



Salesforce.com: Salesforce Summer '08

Salesforce Summer '08 Release Notes

Table of Contents

About the Release Notes.....	3
Summary of Summer '08 Features and Impact on Salesforce Users.....	3
Salesforce Applications.....	9
Salesforce for Google Apps.....	9
Analytic Snapshots.....	15
Global Business Hours.....	27
Customer Portal Enhancements.....	29
Salesforce Content Enhancements.....	31
Salesforce Ideas Enhancements.....	38
Partner Portal Enhancements.....	43
Salesforce to Salesforce Enhancements.....	46
Salesforce Mobile Enhancements.....	47
Additional Salesforce Application Enhancements.....	56
Force.com Platform.....	60
General Availability of Visualforce and Other Visualforce Enhancements.....	60
Public Tagging and Other Tagging Enhancements.....	64
Lookup Enhancements.....	70
Enhanced List Views.....	74
Custom Landing Page.....	77
Customizable User Object.....	77
Cross-Object Formulas.....	79
Parallel Approval Routing.....	81
Email Delivery Tracking.....	81
Apex Enhancements.....	83
Apex Managed Sharing.....	87
Many-to-Many Object Relationships.....	90
Single Sign-On Using SAML.....	94
Force.com Web Services API 13.0.....	96
Force.com Development as a Service.....	96
License Management of Installed Managed Packages.....	99
Additional Force.com Platform Enhancements.....	101

About the Release Notes

The Release Notes are a comprehensive user guide for the latest release of Salesforce. Unlike a traditional release notes document that includes only a simple list of enhancements, the Salesforce Release Notes give you everything you need to get up and running with the new features and enhancements in the latest release.

What's Included in the Release Notes

For every new major enhancement, the Release Notes provide:

- A brief, high-level description of the functionality
- Implementation tips to help you get started with setup and administration
- Best practice tips to help you maximize the benefit of the functionality
- Complete end-to-end instructions on how to set up and use the functionality

Beyond the major new features, the Additional Enhancements sections include a list and brief description of every other enhancement or functional change included in the latest release—everything from new merge fields you can use in formulas to improved icons for greater usability to additional fields that are available in standard reports.

Let the Release Notes be your guide to success with the latest release from salesforce.com!

Summary of Summer '08 Features and Impact on Salesforce Users

Summer '08 includes features that will immediately impact all Salesforce users when the release occurs. You may want to communicate these changes to the users in your organization before the release so that they are prepared for any changes that might affect them. Other features require direct action by a Salesforce administrator before your users can benefit from the new functionality.

The following table summarizes the Summer '08 features and whether they will have an immediate impact on users:




Feature	Automatically visible to all users. No setup required.	Not automatically visible. Feature is enabled but requires some setup.	Contact salesforce.com to enable this feature.
Salesforce for Google Apps		✓	
Analytic Snapshots		✓	
Global Business Hours		✓	
Customer Portal Enhancements		✓	
Salesforce Content Enhancements		✓	
Salesforce Ideas Enhancements	✓		
Log In as Customer Portal or Partner Portal User	✓		
Publish and Subscribe to Accounts and Contacts in Salesforce to Salesforce		✓	

Feature	Automatically visible to all users. No setup required.	Not automatically visible. Feature is enabled but requires some setup.	Contact salesforce.com to enable this feature.
Publish Related Tasks in Salesforce to Salesforce			
Mobile Client Support for Person Accounts		 Mobile users must download the newest version of the Salesforce Mobile client application.	
Support for Windows Mobile 6 Standard Edition		 Mobile users must download the newest version of the Salesforce Mobile client application.	
BlackBerry: Streamlined Client Deployment			
BlackBerry Integration with Web Maps		 Mobile users must download the newest version of the Salesforce Mobile client application.	
BlackBerry Call Log Integration		 Mobile users must download the newest version of the Salesforce Mobile client application.	
BlackBerry: Improved Preferences Screen		 Mobile users must download the newest version of the Salesforce Mobile client application.	
BlackBerry: Log Calls and Emails as Events		 Mobile users must download the newest version of the Salesforce	

Feature	Automatically visible to all users. No setup required.	Not automatically visible. Feature is enabled but requires some setup.	Contact salesforce.com to enable this feature.
		Mobile client application.	
BlackBerry: Automatic Purging of Searched Records		 Mobile users must download the newest version of the Salesforce Mobile client application.	
Windows Mobile: Clipboard Support			
Mobilize Recent Items			
Mobile Support for Opportunity Contact Roles	 If a user is assigned to a mobile configuration that includes the contacts data set as a child of the opportunities data set, the user can automatically view contact roles in the mobile client application.		
\$User Merge Fields for Mobile Configuration Filters			
Mobilize User Records			
Device Management Enhancements			
Login History: Mobile Application Name Change			
Mobile Session Caching			
Task Hovers on the Home Page			
Multiday Events			
Assignment Rule Enhancements			
Concurrent Usage Limit for Salesforce			

Feature	Automatically visible to all users. No setup required.	Not automatically visible. Feature is enabled but requires some setup.	Contact salesforce.com to enable this feature.
Converted Lead Page	✓		
Extended Mail Merge Limits- Limited Release			✓
Opportunity History Tracking		✓	
Setup Audit Trail for Mobile Administration	✓		
Solution Search Enhancements	✓		
CAPTCHAs—Security for Exporting Reports			✓
Campaign Reporting	✓		
Case Comments for Custom Report Types		✓	
Business Hours Available for Custom Lookup Relationship Fields		✓	
Salesforce Call Center Enhancements	✓		
Schedule Quantity Column on Opportunities with Products and Schedules Reports	✓		
General Availability of Visualforce and Other Visualforce Enhancements	✓		
Public Tagging and Other Tagging Enhancements		✓	
Lookup Enhancements		✓	
Enhanced List Views		✓	
Custom Landing Page		✓	
Customizable User Object	✓		
Cross-Object Formulas		✓	
Parallel Approval Routing		✓	
Email Delivery Tracking		✓	
		Organizations that use bounce management must ensure that they	

Feature	Automatically visible to all users. No setup required.	Not automatically visible. Feature is enabled but requires some setup.	Contact salesforce.com to enable this feature.
		can accept all mail from *.salesforce.com	
Apex Enhancements	✓		
Apex Managed Sharing		✓	
Many-to-Many Object Relationships		✓	
Single Sign-On Using SAML		✓	
Force.com Web Services API 13.0	✓		
Force.com Development as a Service		✓	
Force.com Migration Tool		✓	
Force.com IDE		✓	
License Management of Installed Managed Packages	✓		
15 Minute Session Timeout	✓		
Auto-Formatting of Fax Numbers in Search Filter Fields	✓		
Apex Post-Update Triggers Visible in Workflow Rules	✓		
New Approval Merge Fields in Email Templates	✓		
Formula Enhancements		✓	
Workflow Rules for Mass Actions on Leads	✓		
Deleted Object Restoration	✓		
Delegated Authentication Gateway Relocation			✓ Delegated authentication must be enabled by salesforce.com before the gateway URL is visible.
Outbound Messaging Dead Letter Queue			✓

Feature	Automatically visible to all users. No setup required.	Not automatically visible. Feature is enabled but requires some setup.	Contact salesforce.com to enable this feature.
Scheduled Data Export			 <p>Scheduled Data Export is automatically available to customers who have Weekly Data Export enabled. If you do not have Weekly Data Export enabled, contact salesforce.com.</p>
AppExchange Package Deprecation			
Non-Global Apex Class and Trigger Deletion			

SALESFORCE APPLICATIONS

Salesforce for Google Apps

Available in: **All Editions**

Google Apps™ is a suite of on-demand communication and collaboration services hosted by Google and designed for business users. Salesforce integrates key Google Apps services and provides several AppExchange apps that enhance and customize Google-related functionality. Your organization can create a free-of-charge Google Apps Standard Edition account and enable Salesforce for Google Apps, or purchase the Salesforce for Google Apps Supported feature that includes a Google Apps Premier Edition account and Premier Edition licenses for your users.

The following services for Google Apps are integrated with Salesforce and require a simple activation by a Salesforce administrator:

Add Google Docs to Salesforce

Google Docs™ allows you to create on-demand documents, spreadsheets, and presentations, edit them in your browser, and work together in real time with other collaborators. When the Add Google Docs to Salesforce service is activated, you can:

- Use the Google Docs, Notes, & Attachments or Google Docs & Attachments related list on any Salesforce record to create, edit, or view Google docs and associate them to a record.
- Share a Google doc with any Google Apps user in your organization.
- Associate Google docs with Salesforce records even when you are not working in Salesforce by using the **Add Google Doc to Salesforce** browser button.

Google Docs Tab

When the Google Docs tab is activated, you can use it to conveniently access the Docs home page for your Google Apps account without leaving Salesforce. The Google Docs tab hosts your Docs home page, which is a list of all Google documents, spreadsheets, and presentations that you created or that other users have shared with you. If the Add Google Docs to Salesforce service is also activated, you can create a Google doc from the Google Docs tab and associate that doc to any Salesforce record with the click of a button.

Gmail to Salesforce

Gmail™ is a Web-based email application that operates on all standard browsers and can be used with your company's domain. Use Gmail to Salesforce to automatically log emails you send from your Gmail account as activities on lead and contact records in Salesforce.

Gmail Buttons and Links

Gmail Buttons and Links adds **Gmail** links next to email fields on all records, and adds **Compose Gmail** buttons in Activity History related lists on leads and contacts. When you click a Gmail link or the **Compose Gmail** button, Salesforce automatically logs you into your Gmail account and automatically populates the **To** field. If Gmail to Salesforce is activated, Salesforce also populates the **BCC** field with your Email to Salesforce address.

Google Talk Sidebar Component

Google Talk™ is Google's instant-messaging tool. When the Google Talk Sidebar Component is activated in Salesforce, Google Talk displays below the sidebar search fields where it can be toggled on, off, or

expanded into its own window. You can also log a chat record as an activity on a Salesforce lead or contact record.

Implementation Tips

- For detailed information about Google Apps, refer to [Google's online help](#).
- Google Apps in Salesforce is available for Google business accounts but not consumer accounts. You can identify a consumer account by the "gmail.com" domain in an email address; for example, *myname@gmail.com* is a consumer account. The Google Apps domain you set up in Salesforce must be the domain you registered with Google for your organization; for example, *mycompany.com* is a business rather than consumer account.
- After creating a Google Apps account for your organization, create Google Apps accounts for your Salesforce users by clicking **Export to Google Apps** from **Setup > Manage Users > Users**.
- Notify users of their Google Apps usernames and passwords.
- Notify users about the changes they will see in Salesforce when Google Apps services are activated. For example, activating the Google Talk Sidebar Component adds Google Talk to the sidebar for all users in your organization.
- To view all the Google apps available on the AppExchange, visit www.salesforce.com/appexchange/.
- By default, Google Apps users on your organization's domain can share Google docs with Google Apps accounts outside your domain. The control panel for your Google Apps account contains sharing settings that enable you to restrict document sharing to within your domain.
- When the **Add Google Docs to Salesforce** service is deactivated, Google docs cannot be accessed from Salesforce records. All Google docs are permanently removed from the Recycle Bin of each user in Salesforce when Google Docs is disabled. If the **Add Google Docs to Salesforce** service is reactivated within 30 days, Google docs that were associated with Salesforce records before the deactivation are restored to their previous location.
- Customer Portal and Partner Portal users can associate an existing Google doc to a Salesforce record, but they cannot create new Google docs from within a Salesforce record or use the **Add Google Doc to Salesforce** browser button.
- Customer Portal and Partner Portal users cannot access the Gmail Buttons and Links or Google Talk Sidebar Component services.
- If your organization purchased the Salesforce for Google Apps Supported feature, see "Getting Started With Salesforce for Google Apps Supported" in the Salesforce online help.

Best Practices

- Test your Google Apps integration using a sandbox or Developer Edition organization.
- Manage Google Apps users as you would Salesforce users. For example, if you deactivate a Salesforce user, also deactivate his or her Google Apps account in the control panel for your organization's Google Apps account. For information about administering your organization's Google Apps account, refer to [Google's online help](#).
- To locate a Google doc quickly in Salesforce, search for the doc using Sidebar Search.
- If Google Talk is in the sidebar, refreshing a Salesforce page causes Google Talk to momentarily disconnect and reconnect. Recommend to your users that they open Google Talk in its own window if they want to have longer chats.

About Salesforce for Google Apps

Getting Started with Google Apps in Salesforce

Step 1: Creating a Google Apps Account

Create a Google Apps account for your organization using one of the following methods:

- On the **Setup ► Google Apps ► Settings** page, click **Sign Up** to launch the account-creation page on the Google website. You are prompted to register your organization's domain name or purchase a new domain name from Google. A domain is the portion of a website's URL that follows the "www." Follow Google's steps to configure your new or existing domain and set up your Google Apps account.
- If your organization purchased the Salesforce for Google Apps Supported feature, click **Setup ► Google Apps ► Premier Setup** to create a new Google Apps Premier Edition account or upgrade your existing Standard Edition account to Premier Edition. For details, see "Getting Started With Salesforce for Google Apps Supported" in the Salesforce online help.



Note: Google Apps in Salesforce supports Google Apps business accounts but not consumer accounts. You can identify a consumer account by the "gmail.com" domain in an email address; for example, *myname@gmail.com* is a consumer account. The Google Apps domain you set up in Salesforce must be the domain you registered with Google for your organization; for example, *mycompany.com* is a business rather than consumer account.

Step 2: Configuring Google Apps Domain Settings

1. On the **Setup ► Google Apps ► Settings** page in Salesforce, click **Edit**.
2. Choose a user for the Google Apps Administrative Contact field. This person is the point of contact for Google Apps users in your organization; specifically, if a user cannot access a Google Apps service, he or she is directed to contact the Google Apps Administrative Contact. The Google Apps Administrative Contact does not need to be the same person who is registered as your organization's Google Apps administrator with Google, but only the Google Apps administrator can create new Google Apps users on your domain.
3. Enter the Google Apps Domain that you registered with Google. For example, if your company's URL is `http://www.acme.com` and you created a Google Apps account for the `acme.com` domain, enter `acme.com` in the Google Apps Domain field.
4. Click **Save**.

Step 3: Activating Google Apps Services

1. In the Activate Google Apps Services section on the **Setup ► Google Apps ► Settings** page, locate the Google Apps service(s) that you want to activate.
2. Click **Edit** or **Install** to activate a service. In the Action column, **Edit** corresponds to Google Apps services that are already integrated in Salesforce, and **Install** corresponds to uninstalled AppExchange apps. Integrated Google Apps services include:
 - Add Google Doc to Salesforce
 - Google Docs Tab
 - Gmail to Salesforce
 - Gmail Buttons and Links
 - Google Talk Sidebar Component

For descriptions of the Google-related AppExchange apps, visit www.salesforce.com/appexchange/.

Step 4: Creating Google Apps Users

Activating Google Apps services in Salesforce makes the services visible to all users in your organization, but a user cannot access a service unless he or she has a Google Apps account on your organization's domain. The Google Apps administrator registered with Google can create these additional accounts. For more information, see "Creating Google Apps Accounts" in the Salesforce online help.

Google Docs

Activating the Add Google Docs to Salesforce Service

To activate or deactivate Google Docs in Salesforce:

1. Click **Setup** ► **Google Apps** ► **Settings**.
2. Click **Edit** next to the Add Google Docs to Salesforce option in the Activate Google Apps Services list.
3. Select or deselect the **Active** checkbox.
4. If you are activating the Add Google Docs to Salesforce service, read the Terms of Use and select the checkbox indicating you agree to the Terms of Use.
5. Click **Save**.

When the Add Google Docs to Salesforce service is enabled, the Notes and Attachments related list on accounts, assets, contacts, contracts, leads, opportunities, products, and custom objects is renamed Google Docs, Notes, & Attachments, and the Attachments related list on cases, solutions, and campaigns is renamed Google Docs & Attachments. From both related lists, users can create, edit, or view Google docs and associate them with Salesforce records.

Activating the Google Docs Tab

The Google Docs tab in Salesforce hosts the Docs home page for each user's Google Apps account, allowing users to view and manage all their Google docs from within Salesforce. If the Add Google Doc to Salesforce service is also activated, users can install a browser button that enables them to easily associate Google docs with Salesforce records from the Google Docs tab.

To activate or deactivate the Google Docs tab in Salesforce:

1. Click **Setup** ► **Google Apps** ► **Settings**.
2. Click **Edit** next to the Google Docs Tab option in the Activate Google Apps Services list.
3. Select or deselect the **Active** checkbox.
4. If you are activating the Google Docs tab, read the Terms of Use and select the checkbox indicating you agree to the Terms of Use.
5. Click **Save**.

Installing the Google Docs Browser Button

A browser button is an applet, or small computer application, that provides one-click functionality similar to a bookmark. The **Add Google Doc to Salesforce** browser button allows you to associate a Google doc with several Salesforce records at once, even when you are not working in Salesforce. To use this browser button, the Add Google Doc to Salesforce service must be enabled and you must install the browser button in your browser.

To access the **Add Google Doc to Salesforce** browser button:

1. Display any record in Salesforce that has a Google Docs, Notes, & Attachments or Google Docs & Attachments related list on the record detail page.
2. Choose **Add Existing** from the **Add Google Doc** drop-down button in the Google Docs, Notes, & Attachments or Google Docs & Attachments related list. If the related list contains a Google doc, you can also click **Edit** next to the Google doc.
3. Click **Get the browser button** at the bottom of the page.

If you use more than one type of browser, for example Microsoft® Internet Explorer and Mozilla® Firefox, install the browser button in each browser. The instructions for installing the browser button depend on your browser. In Firefox, drag the browser button to your Bookmarks Toolbar. In Apple® Safari, drag the browser button to your Bookmark Bar. In Internet Explorer:



Note: The instructions may vary slightly based on your version of Internet Explorer.

1. Right-click the browser button and choose **Add to Favorites...** from the Add Google Doc to Salesforce page.
2. Save the browser button in the Links folder and click **Add**.
3. In your browser menu bar, click **View > Toolbars** and ensure that the Links toolbar is visible.
4. Close and restart your browser. The browser button displays in your Links toolbar.



Note: If you change your personal language setting in Salesforce and want to change the language on the browser button also, delete and reinstall the browser button.

Associating Google Docs to Salesforce Records

Salesforce offers three methods for associating Google docs to Salesforce records:

- You can create a new Google doc from any detail page. The doc is automatically associated to the record and is visible to anyone with access to both the record and the Google doc.
- You can associate an existing Google doc to any Salesforce record. An existing Google doc is one that you already have access to on your Google Apps account but is not already associated with the record you are viewing.
- You can create a Google doc from the Docs home page in your Google Apps account and associate the doc to one or more Salesforce records using the **Add Google Doc to Salesforce** browser button.

Adding New Google Docs to a Salesforce Record

1. Display the record you want linked to the new Google doc.
2. On the Google Docs, Notes, & Attachments related list or the Google Docs & Attachments related list, click **Add Google Doc** and choose **New Document**, **New Spreadsheet**, or **New Presentation**.
3. Enter a name and click **Create Google Doc**. You can begin editing your doc; it is automatically associated with the selected record.



Tip: While you have your Google doc open, remember to share it with other Google Apps users in your organization. Only users with access to the Google doc in their Google Apps account can view the doc from the record detail page.

Adding Existing Google Docs to a Salesforce Record

1. Display the record you want to associate with the Google doc.
2. On the Google Docs, Notes, & Attachments or Google Docs & Attachments related list, click **Add Google Doc** and choose **Add Existing**.
3. Enter a **Name** for the Google doc and its **URL**.
4. Click **Save**.

Adding Google Docs to Multiple Salesforce Records

The Docs home page in your Google Apps account lists all the Google docs you have created with your Google Apps account or that other users have shared with your account. You can access the Docs home page by logging into your Google Apps account and navigating to the Docs home page.



Tip: As a shortcut, you can display the Docs home page in Salesforce if the Google Docs tab is enabled.

If the **Add Google Doc to Salesforce** browser button is installed in your browser, create a Google doc and click the browser button. To associate the Google doc with multiple Salesforce records:

1. Open a Google doc.
2. Click the **Add Google Doc to Salesforce** browser button.
3. In the **Add Google Doc To** field, enter your search criteria for the Salesforce record.
4. Select an object type from the drop-down list and click **Search**.
5. Optionally, filter your search results with the **Limit to items I own** checkbox.
6. In the search results, select one or more records and click **Add Google Doc to Selected Records**. You can also click any of the fields in the search-results list to view more information about the record(s).

Gmail

Gmail™ (also called Google Mail) is a free Web-based email service from Google that operates on all standard browsers and can be used with your company's domain.

Gmail to Salesforce

Gmail to Salesforce allows you to automatically log emails you send from your Gmail account as activities on lead and contact records in Salesforce.

Gmail to Salesforce is based on the Email to Salesforce feature. To activate Gmail to Salesforce for your organization, follow the instructions in "Enabling Email to Salesforce" in the Salesforce online help. To configure your personal Gmail to Salesforce setup, follow the instructions in "Using My Email to Salesforce Address" in the Salesforce online help.

Gmail Buttons and Links

Gmail Buttons and Links adds **Gmail** links next to email fields on all records, and adds **Compose Gmail** buttons in Activity History related lists on leads and contacts. When you click a Gmail link or the **Compose Gmail** button, Salesforce automatically logs you into your Gmail account and automatically populates the **To** field. If Gmail to Salesforce is activated, Salesforce also populates the **BCC** field with your Email to Salesforce address.

To activate Gmail Buttons and Links:

1. Click **Setup ► Google Apps ► Settings**.
2. In the Activate Google Apps Services list, click **Edit** next to Gmail Buttons and Links.
3. Select the **Active** checkbox to activate Gmail Buttons and Links for your organization.
4. Select the **Gmail Links** checkbox to add **Gmail** links next to all email fields (except email fields on pages under **Setup**).
5. Select the **Gmail Buttons** checkbox to add **Compose Gmail** buttons in Activity History related lists on leads and contacts.
6. Read the Terms of Use, and select the checkbox indicating you have read and agree to them.
7. Click **Save**.

Google Talk

Google Talk™ is Google's instant-messaging tool. When the Google Talk Sidebar Component is activated in Salesforce, Google Talk displays below the sidebar search fields where it can be toggled on, off, or expanded into its own window. You can also log a chat record as an activity on a Salesforce lead or contact record.

Activating Google Talk

To activate or deactivate Google Talk in Salesforce:

1. Click **Setup ► Google Apps ► Settings**.
2. Click **Edit** next to the Google Talk Sidebar Component option in the Activate Google Apps Services list.

3. Select or deselect the `Active` checkbox.
4. If you are activating the Google Talk Sidebar Component, read the Terms of Use and select the checkbox indicating you agree to the Terms of Use.
5. Click **Save**.

Tips for Using Google Talk

- For information about using Google Talk, refer to [Google's online help](#).
- Google Talk appears in both standard and custom sidebar layouts on all tabs.
- Because Google Talk chats are automatically saved in Gmail, users with Email to Salesforce can log a Google Talk chat as an activity on a lead or contact. For more information see "Using Gmail in Salesforce" in the Salesforce online help.
- When Google Talk is in the sidebar, refreshing a Salesforce page causes Google Talk to momentarily disconnect and reconnect. For longer chats, open Google Talk in its own window by clicking **pop out** next to the Google Talk sidebar component.
- Google Talk is not available for Customer Portal or Partner Portal users.

Analytic Snapshots

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

Analytic snapshots enable users to run a tabular report and save the report results to fields on a custom object. With analytic snapshots, users with the "Manage Analytic Snapshots" permission can map fields from a source report to the fields on a target object, and schedule when to run the report to load the custom object's fields with the report's data. Analytic snapshots allow users to work with report data similarly to how they work with other records in Salesforce, such as:

- Creating and running custom reports from the target object
- Creating dashboards from reports that reference the target object
- Defining list views on the target object if it is included on a custom object tab

Implementation Tips

- If you save a source report with its details hidden, the report will not be available to include in an analytic snapshot. Furthermore, if you hide the details of a source report included in an analytic snapshot, the analytic snapshot will fail when it runs. To verify that the details of the source report are not hidden, view the source report and click the **Show Details** button. The **Show Details** button only displays if the report's details are hidden.
- When creating the source report for your analytic snapshot, note the names of the fields you added to the report, as those field names may be useful to you when you create fields on the target object in which to store the report results.
- In Enterprise, Unlimited, and Developer Editions, use field-level security to make the target object's fields visible to the appropriate users. For more information, see "Setting Field-Level Security" in the Salesforce online help.
- You can only choose a source report that is a custom report with a tabular format. The `Source Report` drop-down list does not display standard reports.
- You cannot delete a custom object if it is a target object in an analytic snapshot.
- If you change the source report or target object on an analytic snapshot with existing field mappings, the field mappings will be deleted when you save the analytic snapshot.
- You must map at least one field from the source report to one field on the target object or data will not load from the source report to the target object when the analytic snapshot runs.
- You can only map fields with compatible data types. For example, you can map a currency field to a number field. For more information, see "Custom Field Types" in the Salesforce online help.
- You cannot map summary fields in the source report to fields in the target object. For example, if your source report includes the `Record Count` summary field, that field will not be available for mapping to fields on the target object.

- When you map fields from the source report to the target object, some data may lose its context when loaded to the target object. For example, if you map a date and time field from the source report to a text field on the target object, the date and time load to the target object without the time zone.
- You cannot include an analytic snapshot in a package for the AppExchange.
- An analytic snapshot will fail during a scheduled run if:
 - The source report includes more than 100 fields
 - The target object has more than 100 custom fields
 - The target object contains validation rules
 - The target object is included in a workflow
 - The target object is a detail object in a master-detail relationship

Best Practices

- You can delete an analytic snapshot when it is running, but you cannot pause an analytic snapshot as it runs. Furthermore, you cannot delete the source report of an analytic snapshot. To delete the source report, you must first remove the report from the analytic snapshot by changing the report in the `Source Report` drop-down list.
- The `(No fields with compatible data type)` field displays in the `Fields from Source Report` column when a field on the target object does not match the data type of a field on the source report. The fields on the target object determine field mapping availability. For example, your source report may include ten fields, but if your target object includes one field, then you can only map one field in your analytic snapshot.
- The `Schedule Analytic Snapshot` section on an analytic snapshot's detail page displays details on when the analytic snapshot is scheduled to run.
- When an analytic snapshot is defined, deleted, or its source report or target object is changed, it is tracked in your organization's setup audit trail history. For more information, see "Monitoring Setup Changes" in the Salesforce online help.
- The `Run History` section on an analytic snapshot's detail page displays details on when the analytic snapshot ran. Details include:
 - The date and time at which the analytic snapshot ran
 - The name of the source report, target object, and running user
 - The time it took for the analytic snapshot to run
 - The number of records created in the target object
 - Whether or not the analytic snapshot ran successfully

About Analytic Snapshots

What is an Analytic Snapshot?

An analytic snapshot enables users to run a tabular report and save the report results to fields on a custom object. With analytic snapshots, users with the appropriate permissions can map fields from a source report to the fields on a target object, and schedule when to run the report to load the custom object's fields with the report's data. Analytic snapshots allow you to work with report data similarly to how you work with other records in Salesforce. For example, a customer support manager could set up an analytic snapshot that reports on the open cases assigned to his or her team everyday at 5:00 PM, and store that data in a custom object to build a history on open cases from which he or she could spot trends via reports. Furthermore, the customer support manager could report on point-in-time or trend data stored in the custom object and use the report as a source for a dashboard component. For the total number of analytic snapshots you can create, see "App Setup Limits" in the Salesforce online help.

Analytic Snapshot Terminology

The following terminology is used for analytic snapshots:

Source Report

The custom report scheduled to run and load data as records into a custom object.

Target Object

The custom object that receives the results of the source report as records.

Running User

The user whose security settings determine the source report's level of access to data. This bypasses all security settings, giving all users who can view the results of the source report in the target object access to data they might not be able to see otherwise.

Be aware of the type of license your `Running User` has. For example, if the `Running User` of an analytic snapshot has a Salesforce license, users who have Force.com Platform or Salesforce Platform One licenses will not be able to view it. Alternatively, if the `Running User` has a Force.com Platform or Salesforce Platform One license, users who have Salesforce licenses will be able to see the analytic snapshot. If you have users with Force.com Platform or Salesforce Platform One licenses, we recommend creating a separate analytic snapshot for them with a `Running User` that has a Force.com Platform or Salesforce Platform One user license.

After you [set up an analytic snapshot](#), users can:

- Create and run custom reports from the target object. For more information, see "Creating a Custom Report" in the Salesforce online help and "Running Reports" in the Salesforce online help.
- Create dashboards from the source report. For more information, see "Creating and Editing Dashboard Properties" in the Salesforce online help.
- Define list views on the target object if it is included on a custom object tab. For more information, see "Creating Custom List Views" in the Salesforce online help.

Setting Up Analytic Snapshots

User Permissions Needed	
To create, save, and schedule an analytic snapshot:	"Manage Analytic Snapshots"
To run an analytic snapshot as a running user and add the results to a custom object:	"Run Reports"
	AND
	"Create" on the target object

An analytic snapshot enables users to run a tabular report and save the report results to fields on a custom object. With analytic snapshots, users with the appropriate permissions can map fields from a source report to the fields on a target object, and schedule when to run the report to load the custom object's fields with the report's data. Analytic snapshots allow you to work with report data similarly to how you work with other records in Salesforce. For more information, see [What is an Analytic Snapshot?](#) on page 16. For information on the number of analytic snapshots you can set up for your organization, see "App Setup Limits" in the Salesforce online help.

To set up an analytic snapshot:

1. Create a source report that includes the fields to load as records into a target object.
2. Create a target object in which to store the records loaded from the source report.
3. Create fields on the target object that will receive the source report's results when the analytic snapshot runs.
4. [Define the analytic snapshot](#) by name, description, running user, source report, and target object.

5. [Map specific fields](#) on the source report to specific fields on the target object.
6. [Schedule](#) the analytic snapshot to run.

Tips on Source Reports for Analytic Snapshots

Consider the following when setting up source reports for analytic snapshots:

- If you save a source report with its details hidden, the report will not be available to include in an analytic snapshot. Furthermore, if you hide the details of a source report included in an analytic snapshot, the analytic snapshot will fail when it runs. To verify that the details of the source report are not hidden, view the source report, click the **Show Details** button, and save the report. The **Show Details** button only displays if the report's details are hidden.
- When creating the source report for your analytic snapshot, note the names of the fields you added to the report, as those field names may be useful to you when you create fields on the target object in which to store the report results.
- You can only choose a source report that is a custom report with a tabular format. The `Source Report` drop-down list does not display standard reports. For more information, see [Defining an Analytic Snapshot](#) on page 19.
- You can include up to 100 fields in your source report.
- You can delete an analytic snapshot when it is running, but you cannot pause an analytic snapshot as it runs. Furthermore, you cannot delete the source report of an analytic snapshot. To delete the source report, you must first remove the report from the analytic snapshot by changing the report in the `Source Report` drop-down list. For more information, see [Defining an Analytic Snapshot](#) on page 19. For more information, see [Managing Analytic Snapshots](#) on page 23.
- If you select Load No Data in the Fields from Source Report column, no data will load into the corresponding field in the Fields in Target Object column when the analytic snapshot runs. For more information, see [Mapping Analytic Snapshot Fields](#) on page 20.
- The (No fields with compatible data type) field displays in the Fields from Source Report column when a field on the target object does not match the data type of a field on the source report. For more information, see [Mapping Analytic Snapshot Fields](#) on page 20.

Tips on Target Objects for Analytic Snapshots

Consider the following when setting up target objects for analytic snapshots:

- In Enterprise, Unlimited, and Developer Editions, use field-level security to make the target object's fields visible to the appropriate users. For more information, see "Setting Field-Level Security" in the Salesforce online help.
- You cannot delete a custom object if it is a target object in an analytic snapshot. For more information, see "Deleting Custom Objects" in the Salesforce online help.
- The fields on the target object determine field mapping availability. For example, your source report may include ten fields, but if your target object includes one field, then you can only map one field in your analytic snapshot.
- You can add up to 100 fields to the target object.
- Target objects cannot contain validation rules or be included in a workflow. For more information, see "Managing Validation Rules" in the Salesforce online help and "Managing Workflow and Approvals" in the Salesforce online help.
- Analytic snapshots cannot contain target objects that trigger an Apex script to run when new records are created. For more information, see "Managing Apex Triggers" in the Salesforce online help.
- When an analytic snapshot runs, it can add up to 2000 new records to the target object. If more than 2000 records are created from the data in the source report, the additional records are added to the Row Failures related list. You can access the Row Failures related list via the Run History Section of an analytic snapshot detail page. For more information, see [Troubleshooting Analytic Snapshots](#) on page 24.

Tips on Analytic Snapshots

Consider the following when setting up analytic snapshots:

- You cannot include an analytic snapshot in a package for the AppExchange.


- You can only map fields with compatible data types. For example, you can map a currency field to a number field. For more information, see "Custom Field Types" in the Salesforce online help.
- The Schedule Analytic Snapshot section on an analytic snapshot's detail page displays details on when the analytic snapshot is scheduled to run.
- If you change the source report or target object on an analytic snapshot with existing field mappings, the field mappings will be deleted when you save the analytic snapshot. For more information, see [Defining an Analytic Snapshot](#) on page 19.
- You must map at least one field from the source report to one field on the target object or data will not load from the source report to the target object when the analytic snapshot runs.
- When an analytic snapshot is defined, deleted, or its source report or target object is changed, it is tracked in your organization's setup audit trail history. For more information, see "Monitoring Setup Changes" in the Salesforce online help.
- The Run History section on an analytic snapshot's detail page displays details on when the analytic snapshot ran. Details include:
 - The date and time at which the analytic snapshot ran
 - The name of the source report, target object, and running user
 - The time it took for the analytic snapshot to run
 - The number of records created in the target object
 - Whether or not the analytic snapshot ran successfully
- An analytic snapshot will fail during a scheduled run if:
 - The source report includes more than 100 fields
 - The target object has more than 100 custom fields
 - The target object contains validation rules
 - The target object is included in a workflow
 - The target object is a detail object in a master-detail relationship
 - The target object runs an Apex trigger when new records are created on it

Defining an Analytic Snapshot

User Permissions Needed	
To create, save, and schedule an analytic snapshot:	"Manage Analytic Snapshots"
To run an analytic snapshot as a running user and add the results to a custom object:	"Run Reports"
	AND
	"Create" on the target object

After you create a source report, target object, and target object fields as described in [Setting Up Analytic Snapshots](#) on page 17, you can define your analytic snapshot. You define an analytic snapshot by naming it and choosing the source report that will load report results into the target object you specify when the analytic snapshot runs.

To define an analytic snapshot:

1. Click **Setup** ► **Data Management** ► **Analytic Snapshots**.
2. Click **New Analytic Snapshot**.
3. Enter a name and description for your analytic snapshot.
4. Choose a user in the **Running User** field by clicking the lookup icon ().

The user in the `Running User` field determines the source report's level of access to data. This bypasses all security settings, giving all users who can view the results of the source report in the target object access to data they might not be able to see otherwise.

Only users with the "Modify All Data" permission can choose running users other than themselves. For more information, see "Managing Profiles" in the Salesforce online help.

5. Select a report from the `Source Report` drop-down list.

The report you choose determines the report results that will load as records into the target object when the analytic snapshot runs.

You can only choose a source report that is a custom report with a tabular format. The `Source Report` drop-down list does not display standard reports. For more information, see "Creating a Custom Report" in the Salesforce online help and "Standard Report Folders" in the Salesforce online help.

6. Select a custom object from the `Target Object` drop-down list.

The custom object you choose will receive the source report's results as records when the analytic snapshot runs.

7. Click **Save** to save the definition of your analytic snapshot, or click **Save & Edit Field Mappings** to save your analytic snapshot and map its fields.
8. Next, [map the fields](#) on the source report to the fields on the target object.

Mapping Analytic Snapshot Fields

User Permissions Needed	
To create, save, and schedule an analytic snapshot:	"Manage Analytic Snapshots"
To run an analytic snapshot as a running user and add the results to a custom object:	"Run Reports"
	AND "Create" on the target object

After you create a source report, target object, target object fields, and define your analytic snapshot as described in [Setting Up Analytic Snapshots](#) on page 17, you can map the fields on your source report to the fields on your target object. You map source report fields to target object fields so that when the report runs, it automatically loads specific target object fields with data from specific source report fields.

To map the fields on an analytic snapshot:

1. Click **Setup** ► **Data Management** ► **Analytic Snapshots**.
2. Select the name of the analytic snapshot whose fields you want to map.
3. Click **Edit** on the Analytic Snapshot Field Mappings section.
4. In the Fields from Source Report column, click a `Load No Data` drop-down list and select a field from the source report to map to a custom object field in the Fields in Target Object column.
5. Click **Quick Save** to save field mappings and continue mapping fields, or click **Save** to save field mappings and return to the analytic snapshot's detail page.
6. Next, [schedule](#) the analytic snapshot to run.

Tips on Mapping Analytic Snapshot Fields

Consider the following when mapping analytic snapshot fields:

- You must map at least one field from the source report to one field on the target object or data will not load from the source report to the target object when the analytic snapshot runs.

- You can only map fields with compatible data types. For example, you can map a currency field to a number field. For more information, see "Custom Field Types" in the Salesforce online help.
- If you select Load No Data in the Fields from Source Report column, no data will load into the corresponding field in the Fields in Target Object column when the analytic snapshot runs. For more information, see [Scheduling and Running an Analytic Snapshot](#) on page 21.
- The (No fields with compatible data type) field displays in the Fields from Source Report column when a field on the target object does not match the data type of a field on the source report.
- The fields on the target object determine field mapping availability. For example, your source report may include ten fields, but if your target object includes one field, then you can only map one field in your analytic snapshot.
- You cannot map fields from the source report to the following fields on the target object: Created By, Last Modified By, Created Date, and Last Modified Date.
- When you map fields from the source report to the target object, some data may lose its context when loaded to the target object. For example, if you map a date and time field from the source report to a text field on the target object, the date and time load to the target object without the time zone.
- You cannot map summary fields in the source report to fields in the target object. For example, if your source report includes the Record Count summary field, that field will not be available for mapping to fields on the target object.

Scheduling and Running an Analytic Snapshot

User Permissions Needed	
To create, save, and schedule an analytic snapshot:	"Manage Analytic Snapshots"
To run an analytic snapshot as a running user and add the results to a custom object:	"Run Reports"
	AND
	"Create" on the target object

After you create a source report, target object, target object fields, define your analytic snapshot, and map its fields as described in [Setting Up Analytic Snapshots](#) on page 17, you can schedule an analytic snapshot to run. You can schedule an analytic snapshot to run daily, weekly, or monthly so that data from the source report is loaded into the target object when you need it. Furthermore, after an analytic snapshot has completed running, you can send an email notification to yourself and other users that includes details about the analytic snapshot's run, such the date and time the analytic snapshot ran, if the analytic snapshot ran successfully, and how many records were loaded into the target object from the source report. Also, the notification includes a link to the analytic snapshot's detail page in Salesforce. Users with the correct permissions can view the analytic snapshot's detail page after they log in.

To schedule an analytic snapshot to run:

1. Click **Setup** ► **Data Management** ► **Analytic Snapshots**.
2. Select the name of the analytic snapshot that you want to schedule to run.
3. Click **Edit** on the Schedule Analytic Snapshot section.
4. Select a notification setting to send an email when the analytic snapshot finishes running:
 - Click **Me** to send an email to the email address specified on your Salesforce user record.
 - Click **Others . . .** to send an email to additional users. You can only send analytic snapshot notifications to email addresses included on Salesforce user records. Furthermore, you can only select Users and Public Groups in the Search drop-down list.
5. Schedule the analytic snapshot to run:
 - In the **Frequency** field, select the frequency at which the analytic snapshot runs. When you click the **Daily**, **Weekly**, or **Monthly** fields, more options display that allow you to refine frequency criteria.

- In the `Start` and `End` fields, specify the dates during which you wish to schedule the analytic snapshot to run.
- In the `Preferred Start Time` drop-down list, click the **Find available options...** link to choose a preferred start time for the analytic snapshot to run.

Your preferred start time may not be available if other users have already selected that time to run an analytic snapshot or your organization has reached its analytic snapshot limit. For more information, see "App Setup Limits" in the Salesforce online help.

6. Click **Save to schedule the analytic snapshot to run.**

When the analytic snapshot runs, it adds new records to the target object.

Optionally, once you have scheduled an analytic snapshot to run, you can perform the following actions after you click **Edit** on the Schedule Analytic Snapshot section of an analytic snapshot's detail page:

- Click **Edit** to update the notification and frequency settings of the analytic snapshot.
- Click **Delete** to permanently delete the existing schedule of when the analytic snapshot runs.

Tips on Scheduling an Analytic Snapshot to Run

Consider the following when scheduling an analytic snapshot to run:

- The number of analytic snapshots you can schedule to run is determined by your Edition. For details, see "App Setup Limits" in the Salesforce online help.
- Analytic snapshots run in the time zone of the user who schedules the run. For example, if the `Time Zone` field on your user record is set to Pacific Standard Time, and you schedule an analytic snapshot to run every day at 2:00 PM, then the analytic snapshot will run every day at 2:00 PM Pacific Standard Time.
- If you schedule an analytic snapshot to run on a specific day of every month, the analytic snapshot will only run on months that have that specific day. For example, if you schedule an analytic snapshot to run on the 31st day of every month, then the analytic snapshot will only run on months that have 31 days. If you want an analytic snapshot to run on the last day of every month, choose last from the `On day of every month` drop-down list.
- The analytic snapshot runs within an hour of the time you select in the `Preferred Start Time` drop-down list. For example, if you select 2:00 PM as your preferred start time, the analytic snapshot may run any time in between 2:00 PM or 2:59 PM, depending on how many other analytic snapshots are scheduled to refresh at that time.
- Analytic snapshots will not run as scheduled if the user in the `Running User` field does not have access to the folder in which the source report is stored. For more information, see [Defining an Analytic Snapshot](#) on page 19 and "Managing Folders" in the Salesforce online help.
- When an analytic snapshot runs, it can add up to 2000 new records to the target object. If more than 2000 records are created from the data in the source report, the additional records are added to the Row Failures related list. You can access the Row Failures related list via the Run History Section of an analytic snapshot detail page. For more information, see [Troubleshooting Analytic Snapshots](#) on page 24

Managing Analytic Snapshots

User Permissions Needed	
To create, save, and schedule an analytic snapshot:	"Manage Analytic Snapshots"
To run an analytic snapshot as a running user and add the results to a custom object:	"Run Reports" AND "Create" on the target object

After you [set up an analytic snapshot](#), you can view details about it and edit and delete it. Click **Setup ► Data Management ► Analytic Snapshots** to display the Analytic Snapshots page, which shows the list of analytic snapshots defined for your organization.

From the Analytic Snapshots page, you can:

- Select a list view from the **View** drop-down list to go directly to that list page, or click **Create New View** to define your own custom view. For more information, see "Creating Custom List Views" in the Salesforce online help.
- Define a new analytic snapshot by clicking **New Analytic Snapshot**.
- Update an analytic snapshot's name, description, source report, and target object by clicking **Edit** next to an analytic snapshot's name.

If you change the source report or target object on an analytic snapshot with existing field mappings, the field mappings will be deleted when you save the analytic snapshot.

- Delete an analytic snapshot by clicking **Del** next to the analytic snapshot's name. After the analytic snapshot is deleted, it cannot be restored from the Recycle Bin.



Important: When you delete an analytic snapshot, the source report and target object are not deleted; however, when the source report runs, it will not load the target object with data.

You can delete an analytic snapshot when it is running, but you cannot pause an analytic snapshot as it runs. Furthermore, you cannot delete the source report of an analytic snapshot. To delete the source report, you must first remove the report from the analytic snapshot by changing the report in the **Source Report** drop-down list. For more information, see [Defining an Analytic Snapshot](#) on page 19.

- Display detailed information about an analytic snapshot and customize it further by clicking an analytic snapshot's name. After you click an analytic snapshot's name you can:
 - Click links in the Identification section that redirect you to the analytic snapshot's running user, source report, and target object. In addition, you can view the preferred date and time at which the analytic snapshot will approximately run next in the **Next Run** field, and view the date and time at which the analytic snapshot last ran in the **Last Run** field.
 - Click **Edit** in the Analytic Snapshot Field Mappings section to further customize the fields mapped from the source report to the target object. For more information, see [Mapping Analytic Snapshot Fields](#) on page 20.

The Analytic Snapshot Field Mappings section displays which source report fields are mapped to the target object's fields. In addition, you can view the number of fields in the source report available for mapping to the target object in the **Columns in Source Report** field. Also, you can view the number of fields available for mapping in the target object in the **Fields in Target Object** field.

- Click **Edit** in the Schedule Analytic Snapshot section to schedule when to run the analytic snapshot. For more information, see [Scheduling and Running an Analytic Snapshot](#) on page 21.

The Schedule Analytic Snapshot section displays details on when the analytic snapshot is currently scheduled to run.

- The Run History section displays details on when the analytic snapshot ran. Details include:
 - The date and time at which the analytic snapshot ran
 - The name of the source report, target object, and running user
 - The time it took for the analytic snapshot to run
 - The number of records created in the target object
 - Whether or not the analytic snapshot ran successfully

Up to 200 records are stored in the Run History section. After 200 records are stored, the oldest record is automatically deleted and cannot be retrieved from the Recycle Bin.

The Run History section only displays the first error detected for each failed run. To troubleshoot an analytic snapshot that failed during a scheduled run, see [Troubleshooting Analytic Snapshots](#) on page 24.

Troubleshooting Analytic Snapshots

User Permissions Needed	
To create, save, and schedule an analytic snapshot:	"Manage Analytic Snapshots"
To run an analytic snapshot as a running user and add the results to a custom object:	"Run Reports" AND "Create" on the target object

The [Run History section](#) of an analytic snapshot detail page displays if an analytic snapshot ran successfully or not. When an analytic snapshot fails during a scheduled run, the failure is noted in the `Result` column. To view the details of a run, click the date and time of the run in the `Run Start Time` column.



Note:

- When an analytic snapshot runs, it can add up to 2000 new records to the target object. Any records over 2000 are recorded in the Row Failures related list.
- The details of a failed run are available on the Row Failures related list for 14 days before they are automatically deleted. You cannot retrieve details about row failures from the Recycle Bin.

An analytic snapshot could fail during a scheduled run for a number of reasons. The table below lists the errors a failed run may display and how the errors can help you troubleshoot the analytic snapshot so that it will run successfully.

Error	Description
Running user does not have permission to run reports	The user in the <code>Running User</code> field does not have the "Run Reports" or "Create and Customize Reports" permission. Choose a user with the appropriate permissions or add the appropriate permissions to the existing running user's profile. For more information, see "Managing Profiles" in the Salesforce online help.
Cannot run analytic snapshot because source report has been deleted	The report in the <code>Source Report</code> field was deleted and no longer available to run. Choose another source report for your analytic snapshot or restore the deleted report from the Recycle Bin. For more information, see "Recycle Bin" in the Salesforce online help.

Error	Description
Running user does not have permission to access source report	The user in the Running User field does not have access to the folder in which the source report is stored. Choose a user with access to the source report or provide the existing running user with access to the folder in which the source report is stored. For more information, see "Managing Folders" in the Salesforce online help.
Source report definition is obsolete	The report in the Source Report field references a custom object that is no longer available for reports or the relationships between the objects in the report have changed. For more information, see "Managing Custom Objects" in the Salesforce online help and "Overview of Relationships" in the Salesforce online help.
Source report definition is invalid	The report in the Source Report field cannot run because it contains invalid formulas or filter criteria. Update the report so that it can run without errors. For more information, see "Customizing Reports" in the Salesforce online help.
Running user does not have permission to access report type	The user in the Running User field does not have permission to access a report type associated with the report in the Source Report field. Choose a running user that has the correct permissions or provide the existing running user with the appropriate permissions.
Source report must be tabular	The report in the Source Report field is no longer in tabular format. Choose a new source report or update the existing source report's format to tabular. For more information see, "Customizing Reports" in the Salesforce online help.
Source report last saved with details hidden on report results	The report in the Source Report field was saved with its details hidden. To display the details of the source report, view the report, click the Show Details button, and save the report.
Target object has been deleted or is inaccessible to running user	The custom object in the Target Object field has been deleted or the user in the Running User field does not have permission to access the target object. Restore the deleted custom object, choose a new target object, or provide the existing running user with "Create" permissions to the custom object in the Target Object field. For more information, see "Managing Deleted Custom Objects" in the Salesforce online help and "Managing Profiles" in the Salesforce online help.
Running user does not have permission to edit target object	The user in the Running User field does not have "Create" permissions on the custom object in the Target Object field. Choose a running user that has such permissions or provide the existing running user with "Create" permissions to the custom object in the Target Object field. For more information, see "Managing Profiles" in the Salesforce online help.
Target object must not be a detail object in a master-detail relationship	The custom object in the Target Object field is a detail object in a master-detail relationship, meaning that a master object controls certain behaviors on the target object's records.

Error	Description
	Choose a target object that is not included in a master-detail relationship. For more information, see "Overview of Relationships" in the Salesforce online help.
Target object must not be included in a workflow	The custom object in the Target Object field is included in a workflow. Choose a target object that is not included in a workflow. For more information, see "Managing Workflow and Approvals" in the Salesforce online help.
Target object must not include an insert trigger	An Apex trigger runs when new records are created for the custom object in the Target Object field. Remove the Apex trigger or choose a target object for which an Apex trigger does not run when new records are created. For more information, see "Managing Apex Triggers" in the Salesforce online help.
Target object must not include validation rules	The custom object in the Target Object field contains validation rules. Choose a target object that does not contain validation rules or delete validation rules from the existing target object. For more information, see "Managing Validation Rules" in the Salesforce online help.
Running user is inactive	The user in the Running User field is no longer active. Choose an active user.
One or more required fields on the target object are not mapped	One or more required fields on the target object are not mapped. Map all required fields on the target object to fields on the source report. For more information, see Mapping Analytic Snapshot Fields on page 20.
Source report contains too many fields, has a formula field with too many functions, or contains too many criteria	The report in the Source Report field contains too many fields, criteria, or functions within a formula field. Remove any unnecessary fields, criteria and functions within formula fields from the source report. For more information, see "Customizing Reports" in the Salesforce online help.
Source report cannot have more than 100 selected columns	The report in the Source Report field contains more than 100 fields. Remove any unnecessary fields from the source report. For more information, see "Customizing Reports" in the Salesforce online help.
Target object cannot have more than 100 custom fields	The custom object in the Target Object field contains more than 100 custom fields. Remove any unnecessary fields from the target object. For more information, see "Deleting Fields" in the Salesforce online help.
Your report exceeded the time limit for processing.	The report in the Source Report field may contain too much data to process. Reduce the amount of data the report processes when running by limiting the report's date range and remove any unnecessary fields from the source report. For more information, see "Customizing Reports" in the Salesforce online help.

Global Business Hours

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

Now, you can set multiple business hours for your organization to accurately reflect the locations and time zones at which your customer support teams operate. Setting business hours, along with escalation rules, enables you to escalate and associate cases with specific time zones.

Implementation Tips

- After you set business hours, add the `Business Hours` lookup field to case layouts and set field-level security on the `Business Hours` field. This allows users to view and update business hours on a case. For more information, see "Customizing Page Layouts" in the Salesforce online help and "Setting Field-Level Security" in the Salesforce online help.
- Business hours on a case are automatically set to your organization's default business hours, unless the case matches the criteria on an escalation rule associated with different business hours.
- Salesforce automatically calculates daylight savings times for the time zones available for business hours.
- Escalation actions only run during the business hours with which they are associated. For more information, "Setting Up Escalation Rules" in the Salesforce online help.
- After business hours are set to active, you can deselect the `Active` checkbox so that users can no longer associate the business hours with cases and escalation rules.
- You can update cases associated with business hours that are no longer active without having to replace the inactive business hours with active business hours.
- Default business hours on cases can be updated with business hours on escalation rules if the cases match escalation rule criteria and the rule is set to override business hours. For details, see "Setting Up Escalation Rules" in the Salesforce online help.
- You can create multiple business hours for support teams that operate in the same time zone but at different hours.
- You cannot include the `Business Hours` field in list views or reports.

Best Practices

- In previous releases of Salesforce, you needed the "Manage Cases" permission to set business hours. Now, the "Customize Application" permission is required to set business hours for your organization. Verify that users who set business hours have the "Customize Application" permission on their profiles. For more information, see "Creating and Editing Profiles" in the Salesforce online help.
- In previous releases of Salesforce, you could access business hours by clicking **Setup > Customize > Cases > Business Hours**. Now, business hours are located at **Setup > Company Profile > Business Hours**.
- We recommend that you enter text in the `Business Hours Name` field that will remind users of a location or time zone when they view business hours on a case. For example, if your business hours are for a support center in San Francisco, you could enter `San Francisco Business Hours`.
- If a time is not available for you to choose from, click the field and enter the time. Start times must be earlier than end times.
- Click the `24 hours` checkbox if your support team is always available.
- For simplicity, we recommend that you create one set of business hours per support center.
- You can track when changes have been made to the `Escalated` field on cases by enabling field history tracking for the `Escalated` field. For more information, see "Tracking Field History" in the Salesforce online help.

About Multiple Business Hours

Setting Business Hours

User Permissions Needed	
To set business hours:	"Customize Application"

You can specify the business hours at which your customer support team operates, including multiple business hours in multiple time zones. Setting business hours enables you to:

- Associate cases with specific time zones and locations
- Escalate cases according to specific time zones and locations

After you set business hours, users can click the `Business Hours` lookup field on a case to associate the case with the times at which a customer support team operates. Additionally, users with the "Customize Application" permission can associate business hours with escalation rules so that when the details of a case match the criteria of an escalation rule, the case is automatically updated and escalated with the times and location on the rule. By default, business hours are set 24 hours, seven days a week in the default time zone specified in your organization's profile. For more information, see "Setting Up Your Organization" in the Salesforce online help and "Setting Up Escalation Rules" in the Salesforce online help.

To set business hours:

1. Click **Setup** ► **Company Profile** ► **Business Hours**.
2. Click **New Business Hours**.
3. Enter a name for the business hours.

We recommend that you enter text in the `Business Hours Name` field that will remind users of a location or time zone when they view business hours on a case. For example, if your business hours are for a support center in San Francisco, you could enter `San Francisco Business Hours`.

4. Click **Active** to allow users to associate the business hours with cases and escalation rules.

After business hours are set to active, you can deselect the `Active` checkbox so that users can no longer associate the business hours with cases and escalation rules.

5. Optionally, click `Use these business hours as the default` to set the business hours as the default business hours on all new cases.

Default business hours on cases can be updated with business hours on escalation rules if the cases match escalation rule criteria and the rule is set to override business hours. For details, see "Setting Up Escalation Rules" in the Salesforce online help.

6. Choose a time zone to associate with the business hours in the `Time Zone` drop-down list.
7. For each day of the week, click the start and end fields to choose the start and end times for the business hours.

If a time is not available for you to choose from, click the field and enter the time. Start times must be earlier than end times.

Optionally, click `24 hours` if your support team is available during the entire day.

8. Click **Save**.
9. Optionally, associate the business hours to escalation rules so that when the details of a case match the criteria of an escalation rule, the case is updated and escalated with the business hours on the rule. For more information, see "Setting Up Escalation Rules" in the Salesforce online help.

To update business hours, click **Setup > Company Profile > Business Hours** and click the **Edit** link next to the name of the business hours you wish to update.

Tips on Setting Business Hours

Consider the following when setting business hours:

- After you set business hours, add the `Business Hours` lookup field to case layouts and set field-level security on the `Business Hours` field. This allows users to view and update business hours on a case. For more information, see "Customizing Page Layouts" in the Salesforce online help and "Setting Field-Level Security" in the Salesforce online help.
- Business hours on a case are automatically set to your organization's default business hours, unless the case matches the criteria on an escalation rule associated with different business hours.
- Salesforce automatically calculates daylight savings times for the time zones available for business hours.
- Escalation rules only run during the business hours with which they are associated. For more information, see "Setting Up Escalation Rules" in the Salesforce online help.
- You can update cases associated with business hours that are no longer active without having to replace the inactive business hours with active business hours.
- You cannot include the `Business Hours` field in list views or reports.
- You can create multiple business hours for support teams that operate in the same time zone but at different hours.
- For simplicity, we recommend that you create one set of business hours per support center.

Customer Portal Enhancements

Available in: **Enterprise** and **Unlimited** Editions

With Summer '08, you can extend Salesforce's robust analytics and content management capabilities to your customers via the Customer Portal. A Customer Portal provides an online support channel to your customers, allowing them to resolve their inquiries without contacting a customer service representative.

The new capabilities delivered with the SalesforceCustomer Portal include:

Customer Analytics in the Customer Portal

With Summer '08, you can add the Reports tab to your Customer Portal so that your customers can run reports on the data that they have permission to access.

Salesforce Content for Customer Portal

You can now grant two levels of access to Salesforce Content to Customer Portal users. For more information, see "Enabling Salesforce Content in the Customer Portal" in the Salesforce online help.

Default Tab

Now, you can choose which tab to display to users when they log into your portal. For example, instead of the Home tab displaying to users when they log into your portal, you can choose the Cases tab to display.

To set which tab displays to users when they log in to your portal:

1. Click **Setup > Customize > Customer Portal > Settings**.
2. Select the name of the Customer Portal whose tabs you want to customize.
3. Click **Customize Portal Tabs**.
4. From the `Default Landing Tab` drop-down, select which tab to display to users when they log into your portal.
5. Click **Save**.

Implementation Tips

- Portal users cannot customize reports or filter report results; they can only run reports.
- Report results for portal users only include links to objects the portal users have permission to access.
- The Report Options section does not display on report results for portal users because portal users cannot customize report results. Also, the Generated Chart section, which includes the **Edit**, **Large**, **Medium**, and **Small** links, does not display on report results.
- Portal users do not have access to the Unfiled Public Reports and My Personal Custom Reports folders.
- Add the Reports tab to your Customer Portal. For more information, see "Customizing Your Customer Portal's Tabs" in the Salesforce online help or "Customizing Your Partner Portal Tabs" in the Salesforce online help.
- Portal users can only report on objects set to Private in the organization wide default sharing model. Some objects, such as solutions, are not included in the sharing model and cannot be reported on by portal users. For more information, see "Setting Your Organization Wide Default Sharing Model" in the Salesforce online help.
- Portal users will receive an insufficient privileges error if they run a report that contains objects they do not have permission to view.

Best Practices

- Customize reports for portal users and verify that report results include filters that display the specific data you want your customers to view.
- Add the "Run Reports" and "Export Reports" permissions to custom profiles for portal users. For more information, see "Creating and Editing Profiles" in the Salesforce online help.
- After you add reports and the Reports tab to your Customer Portal, log in to your Customer Portal as a portal user to verify that the Reports tab and reports you customized for portal users display correctly.
- By default all users, including portal users, can view report folders. To prevent portal users from viewing report folders, update the sharing settings on report folders to the All Internal Users group. For more information, see "Managing Folders" in the Salesforce online help.

About the Reports Tab for the Customer Portal

Adding Reports and the Reports Tab to Your Customer Portal

To add reports and the Reports tab to your Customer Portal:

1. Customize reports for portal users. For more information, see "Customizing Reports" in the Salesforce online help.
2. Save the reports you customized for portal users to folders on the Reports tab that you want portal users to access. For more information, see "Saving Reports" in the Salesforce online help.
3. Update folder access settings to include portal users on the report folders that contain reports for portal users to run:
 - a. On the Reports tab, select a folder from the `Folder` drop-down list and click the **Edit** link.
 - b. Choose the `This folder is accessible by all users` field or the `This folder is accessible only by the following users:` field and add Customer Portal users.
 - c. Click **Save**.
4. Set the organization wide default sharing model to Private on objects you want portal users to report on:
 - a. Click **Setup** ► **Security Controls** ► **Sharing Settings**.
 - b. Click **Edit** on the Default Sharing Settings related list.
 - c. Select Private from the `Default Access` drop-down list that corresponds with the object you want portal users to report on.
 - d. Click **Save**.

5. Add the Reports tab to your Customer Portal. For more information, see "Customizing Your Customer Portal's Tabs" in the Salesforce online help or "Customizing Your Partner Portal Tabs" in the Salesforce online help.
6. Add the "Run Reports" and "Export Reports" permissions to custom profiles for portal users. For more information, see "Creating and Editing Profiles" in the Salesforce online help.
7. On portal profiles, set the tab settings for Reports to Default On. For more information, see "Creating and Editing Profiles" in the Salesforce online help.
8. Optionally, log in to your portal as a portal user and verify that the Reports tab and reports you customized for portal users display correctly.

Salesforce Content Enhancements

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

Summer '08 provides several major enhancements to Salesforce Content:

Salesforce Content Analytics

Dashboards, standard reports, and custom reports are now available to help you analyze Salesforce Content data.

Salesforce Content for Customer Portal and Partner Portal

You can now provide access to Salesforce Content for your Customer Portal and Partner Portal users.

Global Salesforce Content Availability

Generally available to English-speaking users in Spring '08, Salesforce Content is now available in all Salesforce-supported languages.

In addition, a new multi-language search and contribute feature allows organizations to associate and search for content within specific languages.

About Salesforce Content Enhancements

Salesforce Content Reports

User Permissions Needed	
To run reports:	"Run Reports" AND "Read" on the records included in reports
To create, edit, save, and delete reports:	"Run Reports" and "Read" on the records included in the reports AND "Create and Customize Reports"

Both standard and custom reports are available to help you analyze Salesforce Content data.

Special Features of Salesforce Content Reports

Consider the following when running Salesforce Content reports:

Standard Reports

- Use the Workspace Content report to view the number of files and Web links in each workspace as well as the total amount of storage used by each workspace.



Note: Salesforce Content has its own storage allowance; it does not use General Storage or Supplementary Document Storage. For more information, see "Monitoring Resources" in the Salesforce online help.

- Use the Content Publication Time Frame report to determine how many files and Web links were published in a workspace during a given time period.
- Use the Workspace Administrators report to determine which users have administrative rights in the workspace. A workspace administrator is a user who has the `Manage Content` option checked in his or her workspace permission.
- Use the Most Content Downloads report to determine which files are downloaded most frequently.
- Use the Most Content Subscriptions report to determine which files and Web links have the most subscribers.
- Use the Stale Content report to determine which files have not been downloaded or revised recently.
- Use the Content Authors report to view how many files and Web links each author has published in Salesforce Content.

Report Types

Use the Salesforce Content report type to analyze data from standard and custom fields in your Salesforce Content workspaces. The Salesforce Content report type offers two custom reports:

Content Report

This report type allows you to analyze and sort by any of the Content Report Fields.

Workspace and User Report

This report type generates a list of users who are assigned to workspaces.

Tips for Content Reports

- Salesforce Content users who have the `Manage Content` option checked in their workspace permission can sort report data by the workspaces they have access to ("My Workspaces") or by all the workspaces in an organization ("All Workspaces"). Users without the `Manage Content` option can only sort data by the workspaces they have access to.
- Sort custom reports by `Workspace Name` to view data for individual files as well as workspace summaries, such as total storage used and total number of downloads.
- Sort according to the `Content ID` to view data for a particular document. The `Content Title` is not guaranteed to be unique because multiple versions of the same file can have different titles.
- If you have Customer Portal or Partner Portal users with the "Create Workspaces" user permission, run the Workspace Administrators report to determine which new workspaces have been created by portal users.

Content Report Fields

You can report on any of the following fields in Content custom reports. Depending on the report, these fields are also available in standard reports.

Field	Description
Archived	Flag that indicates whether a file has been archived. Archiving a file removes it from its workspace but does not permanently delete the file from Salesforce Content. Archived files can be restored as needed.
Content Created By	Contributor who published the file or Web link.
Content ID	Identifier that enables you to group by file rather than version. The Content Title is not guaranteed to be unique because multiple versions of the same file can have different titles.
Content Published Date	Date a file or Web link was first published.
Content Title	Title of a file or Web link.
Individual Content Size (MB)	Size of an individual file, exclusive of other versions of the same file.
Total Content Size (MB)	Size of a file, inclusive of all the file's versions.
Num Downloads	Number of times a file has been downloaded or the total number of downloads in a workspace. The number of times a Web link has been opened is not included in this count.
Num Subscriptions	Number of users who are subscribed to a file or Web link, or the total number of subscriptions in a workspace.
Num Versions	Number of times a new version of a file has been published.
Tag	Salesforce Content tag assigned to a file or Web link.
Version Revised Date	Date and time a new version of the file was published.
Version Revised By	Contributor who published the file version.
Workspace Name	Name of the workspace.
Workspace Created Date	Date and time the workspace was created.

Enabling Salesforce Content in the Customer Portal

User Permissions Needed	
To set up and update the Customer Portal:	"Customize Application"
To create and edit profiles:	"Manage Users"
To manage Customer Portal users:	"Edit Self-Service Users"
To create Salesforce Content workspace permissions:	"Manage Salesforce Content" OR "Manage Content Permissions"
To add users to a Salesforce Content workspace:	"Manage Salesforce Content" OR Manage Workspace checked in your workspace permission definition

Salesforce Content is available in the Customer Portal. Two levels of access to Salesforce Content can be granted to Customer Portal users:

- Portal users without a Salesforce Content feature license can download, rate, comment on, and subscribe to content if they have the "View Content on Portals" user permission in their user profiles. They cannot view potentially sensitive data such as user names and download, version, and subscriber history.
- Portal users with a Salesforce Content feature license can access all Salesforce Content features granted by their workspace permission(s), including contributing content, moving and sharing content among workspaces, and deleting content. They can also view Salesforce Content reports.

Enable Salesforce Content for Non-Licensed Users

After you have enabled your Customer Portal, complete the following steps to enable Salesforce Content in your portals. Use these steps if you have not purchased Salesforce Content feature licenses for your portal users.

1. Update Customer Portal profiles:
 - a. Clone the Customer Portal User and/or Customer Portal Manager profiles to include the "View Content on Portals" user permission.
 - b. In the cloned profiles, change the tab visibility for the Workspaces, Content, and Subscriptions tabs from Tab Hidden to Default On. For more information about cloning and updating profiles, see "Creating and Editing Profiles" in the Salesforce online help.
 - c. Assign the cloned profiles to your Customer Portal users. For more information, see "Managing Users" in the Salesforce online help.
2. Determine what privileges your portal users will have in each Salesforce Content workspace by creating one or more workspace permissions. For more information, see "Creating Workspace Permissions" in the Salesforce online help.



Note: A workspace permission can only grant privileges that a user's feature license or profile permits. For example, even though Tag Content is a workspace permission option, selecting it does not allow portal users without a Salesforce Content feature license to tag content.

3. Determine which workspaces you want your portal users to have access to. Ensure that confidential content is not available in these workspaces.

4. Add portal users to workspaces. Portal users with the Customer Portal User profile or a clone of that profile can only be added to a workspace as part of a public group. Portal users with the Customer Portal Manager profile or a clone of that profile can be added to a workspace individually. For more information, see "Displaying and Editing Workspaces" in the Salesforce online help.
5. Add the Salesforce Content tabs to each Customer Portal. For more information, see "Customizing Your Customer Portal's Tabs" in the Salesforce online help.



Note: The Documents tab is not part of Salesforce Content.

Enable Salesforce Content for Licensed Users

After you have enabled your Customer Portal, complete the following steps to enable Salesforce Content in your portals. Use these steps if you have purchased Salesforce Content feature licenses for your portal users

1. Update Customer Portal profiles:
 - a. Optionally, clone the Customer Portal User and/or Customer Portal Manager profiles to include the "Create Workspaces" user permission if you want to allow portal users to create and administer new workspaces.
 - b. In your standard or cloned Customer Portal profiles, change the tab visibility for the Workspaces, Content, Subscriptions, and Contribute tabs from Tab Hidden to Default On.



Note: Even if the Contribute tab is visible in the portal, only portal users with appropriate privileges in their workspace permission can contribute content.

For more information about cloning and updating profiles, see "Creating and Editing Profiles" in the Salesforce online help.

- c. Assign the cloned profiles to your Customer Portal users as needed.
2. Select the `Salesforce Content User` checkbox on the user detail page for each Customer Portal user. For more information, see "Managing Users" in the Salesforce online help.
3. Determine what privileges your portal users will have in each Salesforce Content workspace by creating one or more workspace permissions. For more information, see "Creating Workspace Permissions" in the Salesforce online help.



Note: A workspace permission can only grant privileges that a user's feature license or profile permits. For example, even though `Tag Content` is a workspace permission option, selecting it does not allow portal users without a Salesforce Content feature license to tag content.

4. Determine which workspaces you want your portal users to have access to. Ensure that confidential content is not available in these workspaces.
5. Add portal users to workspaces. Portal users with the Customer Portal User profile or a clone of that profile can only be added to a workspace as part of a public group. Portal users with the Customer Portal Manager profile or a clone of that profile can be added to a workspace individually. For more information, see "Displaying and Editing Workspaces" in the Salesforce online help.
6. Add the Salesforce Content tabs to each Customer Portal. For more information, see "Customizing Your Customer Portal's Tabs" in the Salesforce online help.



Note: The Documents tab is not part of Salesforce Content.

Enabling Salesforce Content in the Partner Portal

User Permissions Needed	
To set up and update the Partner Portal:	"Customize Application"
To create and edit profiles:	"Manage Users"
To manage Partner Portal users:	"Manage Partners"
To create Salesforce Content workspace permissions:	"Manage Salesforce Content" OR "Manage Content Permissions"
To add users to a Salesforce Content workspace:	"Manage Salesforce Content" OR Manage Workspace checked in your workspace permission definition

Salesforce Content is available in the Partner Portal. Two levels of access to Salesforce Content can be granted to Partner Portal users:

- Portal users without a Salesforce Content feature license can download, rate, comment on, and subscribe to content if they have the "View Content on Portals" user permission in their user profiles. They cannot view potentially sensitive data such as user names and download, version, and subscriber history.
- Portal users with a Salesforce Content feature license can access all Salesforce Content features granted by their workspace permission(s), including contributing content, moving and sharing content among workspaces, and deleting content. They can also view Salesforce Content reports.

Enable Salesforce Content for Non-Licensed Users

After you have enabled the Partner Portal, complete the following steps to enable Salesforce Content in your portals. Use these steps if you have not purchased Salesforce Content feature licenses for your portal users.

1. Update your cloned Partner User profiles:
 - a. Include the "View Content on Portals" user permission.
 - b. Change the tab visibility for the Workspaces, Content, and Subscriptions tabs from Tab Hidden to Default On. For more information about cloning and updating profiles, see "Creating and Editing Profiles." in the Salesforce online help.
 - c. Assign the updated profile to Partner Portal users as needed. For more information, see "Managing Users" in the Salesforce online help.
2. Determine what privileges your portal users will have in each Salesforce Content workspace by creating one or more workspace permissions. For more information, see "Creating Workspace Permissions" in the Salesforce online help.



Note: A workspace permission can only grant privileges that a user's feature license or profile permits. For example, even though Tag Content is a workspace permission option, selecting it does not allow portal users without a Salesforce Content feature license to tag content.

3. Determine which workspaces you want your portal users to have access to. Ensure that confidential content is not available in these workspaces.

4. Add portal users to workspaces. Portal users with the Partner User profile or a clone of that profile can only be added to a workspace as part of a public group. For more information, see "Displaying and Editing Workspaces" in the Salesforce online help.
5. Add the Salesforce Content tabs to each Partner Portal. For more information, see "Customizing Your Partner Portal Tabs" in the Salesforce online help.



Note: The Documents tab is not part of Salesforce Content.

Enable Salesforce Content for Licensed Users

After you have enabled the Partner Portal, complete the following steps to enable Salesforce Content in your portals. Use these steps if you have purchased Salesforce Content feature licenses for your portal users.

1. Update your cloned Partner User profiles:
 - a. Optionally, add the "Create Workspaces" user permission if you want to allow portal users to create and administer new workspaces.
 - b. Change the tab visibility for the Workspaces, Content, Subscriptions, and Contribute tabs from Tab Hidden to Default On.



Note: Even if the Contribute tab is visible in the portal, only portal users with appropriate privileges in their workspace permission can contribute content.

For more information about cloning and updating profiles, see "Creating and Editing Profiles" in the Salesforce online help.

- c. Assign the updated profile to Partner Portal users as needed. For more information, see "Managing Users" in the Salesforce online help.
2. Select the `Salesforce Content User` checkbox on the user detail page for each Partner Portal user.
3. Determine what privileges your portal users will have in each Salesforce Content workspace by creating one or more workspace permissions. For more information, see "Creating Workspace Permissions" in the Salesforce online help.



Note: A workspace permission can only grant privileges that a user's feature license or profile permits. For example, even though `Tag Content` is a workspace permission option, selecting it does not allow portal users without a Salesforce Content feature license to tag content.

4. Determine which workspaces you want your portal users to have access to. Ensure that confidential content is not available in these workspaces.
5. Add portal users to workspaces. Portal users with the Partner User profile or a clone of that profile can only be added to a workspace as part of a public group. For more information, see "Displaying and Editing Workspaces" in the Salesforce online help.
6. Add the Salesforce Content tabs to each Partner Portal. For more information, see "Customizing Your Partner Portal Tabs" in the Salesforce online help.



Note: The Documents tab is not part of Salesforce Content.

Global Salesforce Content Availability

The Salesforce Content application is available in all Salesforce-supported languages. In addition, the multi-language search and contribute feature allows organizations to associate and search for content within specific languages. To set up multi-language functionality, click **Setup** ► **Customize** ► **Salesforce Content** ► **Settings**.

If `Enable multi-language search and contribute` is checked, a `Language` drop-down list is available when users publish, edit, or search for content. The `Language` drop-down list contains all fifteen languages that Salesforce supports:

- Brazilian Portuguese
- Simplified Chinese
- Traditional Chinese
- English
- Dutch
- Finnish
- French
- German
- Italian
- Japanese
- Korean
- Russian
- Spanish
- Swedish
- Thai

When content is being published, Salesforce Content associates the content with the user's language if another language is not chosen or if `Enable multi-language search and contribute` is not checked.



Important: If the user's personal language setting is different from the organization's language, content published by that user is associated with the user's language, not the organization's language.

If users select a specific language during search, only content published in the search language displays in search results. To change the language for a published document, open that document's content details page and click **Edit Details**.

Salesforce Ideas Enhancements

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

With Summer '08, Salesforce Ideas now lets administrators create multiple communities that can be made available to internal Salesforce users and portal users, or restricted to internal Salesforce users only.

In addition, Salesforce Ideas now includes many of the powerful Force.com platform features you are accustomed to using on other standard and custom objects. For example, you can now do the following with Salesforce Ideas:

- Create custom fields
- Specify the layout of your custom fields
- Use validation rules
- Create workflow rules
- Define Apex triggers

Implementation Tips

- For Summer '08, Salesforce Ideas is automatically enabled for new organizations and can be accessed from the AppExchange app menu. In addition, the Internal Ideas community is active on the Ideas tab so your Salesforce users can begin posting and sharing ideas immediately. If you want to disable Salesforce Ideas, see [Customizing Salesforce Ideas Settings](#). By default, Salesforce Ideas is disabled for existing organizations.
- Internal users (those with access to Salesforce) can view every community that an administrator creates. Administrators can choose to also display specific communities to Customer Portal and Partner Portal users by selecting the **Show In Portal** checkbox when they create a new community.

Best Practices

- If your organization has multiple communities, make sure you are in the correct community when browsing and posting ideas. You can use the drop-down menu at the top of the Ideas tab to view ideas in a different community.
- After you post an idea, you cannot change the community associated with your idea.
- To ensure that each community has its own unique list of ideas, you cannot post an idea to multiple communities.

About Salesforce Ideas Enhancements

About Ideas

User Permissions Needed	
To view the Ideas tab:	"Read" on ideas
To view and vote for ideas:	"Read" on ideas
To create ideas and add comments to ideas:	"Create" on ideas
To edit ideas and edit comments on ideas:	"Edit" on ideas

Salesforce Ideas is a community of users who post, vote for, and comment on ideas. Consider it an online suggestion box that includes discussions and popularity rankings for any subject.



Tip: Salesforce.com offers its own Salesforce Ideas community for Salesforce users to submit product feedback and suggest new features. To visit, go to <http://ideas.salesforce.com>.

Ideas Terminology

The following terminology is used for Salesforce Ideas:

Category

Administrators can define categories so ideas can be organized into logical groups for easier browsing. A **View Category** drop-down list displays on the Ideas tab, and a **Category** picklist is available when creating an idea. For example, if your Salesforce Ideas community has the focus "Improvements to our clothing line," then you might set up categories such as "Shirts," "Jackets," and "Slacks." Each organization has one common set of categories for all of its communities.

Comment

Comments are plain text responses to posted ideas that enable discussions about the ideas. On the Ideas tab, the **Comments** subtab lists the comments that have most recently been submitted. On the detail page of an idea, comments are sorted in chronological order from oldest to newest.

Community

Communities help organize ideas into logical groups with each community having its own focus, unique ideas, and categories. Internal users can view every community within Salesforce, and administrators can choose to display specific communities to Customer Portal and Partner Portal users as well. Professional Edition organizations can have only one internal community. All other editions can have up to 25 communities. For more information, see "Managing Salesforce Ideas" in the Salesforce online help.

Half-life

The half-life setting determines how quickly old ideas drop in ranking on the Popular Ideas subtab, to make room for ideas with more recent votes. A shorter half-life moves older ideas down the page faster than a longer half-life. This setting affects all communities in your organization. For information on customizing the half-life, see "Customizing Salesforce Ideas Settings" in the Salesforce online help.

Idea

Ideas are suggestions written in plain text. For example, if the focus of a particular Salesforce Ideas community is "Ideas for car features," an appropriate idea for that community might have the title "Insulated cup holders that keep your beverage hot or cold." Or, if the focus of a particular Salesforce Ideas community is "Ideas for our company's employee benefits," an appropriate idea for that community might have the title "On-site day care." Currently, ideas do not support markup, such as HTML or images.

Inbox

Your inbox tracks the ideas you have participated in across all communities—either by posting an idea or adding a comment to an idea—that have received new comments since you last viewed the idea. For more information, see "Using Your Ideas Inbox" in the Salesforce online help.

Point

A point is a unit of measurement that represents the popularity of an idea. Each vote for an idea is worth ten points. An idea's total number of points displays next to its **Vote** button.

Popular

On the Popular Ideas subtab, ideas are sorted by an internal calculation that reflects the age of an idea's votes. Regardless of an idea's static total number of points, ideas with newer votes display higher on the page than ideas with older votes. This allows you to browse ideas that have most recently gained popularity, with less precedence given to long-established ideas that were voted on in the past. For more information on how ideas move down the page, see "Point" in the Salesforce online help and "Half-life" in the Salesforce online help.

Portal

If your organization has a Customer Portal or Partner Portal, you can add the Ideas tab to either or both portals so that portal users can participate in their own Salesforce Ideas communities. The Community list at the top of the Ideas tab lists all the available communities. Each community contains its own unique group of ideas, and communities identified as Internal Only can only be accessed by Salesforce users. All other communities can be accessed by both internal Salesforce users as well as users who have access to a Customer Portal or Partner Portal.

For more information about the Customer Portal, see "Setting Up Your Customer Portal" in the Salesforce online help. For more information about the Partner Portal, see "About Partner Relationship Management" in the Salesforce online help.

Top All-Time

On the Top All-Time subtab, ideas are sorted from most number of points to fewest. This allows you to see the most popular ideas in the history of your Salesforce Ideas community.

Vote

If you agree with or like an idea, click the **Vote** button to vote for it. Each vote adds ten points to an idea. You cannot vote for the same idea more than once. Note that when you post an idea, your vote is automatically added when you save the new idea. For more information on points, see "Point" in the Salesforce online help.

Customizing Salesforce Ideas Settings

User Permissions Needed	
To customize Salesforce Ideas settings:	"Customize Application"

To manage organization-wide settings for Salesforce Ideas:

1. Click **Setup** ► **Customize** ► **Ideas** ► **Settings**.
2. Click **Edit**.
3. Use the **Enable Ideas** checkbox to enable or disable Salesforce Ideas for your organization.

Enabling Salesforce Ideas displays the Ideas app in the AppExchange app menu and shows active communities on the Ideas tab. By default, the Ideas app includes the following tabs: Home, Contacts, Accounts, Ideas, Reports, and Dashboards. To access the page where you can customize the tabs in an app, click **Setup** ► **Create** ► **Apps**, then click **Edit** next to the appropriate app name.

Disabling Salesforce Ideas removes the Ideas app as well as any instances of the Ideas tab included in other apps. Users will no longer be able access active communities, but these communities will reappear on the Ideas tab the next time you enable Salesforce Ideas.

4. In the **Half-Life (in Days)** field, enter a number of days.

The half-life setting determines how quickly old ideas drop in ranking on the Popular Ideas subtab, to make room for ideas with more recent votes. A shorter half-life moves older ideas down the page faster than a longer half-life.

5. Click **Save**.

Creating and Editing Communities

User Permissions Needed	
To create or edit a Salesforce Ideas community:	"Customize Application"

To create a new community or edit the details of an existing community, click **Setup** ► **Customize** ► **Ideas** ► **Communities**, and then click **Edit** or **New**.

When creating or editing a community, note the following:

- Every community must have a unique name.
- The community whose name comes first in the alphabet is the community that is displayed when users first visit the Ideas tab. For example, if you have a community named Jeans and another named T-shirts, the Jeans community is the default community that appears when users first go to the Ideas tab.
- Descriptions are optional and must be in plain text. HTML and other markup languages are not supported.
- To display the community to your Salesforce Ideas users, select the **Active** checkbox. Communities cannot be deleted, so if you need to hide a community, make sure **Active** is not selected.
- To show the community to your Customer Portal and Partner Portal users, select the **Show In Portal** checkbox.

Setting Layouts for Idea Custom Fields

User Permissions Needed	
To set the layout of a Salesforce Ideas custom field:	"Customize Application"

When a custom field is created for Salesforce Ideas, that field appears in the Additional Information section at the bottom of the Post Idea and Idea Detail pages.

To improve the layout of these pages, you can specify the order in which a custom field appears in the Additional Information section. You can also remove a custom field from these pages without permanently deleting the field from the system.

To set the layout of a custom Salesforce Ideas field:

1. Click **Setup** ► **Customize** ► **Ideas** ► **Custom Field Layout**.
2. Click **Edit**.
3. In the **Selected Fields** column, select the field you want to move and use the up and down arrows to change the order of the field in the list.

The **Selected Fields** column shows the order in which custom fields appear in the Additional Information section on the Post Idea and Idea Detail pages.
4. To remove a custom field, select the field in the **Selected Fields** column and click **Remove**. The field moves to the **Available Fields** column and no longer appears on the Post Idea and Idea Detail pages.
5. Click **Save**.

Tips on Using Salesforce Ideas

User Permissions Needed	
To view the Ideas tab:	"Read" on ideas
To view and vote for ideas:	"Read" on ideas
To create ideas and add comments to ideas:	"Create" on ideas
To edit ideas and edit comments on ideas:	"Edit" on ideas
To create communities:	"Customize Application"

- To monitor the activity of Salesforce Ideas, you can:
 - Create a workflow rule or trigger based on the number of comments an idea receives. You cannot create a workflow rule or trigger based on an idea's vote total or vote count. For more information, see "Creating Workflow Rules" in the Salesforce online help.
 - Create a custom report based on an idea's vote score or number of comments. For more information, see "Creating a Custom Report" in the Salesforce online help.
- When posting an idea or comment, you can include a plain text URL in the idea's description or comment field, but you cannot attach a file or add a note to an idea.
- Master detail relationships are not supported.
- Salesforce Ideas does not support workflow tasks, outbound messages, and approvals.
- Salesforce Ideas does not support custom links.
- The Ideas detail page does not contain related lists.

- The data export feature archives all your Salesforce Ideas data with the exception of deleted ideas and deleted comments.
- When creating a validation rule, you can only display error messages at the top of the page. Error messages cannot be displayed next to the field as in other objects. For more information, see "Defining Validation Rules" in the Salesforce online help.
- You cannot create activities and events for Salesforce Ideas.
- When using standard or custom Idea fields, note the following:
 - History tracking is not supported.
 - Field dependencies and roll-up summary fields are not supported.
 - Formula fields are not available for the Community object.

Partner Portal Enhancements

Available in: **Enterprise** and **Unlimited** Editions

With Summer '08, Salesforce customers can leverage the power of the Partner Portal to extend the benefits of a CRM system to their indirect sales channels through a simple and easy-to-use portal. Partner Portal allows companies to track a consolidated sales forecast and manage pipeline dashboards across internal sales groups and external partner sales groups. With Partner Portal, it is easy to collaborate with strategic partners through co-marketing and joint selling programs.

The new capabilities delivered with the Salesforce partner portal include:

Log In as Customer Portal or Partner Portal User

You can now log in as a Customer Portal or Partner Portal user to test or troubleshoot any portal issues. To do so, navigate to the contact detail page for a Customer Portal or Partner Portal user and click **Login As Portal User**. This action opens a new browser window and logs you into the portal as the Customer Portal or Partner Portal user.

Partner Self-Service User Administration

You can delegate some administrative rights to partner users that have the gold (strategic) partner user license. Delegated partner user administrators can do any of the following for users associated with their own account:

- Create new partner users
- Edit existing partner users
- Reset passwords for partner users
- Deactivate partner users

Salesforce Content for Partner Portal

You can now grant two levels of access to Salesforce Content to Partner Portal users. For more information, see "Enabling Salesforce Content in the Partner Portal" in the Salesforce online help.

Salesforce Ideas for Partner Portal

Administrators can choose to also display specific communities to Partner Portal users by selecting the **Show In Portal** checkbox when they create a new community. For more information, see "General Availability of Salesforce Ideas" in the Salesforce online help.

Reports for Partner Portal

With Summer '08, you can add the Reports tab to your Partner Portal so that your customers can run reports on the data that they have permission to access. Only partner users with the Gold Partner license can access the Reports tab.

Default Tab

Now, you can choose which tab to display to users when they log into your portal. For example, instead of the Home tab displaying to users when they log into your portal, you can choose the Opportunities tab to display.

To set which tab displays to users when they log in to your portal:

1. Click **Setup** ► **Customize** ► **Partner Portal** ► **Settings**
2. Select the name of the portal whose tabs you want to customize.
3. Click **Customize Portal Tabs**.
4. From the **Default Landing Tab** drop-down, select which tab to display to users when they log into your portal.
5. Click **Save**.

About the Partner Portal

Partner relationship management (PRM) allows companies that sell through indirect sales channels to maximize the return on their channel investments and increase channel revenues. With partner relationship management, organizations can manage, track, and forecast their channel business alongside their direct sales business. It also helps partners sell more effectively, close more business, and achieve greater profits.

Empowering your partners with your Salesforce data can help you sell more without spending more. However, you want to control the information your partners can access, and you want your partners to work within an application that uses your company's branding. You can accomplish this by granting your partners access to a Salesforce partner portal.

A portal allows partner users to log in to Salesforce through a separate website than your non-partner users. Partner users can only see the data that you have made available to them. Furthermore, partner users can only manipulate data if you give them the appropriate user permissions.

The following Salesforce features are key to partner relationship management:

Partner accounts

Partner accounts are accounts that a channel manager uses to manage partner organizations, partner users, and activities.

Partner users

Partner users are Salesforce users with limited capabilities. They are associated with a particular partner account, have limited access to your organization's data, and log in via a partner portal.

There are three license types available for partner users: Bronze (Basic) Partner, Silver (Standard) Partner, and Gold (Strategic) Partner. The license type controls the amount of additional organization storage per license as well as which features the partner user can access on the portal.

	Bronze Partner License Type	Silver Partner License Type	Gold Partner License Type
Storage per license	None	2 MB	5 MB
Documents	Yes	Yes	Yes
My Account Profile	Yes	Yes	Yes
Leads	No	Yes	Yes
Custom Objects	No	Yes	Yes
Approvals	No	Yes	Yes
Accounts	No	No	Yes

	Bronze Partner License Type	Silver Partner License Type	Gold Partner License Type
Opportunities	No	No	Yes
Salesforce Content	No	Yes	Yes
Reports	No	No	No

Your organization may also have users with a Partner license which is no longer available from salesforce.com. The Partner license has all of the functionality of the Strategic Partner License Type, but includes 20 MB of storage per user. For more information on storage limits, see "Monitoring Resources" in the Salesforce online help. For more information on user license types, see "Viewing User License Types" in the Salesforce online help.

Channel managers

Channel managers are the internal users that manage your partners.

Partner portals

Partner portals allow partner users to log in to Salesforce through a web portal rather than through salesforce.com. You can customize the web portal to show your branding, and you can configure it to meet your functional and security needs. You can also have multiple portals to meet your different requirements for working with partners.

Delegate Partner User Administration

User Permissions Needed	
To manage Partner Portal users:	"Manage Partners"
To create, edit, and delete profiles:	"Manage Users"

You can delegate a subset of administrative rights to partner portal users that have a gold (strategic) partner user license. Delegated portal user administrators can perform any of the following tasks for users associated with their account:

- Create partner users.
- Edit partner users.
- Reset passwords for partner users.

To delegate a partner portal user administration rights:

1. Click **Setup** ► **Manage Users** ► **Profiles** and click a custom partner profile.
You cannot edit the Partner User profile.
2. Click **Edit**.
3. Select **Delegated Portal User Administrator**.
4. Click **Save**.
5. Click **Edit** in the Delegated Portal User Profiles related list.
6. Select the partner user profiles you want users with this profile to be able to administer.
7. Click **Save**.

To change which profiles a delegated portal user administrator can edit:

1. Click **Setup** ► **Manage Users** ► **Profiles** and click a custom partner profile.

You cannot edit the Partner User profile.

2. Click **Edit** in the Delegated Portal User Profiles related list.
3. Select the partner user profiles you want users with this profile to be able to administer.
4. Click **Save**.

Delegated portal user administrators can perform the following tasks:

- Click **View Partner User** in the user's record to view the partner portal user's details.
- Click **Edit** to edit a partner portal user's details.
- Click **Reset Password** to reset the partner portal user's password.

Salesforce to Salesforce Enhancements

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

Salesforce to Salesforce enables business collaboration both within and across Salesforce organizations. This allows you to share lead, opportunity, account, contact, task, or custom object data with your business partners that use Salesforce and get real-time updates on the shared data. For example, you can share lead and opportunity data with business partners and manage your entire pipeline and programs within Salesforce.

Salesforce to Salesforce allows you and your business partners to collaborate more easily and effectively.

It allows your business partners to:

- Access all their programs from one place
- Easily integrate your data with the data they manage in Salesforce
- Integrate their business processes with updates received from you using workflow, assignment rules, and reports

It allows you to:

- Have 100% visibility into your partner activity
- Manage your entire pipeline, both internal sales and channel sales, in one place
- Rapidly and easily share data across multitiered partnerships
- Integrate your business processes with updates received from your partners using workflow and assignment rules

Salesforce to Salesforce Enhancements

Salesforce to Salesforce now offers the following enhancements in Summer '08:

Publish and Subscribe to Accounts and Contacts in Salesforce to Salesforce

You can now publish and subscribe to accounts and contacts using Salesforce to Salesforce.

Publish Related Tasks in Salesforce to Salesforce

You can now forward tasks that are related to a shared record using Salesforce to Salesforce.

Implementation Tips

Before making connections with other organizations using Salesforce to Salesforce, you must complete the following:

- "Enabling Salesforce to Salesforce" in the Salesforce online help
- "Configuring Salesforce to Salesforce" in the Salesforce online help

Once you have configured Salesforce to Salesforce, you can make connections with other organizations using Salesforce to Salesforce. To invite other companies make a connection with you using Salesforce to Salesforce, see "Sending an Invitation to Connect with your Business Partners using Salesforce to Salesforce" in the Salesforce online help.



Note: Invitations can only be sent from Professional, Unlimited and Enterprise Edition organizations.

If you have received an invitation to make a connection using Salesforce to Salesforce, see "Accepting or Rejecting an Invitation to Join Salesforce to Salesforce" in the Salesforce online help. You can manage your connections using the "Connections Home Page" in the Salesforce online help.

After you have made a connection to another company using Salesforce to Salesforce, you can share records with that connection. See "Making Records Available to a Connection" in the Salesforce online help and "Accepting or Rejecting Records Shared from a Connection" in the Salesforce online help.

Salesforce Mobile Enhancements

Available in: **Unlimited** and **Developer** Editions

Available for an additional cost in: **Professional** and **Enterprise** Editions

The Summer '08 release includes several new features that improve the capabilities of Salesforce Mobile. These include:

- [Mobile Client Support for Person Accounts](#)
- [Support for Windows Mobile 6 Standard Edition](#)
- [BlackBerry: Streamlined Client Deployment](#)
- [BlackBerry Integration with Web Maps](#)
- [BlackBerry Call Log Integration](#)
- [BlackBerry: Improved Preferences Screen](#)
- [BlackBerry: Log Calls and Emails as Events](#)
- [BlackBerry: Automatic Purging of Searched Records](#)
- [Windows Mobile: Clipboard Support](#)
- [Mobilize Recent Items](#)
- [Mobile Support for Opportunity Contact Roles](#)
- [\\$User Merge Fields for Mobile Configuration Filters](#)
- [Mobilize User Records](#)
- [Device Management Enhancements](#)
- [Login History: Mobile Application Name Change](#)
- [Mobile Session Caching](#)

About Salesforce Mobile Enhancements

Mobile Client Support for Person Accounts

Summer '08 introduces full support for person accounts in the Windows Mobile and BlackBerry client applications.

Support for Windows Mobile 6 Standard Edition

With Summer '08, Salesforce Mobile can now run on two of the most popular Windows Mobile smartphones on the market: the MOTO Q9 and the BlackJack II.

To install Salesforce Mobile on a Windows Mobile 6 Standard Edition phone:

1. Open Internet Explorer on your phone and navigate to the following URL: <http://mobile.salesforce.com/setup>.
2. Select **Download**, then select **Yes**.
3. After the application downloads, select **Done**.
4. From the phone's Start menu, select the Salesforce Mobile icon to launch the application.
5. Read the license agreement and select **I Accept**.
6. Enter your Salesforce username and password.
7. Select **Activate** to verify your Salesforce account and activate Salesforce Mobile on the device.

After your username and password are confirmed by Salesforce, the data is downloaded, and the icon pulses to show activity. The initial data download may last a few minutes. Future updates to the data automatically occur behind the scenes.

8. After your records have been downloaded to the device, the login screen appears. Because your account is activated on the device, Salesforce Mobile remembers your username and only prompts you for your password. Enter your password, and select **Login**.

BlackBerry: Streamlined Client Deployment

With streamlined initial installations, download times are faster, and mobile users can install or upgrade the Salesforce Mobile client without having to remove the battery on BlackBerry devices. In addition, the new deployment process includes customer-hosted client packages, which lets administrators host their own client installation file on internal file servers behind the firewall. This feature allows mobile users to install and upgrade the Salesforce Mobile clients on their devices without having to access an external site.

To install the latest version of the BlackBerry client application:

1. Open the Salesforce Mobile email message from your Salesforce administrator in the BlackBerry email application. If you don't receive an email with a link to the installer, you can open your web browser and navigate to the following URL: <http://mobile.salesforce.com/setup>.
2. Click the link in the email on your device to open the web page for the Salesforce Mobile installer. Your BlackBerry smartphone must be connected to the network to open the link in the email message.
3. Highlight the **Click here to download the loader** link and select **Get Link** from the menu.
4. Click **Download** to download the installation program.
5. After the installer downloads, click **Run**.
6. Click **OK** to launch the browser and continue the installation process.
7. Click **OK** to verify you understand that a firewall prompt may appear after the download.

The download page for the mobile application displays.

8. Click **Download** to install the mobile application.
9. When prompted to allow an HTTP connection, select the [tp.mobile.salesforce.com](http://mobile.salesforce.com) checkbox. Scroll down and click **Allow this connection**.
10. After the application installs successfully, a confirmation message appears. Click **OK** to close it.
11. Close the browser.
12. Click the Salesforce Mobile icon, which resides on the home page of your device or in the applications folder.
13. Read the license agreement and click **I Accept**.

The Salesforce Mobile Activation page appears.

14. Enter your Salesforce username and password.

Because many passwords contain special characters that are difficult to enter on the device, the `Show Password` checkbox is selected by default. To protect your password, deselect the option. An asterisk displays for each character you type.

15. Open the menu and select **Activate** to verify your Salesforce account and activate Salesforce Mobile on the device.

After your username and password are confirmed by Salesforce, the data is downloaded, and the icon pulses to show activity. The initial data download may last a few minutes. Future updates to the data automatically occur behind the scenes.

After your records have downloaded, the login screen appears. Because your account is activated on the device, Salesforce Mobile remembers your username and only prompts you for your password.



Note: When upgrading from the Winter '08 version of the BlackBerry, users will be prompted to reboot their device by removing and reinserting the battery. Once the new version is installed, however, the upgrade process will no longer require removal of the battery.

BlackBerry Integration with Web Maps

Summer '08 offers even more support for BlackBerry users in the field. Now Salesforce Mobile is integrated with web maps, which makes it easy to find the location of accounts, contacts, and leads. To map an address:

1. Select a contact, lead, or account.
2. Make sure your phone is connected to the network, then open the menu and select **Map**. A popup displays when mapping an account's address so you can select either **Billing Address** or **Shipping Address**.

The browser launches an online mapping site and displays the address.

3. To close the browser and return to the mobile application, press the Escape button on the BlackBerry.



Note: If your corporate IT policy prevents mobile users from accessing external websites on their devices, users cannot use the map feature.

Additionally, the **Map** option is not available if you exclude the address fields from mobile configurations.

BlackBerry Call Log Integration

BlackBerry users already have the ability to log inbound and outbound emails to Salesforce. With Summer '08, they can also log inbound and outbound calls to Salesforce. To log a call from the call history:

1. Open the BlackBerry call log.
2. Highlight a phone number, open the menu, and select **Log Call to Salesforce**.
3. Enter information about the completed task or event. Be sure to associate the task or event with a record. Salesforce Mobile cannot automatically populate this information because the call was placed or received outside of the mobile application.
4. Open the menu and select **Save**.

BlackBerry: Improved Preferences Screen

In previous versions of Salesforce Mobile, users configured each object's preferences separately from the appropriate tab. In Summer '08, the process of setting object preferences has been streamlined—now the mobile application has just one preferences screen with a selector for the object. To change object preferences:

1. Highlight any tab, open the menu, and click **Preferences**.
2. Highlight the Select drop-down list and select **Change Option** from the menu to choose the object whose preferences you want to change.
3. Edit the settings on the Options page.
4. Open the menu and select **Save**.

BlackBerry: Log Calls and Emails as Events

Summer '08 introduces the ability to log calls and emails as tasks instead of events. New preferences in the mobile application let BlackBerry users control how they want to log activities.

To change the logging options for calls and emails:

1. Highlight any tab, open the menu, and click **Preferences**.
2. Choose Calls or Emails from the Select drop-down list.
3. Edit the settings.

Call Option	Description
Log Call as	Select Task to configure Salesforce Mobile to automatically log completed calls as tasks. Select Event to automatically log completed calls as events. Select Ask Me to force the application to prompt you whether you want to log the completed call as a task or an event.

Email Option	Description
Log Email as	Select Task to configure Salesforce Mobile to automatically log sent emails as tasks. Select Event to automatically log emails as events. Select Ask Me to force the application to prompt you whether you want to log the sent email as a task or an event.

4. Open the menu and select **Save**.

BlackBerry: Automatic Purging of Searched Records

In Summer '08, the new data management feature in the BlackBerry mobile client application helps reduce the amount of memory used by Salesforce Mobile. Now the mobile client application automatically purges records that the user searched for and downloaded but no longer accesses. This enhancement can prevent the mobile application from draining valuable device resources and keep users from reaching their data size limit too quickly.

Windows Mobile: Clipboard Support

Now Windows Mobile users can work more efficiently in the mobile application. In Summer '08, Salesforce Mobile supports clipboard operations in text fields. Use the **Cut**, **Copy**, and **Paste** options on the Actions menu to cut, copy, and paste text from one text field to another.

Mobilize Recent Items

User Permissions Needed	
To view mobile configurations:	"View Setup and Configuration"
To create, change, or delete mobile configurations:	"Manage Mobile Configurations"

In Summer '08, administrators can set up mobile configurations so that wireless users automatically have access to items they recently used on the Salesforce website.

To mobilize recent items:

1. Click **Setup** ► **Mobile Administration** ► **Mobile Configurations**, and click **Edit** next to the name of the mobile configuration you want to modify.
2. Select the `Mobilize Recent Items` checkbox to mark recently used records in Salesforce for device synchronization.
 Selecting this option ensures that mobile users assigned to the configuration will not have to search for and download items they recently accessed on the Salesforce website, even if those records do not meet the configuration's filter criteria. For more information about filtering data sets, see "Defining Data Sets" in the Salesforce online help.
 Only records belonging to mobilized objects can be marked for device synchronization; for example, if you do not mobilize the account object in a configuration, users assigned to that configuration cannot automatically receive recent accounts on their devices.
3. Select a value from the `Maximum Number of Recent Items` drop-down list. You might set a low number if your users have minimal free space on their mobile devices.
4. Click **Save**.

Mobile Support for Opportunity Contact Roles

User Permissions Needed	
To view mobile data sets:	"View Setup and Configuration"
To create, change, or delete mobile data sets:	"Manage Mobile Configurations"

In Summer '08, wireless users can view opportunity contact roles on their mobile devices. To mobilize contact roles, include the contact data set as a child of the opportunity data set in your mobile configurations. In the mobile client application, contact roles are available as a related list on opportunity records.

\$User Merge Fields for Mobile Configuration Filters

User Permissions Needed	
To view mobile data sets:	"View Setup and Configuration"
To create, change, or delete mobile data sets:	"Manage Mobile Configurations"

In Summer '08, several of the \$User merge fields are available for mobile configuration filters, so administrators have even more flexibility when defining their users' data sets. You can use these merge fields to synchronize records where the user is

linked to a record but is not the record owner. For example, you can send cases created by the current user to the mobile device, or you can send records to the device where the current user is referenced in a custom field.

Merge Field	Description
<code>\$User.UserID</code>	References the ID of the current user. This merge field can be applied to fields that contain a user lookup. The valid operators for this merge field are Equals and Not Equal To.
<code>\$User.Username</code>	References the username of the current user. This merge field can be applied to any text or lookup field, except picklists. The valid operators for this merge field are Equals, Not Equal To, Greater Than or Equal, Less Than or Equal, Contains, Does Not Contain, and Starts With.
<code>\$User.Firstname</code>	References the first name of the current user. This merge field can be applied to any text or lookup field, except picklists. The valid operators for this merge field are Equals, Not Equal To, Greater Than or Equal, Less Than or Equal, Contains, Does Not Contain, and Starts With.
<code>\$User.Lastname</code>	References the last name of the current user. This merge field can be applied to any text or lookup field, except picklists. The valid operators for this merge field are Equals, Not Equal To, Greater Than or Equal, Less Than or Equal, Contains, Does Not Contain, and Starts With.
<code>\$User.Fullname</code>	References the first and last name of the current user. This merge field can be applied to any text or lookup field, except picklists. The valid operators for this merge field are Equals, Not Equal To, Greater Than or Equal, Less Than or Equal, Contains, Does Not Contain, and Starts With.

For more information on the `$User` global variable, see "Understanding Global Variables" in the Salesforce online help.

Mobilize User Records

User Permissions Needed	
To view mobile data sets:	"View Setup and Configuration"
To create, change, or delete mobile data sets:	"Manage Mobile Configurations"

Summer '08 introduces support for the user object in mobile configurations. Previously, mobile users had to search for and download user records to their devices if they wanted to assign items to other Salesforce users. Now Salesforce can automatically synchronize user records to devices based on filtering options in mobile configurations.

To mobilize the user object:

1. Click **Setup** ► **Mobile Administration** ► **Mobile Configurations**. Create a new mobile configuration, or click the name of the mobile configuration you want to modify.
2. In the Data Sets related list, click **Edit**.
3. In the hierarchy, select **Data Sets** to create a parent data set. The user data set cannot be the child of another data set.
4. Click **Add...**

5. In the popup window, select **User**.
6. Click **OK**. The User data set appears in the hierarchy.
7. Select one of the record ownership filters:
 - **All Records**: Salesforce synchronizes all user records. Administrators of large organizations should be cautious about selecting this option because too many user records might overload the device. If you must synchronize all user records, try restricting the data using the field filters below the ownership filters. The **Profile** and **Role** fields are helpful for targeting groups of users applicable to the selected mobile configuration.
 - **User's Team's Records**: Salesforce synchronizes the user records of any subordinates in the role hierarchy.
 - **None (Search Only)**: Salesforce does not synchronize any user records. To assign items to another Salesforce user, the wireless user must search for and download the other user's record or a record owned by that user.
8. Optionally, use the additional filters to restrict the records that the User data set includes. For more information about filtering, see "Defining Data Sets" in the Salesforce online help.
9. Be sure to test your mobile configuration to make sure the data does not exceed the total data size limit. See "Testing Mobile Configurations" in the Salesforce online help for instructions.
10. Click **Done** when you are finished.



Note: You cannot exclude fields from the user object's mobile page layout, and you cannot create mobile views for the user object.

Device Management Enhancements

With Summer '08, administrators have additional tools for managing their users' mobile devices. New device management enhancements let administrators:

- remove a mobile device from a user's record
- view the amount of Salesforce data stored on a user's device
- monitor the device status to check for synchronization errors
- estimate the amount of metadata a mobile configuration would send to a user's device

Deleting Mobile Devices

User Permissions Needed	
To view mobile devices and users:	"View Setup and Configuration"
To delete mobile devices:	"Manage Mobile Configurations"

In rare instances, you might want to remove a mobile device from your organization. Salesforce automatically associates a device record with the mobile user who most recently activated the device, so it is unnecessary to delete a device in order to assign it to another user. To maintain an accurate device inventory, however, you should delete a device when you want to move it from your sandbox organization to your production organization. For more information about sandbox organizations, see "Managing Your Developer Sandboxes" in the Salesforce online help.

To delete a mobile device:

1. Navigate to the Mobile Devices and Users page or the Mobile Device page:
 - Click **Setup** ► **Mobile Administration** ► **Mobile Users and Devices**. From the list view, you can select multiple devices at one time.

OR

- Click **Setup** ► **Manage Users** ► **Users**. Click **Edit** next to a user's name, and then click the device address in the Assigned Mobile Devices related list.
2. On the Mobile Devices and Users page, select one or more devices, then click **Delete Device**. On the Mobile Device page, click **Delete**.
 3. Click **OK**.
- Salesforce attempts to delete the selected device(s).
4. A confirmation page summarizes the results for each mobile device you selected. For more information, see Delete Device Results.

Delete Device Results

After Salesforce sends the message to the mobile server to delete the devices, a results page provides information about the status of each device. The table below describes the three possible outcomes:

Result	Description
Device deleted.	Salesforce removed the device record from your organization.
Device cannot be deleted at this time. Please try again later.	A temporary communication problem between Salesforce and the mobile server prevented the device from being deleted. Try again later.
User has no mobile device.	The selected mobile user never registered a device, so therefore the message could not be sent.

Viewing the Data Size and Device Status

New fields on the device details page display information about the amount of data stored on a user's device and the device's synchronization status. There are two ways to access the device details page:

- Click **Setup** ► **Mobile Administration** ► **Mobile Users and Devices**, and then click a device address in the list view.
- Click **Setup** ► **Manage Users** ► **Users**. Click a user's name, and then click the device address in the Assigned Mobile Devices related list.

Field	Description
Data Size	The estimated size of the Salesforce data currently stored on the user's mobile device. The mobile device periodically sends this information to Salesforce, which is helpful when troubleshooting synchronization errors resulting from an exceeded data limit. For information about setting the data size limit, see "Creating Mobile Configurations" in the Salesforce online help.
Metadata Size	The estimated size of the Salesforce metadata currently stored on the user's mobile device. Metadata consists of page layout and schema information, and the amount of metadata sent to a device can be very high depending on the size of your organization and the complexity of its setup.

Field	Description
Status	Indicates whether any synchronization errors exist between the device and Salesforce. The <code>Status</code> field is only visible when an error is present. The two error statuses are Data Limit Exceeded and Unknown Error.
Last Status Date	The last time the mobile device notified Salesforce that the device is no longer synchronizing data due to an error. The <code>Last Status Date</code> field is only visible when an error is present.

Testing the Metadata Size

Now administrators can estimate the amount of metadata that a mobile configuration would send to a user's device. It's essential for administrators to test the metadata size: In Summer '08, the metadata size counts against the data size limit set for the mobile configuration. If your organization's setup sends a large amount of metadata to devices, the data size limit could potentially be exceeded, thereby causing the devices to stop synchronizing data. To estimate the metadata size:

1. Click **Setup** ► **Mobile Administration** ► **Mobile Configurations**, and click the name of the mobile configuration you want to test.
2. In the Data Sets related list, click **Edit**.
3. In the Test Data Size section, click the lookup icon next to the `Select a user` field to choose the user you want to test.
4. Select the **Include metadata** checkbox to include metadata in the estimate. Metadata consists of page layout and schema information, and the amount of metadata sent to a device can be very high depending on the size of your organization and the complexity of its setup.



Caution: It might take a while for Salesforce to calculate the metadata size in addition to the data size. Even if you choose to hide the metadata in your test results, the metadata is still factored into the total data size when the mobile device synchronizes with Salesforce.

5. Click **Estimate Data Size**.

The Test Data Size section displays the estimated size of the metadata that the mobile configuration would send to the user's device.

Mobile Licenses for Salesforce Trials

Prospective customers can easily test drive Salesforce Mobile to find more about the mobile solution. In Summer '08, mobile licenses are available in Professional, Enterprise, and Unlimited Edition trials.

Login History: Mobile Application Name Change

When users access Salesforce from the mobile client application, the login history in Salesforce now displays `Salesforce Mobile` as the application name instead of `Sendia`.

Mobile Session Caching

The user's previous session is now cached on the mobile server to improve performance and scalability. As a result of this change, deselecting the **Mobile User** checkbox on a user's record may not immediately block a user from accessing Salesforce through the mobile client application. To prevent a user from logging into Salesforce Mobile, deselect the **Mobile User**

checkbox on the user's record, then erase the data on the device. For detailed information about removing Salesforce data from a mobile device, see "Erasing Mobile Data" in the Salesforce online help.

Additional Salesforce Application Enhancements

Activities Enhancements

Summer '08 includes enhancements to tasks and events for all Salesforce Editions:

Task Hovers on the Home Page

In the calendar day view and My Tasks list on the home page, users can mouse over tasks to view the details of the task in an overlay. Administrators can control whether this functionality is available for their organizations by clicking **Setup** ► **Customize** ► **User Interface** and selecting or deselecting the `Enable Hover Links for My Tasks List` checkbox.

Multiday Events

Users can now create events that end more than one day (24 hours) after they start, lasting up to 14 days. Administrators can control whether this functionality is available for their organizations by clicking **Setup** ► **Customize** ► **Activities** ► **Activity Settings** and selecting or deselecting the `Enable Multiday Events` checkbox. This feature is available and enabled by default in all Editions. Version 13 and later of the API is required. For information on creating events, see "Creating Events" in the Salesforce online help. For information on creating events using the API, see the *Force.com Web Services API Developer's Guide*.


Reassign Group Events to a New Owner

You can now reassign a group event to a new owner unless the event is part of a recurring event series.

1. Open the detail page of a group event and click **Edit**.
2. Enter a user's name in the `Assigned To` field, or click the lookup icon to search for the user's name.
3. Click **Save**.

For information on group events, see "Creating Group Events" in the Salesforce online help and "Editing Group Events" in the Salesforce online help.

Create New Activities from Activity List Views

Now, you can click **New Task** or **New Event** to create a new activity from an activity list view. To display an activity list view, click the list view icon () below the calendar on the Home tab or at the top of a calendar view. For more information, see "Viewing Activity Lists" in the Salesforce online help.

Assignment Rule Enhancements

Now you can select the `Do Not Reassign User` checkbox on rule entries for assignment rules so that assignment rules do not automatically reassign current owners on cases or leads. To update rule entries for assignment rules:

1. Choose **Setup** ► **Customize** and select either **Leads** or **Cases**.
2. Click **Assignment Rules**.
3. Select a Rule Name.
4. Click the **Edit** link next to the rule entry you want to update in the Rule Entries related list.
5. Select the `Do Not Reassign User` checkbox.
6. Click **Save**.

Concurrent Usage Limit for Salesforce

To ensure that resources are available for all Salesforce users, limits are placed on the number of long-running Web requests that one organization can send at the same time. This kind of limit is called a maximum *concurrent Web requests limit*.

Salesforce.com monitors the number of concurrent requests issued by all users logged in to your organization, and compares that number against the maximum limit. In this way, salesforce.com keeps the number of concurrent requests below the maximum limit. The limit ensures that resources are available uniformly to all organizations and prevents deliberate or accidental over-consumption by any one organization.

If too many requests are issued by users in your organization, you may have to wait until one of them has finished before you can perform your task. For example, assume that MyCorporation has 100,000 users. At 9:00 AM, each user requests a report that contains 200,000 records. Salesforce starts to run the report for all users until the maximum number of concurrent requests has been met. At that point, Salesforce refuses to take any additional requests until some of the reports have completed.

Similar limits are placed on requests issued from the Force.com Web services API. For more information, see "Force.com API Usage Limits" in the Salesforce online help.

Converted Lead Page

Previously, if you created a link to a lead detail page and later opened the link after the lead was converted, Salesforce provided a message stating that the lead was converted. Now, applicable information about the converted lead is also provided, including the name of the account, contact, and opportunity.

Extended Mail Merge Limits- Limited Release

With Extended Mail Merge, a mail merge operation cannot exceed the following limits:

- 1000 records
- The selected mail merge template(s) total size cannot be larger than 1 MB.
- For mass mail merges, the number of selected records multiplied by the combined sizes of the selected mail merge templates cannot be larger than 50 MB.

Extended Mail Merge is available by request only. Please contact salesforce.com Customer Support if you are interested in this feature.

Opportunity History Tracking

In Summer '08, field history tracking has been extended to include opportunities. This new functionality provides the ability to track and audit changes to standard and custom opportunity fields. For more information, see [Tracking Field History and Opportunity Field History](#).



Note: This feature differs from opportunity stage history, which automatically tracks changes in opportunity status through the Amount, Probability, Stage, and Close Date fields. For more information, see "Stage History" in the Salesforce online help.

Standard Button and Tab Overrides in Group and Professional Editions

Visualforce can be used to override standard buttons and tabs in Group, Professional, Enterprise, Unlimited, and Developer Editions. In previous version of Salesforce, Group and Professional Editions could not override standard buttons and tabs.

New Button Labels on List Views

The button you use to create a new object from a list view has been updated to reflect the type of object in the list view. For example, to create a new account from the Account list view, click **New Account**, or to create a new case from the Case list view, click **New Case**.

Log In as Customer Portal or Partner Portal User

In Summer '08, you can now log in as a Customer Portal or Partner Portal user to test or troubleshoot any portal issues. To do so, navigate to the contact detail page for a Customer Portal or Partner Portal user and click **Login As Portal User**. This action opens a new browser window and logs you into the portal as the Customer Portal or Partner Portal user.

Setup Audit Trail for Mobile Administration

Summer '08 offers enhanced security controls for mobile administrators. The setup audit trail now tracks changes to mobile configuration settings, including data sets, mobile views, and excluded fields.

Solution Search Enhancements

Now, solution search results display all fields specified in the search results layout for solutions when solution browsing is enabled.

To choose which fields display in search results for solutions:

1. Click **Setup** ► **Customize** ► **Solutions** ► **Search Layouts**, select the **Edit** link next to the `Search Results` field.
2. Choose the fields to display on solution search results.
3. Click **Save**.

To enable solution browsing:

1. Click **Setup** ► **Customize** ► **Solutions** ► **Solution Settings** ► **Edit**.
2. Select `Enable Solution Browsing`.
3. Click **Save**.

For more information, see "Customizing Search Layouts" in the Salesforce online help and "Customizing Solution Settings" in the Salesforce online help.

Reporting Enhancements

Summer '08 includes enhancements to reports for all Salesforce Editions:

CAPTCHAs—Security for Exporting Reports

By request, Salesforce can now require users to pass a user verification test to export reports from the Export Reports page. This simple, text-entry test helps prevent malicious programs from accessing your organization's data. To pass the test, users must type the two words displayed on an overlay into the overlay's text box field, and click the **Submit** button. The words entered into the text box field must be separated by a space.

Salesforce uses CAPTCHA technology provided by [reCaptcha](#) to verify that a person, as opposed to an automated program, has correctly entered the text into the overlay. CAPTCHA is an acronym that stands for "Completely Automated Public Turing Test To Tell Computers and Humans Apart."

Note the following about CAPTCHA:

- Contact [salesforce.com](#) to enable CAPTCHA for your organization.
- The CAPTCHA overlay displays Latin letters and usually English words, and it may not work with audio devices that do not support English.
- If CAPTCHA is enabled, integrations to third-party report products, such as Business Objects' Crystal Reports and Conga's Conga Courier, may no longer function.

Campaign Reporting

In Summer '08, marketers can better track the effectiveness of their campaigns by running a Campaigns with Leads and Converted Lead Information report. This report provides lead lifetime information sorted by campaign. To run this report:

1. On the Reports tab, click **Create New Custom Report**.
2. Select **Campaigns** as the report type.
3. Choose **Campaigns with Leads and Converted Lead Information** from the report menu.

Case Comments for Custom Report Types

Now, when you create or edit a custom report type with cases as the primary object, you can choose case comments as the secondary object. This enables you to create custom report types where users can report on case comments associated with cases. For more information, see "Choosing the Object Relationships that Display on Reports Created from Custom Report Types" in the Salesforce online help.


Schedule Quantity Column on Opportunities with Products and Schedules Reports

In previous releases, if you ran an opportunity with products and schedules report, and selected `Schedule Quantity` as a column, the `Schedule Quantity` column would display zero if there were no schedule quantities, even though product or opportunity quantities existed. Now, when there are no schedule quantities, the `Schedule Quantity` column displays existing product or opportunity quantities. This is because all three quantity fields represent a quantity on an opportunity. If there are schedule quantities they will display in this column.

New Field Available on Lead History Report

The `Lead Owner Role` field is now available on the Lead History Report.

Business Hours Available for Custom Lookup Relationship Fields

Now, Personal, Professional, Enterprise, Unlimited, and Developer Editions can create custom lookup relationship fields to business hours. This allows users to associate object records with your organization's business hours. A lookup relationship creates a field that allows users to click a lookup icon () and select another record from a popup window. For example, cases have a lookup relationship with contacts that lets you associate a particular case with a contact.

To create a custom lookup relationship field to business hours:

1. Navigate to the fields area of the appropriate object:
 - For standard objects, click **Setup** ► **Customize**, select the appropriate object from the **Customize** menu, and click **Fields**.
 - For custom objects, click **Setup** ► **Create** ► **Objects**, and select one of the custom objects in the list.
2. Click **New** in the Custom Fields & Relationships section of the page.
3. Choose `Lookup Relationships` and click **Next**.

For more information about relationships, see "Overview of Relationships" in the Salesforce online help.

4. Select `Business Hours` from the `Related To` drop-down list and click **Next**.
5. Enter a field label.
6. Enter any field attributes, and click **Next**.

For information on the attributes you can set, see "Custom Field Attributes" in the Salesforce online help.

7. In Enterprise, Unlimited, and Developer Editions, set the field-level security to determine whether the field should be visible or read only for specific profiles, and click **Next**.
8. Choose the page layouts that should display the field as an editable field.
9. Click **Save**.

Note that you cannot create custom lookup relationship fields to business hours from activities, as custom lookup relationship fields are not available for activities.

Salesforce Call Center Enhancements

Now, Salesforce Call Center screens do not automatically display over inline editing and edit pages in the Console tab.

FORCE.COM PLATFORM

General Availability of Visualforce and Other Visualforce Enhancements

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

Visualforce is now available for all organizations in Group, Professional, Enterprise, Unlimited, and Developer Editions.

Visualforce uses a tag-based markup language to give developers a more powerful way to build applications and customize the Salesforce user interface. With Visualforce you can:

- Create custom user interfaces that easily leverage standard Salesforce styles
- Create custom user interfaces that completely replace the standard Salesforce styles
- Build wizards and other navigation patterns that use data-specific rules for optimal, efficient application interaction

Visualforce comes with a rich component library that allows you to quickly build pages without having to create a lot of functionality yourself. In the Visualforce markup language, each tag corresponds to a coarse or fine-grained component, such as a section of a page, a related list, or a field. The components can either be controlled by the same logic that is used in standard Salesforce pages, or developers can associate their own logic with a custom controller or controller extension written in Apex.



Note: Custom controllers and standard controller extensions are not supported in Group or Professional Editions.

For more information, see the [Visualforce Developer's Guide](#).

Additional Visualforce Enhancements

In addition, the Summer '08 release includes several new features that enhance the capabilities of previous versions of Visualforce. These include:

PDF Pages

Visualforce pages can now be displayed as a PDF by setting the `renderAs` attribute on the `<apex:page>` component to `pdf`.

If a Visualforce page that is rendered as a PDF contains `<apex:outputLink>` components, the output links are usable if the page is rendered as a PDF. In addition, any JavaScript `onclick` links are also usable.

If a Visualforce page that is rendered as a PDF contains any `<apex:commandLink>` or `<apex:commandButton>` components, the components are displayed but are not usable.

Apex Properties in Visualforce Pages

If your controller uses Apex properties, like the following:

```
public class propertyTestCon {
    public String myproperty {get;set;}
}
```

you can refer to the property in a Visualforce page. For example, to use the property `myproperty` as defined above, you can add the following to your page:

```
<apex:page controller="propertyTestCon">
    <apex:form>
        <apex:inputText value="{!myproperty}"/>
        <apex:commandLink value="Click Me" rerender="out"/>
    </apex:form>
    <apex:outputPanel layout="block" id="out">
        {!myproperty}
    </apex:outputPanel>
</apex:page>
```

For more information on Apex, see [Apex Properties](#).

<apex:pageBlockList> Component Renamed

The `<apex:pageBlockList>` component has been renamed to `<apex:pageBlockTable>`. All existing pages that use `<apex:pageBlockList>` will continue to work without modification, but you must change the components to `<apex:pageBlockTable>` if you wish to modify the page.

<apex:selectList>, <apex:selectCheckboxes>, and <apex:selectRadio> Now Require Child <apex:selectOption> or <apex:selectOptions> Components

The `<apex:selectList>`, `<apex:selectCheckboxes>`, and `<apex:selectRadio>` components now require at least one child `<apex:selectOption>` or `<apex:selectOptions>` component.

<apex:selectOption> Value Attribute Now Required

The value attribute on `<apex:selectOption>` is now required. Do not set value to null, since this returns an empty option.

<apex:message> and <apex:messages> No Longer Support the tooltip Attribute.

The tooltip attribute is no longer valid on an `<apex:message>` or `<apex:messages>` component.

New <apex:componentBody> Component

The `<apex:componentBody>` component pulls the body of a component's implementation into the component definition. This component is especially useful for generating custom iteration components, and is valid only within an `<apex:component>` tag.

Static Resource Dependency Checking

You can find out the dependencies of a static resource. On the static resource detail page, click **Where is this used?** to see the details.

System.currentPageReference has moved from being a system method to the ApexPages namespace

The method `System.currentPageReference` has been replaced with `ApexPages.currentPage`. The `System.currentPageReference` will continue to work, so there will be no impact on existing code.

\$CurrentPageReference has been replaced with \$CurrentPage

Use `$CurrentPage` where you would have used `$CurrentPageReference` in the past. `$CurrentPageReference` will continue to work, so there will be no impact on existing code.

Test.setCurrentPageReference () has been replaced with Test.setCurrentPage (ApexPages . PageReference)

Use `Test.setCurrentPage (ApexPages . PageReference)` where you would have used `Test.setCurrentPageReference ()` in the past. `Test.setCurrentPageReference ()` will continue to work, so there will be no impact on existing code.

Display Validation Errors on Visualforce Pages

If a user enters data on a Visualforce page that causes a validation rule error, the error can be displayed on the Visualforce page. If the validation rule error location is a field associated with an `<apex:inputField>` component, the error displays there. If the validation rule error location is set to the top of the page, use the `<apex:messages>` component within the `<apex:page>` to display the error. For more information on validation rules, see [Defining Validation Rules](#) and [Validation Rules and Standard Controllers](#).

Page Level Security

With Summer '08, you can control access to Visualforce pages using page level security. Class level security no longer controls access to Visualforce pages. For more information, see [Setting Visualforce Page Security](#) on page 64.

Approval Process Related List

You can display the Approval History related list on Visualforce pages. For example,

```
<apex:page standardController="account">
  <apex:relatedList list="ProcessSteps"/>
</apex:page>
```

will display the Approval History related list for an account. For more information on approval processes, see "What Are Approval Processes?" in the Salesforce online help.

About Visualforce

Defining Visualforce Pages

User Permissions Needed	
To create Visualforce pages:	"Customize Application"

You can create Visualforce pages either by using Visualforce development mode, or by creating pages in Setup.

To create a page using Visualforce developer mode:

1. In your browser, enter a URL in the following form: `http://mySalesforceInstance/apex/nameOfNewPage`, where the value of *mySalesforceInstance* is the host name of your Salesforce instance (for example, `na3.salesforce.com`) and the value of *nameOfNewPage* is the value you want to give to the Name field on your page definition.

For example, if you want to create a page called "HelloWorld" and your Salesforce organization uses the `na3.salesforce.com` instance, enter `https://na3.salesforce.com/apex/HelloWorld`.



Note: Page names cannot be longer than 40 characters.

2. Because the page does not yet exist, you are directed to an intermediary page from which you can create your new page. Click **Create page** *nameOfNewPage* to create the new page. Both the page Name and Label are assigned the *nameOfNewPage* value you specified in the URL.

To create pages in Setup:

1. Click **Setup** ► **Develop** ► **Pages**.
2. Click **New**.
3. In the **Name** text box, enter the text that should appear in the URL as the page name. This name must only contain alphanumeric characters, start with a letter, and be unique from all other pages in your organization.
4. In the **Label** text box, enter the text that should be used to identify the page in Setup tools, such as when defining custom tabs, or overriding standard buttons.
5. In the **Body** text box, enter Visualforce markup for the page. A single page can hold up to 1 MB of text, or approximately 1,000,000 characters.
6. Click **Save** to save your changes and return to the Visualforce detail screen, or click **Quick Save** to save your changes and continue editing your page. Your Visualforce markup must be valid before you can save your page.



Note: Though your Visualforce markup can be edited from this part of setup, to see the results of your edits you have to navigate to the URL of your page. For that reason, most developers prefer to work with development mode enabled so they can view and edit pages in a single window.

Once your page has been created, you can access it using a URL in the following form:

`http://mySalesforceInstance/apex/nameOfNewPage`, where the value of *mySalesforceInstance* is the host name of your Salesforce instance (for example, `na3.salesforce.com`) and the value of *nameOfNewPage* is the value of the **Name** field on your page definition.

Managing Visualforce Pages

User Permissions Needed	
To create and edit Visualforce pages:	"Customize Application"

After creating Visualforce pages, you can customize, edit, and delete them. Click **Setup** ► **Develop** ► **Pages** to display the Pages list page, which shows all the Visualforce pages defined for your organization. From the Pages list page, you can:

- Click **New** to define a new Visualforce page.
- Click a page name to display detailed information about the page, including its label and Visualforce markup.
- Click **Edit** next to a page name to modify the page's name, label, or Visualforce markup.
- Click **Del** to remove a page.
- Click **Security** to manage the security for the page.



Note: The namespace prefix is added to Apex classes, Apex triggers, Apex components, Visualforce pages, brand templates, folders, s-controls, static resources, web links, and custom report types if they are included in a managed package. However, if your profile does not have customize application permissions, the namespace prefix field is not displayed for brand templates, folders, and custom report types. For more information on namespace prefixes, see .

Using Visualforce Pages

Similar to s-controls, developers can use Visualforce pages to:

- Override standard buttons, such as the **New** button for accounts, or the **Save** button for contacts
- Override tab overview pages, such as the Accounts tab home page
- Define custom tabs
- Embed components in detail page layouts, similar to the way inline s-controls can be embedded

Setting Visualforce Page Security

You can specify which users can execute a particular Visualforce page based on their profile.

Permission for a Visualforce page is checked at the top level only. Once a page is enabled for profile, users with that profile can access the page and execute all Apex that is associated with the page. This includes:

- The controller for the page and any Apex classes called from the controller class
- Any extension classes for the page and any Apex called from an extension
- Any Apex classes associated with custom components within the page
- Any classes associated with the page through the use of `apex:include` or `apex:composition`

For example, if page A depends on a controller that calls an Apex class B, and a user profile has access only to page A but not class B, the user can still successfully execute the code in class A. Likewise, if a Visualforce page uses a custom component with an associated controller, security is only checked for the controller associated with the page.

To set Visualforce page security from a page definition:

1. Click **Setup** ► **Develop** ► **Pages**.
2. Next to the name of the page that you want to restrict, click **Security**.
3. Select the profiles that you want to enable from the Available Profiles list and click **Add**.
4. Select the profiles that you want to disable from the Enabled Profiles list and click **Remove**.
5. Click **Save**.

To set Visualforce page security from a profile detail page:

1. Click **Setup** ► **Manage Users** ► **Profiles**.
2. Click the name of the profile you want to modify.
3. In the Enabled Visualforce Page Access related list, click **Edit**.
4. Select the Visualforce pages that you want to enable from the Available Visualforce Pages list and click **Add**.
5. Select the Visualforce pages that you want to disable from the Enabled Visualforce Pages list and click **Remove**.
6. Click **Save**.

If a user has the "Customize Application" permission enabled in his or her profile, the user has access to all Visualforce pages in the associated organization. However, this user may still have restrictions related to Apex classes. The "Customize Application" permission does not allow a user to ignore those restrictions in a Visualforce page unless the profile has been granted Visualforce page access.

Public Tagging and Other Tagging Enhancements

Available in: **All Editions**

With Summer '08, Salesforce now includes public tagging and additional enhancements to personal tagging.

Public tagging enables users to view and use tags applied by other users within an organization. Any public tag that a user adds to a record can be viewed by any other user who can also access the record. As with personal tags, administrators can enable public tags on accounts, activities, assets, campaigns, cases, contacts, contracts, documents, events, leads, notes, opportunities, reports, solutions, tasks, and any custom objects (except relationship group members). While any user can add a public tag to a record, only users with the "Tag Manager" profile permission can rename or delete public tags.

Additionally, personal tagging is now enhanced with the following features:

Personal Tag Usage Statistics

You can review your current usage of personal tags from the Tags page by clicking the **Personal Tag Usage** link on the right side. This page displays your current number of unique personal tags and personal tag applications.

Personal Tag Cleanup for Deactivated Users

If your organization is approaching its limit of 5,000,000 tag applications, administrators can use the Personal Tag Cleanup page to delete the personal tags of deactivated users. To access this page, click **Setup > Customize > Tags > Personal Tag Cleanup**. Once personal tags are deleted from this page, they cannot be restored.

Implementation Tips

- Once you have enabled tags for your organization, add the Tags component to the sidebar by clicking **Setup > Customize > Home > Home Page Layouts** and editing the appropriate home page layouts.
- If you want the Tags component to appear on the sidebar of all pages and not just the Home tab, click **Setup > Customize > User Interface**, and select **Show Custom Sidebar Components on All Pages**.
- Only administrators have permission to rename or delete public tags in the Tags page. If you want to grant this permission to a non-administrator user, select the "Tag Manager" permission on the user's profile. For more information, see "Managing Profiles" in the Salesforce online help.
- A user is limited to a maximum of 500 unique personal tags, and 5,000 applications of personal tags to records. Across all users, an organization is limited to 1,000 unique public tags, 50,000 applications of public tags to records, and 5,000,000 applications of personal and public tags to records.
- Customer Portal users cannot view the tags section of a page, even if it is included in a page layout.

Best Practices

- Tags can only contain letters, numbers, spaces, dashes, and underscores, and must contain at least one letter or number.
- As you enter new tags, up to ten tags that have already been defined are displayed as auto-complete suggestions. As you type, the list of suggestions changes to show only those tags that match the prefix you have entered. To choose one of the suggestions, click on it or use your keyboard arrow keys to select it and press the TAB or ENTER key.
- When you are creating or editing tags in the Tags area of a record detail page, you can press the ENTER key to save your changes, or the ESC key to discard them.
- You can view a list of records that have a particular tag by clicking the tag in any detail page, the Tags sidebar component, or in the Tags page. The list of matching records appears on the Tags page, organized by object. You can narrow your results further by clicking additional tags.
- Personal tags are associated with the tag icon (📌). Public tags do not have an associated icon.
- The number of records associated with a tag can sometimes be greater than the number of records displayed when you click that tag in the Tags page. This situation occurs if you tagged a record and then lost permission to view it because of a change in sharing, or if a record that you do not have access to has one or more public tags.
- You can rename or delete any personal tag, but you must have the "Tag Manager" profile permission to rename or delete a public tag.
- If you remove the last instance of a tag from a record, the tag is deleted completely from the Tags page. If other records use the tag, the tag still appears in the Tags page.
- If you restore a tag from the Recycle Bin, it is automatically reassociated with the records from which it was removed.
- If you are approaching your personal tag limits, consider merging similar tags into a single tag by renaming. For example, if you have tags for Bicycling, Cycling, and Biking, you can rename Cycling and Biking to Bicycling to reduce your number of unique personal tags.

About Public Tagging and Other Tagging Enhancements

About Tagging

Tags are words or short phrases that users can associate with most Salesforce records to describe and organize their data in a personalized way. Tags allow users to group records from various objects by a common topic or use, and then use those tags in search to make finding information fast and intuitive.

For example, if a user met a number of contacts and leads at a conference, she might tag them all with the phrase *User Conference 2007*. She could then search for the *User Conference 2007* tag and click that tag in Sidebar or Advanced Search results to retrieve those records.

Salesforce supports two types of tags:

- *Personal tags* are private for every user. That is, any personal tag that a user adds to a record can only be viewed by that user.
- *Public tags* are shared between all users in an organization. That is, any public tag that a user adds to a record can be viewed by any other user who can also access the record.

Administrators can enable personal and public tags for accounts, activities, assets, campaigns, cases, contacts, contracts, documents, events, leads, notes, opportunities, reports, solutions, tasks, and any custom objects (except relationship group members). This allows users to:

- View personal and public tags on a record
- Add personal and public tags to a record, either by creating a new tag with free-form text entry, or by selecting from personal and public tags that have already been created
- Remove personal and public tags from a record

For more information, see "Tagging Records" in the Salesforce online help.

Once tags are assigned to records, users can:

- Search for personal and public tags from Sidebar or Advanced Search
- Browse personal and public tags alphabetically, by frequency of use, or by recency of use
- View all records with one or more assigned personal and public tags
- Rename personal and public tags or merge personal and public tags that are similar or redundant
- Delete personal and public tags that are no longer needed, sending them to the Recycle Bin

For more information, see "Browsing, Searching, and Managing Tags" in the Salesforce online help.

Enabling Tags

User Permissions Needed	
To modify tag settings:	"Customize Application"

To change your organization's tagging settings:

1. Click **Setup** > **Customize** > **Tags** > **Tag Settings**.
2. Select `Enable Personal Tags` if you want to allow users to add personal tags to records, and select `Enable Public Tags` if you want to allow users to add public tags to records. Deselect both options if you want to disable tagging.

3. If you are enabling tags, specify which objects and page layouts should display personal and public tags in a tag section at the top of record detail pages. The tag section is the only way that a user can add tags to a record.

For example, if you only select one or more account page layouts, users in your organization can only tag account records. Additionally, if you only select account page layouts in the `Enable Personal Tags` section and not in the `Enable Public Tags` section, users can only tag account records with personal tags.



Note:

- When tags are enabled, you can also add personal and public tags to a page layout by editing the page layout directly. See "Customizing Page Layouts" in the Salesforce online help.
- Customer Portal users cannot view the tags section of a page, even if it is included in a page layout.

4. Click **Save**.

Adding the Tags Component to the Sidebar

Once you have enabled tags for your organization, you can add the Tags component to your user's sidebar. This component allows users to navigate to the Tags page where they can browse, search, and manage their tags. It also lists each user's most recently used tags. To add this component:

1. Click **Setup** ► **Customize** ► **Home** ► **Home Page Layouts**.
2. Next to a home page layout that you want to modify, click **Edit**.
3. Select the `Tags` checkbox and click **Next**.
4. Arrange the Tags component on your page layout as desired, and click **Save**.



Tip: If you want the Tags component to appear on all pages and not just the Home tab, click **Setup** ► **Customize** ► **User Interface**, and select `Show Custom Sidebar Components on All Pages`.

Tagging Records

User Permissions Needed	
To edit tags on a record:	"Read" on the record

To tag a record:

1. On the record detail page, click **Add Tags** in the Tags area just under the colored title bar. If the record already has associated tags, click **Edit Tags** instead.
2. In the `Personal Tags` or `Public Tags` text boxes, enter comma-separated lists of the personal and public tags that you want to associate with the record. Tags can only contain letters, numbers, spaces, dashes, and underscores, and must contain at least one letter or number.

As you enter new tags, up to ten tags that have already been defined are displayed as auto-complete suggestions. As you type, the list of suggestions changes to show only those tags that match the prefix you have entered. To choose one of the suggestions, click on it or use your keyboard arrow keys to select it and press the `TAB` or `ENTER` key.

3. Click **Save** to save your changes, or **Cancel** to discard them.



Note: You and your organization are subject to limits on the number of personal and public tags that you can create and apply to records. If you attempt to tag a record with a new tag that exceeds one or more of these limits, the tag is not saved. If this occurs, you can delete infrequently used tags from the Tags page. See "Browsing, Searching, and Managing Tags" in the Salesforce online help.

To remove a tag from a record:

1. On the record detail page, click **Edit Tags** in the Tags area just under the colored title bar.
2. Next to the **Personal Tags** or **Public Tags** text boxes, click **[X]** next to the tag that you want to remove from the record.
3. Click **Save** to save your changes, or **Cancel** to discard them.

If the tag that you removed is the last instance of the tag, the tag is deleted from your organization completely. If other records use the tag, the tag still appears in search results and the Tags page.



Tip: When you are creating or editing tags in the Tags area, you can also press the ENTER key to save your changes, or the ESC key to discard them.

Browsing, Searching, and Managing Tags

You can browse, search, and manage personal and public tags in the Tags page. To access this page, click the name of any tag on a detail page, or, if your administrator has enabled the Tags sidebar component, click **Tags** in the sidebar.

Review the following topics for information on how to use this page:

- Viewing and Browsing Tags
- Finding Records with Tags
- Searching Tags
- Managing Tags
- Reviewing Personal Tag Usage Statistics

Viewing and Browsing Tags

The Tags page displays a list of all tags that you can view in your organization. You can use the **Personal Tags** and **Public Tags** checkboxes at the top right corner of the page to view just personal tags, just public tags, or both personal and public tags at the same time.

Personal tags are associated with the tag icon (🔒). Because personal tags are private, you can only see the personal tags that you have defined; you cannot see the personal tags of other users. You can, however, see all public tags that have been defined in your organization.

You can browse through your tags by clicking a letter at the top of the tag browsing area to view only tags that begin with that letter, or by using the **Next Page** and **Previous Page** links at the bottom.

By default, tags are listed in alphabetical order. You can also choose **By Number of Uses** from the **Sort** picklist to sort tags by the number of records that are tagged by them, or choose **By Most Recently Used** to sort tags by how recently they were added to a record.

Finding Records with Tags

Each tag includes a number in parentheses that indicates how many records are associated with that tag. You can view those records by clicking the tag. The list of records appears below the tag browsing area, organized by object. You can narrow your results further by clicking additional tags. When more than one tag is selected, only records that match all selected tags are displayed in the list of results. Click **[X]** next to a tag to deselect it and remove it from the filter. Click **Clear Selected Tag(s)** to deselect all tags and start over.



Note: The number of records associated with a tag can sometimes be greater than the number of records displayed when you click that tag in the Tags page. This situation occurs if you tagged a record and then lost permission to view it because of a change in sharing, or if a record that you do not have access to has one or more public tags.

As with regular search results, you can select and reorder the columns that appear for each object, and filter the search results by particular values. See "Viewing Search Results" in the Salesforce online help.

Searching Tags

You can search tags by entering terms in the Search Tags text box and clicking **Search**. Only tags that meet your search criteria are listed in the tag browsing area. You can then click any tag to view records associated with that tag.

Search strings must include at least two characters to return results, and can also include wildcards and other special operators. See "Search Wildcards and Operators" in the Salesforce online help.

The most recent search result is saved in the tag browsing area next to the alphabet at the top of the page. Click the search string to return to your results.

Managing Tags

User Permissions Needed	
To rename or delete public tags:	"Tag Manager"

The Tags page allows you to rename and delete tags:

- To rename a tag, hover over the tag and select **Rename** from the drop-down menu that appears around the tag. Enter a new name for the tag in the text box that appears and click **Save**.
- To delete a tag, hover over the tag and select **Delete** from the drop-down menu that appears around the tag. The tag is removed from every record in your organization and is placed in the Recycle Bin.

If you restore a tag from the Recycle Bin, it is automatically reassociated with the records from which it was removed. For more information, see "Recycle Bin" in the Salesforce online help.

You can rename or delete any personal tag, but you must have the "Tag Manager" profile permission to rename or delete a public tag.

Reviewing Personal Tag Usage Statistics

You can review your current usage of personal tags from the Tags page by clicking the **Personal Tag Usage** link on the right side. This page displays your current number of unique personal tags and personal tag applications. A user is limited to a maximum of:

- 500 unique personal tags
- 5,000 instances of personal tags applied to records

If you are approaching your personal tag limits, consider merging similar tags into a single tag by renaming. For example, if you have tags for Bicycling, Cycling, and Biking, you can rename Cycling and Biking to Bicycling to reduce your number of unique personal tags.

To reduce the number of instances of tags applied to records, delete personal tags that you no longer use.

Tagging Limits

A user is limited to a maximum of:

- 500 unique personal tags
- 5,000 instances of personal tags applied to records

Across all users, an organization is limited to:

- 1,000 unique public tags
- 50,000 instances of public tags applied to records
- 5,000,000 instances of personal and public tags applied to records

Deleting Personal Tags for Deactivated Users

User Permissions Needed	
To delete personal tags for deactivated users:	"Customize Application"



Your organization can have up to 5,000,000 personal and public tags applied to records, across all users. If you are approaching this limit, you can delete the personal tags for your deactivated users in the Personal Tag Cleanup page. To use this page:

1. Click **Setup** ► **Customize** ► **Tags** ► **Personal Tag Cleanup**.
2. Select one or more deactivated users and click **Delete**.

Once personal tags are deleted, they cannot be restored.

Lookup Enhancements

Available in: **All Editions**

Salesforce objects often include one or more *lookup fields* that allow users to associate two records together in a relationship. For example, a contact record includes an `Account` lookup field that represents the relationship between the contact and the organization with which the contact is associated. Users can differentiate lookup fields from other fields because they appear with the  button on record edit pages. Clicking  opens a lookup search dialog that allows the user to search for the record that should be associated with the one being edited.

Standard lookup searches are limited by the following restrictions:

- They can never return more than 50 records at a time.
- They do not allow users to customize the columns that are displayed in results.
- They do not allow users to sort or apply filters to standard lookup search results.
- They do not include auto-completion capabilities.

To circumvent these issues, Summer '08 now offers the following features for account, user, contact, and custom object lookups:

Advanced Lookups

Advanced lookups alleviate the restrictions associated with standard lookups by:

- Returning all matching records, rather than just 50 records at a time
- Allowing users to customize the columns that are displayed in lookup results
- Allowing users to sort and apply filters to lookup results

Lookup Auto-Completion

Lookup auto-completion displays a list of matching records from your list of recently used records as you begin typing in a standard or enhanced lookup field.

Implementation Tips

- Enhanced lookups and lookup auto-completion are available for account, contact, user, and custom object lookups only.
- Lookup auto-completion is available for both standard and enhanced lookups.



- You can define the enhanced lookup filter options that are available to end users by setting up lookup filter fields.

Best Practices

- Unlike standard lookups, enhanced lookup search queries are broken into separate search terms at any split between alphabetic and numeric characters. In other words, if you enter `ALL4ONE` in an enhanced lookups field, the resulting query searches for *ALL* and *4* and *ONE*. Consequently, entering `ALL the 4 and ONE` returns *ALL4ONE*.
- Enhanced lookups allow you to sort and filter search results by any field that is available in regular search results. You can also hide and reorganize the columns that are displayed in the results window.
- You can customize the columns that are displayed in enhanced lookups search results by clicking **My Columns**.
- Enhanced lookups return all records that match your search criteria and allow you to page through large sets of results using forward and backward buttons.
- Enhanced lookups are available when you type at least two characters. If no text is entered, the search returns most recently used records.
- Your changes to enhanced lookups search results are saved across sessions.
- You can use filters on non-searchable fields to further narrow your search for desired records. When applying filtering to enhanced lookup results, you select the fields to include in a particular search layout. These choices only determine the display of search results and do not affect the fields that are actually searched.
- For a standard or enhanced lookup to display auto-completion suggestions, you must have recently visited records of the appropriate type.
- Auto-complete suggestions appear after you type at least two characters and are updated as you enter additional characters.

About Advanced Lookups

Lookup Dialog Search

Salesforce objects often include one or more *lookup fields* that allow users to associate two records together in a relationship. For example, a contact record includes an `Account` lookup field that represents the relationship between the contact and the organization with which the contact is associated. Users can differentiate lookup fields from other fields because they appear with the  button on record edit pages. Clicking  opens a lookup search dialog that allows the user to search for the record that should be associated with the one being edited.

Salesforce provides two types of lookups:

Standard Lookups

By default, all lookups behave as standard lookups. When searching for records with a standard lookup, only the fields listed in "Lookup Search Fields" in the Salesforce online help are queried. Standard lookups return up to 50 records at a time in alphabetical order, and do not allow for sorting, filtering, or customizable columns.

Enhanced Lookups

If enabled by your administrator, account, contact, user, and custom object lookups can behave as enhanced lookups. Enhanced lookups update standard lookup fields with the following functionality:

- Enhanced lookup search queries are broken into separate search terms at any split between alphabetic, numeric, and special characters. In other words, if you enter `ALL4ONE` in an enhanced lookup field, the resulting query searches for *ALL* and *4* and *ONE*. Consequently, entering `ALL the 4 and ONE` returns *ALL4ONE*. Also, searching for `S&` returns fields containing both *S&* and *&S*.
- Enhanced lookups allow users to sort and filter search results by any field that is available in regular search results. Users can also hide and reorganize the columns that are displayed in the results window.

- Enhanced lookups return all records that match your search criteria and allow you to page through large sets of search results.

When you click a standard or enhanced lookup icon before entering anything in the lookup field, a list of all recently used records displays. However, for standard lookups of users, products, and queues, the dialog shows an alphabetical listing of the first 50 records. For standard lookups of campaigns, the dialog shows the first 100 active campaigns. For the asset standard lookup on a case, the dialog shows all the assets tied to the contact on the case, if any.

Lookup Auto-Completion


If enabled by your administrator, both standard lookups and enhanced lookups can display a dynamic list of matching recently used records when a lookup field is edited. This list is restricted to objects of the appropriate type and, with the exception of lookups of users, is populated from recently used items. For example, while editing an Account lookup, you can see recently used accounts with names that match the prefix you have entered. Recently used contacts do not appear in this list.

Lookup auto-completion is subject to the following restrictions:

- You must have recently visited records of the appropriate type for the lookup's auto-completion list to be populated.
- You must be editing the lookup field on a record's edit page.

Tips for Using Standard and Enhanced Lookups

Consider the following tips when using standard and enhanced lookups:

- To improve standard lookup dialog search results, use an asterisk (*) wildcard within your search string.
For example, searching for `com*` finds items with *com* at the beginning of any word in the search string, such as *commerce*, *community*, and *edge communications*.
- When you use wildcards to search enhanced lookup fields, be aware that the results may include more records than you expect if your search term includes combinations of letters, numbers, and special characters.
- If you enter a value into the lookup text box and save the record without clicking the lookup icon () , Salesforce automatically performs a search and assigns the result to the lookup field. If more than one result is found, Salesforce displays a drop-down list of the matching options. If no results match the text you entered, an error displays instead.
- A wildcard is automatically appended to each of your search terms.
For example, searching for `bob jo` returns items with *bob jones*, *bobby jones*, or *bob johnson*.
- To search for contacts, leads, users, or other individuals that include spaces in the `First Name` or `Last Name` fields, enter quotes around the terms.
For example, to search for *bob von hausen*, enter `"bob von hausen"`.
- In organizations where the Salesforce Customer Portal or PRM portal is enabled, you can filter the results that will display on the user lookup dialog by selecting either a queue or group of users from the `Owner` or `Assigned To` drop-down list. Note that neither the User group nor the Roles and Internal Subordinates group contains Customer Portal or partner users.
- If your organization uses divisions and you have the "Affected by Divisions" permission, your lookup dialog search results include records in the division you select in the lookup dialog window.

Enabling Enhanced Lookups

User Permissions Needed
To enable enhanced lookups and specify lookup filter fields: "Customize Application"

To enable enhanced lookups for your organization:

1. Click **Setup** ► **Customize** ► **Search**.
2. In the Lookup Settings area, select the objects for which you want to enable enhanced lookup functionality. Currently, only account, contact, user, and custom object lookups can use this feature.
3. Click **Save**.

After you have enabled enhanced lookups, you can specify lookup filter fields for your users. If you do not specify filter fields, your users cannot use filters in enhanced lookup dialogs:

1. Click **Setup** ► **Customize**, select **Accounts**, **Contacts**, or **Users**, and click **Search Layouts**. To access search layouts for custom objects, click **Setup** ► **Create** ► **Objects**, click on the name of the object you want to modify, and then scroll down to the Search Layouts related list.
2. Click **Edit** next to the Lookup Filter Fields layout.
3. Use the arrows to add or remove fields from the layout, and to define the order in which the fields should display. You can add up to six filter fields to the Selected Fields list. To select more than one field at a time, use CTRL+click or SHIFT+click to select multiple items in a range.
4. Click **Save**.

Enabling Lookup Auto-Completion

User Permissions Needed	
To enable lookup auto-completion:	"Customize Application"

To enable lookup auto-completion for your organization:

1. Click **Setup** ► **Customize** ► **Search**.
2. In the Search Settings area, select the object lookups for which you want to enable auto-completion. Currently, only account, contact, user, and custom object lookups can use this feature.
3. Click **Save**.


Using Enhanced Lookups and Lookup Auto-Completion



User Permissions Needed	
To use enhanced lookups or lookup auto-completion:	"Edit" on the record that includes the lookup field

After enhanced lookups and lookup auto-completion are enabled in an organization, users access them in the same way they access standard lookups:

1. Use one of the following methods to open a record for editing:
 - Create a new record.
 - Click **Edit** on the detail page for an existing record.

The record must have an account, contact, user, or custom object lookup field to access enhanced lookups functionality.

2. Next to an account, contact, user, or custom object lookup field, either enter text into the lookup text box, click the lookup icon () , or do both:
 - If you enter text into the lookup text box, an alphabetical list of matching, recently used records displays under the lookup field. This list changes dynamically as you add or remove characters from the text box. Use your mouse or the arrow keys on your keyboard to select a record.

- If you did not enter text into the lookup text box and click the lookup icon () , a list of all recently used records displays. Use your mouse to select a record.
- If you entered text into the lookup text box and click the lookup icon () , or if you specify a query in the `Search` text box of the lookup dialog and click **Go!**, a list of matching records from your list of recently used records displays. Use your mouse or keyboard arrow keys to select a record.

Enhanced List Views

Available in: **All Editions**

With Spring '08, Salesforce now includes substantial enhancements to list views, allowing you to quickly view, customize, and edit list data to speed up your daily productivity. Once enabled by an administrator, these enhancements include:

Inline List Editing

If your administrator has enabled inline editing for your organization, you can now edit single records directly from a list view by double-clicking on individual field values. If your administrator has granted you the "Mass Inline Edit from Lists" user profile permission, you can also edit up to 200 records at a time with inline editing.

Custom Paging

You can now change the number of records displayed per page of list results by clicking the record count indicator in the lower left corner of the list and selecting the desired setting. You can view 10, 25, 50, 100, or 200 records at a time. Additionally you can navigate through the pages by clicking the first page icon (<<), **Previous**, **Next**, or the last page icon (>>), or by entering a page number in the text box in the lower right corner and then pressing ENTER.



Drag-and-Drop Customization for List Views

You can now change the order in which a column is displayed by dragging the entire column heading with your mouse to the desired position. If you have permission to edit the list definition, your changes are automatically saved for all users who see the list. If you do not have permission to edit the list definition, your changes are discarded when you navigate away from the page. Additionally, you can now change the width of a column by dragging the right side of the column heading with your mouse

Implementation Tips

- Enable enhanced lists by clicking **Setup** ► **Customize** ► **User Interface**, and then selecting `Enable Enhanced Lists`. You can also enable inline editing from this page by selecting `Enable Inline Editing`.
- Enhanced lists are unavailable for users with accessibility mode enabled.
- Enhanced lists are not supported in setup pages, or on tabs that use folders, such as Dashboards, Reports, or Documents.
- To grant users the ability to perform mass inline edits for records in a list, you must select the **Mass Edits from Lists** permission on their user profile. All standard profiles already have this permission selected by default.

Best Practices

- If inline editing is enabled, you can edit records directly on a list by double-clicking an editable field's value. An editable field displays a pencil icon () when you hover over it with your mouse, while a non-editable field displays a lock icon () .
- If your organization uses record types, inline editing with lists is only available when all of the records in the list are of the same record type. Therefore, you must specify a filter of `Record Type equals X`, where *X* is the name of a single record type (or blank for the master record type).
- To perform inline editing on an enhanced list, **Advanced Filters** must be turned off.

About Enhanced List Views

Working with Enhanced Lists

User Permissions Needed	
To use inline editing in an enhanced list:	"Mass Edit from Lists"

Enhanced lists give you the ability to quickly view, customize, and edit list data to speed up your daily productivity. They must first be enabled by your administrator for you to take advantage of them.

Enhanced lists allow you to:

- Navigate through the list results by clicking the first page icon (<<), **Previous**, **Next**, or the last page icon (>>) at the bottom of the list.
- Jump to a specific page of results by entering a number in the text box in the lower right corner, and then pressing ENTER.
- Change the number of records displayed per page by clicking the record count indicator in the lower left corner of the list and selecting the desired setting. You can view 10, 25, 50, 100, or 200 records at a time. When you change this setting, you return to the first page of list results.



Note: Changing your preference for the number of records displayed per page applies to all lists in all Salesforce apps, not just the one currently displayed.

- Change the width of a column by dragging the right side of the column heading with your mouse. Any changes you make to column widths are specific to that list only, and are preserved when you next view the list.



Note: If you add or remove columns from a list, any column width customizations for that list are discarded automatically.

- Change the order in which a column is displayed by dragging the entire column heading with your mouse to the desired position. If you have permission to edit the list definition, your changes are automatically saved for all users who see the list. If you do not have permission to edit the list definition, your changes are discarded when you navigate away from the page.
- Change the number and order of columns displayed by clicking **Edit** next to the list drop-down in the upper left corner. See "Creating Custom List Views" in the Salesforce online help.
- If your administrator has enabled inline editing for your organization, edit single records directly from the list by double-clicking on individual field values. If your administrator has granted you the "Mass Edit from Lists" user profile permission, you can also edit up to 200 records at a time. See "Using Inline Editing in Lists" in the Salesforce online help.

Using Inline Editing in Lists

User Permissions Needed	
To use inline editing in an enhanced list:	"Mass Edit from Lists"

If your administrator has enabled both inline editing and enhanced lists, you can edit records displayed in a list by double-clicking an editable field's value. Editable fields display a pencil icon (✎) when you hover over the field with your mouse, while non-editable fields display a lock icon (🔒).

After double-clicking the value you want to edit, a dialog box displays. Specify the new field value and click **OK**. To cancel your edit, click **Cancel**.

If your administrator has enabled the `Mass Inline Edit from Lists` permission on your user profile, you can edit multiple records at once with inline editing, up to a maximum of 200. To edit multiple records:

1. Select the checkbox next to each record you want to update. If you select records on multiple pages, Salesforce remembers which records are selected.
2. Double-click one of the cells you want to edit. A dialog box displays allowing you to apply your edit to one record, or to every record selected.



Note: You cannot edit multiple product records at once, they must be edited one at a time.

If you encounter any errors when trying to update records, a console window displays showing the name of each record in error (if known), as well as a description of why the error occurred. Click the name of a record in the console window to open that record's detail page in a new window. Salesforce keeps track of the records you've clicked in the error console by displaying them in gray, strike-through text.



Note: To view the error console, pop-up blockers must be disabled for the Salesforce domain. To check if your browser allows pop-up windows, click **Setup** ► **My Personal Information** ► **Reminders**, and then click **Preview Reminder Alert**.

Tips for Using Inline Editing with Lists

Note the following tips when using inline editing with lists:

- Some standard fields do not support inline editing. For example, `Case Status`, `Opportunity Stage`, `Opportunity Amount`, `Opportunity Quantity` and `Lead Status`, and most `Task` and `Event` fields can only be edited from a record's edit page. For more information, see "Editing Data Using Inline Editing" in the Salesforce online help.
- If your organization uses record types, inline editing with lists is only available when all of the records in the list are of the same record type. Therefore, you must specify a filter of `Record Type equals X`, where *X* is the name of a single record type (or blank for the master record type).
- To perform inline editing on an enhanced list, **Advanced Filters** must be turned off.
- For lists of activities, you must specify an additional filter of either `Task equals True` (for tasks) or `Task equals False` (for events) for inline editing to be available.
- If your organization is using Person Accounts, you cannot use inline editing to change them from a Contact list. You can only inline edit Person Accounts from an Account list.
- If your organization is using Person Accounts, you can only use inline editing on contacts associated to business accounts by specifying an additional filter of `Is Person Account EQUALS False` in your list criteria.

Enabling Enhanced Lists

To enable enhanced lists:

1. Click **Setup** ► **Customize** ► **User Interface**.
2. Select `Enable Enhanced Lists`. You can also enable inline editing from this page by selecting `Enable Inline Editing`.
3. Click **Save**.

To allow a user to use inline editing on more than one list item at a time:

1. Click **Setup** ► **Manage Users** ► **Profiles**.
2. Click **Edit** next to the name of the user's profile.
3. In the General User Permissions section, select `Mass Edit from Lists`.
4. Click **Save**.



Note: All standard profiles already have the "Mass Edit from Lists" permission selected by default.

Custom Landing Page

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

In prior releases, all apps sent users to the Home tab after login. In Summer '08, you can now specify a custom default landing tab when creating or editing an app. To do so, use the `Default Landing Tab` drop-down menu below the tab selection area of the app creation wizard.

The default landing tab is displayed at login and at any time a user switches between apps with the app menu. For example, the Call Center app can be configured so that the Console tab is the default landing tab.



Note: If a user does not have permission to view a tab designated as the default landing tab, the Home tab is displayed instead.

Customizable User Object

Available in: **All** Editions

In Summer '08, the user object now supports the following functionality:

Expanded Limits for Custom Fields

You can now create more custom fields on users. Prior to this release, the number of user custom fields was limited to 20. In Summer '08, the limit has been expanded for each edition as follows:

- **Personal Edition**—5 per object
- **Group and Professional Editions**—100 per object
- **Enterprise, Developer, and Unlimited Editions**—500 per object

Customizable Page Layouts

S-controls and Visualforce pages can now be included on user object page layouts. Additionally, you can now modify the location of custom fields and links on a user page layout.



Note:

- Previously, when custom fields or custom links were created on the user object, they were automatically added to the user page layout. Now, you must edit user page layouts to add custom fields and custom links.
- Previously, packaged custom fields and custom links were automatically added to the installer's user page layouts during package installation. Now, as with other objects that support page layouts, custom fields and custom links on the user object are not automatically added to the installer's user page layouts. Instead, the installer must edit the user page layout and field-level security setting to add custom fields and custom links.
- If you already have custom fields or custom links on the user object, they automatically display in the user page layout.
- Tags, related lists, custom buttons, and standard fields still cannot be modified on user object page layouts.
- If you were a customer prior to the Summer '08 release, a user page layout is created for you based on your existing pages. Additionally, you see the following changes:
 - The `Created By` and `Modified By` fields are now displayed above the `Additional Information` section.
 - Custom fields are displayed in two columns on both the user detail and user edit pages.

Field-Level Security

In Enterprise, Unlimited, and Developer Editions, Salesforce now supports field-level security for custom fields on the user object. Custom fields automatically have field-level security equivalent to the security on the fields before Summer '08.



Note:

- Because field-level security replaces the functionality of the `Restricted Field` checkbox in the custom field wizard, that checkbox is no longer available in Enterprise, Unlimited, and Developer Editions. The `Restricted Field` checkbox is still available in Personal, Professional, and Group Editions, as these editions do not support field-level security.
- Salesforce applies field-level security to your organization's existing user custom fields as follows:
 - All user custom fields without the `Restricted Field` checkbox selected are set to visible, making them editable for all profiles.
 - User custom fields with the `Restricted Field` checkbox selected are set to read-only for all profiles without the "Manage Users" permission, and visible (editable) for all profiles with the "Manage Users" permission.
- After Salesforce applies field-level security to your organization's existing user custom fields, any custom user fields that have the `Required` checkbox selected will be editable by all users, even if the field-level security for that user's profile is not set to visible. To make the field required for users with the "Manage Users" permission while preventing all other users from editing the field:
 1. Deselect the `Required` checkbox on the user custom field's edit page. See "Modifying Field Access Settings" in the Salesforce online help.

2. Create a validation rule that requires users with the "Manage Users" permission to populate the field. For example, if you have a custom field called "CustomField1," use the following validation rule if the field is a number, currency, percent, date, or date/time field:

```
AND(
  ISNULL(CustomField1__c),
  $Profile.ManageUsers
)
```

Alternatively, use the following validation rule if the field is a text, URL, or email field:

```
AND(
  LEN(CustomField1__c) = 0,
  $Profile.ManageUsers
)
```

3. Optionally, set the field as required on your page layouts. See "Customizing Page Layouts" in the Salesforce online help.
- Prior to Summer '08, when you created a new custom hierarchical relationship field in either the standard or jump start approval process wizard, the `Restricted Field` checkbox for that field was selected, and the field was immediately visible on the user's detail page. Now, Salesforce adds the field to all user page layouts and sets the field-level security for each profile based on whether or not the profile has the "Manage Users" permission. Profiles with the "Manage Users" permission are set to visible, while profiles without the "Manage Users" permission are set to read-only.

Dependent Picklists

You can now define dependencies between two custom picklist fields.

Mini Page Layouts

You can now define mini page layouts for the user object; however, you can only add custom fields, you cannot add the standard fields or related lists. Also, customized mini page layouts for the user object do not display in the console.

Matching Additional Information Sections on User Detail and Edit Pages

The Additional Information section on user edit pages now matches the Additional Information section on user detail pages, displaying two columns instead of one column.

Cross-Object Formulas

Available in: All Editions

In a previous release, we introduced cross-object formulas in validation rules, workflow rules, and other business rules. With Summer '08, you now have the same flexibility with formula fields. These formula fields can now reference merge fields from parent records that are related via master-detail or lookup relationships. In addition, cross-object formulas can reference up to five related objects. You can also create a formula field to display fields from related objects on detail pages, list views, related lists, and reports. For example, a Discounted Amount formula on the opportunity object can use a `Discount Percent` field defined on the account object.

To access these related object fields in the formula builder, click the **Advanced -Formula** tab. The **Simple Formula** tab is still limited to merge fields directly on the selected object. When you click either tab, Salesforce automatically displays that tab the next time you use the formula builder.

Implementation Tips

- For all Salesforce editions, the limit for cross-object formulas is five relationships per object, which means that the total number of relationships across all formulas and rules for any object cannot exceed five. Relationships that are already established do not count against the limit. For example, if you create an opportunity product formula that references `PricebookEntry.Product2.ProductCode`, it counts as two relationships. You can create an opportunity product validation rule with the same references, such as `PricebookEntry.Product2.Name`, without using up two additional relationships for the opportunity product object. However, you would not be able to create an opportunity product validation rule that includes `Opportunity.Account.CreatedBy.Profile.Name`, which counts as four relationships, because you would exceed the limit of five relationships for the opportunity product object.
- A new icon (🔗) indicates a formula field that references fields on a related object. It is available on setup pages when viewing the formula field data type.
- The invalid roll-up summary icon displays on formula fields that reference a roll-up summary field whose calculated value is out of date.
- Cross-object formula fields are not available in a self relationship, an object that has a lookup relationship with itself.
- In roll-up summary fields, you cannot reference formula fields that include related object merge fields.
- If you create a contacts formula field that references account merge fields, that field can be included in contact page layouts but should not be included in person accounts page layouts. The formula field will display a value of #Error on the person accounts page.
- You cannot reference merge fields for objects related to activities. For example, merge fields for contacts and accounts are not available from task and event formulas.
- You cannot reference record owner merge fields for any object. For example, the opportunity owner's `Role` merge field is not available from opportunity formulas.
-

Best Practices

- Use cross-object formula fields to display important fields from related objects on page layouts, recently viewed lists, list views, search results, and related lists.
- Remove implementations that have been using workflow field updates to copy field values from the parent record and replace them with a formula field that references that value instead.
- Use object names or other naming conventions in labels to make it clear where data comes from. For example, use `Contact Name` or `Account Name` instead of `Name`.
- Formula fields have access to data for all merge fields, even when the end user does not have field-level security access to that field. Make sure that you secure the formula field with the appropriate field-level security. For example, if a user does not have access to the `Account Rating` field, but you expose it in a contact cross-object formula field and give all profiles read access to that formula field, then that user will be able to see the `Account Rating` value on the contact detail page.

Building Cross-Object Formula Fields

User Permissions Needed	
To view formula field details:	"View Setup and Configuration"
To create, change, or delete formula fields:	"Customize Application"

To create a formula field that references related objects:

1. Begin building a formula field. See "Adding Fields" in the Salesforce online help.

2. Select the data type for the formula. Choose the appropriate data type for your formula based on the output of your calculation.
3. Click **Next**.
4. Select the **Advanced Formula** tab.
5. Click **Insert Field**, then click any item followed by a ">" to view the list of related fields for that object.
6. Click **Insert**.
7. Finish creating the formula field.

Parallel Approval Routing

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

In prior releases, you could configure approval processes with steps that assigned approval requests only to a single user, related user, or queue at one time. With Summer '08, you can now configure an approval step to request approval from any combination of multiple users and related users simultaneously. Records can be approved or rejected based on the first response to the approval request, or you can require unanimous approval from all selected approvers.

To configure a parallel approval request:

1. In step 3 of the approval step wizard, select `Automatically assign to approver(s)`.
2. Choose the users and related users that you want to receive the approval request. Use `Add Row` and `Remove Row` to change the number of approvers.
3. Choose one of the following:

Approve or reject based on the first response.

The first response to the approval request determines whether the record is approved or rejected.

Require unanimous approval from all selected approvers.

The record is only approved if all of the approvers approve the request. The record is rejected if any of the approvers reject the request.



Note: The `Automatically assign to approver(s)` radio button previously included the option to assign an approval request to a queue. This option is now in a separate radio button labeled `Automatically assign to a queue` in step 3 of the approval wizard. The `Automatically assign to a queue` radio button only appears if you have queues configured for the type of object for which you are configuring the approval process.

For more information, see "Creating Approval Steps" in the Salesforce online help.

Email Delivery Tracking

Available in: **All** Editions

In Summer '08, Salesforce introduces bounce management—a new email delivery tracking feature that manages the bounced email that users send to contacts, leads, and person accounts. If an email server receives an email addressed to an invalid recipient, the server *bounces* the email, that is, returns it to the sender. If a sender sends several email messages that bounce, the email server might slow or block the delivery of all email from that sender. Use bounce management to improve your organization's data quality, keep your email address lists correct, and ensure that the email your users send to contacts, leads, and person accounts is not impeded.

When bounce management is activated, if a user sends an email to a contact, lead, or person account with an invalid email address, Salesforce displays an alert next to that email address, and prevents users from sending email to that address until the

address is updated or confirmed. Also, the email bounces to Salesforce instead of the sender's personal email account. You can optionally have Salesforce send a copy of the bounced email headers to the sender as well.



Note: Bounce management is automatically available to organizations without email relaying enabled. If your organization is using email relaying, contact salesforce.com to enable bounce management. For information on email relaying, see "Setting Up Email Relaying" in the Salesforce online help.

About Email Delivery Tracking

Activating Bounce Management

User Permissions Needed	
To enable or disable bounce management:	"Customize Application"

If an email server receives an email addressed to an invalid recipient, the server *bounces* the email, that is, returns it to the sender. If a sender sends several email messages that bounce, the email server might slow or block the delivery of all email from that sender.

Bounce management is an email delivery tracking feature that helps ensure that the email addresses you have for your contacts, leads, and person accounts are correct, and that the email your users send to those addresses is not impeded due to excessive email bounces. When bounce management is activated, if a user sends an email to a contact, lead, or person account with an invalid email address, Salesforce displays an alert next to that email address, and prevents users from sending email to that address until the address is updated or confirmed. Also, the email bounces to Salesforce instead of the sender's personal email account. You can optionally have Salesforce send a copy of the bounced email headers to the sender as well.



Caution: If you plan to activate both bounce management and email relaying, check with your email administrator to ensure that your organization's email server allows the relaying of email sent from salesforce.com; otherwise, the email you send from Salesforce may not get delivered. For information on email relaying, see "Setting Up Email Relaying" in the Salesforce online help.

To activate bounce management:

1. Click **Setup** ► **Email Administration** ► **Bounce Administration**.
2. Click **Edit**.
3. Select the `Activate bounce management` checkbox.
4. Optionally, select the `Show bounce alert next to all instances of the email address` checkbox. If you select this option, Salesforce searches all lead, contact, and person account records for instances of the email address that bounced the email, and displays a bounce alert next to each instance.
5. Optionally, select the `Return bounced email to sender` checkbox to configure Salesforce to send a copy of the bounced email header to the sender. If you do not select this option, only Salesforce receives the bounced email header. In either case, Salesforce does not return the body of the bounced email to the sender for security purposes.

This option applies to all users in your organization and cannot be enabled per user or per email.

6. Click **Save**.



Tip: Use the Bounced Contacts and Bounced Leads standard reports to view a list of email addresses that have bounced email. The report includes the reason the email was bounced, the date the bounce occurred, and the contact, lead, or person account that bounced the email. See "Overview of Reports" in the Salesforce online help for more information.

Apex Enhancements

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

Apex includes the following enhancements in Summer '08. Refer to the [Apex Language Reference](#) for complete information about Apex.

Generally Available Enhancements

The following enhancements are generally available.

Describe Information

Describe information provides information about sObject and field properties. For example, the describe information for an sObject includes whether that type of sObject supports operations like create or undelete, the sObject's name and label, the sObject's fields and child objects, and so on. The describe information for a field includes whether the field has a default value, whether it is a calculated field, the type of the field, and so on.

For more information, see [Understanding Apex Describe Information](#).

Apex Managed Sharing

Apex managed sharing allows developers to use Apex to programmatically share custom objects. When you use Apex managed sharing to share a custom object, only users with the "Modify All Data" permission can add or change the sharing on the custom object's record, and the sharing access is maintained across record owner changes.

An Apex sharing reason lets developers indicate why sharing was implemented, simplify the coding required to update and delete sharing records, and share a record multiple times with the same user or group using different Apex sharing reasons.

For more information, see [Apex Managed Sharing](#) on page 87.

Apex Properties

An Apex *property* is similar to a variable, however, you can do additional things in your script to a property value before it is accessed or returned. Properties can be used in many different ways: they can validate data before a change is made; they can prompt an action when data is changed, such as altering the value of other member variables; or they can expose data that is retrieved from some other source, such as another class.

For more information, see [Apex Properties](#).

Operational Scope Matrix

The Show Dependencies page, available from the detail page of any Apex class or trigger, now includes the *operational scope* of the class or trigger. The operational scope is a table that lists any data manipulation language (DML) operations (such as `insert` or `merge`) that an Apex script executes on a specified object. The operational scope can be used when installing an app to determine the full extent of the app's database operations.

If a list of dependent objects displays, click **Fields** to access the field-level detail of the operational scope. The field-level detail includes information such as whether a field is updated by an Apex script.

For more information, see "Understanding Dependencies" and "Field Operational Scope" in the Salesforce online help.

Change in sObject and DML Behavior

In previous releases, in a single transaction that involved triggers, you could perform DML operations on more than one type of sObject, for example, you could insert an account, then insert a user. As of Summer '08, you can only perform DML operations on a single type of sObject from the following list of sObjects. For example, you cannot insert an account, then insert a user, or update a group, then insert a group member.

- Group
- GroupMember
- QueueSObject
- User
- UserRole
- UserTerritory
- Territory

In addition, User and Territory now support the `insert` and `update` DML operations, and UserRole now supports the `insert`, `update`, `delete` and `upsert` DML operations.

Apex DML operations are not supported on the following sObjects:

- AccountTerritoryAssignmentRule
- AccountTerritoryAssignmentRuleItem
- UserAccountTeamMember

For more information, see [sObjects That Cannot Be Used Together in DML Operations](#).

Visualforce Messages

When using a standard controller, all validation errors, both custom and standard, that occur when the end user saves the page are automatically added to the page error collections. If there is an `inputField` component bound to the field with an error, the message is added to the components error collection. All messages are added to the pages error collection. If your application uses a custom controller or extension, you must use the `message` class for collecting errors.

For more information, see [Message Class](#).

Visualforce ApexPages Namespace

Use the `ApexPages` namespace to add and check for messages associated with the current page, as well as to reference the current page.

For more information, see [ApexPages Namespace](#).

@isTest Annotation

An Apex annotation modifies the way a method is executed, similar to annotations in Java.

Use the `isTest` annotation to define classes that only contain methods used for testing your application. The `isTest` annotation is similar to creating a class with methods declared as `testMethod`.



Note: Classes defined with the `isTest` annotation do not count against your organization limit of 1 MB for all Apex scripts. For more information, see "Understanding Execution Governors and Limits" in the Salesforce online help.

For more information, see [Annotations](#).

Client Certificate Support

You can now send a client certificate with a callout to authenticate an HTTPS connection with a specified value.

For more information, see [Client Certificate Support](#).

HTTP Header Support

You can now set the HTTP headers on a Web service callout. For example, you can use this feature to set the value of a cookie in an authorization header. To set HTTP headers, add `inputHttpHeaders_x` and `outputHttpHeaders_x` to the stub.

For more information, see [HTTP Header Support](#).

Increased Limits for Strings

The total number of characters for a String is now 100,000 for triggers, anonymous blocks, Visualforce controllers, or WSDL methods, and 500,000 for RunTest methods.

New Decimal Methods

The following Decimal instance methods are now included:

- `Decimal abs()`
- `Decimal divide(divisor, scale)`
- `Decimal divide(divisor, scale, roundingmode)`
- `Decimal doubleValue()`
- `String format()`
- `Integer intValue()`
- `Long longValue()`
- `Decimal pow(exponent)`
- `Integer precision()`
- `Long round()`
- `Long round(roundingmode)`
- `Integer scale()`
- `Decimal setScale(scale)`
- `Decimal setScale(scale, roundingmode)`
- `Decimal stripTrailingZeros()`
- `String toPlainString()`

For more information, see [Decimal Methods](#).

New Business Hours Class

Business hours are now available as a class.

For more information, see [Business Hours Class](#).

New Business Hours Methods

The following business hours instance methods are now included:

- `Datetime add(String businessHoursId, startDate, Long interval)`
- `Datetime addGmt(String businessHoursId, Datetime startDate, Long interval)`
- `Long diff(String businessHoursId, Datetime startDate, Datetime endDate)`

For more information, see [Business Hours Class](#).

New Time Data Type

Time is now available as primitive data types. For more information, see [Primitive Data Types](#).

New Time Methods

The following time system static methods are now included:

- `Time newInstance(Long l)`
- `Time newInstance(Integer hour, Integer milliseconds, Integer minutes, Integer seconds)`

The following time instance methods are now included:

- `Time addHours(Integer addlHours)`
- `Time addMilliseconds(Integer addlMilliseconds)`
- `Time addMinutes(Integer addlMinutes)`
- `Time addSeconds(Integer addlSeconds)`
- `Integer hour()`
- `Integer millisecond()`
- `Integer minute()`
- `Integer second()`

For more information, see [Time Methods](#).

Changed PageReference Class Method

The `getContent` method now returns the content of a page even if it is rendered as a PDF. The return type has changed from `String` to `Blob` to accommodate this. For more information, see [PageReference Class](#).

New Datetime method

The system static method `now` is now included in `Datetime`. It returns the current datetime.

Developer Preview Only Enhancements

The following enhancements are available for developer preview only.

Dynamic Apex

Dynamic Apex is composed of dynamic SOQL and SOSL queries, as well as dynamic DML.

Dynamic SOQL and SOSL queries provide the ability to execute SOQL or SOSL as a string at runtime, while *dynamic DML* provides the ability to create a record dynamically and then insert it into the database using DML. Using dynamic SOQL, SOSL, and DML, an application can be tailored precisely to the organization as well as the user's permissions. This can be useful for applications that are installed from the AppExchange.



Note: Dynamic SOQL, SOSL and dynamic DML are currently in pilot, and not enabled for all organizations. If you need them for your application and are interested in the pilot program, contact your salesforce.com representative.

For more information, see [Dynamic SOQL](#), [Dynamic SOSL](#), and [Dynamic DML](#).

Apex Managed Sharing Recalculations

Apex managed sharing allows developers to use Apex to programmatically share custom objects. When you use Apex managed sharing to share a custom object, only users with the "Modify All Data" permission can add or change the sharing on the custom object's record, and the sharing access is maintained across record owner changes.

Developers can write Apex classes that recalculate the Apex managed sharing for a specific custom object. You can associate these classes with a custom object on its detail page, and execute them if a locking issue prevents an Apex script from granting access to a user as defined by the application's logic. Apex sharing recalculations are also useful for resolving visibility issues due to coding errors. For example, if a developer corrects a coding error that prevented users from accessing records they should see, the correction might only affect records created after the code update. To ensure the correction applies to existing records as well, the developer can run an Apex sharing recalculation to validate sharing on all records.

For more information, see [Apex Managed Sharing](#) on page 87.

Asynchronous Apex—`@future` Annotation

An Apex annotation modifies the way a method is executed, similar to annotations in Java.

Use the `future` annotation to identify methods that are executed asynchronously. When you specify `future`, the method executes when Salesforce has available resources.

For more information, see [Annotations](#).

Apex Job Queue

The Apex job queue lists all Apex jobs that have been submitted for execution. Jobs that have completed execution are listed, as well as those that are not yet finished, including:

- Apex methods with the `future` annotation that have not yet been executed. Such jobs are listed as Future in the Job Type column, and do not have values in the Total Batches or Batches Processed columns.
- Apex sharing recalculation batch jobs which have not yet finished execution. Such jobs are listed as Sharing Recalculation in the Job Type column. The records in a sharing recalculation job are automatically split into batches. The Total Batches column lists the total number of batches for the job. The Batches Processed column lists the number of batches that have already been processed.

For more information, see "Apex Job Queue" in the Salesforce online help.

Apex Managed Sharing

Apex managed sharing is available in: **Enterprise**, **Unlimited**, and **Developer** Editions

Apex managed sharing recalculations are available in: **Developer** Edition and by request

Sharing is the act of granting a user or group of users permission to perform a set of actions on a record or set of records. Sharing access can be granted using the Salesforce user interface and Force.com, or programmatically using Apex.

Types of Sharing

Salesforce has the following types of sharing:

Force.com Managed Sharing

Force.com managed sharing involves sharing access granted by Force.com through based on record ownership, the role hierarchy, and sharing rules:

Record Ownership

Each record is owned by a user (or optionally a queue for custom objects, cases and leads). The *record owner* is automatically granted Full Access, allowing them to view, edit, transfer, share, and delete the record.

Role Hierarchy

The *role hierarchy* enables users above another user in the hierarchy to have the same level of access to records owned by or shared with users below. Consequently, users above a record owner in the role hierarchy are also implicitly granted Full Access to the record, though this behavior can be disabled for specific custom objects. The role hierarchy is not maintained with sharing records. Instead, role hierarchy access is derived at runtime. For more information, see "Controlling Access Using Hierarchies" in the Salesforce online help.

Sharing Rules

Sharing rules are used by administrators to automatically grant users within a given group or role access to records owned by a specific group of users. Sharing rules cannot be added to a package and cannot be used to support sharing logic for apps installed from the AppExchange.

All implicit sharing added by Force.com managed sharing cannot be altered directly using the Salesforce user interface, Force.com Web Services API, or Apex.

User Managed Sharing, also known as Manual Sharing

User managed sharing allows the record owner or any user with Full Access to a record to share the record with a user or group of users. This is generally done by an end-user, for a single record. Only the record owner and users above the owner in the role hierarchy are granted Full Access to the record. It is not possible to grant other users Full Access. Users with "Modify All Data" permission can also manually share a record. User managed sharing is removed when the record owner changes or when the access granted in the sharing does not grant additional access beyond the object's organization-wide sharing default access level.

Apex Managed Sharing

Apex managed sharing provides developers with the ability to support an application's particular sharing requirements programmatically with Apex. This type of sharing is similar to Force.com managed sharing, only the application developer manages this sharing using Apex. Only users with "Modify All Data" permission can add or change Apex managed sharing on a record. Apex managed sharing is maintained across record owner changes.



Note: Apex managed sharing is only available for custom objects.

Implementation Tips

- Apex managed sharing is only available for custom object records.
- Developers must create Apex sharing reasons to indicate why sharing was implemented, simplify the coding required to update and delete sharing records, and share a record multiple times with the same user or group using different Apex sharing reasons..
- Developers can write Apex classes that recalculate the Apex managed sharing for a specific custom object. You can associate these classes with a custom object on its detail page, and execute them if a locking issue prevents an Apex script from granting access to a user as defined by the application's logic. Apex sharing recalculations are also useful for resolving visibility issues due to coding errors. For example, if a developer corrects a coding error that prevented users from accessing records they should see, the correction might only affect records created after the code update. To ensure the correction applies to existing records as well, the developer can run an Apex sharing recalculation to validate sharing on all records.

For complete information on Apex managed sharing, see the [Apex Language Reference](#).

About Apex Managed Sharing

Creating Apex Sharing Reasons

User Permissions Needed	
To create Apex sharing reasons:	"Author Apex"
To view Apex sharing reasons:	"View Setup and Configuration"

When creating Apex managed sharing, create Apex sharing reasons for individual custom objects to indicate why sharing was implemented, simplify the coding required to update and delete sharing records, and share a record multiple times with the same user or group using different Apex sharing reasons.



Note: For more information on Apex managed sharing, see the [Apex Language Reference](#).

Salesforce displays Apex sharing reasons in the `Reason` column when viewing the sharing for a custom object record in the user interface. This allows users and administrators to understand the purpose of the sharing.

When working with Apex sharing reasons, note the following:

- Apex sharing reasons are only available for custom objects.
- Only users with the "Modify All Data" permission can add, edit, or delete sharing that uses an Apex sharing reason.
- Deleting an Apex sharing reason will delete all sharing on the object that uses the reason.
- You can create up to ten Apex sharing reasons per custom object.

To create an Apex sharing reason:

1. Click **Setup** ► **Create** ► **Objects**.
2. Select the custom object.
3. Click **New** in the Apex Sharing Reasons related list.
4. Enter a label for the Apex sharing reason. The label displays in the `Reason` column when viewing the sharing for a record in the user interface. The label is also enabled for translation through the Translation Workbench.
5. Enter a name for the Apex sharing reason. The name is used when referencing the reason in the Force.com API and Apex. The name can only contain numbers, letters, and the underscore (`_`) character, must start with a letter, and cannot end with an underscore or contain two consecutive underscore characters.
6. Click **Save**.

Recalculating Apex Managed Sharing

User Permissions Needed	
To associate an Apex managed sharing recalculation class:	"Author Apex"
To run an Apex managed sharing recalculation:	"Author Apex" OR "Manage Users"



Important: Apex sharing recalculations are only available in **Developer** Edition and by request in other Salesforce editions. When packaging custom objects, remember that associated Apex sharing recalculations are also included and may prevent the package from installing.

Developers can write Apex classes that recalculate the Apex managed sharing for a specific custom object. You can associate these classes with a custom object on its detail page, and execute them if a locking issue prevents an Apex script from granting access to a user as defined by the application's logic. Apex sharing recalculations are also useful for resolving visibility issues due to coding errors. For example, if a developer corrects a coding error that prevented users from accessing records they should see, the correction might only affect records created after the code update. To ensure the correction applies to existing records as well, the developer can run an Apex sharing recalculation to validate sharing on all records.

You can run Apex sharing recalculations from a custom object's detail page. In addition, Salesforce automatically runs Apex recalculation classes defined for a custom object every time a custom object's organization wide sharing default access level is updated.



Note:

Salesforce automatically recalculates sharing for all records on an object when its organization-wide sharing default access level changes. The recalculation includes access granted by sharing rules. In addition, all types of sharing are removed if the access they grant is redundant. For example, the manual sharing which grants Read Only access to a user is deleted when the object's sharing model is changed from Private to Public Read Only.

For information on creating Apex managed sharing and recalculation classes, see the [Apex Language Reference](#).

To associate an Apex managed sharing recalculation class with a custom object:

1. Click **Setup** ► **Create** ► **Objects**.
2. Select the custom object.
3. Click **New** in the Apex Sharing Recalculations related list.
4. Choose the Apex class that recalculates the Apex sharing for this object. The class you choose must implement the `Database.Batchable` interface. You cannot associate the same Apex class multiple times with the same custom object.
5. Click **Save**.

To run an Apex sharing recalculation:

1. Click **Setup** ► **Create** ► **Objects**.
2. Select the custom object.
3. Click **Recalculate Apex Sharing**.

When working with Apex sharing recalculations, note the following:

- The Apex script that extends the sharing recalculation can process a maximum of five million records. If the script affects more than five million records, the job fails immediately.
- You can monitor the status of Apex sharing recalculations in the Apex job queue.
- You can associate a maximum of five Apex sharing recalculations per custom object.
- You cannot associate Apex sharing recalculations with standard objects.

Many-to-Many Object Relationships

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

When designing CRM extensions and custom apps, it is often desirable to model a *many-to-many relationship* between objects, where each record of one object can be related to many records of the other object and vice versa. As an example, one solution can be associated with many cases, and one case can have many solutions.

In Summer '08, you can now create two master-detail relationships on a single *junction object* to make it easier to represent a many-to-many relationship in your data model.

Implementation Tips

- When creating a new junction object:
 - Name the object with a label that indicates its purpose, such as `BugCaseAssociation`.
 - For the `Record Name` field, it is recommended that you use the auto-number data type.
 - Do not enable the `Allow Activities` option. Activities are not allowed on junction objects.
 - Do not launch the custom tab wizard before clicking **Save**. Junction objects do not need a tab.
- The first master-detail relationship you create on your junction object becomes the *primary* relationship. This affects the following for the junction object records:
 - Look and feel: The junction object's detail and edit pages use the color and any associated icon of the primary master object.
 - Record ownership: The junction object records inherit the value of the `Owner` field from their associated primary master record. Because objects on the detail side of a relationship do not have a visible `Owner` field, this is only relevant if you later delete both master-detail relationships on your junction object.

- **Division:** If your organization uses divisions to segment data, the junction object records inherit their division from their associated primary master record. Similar to the record ownership, this is only relevant if you later delete both master-detail relationships.

Best Practices

- Roll-up summary fields that summarize data from a junction object can be created on both of its master objects.
- Formula fields and validation rules on a junction object can reference fields on both of its master objects.
- You cannot have activities or workflow rules on junction objects, but you can define Apex triggers on both master objects and their junction object.

About Many-to-Many Object Relationships

What are Many-to-Many Relationships?

You can use master-detail relationships to model *many-to-many* relationships between two standard objects, two custom objects, or a custom object and a standard object. A many-to-many relationship allows each record of one object to be linked to multiple records from another object and vice versa. For example, you may have a custom object called "Bug" that relates to the standard case object such that a bug could be related to multiple cases and a case could also be related to multiple bugs. When modeling a many-to-many relationship, you use a *junction object* to connect the two objects you want to relate to each other. A junction object is a custom object with two master-detail relationships.

Creating a Many-to-Many Relationship

To create a many-to-many relationship:

1. [Create the custom object](#) to serve as the junction object between the two other objects you want to relate.
2. [Create two master-detail relationships](#) on the junction object.
3. [Customize the junction object related lists](#) on the page layouts of the two master objects.
4. [Customize reports](#) to maximize the effectiveness of the many-to-many relationship.

Creating the Junction Object

To create the junction object:

1. Click **Setup** ► **Create** ► **Objects**.
2. Click **New Custom Object**.
3. In the custom object wizard, consider these tips specifically for junction objects:
 - Name the object with a label that indicates its purpose, such as BugCaseAssociation.
 - For the **Record Name** field, it is recommended that you use the auto-number data type.
 - Do not enable the **Allow Activities** option. Activities are not allowed on junction objects.
 - Do not launch the custom tab wizard before clicking **Save**. Junction objects do not need a tab.

Creating the Two Master-Detail Relationships

To create the two master-detail relationships:

1. Verify that the two objects you want to relate to each other already exist. For example, you may want to relate the standard case object to a custom bug object.
2. On the junction object, create the first master-detail relationship field. In the custom field wizard, consider these tips specifically for junction objects:

- Choose `Master-Detail Relationship` as the field type.
- Select one of the objects to relate to your junction object. For example, select `Case`.

The first master-detail relationship you create on your junction object becomes the *primary* relationship. This affects the following for the junction object records:

- **Look and feel:** The junction object's detail and edit pages use the color and any associated icon of the primary master object.
 - **Record ownership:** The junction object records inherit the value of the `Owner` field from their associated primary master record. Because objects on the detail side of a relationship do not have a visible `Owner` field, this is only relevant if you later delete both master-detail relationships on your junction object.
 - **Division:** If your organization uses divisions to segment data, the junction object records inherit their division from their associated primary master record. Similar to the record ownership, this is only relevant if you later delete both master-detail relationships.
3. On the junction object, create the second master-detail relationship. In the custom field wizard, consider the following:
 - Choose `Master-Detail Relationship` as the field type.
 - Select the other desired master object to relate to your junction object. For example, select `Bug`.

The second master-detail relationship you create on your junction object becomes the *secondary* relationship. If you delete the primary master-detail relationship or convert it to a lookup relationship, the secondary master object becomes primary.

 - Select a `Sharing Setting` option. For master-detail relationship fields, the `Sharing Setting` attribute determines the sharing access that users must have to a master record in order to create, edit, or delete its associated detail records.
 - For the `Related List Label` that will display on the page layout of the master object, do not accept the default. Change this to use the name of the other master object in your many-to-many relationship. For example, change this to `Bugs` so users will see a `Bugs` related list on the case detail page.

Customizing Many-to-Many Relationship Related Lists

For a many-to-many relationship in Salesforce, each master object record displays a related list of the associated junction object records. To create a seamless user experience, you can change the name of the junction object related list on each of the master object page layouts to have the name of the other master object. For example, you might change the `BugCaseAssociations` related list to `Cases` on the bugs page layout and to `Bugs` on the cases page layout. You can further customize these related lists to display fields from the other master object.

To customize the fields that display in the junction object related list on each master object page layout:

1. Edit the page layout of each master object that is related to the junction object. For example, to modify the `BugCaseAssociations` related list for case records, edit the page layout for cases at **Setup** > **Customize** > **Cases** > **Page Layouts**.
2. Select the related list you want to modify and click **Edit Properties** to open the related list popup window. For example, on cases the `BugCaseAssociations` related list was renamed to `Bugs`, so select the `Bugs` related list.

3. Add the fields to display in the related list. You can add fields from the junction object itself, but more importantly, you can add fields from the other master object.

Each field is prefixed with its object name in the popup window. In the related list itself, only fields from the junction object are prefixed with the object name; fields from the other master object are not.



Note: The junction object related list does not include an icon on the master record's detail pages because the junction object does not have a custom tab. If you make a tab for the junction object, the icon is included.

Customizing Reports for Many-to-Many Relationships

Many-to-many relationships provide two standard report types that join the master objects and the junction object. The report types are:

- "Primary master with junction object and secondary master" in the primary master object's report category
- "Secondary master with junction object and primary master" in the secondary master object's report category

The order of the master objects in the report type is important. The master object listed first determines the scope of records that can be displayed in the report.

You can create custom reports based on these standard report types. In addition, you can create custom report types to customize which related objects are joined in the report.

Considerations for Many-to-Many Relationships

Review the following considerations before creating many-to-many relationships between objects:

- Junction object records are deleted when either associated master record is deleted and placed in the Recycle Bin. If both associated master records are deleted, the junction object record is deleted permanently and cannot be restored.
- Sharing access to a junction object record is determined by a user's sharing access to both associated master records and the `Sharing Setting` option on the relationship field. See "Custom Object Security" in the Salesforce online help. For example, if the sharing setting on both parents is Read/Write, then the user must have Read/Write access to *both* parents in order to have Read/Write access to the junction object. If, on the other hand, the sharing setting on both masters is Read-Only, a user with Read-Only rights on the master records would have Read/Write access to the junction object.
- You cannot have activities or workflow rules on junction objects.
- In a many-to-many relationship, a user cannot delete a parent record if there are more than 200 junction object records associated with it *and* if the junction object has a roll-up summary field that rolls up to the other parent. To delete this object, manually delete junction object records until the count is fewer than 200.
- Roll-up summary fields that summarize data from the junction object can be created on both master objects.
- Formula fields and validation rules on the junction object can reference fields on both master objects.
- You can define Apex triggers on both master objects and the junction object.
- A junction object cannot be on the master side of another master-detail relationship.
- Junction objects cannot be on the subscriber side of a Salesforce to Salesforce connection.
- You cannot create a many-to-many self relationship, that is, the two master-detail relationships on the junction object cannot have the same master object.

Single Sign-On Using SAML

Available in: **All Editions**

With Spring '08, Salesforce now supports federated single sign-on via the OASIS standard Security Assertion Markup Language (SAML).

Best Practices

- Obtain the Recipient URL value from the configuration page and put it in the corresponding configuration parameter of your Identity Provider.
- If your identity provider requires you to set the Service Provider's Audience URL, set it to `https://saml.salesforce.com`.
- Salesforce allows a maximum of five minutes for clock skew with your IDP server, make sure your server's clock is up-to-date.
- If you are unable to login with SAML assertion, always check the login history and note the error message.
- You may need to map your organization's internal usernames and Salesforce usernames. If your organization does not follow a standard mapping, you may be able to extend your user database schema (for example, Active Directory) to include the Salesforce username as an attribute of a user account. Your authentication service can then use this attribute to map back to a user account.
- Before allowing users to login with SAML assertion, enable the SAML organization preference and provide all the necessary configurations.
- We recommend that you use a Sandbox or Developer Edition account when testing a SAML single sign-on solution. To sign up for a free Developer Edition account, go to developer.force.com.
- All sandbox copies are made with federated authentication using SAML disabled. Any configuration information is preserved, except the value for Recipient URL changes to `http://tapp0.salesforce.com`. The Recipient URL is updated to match your sandbox URL, for example `http://cs1.salesforce.com`, after you re-enable SAML. To re-enable SAML in the sandbox copy, select **Setup** ► **Security Controls** ► **Single Sign-On Settings**, then click **Edit**, and select **SAML Enabled**.

About Single Sign-On Using SAML

About Security Assertion Markup Language (SAML)

Security Assertion Markup Language (SAML) is an XML-based standard that allows you to communicate authentication decisions between one service and another. It underlies many Web single sign-on solutions. Salesforce supports SAML for single sign-on into Salesforce from a corporate portal or identity provider.

Configuring Salesforce for SAML

To configure SAML settings for single sign-on from your corporate identity provider to Salesforce:

1. Obtain a certificate from your identity provider and store it where you can access it from Salesforce.
2. In Salesforce, navigate to **Setup** ► **Security Controls** ► **Single Sign-On Settings**, and click **Edit**.
3. Customize the SAML settings:

Field	Description
SAML Enabled	Select this checkbox to enable SAML for your organization. Deselect it to disable SAML.
SAML Version	Specify the version of SAML your identity provider uses.
Issuer	Specify the identity provider who issued your identity provider (IDP) certificate. This value is usually the URL of the identity provider service, or the entity ID of the identity provider. SAML assertions sent to Salesforce must use this value in the Issuer attribute of SAML assertions.
Identity Provider Certificate	Use the Browse button to locate and upload a new identity provider certificate issued by your identity provider. Once successfully uploaded, the certificate is listed as the Current Certificate.
Current Certificate	Information about the current identity provider certificate, including the expiration date.
SAML User ID Type	<p>Specify which element in a SAML assertion contains the string that identifies a Salesforce user:</p> <p>Assertion contains User's Salesforce username Select this option if the assertion identifies a Salesforce user with his or her Salesforce username. Use this option if you keep Salesforce usernames in the external system.</p> <p>Assertion contains the federated ID from the User object Select this option if the assertion identifies a Salesforce user with the value of the <code>FederationIdentifier</code> field on his or her User record. Use this option if you want to map Salesforce users with an external value instead of the Salesforce username.</p>
SAML User ID Location	<p>Specify where in the assertion a user should be identified:</p> <p>User ID is in the NameIdentifier element of the Subject statement The <code>Salesforce Username</code> or <code>FederationIdentifier</code> is located in the <code><Subject></code> statement of the assertion.</p> <p>User ID is in an Attribute element The <code>Salesforce Username</code> or <code>FederationIdentifier</code> is specified in an <code><AttributeValue></code>, located in the <code><Attribute></code> of the assertion.</p>
Attribute Name	If User ID is in an Attribute element is selected, enter the value of the <code>AttributeName</code> that is specified in <code><Attribute></code> that contains the User ID.
Attribute URI	If User ID is in an Attribute element is selected, enter the value of the <code>AttributeNamespace</code> that is specified in <code><Attribute></code> .
Recipient URL	<p>The URL to which you post assertions. This field displays the correct value after you save your SAML configuration.</p> <p>If you select the <code>Username User ID type</code> and the <code><Subject> User ID location</code>, this URL will be of the form <code>https://login.salesforce.com</code> or for Sandbox, <code>https://test.salesforce.com</code>. For all other selections, you will see similar URLs, but with more, encrypted material as part of the URL.</p>

4. Click **Save**.
5. To request single sign-on, your client application sends a POST message containing SAML assertions to the Salesforce login page. Each assertion is verified, and if successful, single sign-on is allowed.

Force.com Web Services API 13.0

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

The Force.com Web Services API has been improved for Summer '08:

- Sessions expire only if they have been inactive for the amount of time specified in your organization. You can configure this value at **Setup ► Security Controls ► Session Settings** in the `Timeout` value drop-down list. Your session remains valid as long as you continue to use the session.
- You can explicitly end sessions with one of the following new calls:
 - `logout()` ends the session of the current (logged-in) user.
 - `invalidateSessions()` uses specified sessionIds to end an array of sessions. Ending a single session is also supported.
- The outer join behavior in SOQL queries with lookup relationships and an `ORDER BY` clause has been improved. For API version 13.0 and later, records are returned even if a specified parent field is null. In prior API versions, such records are not returned.

For complete details about Force.com Web Services API 13.0 enhancements, including changes to objects as a result of other platform or application feature improvements, visit "What's New in Web Services API Summer '08" on developer.force.com at https://wiki.apexdevnet.com/index.php/Web_Services_API.

Force.com Development as a Service

Force.com Development as a Service (DaaS) provides the tools and technologies used by professional developers who build applications for the Force.com platform, as well as those who migrate application changes between development organizations and production. The DaaS feature area includes support for creating, retrieving, and deploying changes to your organization's metadata. The following metadata components are new in API version 13.0:

- Custom Page Web Link
- Home Page Components
- Home Page Layouts
- Layouts
- Validation Rule
- Workflow

The following metadata components have changed in API version 13.0:

Metadata Component	Field	Change	Description
ApexClass	<code>status</code>	New	The current status of the class: <ul style="list-style-type: none"> • <code>Active</code> - The class is active. • <code>Inactive</code> - The class is inactive, but not deleted. • <code>Deleted</code> - The class is marked for deletion. This is useful for managed packages, because it allows a class to be deleted when a managed package is updated.
ApexTrigger	<code>status</code>	New	The current status of the trigger: <ul style="list-style-type: none"> • <code>Active</code> - The trigger is active.

Metadata Component	Field	Change	Description
			<ul style="list-style-type: none"> Inactive - The trigger is inactive, but not deleted. Deleted - The trigger is marked for deletion. This is useful for managed packages, because it allows a trigger to be deleted when a managed package is updated.
ApexPage	apiVersion	New	The API version for this page. Every page has an API version automatically specified at creation.
CustomApplication	defaultLandingPad	New	The name of a standard tab or custom tab that opens when this application is selected.
CustomApplication	label	Changed	The label of the custom application as it appears in the app. In API 12.0, the <code>fullName</code> was used for both the internal name of the component and the label in the app. In API 13.0, the <code>label</code> field is the name of the application as it appears in the UI.
CustomObject	customSettingsType	New	<p>Custom setting can be one of the following types:</p> <ul style="list-style-type: none"> List - defines application-level data, such as country codes, to be stored in the application cache to avoid repeated queries to the system. Hierarchy - defines personalization settings, such as default field values, that can be overridden at the organization, profile, or user level.
CustomObject	validationRules	New	The validation rules on this object.
CustomField	relationshipOrder	New	<p>This field is only valid for junction objects. A <i>junction object</i> has two master-detail relationships, and is analogous to an association table in a many-to-many relationship. Junction objects must define one parent object as primary (0), the other as secondary (1). The definition of primary or secondary affects delete behavior and inheritance of look and feel, and record ownership. For more information, see the Salesforce online help.</p> <p>0 or 1 are the only valid values.</p>
CustomField	writeRequiresMasterRead	New	<p>Sets the minimum sharing access level required on the master record to create, edit, or delete detail records. This field applies only to master-detail custom field types.</p> <ul style="list-style-type: none"> true - Allows users with "Read" access to the master record permission to create, edit, or delete detail records. This setting makes sharing less restrictive. false - Allows users with "Read/Write" access to the master record permission to create, edit, or delete related detail records. This setting is more restrictive than true, and is the default value.
CustomTab	fullName	Changed	The <code>fullName</code> for standard tabs is prefixed by <code>std-</code> ; for example <code>std-Accounts</code> .

Metadata Component	Field	Change	Description
CustomTab	label	New	For web tabs, the label of the tab in the app.
CustomTab	splashPageLink	New	A link that references a home page component.
Folder	fullName	Changed	In API 12.0, the <code>fullName</code> field was not unique. In API 13.0, the <code>fullName</code> field is the developer-assigned name of the folder.
Folder	name	New	This field is new in API 13.0 and represents the name of the folder.
Letterhead	fullName	Changed	In API 12.0, the <code>fullName</code> field was not unique. In API 13.0, the <code>fullName</code> field is the developer-assigned name of the Letterhead.
Letterhead	name	New	This field is new in API 13.0 and represents the name of the Letterhead.
Package	description	New	A description of the package.
Profile	layoutAssignments	New	Use to determine which layout to use for a given profile.
WebLink	availability	New	Indicates whether the Weblink is only available online (<code>online</code> , or if it is also available offline (<code>offline</code>)).
WebLink	description	New	A description of the web link.

Force.com Migration Tool

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

The Apex Deployment Tool has been renamed as the Force.com Migration Tool. Use the Force.com Migration Tool to retrieve and deploy metadata using Apache Ant.

To download the Force.com Migration Tool, click **Setup ► Develop ► Tools ► Force.com Migration Tool**. For instructions on how to use the tool, open the `Readme.html` file downloaded with the tool. Additional information can be found in [Deploying Apex Scripts](#).

Force.com IDE

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

Summer '08 includes a developer preview of the Force.com IDE. The Force.com IDE provides a unified interface for building and deploying Force.com applications. Designed for developers and development teams, the IDE provides tools to accelerate Force.com application development, including source code editors, test execution tools, wizards, and integrated help. All Force.com components exposed in the Metadata API are available from the IDE for editing, deploying, and versioning, including Apex classes and triggers, Visualforce pages, s-controls, objects and fields. The Force.com IDE is available as a plugin to the industry-leading, open-source Eclipse project.

For complete details about the Force.com IDE, visit the Force.com IDE page at http://wiki.apexdevnet.com/index.php/Force.com_IDE.

License Management of Installed Managed Packages

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

With Summer '08, Salesforce now includes the ability to manage licenses of packages installed from the AppExchange. This feature enables administrators to assign licenses to and remove licenses from users within their organization.



Note: To manage licenses for packages you created and distributed to customers, install the License Management Application (LMA) from the AppExchange.

Best Practices

- After you have installed a licensed managed package in your organization, assign licenses by clicking **Manage Licenses** on the package detail page.
- If you have assigned all available licenses but need to assign a license to an unassigned user, remove the license for an assigned user first, and then assign the other user.
- You can grant access to a single user from the user's detail page. See "Editing Users" in the Salesforce online help.

About License Management

Managing Licenses for Installed Apps

User Permissions Needed	
To manage licenses for an AppExchange app:	"Manage Package Licenses"

When you install a licensed managed package in your organization from the AppExchange, you purchase a certain number of licenses from the package developer or publisher. You can assign each license to a user within your organization. If you assign all available licenses, but would like to grant licenses to additional users, you can reassign a license or purchase more. To get more licenses, contact the publisher of the managed package.



Note: If you purchased a site license or if the managed package is not licensed, Salesforce automatically assigns licenses to all your users and the ability to manage licenses is not available. Your users can use the app as long as they have the appropriate profile and permissions.

1. Click **Setup** ► **View Installed Packages**.
2. Click **Manage Licenses** next to the app.



Note: To assign licenses for an app, you must have access to the app and at least one available license.

- To assign licenses to more users, click **Add Users**. For more information, see [Assigning Licenses for Installed Apps](#) on page 100.
- To remove a license from a user, click **Remove** next to the user's name. To remove licenses from multiple users, click **Remove Multiple Users**. For information, see [Removing Licenses for Installed AppExchange Apps](#) on page 100.

- Click any column heading to sort the users in ascending order using the data in that column. Click the heading again to sort in descending order.
- If available, select **fewer** or **more** to view a shorter or longer display list.

Assigning Licenses for Installed Apps

User Permissions Needed	
To manage licenses for an AppExchange app:	"Manage Package Licenses"

Assigning Licenses to Users

To assign licenses to AppExchange app users:



Note: If you purchased a site license or if the managed package is not licensed, Salesforce automatically assigns licenses to all your users and the ability to manage licenses is not available. Your users can use the app as long as they have the appropriate profile and permissions.

1. Click **Setup ► View Installed Packages** to find the installed app that has available licenses.
2. Click the **Manage Licenses** link next to the app name.
3. Click **Add Users**.
4. Choose a view from the drop-down list, or click **Create New View** to build a new custom view; see [Creating Custom List Views](#).
5. Click a letter to filter the users with a last name that corresponds with that letter.
6. Click **All** to display all users who match the criteria of the current view.
7. Select the users. Selected users are listed in the Selected list.
8. When the Selected list includes all users to which you want to assign licenses, click **Add**.



Note: You can also add a single user from the user's detail page. See "Editing Users" in the Salesforce online help.

Removing Licenses for Installed AppExchange Apps

User Permissions Needed	
To manage licenses for an AppExchange app:	"Manage Package Licenses"

To remove licenses for an AppExchange app from multiple users:

1. Click **Setup ► View Installed Packages**.
2. Click **Manage Licenses** next to the app name.
3. Click **Remove Multiple Users**.
4. Optionally, choose a view from the drop-down list, or click **Create New View** to build a new custom view; see [Creating Custom List Views](#).
5. Click a letter to filter the users with a last name that corresponds with that letter.
6. Click **All** to display all users who match the criteria of the current view.
7. Select the users you want to remove from the license.
8. When the Selected for Removal area includes all users for which you want to remove licenses, click **Remove**.

To remove licenses for an AppExchange app from a single user, there are two options.

1. Click **Setup** ► **Manage Users** ► **Users** and click **Remove** next to the package in the managed packages list.
2. Click **Setup** ► **View Installed Packages**, then click **Manage Licenses** next to the app name, and click **Remove** next to the user.

Additional Force.com Platform Enhancements

15 Minute Session Timeout

System administrators can now select 15 minutes as the amount of time Salesforce waits before prompting a user to log out or continue working. If the user does not respond, Salesforce logs out the user. Previously, 30 minutes was the minimum session timeout.

To select a 15 minute session timeout:

1. Click **Setup** ► **Security Controls** ► **Session Settings**.
2. Select 15 minutes from the `Timeout` drop-down list.
3. Click **Save**.

Auto-Formatting of Fax Numbers in Search Filter Fields

In prior releases of Salesforce, search filters automatically formatted the `Fax` field on account, user, lead, and contact records to the form (xxx) xxx-xxxx. This behavior prevented users from finding records with that number if it was formatted differently (such as might occur if data was loaded via the Force.com API).

In the Summer '08 release, search filter fields no longer auto-format the `Fax` field on account, user, lead, and contact records.

Apex Post-Update Triggers Visible in Workflow Rules

In prior releases, Apex DML operations in post-update triggers were not reflected in fields referenced in workflow rules. In Summer '08, the fields referenced in workflow rules reflect all changes made by post-update triggers.

New Approval Merge Fields in Email Templates

In Summer '08, the following new approval merge fields are available when creating email templates:

- Approval Process Name: `{!ApprovalRequest.Process_Name}`
- Approval Process Step Name: `{!ApprovalRequest.Process_Step_Name}`
- Approval Step Comments: `{!ApprovalRequest.Comments}`
- Approval Step Status: `{!ApprovalRequest.Status}`
- Approval Step Response Date: `{!ApprovalRequest.Response_Date}`
- Approval Step Assignee: `{!ApprovalRequest.Process_Assignee}`
- Approval Step Assignee ID: `{!ApprovalRequest.Process_Assignee_Id}`
- Approval Step Approver: `{!ApprovalRequest.Process_Approver}`
- Approval Step Approver ID: `{!ApprovalRequest.Process_Approver_Id}`

Note that these approval merge fields will be populated only if the email template you create is used as the approval assignment template. If you use the template for any other email alert action--in either workflow rules or approval processes--the merge fields will return a null value.

Formula Enhancements

Summer '08 now includes the following enhancements for custom formula fields:

Support for Formulas in Validation Rules

Validation rule formulas can now reference formula fields. In addition, validation rule formulas can reference up to five related objects. For instructions on creating a validation rule, see "Defining Validation Rules" in the Salesforce online help

Task and Event Type Picklist Merge Field

Formulas for task and event validation rules, workflow field updates, workflow rules, and approval processes can now use the `Type` picklist merge field. It returns the value of the `Type` standard field for either the task or event object.

Product Code Merge Field

Formulas for product formula fields, validation rules, workflow field updates, workflow rules, and approval processes can now use the `Product Code` merge field. It returns the value of the `Product Code` standard field for the product object.

Added `Manage Users` Merge Field to the `$Profile` Global Variable

The `Manage Users` merge field returns `True` if the profile associated to the current user has the "Manage Users" permission; otherwise, it returns `False`.

Formula Field Detail Page Displays an Error for Invalid Dates

Salesforce displays an error on the detail page if the value of the `DATE` function in a formula field is an invalid date, such as February 29 in a non-leap year. This behavior already exists in reports.

Workflow Rules for Mass Actions on Leads

In Summer '08, workflow rules are now triggered when users select multiple leads from a list view and click **Change Status**, **Change Owner**, or **Add to Campaign**.

Deleted Object Restoration

In Summer '08, Salesforce now temporarily stores deleted custom objects and their data so you can restore them if necessary. During a 45 day grace period, you can restore or permanently erase an object and its data from the Deleted Objects list at **Setup ► Create ► Objects**. After 45 days, the object and its data are permanently erased.

Until permanently erased, the custom object and its data still count against the maximum number of items allowed in your organization. If you delete custom objects because they are not tracking business data (for example, if you export the data to track elsewhere or if you no longer need the object in your data model), permanently erase those objects to make space available. However, avoid permanently erasing custom objects until you are certain you no longer need the data.

For more information on restoring custom objects, see "Managing Deleted Custom Objects" in the Salesforce online help.

Delegated Authentication Gateway Relocation

You can now create or change the delegated authentication gateway in the `Delegated Gateway URL` field in **Setup ► Single Sign-On Settings**. Previously, this value was located in **Setup ► Company Profile ► Company Information** and named `Single Sign-On Gateway URL`.

Outbound Messaging Dead Letter Queue

Outbound messages that have failed to be delivered for more than 24 hours are now listed in a failed outbound message queue. You can request that these messages be retried for another 24 hours, and you can assign up to five email recipients to receive a notification once every 24 hours if one or more outbound messages are in the failed outbound message queue. To track the status of an outbound message, click **Setup ► Monitoring ► Outbound Messages**. For more information, see "Tracking Outbound Message Delivery Status" in the Salesforce online help.

Scheduled Data Export

Data Export allows you to create backup files of your data. In previous releases, you could manually initiate the backup process once per week. In Summer '08 you can now schedule backups to run automatically at weekly or monthly intervals, at the time of day of your choice. As in previous releases, the minimum time interval between backups is six days.

To schedule export files for backup, go to **Setup ► Data Management ► Data Export** and click **Schedule Export**.

If Data Export is not enabled for your organization, contact salesforce.com.

Managed Package Enhancements

Summer '08 offers the following enhancements to managed packages:

AppExchange Package Deprecation

In previous releases, you could not delete or deprecate an older version of an uploaded Managed - Released AppExchange package, even after you uploaded a new version. This made it impossible for a developer to completely "end-of-life" an older version of an uploaded Managed - Released package, because users could still install the older version from the installation URL.

In Summer '08, salesforce.com has resolved these issues with a new option to deprecate the previous versions of Managed - Released packages. Deprecating a version prevents new installations of that version, without affecting existing installations. Deprecation works for all types of packages except for the most recent version of a Managed - Released package. Once a package has been deprecated, there is an option to restore it, which allows users to install that version again.

Non-Global Apex Class and Trigger Deletion

In previous releases, you could not delete an Apex class or trigger from any managed packages. In Summer '08, salesforce.com allows developer editions to delete non-global Apex classes and triggers from managed packages. Note that global Apex classes and triggers, those not in a developer edition, are still locked. For more information see [Properties of Managed Packages](#).