Salesforce.com Summer '12 Release Notes

Last updated: September 7 2012

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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 email enhancements, to new report types, to security and packaging enhancements.

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

Your Feedback Matters

We know how important the Release Notes, online help, and documentation are to your company's success with Salesforce. To continually improve the content we deliver to you, we want to know what works and what doesn't. Let us know!

- Feedback forms—Every HTML documentation page, both in the online help and in our developer guides at Developer Force, includes a feedback form for you to submit your suggestions, corrections, and feedback about the documentation. Let us know what you think!
- IdeaExchange—We're listening to your ideas too. Summer '12 includes some of your top ideas. Visit IdeaExchange for a complete list of ideas coming in Summer '12.

Want to be notified whenever we publish new documentation or make significant updates to existing documentation? Follow us on Twitter: @salesforcedocs.

Release Notes Changes

Welcome to the Release Notes Change Log. Anything that's changed with each new iteration of the release notes is right here, with the newest updates at the top.

Date	What's New	Description
September 12, 2012	Salesforce Touch	Updated the process for enabling Salesforce Touch. It's now automatically available to all organizations without first contacting Salesforce Customer Support, but a Salesforce administrator must enable Salesforce Touch before users can access it. Also, the Salesforce Touch settings page has been slightly modified. Removed references to Touch App. When the downloadable version of Salesforce Touch is available, we'll update the Winter '13 release notes.
August 22, 2012	New Data.com Industry Mapping	Added a section about the improved industry mapping, which is used to determine the value of the Industry field on Data.com account records.
August 1, 2012	Chatter Desktop Enhancements	Added section announcing the availability of the latest version of Chatter Desktop.
August 1, 2012	Salesforce Touch	To protect the integrity of your events' date values, the option to edit event records in Salesforce Touch has been disabled. You can still edit all other records that are viewable in Salesforce Touch. Updated the Salesforce Touch section with this change.
August 1, 2012	Adding Domains Using TXT Records in Site.com	Added a topic explaining how to add domains in Site.com using TXT records.
August 1, 2012	Data Residency Option Now Available	Added a section announcing that the Data Residency Option (DRO) is now available.
August 1, 2012	Data.com Product Suite Overview	Added an "Important" note advising Data.com users not to attempt self-service migrations to the Data.com Clean product built-in to Salesforce. Topic also provides information on how to get help with migration.
August 1, 2012	Preventing Data.com Clean Auto-Updates for Account, Contact, and Lead Records	Add a topic about a new feature in the Data.com Reports AppExchange package that lets you prevent auto-updates for account, contact, and lead records.
July 25, 2012	Public Help and Training Portal	You can access the Help and Training portal without logging in: http://help.salesforce.com/apex/hthome
July 25, 2012	Salesforce Touch	The July '12 update to the Salesforce Touch release is now available. The Salesforce Touch section in these release notes describes the new beta features, as well as current limitations in the product.

Date	What's New	Description
July 5, 2012	Enabling Data.com Clean for Data.com Corporate or Premium	Added a new topic explaining how to enable manual Clean for organizations who use the Data.com Corporate or Data.com Premium products *without* the Data.com Clean product. Linked to that topic from the sections that cover configuring the Corporate and Premium products.
July 5, 2012	Data.com Product Suite Overview	Added more details to the considerations for those who use Clean from the Data.com AppExchange Package. Explains that Salesforce Summer '12 help and release notes describe the Data.com features built in to Salesforce and not the AppExchange features.
July 5, 2012	Salesforce Mobile User Guide for Android	Salesforce Mobile User Guide for Android is now available. The guide contains detailed information for users getting started with Salesforce Mobile for Android.
June 20, 2012	Managed Packages No Longer Use Remote Access Objects	Noted that remote access application definitions should no longer be included in managed packages.
June 20, 2012	Force.com IDE Enhancements	Added a section announcing that the Force.com IDE for Summer '12 is available and supports API v25.0.
June 20, 2012	Live Agent Available in Developer Edition Organizations	Added a note that Live Agent is available in Developer Edition organizations created after June 14, 2012.
June 14, 2012	Help and Training Enhancements	Added that a Tips for Scheduling Reports video and an FAQ: Scheduling Reports are now available.
June 14, 2012	Service Cloud Console Supports Google Chrome™	Added that the Service Cloud console supports the Chrome browser.
June 14, 2012	Chatter REST API Enhancements	Updated the example return for `/chatter/feed-items/`**`feedItemId`**.
June 14, 2012	Chatter REST API Enhancements	Added the following resources to the list of resources that you can specify any user for *userId*. It does not have to be the logged-in user: • `/chatter/feeds/user-profile/`**`userId`**`/feed-items` • `/chatter/feeds/user-profile/`**`userId`**`/feed-items/flat`
June 14, 2012	AppExchange Checkout	Added information on Checkout, a new payment service for apps on the AppExchange.
June 14, 2012	Increased Availability of salesforce.com During Upgrades	Added details about the five-minute upgrade process, and what customers can expect.
June 14, 2012	Videos	Added Introducing Chatter Messenger to the list of available videos.
June 14, 2012	Data.com Product Suite Overview	Added a detailed note about Data.com account search and clean results from the expanded North America D&B data set.
June 06, 2012	Chatter Messenger — Generally Available	Updated feature release timing.

Date	What's New	Description
June 06, 2012	Chatter for iOS v2.2 (iPhone and iPad)—Generally Available	Announced the latest version of the Chatter for iOS mobile app and added information about the features in the new release.
June 06, 2012	Browser Support Changes	Added a note on browser support for existing features.
June 06, 2012	Chatter API Objects	Updated the User object section with the new `UserPreferencesEnableAutoSubForFeeds` field and deprecated `UserPreferencesDisableAutoSubForFeeds` field.
May 30, 2012	Videos	Added the updated video "Sharing Files in Salesforce" to the list of available videos.
May 30, 2012	Videos	Added Cross Filters in Reports to the list of available videos.
May 30, 2012	Chatter Messenger — Generally Available	Updated Sounds and Notifications Tab details under Editing Chat Options.
May 30, 2012	Salesforce Touch	Announced the June '12 update to the Salesforce Touch beta release. Updates to the release notes include a section that describes new and enhanced functionality in this release.
May 30, 2012	SOQL Pagination—Generally Available	Added limit for SOQL offset.
May 30, 2012	Chatter Messenger — Generally Available	Added a delayed release date for some instances.
May 30, 2012	Help and Training Enhancements	Added the Help and Training section, which lists videos and documents that are new or updated for Summer '12.
May 30, 2012	Allow Reparenting Option in Master-Detail Relationship Definitions	Updated Salesforce documentation to clarify that the **Allow reparenting** checkbox for master-detail relationship fields is available only on custom objects.
May 30, 2012	Updated Owner Field in a Forecast	Updated detail about the Owner Field change.
May 30, 2012	Use Quotas to Help Set Sales Goals	Added detail about the required API version.
May 25, 2012	Customizations in Case Feed	Added a link to the Customizing Case Feed with Visualforce developer's guide.
May 25, 2012	Picklist Bucket Names	Added note that picklist bucket fields must contain non-numeric characters.
May 25, 2012	Chatter REST API Enhancements	Added `/chatter/feeds/user-profile/`*`userId`* to the list of resources that you can specify any user for *`userId`*. It does not have to be the logged-in user.
May 25, 2012	Relate Multiple Contacts to a Task (Shared Tasks)	Clarified detail about activity reports.
May 23, 2012	Salesforce Mobile Dashboards for iPad—Generally Available	Announced the latest release of Salesforce Mobile dashboards for the iPad.

Date	What's New	Description
May 18, 2012	Standard Object Limits in Setup and User Roles and Permissions Enhancements	Added Editions tables.
May 18, 2012	Drag-and-Drop Files	Added separate section for Drag-and-Drop Files instead of including it in the Upload Multiple Files section.
May 16, 2012	Browser Support Changes	Updated the Salesforce recommendations for Firefox and Internet Explorer.
May 16, 2012	Creating and Deleting Workspaces	Clarified the behavior of workspaces in the Developer Console.
May 16, 2012	Navigating to Method and Variable Declarations	You can navigate to a method or variable declaration only if the identifier is underlined on mouse over.
May 11, 2012	Reordering of Apex release notes	Reordered Apex release notes entries.
May 11, 2012	Desupport of Package.Version* Methods	Added an entry for Desupport of Package.Version* Methods in the Apex section.
May 11, 2012	Salesforce Known Issues Site	Added a section to the release notes about the Salesforce Known Issues Site.
May 11, 2012	Some OAuth Scope Values Are Nested	Added a note that the documentation now explains which OAuth scopes contain other scopes.
May 11, 2012	Prompt Parameter Now Available in OAuth	Added the OAuth 2.0 prompt parameter for for reauthentication and reapproval.
May 2, 2012	Chart Data Options	Added a link to the related IdeaExchange idea.
May 2, 2012	Dashboard Components Based on Tabular Reports	Added a link to the related IdeaExchange idea.
May 2, 2012	Combination Charts in Dashboard Components	Added a link to the related IdeaExchange idea.
May 2, 2012	Release Notes Change Log	Release notes change log added to the release notes.

Summary of Summer '12 Features and Impact on Salesforce Users

Summer '12 has features that immediately impact all users after the release. You might want to communicate these changes to your users beforehand so they are prepared. Other features require direct action by an administrator before users can benefit from the new functionality.

The following table summarizes the Summer '12 features and their impact on users. Review the feature details for the applicable Salesforce Editions.

General Enhancements

Feature	Automatically visible to all users. No setup required.	Automatically visible to all administrators. No setup required.	Not automatically visible. Feature is available but requires some setup.	Contact salesforce.com to enable this feature.
Browser Support Changes	✔			
Minor HTML and CSS Changes	✔			
Email Services Enhancements (not immediately available with the Summer '12 release)	✔			
Salesforce Known Issues Site	✔			

Chatter Enhancements

Feature	Automatically visible to all users. No setup required.	Automatically visible to all administrators. No setup required.	Not automatically visible. Feature is available but requires some setup.	Contact salesforce.com to enable this feature.
Chatter Messenger — Generally Available (Enabled after the release. Refer to this section for more details.)	✔			
Upload Multiple Files	✔			
Drag-and-Drop Files	✔			

Feature	Automatically visible to all users. No setup required.	Automatically visible to all administrators. No setup required.	Not automatically visible. Feature is available but requires some setup.	Contact salesforce.com to enable this feature.
Sharing Files From Your Feed	✅			
Viewing Files in Your Groups on the Files Tab	✅			
Files Now Included in Data Export		✅		
New Page For Viewing Overall Top Files by Storage Utilization		✅		
File Search Improvements	✅			
Chatter Desktop Enhancements			✅	
Chatter Threads in Email	✅			
Improved Chatter Posting	✅			
Sorting Chatter Feeds	✅			
Streamlined Feed	✅			
Status Updates in Chatter Feed	✅			
Re-Post Files	✅			
Feed Update for Creating Public Groups	✅			
Tracked Feed Updates	✅			
Chatter for iOS v2.2 (iPhone and iPad)—Generally Available			✅	
Chatter REST API Enhancements	✅			

Sales Enhancements

Feature	Automatically visible to all users. No setup required.	Automatically visible to all administrators. No setup required.	Not automatically visible. Feature is available but requires some setup.	Contact salesforce.com to enable this feature.
Forecasts (Also Known as Collaborative Forecasts) Now Available to Customers Currently Using Customizable Forecasting			✅	
Find Forecasts Easily with Jump To...	✅			
Relate Multiple Contacts to a Task (Shared Tasks)			✅	
Use Quotas to Help Set Sales Goals			✅	
New Permission: Manage Quotas		✅		
Improved Access to User-defined Display Settings	✅			
New Location for the Show Opportunities Button on Forecasts Pages	✅			
Updated Owner Field in a Forecast	✅			
Updated Process for Resubmitting Email Approval Responses	✅			
Find and Select Products Easily	✅			
Salesforce CRM Content Files Now Included in Data Export		✅		
New D&B Company Field on Account Records			✅	

Service Enhancements

Feature	Automatically visible to all users. No setup required.	Automatically visible to all administrators. No setup required.	Not automatically visible. Feature is available but requires some setup.	Contact salesforce.com to enable this feature.
Case Feed:				
Customizations in Case Feed			✅	
New Look and Location for **Edit Layout** and **Help for this Page** Links in Case Feed	✅			
New Options for Case Feed Layouts		✅		
Printable View for Case Feed	✅			
Quick Links to Related Lists on Case Feed Detail Pages	✅			
Quick Text in Case Feed			✅	
Send Email Notification Option in the Case Feed Portal Publisher			✅	
Cases:				
Changes to `Created By` Feed Items in Feed Tracking on Cases	✅			
New `Case.Email_Thread` Merge Field		✅		
New Options on Case Reports	✅			
Chatter Answers:				
Chatter Answers for Portals		✅		
Custom Email Notification URLs for Chatter Answers		✅		
Email Branding for Chatter Answers		✅		
Facebook© Sign In for Chatter Answers		✅		
Links to Cases on Private Questions Posted in Chatter Answers	✅			
Optimizing Questions for Chatter Answers		✅		

Feature	Automatically visible to all users. No setup required.	Automatically visible to all administrators. No setup required.	Not automatically visible. Feature is available but requires some setup.	Contact salesforce.com to enable this feature.
Partner Portal User Access to Chatter Answers		✔		
Promoting Chatter Answers into Salesforce Knowledge		✔		
Troubleshooting Chatter Answers Setup with Site Snapshots		✔		
Unfollowing Questions in Chatter Answers	✔			
Computer-Telephony Integration (CTI):				
Open CTI			✔	
Live Agent:				
Desktop Notifications for Incoming Chats in Live Agent (available by June 11, 2012)		✔		
Live Agent in the Console (available by June 11, 2012)			✔	
Live Agent Supervisor Page (available by June 11, 2012)			✔	
Multi-Skill Routing Option on Live Agent Chat Buttons (available by June 11, 2012)		✔		
Quick Text:				
Quick Text `Channel` Field (available within 24 hours after the Summer '12 release)			✔	
Quick Text Merge Fields			✔	
New Quick Text Location in Setup	✔			
Service Cloud Console:				
Service Cloud Console Supports Google Chrome™	✔			
Service Cloud Console Apps for the AppExchange		✔		

Feature	Automatically visible to all users. No setup required.	Automatically visible to all administrators. No setup required.	Not automatically visible. Feature is available but requires some setup.	Contact salesforce.com to enable this feature.
Custom Application Components for the Service Cloud Console		✅		
Hiding the Header in the Service Cloud Console	✅			
Whitelisting Domains		✅		
Service Cloud Console Integration Toolkit: New Methods			✅	
Salesforce Knowledge:				
Knowledge Article Actions—Generally Available (available within 24 hours after the Summer '12 release)		✅		
Article History Tracking (available within 24 hours after the Summer '12 release)		✅		
Deleting a Version or Reverting to a Draft	✅			
Filter Article Searches by Validation Status		✅		
Select a Queue for Approval Processes		✅		
Multimedia Content in Articles		✅		
Validation Status in Articles Related List for Cases		✅		
Article Version History Report	✅			
Salesforce Knowledge API Enhancements (available within 24 hours after the Summer '12 release)	✅			
Customer Portals				
New Access Defaults for Customer Portal Users (available within 24 hours after the Summer '12 release)			✅	

Analytics Enhancements

Feature	Automatically visible to all users. No setup required.	Automatically visible to all administrators. No setup required.	Not automatically visible. Feature is available but requires some setup.	Contact salesforce.com to enable this feature.
Reports Home Page Updates	✅			
Joined Reports Enhancements	✅			
Introducing the Report Timeout Warning	✅			
New Options on Case Reports	✅			
Dashboard Charting Options	✅			
Salesforce Mobile Dashboards for iPad—Generally Available			✅	
Reports Filter Panel Enhancements	✅			
New Custom Date Fields	✅			
Cross-Filtering on Secondary Objects	✅			
Bucket Query Length	✅			

Mobile Enhancements

Feature	Automatically visible to all users. No setup required.	Automatically visible to all administrators. No setup required.	Not automatically visible. Feature is available but requires some setup.	Contact salesforce.com to enable this feature.
Salesforce Mobile for Android Tablets—Generally Available			✅	
Chatter for iOS v2.2 (iPhone and iPad)—Generally Available			✅	
Salesforce Touch			✅	
Salesforce Mobile Dashboards for iPad—Generally Available			✅	

Feature	Automatically visible to all users. No setup required.	Automatically visible to all administrators. No setup required.	Not automatically visible. Feature is available but requires some setup.	Contact salesforce.com to enable this feature.
Salesforce Mobile User Guide for Android		✅		

Data.com Enhancements

Feature	Automatically visible to all users. No setup required.	Automatically visible to all administrators. No setup required.	Not automatically visible. Feature is available but requires some setup.	Contact salesforce.com to enable this feature.
Configuring Data.com Corporate			✅	
Configuring Data.com Premium			✅	
New Data.com Setup Tree		✅		
Increased Data Security	✅			
Expanded Documentation	✅			
Standard Industry Classification Systems	✅			
Industry Selector	✅			
Account Site Field More Prominent on the Account Card	✅			
Search Based on Account Name *and* Tradestyle Fields	✅			
New Standard Report: D&B Company With and Without Accounts	✅			
D&B Fields Available with Custom Reports	✅			
New Reports in Data.com Reports AppExchange Package	✅			
Additional Fields Available in List Views	✅			
New Industry Mapping	✅			

Feature	Automatically visible to all users. No setup required.	Automatically visible to all administrators. No setup required.	Not automatically visible. Feature is available but requires some setup.	Contact salesforce.com to enable this feature.
Introducing D&B Companies — GA in Summer '12			✅	
Data.com Clean — GA in Summer '12			✅	
Data.com Clean Section on Data.com Licenses & Limits Page		✅		
New Data.com Setup Tree		✅		
Platform-Ready `Clean Status` Field		✅		
Expanded Data.com Clean Documentation	✅			
Show/Hide Identical Fields When You Clean Records	✅			
Data.com Corporate D&B Fields Available for Data.com Clean	✅			

Force.com Enhancements

Visual Workflow Enhancements

Feature	Automatically visible to all users. No setup required.	Automatically visible to all administrators. No setup required.	Not automatically visible. Feature is available but requires some setup.	Contact salesforce.com to enable this feature.
Security Enhancement for Flow Finish Behavior		✅		
Visual Workflow Subflows		✅		
Control Input/Output Access for Each Flow Variable		✅		
Sort Records Retrieved by a Record Lookup		✅		

Feature	Automatically visible to all users. No setup required.	Automatically visible to all administrators. No setup required.	Not automatically visible. Feature is available but requires some setup.	Contact salesforce.com to enable this feature.
Sort and Limit Choices Generated by a Dynamic Choice Resource		✅		
Customize a Flow's User Interface with Visualforce		✅		
Updates to the Cloud Flow Designer's Button Bar		✅		
Copy and Paste Elements		✅		
Plain Text Editor		✅		
Default Values of the `Scale` Field		✅		
User Interface Text Improvements		✅		
New "Run Flows" User Permission		✅		
Cloud Flow Designer and API Limits		✅		
Visualforce References to Flows		✅		

Search Enhancements

Feature	Automatically visible to all users. No setup required.	Automatically visible to all administrators. No setup required.	Not automatically visible. Feature is available but requires some setup.	Contact salesforce.com to enable this feature.
Improved Article Search Relevancy	✅			
Improved File Search Relevancy	✅			
Improved Global Search Scope and Ordering	✅			

Schema Builder--Generally Available

Feature	Automatically visible to all users. No setup required.	Automatically visible to all administrators. No setup required.	Not automatically visible. Feature is available but requires some setup.	Contact salesforce.com to enable this feature.
Edit properties of a custom field	✅			
Manage permissions for a custom field	✅			
Custom fields support all types	✅			

Visualforce Enhancements

Feature	Automatically visible to all users. No setup required.	Automatically visible to all administrators. No setup required.	Not automatically visible. Feature is available but requires some setup.	Contact salesforce.com to enable this feature.
Flow Customization Enhancements	✅			
Visualforce References to Flows		✅		
Flow Variable Access Control		✅		
Enhanced Chatter Component		✅		
Chatter Messenger for Visualforce Pages	✅			
PDF Rendering Pipeline Optimizations			✅	
Apex Describe Support for Field Sets		✅		
Single View State—Generally Available (available within 24 hours after the Summer '12 release)	✅			
JavaScript Remoting Enhancements		✅		
Layout Attribute for Custom Components		✅		
Disable Development Mode Button		✅		
Referential Integrity Validation Improvements		✅		

Feature	Automatically visible to all users. No setup required.	Automatically visible to all administrators. No setup required.	Not automatically visible. Feature is available but requires some setup.	Contact salesforce.com to enable this feature.
Other Optimizations		✅		

Platform Development Tools Enhancements

Feature	Automatically visible to all users. No setup required.	Automatically visible to all administrators. No setup required.	Not automatically visible. Feature is available but requires some setup.	Contact salesforce.com to enable this feature.
Workspaces		✅		
Navigating through Tab History		✅		
Navigating to Method and Variable Declarations		✅		
Syntax Highlighting		✅		
Performance Tree		✅		
Overlaying Apex Code and SOQL Statements		✅		
Execute Anonymous Apex Code Enhancements		✅		

Platform Development Tools Enhancements—Force.com IDE

Feature	Automatically visible to all users. No setup required.	Automatically visible to all administrators. No setup required.	Not automatically visible. Feature is available but requires some setup.	Contact salesforce.com to enable this feature.
Force.com IDE			✅	

Security Enhancements

Feature	Automatically visible to all users. No setup required.	Automatically visible to all administrators. No setup required.	Not automatically visible. Feature is available but requires some setup.	Contact salesforce.com to enable this feature.
Verifying the Expiration Date for a CA Certificate	✅			
Enable SMS-based Identity Confirmation			✅	
Support for Bearer Authentication Headers	✅			
Specify the HttpOnly Attribute		✅		
Clickjacking Protection Applied to Setup Pages	✅			
OAuth Version Support Clarified	✅			
Prompt Parameter Now Available in OAuth	✅			
Some OAuth Scope Values Are Nested	✅			
Managed Packages No Longer Use Remote Access Objects	✅			
Data Residency Option Now Available				✅

Permission Sets Enhancements

Feature	Automatically visible to all users. No setup required.	Automatically visible to all administrators. No setup required.	Not automatically visible. Feature is available but requires some setup.	Contact salesforce.com to enable this feature.
Assigned App Settings	☑			
Tab Settings	☑			
Object and Field Permissions Page Renamed	☑			
Permission for Setting Apex Class and Visualforce Page Access		☑		

Sharing Enhancements

Feature	Automatically visible to all users. No setup required.	Automatically visible to all administrators. No setup required.	Not automatically visible. Feature is available but requires some setup.	Contact salesforce.com to enable this feature.
Separate Organization-Wide Defaults for External Users—Pilot				☑
Enable and Assign Partner Super User Access (available within 24 hours after the Summer '12 release)		☑		

Apex Code Enhancements

Feature	Automatically visible to all users. No setup required.	Automatically visible to all administrators. No setup required.	Not automatically visible. Feature is available requires some setup.	Contact salesforce.com to enable this feature.
JSON Parsing Enhancements	☑			

Feature	Automatically visible to all users. No setup required.	Automatically visible to all administrators. No setup required.	Not automatically visible. Feature is available requires some setup.	Contact salesforce.com to enable this feature.
New Type Methods	✅			
Sorting Support for Non-Primitive Data Types in Lists	✅			
Knowledge Management Publishing Service Class	✅			
Describe Support for Field Sets	✅			
New Interfaces and Methods for Running Apex on Package Install/Upgrade and Uninstall	✅			
Desupport of Package.Version* Methods	✅			
Apex Test Execution and Code Coverage Results Changes	✅			
Change in Running Asynchronous Processes in Test Methods	✅			
DML Support for Permission Set sObjects	✅			
New Site setPortalUserAsAuthProvider Method	✅			
Changed isUpdateable Method of DescribeFieldResult	✅			
Callout Limit Increase for Batch Apex	✅			
Active Query Cursor Limit Increase	✅			
Cleaning Up Old AsyncApexJob Records	✅			
Change in Sending Emails for Unhandled Exceptions	✅			

API Enhancements

Feature	Automatically visible to all users. No setup required.	Automatically visible to all administrators. No setup required.	Not automatically visible. Feature is available but requires some setup.	Contact salesforce.com to enable this feature.
API Enhancements	✅			
SOQL Pagination—Generally Available	✅			

Site.com Enhancements

Feature	Automatically visible to all users. No setup required.	Automatically visible to all administrators. No setup required.	Not automatically visible. Feature is available but requires some setup.	Contact salesforce.com to enable this feature.
ZIP File Import	✅			
HTML Tag Property	✅			
Change in Behavior for Editable Components	✅			
User Roles and Permissions Enhancements		✅		
Publishing History	✅			
Trash Can	✅			
Repeater and Data Table Pagination—Generally Available	✅			
Adding Domains Using TXT Records	✅			

ISVforce Enhancements

Feature	Automatically visible to all users. No setup required.	Automatically visible to all administrators. No setup required.	Not automatically visible. Feature is available but requires some setup.	Contact salesforce.com to enable this feature.
Run Apex on Package Install/Upgrade		✅		
Run Apex on Package Uninstall		✅		
Enhancements to Subscriber Support		✅		
AppExchange Checkout		✅		
Service Cloud Console Apps for the AppExchange		✅		

Additional Force.com Enhancements

Feature	Automatically visible to all users. No setup required.	Automatically visible to all administrators. No setup required.	Not automatically visible. Feature is available but requires some setup.	Contact salesforce.com to enable this feature.
Troubleshooting with Inbound Email Snapshots				✅
Data Export File Size Increased	✅			
Recent Items in Setup—Beta		✅		
Standard Object Limits in Setup		✅		
Enhanced Profile User Interface: Object and Tabs Page Renamed	✅			
Organization Administrators Can Log in as Any User				✅
Allow Reparenting Option in Master-Detail Relationship Definitions		✅		
Custom Object Limits in Setup		✅		
Changes in Full Sandbox Configuration		✅		

Feature	Automatically visible to all users. No setup required.	Automatically visible to all administrators. No setup required.	Not automatically visible. Feature is available but requires some setup.	Contact salesforce.com to enable this feature.
Corrections to Sandbox Retention Policy		✓		
New Lookup Relationship Options	✓			✓ For one new option
Formula Function Changes	✓			
Supported Locale Online Help Enhanced	✓			
Custom field labels changes	✓			
Force.com Migration Tool Documentation Location		✓		
Time-Dependent Field Updates Can Retrigger Workflow Rules	✓			

General Enhancements

Summer '12 includes several general enhancements.

Browser Support Changes

Salesforce no longer supports Windows® Internet Explorer® version 6. Existing features that have previously worked on this browser may continue to work through 2014. We recommend upgrading to a later version of Internet Explorer or any of the browsers listed here.

Browser	Comments
Microsoft® Internet Explorer® versions 7, 8, and 9	If you use Internet Explorer, Salesforce recommends using the latest version. Apply all Microsoft hotfixes. The compatibility view feature in Internet Explorer 8 and 9 is not supported in Salesforce. For configuration recommendations, see "Configuring Internet Explorer" in the online help.
Mozilla® Firefox®, most recent stable version	Salesforce.com makes every effort to test and support the most recent version of Firefox. For configuration recommendations, see "Configuring Firefox" in the online help.
Google Chrome™, most recent stable version	Google Chrome applies updates automatically; Salesforce.com makes every effort to test and support the most recent version. There are no configuration recommendations for Chrome. Chrome is not supported for the Console tab or the **Add Google Doc to Salesforce** browser button.
Google Chrome Frame™ plug-in for Microsoft® Internet Explorer® 6	Supported plug-in for Internet Explorer 6 only. Google Chrome Frame applies updates automatically; Salesforce.com supports only the most recent version. For configuration recommendations, see "Installing Google Chrome Frame for Microsoft® Internet Explorer®" in the online help. Chrome Frame plug-in is not supported for the Service Cloud console or Forecasts.
Apple® Safari® version 5.1.x	There are no configuration recommendations for Safari. Safari is not supported for the Salesforce CRM Call Center CTI Toolkit or the Service Cloud console.

For feature-specific recommendations, see "Supported Browsers" in the online help.

Minor HTML and CSS Changes

In Summer '12, we are introducing several changes to the HTML markup and CSS used to render Salesforce pages. These changes improve page performance and maintainability, and should not affect the appearance and behavior of these pages.

While best practices guidelines recommend against manipulating our HTML and CSS, some customers and partners may be impacted by these changes. Any CSS-based customizations, especially those related to tab bar navigation elements, should be extensively tested during the Sandbox release phase.

Email Services Enhancements

To support our continued commitment to trust and transparency, we're announcing under-the-hood upgrades to our email infrastructure. Salesforce.com has invested heavily in a complete rearchitecture of our email services, in response to customer feedback, tremendous growth in usage of our services, and future projected growth.

Our upgrades boost the resiliency, scalability, and efficiency of inbound email. Salesforce email services—including Email to Salesforce, Email-to-Case, and Apex email services—will benefit from:

- Smarter queueing mechanisms
- Significantly increased processing capacity
- More robust mail loop protection

We'll phase in these upgrades over several weeks in the months following the Summer '12 release. Although email services won't be affected during the upgrade period, we will announce on http://trust.salesforce.com when specific environments are scheduled for upgrade. If you have any questions, please contact Customer Support.

Increased Availability of salesforce.com During Upgrades

At salesforce.com, customer success is our top priority. Part of delivering that success is ensuring our service delivers optimal value and remains highly available at all times.

To that end, we have recently improved our major release upgrade process to increase the availability of service during our scheduled release upgrade windows.

Your organization can expect to experience a brief service disruption during the five minute release window listed on Trust at http://trust.salesforce.com/trust/status/#maint. During this brief disruption, users receive an error message informing them that the service is momentarily unavailable while we upgrade it to the latest release, and are prompted to log back.

Note: The five minute release window currently only applies to our major release upgrades, executed three times per year. System maintenance windows have not changed.

Salesforce Known Issues Site

Summer '12 introduces the Known Issues site, a new resource in the Salesforce Customer Community. Created as part of our commitment to trust, transparency, and customer success, the site lists a subset of the issues salesforce.com is aware of and, in many cases, working to fix. You can search for issues, browse by category, and subscribe to updates about issues that are important to your organization.

Each issue listed includes:

- A summary
- Steps to reproduce
- Workarounds
- Ongoing updates
- An estimate of the time frame in which we'll release a fix for the issue

Visit the Known Issues site at http://success.salesforce.com/issues_index. To learn more about the site, visit http://success.salesforce.com/issues_about.

CHATTER

Chatter Messenger — Generally Available

You asked for it! Summer '12 addresses the following ideas on the IdeaExchange: chat and who's online.

Note: Chatter Messenger will be enabled for organizations on instances NA4, NA5, and NA6 on Saturday, July 14, 2012, after the major release. For all other instances, Chatter Messenger will be enabled within 24 hours of the release.

Chatter Messenger is now generally available, and is enabled by default in organizations that have Chatter enabled, including those with Chatter Plus and Chatter Free licenses. Chatter Messenger allows people in your organization to chat securely with people in Chatter without using external chat clients.

To get the most out of your chat experience, click ⬉ in the chat list to pop it out to a separate browser window. Then, you can easily chat with people while you browse other sites and use other applications.

Note: Chatter Messenger is not supported using Microsoft® Internet Explorer® version 7.0. Internet Explorer 7 users won't have access to Chatter Messenger, and will appear offline to other Chatter Messenger users. We recommend these users switch to a different supported browser.

Enabling and Disabling Chat

User Permissions Needed	
To enable Chat:	"Customize Application"

Chat is enabled by default in organizations that have Chatter enabled.

1. Click **Your Name** > **Setup** > **Customize** > **Chatter** > **Chat Settings**.
2. Click **Edit**.
3. Under Chat Settings, select or deselect `Enable Chat`. Chatter must be enabled to enable chat.
4. Click **Save**.

Enabling and Disabling Chat for Visualforce Pages

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

User Permissions Needed	
To enable chat for custom Visualforce pages	"Customize Application"

Add a chat widget to your custom Visualforce pages.

1. Click *Your Name* > **Setup** > **Customize** > **Chatter** > **Chat Settings**.
2. Click **Edit**.
3. Under Visualforce Settings, select `Allow`.

   Deselect to disable chat for custom Visualforce pages.

4. Click **Save**.

To prevent the chat widget from displaying on a specific Visualforce page, do any of the following:

- Turn off the Salesforce tab header on your page by setting `<apex:page showHeader="false">`.
- Set the page `contentType` to something other than `text/html`, for example, `<apex:page contentType="text/plain">`.

Changing Your Chat Status

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

Let people know if you're available to chat, or set your status to **Offline** if you don't want to chat.

People can see your status:

- In their chat lists
- On your profile
- On people hovers

To change your chat status, click **Available**, **Away**, or **Offline** at the top of your chat list. For example, if your status is set to Available but you don't want to chat with others, click **Available** and choose **Offline**.

Your status automatically changes to idle if you're idle for 15 minutes. To change this setting, click **Chat > ⚙ > Options**, then select **General Settings**.

Chatting with People

You can chat with one or more people in Chatter who are online.

1. Start a chat.

   - From your chat list, click a name in the People I Follow or My Favorites list.
   - From a person's profile, click **Start Chat**.

2. Optionally, add up to 10 people to the chat.

   a. Drag people from your chat list to the active chat, or click at the top of the active chat and type the name of a person you're following in Chatter.
   b. Repeat until you've added everyone you need for the chat.

   Click to see a list of everyone in the chat.

   Note: When you leave a chat with multiple people, the other people in the chat can continue chatting without you. You need to be added back to the chat to participate again.

Adding People to the My Favorites List in Chat

The list of people you follow in Chatter can be long. Add up to 100 chats with one or more people to your My Favorites list and they'll always show up at the top of your chat list.

- In an active chat with one or more people, click ☆ to save the chat as a favorite.
- You can also click and drag a single person's name from the People I Follow list to the My Favorites list.
- You can rename a chat with multiple people in your My Favorites list. Click **Edit** next to My Favorites, click the multiple-person chat you want to rename, and type a new name. For example, if you have a favorite chat with *Sue, John, Jeff*, you could rename it to `Sales Team`. All names must be unique.

Removing People from the My Favorites List in Chat

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

Remove chats with one or multiple people from your My Favorites list if you chat with them less often. People you follow in Chatter will still show up in your People I Follow list.

1. Next to the My Favorites list, click **Edit**.
2. Next to the name of the chat you want to remove, click the ✖ button.
3. When you've finished deleting chats from the list, click **Done** next to the My Favorites list.

You can also remove chats from the My Favorites list by clicking the ★ icon in an active chat.

Popping Out Chat Windows

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

Keep chatting—even when you minimize your browser or use other applications—by popping out a chat or your chat list into a separate browser window.

- Click ↖ in the top-right corner of an active chat or the entire chat list to pop it out.
- Click ↘ in the top-right corner of a popped-out chat or chat list to pop it back in to your Salesforce screen.

Adding Emoticons to a Chat

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

Typing certain combinations of letters and punctuation marks inserts a whimsical icon into your chat conversation.

The following emoticons are available.

Emoticon	Typed Characters
😊	:-), :), :], =)
🙁	:-(, :(, :[, =(
😃	:-D, :D, =D
😮	:-O, :O, :-o, :o
😛	:-P, :P, :-p, :p, =P

Emoticon	Typed Characters
😊	;-),;)
😕	:/, :-/, :\, :-\

You can turn off emoticons in **Chat** > ⚙ > **Options**.

Editing Chat Options

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

To edit your chat options, click ⚙ in the top-right corner of the chat window, then click **Options**.

Tip: When you click ⚙, you can also quickly toggle the visibility of **My Favorites**, **People I Follow**, and **Offline People** in your chat list. You can also toggle the options to **Play sounds** and **Show emoticons**.

General Settings

Option	Description
Change status to Away after *15* minutes	When selected, your status changes to "idle" if you are idle in your Salesforce app for the length of time you specify.
Show emoticons	When selected, graphics such as 😊 or 😕 display when people you chat with type standard textual emoticons such as :-) or :-(.
Show a timestamp only when I hover over a message	When selected, the timestamp for chat messages displays only when you hover over an individual message. When not selected, the timestamp displays inline with each chat message and status change.

Sounds and Notifications

Option	Description
Play a sound for new messages	When selected, a sound plays when someone starts a new chat with you. **Note:** Sounds play for all incoming messages when a chat is minimized, a chat is out of focus (for example, if you have multiple chats), or when you're using another application or browser tab.
Alert in browser tab for new messages	When selected, a notification saying "You have new chat messages" displays in your browser tab when someone sends you a new chat message.

Chat List

Select the lists of people that you want to see in your chat list:

- **My Favorites**
- **People I Follow**
- **Show people who are offline**

Files Enhancements

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

Upload Multiple Files

In Summer '12, you can upload multiple files at the same time from the Files tab, the Files Shared With list on a group, or the Files Owned by list on a profile.

The following browsers support uploading multiple files. If your browser does not support uploading multiple files, you can still upload files one at a time.

Browser	Additional Requirements
Google® Chrome™	Must be the latest stable version
Mozilla® Firefox®	Must be the latest stable version
Internet® Explorer® 7, 8, 9	Must have Flash 11 or later installed
Apple® Safari® for Mac	Version 5.1.x

Drag-and-Drop Files

In Summer '12, you can upload files using drag-and-drop. Drag one or more files from your desktop or file browser and drop onto the Files list, just like you would drag files into a folder. This is not supported in Internet Explorer.

Sharing Files From Your Feed

In Summer '12, the option to share files that are attached to posts has moved. To share a file attached to a post, next to the file, click **More Actions** > **File Sharing Settings**.

Viewing Files in Your Groups on the Files Tab

In Summer '12, the **FILES IN MY GROUPS** filter on the Files tab shows only files in the groups you've most recently viewed.

Files Now Included in Data Export

Both public Salesforce CRM Content and public Chatter files attached to your selected data types can now be included when you export data, along with images, documents, and attachments.

New Page For Viewing Overall Top Files by Storage Utilization

In Summer '12, to view the files that are using the most storage for your organization:

1. Click **Your Name** > **Setup** > **Data Management** > **Storage Usage**.
2. At the bottom of the page, click **Overall Top Files by Storage Utilization**.

File Search Improvements

See Improved File Search Relevancy for information on enhancements to file search in Summer '12.

Chatter Desktop Enhancements

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

Summer '12 delivers a new version of Chatter Desktop—a desktop app that increases your productivity by letting you collaborate in Chatter outside of your Web browser. This version of Chatter Desktop includes:

- The ability to chat with one or more people in your organization
- The ability to like comments
- The ability to view a list of people who like a post or comment
- The ability to view files attached to comments
- The ability to view dashboard snapshots
- The ability to view shared messages
- Several miscellaneous bug fixes, including feed improvements using new components and an issue that prevented adding an @mention after a #topic

In organizations that allow Chatter Desktop standard installations, Chatter Desktop prompts current users to install the updated version. You can also install the updated version from *Your Name* > **Setup** > **Desktop Integration** > **Chatter Desktop**.

In organizations that use the Chatter Desktop managed installer, only system administrators can upgrade users to the new version.

Additional Chatter Enhancements

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

Chatter Threads in Email

You asked for it! This enhancement is from an idea on the IdeaExchange.

Email notifications have a new look, giving you more useful details while reducing noise. Now, when you receive notifications for being mentioned in a comment or for any of the comment notifications listed in your Chatter email settings under Comments, the emails include the original post and people's latest comments. We've also simplified the footers in these and other Chatter emails for a more streamlined inbox.

Improved Chatter Posting

In Summer '12, we made it easier for you to create different types of posts in Chatter. Now text, file, and link post options are above the text box.

Sorting Chatter Feeds

For new users, Chatter feeds are now sorted by Post & Comment Date by default. Posts with the most recent comments appear at the top of your Chatter feed. You can toggle between sorting your feed by posts only and sorting by posts and comments at any time by selecting **Post Date** or **Post & Comment Date** at the top of your feed.

Streamlined Feed

We're cleaning up your Chatter feed. Starting with Summer '12, you no longer get automatic feed updates for all records you created. You can decide which records you want to follow by clicking **Follow** on the record's detail page. However, if you still want to follow all records you created, you can enable auto-follow for all records in your Chatter settings. Click **_Your Name_** > **Setup** > **My Chatter Settings** > **My Feeds** and select `Automatically follow records I create`.

In addition to this change, you also don't see feed updates when you create a new record. However, if your organization switched from the standard case interface to Case Feed, you still see feed updates for case records. If your organization switched to Case Feed prior to Summer '12, you see updates for all new and existing cases you own. If your organization switched after the release of Summer '12, you see updates only for cases you create once Case Feed is enabled.

Status Updates in Chatter Feed

Starting with Summer '12, we changed the way we create and display your profile status updates. You can still post a status update from the Chatter tab and your profile page. Your status still displays in all feeds, but it no longer appears under your profile picture, in the Chatter tab sidebar, or in People list views.

Re-Post Files

 You asked for it! This enhancement is from an idea on the IdeaExchange.

In Summer '12, you now access all re-posting actions by clicking **Share** below the post. The new re-posting improvements include:

- Sharing public user and group posts with files to your profile or to a group.
- Setting viewer or collaborator rights on files when sharing a post containing an attachment with a group.
- **Show link to post** in the top corner lets you easily copy and share the URL to the post.

Feed Update for Creating Public Groups

Starting in Summer '12, we post an update to your Chatter feed and the All Company feed when you create a public group. People who are following you also see the update in their Chatter feed.

We don't post an update when you create a private group or a group that allows customers.

Tracked Feed Updates

In Summer '12, we automatically prune tracked feed updates from your Chatter feed if the updates are older than 45 days and have no likes or comments. This change doesn't affect tracked feed updates for case records. Older updates are only removed from the feed; the full audit history for each tracked object is always available.

Tracked feed updates are updates for objects and changes to fields and records you follow. We only prune tracked feed updates; we don't remove posts or comments made by you or by others.

Chatter for iOS v2.2 (iPhone and iPad)—Generally Available

A new version of the Chatter mobile app on page 93 is now available for iPhone and iPad users.

Chatter REST API Enhancements

> **Available in**: **All** editions except **Personal** Edition

Summer '12 (Chatter API version 25.0) improvements:

- General Updates
- New and Changed Resources
- New and Changed Response Bodies
- New and Changed Request Bodies

> **Attention:** Resources, parameters, and response bodies change from release to release. We strongly recommend testing your application in a test environment before deploying it to production.

General Updates

- Chatter API now escapes `&` as `&` in all strings, in addition to the characters already being escaped, such as <, >, and so on. This change applies to all Chatter API versions. If you don't want Chatter API to encoded characters, set the `X-Chatter-Entity-Encoding` HTTP header in your request to `false`.
- The Files resources are now generally available. This includes the following resources and responses:

    ◊ File, File Details, and File Page resources return information about files.
    ◊ The Groups Files resource returns information about files posted to the group.
    ◊ The Users File resources:

        - `/users/me | `**`userid`**`/files`—Returns information about files that a user has posted.
        - `/users/me | `**`userid`**`/files/filter/groups`—Returns information about files posted to groups that the logged-in user is a member of.
        - `/users/me | `**`userid`**`/files/filter/shared-with-me`—Returns information about files that have been shared with the logged-in user.

    ◊ File Shares Page, Library, and Shares response bodies return information about file shares.

- User status is no longer available as a separate feed item type in Chatter. Instead, post updates to any feed resource, with the feed-item, such as `/chatter/feeds/news/me/feed-items`. As a result, the following updates have been made to Chatter API:

    ◊ New feed item posts made to the News, Record, and User feed resources no longer create separate user status updates
    ◊ The User Status resource (`/chatter/user/me/status`) is no longer available
    ◊ The User Status request body is no longer available
    ◊ The User Status response body is no longer available
    ◊ In the User Detail response body, the `currentStatus` property is no longer available

- The documentation listed the following resources as requiring the *userId* to be the same as logged-in user. That was incorrect: you can specify any user for *userId*, as well as the keyword `me` to indicate the logged-in user.

    ◊ `/chatter/feeds/user-profile/`**`userId`**
    ◊ `/chatter/feeds/user-profile/`**`userId`**`/feed-items`
    ◊ `/chatter/feeds/user-profile/`**`userId`**`/feed-items/flat`

◊ /chatter/users/***userId***
◊ /chatter/users/***userId***/files
◊ /chatter/users/***userId***/files/filter/groups
◊ /chatter/users/***userId***/files/filter/shared-with-me
◊ /chatter/users/***userId***/followers
◊ /chatter/users/***userId***/following
◊ /chatter/users/***userId***/groups
◊ /chatter/users/***userId***/status

New and Changed Resources

- The new Component Snapshots resource enables you to post a new dashboard snapshot. The new resource is:
  `/connect/dashboards/components/`***componentId***`/snapshots`
- You can now use the new Photo request body to specify an existing photo to be used for the following resources:

  ◊ Group Photo
  ◊ User Photo

- The User Files, Filtered by Sharing resource can be specified as either:

  ```
  /chatter/users/me | userid/files/filter/shared-with-me
  ```

  OR

  ```
  /chatter/users/me | userid/files/filter/sharedwithme
  ```

- The Users Following resource has a new request parameter for GET or HEAD—`filterType` can be used to specify a key prefix to filter the type of object returned.
- User Recommendations for a Specific Action and Object Category have a new request parameter, `viewed`, that provides new recommendations based on the context of the provided file ID.
- User Recommendations for a Specific Action, User Recommendations for a Specific Action and Object Category, and User Recommendations for a Specific Action and Object ID have a new valid value for `action`, `view`, that returns recommendations to view users, files, groups, and records.
- User Recommendations for a Specific Action and Object Category have new valid values for `object category` if the `action` is view: users, files, groups, records
- User Recommendations for a Specific Action and Object ID have new valid values for `object ID` if the `action` is view: user ID, file ID, group ID, or record ID.
- The following feeds now have a flat feed resource, that is, they return a feed where there is no hierarchy between feed items and comments: feed items and comments are all at the same level.

  ◊ Bookmarks
  ◊ Filter
  ◊ Files
  ◊ Groups
  ◊ News
  ◊ People
  ◊ To
  ◊ Record
  ◊ User Profile

New and Changed Response Bodies

- The Address response has a new property `formattedAddress` that returns the address formatted for the logged-in user's locale.
- The following updates have been made to the Comment response:

  ◊ The `isDeletable` property is no longer available. Use the new property `isDeleteRestricted` instead.
  ◊ The date returned for the `createdDate` property now is identical to all other dates. It returns an ISO8601 date string.

    The `createdDate` property used to return something similar to the following:

    ```
    "createdDate" : "2012-01-30T23:31:02.000+0000"
    ```

    It now returns something similar to the following:

    ```
    "createdDate" : "2012-01-30T23:20:22.000Z"
    ```

- The Features response has the following new properties:

  ◊ `chatterMessages`—specifies whether Chatter messages are enabled for the organization.
  ◊ `dashboardComponentSnapshots`—specifies whether dashboard snapshots are enabled for the organization.

- The Feed Body resource, the `messageSegments` property now has a new type, Message Segment: Entity Link. This returns a URL to a record.
- The Feed Item resource has the following updates:

  ◊ `isDeleteRestricted`—a new property that indicates if a feed item cannot be deleted.
  ◊ The `parent` property now returns a File response body if the parent is a file. This change applies to all Chatter API versions. In order to prevent errors in existing applications, the `name` property has been added to the File response body so that existing applications may continue to function without change.
  ◊ The `type` property has the following new types:

    - `AttachArticleEvent`
    - `ChangeStatusPost`
    - `CollaborationGroupCreated`

- Group and Group Member responses have the following new values for the `role` property:

  ◊ `NotAMember`
  ◊ `NotAMemberPrivateRequested`

- The default sizes for the Photo response have changed:

  ◊ `largePhotoUrl`—The default width is 200 pixels, while the length is scaled so the original image proportions are maintained.
  ◊ `smallPhotoUrl`—The default size is 64x64 pixels.

- The User Summary response body has a new property `isActive`.
- The following responses have a new property, `isFeedModifiedUrl`:

  ◊ Feed
  ◊ Feed Item Page

- The following new responses have been added:

◊   Feed Modified Info
◊   Flat Feed
◊   Flat Feed Item

New and Changed Request Bodies

•   Dashboard Component Snapshot is a new request body that allows users to post dashboard component snapshots.
•   Photo is a new request body that allows an existing file to be used as a photo.

SALES CLOUD

Forecasts Enhancements and Updates

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

User Permissions Needed	
To enable Forecasts users:	"Manage Users" AND "Customize Application"
To enable quotas:	"Manage Quotas"
To use Forecasts:	"Allow Forecasting"
To use quotas:	"Allow Forecasting" AND "Manage Quotas"

> **Note:** This information applies only to the Forecasts product beginning with Winter '12, and not Customizable Forecasting or Forecasts (Classic).

Forecasts (Also Known as Collaborative Forecasts) Now Available to Customers Currently Using Customizable Forecasting

Customers currently using Customizable Forecasting can now migrate to the Forecasts product first released in Winter '12. Before migrating, make sure to review the help topic What's the difference between the Forecasting features? to determine if you can benefit from the latest improvements offered in Forecasts. When migrating to Forecasts from Customizable Forecasts keep the following in mind:

- To enable Forecasts, Customizable Forecasts must be disabled first.
- Organizations using territory management, PRM, or custom fiscal years can't migrate to Forecasts at this time.
- The forecast history, overrides, reports, and sharing data from Customizable Forecasts are purged.
- Prior to migrating to Forecasts, consider exporting forecasting report data.
- Forecast hierarchy is retained. However, to reduce the chance of potential data loss, consider migrating to Forecasts immediately after disabling Customizable Forecasts. Since the hierarchy is retained, do not enable Forecasts users again after migrating. Instead, after migration validate all hierarchies for accuracy.

Find Forecasts Easily with Jump To...

Now you can find forecasts by user name more easily than ever. If you're a forecasts manager, use **Jump to...** to move up and down through the forecasts hierarchy.

1. Click **Jump to...**.
2. Begin typing up to 20 characters in the text box that appears.
3. Select a name to go to that person's forecast.
4. After you're on a forecasts page, you can expand rows by clicking them as you do in your own forecast. Hover over names to display the **Details >>** link. Navigation links with the names of forecast managers display at the top of the page as you drill down through the forecast hierarchy. Click on these links to move quickly back up the hierarchy.

Use Quotas to Help Set Sales Goals

We're adding even more functionality and improvements to our newest forecasting product. Now administrators can enable quotas for Forecasts users in their organizations!

Note: Quotas for Forecasts is available for Developer, Enterprise, and Unlimited Edition customers. Professional Edition customers who purchase API enablement can also use quotas for Forecasts.

1. Click *Your Name* > **Setup** > **Customize** > **Forecasts** > **Settings**.
2. Under Quotas, select `Show Quotas`.
3. Click `Save`.

Quota data must be loaded through the API. Consider using the Data Loader for this task. (You must use API version 25 or later.) For example, you might have a CSV file with column names such as User ID, Quota Amount, Currency Code, and Month [YYYY-MM-DD].

User ID	Quota Amount	Currency Code	Month
00599000000Hofh	250000	USD	2012-03-01
00599000000Hofh	250000	USD	2012-04-01
00599000000Hofh	250000	USD	2012-05-01
00599000000Hofh	250000	USD	2012-06-01
00599000000Hofh	250000	USD	2012-07-01
00599000000Hofh	250000	USD	2012-08-01

Map these columns to the `QuotaOwnerId`, `QuotaAmount`, `CurrencyIsoCode`, and `StartDate` fields in the ForecastingQuota object and use the Data Loader to upload your quota information to Salesforce.com. For more details about Data Loader, see "Data Loader Overview." in the online help As a best practice, load quota data in the quota owner's personal currency. Note that you can still upload quota data using the API even if `Show Quotas` is disabled.

Note: If you disable Forecasts, quotas are also disabled.

New Permission: Manage Quotas

Now that quotas are available, we added a new user permission: "Manage Quotas." System administrators can enable this permission for users who create, edit, and delete quotas.

Improved Access to User-defined Display Settings

You can show or hide quota amounts and quota attainment percentages on your forecast page: Click **Display Settings**. Use the selection options to choose what you want to display on your forecast page.

Now if your organization uses multiple currencies, click **Display Settings** > **Change** to select a forecast display currency. Previously, you clicked **Change**, located next to your currency information.

New Location for the Show Opportunities Button on Forecasts Pages

For organizations that use Chatter Messenger, we moved the **Show** button to make room for the chat list.

Learn more about Chatter Messenger, which is now generally available.

Updated Owner Field in a Forecast

On the Opportunities section of a forecast, we changed the field name `Owner` to `Owner Full Name`.

Relate Multiple Contacts to a Task (Shared Tasks)

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

User Permissions Needed	
To view activity settings:	"View Setup and Configuration"
To customize activity settings:	"Customize Application"

 You asked for it! Summer '12 addresses this idea on IdeaExchange.

Summer '12 includes the new feature, Shared Activities, which lets your users relate non-recurring and non-group tasks to as many as 10 contacts, one of which your users select as the primary contact. All others are secondary contacts. You can enable this feature for your users in Salesforce.
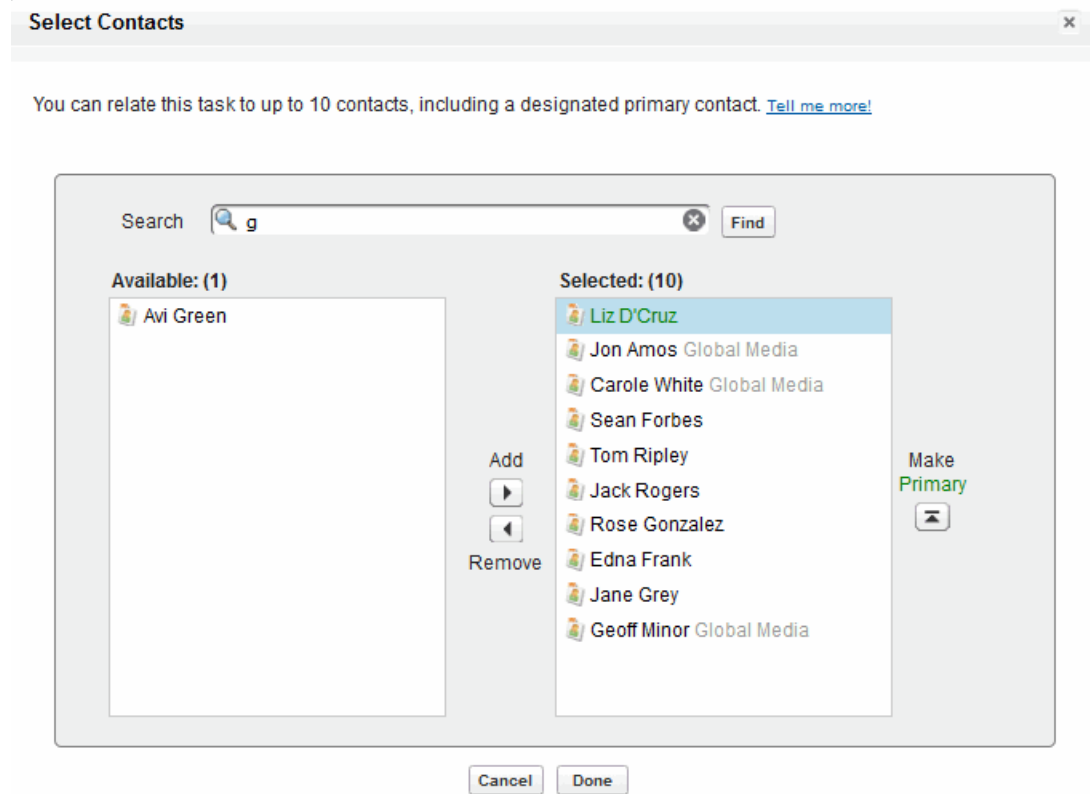
Learn about the Shared Activities Feature

When you enable the Shared Activities feature, your users have more flexibility with their tasks, such as when your users view them on the Task detail page and run certain reports.

Using activity reports, your users can gather information on activity metrics. In addition, users can see all related contacts on the Task detail page if you add the new Name related list to the Task Page Layout. We also added a Relation Count column, which displays the number of contacts related to a task, in activity reports. The Shared Activities feature lets your users view:

- Tasks when you have access to at least one contact, lead, or related record. You can also view tasks if your role is above the task owner's in your organization's hierarchy. Keep in mind, when you relate contacts to which other users have access, those users can view the task along with the names, account names, and titles of all the contacts you related to the task—including the contacts to which those users may not otherwise have access.
- All contacts related to a task on the Task detail page if your administrator adds the Name related list to the Task Page Layout.
- The number of contacts related to a task when you use the Relation Count column in activity reports.
- One row per contact for each activity in the Activities with Contacts report when you select at least one field from the related Contact list.
- A task's primary contact in two reports: Tasks and Events, and Activities with Cases. The primary contact also appears in the Name field on the Task detail page.

For now, users select contacts with the Select Contacts dialog box, regardless of the number of contacts they relate to a task.

Known Issue Involving API and Email Integration Compatibility

Before you enable the Shared Activities feature, it's important you understand an issue that may impact administrators or developers using our API version 24 or earlier, as well as users of two Salesforce email integration applications.

If your role is	And you use	It's important to know that
Administrator or Developer	API version 24.0 or earlier	The API doesn't return tasks with multiple contacts related to the tasks. To avoid this issue, upgrade to API version 25.0.
User	Either of the following email integration applications: • Connect for Outlook • Connect for Lotus Notes	You may lose task data when you: • Relate multiple contacts to a task that you update in Salesforce, *and* • Sync these tasks from Salesforce to your email system This issue may occur because the two affected email integration applications aren't compatible with the Shared Activities feature. To avoid this issue, consider either upgrading to Salesforce for Outlook, or not enabling the Shared Activities feature.

Enabling Shared Activities

The process for enabling the Shared Activities feature for tasks can take up to 48 hours, depending on the volume of activities for your organization. While you enable this feature, your users can continue working with tasks.

1. Go to **Your Name** > **Setup** > **Customize** > **Activities** > **Activity Settings**.
2. Select `Allow Users to Relate Multiple Contacts to Tasks`.
3. Click **Submit**.
4. Required for Salesforce Mobile users and recommended for all users: Add the Name related list to the Task detail page layout. If you don't add the related list to the page layout, mobile users can only see a task's primary contact.

After the process for enabling Shared Activities finishes, you'll receive a confirmation email.

> **Tip:** Easily check the status of your process for enabling the Shared Activities feature by viewing the Activity Settings page. We provide helpful messages about both the status and what you need to do if the enabling process doesn't finish successfully.

Displaying Related Contacts on Task Detail Pages

When you enable the Shared Activities feature for tasks, the Contact detail page displays task information in the Open Activities and Activity History related lists for each related contact. For your users to make the most of the Shared Activities feature, we recommend that you add the Name related list to the Task detail page layout. This lets your users view all names related to a specific task on the Task detail page.

1. Select **Your Name** > **Setup** > **Customize** > **Activities** > **Task Page Layout**.
2. In the palette on the upper portion of the screen, click **Related Lists**. The palette displays the available related lists.
3. From the palette, drag **Name** to the lower portion of the screen.
4. In the palette, click **Save**.

Additional Sales Cloud Enhancements

Updated Process for Resubmitting Email Approval Responses

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

User Permissions Needed	
To approve, reject, or reassign approval requests:	Permissions vary depending on the approval process settings
To approve and reject approval requests via email:	"API Enabled"

We've improved how we handle approval request email responses that contain errors. When you process approval requests using email, you can reply to the request notification by typing a response in the email body, such as approve, reject, or another valid word. If the word in your response isn't recognized, you receive an error notification email. To submit another response, reply again to the original email notification. This functionality hasn't changed.

Previously, you could also resubmit your response by replying to the error notification email. Now, we accept only replies to the original approval request notification. Replies to the error notification email won't be processed. This minimizes the risk of unintended email loops caused by automated responses, such as out of office messages.

Find and Select Products Easily

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

You asked for it! This enhancement is from ideas on the IdeaExchange.

- Keep selections across search results pages
- Have A–Z links and a Go to Page field
- Show the number of search result pages
- Display more than 25 products per page

We improved how your users can find and select products. They can filter products using search criteria or alphabetical links. In addition, they can specify how many products appear on each page, and refresh the products list to display newly added products. Your users can also dynamically reorder the columns in the displayed products table. Whenever users select or deselect products using checkboxes or the new quick select or deselect option, and then navigate to another product list page, the selections persist. We also improved navigation so your users can now move between product list pages using **Previous** and **Next** links, or the Page box if the data set contains fewer than 2,000 records.

In addition, the product selection page includes improvements for opportunities, quotes, service contracts, and price books.

Note: Beginning in Summer '12, only administrators, and not users, can customize columns in the products search results list.

Label Change for Account Layout Properties

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

User Permissions Needed	
To customize page layouts:	"Customize Application"
To view page layouts:	"View Setup"

In the Account Layout Properties dialog box, the `Run Territory Assignment Rules on save` label is now `Evaluate this account against territory rules on save`.

To run territory assignment rules automatically when an account is edited and saved, select the `Select by default` checkbox under **Layout Properties** in the Account Layout edit page. If both `Select by default` and `Show on edit` are selected, users can uncheck the `Evaluate this account against territory rules on save` checkbox on the account edit page, and territory assignment rules will not be run.

Salesforce CRM Content Files Now Included in Data Export

Both public Salesforce CRM Content and public Chatter files attached to your selected data types can now be included when you export data, along with images, documents, and attachments.

New D&B Company Field on Account Records

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

If you use Data.com Premium, Account records have a new field, `D&B Company`, which links to a corresponding D&B Company record.

SERVICE CLOUD

Customizations in Case Feed

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

Case Feed gives you a more streamlined way of creating, managing, and viewing your organization's cases. Case Feed includes publishers and a Chatter feed. The publishers let you create internal notes, log calls, change the status of cases, and communicate with customers. The feed displays important case events in chronological order, so you can easily see the progress of each case. Summer '12 introduces four new Visualforce components that let you customize Case Feed layouts and functionality in the Service Cloud console.

Component Overview

Use these new Visualforce components on a custom Visualforce page to create a unique Case Feed layout and functionality in the Service Cloud console:

Component Name	Description	Use It To...
`apex:emailPublisher`	Displays and controls the appearance and functionality of the Case Feed Email publisher.	• Create an Email publisher and place it anywhere on a Service Cloud console page. • Change the appearance of the publisher by specifying its dimensions and the fields it includes. • Customize certain aspects of the publisher's functionality, such as specifying a default Subject for each outgoing email.
`apex:logCallPublisher`	Displays and controls the appearance and functionality of the Case Feed Log a Call publisher.	• Create a Log a Call publisher and place it anywhere on a Service Cloud console page. • Change the appearance of the publisher by specifying its dimensions and the fields it includes.
`support:caseArticles`	Displays and controls the appearance and functionality of the Articles tool for cases.	• Create an Articles tool for cases and place it anywhere on a Service Cloud console page. • Change the appearance of the tool by specifying its dimensions.

Component Name	Description	Use It To...
		• Customize certain aspects of the tool's functionality, such as how it searches for articles.
support:portalPublisher	Displays and controls the appearance and functionality of the Case Feed Portal publisher.	• Create a Portal publisher and place it anywhere on a Service Cloud console page. • Change the appearance of the publisher by specifying its dimensions and the fields it includes.

Example

Here are some of the types of Case Feed customizations you can do with Visualforce. This example highlights the `apex:emailPublisher`.

1. Define the width of the page so it's fixed or scalable.
2. Make the fields in the Email publisher expanded by default whenever a support agent clicks **Email Customer**.
3. Set a specific address to appear in the `From` field for all outgoing email messages.
4. Make the `To` and `Subject` fields read-only so support agents can't change them.
5. Pre-fill the email body with a standardized message, including merge fields for customer information.

Requirements and Limitations

The `apex:emailPublisher`, `apex:logCallPublisher`, and `support:portalPublisher` components can only be used in organizations that have enabled Case Feed, Chatter, and feed tracking on cases.

Learn More

For more information (English only) about customizing Case Feed in the Service Cloud console, including use cases and code samples, see Customizing Case Feed with Visualforce.

Open CTI

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions with the Service Cloud

Salesforce CRM Call Center seamlessly integrates Salesforce with third-party computer-telephony integration (CTI) systems. Before the introduction of Open CTI, Salesforce users could only use the features of a CTI system after they installed a CTI adapter program on their machines. Yet such programs often included desktop software that required maintenance and didn't get the benefits of cloud architecture. Open CTI lets developers:

- Build CTI systems that integrate with Salesforce without the use of CTI adapters.
- Create customizable SoftPhones (call-control tools) that function as fully integrated parts of Salesforce and the Service Cloud console.
- Provide users with CTI systems that are browser and platform agnostic, for example, CTI for Chrome, Firefox, or Internet Explorer on Mac, Linux, or Windows machines.

Developers use Open CTI in JavaScript to embed API calls and processes; Open CTI is only available for use with JavaScript pages. To use Open CTI, developers should have a basic familiarity with:

- CTI
- JavaScript
- Visualforce
- Web services
- Software development
- The Service Cloud console
- Salesforce CRM Call Center

For information (English only) on customizing and building CTI systems with Open CTI, see the *Open CTI Developer's Guide*.

With Summer '12, the following new methods are available.

Method	Description
`disableClickToDial()`	Disables click-to-dial.
`enableClickToDial()`	Enables click-to-dial.
`getCallCenterSettings()`	Returns the call center settings in the call center definition file as a JSON string.
`getPageInfo()`	Returns information about the current page as a JSON string.

Method	Description
isInConsole()	Indicates if the SoftPhone is in the Service Cloud console. For more information, see "Service Cloud Console Overview" in the Salesforce online help.
isVisible()	Returns true if the SoftPhone is visible or false if the SoftPhone is hidden.
onClickToDial()	Registers a function to call when a user clicks an enabled phone number.
onFocus()	Registers a function to call when the browser focus changes. In the Service Cloud console, the browser focus changes when a user navigates in between primary tabs or the navigation tab.
runApex()	Executes an Apex method from an Apex class that's exposed in Salesforce.
saveLog()	Saves or updates an object in Salesforce.
screenPop()	Pops to a target URL, which must be relative.
searchAndScreenPop()	Searches keywords in Salesforce and screen pops any matching records as defined in the SoftPhone layout.
setSoftphoneHeight()	Sets the SoftPhone height in pixels.
setSoftphoneWidth()	Sets the SoftPhone width in pixels for the Service Cloud console. For more information, see "Service Cloud Console Overview" in the Salesforce online help.
setVisible()	Shows or hides the SoftPhone in the Service Cloud console. For more information, see "Service Cloud Console Overview" in the Salesforce online help.

Custom Application Components for the Service Cloud Console

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions with the Service Cloud

Custom console components let you customize, extend, or integrate the sidebars, highlight panels, and interaction logs of the Service Cloud console using Visualforce. Visualforce uses a tag-based markup language to give developers a more powerful way to build applications and customize the Salesforce user interface. Previously, you could only add components to page layouts so that the components displayed when users accessed specific pages in the console. Now, you can extend component functionality so that components display to users across all pages and tabs in a console app when they click a button in the footer on the console. For example, you might want to create components that display the following across several console pages or tabs:

• Chat or SoftPhone widgets

- Messages from marquees
- Third party apps or data

Here's an example of a Service Cloud console with three custom console components available from the footer:
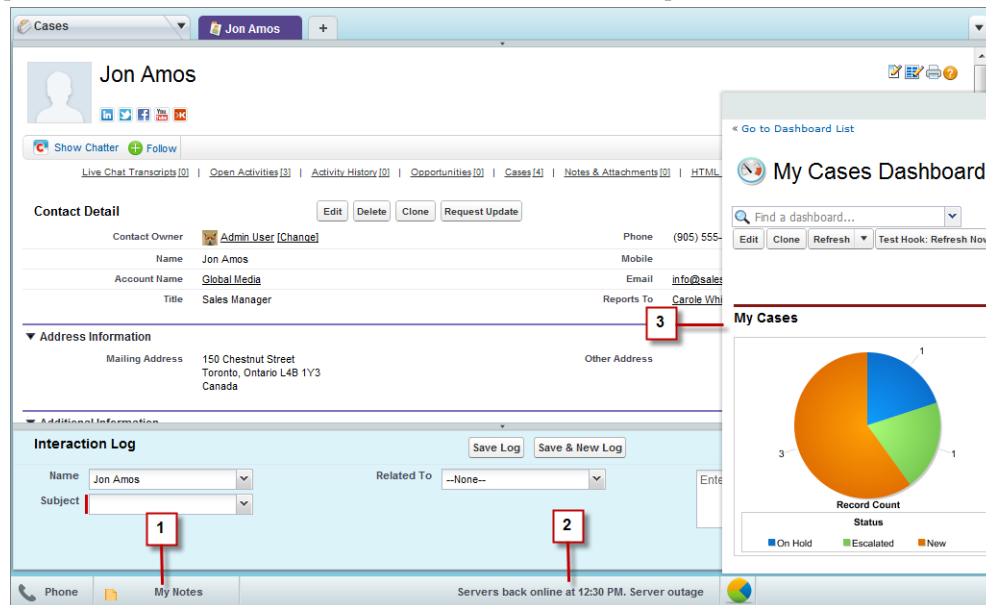
1. **My Notes**: Component that lets support agents type notes.
2. **Marquee**: Component that scrolls important messages to support agents.
3. **My Cases Dashboard**: Component that displays a support agent's daily case metrics.

You can use the Service Cloud Console Integration Toolkit to build custom console components. The toolkit is an API that uses browsers as clients to display pages as tabs or widgets in console apps. It provides you with programmatic access to console apps so that you can extend them to meet your business needs. For example, you can use the toolkit to open and close tabs in a console to streamline a business process. In addition to this, custom console components can display:

- Content in sidebars, highlights panels, and interaction logs, instead of tabs
- Content when users click a customizable button in the footer
- Information without users having to click a button or link
- Content when users view specific pages
- Contextual information alongside records
- Small amounts of information on pages

Creating a custom console component for an app typically involves these steps:

1. Developers create a Visualforce page.
2. Administrators add the Visualforce page to Service Cloud console apps.
3. Administrators determine the height and width of the component, as well as the look and feel of the button used to access the component.
4. Administrators assign the component to each console where they want users to access it.
5. Users access the component by clicking a button on the console's footer.

Adding Custom Console Components to Apps

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions with the Service Cloud

User Permissions Needed	
To add custom console components:	"Customize Application"
To create Visualforce pages:	"Customize Application"

After you create a custom console component (Visualforce page), you can add it as a button in the footer of Service Cloud console apps for user access.

1. Click *Your Name* > **Setup** > **Customize** > **Service Cloud Console** > **Custom Console Components**.
2. Click **New**.
3. Type a name for your component.
4. Click Hide to hide your component from console users.

   Hidden components don't display to console users, but they can still function in the background.
5. In Button Name, type the label that will display on the button users click to launch your component. For example, Live Chat.
6. In Button CSS, enter the in-line style used to define how the button looks to users who click it to launch your component.
7. Enter the width of the button as it should display in the console.
8. In Visualforce Page, type the name of your component, or click 🔍 to find and select it.
9. Enter the height and width of the window used to display your component in the console.
10. Click Fixed Width or Fixed Height to prevent users from changing the dimensions of the window used to display your component.
11. Click **Save**.

Before users can access your component, you must assign it to each console where you want users to access it. See Assigning a Custom Console Component to an App on page 52.

Assigning a Custom Console Component to an App

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions with the Service Cloud

User Permissions Needed	
To assign custom console components to an app:	"Customize Application"

After you add a custom console component to Service Cloud console apps, you must assign it to each console where you want users to access it.

1. Click *Your Name* > **Setup** > **Create** > **Apps**.
2. Select a Service Cloud console app.
3. Click **Edit**.
4. In `Choose Custom Console Components`, add any available components to your app.
5. Click **Save**.

Chatter Answers for Portals

Chatter Answers is a Web community where your customers can post questions and receive answers and comments from other customers or your support agents. Now, you can add Chatter Answers to existing Customer Portals or Partner Portals so that portal users can access Chatter Answers communities from one of your established channels. After users log in to one of your portals, they can access Chatter Answers from a tab and choose which community to view from a drop-down list.

The following occurs to Chatter Answers when it appears in a portal:

• Chatter Answers displays as a tab, which you can rename.
• A drop-down list lets portal users switch between all of your Chatter Answers communities.
• The **My Settings** link for users is replaced by **Enable Emails** and **Disable Emails**.
• **Sign In** and **Sign Up** are removed because portal users can only view Chatter Answers after they've logged in to your portal.
• Chatter Answers displays a look and feel, which you can't customize.
• The **Need help?** link is removed.

If you only want to display Chatter Answers in your portals, then you don't need to set up a Force.com site to host Chatter Answers. However, a site lets guest users access some Chatter Answers data without a login, whereas portals do not.

Here's a Customer Portal with Chatter Answers:
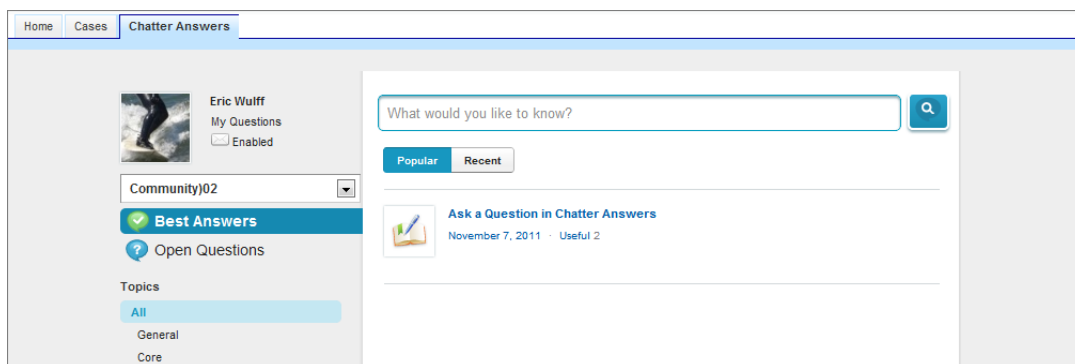
Adding Chatter Answers to a Customer Portal

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

User Permissions Needed	
To add Chatter Answers to a Customer Portal:	"Customize Application"

You can add Chatter Answers to an existing Customer Portal so that portal users can access Chatter Answers communities from one of your established support channels.

1. Enable Chatter Answers for portals:
    a. Click *Your Name* > **Setup** > **Customize** > **Chatter Answers** > **Settings**.
    b. Click **Edit**.
    c. Select `Show Chatter Answers in Portals`.
    d. Click **Save**.

2. Edit Customer Portal user profiles to support Chatter Answers:
    a. Click *Your Name* > **Setup** > **Manage Users** > **Profiles**.
    b. Click **Edit** next to a portal user profile.
    c. In Tab Settings, choose Default On for Chatter Answers.
    d. In Standard Object Permissions, click `Read` and `Create` on Questions.
    e. Click **Save**.

3. Add the Chatter Answers User feature license to Customer Portal users:
    a. Click *Your Name* > **Setup** > **Manage Users** > **Users**.
    b. Click **Edit** next to a portal user.
    c. Click `Chatter Answers User`.
    d. Click **Save**.

4. Add Chatter Answers as a tab to your Customer Portal:
    a. Click *Your Name* > **Setup** > **Customize** > **Customer Portal** > **Settings**.
    b. Click the name of a Customer Portal.
    c. Click **Customize Portal Tabs**.
    d. Select Chatter Answers and click the **Add** arrow to move the Chatter Answers tab into the Selected Tabs box.
    e. Click **Save**.

5. Optionally, rename the Chatter Answers tab for your Customer Portal:
    a. Click *Your Name* > **Setup** > **Customize** > **Tab Names and Labels** > **Rename Tabs and Labels**.
    b. Click **Edit** next to Questions.
    c. Click **Next**.
    d. In Other Labels, rename Chatter Answers. You can only rename it as `Singular`, not `Plural`.
    e. Click **Save**.

Adding Chatter Answers to a Partner Portal

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

User Permissions Needed	
To add Chatter Answers to a Partner Portal:	"Customize Application"

You can add Chatter Answers to an existing Partner Portal so that portal users can access Chatter Answers communities from one of your established partner channels.

1. Enable Chatter Answers for portals:

    a. Click *Your Name* > **Setup** > **Customize** > **Chatter Answers** > **Settings**.

    b. Click **Edit**.

    c. Select `Show Chatter Answers in Portals`.

    d. Click **Save**.

2. Edit Partner Portal user profiles to support Chatter Answers:

    a. Click *Your Name* > **Setup** > **Manage Users** > **Profiles**.

    b. Click **Edit** next to a portal user profile.

    c. In Tab Settings, choose Default On for Chatter Answers.

    d. In Standard Object Permissions, click `Read` and `Create` on Questions.

    e. Click **Save**.

3. Add the Chatter Answers User feature license to Partner Portal users:

    a. Click *Your Name* > **Setup** > **Manage Users** > **Users**.

    b. Click **Edit** next to a portal user.

    c. Click `Chatter Answers User`.

    d. Click **Save**.

4. Add Chatter Answers as a tab to your Partner Portal:

    a. Click *Your Name* > **Setup** > **Customize** > **Partners** > **Settings**.

    b. Click the name of a Partner Portal.

    c. Click **Customize Portal Tabs**.

    d. Select Chatter Answers and click the **Add** arrow to move the Chatter Answers tab into the Selected Tabs box.

    e. Click **Save**.

5. Optionally, rename the Chatter Answers tab for your Partner Portal:

    a. Click *Your Name* > **Setup** > **Customize** > **Tab Names and Labels** > **Rename Tabs and Labels**.

    b. Click **Edit** next to Questions.

    c. Click **Next**.

    d. In Other Labels, rename Chatter Answers. You can only rename it as `Singular`, not `Plural`.

    e. Click **Save**.

Facebook© Sign In for Chatter Answers

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

User Permissions Needed	
To view Setup:	"View Setup and Configuration"
To set up Chatter Answers:	"Customize Application"

Chatter Answers is a Web community where your customers can post questions and receive answers and comments from other customers or your support agents. Now, instead of requiring users to create a Chatter Answers login to post and answer questions, you can encourage community participation by letting users sign in with an existing Facebook login. Once an administrator turns on `Enable Facebook Single Sign On`, Chatter Answers communities display an option to `Sign in with Facebook` next to your communities' `Sign In`. When a user signs in to Chatter Answers with a Facebook login, the first name, last name, and the photo associated with the Facebook account is used in posts to your communities.

> **Important:** Before you can enable this feature, you must define a Facebook authentication provider in your Salesforce organization's security settings. For more information, see "About External Authentication Providers" and "Configuring a Facebook Authentication Provider" in the online help.

To let users sign in to Chatter Answers communities with a Facebook login:

1. Click *Your Name* > **Setup** > **Customize** > **Chatter Answers** > **Settings**.
2. Click **Edit**.
3. Select `Enable Facebook Single Sign On`.
4. Choose an existing Facebook authentication provider from your organization's security controls.
5. Click **Save**.

For more information, see "Enabling Chatter Answers" in the online help.

Salesforce Knowledge Enhancements

Knowledge Article Actions—Generally Available

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

User Permissions Needed	
To enable Salesforce Knowledge Actions:	"Customize Application"

When knowledge actions are enabled, you can use them to link article types to specific workflow article actions, such as publishing. For example, if you want to have each FAQ published as a new version each time it completes the approval process, you can create a knowledge action that links the FAQ article type to the `Publish as New` action. Then, when you create an approval process for FAQs, select the new Knowledge Action.

Note: When you create the approval process, make sure to change the final approval action to `Unlock the record for editing` to let users publish the article.

To maximize memory usage when publishing large groups of articles, Salesforce may delay publication and adds the articles to the publication queue. This happens when the number of articles and translations multiplied by the number of rich text areas is greater than 100. You can view the publishing queue to check the status of the articles on the Automated Process Actions page.

1. Click **Your Name** > **Setup** > **Create** > **Workflow & Approvals** > **Knowledge Actions**.
2. Click **New Knowledge Action**.
3. Select the article type for the action. The workflow rules and approval process that you associate with the action must belong to the same article type.
4. Enter a unique name for the knowledge action.
5. Select the type of action you want to apply to the article type. For example, `Publish as New` publishes the article as a new version.
6. Enter a description.
7. Click **Save**. The Knowledge Action detail page appears showing you the rules and approval processes that use the knowledge action.
8. When you're ready to use the knowledge action in an approval or workflow process, click **Activate** on the Knowledge Action detail page.

New Edit Link in Articles

Knowledge users can now edit articles without going to the Article Management tab. Click the **Edit** link in an article to open the article edit page. If a published version of the article already exists, you have the option to view the published version or edit the current version. If a draft version exists, you can continue with editing the existing draft, but should carefully review the draft so that you don't overwrite unpublished changes.
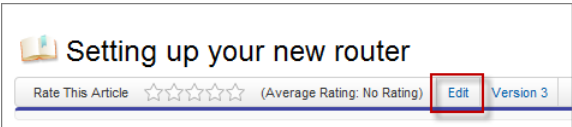
Article History Tracking

User Permissions Needed	
To create, edit, or delete article types:	"Customize Application"
	AND
	"Manage Salesforce Knowledge"

With Summer '12, you can now track article history events for an article type and its versions, see who made changes and when they made them, and use this information to create reports.

You can track the history of certain fields in articles. Modifying any of these fields adds a new entry to the History related list. All entries include the date, time, nature of the change, and who made the change. History data does not count against your organization's storage limit. Note that not all field types are available for history tracking. You can also set tracking for the article type and track the full history of an article and its versions. Salesforce stores up to 1000 of the most current tracked events per article.

The system records and displays field updates, publishing workflow events, and language versions for the master article and any translations. When you track old and new values, the system records both values as well as the date, time, nature of the change, and the user who made the change. When you track only the changed values, the system marks the changed field as having been edited; it doesn't record the old and new field values. This information is available in the Version History list and the fields are available in the Article Version History report.

Article history respects field, entity, and record-level security. You must have at least "Read" permission on the article type or the field to access its history. For data category security, Salesforce determines access based on the categorization of the online version of an article. If there is no online version, then security is applied based on the archived version, followed by the security of the draft version.

Using the Version History list, you can expand the version to view its field change history (if you have history tracking enabled for the article type and for fields).

For more information on article history, see "Tracking Article History Events" in the online help.

Article Version History Report
In Summer '12, we've introduced a new custom report type, Article Version History. Use this report to view information about the article types and fields that you've selected for tracking.
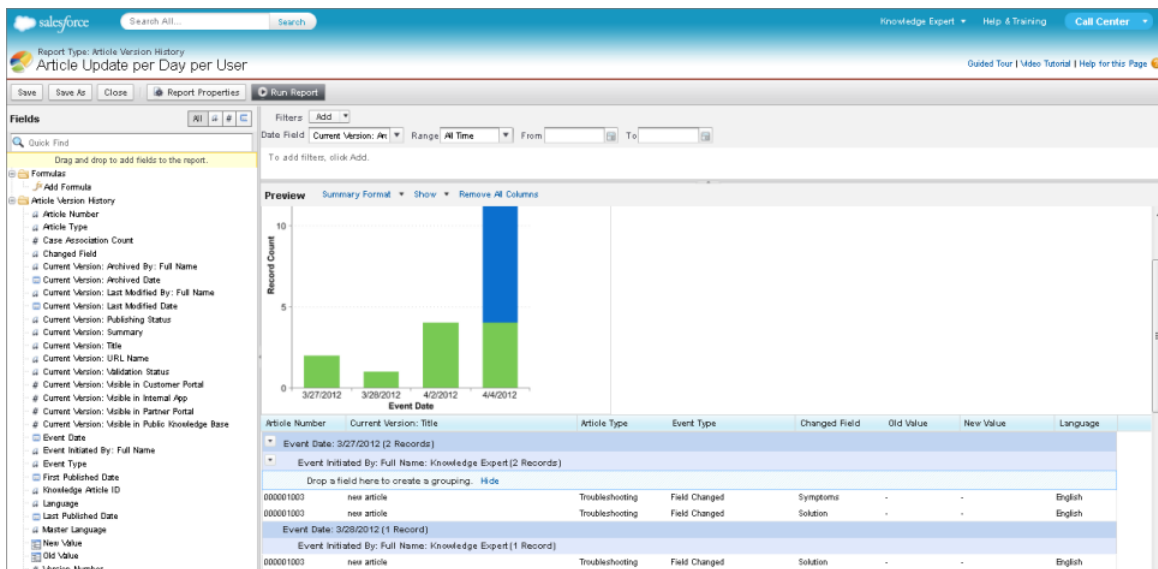
Deleting a Version or Reverting to a Draft

Managing versions of your articles just got easier! With Summer '12, you can delete outdated versions of articles, or restore an existing version to draft status and republish it.

When several versions of an article exist, you can restore an older version and republish it. Click `Revert to Draft Version` to copy the archived version's content into a draft article, then republish it as a new version. You can also restore the older version of any associated translations at the same time. When there is an existing draft for the article, the option to revert isn't available.

You can delete an older, outdated version of an article by selecting `Delete This Version` from the article detail page. Salesforce warns you when the version is associated with a case. If you still want to delete the article, it will no longer be attached to the case. Translated article versions are dependent on the master language article. If the master language version is deleted, the translated versions are also deleted

For more information on article versions, see "Salesforce Knowledge Article Versions" in the online help.

Filter Article Searches by Validation Status

Finding trusted and reliable information in Knowledge just became so much easier! Now, users can filter search results for articles that have been reviewed and verified by experts and can attach them to cases. Select a `Validation Status` as a filter for search results from the Article Management tab, the Articles tab, and Cases. Validation status is also available for use in the API.

Select a Queue for Approval Processes

Getting the most current information to your customers quickly is what a Knowledge center is all about, and your business can't wait for an important article to be reviewed by one person. With Summer '12, when you're creating approval processes, you can choose a queue of subject experts to approve and publish articles.

For more information on creating approval queues see, "Creating an Article Queue" in the online help.

Multimedia Content in Articles

 You asked for it! This enhancement is from an idea on the IdeaExchange.

When enabled from the Knowledge Settings page, users can cut and paste `<iframe>` HTML elements to embed multimedia content in articles using the HTML editor using one of two methods:

- Click to paste the `<iframe>` element directly into the HTML code.

- Click to paste the `<iframe>` element into a text box on the Embed Multimedia Content dialog box. The frame and its contents are added to the article.
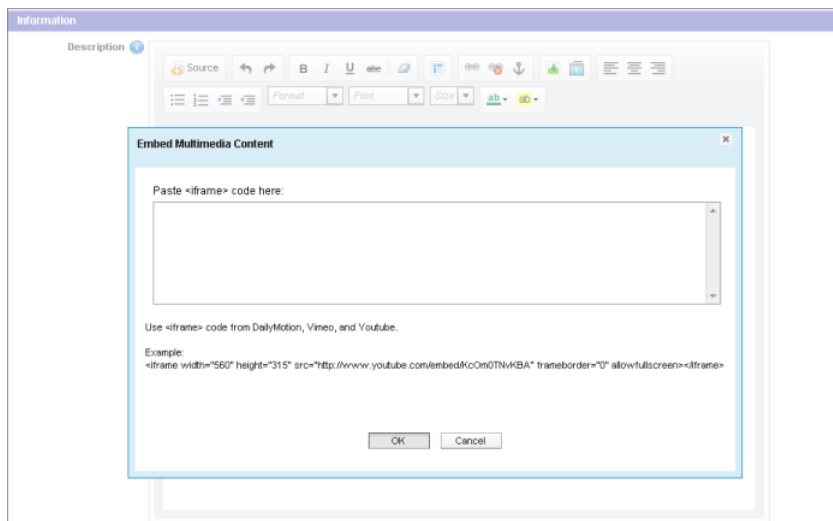
Users can paste `<iframe>` HTML code that is copied from the following sites: Dailymotion, Vimeo, or YouTube.

 Note: Make sure that your browser security settings allow you to embed multimedia content. Some browser security settings can block <iframe> elements. For example, if browser security is set to high in Internet Explorer 7, <iframe> content does not appear in the frame.

For more information on the HTML Editor, see "Using the HTML Editor" in the online help.

Validation Status in Articles Related List for Cases

With Summer '12, administrators can add `Validation Status` as a column to the Articles related list on the case detail page.

Salesforce Knowledge API Enhancements

Summer '12 introduces API support to manage your knowledge base programmatically using REST or Apex.

Before the introduction of these APIs, the only way to manage the article lifecycle was through the user interface. Now, it's possible to use REST or Apex to perform many essential actions on an article and its translations, including:

- Publishing
- Unpublishing
- Updating
- Retrieving
- Deleting
- Submitting for translation
- Setting a translation to complete or incomplete status
- Archiving
- Restoring

See *Salesforce Knowledge Developer's Guide* for more information on using REST or Apex to manage the publication lifecycle of articles.

Other API enhancements include:

- API version 25.0 introduces the new KnowledgeArticleVersionHistory object, which enables read-only access to the full history of an article. See *Web Services API Developer's Guide* for more information.
- The KnowledgeArticleVersion object now includes using article types in describeLayout calls. For example, describeLayout('ArticleType__kav') shows the article custom fields and sections in the layout.

Minor Salesforce Knowledge Enhancements

- When users attach an article from a case to an email message, the system now creates a PDF of the article using the language and version of the article that are associated with the case.
- The pages for importing and exporting article translations now use standard lookup fields to enable you to select the name of the user or queue you want to review the translated articles. This makes navigating to the correct assignee's name much easier.

- Improved article search relevancy. See Improved Article Search Relevancy for information about Summer '12 enhancements to search.

Live Agent in the Console

Live Agent lets service organizations connect with customers or website visitors in real time through a Web-based, text-only live chat. With Summer '12, Live Agent is available in the Service Cloud console, making it easy for support agents to chat with multiple customers and handle multi-channel interactions, such as chat and email, all within one browser window.
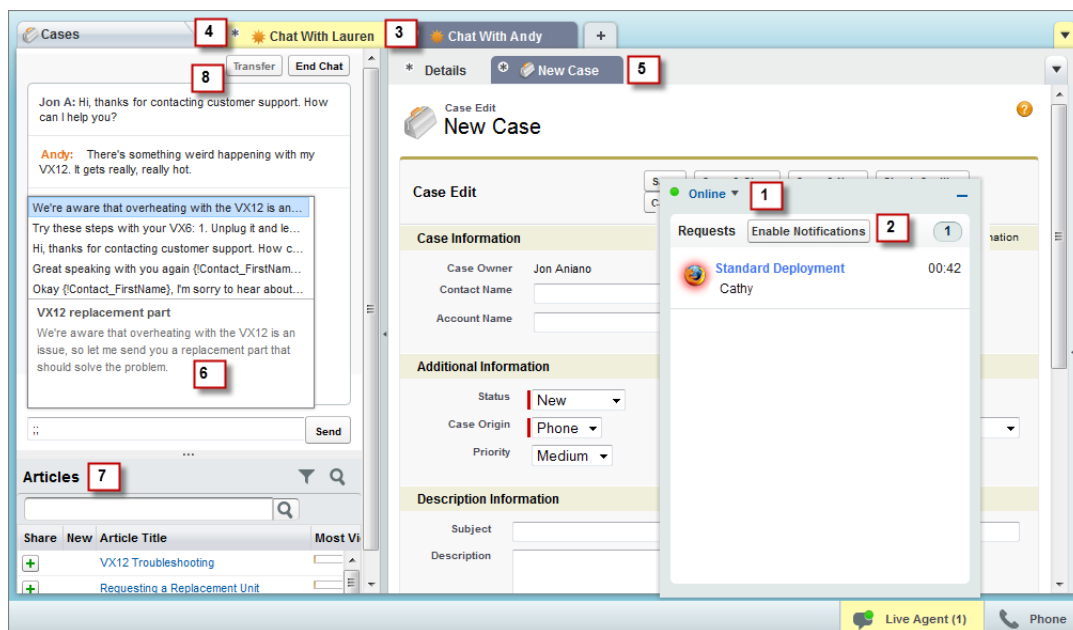
With Live Agent in the Service Cloud console, support agents can:

1. View a list of incoming chats, with basic information about each one, including deployment and wait time.
2. Receive desktop alerts of incoming chat requests (only available for agents using Google Chrome).
3. Chat with multiple customers at once and easily move back and forth between different sessions.
4. See when new chat messages arrive on tabs other than the one the agent is viewing.
5. View customer information and browse or create Salesforce records quickly.
6. Use Quick Text to include short, pre-written messages in their chats.
7. Browse Salesforce Knowledge articles and send relevant ones to customers.

8. Transfer chat sessions to other agents, either individuals or skill groups.

In addition, Live Agent in the Service Cloud console supports all the features of standard Salesforce pages, including Visualforce customizations.

To add Live Agent to an existing Service Cloud console app:

1. Click *Your Name* > **Setup** > **Create** > **Apps**.
2. Click **Edit** next to the name of the Service Cloud console app in which you want to set up Live Agent.
3. Select `Include Live Agent in this App`.
4. Choose the records or pages you want to open as subtabs of chat sessions in the chat workspace.
5. Optionally, if your organization has Salesforce Knowledge enabled, select `Include Suggested Articles from Salesforce Knowledge in Live Agent` to display the articles tool in the chat workspace.

Implementation Tips

- You need to enable and set up Live Agent before you can add it to a Service Cloud console app.
- Only users with a Live Agent feature license *and* a Service Cloud user license can access Live Agent in the Service Cloud console.

Additional Service Cloud Enhancements

New Look and Location for Edit Layout and Help for this Page Links in Case Feed

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

Summer '12 introduces a new look and location for the **Edit Layout** and **Help for this Page** links in Case Feed. These links are now icons that appear at the top of the right sidebar on the feed page, along with the icon for **Printable View**.

For more information about feed layouts, see "Creating and Editing Feed Layouts in Case Feed" in the online help. For more information about Printable View, see Printable View for Case Feed on page 64.

New Options for Case Feed Layouts

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

User Permissions Needed	
To create and edit page layouts:	"Customize Application"
To assign page layouts:	"Manage Users"

With Summer '12, you have more options for the fields and information you include on feed layouts in Case Feed. You can:

- Add picklists, including multi-select and dependent picklists, to the Log a Call and Change Status publishers, even if those picklists aren't included on a case detail page layout.
- Choose the fields you want to include in the Email publisher (which is part of the Answer Customer publisher).
- Remove the View Case Details publisher.

- Choose which components to include in the right sidebar, including case followers lists, custom buttons, and custom links, and hide those you don't need.

For more information, see "Creating and Editing Feed Layouts in Case Feed" in the online help.

Printable View for Case Feed

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

User Permissions Needed	
To view and print case information:	"Read" on cases

Summer '12 introduces a **Printable View** link 🖨 in Case Feed, which lets you view and print the following information about a case:

1. Case details
2. Contents of related lists that are included on the Case Detail page
3. Internal notes

For more information, see "Using Printable View in Case Feed" in the online help.

Quick Links to Related Lists on Case Feed Detail Pages

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

The **View Case Details** button in Case Feed lets you see detailed information about a case. In Summer '12, when you click **View Case Details**, links to the related lists on the Case Detail page appear below the button. Click a link to go directly to the related list. For more information, see "Viewing and Editing Cases from the Case Detail Page in Case Feed" in the online help.

Quick Text in Case Feed

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

User Permissions Needed	
To use Quick Text in Case Feed:	"Read" on Quick Text

Quick Text lets users create standard messages, such as greetings and answers to common questions, which support agents can easily insert into communications with customers. With Summer '12, Quick Text is now available in the Email publisher in Case Feed.
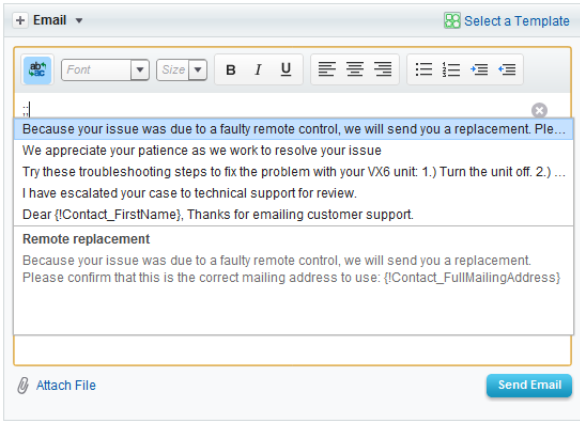
To add a Quick Text message to an email:

1. Click **Answer Customer**.
2. Click [⏷] and select `Email`.
3. In the email text box, type `;;`. A list of Quick Text messages appears, with the messages you've used most recently at the top.
4. To see additional messages, type a word or phrase. A list of messages that include those words appears.
5. To see the title and full text of a message, click it once or highlight it using the arrow keys on your keyboard. The full message appears at the bottom of the Quick Text list.
6. To select a message and add it to your email, double-click it or highlight it and press ENTER. If the message you select contains merge fields, they are resolved when you add the message to your email.

For more information, see "Using Quick Text in Case Feed" in the online help.

Send Email Notification Option in the Case Feed Portal Publisher

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

User Permissions Needed	
To create customer portal posts:	"Edit" on cases

The Answer Customer publisher in Case Feed gives support agents the ability to reply to customers by email or portal post. Summer '12 includes a new option for replies via portal: agents can now select the `Send Email Notification` checkbox to send a message to the customer letting them know that a reply to their question has been posted to the portal. For more information, see "Communicating with Customers via the Customer Portal" in the online help.

Changes to `Created By` Feed Items in Feed Tracking on Cases

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

User Permissions Needed	
To create and edit page layouts:	"Customize Application"
To assign page layouts:	"Manage Users"

Summer '12 introduces changes to the `Created By` feed item for organizations that use feed tracking on cases:

- For organizations that use the standard case interface, `Created By` is no longer available in the Chatter feed for cases.
- For organizations that switch from the standard case interface to Case Feed after the release of Summer '12:

  ◊ The `Created By` feed item is included for all cases created afterCase Feed is enabled.
  ◊ For cases created prior to the switch to Case Feed, the `Created By` feed item is no longer available

- For organizations that began using Case Feed prior to the release of Summer '12, `Created By` is available in the feed for all new and existing cases.

The highlights panel on the case detail and Case Feed pages automatically shows the date and time a case was created. Administrators can customize the highlights panel using the page layout editor to show the case creator. For more information on editing page layouts, see Customizing Page Layouts on page 115.

New `Case.Email_Thread` Merge Field

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

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions for Case Feed

You can use merge fields within custom formula fields, custom links, custom buttons, and when you create email or mail merge templates. Merge fields serve as placeholders for data that will be replaced with information from your records, user information, or company information.

Summer '12 introduces a new `Case.Email_Thread` merge field that you can use when sending case emails or in Case Feed. The merge field represents a thread of all emails where the case contact is a sender or recipient (`To`, `CC`, or `BCC`).

The emails are listed in reverse chronological order so the most recent emails appear at the top of the thread. The thread inserts the text version of the emails. You can't use this merge field in Visualforce pages.

The limits for the email thread are:

- Maximum number of emails: 200
- Email body truncation size: 32 KB

For more information, see "Merge Fields for Cases" in the online help.

Custom Email Notification URLs for Chatter Answers

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

User Permissions Needed	
To configure a Chatter Answers community:	"Customize Application"

Chatter Answers is a Web community where your customers can post questions and receive answers and comments from other customers or your support agents. With Summer '12, a new `Portal Email Notification URL` field lets administrators customize the portal URL that's included in email notifications sent from Chatter Answers communities.

This field only displays if you've chosen to show Chatter Answers in a Customer Portal. The URL is automatically generated to include your portal's ID and a question or case ID; but you might want to customize the URL to redirect users to a specific login page. For example, if you've created a login page from which users can access multiple communities, you can customize `Portal Email Notification URL` to redirect users to that page from email notifications.

To customize `Portal Email Notification URL`:

1. Click *Your Name* > **Setup** > **Customize** > **Chatter Answers** > **Communities**.
2. Select an existing community, or click **New** to create a new community.
3. In `Portal Email Notification URL`, customize the portal URL that's included in email notifications sent from the community.
4. Click **Save**.

For more information, see "Enabling Chatter Answers" and "Configuring a Chatter Answers Community" in the online help.

Email Branding for Chatter Answers

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

User Permissions Needed	
To configure a Chatter Answers community:	"Customize Application"
To upload new documents:	"Create" on documents

Now, you can customize the headers and footers of email notifications sent from specific Chatter Answers communities. For example, you can add your organization's branding to the header of every notification sent from one community, and add different branding to the footer of notifications sent from another community.

To begin, upload a text or HTML file with your customizations to your organization's Documents tab. The files you add to headers and footers can have a combined size of up to 10 KB.

1. On the Documents tab, click **New Document**.
2. Type a `Document Name`.
3. Click `Externally Available Image` to make the file available to users without a Salesforce username and password.
4. Select a publicly available folder for the file.
5. Select a document or file path.
6. Click **Save**.

Add the file to a Chatter Answers community:

1. Click *Your Name* > **Setup** > **Customize** > **Chatter Answers** > **Communities**.
2. Click **Edit** next to a community.
3. In `Header` or `Footer`, click 🔍 and choose the file that includes your customizations.
4. Click **Save**.

For more information, see "Uploading and Replacing Documents" and "Configuring a Chatter Answers Community" in the online help.

Links to Cases on Private Questions Posted in Chatter Answers

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

Chatter Answers is a Web community where your customers can post questions and receive answers and comments from other customers or your support agents. If enabled by administrators, customers can post private questions so that only support agents can view and answer their posts. Each private question is automatically associated with a case for your support team. With Summer '12, support agents using the Questions tab can easily get to a private question's case by clicking the case link on the question. For more information, see "Questions Home" in the online help.

Optimizing Questions for Chatter Answers

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

User Permissions Needed	
To view Setup:	"View Setup and Configuration"
To set up Chatter Answers:	"Customize Application"

Chatter Answers is a Web community where your customers can post questions and receive answers and comments from other customers or your support agents. With Summer '12, administrators can choose a new `Optimize Question Flow` setting to:

- Let users filter search results by questions or articles before they post a question.
- Add `Title` and `Body` fields to questions for easier text input and scanning.

For example, here are some search results that users can filter by questions or articles:
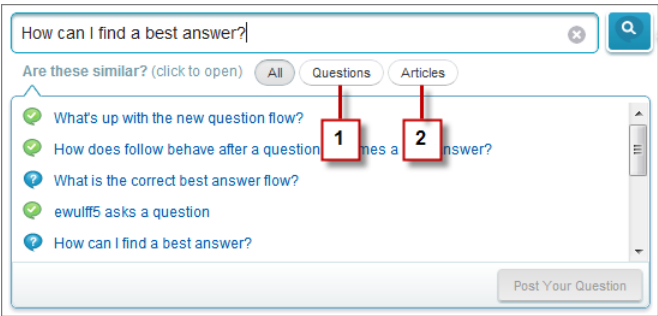
1. Questions filter
2. Articles filter

Here's an example of `Title` and `Body` fields added to a question before a user posts it:

1. `Title`
2. `Body`

Here's an example of `Title` fields added to questions for easier scanning. `Body` fields and replies display when users click **more** on questions:

To optimize questions for all of your Chatter Answers communities:

1. Click *Your Name* > **Setup** > **Customize** > **Chatter Answers** > **Settings**.
2. Click **Edit**.
3. Select `Optimize Question Flow`.
4. Click **Save**.

For more information, see Enabling Chatter Answers.

Partner Portal User Access to Chatter Answers

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

User Permissions Needed	
To create, edit, disable, or deactivate users:	"Manage Users"

Chatter Answers is a Web community where your customers can post questions and receive answers and comments from other customers or your support agents. The Partner Portal is an application that provides your business partners with access to some of your Salesforce data to help you sell more. With Summer '12, administrators can grant partner users access to Chatter Answers communities. Just like other Chatter Answers users, partner users must have the Chatter Answers User feature license to access Chatter Answers communities.

For more information, see "Partner Portal Overview," "Chatter Answers Users," and "Configuring Portal Users for Self-Registration to Chatter Answers" in the online help.

Promoting Chatter Answers into Salesforce Knowledge

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

User Permissions Needed	
To enable or customize Salesforce Knowledge:	"Customize Application"
To ask and reply to questions:	"Create" on questions
To promote a reply:	"Create" and "Read" on the article type used to promote replies AND "Edit" on questions AND `Knowledge User` checked on user detail page

Chatter Answers is a Web community where your customers can post questions and receive answers and comments from other customers or your support agents. Summer '12 introduces a setting that lets support agents easily promote helpful replies on questions to new drafts of knowledge base articles. Promoting replies lets your support team quickly add useful information from your Chatter Answers community to your knowledge base so that your customers and internal users can find the information they need.

Before support agents can promote a reply to a draft article, Salesforce Knowledge must be enabled, and administrators must click *Your Name* > **Setup** > **Customize** > **Knowledge** > **Settings** > **Edit** and select `Allow users to create an article from a reply`.

To promote a reply to a draft article, users can select a question from the Questions tab, and on a reply click ⌄ and choose **Promote to Article**.

For more information, see "Customizing Salesforce Knowledge Settings" and "Questions Home" in the online help.

Troubleshooting Chatter Answers Setup with Site Snapshots

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

User Permissions Needed	
To view Setup:	"View Setup and Configuration"
To set up Chatter Answers:	"Customize Application"

Chatter Answers is a Web community where your customers can post questions and receive answers and comments from other customers or your support agents. Now, after you set up a Chatter Answers community, you can view a snapshot of all of its configurations on one page so that you don't have to visit several pages in setup to diagnose issues. For example, you can use a site snapshot to see if the Force.com site hosting your community is marked `Active` or to verify the names of the user profiles assigned to your community's Customer Portal.

To view a snapshot:

1. Click **Your Name** > **Setup** > **Customize** > **Chatter Answers** > **Sites Settings**.
2. In the Site Snapshot column, click **View** next to the Force.com site associated with your community.
3. Click ▶ to show or ▼ to hide various settings.
4. Click **Go!** to go to a specific page in setup where you can change settings.

For more information, see "Setting Up Chatter Answers" in the online help.

Unfollowing Questions in Chatter Answers

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

Chatter Answers is a Web community where your customers can post questions and receive answers and comments from other customers or your support agents. With Summer '12, users can click **Unfollow** on questions they've followed to stop receiving emails related to questions they're no longer interested in. For more information, see "Chatter Answers Overview" in the online help.

Desktop Notifications for Incoming Chats in Live Agent

Available in: **Enterprise** and **Unlimited** Editions, and **Developer** Edition organizations created after June 14, 2012

User Permissions Needed	
To create and edit configurations:	"Customize Application"

Live Agent lets service organizations connect with customers or website visitors in real time through a Web-based, text-only live chat. With Summer '12, administrators can now add desktop notifications for incoming chats to agent configurations. These notifications, which are supported only in Google Chrome, give support agents the ability to receive alerts of new chat requests even when they're viewing programs other than the Live Agent console or the chat workspace in the Service Cloud console. For more information, see "Live Agent Notifications Overview" in the online help.

Multi-Skill Routing Option on Live Agent Chat Buttons

Available in: **Enterprise** and **Unlimited** Editions, and **Developer** Edition organizations created after June 14, 2012

User Permissions Needed	
To create and customize chat buttons:	"Customize Application"

Live Agent lets service organizations connect with customers or website visitors in real time through a Web-based, text-only live chat. Incoming chat requests are routed to support agents based on their skills, such as knowledge of billing issues or technical support. Summer '12 introduces a multi-skill routing option on chat buttons, allowing administrators to create buttons that direct chat requests to agents with multiple skills. For example, if your company sells apparel online, you might create a button that routes incoming chats to agents who have knowledge of both your clothes collections and your accessories collections.

To assign multiple skills to a chat button, move the skills you want from the `Available Skills` list to the `Selected Skills` list on the chat button edit page.

For more information, see "Creating Chat Buttons" in the online help.

Live Agent Available in Developer Edition Organizations

Live Agent is available in Developer Edition organizations created after June 14, 2012. For more information, see "Developer Edition" in the online help.

Live Agent Supervisor Page

Available in: **Enterprise** and **Unlimited** Editions, and **Developer** Edition organizations created after June 14, 2012

User Permissions Needed	
To use the Live Agent Supervisor page:	Access to the Live Agent Supervisor tab in a user profile or permission set

Live Agent lets service organizations connect with customers or website visitors in real time through a Web-based, text-only live chat. With Summer '12, managers and senior support agents can now use the Live Agent Supervisor page to see detailed information on your department's chat buttons and Live Agent users.

To access the Supervisor page, click the **Live Agent Supervisor** tab. From there you can:

- See a list of all of your organization's active chat buttons, with information on the length of each button's queue and longest wait time.
- See a list of all of your organization's chat agents, along with their statuses, the number of their active chat sessions, how long they've been logged in to Live Agent, and how long it's been since they last accepted a chat request.

For more information, see "Live Agent Supervisor Page Overview" in the online help.

Quick Text `Channel` Field

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

User Permissions Needed	
To customize Quick Text:	"Customize Application"

Quick Text lets users create standard messages, such as greetings and answers to common questions, which support agents can easily insert into communications with customers. Summer '12 introduces a new field, `Channel`, for Quick Text. The `Channel` field lets users designate which type of customer communication a specific Quick Text message is available for use in. For example, you might create a series of short greetings appropriate for use in chats and assign them to the Live Agent channel, or assign a series of longer, more detailed messages to the Email channel so they're available to support agents who communicate with customers through email in Case Feed.

In organizations with Live Agent enabled, Live Agent is added automatically as the default channel, and is applied to all existing Quick Text messages. In organizations with Case Feed enabled, Email is added as the default channel.

For more information, see "Using the Channel Field in Quick Text" in the online help.

Quick Text Merge Fields

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

User Permissions Needed	
To create Quick Text messages:	"Create," "Read," "Edit," and "Delete" on Quick Text

Quick Text lets users create standard messages, such as greetings and answers to common questions, which support agents can easily insert into communications with customers. In Summer '12, users can populate Quick Text messages with data from specified records by clicking **Available Merge Fields** on the New Quick Text page and choosing fields from the merge field selector. Users can then click **Test and Verify Merge Fields** on the Quick Text Detail page to view a sample of the message populated with data from the chosen records.

For more information, see "Creating Quick Text Messages" in the online help.

New Quick Text Location in Setup

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

User Permissions Needed	
To set up Quick Text:	"Customize Application"

Quick Text lets users create standard messages, such as greetings and answers to common questions, which support agents can easily insert into communications with customers. In Summer '12, the setup options for Quick Text have moved. Administrators can now enable and customize Quick Text by clicking *Your Name* > **Setup** > **Cases** > **Quick Text**.

For more information, see "Setting Up Quick Text" in the online help.

Service Cloud Console Supports Google Chrome™

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions with the Service Cloud

The Service Cloud console is designed for users in fast-paced environments who need to find, update, and create records quickly. Now, you can use the Service Cloud console with the most recent stable version of the Chrome browser. Other browsers you can use with the console include Internet Explorer 7, 8, or 9, and Firefox 3.5 and above.

For more information, see "Service Cloud Console Overview" in the online help.

Service Cloud Console Apps for the AppExchange

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions with the Service Cloud

| User Permissions Needed	
To create packages:	"Create AppExchange Packages"
To upload packages to the AppExchange:	"Upload AppExchange Packages"

The Service Cloud console is designed for users in fast-paced environments who need to find, update, and create records quickly. The AppExchange is an online marketplace where Salesforce users can browse, share, sell, and purchase applications for their Salesforce organizations. With Summer '12, users with the appropriate permissions can package, distribute, or install Service Cloud Console apps from the AppExchange.

For more information, see "Service Cloud Console Overview" and "Overview of Packages" in the online help.
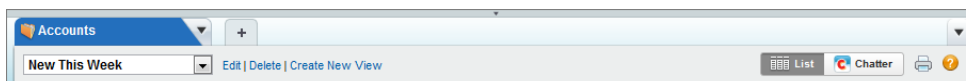
Hiding the Header in the Service Cloud Console

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions with the Service Cloud

The Service Cloud console is designed for users in fast-paced environments who need to find, update, and create records quickly. With Summer '12, you can click [image] to hide the global search header when it's not needed so that you can maximize screen space. For example, here's a Service Cloud console with a header:
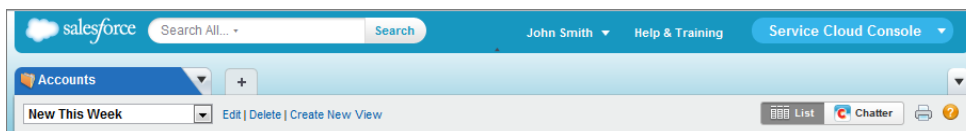
Here's the same console with the header hidden:

To display the header in the console after you've hidden it, click [image].

For more information, see "Service Cloud Console Overview" in the online help.

Whitelisting Domains for the Service Cloud Console

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions with the Service Cloud

The Service Cloud console is designed for users in fast-paced environments who need to find, update, and create records quickly. With Summer '12, administrators can specify domains outside of Salesforce that users can access from within the console. For example, you can add `www.example.com` to the console's whitelist so that console users can access that domain.

To add a domain to the whitelist:

1. Click *Your Name* > **Setup** > **Create** > **Apps**.
2. Select a Service Cloud console app.
3. Click **Edit**.
4. In `Whitelist Domains`, type the domains you want users to access. You don't need to enter `http://` or `https://` because those are part of a URL, not a domain.
5. Click **Save**.

For more information, see "Setting Up a Service Cloud Console" in the online help.

Service Cloud Console Integration Toolkit: New Methods

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions with the Service Cloud

The Service Cloud Console Integration Toolkit is an API that uses browsers to display pages as tabs in the console. It provides advanced administrators and developers with programmatic access to the console so that they can extend it to meet your business needs. For example, developers can use the toolkit to open and close tabs in the console to streamline a business process.

With Summer '12, the following methods have been updated.

Method	Description
`setTabTitle()`	A new argument named `tabId` has been added, which is the ID of the tab in which to set the title.
`setTabUnsavedChanges()`	Two new arguments have been added: • `callback`: JavaScript method called upon completion of the method. • `subtabId`: The ID of the subtab that is marked as having unsaved changes.

With Summer '12, the following new methods are available.

Method	Description
`addEventListener()`	Adds a listener for a custom event type, which is called when the custom event is fired.
`fireEvent()`	Fires a custom event.

Method	Description
getFocusedPrimaryTabId()	Returns the ID of the primary tab on which the browser is focused.
getFocusedPrimaryTabObjectId()	Returns the object ID of the primary tab on which the browser is focused.
getFocusedSubtabId()	Returns the ID of the subtab on which the browser is focused. For example, a case ID or account ID.
isCustomConsoleComponentWindowHidden()	Determines if the application-level custom console component window is hidden.
isInCustomConsoleComponent()	Determines if the page is in an application-level custom console component.
onCustomConsoleComponentButtonClicked()	Registers a function to call when a button is clicked on an application-level custom console component.
onFocusedPrimaryTab()	Registers a function to call when the focus of the browser changes to a different primary tab.
setCustomConsoleComponentButtonIconUrl()	Sets the button icon URL of an application-level custom console component that's on a page.
setCustomConsoleComponentButtonStyle()	Sets the style of a button used to launch an application-level custom console component that's on a page.
setCustomConsoleComponentButtonText()	Sets the text on a button used to launch an application-level custom console component that's on a page.
setCustomConsoleComponentWindowVisible()	Sets the window visibility of an application-level custom console component that's on a page.

For more information (English only) about the toolkit, see the *Service Cloud Console Integration Toolkit Developer's Guide*.

New Access Defaults for Customer Portal Users

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions with the Service Cloud

User Permissions Needed	
To manage Customer Portal users:	"Edit Self-Service Users"
To manage profiles and permission sets:	"Manage Users"
To set sharing rules:	"Manage Users"

You asked for it! This enhancement is from an idea on the IdeaExchange.

We've expanded the objects available to Service Cloud portal users to support a wider range of custom business processes. Administrators can now give users access to price books, products, assets, and accounts, depending on the portal type.

The new objects will be available within 24 hours after the Summer '12 release.

Assets

Partner Portal, Enterprise Administration, Service Cloud Portal, and Customer Portal users can now have "Create, " "Read," and "Update" permissions on assets.

Accounts

On accounts, Enterprise Administration users can now have "Create, " "Read, " and "Update" permissions, and Service Cloud Portal and Customer Portal users can have "Read" and "Update."

Products and Pricebooks

Enterprise Administration, Service Cloud Portal, and Customer Portal users can now have "Read" permission on products and price books.

The following tables list the new permissions available for each portal license.

- For existing orgs, not all the permissions are on by default. ☑ indicates that the permission is on by default. ☐ indicates that it is available but off by default.
- For new orgs, all the permissions are on by default.

See "Understanding User License Types" in the online help for the full list of permissions available to portal users as of Spring '12.

This table lists the new permissions available toHigh Volume Customer Portal users.

	Create	Read	Edit	Delete
Accounts		☑	☐	
Assets	☐	☑	☐	
Price Books		☑		
Products		☑		

This table lists the new permissions available to Customer Portal users.

	Create	Read	Edit	Delete
Accounts		☑	☐	
Assets	☐	☑	☐	
Price Books		☐		
Products		☐		

This table lists the new permissions that can be given to Customer Portal — Enterprise Administration users.

	Create	Read	Edit	Delete
Accounts	☐	☑	☐	
Assets	☐	☑	☐	
Price Books		☐		
Products		☐		

This table lists the new permissions that can be given to Partner Portal users.

	Create	Read	Edit	Delete
Accounts	☑	☑	☑	
Assets	☐	☐	☐	
Price Books		☑		
Products		☑		

ANALYTICS

Reports Home Page Updates

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

User Permissions Needed	
To view the Reports tab:	"Run Reports"

You asked for it! Reports tab addresses the following ideas on the IdeaExchange: drag-and-drop reports or dashboards between folders, show more items per page using the list view record picker, and differentiate report and dashboard folders by their icons.

In Summer '12, the home page for reports and dashboards has several improvements, including improved search, the ability to move list view items between folders, a list view record picker, and unique icons for report and dashboard folders.

If you don't see some of the features described here, check that you're using a supported browser and ask your administrator to enable the new user interface theme. For more information, check "Supported Browsers" in the online help.

### Search Includes More Fields

We've broadened report and dashboard search on the home page to look up more fields. Previously, search applied to name only. Now, search looks across all folders by name and these fields:

- Description
- Last Modified By
- Created By

Search looks for an exact match of what you type within these fields. As always, refine results by folder or filters. See "Searching for Reports and Dashboards" in the online help for more information.

Distinct Icons for Report and Dashboard Folders

Starting with Summer '12, you can tell report from dashboard folders at a glance. They are distinguished by separate icons for the report ( ) and dashboard folders ( ).
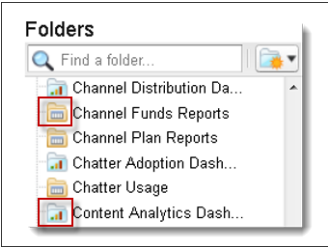
List View Record Picker

On the home page list view, you can change the number of records displayed on each page. By default, you see 25 records per page. Click ▼ in the lower left corner of the list and select 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. Once set, however, you view the same number of records throughout the list. The record display setting on the Reports tab doesn't affect list views elsewhere in Salesforce.
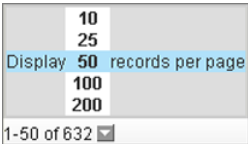
For more information, see "Customizing the Reports Tab List View" in the online help.

Moving Folder Items with Drag and Drop

In this release, you can move items between folders directly from the list view on the home page. You can drag an item from the list view into a folder on the Folders pane. Note that you can move one item at a time. First, click and hold an item from the list view, then drag it into a desired folder in the Folders pane. A green check mark indicates that the item can be dragged into the selected folder while a red icon (⊘) means you can't.

Although you can move reports into report folders and dashboards into dashboard folders, items within standard report folders or installed packages from AppExchange can't be moved.

Joined Reports Enhancements

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

User Permissions Needed	
To create, edit, and delete reports:	"Create and Customize Reports"
	AND
	"Report Builder"

In Summer '12, we've enhanced joined reports to support cross-block custom summary formulas and charts. Now, you can also hide record counts and use a new process to remove blocks from reports.

Introducing Cross-Block Custom Summary Formulas

This enhancement addresses an idea on IdeaExchange.

Two types of custom summary formulas are available with joined reports: standard and cross-block. Standard custom summary formulas were introduced in Spring '12. Cross-block custom summary formulas are new in Summer '12.

Cross-block custom summary formulas let you calculate values across multiple blocks in a joined report. For example, you can use a cross-block formula to calculate the ratio of open to closed opportunities for an account or the ratio of closed pipeline deals to sales targets.

Keep the following in mind when working with cross-block custom summary formulas.

- You can add a cross-block formula to any block in the report.
- Cross-block formulas aren't automatically added to the report when you create them. To add a formula, drag it to a block.
- When you add cross-block formulas to a block, they appear to the right of standard ones in the order in which you add them to the block.
- The results of cross-block formulas are affected by the filter options applied to the blocks in the report. As a result, a cross-block formula can yield different results when you change filter options.
- Each joined report can have up to 10 cross-block custom summary formulas.
- Deleting a block that's used in a cross-block formula also deletes the formula from both the Fields pane and any remaining blocks containing it.
- Each cross block formula must have a unique name. However, standard and cross-block custom summary formulas can have the same name.
- Cross-block formula names can't include brackets ("[" or "]").

When a joined report contains a single report type, the cross-block and standard formulas appear together in the Formulas folder.
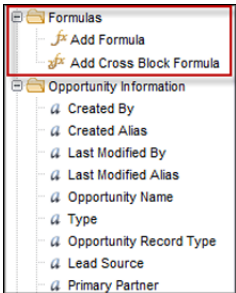
When a joined report contains multiple report types, cross-block formulas appear in the Common Fields area, while standard formulas appear in the report type area.
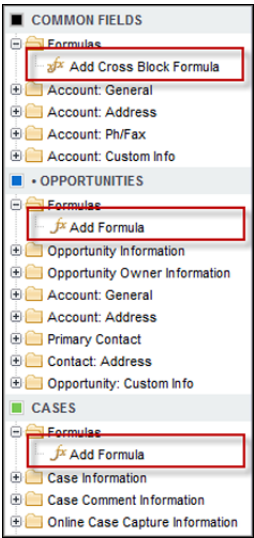
To create a new cross-block custom summary formula, double-click **Add Cross Block Formula**. To create a standard custom summary formula, go to the area for the report type, and double-click **Add Formula**. See "Building Custom Summary Formulas for Joined Reports" in the online help for more information.

Example: Creating an Opportunity Pipeline Prediction Report

Using a cross-block custom summary formula, you can develop a report that predicts future opportunity revenue based on your sales reps' past performance. Create a report based on the Opportunities standard report type, add three blocks to the report, filter each block by the appropriate status, and then create a formula that uses fields from different blocks.

To create the report:

1. Create a new joined report, selecting `Opportunities` as the report type.
2. Remove unwanted fields by dragging them to the Fields pane.
3. Create three blocks, each containing the `Opportunity Name`, `Account Name` and `Amount` fields.
4. For each block, show `All Opportunities`. Then, filter each block.

Block	Filters
Block 1	Opportunity Status equals Closed
	Date Field equals Close Date
	Range equals Current and Previous FY
	Stage equals Closed Lost

Block	Filters
Block 2	Opportunity Status equals Closed Won Date Field equals Close Date Range equals Current and Previous FY
Block 3	Date Field equals Close Date Range equals Next Month Opportunity Status equals Open

5. Group the blocks by `Opportunity Owner`.
6. Rename the blocks. For example, "Closed — Won," "Close — Lost," and "Closing Next Month."
7. Create a cross-block custom summary formula that predicts upcoming revenue based on past sales rep performance:

```
[Closing Next Month]AMOUNT:SUM*([Closed - Won]RowCount/([Closed - Lost]RowCount+[Closed
 - Won]RowCount))
```

8. Add the formula to one or more of the blocks.
9. Optionally, add a cross-block custom summary formula that calculates the win ratio of each sales rep:

```
[Closed - Won]RowCount/([Closed - Lost]RowCount+[Closed - Won]RowCount)
```

10. Click **Save** or **Run Report**.

## Adding Charts to Joined Reports

This enhancement addresses an idea on IdeaExchange.

Now, you can add a chart to a joined report. All chart types available for summary and matrix reports are available for joined reports as well. Your chart can display data based on standard and cross-block custom summary formulas, summary fields, record counts, and fields you've used to group blocks.

In the Chart Editor, summary field names contain both the field name and the block name. For example, in the figure, `Closed — Lost — Sum of Amount` is the summarized Amount field from the Closed — Lost block. A cross-block or standard custom summary formula contains the block name when the formula is included in multiple blocks.
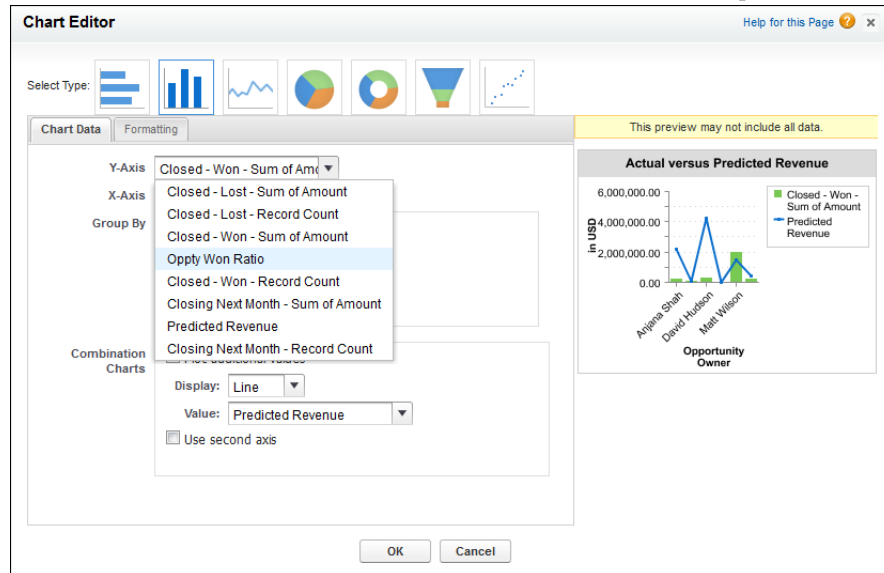
To add a chart to a joined report:

1. Make sure the report has at least one grouping.
2. Click **Add Chart**, and select the data and formatting options from the Chart Editor overlay.
3. Click **OK**, and then save or run the report.

Example: Adding a Chart to the Opportunity Pipeline Prediction Report

You can add a chart to the Opportunity Pipeline Predictor report that shows actual versus predicted revenue.

To add the chart:

1. Create the Opportunity Pipeline Predictor report on page 82.
2. Click **Add Chart** to access the Chart Editor overlay.
3. For the Y-axis, select `Closed — Won — Sum of Amount`.
4. Select **Plot additional values**.
5. Select `Line` for the Display option, and `Predicted Revenue` as the Value.
6. Click the Formatting tab, and enter `Actual versus Predicted Revenue` as the chart title.
7. Click **OK**.
8. Click **Save** or **Run Report**.
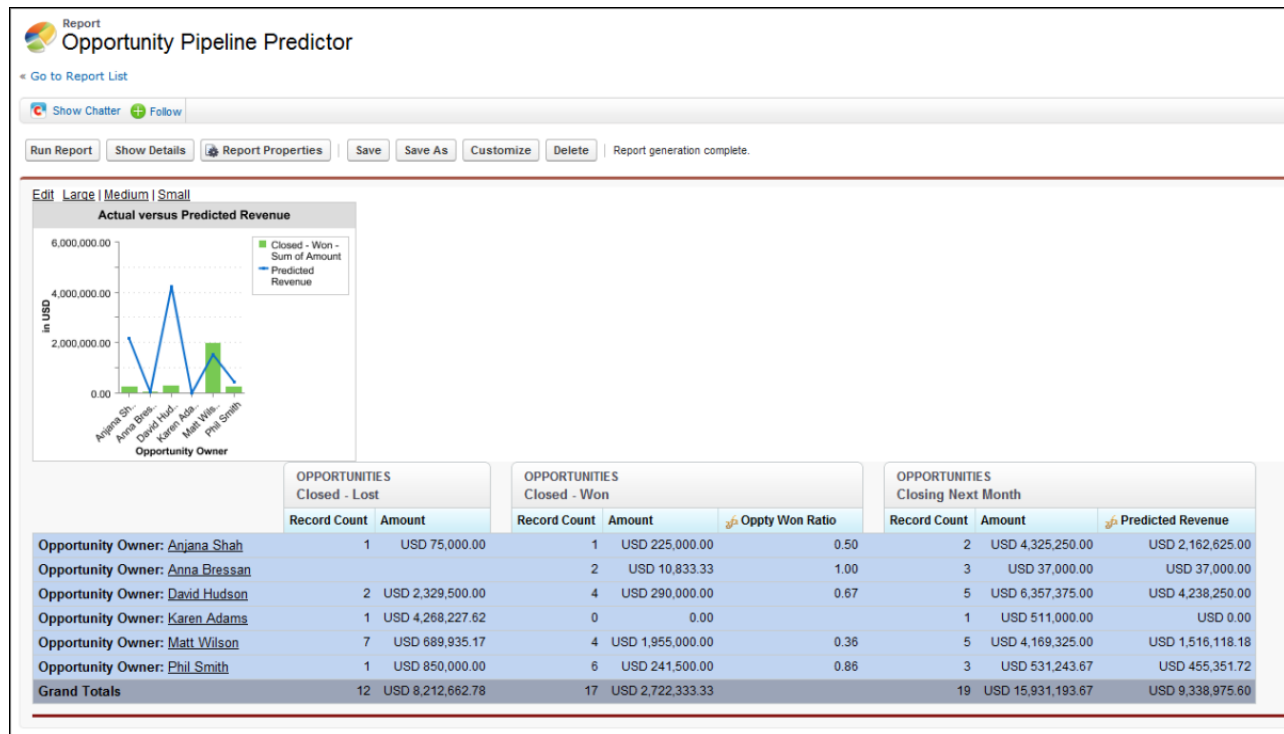
Hiding Record Counts

This enhancement addresses an idea on IdeaExchange.

You can choose to show or hide the number of records, or *record count*, for each block in a joined report. By default, record count is displayed for each block in the report builder and on the run reports page.

You show or hide record counts in the report builder. There are two ways to show or hide counts:.

- Click the arrow in the block header (⌄) to display the block menu. The check mark beside the **Record Count** menu item shows that record count is enabled for the block. Click **Record Count** to toggle between showing and hiding the count.
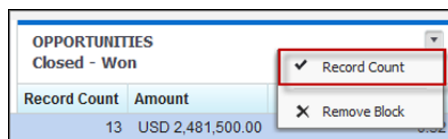
- When you've hidden report details, position the cursor over the Record Count column to display an arrow (⌄). Click the arrow, and select **Remove Column**. To display record count again, click the arrow in the block header and select **Record Count**.
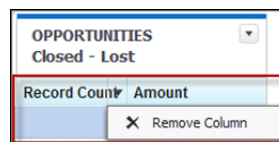
Note: If you haven't summarized any rows in your report blocks and have also hidden both details for the report and row counts for all blocks, your blocks will be hidden on the run reports page. To display the blocks, choose **Show Details** from the run reports page or the report builder.

Removing Blocks

Previously, you removed blocks from a report by dragging them to the Fields pane. This functionality is still available, and we've added a second way to remove a block. Now, click the arrow in the block header (⌄) to display the block menu, and then click **Remove Block**.

OPPORTUNITIES Closed - Won		⌄
	✓ Record Count	
Record Count	Amount	
	✗ Remove Block	
	17 USD 2,722,333.33	USD 2,722,333.33

Joined Report Considerations

Remember the following when working with joined reports.
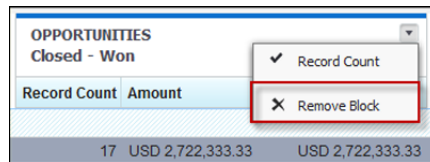
* For users to be able to create and edit joined reports, report builder must be enabled for your entire organization. For information on enabling report builder, see "Upgrading Report Builder" in the online help. When report builder isn't enabled, users can only run joined reports.
* Joined reports require that the new user interface theme be enabled. Users without the new theme are unable to create, edit, or run joined reports. See "Enable New User Interface Theme" in the online help.
* Internet Explorer 6 is not supported for joined reports.

Dashboard Charting Options

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

User Permissions Needed	
To create, edit, and delete dashboards:	"Run Reports" AND "Manage Dashboards"
To create, edit, and delete dynamic dashboards:	"Run Reports" AND "Manage Dynamic Dashboards"

In this release, many options for displaying data graphically that were previously available only in the report builder are now also available in the dashboard builder.

Chart Data Options

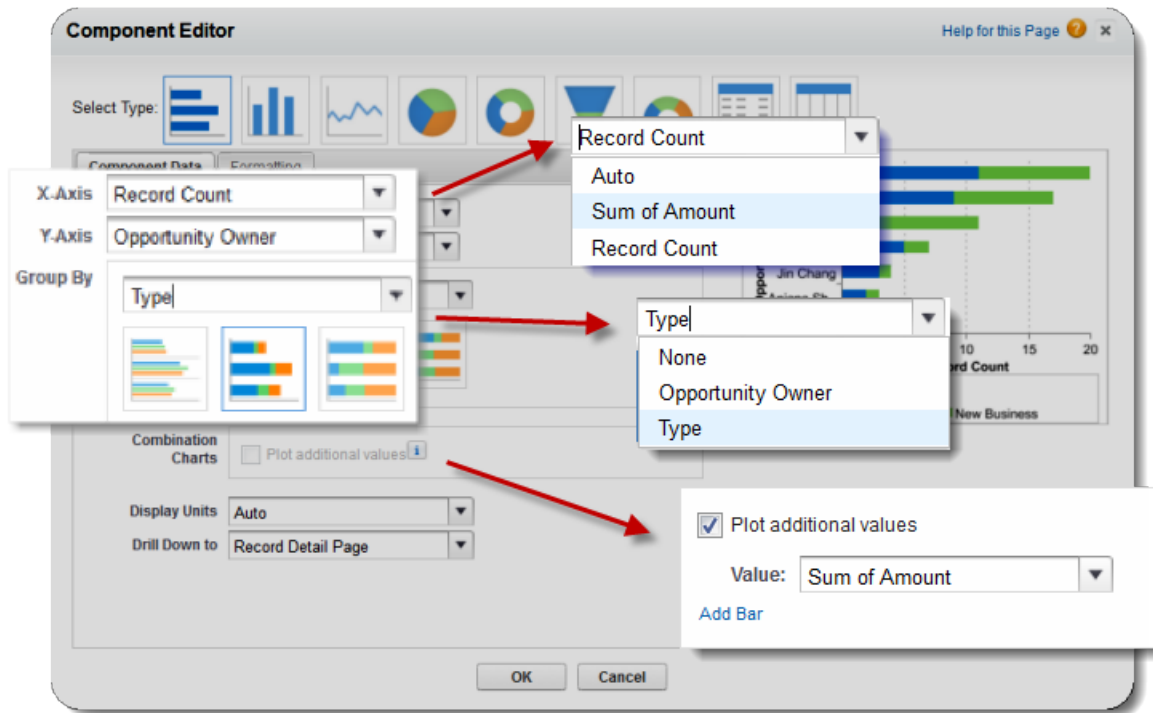You asked for it! This enhancement is from an idea on the IdeaExchange.

Previously, the default groupings and summary fields from the report (typically the first grouping and the first summary field) were automatically selected for a dashboard component. This is still the default mode, but now you can also directly edit a dashboard component to specify the groupings and summary fields you want to show.

For example, in a line chart or bar chart component, you can select your groupings and summary fields in the dashboard component editor by specifying the fields to use as the X axis and the Y axis.

You can still let the system automatically pick the default fields to show on the component by leaving `Auto` selected in the drop-down lists where you select the fields you want to display.

See "Grouping Report Data" in the online help and "Summarizing Report Data" in the online help for more on groupings and summary fields.

Dashboard Components Based on Tabular Reports

You asked for it! This enhancement is from an idea on the IdeaExchange.

When you use a tabular report with a row limitation in a dashboard component, all fields on the report are available to pick from, not just the fields you specified with the **Dashboard Settings** button in the report builder. You no longer have to set **Dashboard Settings** to use the report in a dashboard component.

Combination Charts in Dashboard Components

You asked for it! This enhancement is from an idea on the IdeaExchange.

Combination charts (also known as multimetric charts) were previously available only in the report builder. Now you can set up a combination chart directly from the dashboard component editor.

A *combination chart* plots multiple sets of data on a single chart. Each set of data is based on a different field, so values are easy to compare. You can also combine certain chart types to present data in different ways in a single chart. For example, if you are a sales manager, you might wish to see "Pipeline amount" as a line and "Number of open deals" as vertical bars, on the same chart.

With combination charts, you can:

- Add a line to an existing line, vertical column, grouped vertical column, or stacked vertical column chart.
- Add a cumulative line to an existing line cumulative chart.
- Add up to three columns to a vertical column chart.
- Add up to three bars to a horizontal bar chart.

See "Using Combination Charts" in the online help for more about combination charts.

Note: Internet Explorer 6 is not supported for the new dashboard charting options.

For detailed instructions, see Editing Dashboard Components.

Additional Analytics Enhancements

Also to note in Summer '12 are these additional analytics improvements:

- Introducing the Report Timeout Warning
- New Options on Case Reports
- Reports Filter Panel Enhancements
- New Custom Date Fields
- Cross-Filtering on Secondary Objects
- Bucket Query Length
- Picklist Bucket Names

Introducing the Report Timeout Warning

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

User Permissions Needed	
To modify report and dashboard settings:	"Customize Application"

The report timeout warning analyzes reports at runtime, identifies those that are highly complex and likely to time out, and displays a warning. Users with permission to modify reports can edit the report to improve performance. Users can also choose to run the report in spite of the warning. The report timeout warning is enabled by default.

The report timeout warning only analyzes reports run manually from the Run Reports page. It doesn't analyze scheduled reports, reports run from dashboards, or reports run using background export.

The report timeout warning might occasionally flag reports that don't time out. Additionally, the warning assumes that your organization's reports will time out after 10 minutes, which is the standard length of time reports can run before timing out. If your organization has extended the limit to 20 minutes, the reports might be less likely to time out. Keep in mind that, even if the reports run successfully, they remain highly complex, and could time out in the future. When the timeout warning appears, we recommend that you take the steps described in "Tips for Improving Report Performance" in the online help to simplify the report.

To disable the report timeout warning:

1. Click *Your Name* > **Setup** > **Customize** > **Reports & Dashboards** > **User Interface Settings**.
2. Deselect **Enable Report Timeout Warning**.
3. Click **Save**.

New Options on Case Reports

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

Summer '12 includes two changes to options in the **Show** drop-down in reports based on cases.

- `My role-based team's cases` is a new option that lets you limit the report to cases owned by anyone within your role-based team.
- `My team's cases` has been renamed `My case team's cases`.

Additionally, when you run reports on cases or create a custom report type based on cases, you can now cross-filter by case team member or pre-defined case team.

For more information on creating and running reports see "Running Reports" in the online help. For information about reports based on the cases report type, see "Support Reports" in the online help.

Reports Filter Panel Enhancements

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

User Permissions Needed	
To modify report and dashboard settings:	"Customize Application"

This release includes two kinds of enhancements to help users configure report filters more efficiently.

Simplified editing: You can create and edit filters more easily, and recover filters you have deleted.

- With Boolean logic enabled, you can now recover a deleted filter using the **Undo** option.
- When editing a filter, you must now complete and save the change before adding a new filter. While you are editing a filter, both the **Add** button and the ability to drag fields onto the editing panel are disabled.
- When you are editing a filter, the **Edit** and **Remove** links on other filters are disabled, so you cannot work on other filters until you finish editing the current filter.

Better viewing: It's easier to edit filters at a low screen resolution.

- When you add complex Boolean logic, you can now scroll horizontally when a filter definition is longer than the width of the screen.
- When viewing filters with very long Boolean logic, the text now wraps instead of truncating at the edge of the screen.

New Custom Date Fields

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

You asked for it! This enhancement is from an idea on the IdeaExchange.

This release includes new options for using pre-defined date ranges in custom date filters. These values have been added:

Field	Description
n FISCAL YEARS AGO	Starts at 12:00:00 a.m. on the first day of the fiscal year *n* fiscal years ago and continues through the end of the last day of that fiscal year.
n FISCAL QUARTERS AGO	Starts at 12:00:00 a.m. on the first day of the fiscal quarter *n* fiscal quarters before the current fiscal quarter and continues through the end of the last day of that fiscal quarter.
n YEARS AGO	Starts at 12:00:00 a.m. on January 1 of the calendar year *n* years before the current calendar year and continues through the end of December 31 of that year.
n QUARTERS AGO	Starts at 12:00:00 a.m. on the first day of the calendar quarter *n* quarters before the current calendar quarter and continues to the end of that quarter.
NEXT *n* MONTHS	Starts at 12:00:00 a.m. on the first day of the month after the current month and continues until the end of the *n*th month.
LAST *n* MONTHS	Starts at 12:00:00 a.m. on the first day of the month that started *n* months before the current month and continues up to the current second.
n MONTHS AGO	Starts at 12:00:00 a.m. on the first day of the month that started *n* months before the start of the current month and continues for all the days of that month.
LAST *n* WEEKS	Starts at 12:00:00 a.m. on the first day of the week that started n weeks before the current week, and continues up to the current second.
NEXT *n* WEEKS	Starts at 12:00:00 a.m. on the first day of the week after the current week and continues for *n* times seven days.
n WEEKS AGO	Starts at 12:00:00 a.m. on the first day of the week that started *n* weeks before the start of the current week and continues for seven days.

Cross-Filtering on Secondary Objects

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

User Permissions Needed	
To create, edit, and delete reports:	"Create and Customize Reports"
	AND
	"Report Builder"

In Campaign-based standard report types where Campaign is the primary entity, you can now create cross filters based on the secondary objects as well. Previously, you could create cross filters on the primary entity only.

For example, in a report based on the "Campaigns with Contacts" standard report type, you can now cross-filter for contacts with or without activities. Previously, you could cross-filter for the child objects of Campaigns, but not the child objects of Contacts.

Contacts ▼	without ▼	Activities ▼
Campaigns		
Contacts		
Accounts		

The following standard report types based on the Campaign object now support cross filtering by the secondary objects listed.

Standard Report Type	Objects Available for Cross-Filtering
Campaigns with Contacts	Campaign, Contact, Account
Campaigns with Leads	Campaign, Lead
Campaigns with Leads and Converted Lead Information	Campaign, Lead, Account, Opportunity, Contact
Campaigns with Influenced Opportunities	Campaign, Opportunity, Account

For more, see "Creating Cross Filters" in the online help.

Bucket Query Length

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

User Permissions Needed	
To create, edit, and delete reports:	"Create and Customize Reports"
	AND
	"Report Builder"

Salesforce prevents users from saving a bucket or combination of buckets when the resulting SQL query is too long. Even if the user has not exceeded the limit of five buckets and 20 values per bucket, the SQL query resulting from the particular combination of buckets and bucketed values can exceed the maximum query length. In such cases, the system displays this error message when the user creates a bucket and clicks **OK** on the bucket dialog: "The query for these buckets is too complex. Remove one or more buckets and retry."

Picklist Bucket Names

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

User Permissions Needed	
To create, edit, and delete reports:	"Create and Customize Reports"
	AND
	"Report Builder"

Picklist bucket names must include one or more letters or symbols. If a picklist bucket field includes a bucket whose name contains only numbers, the bucket field cannot be saved.

Users who attempt to name a picklist bucket with a numerical value will get this error message: "A picklist bucket field can't contain a bucket with a numeric name, such as [invalid bucket label]. Add at least one letter or symbol to the name of the bucket and retry."

For example, suppose you're a sales manager and your team uses a picklist field to rate its opportunities as Excellent, Good, Fair, and Never Mind. You decide to sort the opportunities into buckets that define their relative priority. If any of your buckets has a name like "1" or "2" or "123" you can't save the bucket field. Instead, use names that include non-numeric characters, such as "P1" or "p2" or "3d priority."

For details about picklist buckets, see "Editing Picklist Bucket Fields" in the online help.

MOBILE

Salesforce Mobile for Android Tablets—Generally Available

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

Salesforce Mobile is now generally available for Android tablets! Use it to access your Salesforce data, tasks, and calendar from your Android tablet, even when you're not connected to a Wi-Fi network. Salesforce Mobile for Android tablets also integrates with native Android features, allowing you to send email and map addresses by tapping fields on Salesforce records. Salesforce Mobile for Android tablet also supports dashboards and Salesforce CRM Content.

Salesforce Mobile for Android tablets is available for download on Google Play.

Salesforce Mobile User Guide for Android

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

Salesforce Mobile User Guide for Android is now available. The guide contains detailed information for users getting started with Salesforce Mobile for Android.

Chatter for iOS v2.2 (iPhone and iPad)—Generally Available

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

Chatter for iOS v2.2 is now generally available. Use Chatter for iOS to:

- View updates about the people, groups, and records you follow
- Create posts, attach photos or files, and add comments
- Mention people in posts and comments
- View documents and links shared by others
- Find and follow people in your organization
- View your coworkers' profiles to see their contact information, bios, the files they own, who they're following, and who's following them
- Initiate phone calls and FaceTime calls, and send emails and text messages to your coworkers
- Find and join groups in your organization
- Collaborate with customers in private Chatter groups

New Features in Chatter for iOS v2.2

This release includes two enhancements to the Chatter mobile app:

Push Notifications

Chatter for iOS users can now take advantage of push notifications on their iPhone or iPad. Push notifications are alerts that Chatter sends to your device to keep you aware of important feed activity, such as when someone mentions you in a post or comment.

To enable or disable push notifications from your iPad or iPhone:

1. From your device home screen, tap **Settings** > **Notifications**.
2. Tap **Chatter**.
3. Turn notifications on or off.

> **Note:** Users can't enable push notifications on the device if they were disabled by the administrator. To access your organization's push notification settings, click *Your Name* > **Setup** > **Mobile Administration** > **Chatter Mobile** > **Settings**.

@ Me Tab Enhancement

On the @ Me tab, it's now easier to locate activity that involves you. When you visit the @ Me tab, you see a list of the individual updates where you were mentioned. Tap an update to view the related post, including the entire comment thread.

For more information about using Chatter on your device, open the Chatter mobile app on your iPhone or iPad, then tap **Settings** > **Help**.

Installing the App

Salesforce Chatter is available for download in the Apple App Store. To use the Chatter for iOS v2.2 mobile app, your iPhone or iPad must be running iOS 5.0 or higher, and it must be connected to a WiFi or cellular network.

Upgrading the App

Most users will be able to upgrade to the latest version of Chatter for iOS by installing the pending update that appears in the App Store. However, iPad users who have an old version of the Chatter for iPad app – Chatter for iPad v2.0 or earlier – must download the new app from the App Store.

> **Important:** This release impacts administrators who apply IP restrictions to their iPad users and still have users running version 2.0 or earlier of the old Chatter for iPad app. Chatter for iOS is not an upgrade of the old iPad app – it's a new app. If your iPad users are IP restricted and do not use VPN on their device, you must email them a new activation link so they can activate the new app on their iPad. Click *Your Name* > **Setup** > **Mobile Administration** > **Chatter Mobile** > **Settings** to send a new activation email.

Salesforce Touch

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

Salesforce Touch is a version of Salesforce that's designed specifically for touchscreen mobile devices. It gives you real-time access to the same information that you see in the office, but organized for working while on the go.

Note: This release doesn't have all of the functionality of the full Salesforce site. See Differences from the Full Salesforce Site on page 98 for more details.

Salesforce Touch provides these benefits:

- An intuitive interface that is optimized for easy navigation and data interaction on an iPad, so you can scroll, tap, and swipe through records to quickly find the information you need
- Runs in your device's browser, so you don't have to download any software
- Automatic updates and enhancements, so you're always using the most current version
- Support for many of your organization's Salesforce customizations

Note:

To learn about using Salesforce Touch, see the *Salesforce Touch FAQ* that's available from the **Settings** 🔧 icon in the app.

Salesforce Touch Features Overview

Brush up on the status of deals or notes about contacts before customer meetings. Update records with new information while the details are fresh. Rally team members back at the office to start working on a customer request. These are just a few of the ways Salesforce Touch helps your users be productive on the go and avoid time-consuming catch-up work at the end of the day.

This section highlights some of the key features that make Salesforce Touch a great choice for use when out of the office.
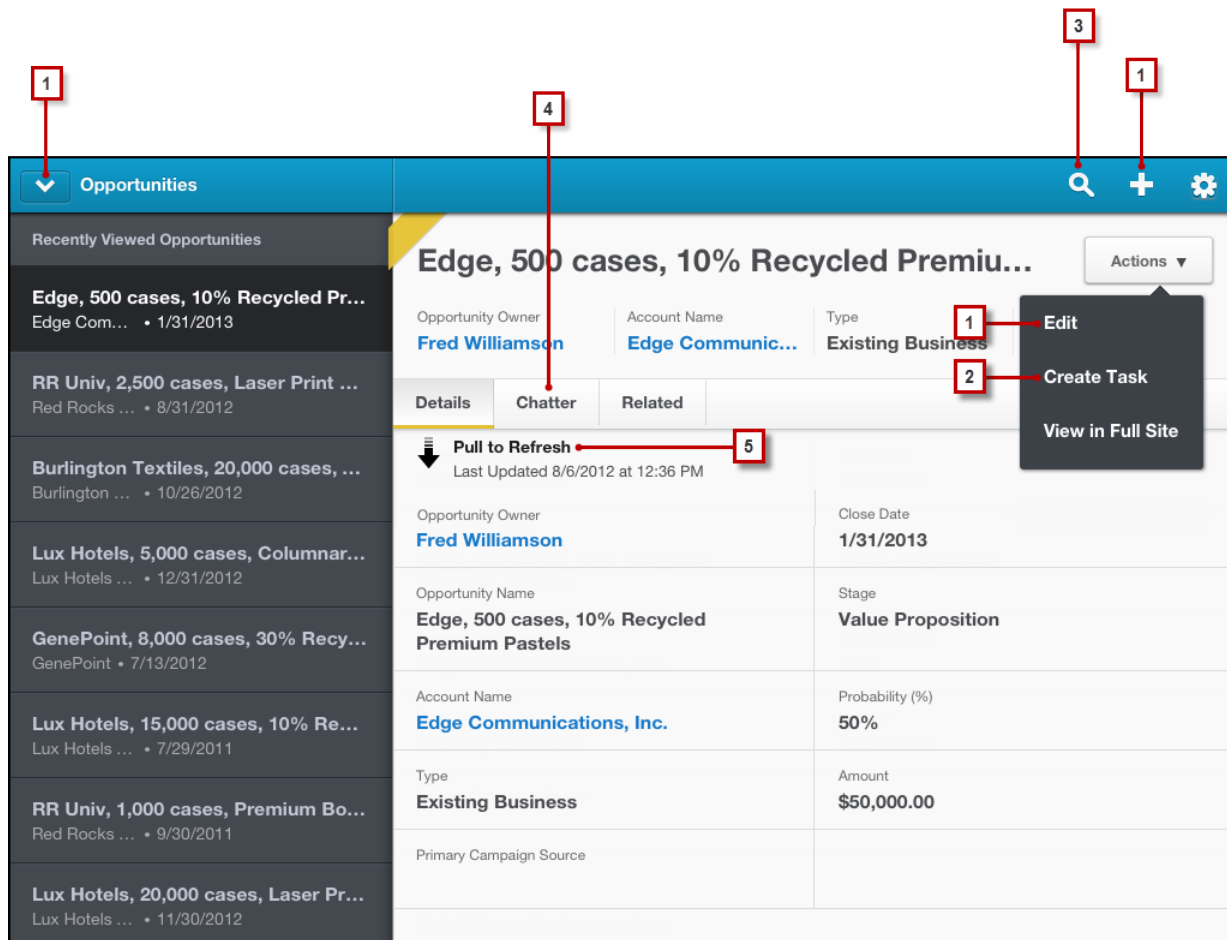
1. View, edit, and create records for any object that has a tab in the Salesforce Sales app, including your organization's custom objects
2. Keep on top of activities by creating and managing tasks
3. Search Salesforce for information, including events and records not in recently viewed lists
4. Use Chatter to see record updates and to collaborate with coworkers
5. Work with real-time data by refreshing desired areas of Salesforce Touch

Salesforce Touch Enhancements in this Release

We've been constantly improving Salesforce Touch. An update in August '12 included these additions and changes:

• You can now mention people in Chatter posts and comments.
• The **Enable Salesforce Touch for all users** option on the Salesforce Touch Settings page in the full site (**Your Name** > **Setup** > **Mobile Administration** > **Salesforce Touch** > **Settings**) has been renamed **Enable Touch Web**. This option still controls whether or not users are automatically redirected to Salesforce Touch when logging in to Salesforce from the Safari on iPad web browser. The setting applies to all users in your organization and is off by default.

An update in July '12 included these additions and changes:

• Salesforce Touch has a new, lighter look. As a result of this redesign, the Chatter tabs now use **Feed**, **Groups**, and **People** labels instead of icons.

- You can now create new records for any of the Salesforce Touch–supported tabs in your Salesforce Sales app. And, with the exception of events, you can edit all records that are viewable in Salesforce Touch.
- Salesforce Touch officially supports most of the Salesforce–supported locales and the fully-supported and end user languages. The exception is right-to-left languages (including Arabic and Hebrew), which aren't currently supported.
- The *Salesforce Touch FAQ* was reorganized to incorporate the new topics for the create and edit features. The previous *Working in Touch* section is now called *Working with Records* and the tasks and events topics are now available in the new *Tracking Activities* section.

Salesforce Touch Requirements

These are the requirements for using Salesforce Touch:

Devices:

Apple iPad (2nd- and 3rd-generation), with iOS® version 5.0 or higher.

Browsers:

The default iPad browser, Safari.

Private Browsing must be turned off. Tap the iPad **Settings** icon, then select **Safari** and set **Private Browsing** to **Off**.

Salesforce:

Chatter must be enabled for your organization.

You must have an active Salesforce account to access Salesforce Touch.

You must have access to the standard Sales app.

Chatter Free users, Chatter Only users, and Chatter customers aren't able to use Salesforce Touch.

Wireless Connection:

A Wi-Fi® or cellular network connection is required to communicate with Salesforce. For the best performance, we recommend using Wi-Fi. If you use Salesforce Touch on a 3G cellular network, data rates may apply and you may incur roaming charges while traveling.

Offline use of Salesforce Touch isn't currently supported.

Language and Locale:

Salesforce Touch works with almost all of the Salesforce-supported locales and the fully-supported and end user languages. The exception is right-to-left locales and languages (including Arabic and Hebrew), which aren't currently supported.

Advanced currency management isn't supported in this release.

Enabling Salesforce Touch

User Permissions Needed	
To view Salesforce Touch settings:	"View Setup and Configuration"
To modify Salesforce Touch settings:	"Customize Application" "Modify All Data"
To use the API:	"API Enabled" "Manage Users"

To enable Salesforce Touch for your organization:

1. Click **Your Name** > **Setup** > **Mobile Administration** > **Salesforce Touch** > **Settings**.
2. Select **Enable Touch Web**.
3. Click **Save**.

Salesforce Touch is disabled by default. Selecting this setting enables Salesforce Touch for all users in your organization. When users log in to Salesforce from the Safari® on iPad web browser, they're automatically redirected to the Salesforce Touch interface.

> **Note:**
>
> If users prefer to access the full Salesforce site from Safari instead, they can turn off the Salesforce Touch redirection for themselves, either from the app or from the full site by deselecting the **Touch User** checkbox at **Your Name** > **Setup** > **My Personal Information** > **Personal Information**.
>
> Alternately, you can use the Web Services API to quickly turn automatic redirection to Salesforce Touch off (or on) for users. When Salesforce Touch is enabled, the UserPreferencesOptOutOfTouch field is added to the User object. By default, this field is set to false—which turns on automatic redirection to Salesforce Touch—for all user records. Change this field to true to turn the redirection off for desired users. See the User section in the *Web Services API Developer's Guide* for more information.

Accessing Salesforce Touch

If you enable Salesforce Touch, users simply access the mobile web interface by logging in to their Salesforce accounts from the Safari web browser. Login sessions from iPad devices are automatically redirected to Salesforce Touch.

> **Note:** If a user sees the full site instead of Salesforce Touch, verify that the **Touch User** checkbox in the user's Personal Information settings is selected. You can access this information by selecting **Your Name** > **Setup** > **Manage Users** > **Users**, then clicking **Edit** next to the user's name.

Differences from the Full Salesforce Site

Salesforce Touch doesn't have all of the functionality of the full Salesforce site. Currently, the Salesforce Sales app is the only tabset that's available. Users can work with their accounts, contacts, opportunities, tasks, and any custom tabs that are included in the Sales app, and they can view events that are accessible from Open Activities or Activity History related lists. With a few exceptions, all of the standard and custom fields for these objects are available. Additionally, users can see their Chatter data, including People, Groups, and feeds.

Note: Salesforce Touch uses user profiles and permission sets, so users have access to the same tabs, record types, fields, page layouts, and object permissions that they do when working in the full Salesforce site. However, any user interface customizations that your organization implemented programmatically (for example, using Visualforce, JavaScript, and so forth) aren't accessible in this release.

Salesforce Touch has these limits when displaying data:

- **Chatter Groups and People:** 15 records displayed initially, expandable to 200 maximum
- **Recent Items:** 15 records displayed initially, expandable to 100 maximum
- **Related Lists:** 30 records displayed initially, not expandable
- **Search Results:** top 5 results per object displayed, not expandable
- **Tasks:** 15 records displayed initially, expandable to 100 maximum

Currently, this release doesn't support:

- Other standard apps and all custom apps
- Objects other than those mentioned in this section
- Person accounts
- Standard list views and custom object lists
- A few record fields, including:

  ◊ division fields
  ◊ rich text area fields
  ◊ territory management fields

- Some related lists and some related list fields
- Archived activities
- Dashboards
- Search on objects other than accounts, contacts, events, opportunities, tasks, users, and custom objects.
- Advanced currency management
- Programmatic customizations to the Salesforce interface, including:

  ◊ Custom buttons and links
  ◊ Web tabs and Visualforce tabs
  ◊ Visualforce components and S-controls

Note:

Unsupported fields and related lists include links to the full Salesforce site, where you can see the missing information. Links to unsupported objects also take you to the full site. In addition, the **Actions** menu on a record detail pane allows you to switch to the full site so you can perform tasks not currently available in Salesforce Touch.

Salesforce.com provides these links for your convenience but using the full site from Salesforce Touch isn't officially supported.

There are some differences from the full site when creating or editing records:

Category	Issue	Creating Records	Editing Records
Any Record	You can't modify a record's owner or its record type. Switch to the full site to make these changes.		✅

Category	Issue	Creating Records	Editing Records
	If territory management is enabled, you can't assign or modify a record's territory rules.	✔	✔
Accounts and Contacts	The **Copy Billing Address to Shipping Address** and **Copy Mailing Address to Other Address** links aren't available.	✔	✔
	If territory management is enabled, the **Evaluate this account against territory rules on save** option isn't available when editing account records.		✔
Events	You can't create or edit event records in Salesforce Touch.	✔	✔
Opportunities	You can't edit the `Probability` or `Forecast Category` fields. However, values are automatically added to these fields (based on the value of the `Stage` field) when you save the record. You can manually override the values for these fields by editing the record in the full site.	✔	✔
	If you make an opportunity private, you don't get a warning that you're removing all sharing from the record.		✔
Tasks	If you set the `Name` field to `Lead`, the `Related To` field shouldn't be available but it's editable in Salesforce Touch. You'll get a validation error if there's data in `Related To` when you save the record.	✔	✔
	The `Email` and `Phone` fields for an associated contact aren't displayed.	✔	✔
	You can't create recurring tasks or change the details for recurring tasks.	✔	✔
	Spell-checking the `Comments` fields isn't available.	✔	✔
	You can't adding attachments.	✔	✔
	You can't send notification emails.	✔	✔
	You can't set task reminders.	✔	✔
Lookup Fields	Enhanced lookups aren't supported, so you can't use wildcards in lookup searches and you can't sort, filter, and page through search results.	✔	✔
	Dependent lookups aren't supported.	✔	✔
	Lookup filters aren't respected, so lookup search results aren't restricted in any way. You may wind up selecting an item that isn't valid for your organization, resulting in an error message when you save your record.	✔	✔
Phone Number Fields	Salesforce Touch doesn't apply any formatting to numbers entered in phone number fields, so if you enter `4155551212`, that's how the phone number is displayed when you view the record.	✔	✔
Picklist Fields	Controlling and dependent picklists are supported, but Salesforce Touch doesn't display indicators on create and edit pages for these fields. To determine if a picklist field is dependent, and which picklist field controls it, switch to the full site.	✔	✔
Text Area Fields	Text area fields aren't scrollable in this release. To access text that isn't visible in the field, tap the field to display the keyboard, then touch and hold to bring up the magnifying glass. Slowly drag the magnifying glass through the field until you see the desired text.	✔	✔

On the Chatter tab, you can't:

- Create or update profile information, or upload profile pictures
- See the Followers, Following, Groups, and Files Owned lists on profiles
- See Chatter activity statistics or Chatter influence status
- Receive Chatter recommendations
- See trending topics
- Invite coworkers to sign up for Chatter
- Update group settings and information
- Create new groups
- View members of groups or lists of group files
- Invite Chatter customers to join private groups
- Upload, share, or preview files
- View or download files that were uploaded via the Files tab from the full Salesforce site, or that were uploaded to a comment. (Note that you can view files that were attached to a post on a Chatter feed.)
- Find or follow files
- Send or view Chatter messages
- Bookmark posts
- View the list of people who liked a Chatter update
- Share public posts
- Add or view Chatter favorites
- Add topics to posts and comments
- Search for data in any Chatter feeds, including Groups, People, and Files
- View the "All Chatter" feed filter
- Filter or follow records
- Use Chatter as a moderator

Salesforce Mobile Dashboards for iPad—Generally Available

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

With the latest release of the mobile dashboards app, you can now:

- Browse dashboards more easily on the home screen
- View, post, or comment on a dashboard feed
- See hover-style notifications
- Connect to different instances from the login page
- Log out from within the app
- Use more options under settings

To learn more about the app, see the "Mobile Dashboards App Overview" topic in the online help. You can download the app for free from the Apple App Store or from the AppExchange. You can use the app on all iPad models with iOS 5 or higher.

Browse Dashboards More Easily on the Home Screen

The mobile dashboard app's home screen shows your recently viewed and followed dashboards in a carousel view. Flick through the carousel to quickly find the dashboard you want to view. By default, the home screen shows recently viewed dashboards (1). Use ⚙ (2) to log out and choose additional options, and use ↻ (3) to sync the app with the full Salesforce site for latest dashboard data. Use the search box (4) to find dashboards that aren't under **Recent** or **Following**.

View, Post, or Comment on a Dashboard Feed

You can now interact with dashboard Chatter feeds in the app as long as Chatter and feed tracking for dashboards are enabled in the full Salesforce site.
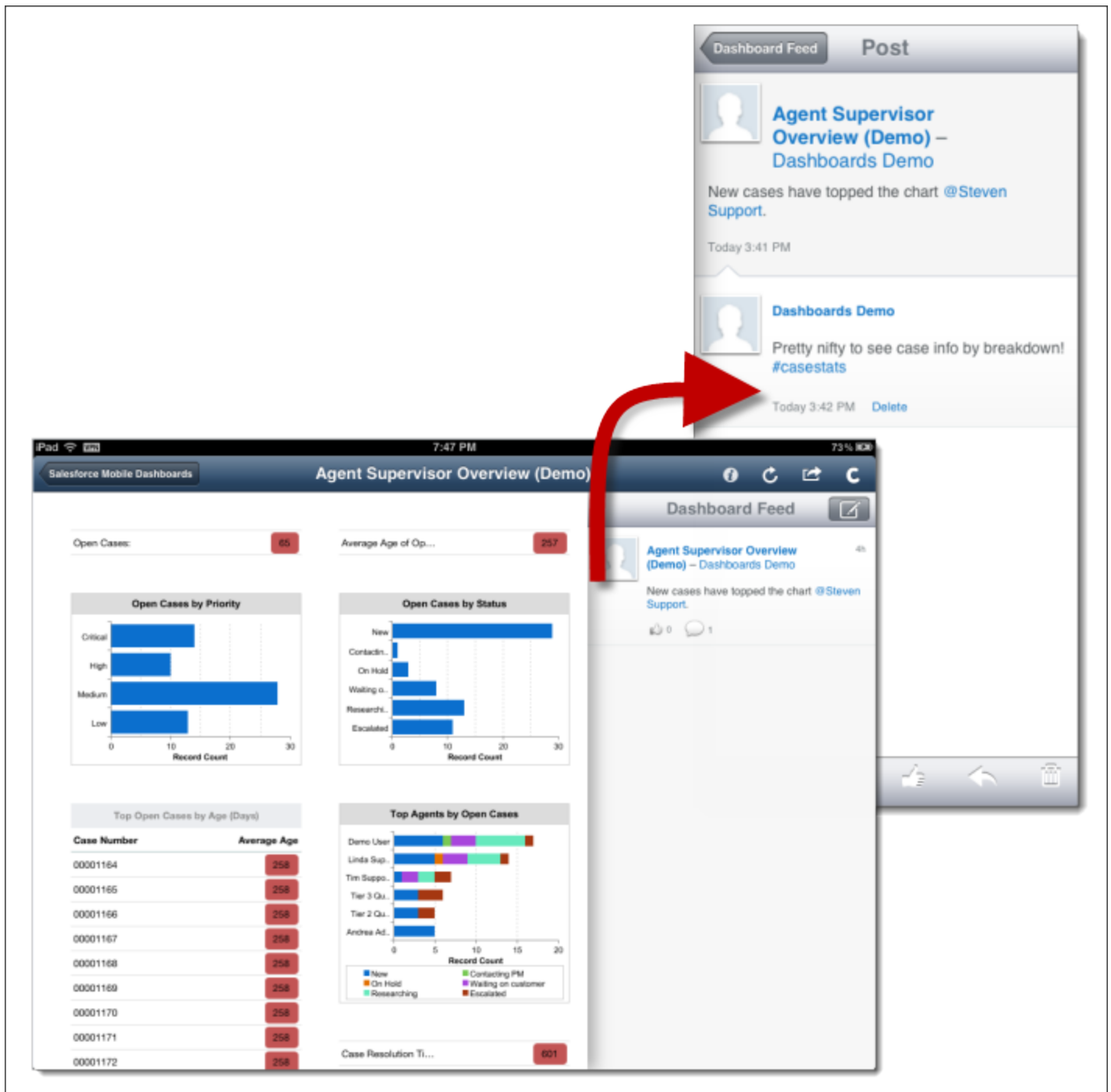
Figure 1: Post and Comment on a Dashboard Feed

You can do the following:

- To view or hide the Chatter feed for a dashboard, tap 🇨.
- To post to a dashboard feed, tap 🖊. After composing your post, tap **Share**.
- To comment on an existing post, tap the post to open the comment panel, then tap ↩. To return to a feed, tap **Dashboard Feed**.

When composing a post or comment, you can:

- Mention others by tapping @ or add topics by typing # followed by any word.
- Tap 📷 to select a photo from your device. When posting from a device with a camera, tap 📷 to take a picture to attach to the post. You can also tap 🗂 to attach a file to your post.

See Hover-Style Notifications
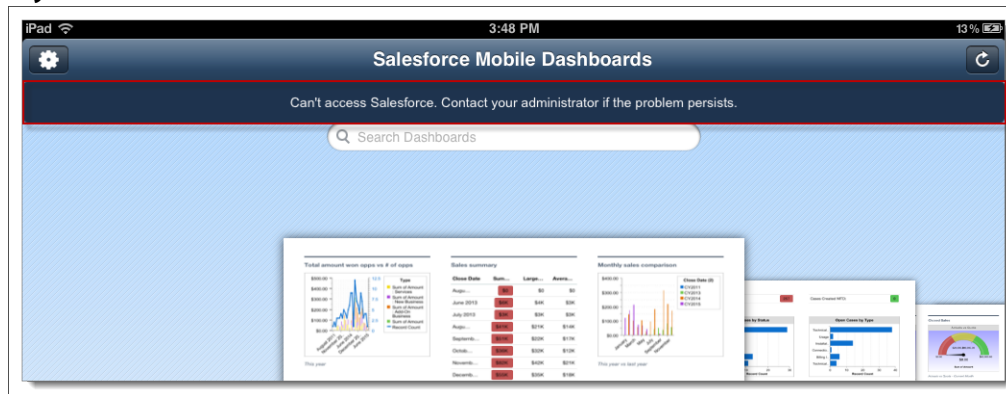
The mobile dashboard app notifies you when you're offline or are not seeing the latest data. Notification alerts now hover briefly at the top of the app instead of displaying in the dialog-style notifications used before.

Connect to Different Instances from the Login Page

The mobile dashboards app includes two predefined instances—**Production** and **Sandbox**—that you can access from the login page. By default, you connect to your production environment. To connect to a test environment instead, use the sandbox instance.

To add another instance you can connect to:

1. Log out of the app.
2. On the app's login page, tap ⚙.
3. Tap ➕ to add a new connection.
4. Enter a login URL (1) and, optionally, a name (2) for the new instance.

   You don't need to include `http://` in the URL because it's added automatically.
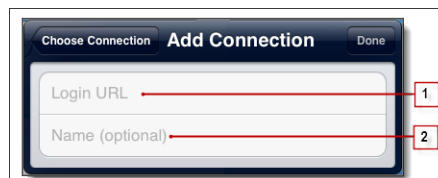
5. Tap **Done**.
6. Tap the new instance to connect to it.
7. Enter your username and password, then tap **Login**.

To delete an instance you no longer use:

1. On the app's login page, tap ⚙.
2. Flick to find the instance.
3. Swipe your finger across it.

4. Tap **Delete**.

Log Out from Within the App

Starting with this release, you can log out directly from the app to end your active session.
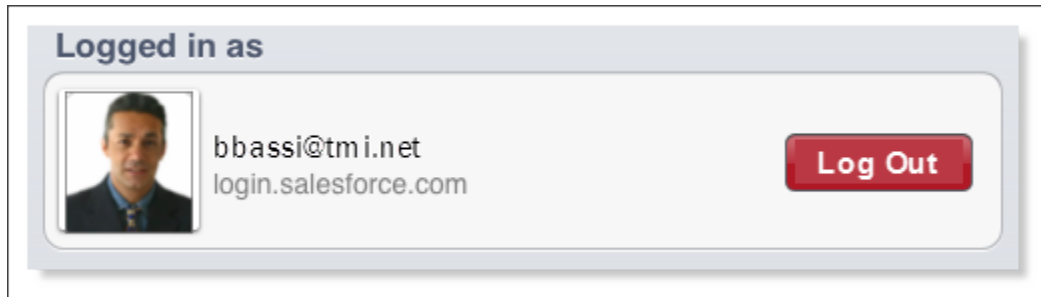
To log out:

1. In the app, go to the home view.

2. Tap ⚙.

3. Tap **Log Out** to end the active app session.

Use More Options under Settings

Additional options for the mobile dashboards app are available from ⚙ on the home screen, including:

- **Chart Animations**. Animate charts when viewing components by turning this option **ON**.
- **Synced**. See when you last synced with the full Salesforce site.

Salesforce Mobile SDK

The Salesforce Mobile SDK is an open source suite of developer technologies that simplify the development of mobile applications.

The Mobile SDK provides the following:

- Native OAuth implementations for Android and iOS that work out-of-the-box
- OAuth access token management, including persistence and refresh capabilities
- App containers for building hybrid applications

Using the Salesforce Mobile SDK, you can create three types of mobile applications:

- **Native** — Native apps are coded using a mobile platform's native capabilities. Typically, these apps are more difficult to develop, but they also offer the best performance. In this workbook, we show how to construct native applications for iOS and Android.
- **HTML5** — HTML5 apps are built using HTML5, CSS and JavaScript. These lightweight server-side pages typically offer the most portability, but don't have access to native platform features. HTML5 apps aren't OS-specific, so the same app will run on an iOS, Android, Windows Mobile, or other device.
- **Hybrid** — Hybrid apps use a JavaScript bridge in a native container to merge the portability of HTML5 with native device capabilities, such as the camera or address book.

Because the Mobile SDK is new technology, with many rapid changes expected over the coming year, the most recent release notes can be found at http://wiki.developerforce.com/MobileSDK.

DATA.COM

Data.com Product Suite Overview

 Watch a Demo (3:19 minutes)

Data.com is a leading provider of business information and data, combining 30 million crowd-sourced business contacts with accounts from Dun & Bradstreet (D&B) to deliver the best data source inside of Salesforce. Within Salesforce, you can search for Data.com accounts and contacts right on the Data.com tab, and if you have a Data.com license, you can add records to Salesforce. You can add your contact search results as either contacts *or* leads. It's remarkably easy to find the accounts and contacts you need, and using Data.com is a great way to plan your sales territories, segment campaigns, find new accounts to engage, and get new contacts to quickly expand your sales network. The Data.com product suite includes Data.com Corporate and Data.com Premium, as well as related products Data.com Clean and Data.com Reports. This topic describes them all, and explains how they work together.

New in Summer '12: Expanded North America Data From D&B

In Summer '12, Data.com continues to deliver more company profiles from D&B, including expanded data for North American (United States & Canada) companies. This valuable new information includes company headquarter and location indicators such as `single location` or `branch`. These fields are available when Salesforce users search for Data.com accounts and when they view an account's account card. When licensed Data.com users add accounts to Salesforce, these fields are included. Data.com Clean users see these fields and values when they manually clean account records.

> **Note:** When you search for accounts on the Data.com tab, your results will include only *active* D&B company records for the available North American regions, and you can add accounts to Salesforce from those results. Active records are a subset of the complete list of D&B company records, which also includes *inactive* records. If your company has purchased Data.com Clean, when you clean a Salesforce account record, it is compared with the complete list of D&B company records, and any match Data.com makes will come from that complete list.

Data.com Corporate
With Data.com Corporate, all Salesforce users can search Data.com for accounts and contacts. Users with Data.com licenses can:

- Add accounts and contacts to Salesforce, and add contacts as leads.
- Add contacts for an account directly from the account record.
- Access the basic set of D&B fields provided for accounts.
- Manually clean Salesforce account, contact, and lead records, whether they were added from Data.com or not.

Starting December 16, 2011, all organizations purchasing Data.com received the Data.com Corporate product. Organizations using previous versions have a limited set of fields.

Data.com Premium licenses can not be purchased for Salesforce organizations that already have Data.com Corporate licenses.

Data.com Premium

Data.com Premium is an upgrade to Data.com Corporate. With Premium, you get all the features and D&B fields available to Corporate, plus over 70 additional D&B fields for accounts you add to Salesforce from Data.com. These fields are grouped in a D&B Company record that's linked to the account, and accessible on the D&B Companies tab.

Data.com Corporate licenses can not be purchased for Salesforce organizations that already have Data.com Premium licenses.

Data.com Clean

Data.com Clean is an important part of Salesforce's Data.com product suite, offering both manual and automated cleaning for your account, contact, and lead records. To get automated cleaning, you must purchase Data.com Clean for every Salesforce user.

With Data.com Clean, users can manually clean Salesforce accounts, contacts, and leads, and you can configure jobs to flag field value differences on Salesforce records or automatically fill blank fields.

Data.com Reports

You asked for it! This product answers a request on the IdeaExchange.

Want to analyze the impact of Data.com data on your business? Use the Data.com Reports AppExchange package. It offers several preconfigured Data.com reports and a corresponding impact dashboard. Use these tools to find out how many records are sourced from Data.com, who has added them and when, and how they contribute to your sales forecast and revenue.

Important Considerations for Organizations Using Clean from the Data.com AppExchange Package

The Data.com AppExchange package is an older version of the product that is no longer for sale. It provides similar search, add, and clean functionality, but it works differently from the built-in Data.com product suite. The Salesforce online help and release notes describe the built-in Data.com Corporate and Premium productsonly, not the AppExchange package. If your organization is still using the Data.com AppExchange package, you should consider migrating to the built-in Data.com product suite for your prospecting and cleaning needs. For information and assistance, please contact your Salesforce account manager or log a case.

> **!** **Important:**
>
> You should not attempt to migrate to the built-in Data.com Clean product without assistance, because uninstalling the AppExchange package and its Clean features and then implementing the built-in Clean product will not work. If you attempt to enable the built-in Data.com Clean product without purchasing it, you'll see an error message: Your organization does not currently have the permission to run Clean jobs.

Implementing Data.com

Data.com available in: **Contact Manager**, **Developer**, **Enterprise**, **Group**, **Professional**, and **Unlimited** Editions
Data.com Clean available in: **Developer**, **Enterprise**, **Professional**, and **Unlimited** Editions

User Permissions Needed	
To implement Data.com:	"Customize Application"
To enable Data.com users:	"Manage Users"
To install AppExchange packages:	"Download AppExchange Packages"

Implementing Data.com is easy. Here's what you need to know.

The free version of Data.com provides Data.com data to all users. Users can find the Data.com tab on the All Tabs page, or you can add it for them.

With the free version, users can search across the complete Data.com database of accounts and contacts. Free version users can't see phone and email information for contacts, they can't see account cards or D&B data on account records, and they can't add records to Salesforce.

To take full advantage of Data.com's data, your organization needs to purchase Data.com licenses and set up the feature. We offer two licenses for searching and adding data from Data.com: Data.com Corporate and Data.com Premium. Both are easy to set up, but Premium includes a few additional steps. *Some of the steps are the same for both products*, so let's start with those.

To implement Data.com, you need to:

1. Understand Data.com licenses, limits, and products.
2. Enable users for Data.com, assign type for each user, and assign record addition limits.
3. (Optional) Purchase additional Data.com licenses or record additions.
4. Add the Data.com tab to user profiles.
5. Install the Data.com Reports AppExchange package.

6. Depending on your Data.com license, you'll complete a few more steps. Check out these topics for complete details.

> **Tip:** To find out which Data.com product your organization has, just click **Your Name** > **Setup** > **Data.com Administration** > **Licenses & Limits**. On the Licenses & Limits page, check the Data.com Licenses section. You'll see either "Corporate" or "Premium".

Implementation Tips and Best Practices

> **Note:**
> If a search produces a large number of results, users won't see all data past page 10. Contact Salesforce customer support to enable unlimited view.

- If a user adds more than 200 leads to Salesforce at one time, any lead assignment rules your organization uses won't run. To make sure your lead assignment rules run, instruct your users to limit their additions to fewer than 200 leads at any time.
- If your organization uses validation rules on fields that are mapped to Data.com, either deactivate the rules or make sure they match Data.com field names to avoid errors when you add records.

Understanding Data.com User Types, Licenses, and Limits

Data.com available in: **Contact Manager**, **Developer**, **Enterprise**, **Group**, **Professional**, and **Unlimited** Editions
Data.com Clean available in: **Developer**, **Enterprise**, **Professional**, and **Unlimited** Editions

The Data.com Licenses & Limits page identifies the type and number of user licenses you have, and the limits per user and for your organization. Limits are listed by user type: Data.com User and Data.com List User. Assign monthly record additions for each user on his or her User Edit page.

The Licenses & Limits page also provides information about your organization's Clean implementation.

Data.com Licenses

Data.com user licenses let users search Data.com for accounts and contacts, and add them as records to Salesforce. Users can also add contacts as leads.

If your organization has purchased Data.com Corporate, you'll see "Corporate" in the heading for this section of the page. Data.com Corporate includes several Dun & Bradstreet (D&B) fields on the Account object, including `D-U-N-S Number`, `NAICS Code`, `NAICS Description`, and more.

If your organization has purchased Data.com Premium, you'll see "Premium" in the section heading. Data.com Premium users have access to all the fields available in Data.com Corporate, plus over 70 additional D&B fields on D&B Company records. (D&B Company records are linked to accounts that are added to Salesforce from Data.com.)

Field	Definition
`Number of Licenses`	The total number of Data.com, Data.com Corporate, or Data.com Premium user licenses your organization has purchased from Salesforce.
`Assigned`	The number of Data.com user licenses you've assigned. A single Data.com license is assigned every time you enable a user for Data.com. **Tip:** To see which users have been enabled, check the All Data.com Users page. Click *Your Name* > **Setup** > **Data.com Administration** > **Users**.

Data.com User Limits (Monthly)

Data.com Users get a limited number of records to add or export per month, and their unused additions expire at the end of each month. For each Data.com User, you can see the monthly limit and number of records added to Salesforce or exported during the month.

Field	Definition
`Default Per-User Record Limit`	The number of records a single Data.com user license allows. The default number of records per license is 300, but it can be adjusted based on your agreement. Additions expire at the end of each month, as determined by your organization's default time zone.
`Organization Limit`	The total number of records *your organization* can add each month. This limit is calculated by multiplying the number of Data.com user licenses you have by the monthly limit per user license. Typically, you distribute record limits among a number of users within your organization, but you can also assign them all to a single user.
`(month) Balance`	The number of records Data.com users can still add or export during the current month. The balance is updated every time a user adds records to Salesforce. Additions expire at the end of each month, as determined by your organization's default time zone. **Tip:** To see how many records each user has added, check the All Data.com Users page. Click *Your Name* > **Setup** > **Data.com Administration** > **Users**.

Here's an example of how an organization manages Data.com User licenses and limits. The sales division of Universal Telco has 14 sales reps, and they purchase 20 Data.com licenses, each of which has a record addition limit of 300. This means that Data.com Users within the organization can add as many as 6,000 records per month. The Universal Telco administrator distributes the Data.com Users' monthly record addition limits as follows.

- Ten of the sales reps have limits of 300 each.
- Two of the sales reps have limits of 500 each.
- Two of the sales reps have a limit of 1,000 each.

Data.com List User Limits

Data.com List users share account, contact, and lead record additions from a pool. You can see the organization's limit, and the number of records each Data.com List User has added to Salesforce or exported.

Field	Definition
Pool Record Limit	The total number of records your organization's Data.com List Users can add. All Data.com List users work from this limit, so if one Data.com List user reaches the limit, other users of that type will not be able to add records.
Balance	The number of records Data.com List users can still add. The balance is updated every time a user adds records to Salesforce. **Tip:** To see how many records each user has added, check the All Data.com Data.com Users page. Click *Your Name* > **Setup** > **Data.com Administration** > **Users**.

Here's an example of how an organization manages Data.com List User licenses and limits. The marketing division of Universal Telco has four marketing reps. Each rep has a Data.com license and each is a Data.com List user. Universal Telco purchases a record addition pool of 5,000 records. This means that together, all four marketing reps can add 5,000 records. One rep might add 2500 records, leaving 2500 to be added by one or more of the other three users.

Data.com Clean

The Data.com Licenses & Limits page also provides information about your organization's Clean capabilities and implementation.

If your organization uses Data.com Corporate or Data.com Premium, users with those licenses can manually clean the account, contact, and lead records they have access to.

If your organization has purchased a Data.com Clean product, you can also run automated jobs to clean records, and all Salesforce users (not just those with Data.com Corporate or Data.com Premium licenses) can manually clean records.

Field	Definition
Available To	Which of your Salesforce users can manually clean records. If you've purchased Data.com Clean, all Salesforce users can clean records. If you've purchased only Data.com Corporate or Data.com Premium, only users with licenses can clean records.
Automation	The availability of automated clean jobs for your organization. If you've purchased Data.com Clean but haven't yet scheduled clean jobs, click the **Schedule Clean Jobs** link. If you haven't purchased Data.com Clean, click the **Learn More...** link to get product details.

Installing the Data.com Reports AppExchange Package

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

User Permissions Needed	
To install packages:	"Download AppExchange Packages"

The Data.com Reports AppExchange package offers:

- Several preconfigured Data.com reports and a corresponding set of analytics and impact dashboards. Use these tools to monitor the impact of Data.com data on your leads, forecast, and revenue.
- A custom field you can add to your account, contact, and lead page layouts to identify the records you don't want auto-updated by Data.com Clean jobs; and a validation rule that identifies attempted auto-updates on fields within those records. The validation rule tells the clean job to skip those records.

> **Important:** Starting July 1, 2012, this package will not be compatible with the Jigsaw for Salesforce AppExchange package.

1. Go to the Data.com Reports AppExchange page to download the product.
2. To install Data.com Reports, follow the instructions in Installing a Package.
3. Let your users know that the Data.com reports and dashboards are available.

Configuring Data.com Corporate

Data.com available in: **Contact Manager**, **Developer**, **Enterprise**, **Group**, **Professional**, and **Unlimited** Editions
Data.com Clean available in: **Developer**, **Enterprise**, **Professional**, and **Unlimited** Editions

User Permissions Needed	
To implement Data.com Corporate:	"Customize Application"

Data.com Corporate provides *additional* Dun & Bradstreet account and lead data beyond the basics, including `D-U-N-S Number`, `NAICS Code`, `Tradestyle`, and more. Here's how to implement this product.

> **Note:** To find out which Data.com product your organization has, just click **Your Name** > **Setup** > **Data.com Administration** > **Licenses & Limits**. On the Licenses & Limits page, check the Data.com Licenses section. You'll see either "Corporate" or "Premium".

1. Make sure you've implemented Data.com.
2. Enable Data.com Clean so your users can manually clean account, contact, and lead records.
3. Configure your account, contact, and lead page layouts with the buttons and fields you need.
4. Update your field-level security so users see fields provided by D&B.

Implementation Tips

If your organization uses Data.com Corporate or Data.com Premium, and you create validation rules for the fields that those products provide, those rules will still attempt to run even if you stop using the product, so disable any validation rules using those fields in that case. Data.com Corporate and Premium fields are identified in the help topics "Account Fields" and "Lead Fields".

Setting Field Permissions in Permission Sets and Profiles

Available in: **Enterprise**, **Unlimited**, **Developer**, and **Database.com** Editions

User Permissions Needed	
To set field-level security:	"Customize Application"

Field permissions specify the access level for each field in an object.

1. Click *Your Name* > **Setup** > **Manage Users**, then click **Permission Sets** or **Profiles**.
2. Select a permission set or profile.
3. Depending on which interface you're using, do one of the following:

   - Permission sets or enhanced profile user interface—In the **Find Settings...** box, enter the name of the object you want and select it from the list. Click **Edit**, then scroll to the Field Permissions section.
   - Original profile user interface—In the Field-Level Security section, click **View** next to the object you want to modify, and then click **Edit**.

4. Specify the field's access level.
5. Click **Save**.

Configuring Data.com Premium

Data.com available in: **Contact Manager**, **Developer**, **Enterprise**, **Group**, **Professional**, and **Unlimited** Editions	
Data.com Clean available in: **Developer**, **Enterprise**, **Professional**, and **Unlimited** Editions	

User Permissions Needed	
To implement Data.com Premium:	"Customize Application"

Data.com Premium is an upgrade to Data.com Corporate. With Premium, you get all the features and fields available in Corporate, plus over 70 additional D&B fields for accounts you add to Salesforce from Data.com.

Data.com Premium includes the D&B Companies tab, which lists D&B Company records for all accounts you've added from Data.com. Each record displays the additional fields that Premium provides. Like Data.com Corporate users, Premium users can also view a limited number of D&B fields on account records. Here's how to implement this product.

> **Note:** To find out which Data.com product your organization has, just click **Your Name** > **Setup** > **Data.com Administration** > **Licenses & Limits**. On the Licenses & Limits page, check the Data.com Licenses section. You'll see either "Corporate" or "Premium".

1. Make sure you've implemented Data.com.
2. Enable Data.com Clean so your users can manually clean account, contact, and lead records.
3. Configure your account, contact, and lead page layouts with the buttons and fields you need.
4. Update your field-level security so users see fields provided by D&B.
5. Add the D&B Companies tab to user profiles.
6. (Optional) We've created a default layout for D&B Company records, but you may want to use the Enhanced Page Layout Editor to customize the page layout.

Implementation Tips

If your organization uses Data.com Corporate or Data.com Premium, and you create validation rules for the fields that those products provide, those rules will still attempt to run even if you stop using the product, so disable any validation rules using those fields in that case. Data.com Corporate and Premium fields are identified in the help topics "Account Fields" and "Lead Fields".

Viewing and Editing Tab Settings in Permission Sets and Profiles

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

User Permissions Needed	
To view tab settings:	"View Setup and Configuration"
To edit tab settings:	"Manage Users"

Tab settings specify whether a tab appears in the All Tabs page or is visible in a tab set.

1. Click **Your Name** > **Setup** > **Manage Users**, then click **Permission Sets** or **Profiles**.
2. Select a permission set or profile.
3. Do one of the following:

   - Permission sets or enhanced profile user interface—In the **Find Settings...** box, enter the name of the tab you want and select it from the list, then click **Edit**.
   - Original profile user interface—Click **Edit**, then scroll to the Tab Settings section.

4. Specify the tab settings.
5. (Original profile user interface only) To reset users' tab customizations to the tab visibility settings that you specify, select **Overwrite users' personal tab customizations**.

6. Click **Save**.

> **Note:** If Salesforce CRM Content is enabled for your organization but the **Salesforce CRM Content User** checkbox isn't enabled on the user detail page, the Salesforce CRM Content app has no tabs.

Customizing Page Layouts

Available in: **All** Editions

User Permissions Needed	
To customize page layouts:	"Customize Application"
To view page layouts (enhanced page layout editor only):	"View Setup"

Salesforce has two drag-and-drop tools for editing page layouts: the original page layout editor and a new enhanced page layout editor. The enhanced page layout editor is enabled by default, and provides all of the functionality of the original editor, as well as additional functionality and an easier-to-use WYSIWYG interface.

If you want to use the original page layout editor, you can enable it for your organization in the User Interface settings. Your organization can use only one of the page layout editors at a time.

Accessing the Enhanced Page Layout Editor

To access page layouts for standard objects:

1. Select *Your Name* > **Setup** > **Customize**.
2. Choose the object.
3. Complete one of the following:

- In Enterprise, Unlimited, and Developer Edition organizations, choose the **Page Layouts** link, and click **Edit** next to the page layout you want to customize.

  > **Note:** If you have the "View Setup" permission only, the **Edit** button is not available. Instead, click the name of the page layout to view it.

- In all other editions, choose the **Page Layout** link.

To access page layouts for custom objects:

1. Select *Your Name* > **Setup** > **Create** > **Objects**.
2. Choose the object.
3. Scroll to the Page Layouts section.
4. Click **Edit** next to the page layout you want to customize.

  > **Note:** If you have the "View Setup" permission only, the **Edit** button is not available. Instead, click the name of the page layout to view it.

Alternatively, when you're on a detail page, click the **Edit Layout** link in the upper-right corner to customize the page layout. Salesforce displays the **Edit Layout** link only to users with the "Customize Application" permission.

For more information on the enhanced page layout editor, see "Customizing Page Layouts with the Enhanced Page Layout Editor" in the online help.

Accessing the Original Page Layout Editor

To access page layouts for standard objects:

1. Select *Your Name* > **Setup** > **Customize**.
2. Choose the object.
3. Complete one of the following:

    *   In Enterprise, Unlimited, and Developer Edition organizations, click **Edit** next to the page layout you want to customize.
    *   In all other editions, choose the **Page Layout** link, then click **Edit** at the top of the page layout.

To access page layouts for custom objects:

1. Select *Your Name* > **Setup** > **Create** > **Objects**.
2. Choose the object.
3. Scroll to the Page Layouts section.
4. Complete one of the following:

    *   In Enterprise, Unlimited, and Developer Edition organizations, click **Edit** next to the page layout you want to customize.
    *   In all other editions, choose the **Page Layout** link, then click **Edit** at the top of the page layout.

For more information on the original page layout editor, see "Customizing Page Layouts with the Original Page Layout Editor" in the online help.

Enabling Data.com Clean for Data.com Corporate or Premium

Data.com available in: **Contact Manager**, **Developer**, **Enterprise**, **Group**, **Professional**, and **Unlimited** Editions
Data.com Clean available in: **Developer**, **Enterprise**, **Professional**, and **Unlimited** Editions

User Permissions Needed	
To enable Data.com Clean:	"Customize Application"

The Data.com Corporate and Premium products provide the ability to *manually* clean Salesforce account, contact, and lead records—whether they were added from Data.com or not. If you use Corporate or Premium, you need to enable Data.com Clean so your users can clean their records.

Note:

*   If you have purchased the Data.com Clean product, you can clean account, contact, and lead records manually *and with automated jobs*. For complete details, see Implementing Data.com Clean.
*   Enabling Clean *does not* clean your records immediately, and you can click **Disable** to turn the feature off.

1. Click **Your Name** > **Setup** > **Data.com Administration** > **Clean** > **Settings**
2. Click **Enable Clean**.

Data.com Administration Enhancements

New Data.com Setup Tree

The Data.com Setup tree now includes a section for Data.com Clean. There, you'll find links to Data.com Clean administration pages. Just click **Your Name** > **Setup** > **Data.com Administration** > **Clean**. All organizations that use Data.com Corporate or Premium see links to Settings and Metrics & Analytics pages. Organizations that purchase Data.com Clean get links to those pages plus Preferences and Jobs pages.

Increased Data Security

In an effort to protect our data, some data is unavailable past page 10 of the search results. Specifically, users can't view contact cards and account cards, and the contact name and email is obscured. To increase the page limit to more than 10 or to enable unlimited view, contact Customer Support.

Expanded Documentation

There are a number of additions to the online help, including information about using the new industry selector, details about the new D&B Companies object and its array of fields, and an expanded FAQ section.

Data.com Feature Enhancements

Standard Industry Classification Systems

When searching for accounts and contacts by industry, you can now choose from three industry classification systems: NAICS, SIC, and Data.com. You'll find those options within the Industry Selector. The first selection you make becomes the default, but you can change your selection at any time.

Industry Selector

When you search for accounts or contacts, use the new Industry Selector to navigate easily through extensive industry lists and add industry and subindustry criteria to your search query.

Account Site Field More Prominent on the Account Card

The `Account Site` field, which identifies a company as a headquarters, a branch, or a single location, has been moved to the main section of the account card, making it easier to identify which records you want to add to Salesforce.

Search Based on Account Name *and* Tradestyle Fields

Account searches are now run against the `Tradestyle` field, as well as the `Account Name` field, to increase the effectiveness of the search. For example, if you are looking for United Parcel Service you can search on its tradestyle, `UPS`, and still see `United Parcel Services, Inc.`, in your search results.

New Standard Report: D&B Company With and Without Accounts

A new standard report, D&B Company With and Without Accounts, is available in the Accounts & Contacts report folder. Use it to help analyze your D&B Company records. Include the associated account records in the report and then group the

records by `D-U-N-S Number` to find duplicates in your system. Run the report without the associated accounts and then group the records by `Global Ultimate D-U-N-S Number` and `Domestic Ultimate D-U-N-S Number` to gain insight about the hierarchy of the companies. For more information about reports, look up "Reports Overview" in the online help.

D&B Fields Available with Custom Reports

The new D&B Companies object has over 70 new D&B fields. All D&B fields are available for creating custom reports in Data.com Premium.

New Reports in Data.com Reports AppExchange Package

There are several additional reports available from the Data.com Reports AppExchange Package.

Additional Fields Available in List Views

When creating list views for Account records, you can now add the `D&B Company` and `Data.com Key` fields to your view and filter criteria. When creating list views for Contact and Lead records, you can now add the `Data.com Key` field to your view and filter criteria.

New Industry Mapping

Data.com now uses the primary SIC, NAICS, and Data.com Industry Category codes to determine the `Industry` field value on account records. This simplified approach allows for more accurate and relevant search results no matter which industry classification system you use in your search query.

For example, if you use the SIC system for your search criteria and select the `Computer Peripheral Equipment` industry value, which maps to Electronics, your results will include all accounts with a value of `Electronics` in the `Industry` field. If you use the Data.com Industry Categories classification system for your search criteria and select the `Computers and Electronic` industry, which also maps to Electronics, your results will again include all accounts with a value of `Electronics` in the `Industry` field.

This new mapping system also means that a number of accounts will be assigned a new, more accurate value in the `Industry` field. If your organization uses Data.com Clean, records you have in Salesforce that have been given a new industry value will have a Data.com Clean status of `Different`. You can use Data.com Clean to update these records with the new industry values.

> **Note:** The subindustries under `Goverment` in the Data.com Industry Categories classification system are currently unavailable due to mapping limitations between the Data.com Industry Categories and the SIC system.

Understanding the Data.com Industry Selector

Data.com available in: **Contact Manager**, **Developer**, **Enterprise**, **Group**, **Professional**, and **Unlimited** Editions

Data.com Clean available in: **Developer**, **Enterprise**, **Professional**, and **Unlimited** Editions

When searching for accounts and contacts in Data.com, use the industry selector to add industries and subindustries to your search criteria. Here's how it works.
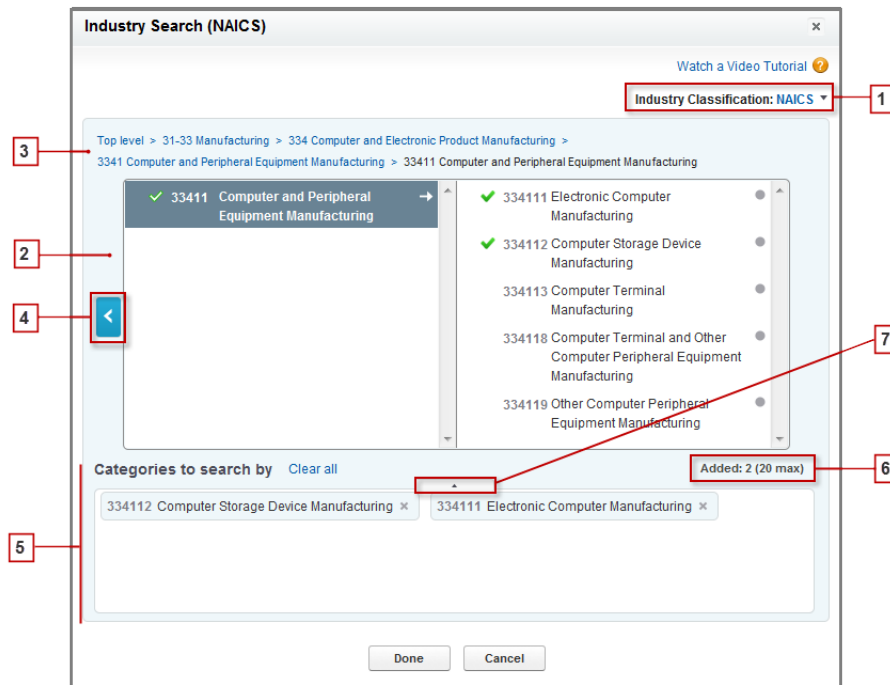
1. Select the industry classification system your organization uses.

    - NAICS (North American Industry Classification System): Used by business and government to classify North American business establishments according to the type of economic activity. This system includes 20 industry sectors, each with multiple levels of subindustries Industries and subindustries are identified by numeric code, up to six digits.
    - SIC (Standard Industry Classification): Used by the United States government to classify business establishments according to the type of economic activity. This system includes 10 industry sectors, each with multiple levels of subindustries Industries and subindustries are identified by numeric code, up to four digits.
    - Data.com Industry Categories: The Data.com system of classifying business establishments by industry and subindustry.

    You can select a different industry classification system at any time, but doing so will clear your selections.

2. Use the selection panels to explore industries and their subindustries and add them to your search. If an industry has a numeric classification code, you'll see it here. When you hover over an industry name, you'll get two options.

    - Click the industry name to view its subindustries, if any, in the right panel. If an industry has any available subindustries, you'll see an arrow 	➡ to the right of the industry name.

    - Click **Add** to add the industry (including all its subindustries) to the **Categories to search by** (Categories) box.

    When you click an industry name in the right panel, it moves to the left panel and its subindustries appear in the right panel. You can continue moving through the industry levels in this manner, adding any industries and subindustries you want to search on as you go. A circle ⬤ to the right of a subindustry name means you have reached the final level of subindustries. When you add an industry to your search criteria, it appears in the Categories box and all of its subindustries are automatically included. You'll also see a solid green checkmark ✔ next to its name. Only the industry, however, appears in the Categories box.

To remove industries from the Categories box, hover over the industry name and click the ❌ . If you remove any subindustries from the selection panel, the industry is removed from the Categories box, and its remaining subindustries appear instead. (This partial selection is denoted by an outlined green checkmark ✔ next to the industry name.) Keep in mind that if you select some but not all subindustries within an industry, the number of selections in the Categories box increases.

3. Use the navigation links at the top of the page to keep track of where you are within the industry levels. Click any link to return to that industry level in the selection panels.
4. Click the **Back** arrow to move up one industry level.
5. All industries and subindustries that you add to your search appear in the **Categories to search by** box. You can remove individual selections by clicking the ❌ next to the industry or subindustry name. Clicking **Clear all** removes *all* your selections.
6. There's a limit on how many industries and subindustries you can add to one search. If you exceed the limit, you'll need to remove selections in order to continue your search.
7. If the **Categories to search by** box includes a long list of industries, you may need to click the arrow to expand the box to view them all.

Here's an example of how the industry selector works. John is looking for companies that manufacture computers. He decides to use the North American Industry Classification System (NAICS) and begins by clicking the **Manufacturing** industry to reveal its subindustries, which include **Food Manufacturing**, **Machinery Manufacturing**, and lots more. He finds **Computer and Electronic Product Manufacturing**, and clicks it, moving it to the left panel to reveal its subindustries in the right panel. He continues to navigate deeper in to the industry levels in this manner, clicking through subindustries until he ultimately finds what he's looking for: **Computer and Peripheral Equipment Manufacturing**. John clicks **Add** to add two subindustries, **Electronic Computer Manufacturing** and **Computer Storage Device Manufacturing**, to the **Categories to search by** box. Those selections remain in the Categories box even if he navigates to other levels in the selection panel and adds other industries. When he is finished adding industries to the Categories box, he does a last review of his selections, then happily clicks `Done` to return to the Data.com tab to complete his search.

Introducing D&B Companies — GA in Summer '12

Dun & Bradstreet (D&B) is the world's leading source of commercial information and insight on businesses, enabling companies to Decide with Confidence® for over 170 years. D&B's global database contains the world's largest source of business records, and is backed by D&B's proprietary DUNSRight® quality assurance process, ensuring you that company information is complete and accurate.

As part of Salesforce's Data.com solution, D&B gives users integrated access to its trusted global database of millions of companies and corporate family hierarchies, and over 70 fields of company information, such as D-U-N-S Number and NAICS industry codes, directly in Salesforce.

D&B Companies is available to organizations that purchase Data.com Premium. Here's how it works.

When you add an account from Data.com, a corresponding D&B Company record is automatically created and linked to that account via the account's `D&B Company` field. Just click the link to open the D&B Company record, and view the rich set of D&B data, including a `Company Description` field, plus sections like Primary Data and Firmographic Data. The Accounts related list on the page links back to the account record.

For example, if you add an account record for Starbucks, when you open its record, the `D&B Company` field value is `Starbucks Corporation`. The value is underlined to identify it as a link. Just click the link to open the Starbucks Corporation D&B Company record.

Implementation Tips

- Make sure you add the D&B Companies tab to user profiles.
- The D&B fields that also exist on the account object (such as `D-U-N-S Number`, `SIC Code`, and `NAICS Code`) are *managed* fields, and they are updated by both manual and automated clean processes.
- Because the D&B Company object is read-only, you can't create task and field update workflow rules for it. Rules that are triggered by D&B field changes that act on other objects are permitted, however. For example, you can create a workflow rule that updates a custom field on an account record when a D&B Company record is created.
- You can enable users to view and delete D&B Company records by assigning appropriate permissions to profiles. Standard profiles automatically have the `Read D&B Company records` permission, but need to be assigned `Delete D&B Company records` permission. Custom profiles need to be assigned both permissions.

  Note: If you're setting up D&B Companies within the first 24 hours of the Summer '12 release, you'll have to enable standard profiles with `Read D&B Company records` permission. After that, standard profiles will automatically have `Read D&B Company records` permission.

Best Practices

- When you add an account from Data.com, a corresponding D&B Company record is automatically created and linked to that account via the account's `D&B Company` field. If you delete an account you might also want to delete the D&B Company record.
- Because the `D&B Company` field is editable on account records, more than one account might end up associated to a single D&B Company record. We recommend that you *do not* delete D&B Company records that are associated to more than one account record.

- You can run the new D&B Company With and Without Accounts report to help analyze your D&B Company records. Include the associated account records in the report and then group the records by `D-U-N-S Number` to find duplicates in your system. Run the report without the associated accounts and then group the records by `Global Ultimate D-U-N-S Number` and `Domestic Ultimate D-U-N-S Number` to gain insight about the hierarchy of the companies.
- All D&B fields are available in Report Builder.

D&B Company Fields

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

Organizations that have purchased Data.com Premium have access to our complete set of Dun & Bradstreet (D&B) data—over 70 fields. When an account record is added to Salesforce, a D&B Company record is automatically created and linked to that account via the account's `D&B Company` field. This topic defines the fields you'll see on D&B Company records.

Field	Description
Annual Sales Volume	The total annual sales revenue in local currency. D&B tracks revenue data for publicly traded companies, Global Ultimates, Domestic Ultimates, and some headquarters. D&B does not supply this data for branch locations.
Annual Sales Volume Indicator	The reliability of the Annual Sales Volume figure. Available values are `Actual number`, `Low`, `Estimated (for all records)`, `Modeled (for non-US records)`. A blank value indicates this data is unavailable.
Company Description	A brief description of the company, which may include information about its history, its products and services, and its influence on a particular industry. This field is `Description` on the Account record.
Delinquency Risk	The probability that a company will pay with a significant delay compared to the agreed terms. The risk level is based on the standard Commercial Credit Score, and ranges from low risk to high risk. Also known as marketing prescreen. Available values are `High risk of delinquency`, `Low risk of delinquency`, and `Moderate risk of delinquency`. D&B supplies this data for US organizations only.
Domestic Ultimate Business Name	The primary name of the Domestic Ultimate, which is the highest ranking subsidiary, specified by country, within an organization's global family tree.
Domestic Ultimate D-U-N-S Number	The D-U-N-S Number for the Domestic Ultimate, which is the highest ranking subsidiary, specified by country, within an organization's global family tree.
D-U-N-S Number	The Data Universal Numbering System (D-U-N-S) number is a unique, nine-digit number assigned to every business location in the D&B database that has a unique, separate, and

Field	Description
	distinct operation. D-U-N-S numbers are used by industries and organizations around the world as a global standard for business identification and tracking.
Facsimile Number	The company's facsimile number.
Fifth NAICS Code	An additional NAICS code used to further classify an organization by industry. See Primary NAICS Code.
Fifth NAICS Description	A brief description of an organization's line of business, based on the corresponding NAICS code. See Primary NAICS Description.
Fifth SIC Code	An additional SIC code used to further classify an organization by industry. See Primary SIC Code.
Fifth SIC Description	A brief description of an organization's line of business, based on the corresponding SIC code. See Primary SIC Description.
Fifth Tradestyle	An additional tradestyle used by the organization. See Primary Tradestyle.
FIPS MSA Code	The Federal Information Processing Standards (FIPS) and the Metropolitan Statistical Area (MSA) codes identify the organization's location. The MSA codes were defined and developed by the National Institute of Standards and Technology (NIST), an organization within the US Federal Department of Commerce. D&B supplies this data for US organizations only.
FIPS MSA Code Description	A brief description of an organization's FIPS MSA code. D&B supplies this data for US organizations only.
Fourth NAICS Code	An additional NAICS code used to further classify an organization by industry. See Primary NAICS Code.
Fourth NAICS Description	A brief description of an organization's line of business, based on the corresponding NAICS code. See Primary NAICS Description.
Fourth SIC Code	An additional SIC code used to further classify an organization by industry. See Primary SIC Code.
Fourth SIC Description	A brief description of an organization's line of business, based on the corresponding SIC code. See Primary SIC Description.
Fourth Tradestyle	An additional tradestyle used by the organization. See Primary Tradestyle.
Geocode Accuracy	The level of accuracy of a location's geographical coordinates compared with its physical address. Available values include Rooftop level, Street level, Block level, Census tract level, and Mailing address level.
Global Ultimate Business Name	The primary name of the Global Ultimate, which is the highest entity within an organization's global family tree and may oversee branches and subsidiaries.

Field	Description
Global Ultimate D-U-N-S Number	The D-U-N-S Number of the Global Ultimate, which is the highest entity within an organization's global family tree and may oversee branches and subsidiaries.
Import/Export	Identifies whether a business imports goods or services, exports goods or services, and/or is an agent for goods.
International Dialing Code	The required code for international calls.
Latitude	The geographical coordinates that specify the north-south position of a point on the Earth's surface. Used with longitude to specify a precise location, which is then used to assess the Geocode Accuracy.
Legal Structure	Identifies the legal structure of an organization. Available values include Cooperative, Nonprofit organization, Local government body, Partnership of unknown type, and Foreign company.
Local Currency Code	The currency in which the company's sales volume is expressed. The full list of values can be found at the Optimizer Resources page maintained by D&B.
Local Currency ISO Code	The code used to represent a company's local currency. This data is provided by the International Organization for Standardization (ISO) and is based on their three-letter currency codes. For example, USD is the ISO code for United States Dollar.
Location Ownership Indicator	Indicates whether a company owns or rents the building it occupies.
Location Type	Identifies the organizational status of a company. Available values are Single location, Headquarters/Parent, and Branch. This field is Account Site on the Account record.
Longitude	The geographical coordinates that specify the east-west position of a point on the Earth's surface. Used with latitude to specify a precise location, which is then used to assess the company's Geocode Accuracy.
Mailing Address	The address where a company has its mail delivered.
Marketing Segmentation Cluster	Twenty-two distinct, mutually exclusive profiles, created as a result of cluster analysis of D&B data for US organizations. Available values include High-Tension Branches of Insurance/Utility Industries, Rapid-Growth Large Businesses, Labor-Intensive Giants, Spartans, Main Street USA. D&B supplies this data for US organizations only.
Minority-Owned Indicator	Indicates whether an organization is owned or controlled by a member of a minority group. D&B supplies this data for US organizations only.

Field	Description
National Identification Number	The identification number used in some countries for business registration and tax collection. This field does not apply to US organizations.
National Identification System	Identifies the type of national identification number used. The full list of values can be found at the Optimizer Resources page maintained by D&B.
Number of Business Family Members	The total number of family members, worldwide, within an organization, including the Global Ultimate, its subsidiaries (if any), and its branches (if any).
Number of Employees—Global	The total number of employees at the Global Ultimate, which is the highest entity within an organization's global family tree and may oversee branches and subsidiaries.
Number of Employees—Global Indicator	The reliability of the Number of Employees–Global figure. Available values are Actual number, Low, Estimated (for all records), Modeled (for non-US records). A blank value indicates this data is unavailable.
Number of Employees—Location	The number of employees at a specified location, such as a branch location.
Number of Employees—Location Indicator	The reliability of the Number of Employees—Location figure. Available values are Actual number, Low, Estimated (for all records), Modeled (for non-US records). A blank value indicates this data is unavailable.
Number of Employees—Total	The total number of employees in the company, including all subsidiary and branch locations. This data is only available on records that have a value of Headquarter/Parent in the Location Type field.
Out of Business Indicator	Indicates whether the company at the specified address has discontinued operations.
Ownership Type Indicator	Indicates whether ownership of the company is public or private. The subsidiaries of a publicly traded parent company will show a value of Private unless the subsidiaries are independently traded. This field is Ownership on the Account record.
Parent Company Business Name	The primary name of the parent or headquarters company.
Parent Company D-U-N-S Number	The D-U-N-S Number for the parent or headquarters.
Primary Address	The address where a company is physically located.
Primary Business Name	The primary or registered name of a company.
Primary NAICS Code	The six-digit North American Industry Classification System (NAICS) code is the standard used by business and government to classify business establishments according to their economic activity for the purpose of collecting, analyzing, and publishing statistical data related to the US business economy. The full list of values can be found at the Optimizer

Field	Description
	Resources page maintained by D&B. This field is `NAICS Code` on the Account record.
Primary NAICS Description	A brief description of an organization's line of business, based on its NAICS code. This field is `NAICS Description` on the Account record.
Primary SIC Code	The four-digit Standard Industrial Classification (SIC) code is used to categorize business establishments by industry. The full list of values can be found at the Optimizer Resources page maintained by D&B. This field is `SIC Code` on the Account record.
Primary SIC Description	A brief description of an organization's line of business, based on its SIC code. This field is `SIC Description` on the Account record.
Primary Tradestyle	A name, different from its legal name, that an organization may use for conducting business. Similar to "Doing business as" or "DBA". This field is `Tradestyle` on the Account record.
Second NAICS Code	An additional NAICS code used to further classify an organization by industry. See Primary NAICS Code.
Second NAICS Description	A brief description of an organization's line of business, based on the corresponding NAICS code. See Primary NAICS Description.
Second SIC Code	An additional SIC code used to further classify an organization by industry. See Primary SIC Code.
Second SIC Description	A brief description of an organization's line of business, based on the corresponding SIC code. See Primary SIC Description.
Second Tradestyle	An additional tradestyle used by the organization. See Primary Tradestyle.
Sixth NAICS Code	An additional NAICS code used to further classify an organization by industry. See Primary NAICS Code.
Sixth NAICS Description	A brief description of an organization's line of business, based on the corresponding NAICS code. See Primary NAICS Description.
Sixth SIC Code	An additional SIC code used to further classify an organization by industry. See Primary SIC Code.
Sixth SIC Description	A brief description of an organization's line of business, based on the corresponding SIC code. See Primary SIC Description.
Small Business Indicator	Indicates whether the company is designated a small business as defined by the Small Business Administration of the US government. D&B supplies this data for US organizations only.
Stock Exchange	The corresponding exchange for a company's ticker symbol. For example: NASDAQ or NYSE.

Field	Description
Subsidiary Indicator	Indicates whether a company is more than 50 percent owned by another organization.
Telephone Number	A company's primary telephone number.
Third NAICS Code	An additional NAICS code used to further classify an organization by industry. See Primary NAICS Code.
Third NAICS Description	A brief description of an organization's line of business, based on the corresponding NAICS code. See Primary NAICS Description.
Third SIC Code	An additional SIC code used to further classify an organization by industry. See Primary SIC Code.
Third SIC Description	A brief description of an organization's line of business, based on the corresponding SIC code. See Primary SIC Description.
Third Tradestyle	An additional tradestyle used by the organization. See Primary Tradestyle.
Ticker Symbol	The abbreviation used to identify publicly traded shares of a particular stock. Also known as the stock symbol.
URL	An organization's primary website address.
US Tax ID Number	The identification number for the company used by the Internal Revenue Service (IRS) in the administration of tax laws. Also referred to as Federal Taxpayer Identification Number. D&B supplies this data for US organizations only.
Woman-Owned Indicator	Indicates whether a company is more than 50 percent owned or controlled by a woman. D&B supplies this data for US organizations only.
Year Started	The year the company was established or the year when current ownership or management assumed control of the company. D&B does not supply this data for branch locations.

Working With D&B Company Records

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

User Permissions Needed	
To enable deletion of D&B Company records:	"Customize Application"

When you add an account from Data.com, a corresponding D&B Company record is automatically created and linked to that account via the account's `D&B Company` field. If you delete an account you might also want to delete the D&B Company record.

! **Important:** Because the `D&B Company` field is editable on account records, more than one account might end up associated to a single D&B Company record. We recommend that you *do not* delete D&B Company records that are associated to more than one account record.

System administrators are enabled by default to delete D&B Company records, but if you need to enable other users to delete these records, you must first create a permission set that allows you to.

Creating a Permission Set for Deleting D&B Company Records

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

User Permissions Needed	
To implement D&B Companies:	"Customize Application"
To create permission sets:	"Manage Users"

System administrators are enabled by default to delete D&B Company records, but if you need to enable other users to delete these records, you must first create a permission set that allows them to.

1. Create a new permission set. In the `Label` field, enter a name related to the permission you're granting. For example: `D&B Company Delete`. In the `User License` field, select `Salesforce`. Click **Save**.
2. On the permission set's overview page, click **App Permissions**.
3. On the App Permissions page, click **Edit**, then select `Delete D&B Company records`. Because the `Read D&B Company records` permission is also required before you can delete D&B Company records, that permission's checkbox is selected automatically.
4. Click **Save**.
   A **Delete** button now appears on all D&B Company records.

Deleting D&B Company Records

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

User Permissions Needed	
To delete D&B Company records:	"Read D&B Company records" AND
	"Delete D&B Company records"

When you add an account from Data.com, a corresponding D&B Company record is automatically created and linked to that account via the account's `D&B Company` field. If you delete an account you might also want to delete the D&B Company record.

1. If you need to, create a permission set to allow you to delete D&B Company records.
2. Open the D&B record you want to delete and click **Delete**.

Data.com Clean — GA in Summer '12

Data.com Clean is generally available with the Summer '12 release.

Data.com Clean is an important part of Salesforce's Data.com product suite, offering both manual and automated cleaning for your account, contact, and lead records. You can purchase Clean for use on its own or to supplement the Clean features within Data.com Corporate or Premium. Data.com Clean must be purchased for every Salesforce user you want to use it.

Data.com Clean provides full clean capability for your organization: all Clean users can manually clean Salesforce accounts, contacts, and leads, and you can configure jobs to clean records automatically.

Clean works by comparing your Salesforce account, contact, and lead records with records from Data.com, linking records that match, and providing clean status information on the Salesforce record. You can choose to implement Clean for accounts, contacts, and leads, and specify whether the clean process will flag differences between the two records, or also auto-fill blank Salesforce fields with Data.com values.

Licensed users can easily clean individual records manually, comparing their fields and values side by side with those from the linked Data.com record. Your organization can also set up automated clean jobs to run as often as every day. Metrics and analytics provide detailed information about the value of Data.com Clean to your organization: see how many of your Salesforce records are matched to Data.com records, and how many have been updated by manual and automated clean processes.

Data.com Corporate and Data.com Premium provide access to account data from Dun & Bradstreet (D&B). For those organizations, Data.com Clean also cleans the basic set of D&B fields that are included in Data.com Corporate and Data.com Premium.

Clean Metrics and Analytics

Match and Update Rates   Match and Update Rates Help ?

During processing, Salesforce records are compared with Data.com records. Salesforce records that have been matched can be updated with Data.com data.

Records	Total	Processed	Matched	Updated
Accounts	31	29	14	7
Contacts	6	5	4	0
Leads	1,012	1,012	11	0
	1,049	1,046	29	7

Records	Match Rate (% of Processed)	Update Rate (% of Matched)
Accounts	48%	50%
Contacts	80%	0%
Leads	1%	0%
	3%	24%

ⓘ Best Practices for Improving your Data.com Clean Match Rates

In-depth Reporting

Use Data.com Reports, available from the AppExchange, to analyze the benefit your business gets from Data.com. The package offers dashboards and over 20 reports.

Install Data.com Reports from the AppExchange. Its free.

Install Data.com Reports now!

Implementation Tips

- For a successful Data.com Clean implementation, it's important that you complete all the setup steps. We've made it easy to get the information you need, with a set of help topics that lead you through the process. If you'd rather refer to a printed guide, just download it from the banner you'll find on the Clean Settings page. Or... just keep reading these release notes.

Best Practices

- Understand how matching works.
- Use your sandbox environment to try out the automated clean jobs before running them in your production org with live data:

  After Data.com Clean is provisioned in your production org, refresh your sandbox so it has the same permissions and data. Then follow the steps in Implementing Data.com Clean to set up Clean in your sandbox. If everything runs smoothly in your sandbox environment, follow the same implementation steps in your production org.

- Check your match and update rates on the Clean Metrics & Analytics page. There, you'll find information about the total number of records cleaned, how many have been matched, and how many have been updated. Figures represent records processed manually and automatically, and reflect your rates since your organization implemented Data.com Clean.
- Schedule regular backups of your account, contact, and lead data. It's always a good practice, and if your Salesforce records are ever matched inappropriately, you can revert to previous versions. Backups are most important if you use automated clean jobs that auto-fill blank fields.
- Set up field history tracking for accounts, contacts, and leads. Field history tracking helps you identify changes to field values and tracks who made changes and when.

Implementing Data.com Clean

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

User Permissions Needed	
To implement Data.com Clean:	"Customize Application"
To enable Data.com Clean users:	"Manage Users"
To install AppExchange packages:	"Download AppExchange Packages"

It's easy to implement Data.com Clean. Just perform these tasks.

1. Enable Data.com Clean.
2. Configure your account, contact, and lead page layouts with the buttons and fields you need.
3. Update your field-level security so users see fields provided by D&B.
4. Define your Clean preferences.
5. Schedule your Clean jobs.
6. Install the Data.com Reports package.

Once you've finished implementing Data.com Clean, to get the optimum benefit from the product, you should:

- Regularly review your Data.com Clean record match results to make sure records are matched as expected.
- Regularly monitor your organization's record match and update rates and take steps to improve those rates if necessary.

If you're using Data.com together with Data.com Clean, see Implementing Data.com on page 108.

If you use Data.com Premium and want the option to prevent Data.com Clean jobs from automatically updating select account, contact, or lead records, you can use the validation rule provided by Data.com Reports.

Enabling Data.com Clean

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

User Permissions Needed	
To enable Data.com Clean:	"Customize Application"

Enable Data.com Clean to make sure your CRM records are always up to date. You can use Clean with all your account, contact, and lead records—not just those added from Data.com.

Enabling Clean makes clean features available to your organization and it causes the **Preferences** and **Jobs** links to appear within the **Clean** section of the Setup tree (`Your Name` > **Setup** > **Data.com Administration** > **Clean**).

Note:

Enabling Clean *does not* clean your records immediately, and you can click **Disable** to turn the feature off.

1. Click *Your Name* > **Setup** > **Data.com Administration** > **Clean** > **Settings**
2. Click **Enable Clean**.

Configuring Page Layouts for Data.com and Data.com Clean

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

User Permissions Needed	
To customize page layouts:	"Customize Application""
To view page layouts:	"View Setup"

When you implement Data.com and Data.com Clean, so that users can use the product, you need to add buttons and fields to your Account, Contact, and Lead page layouts. Here's how.

1. Click **Your Name** > **Setup** > **Customize** > **Accounts** > **Page Layouts**.
2. From the list of page layouts, click **Edit** next to the layout(s) your Clean users will use.
3. On the Account Layout page, from the list of page element categories, click **Fields**.
4. Drag the `Clean Status` field into place on the page where you want it to appear.
5. If you use Data.com Corporate or Data.com Premium, add the D&B fields you want users to see. These include `Account Site`, `D-U-N-S Number`, `NAICS Code`, `Tradestyle`, and more. For a complete list of the D&B fields available on account and lead records, see Account Fields and the Lead Fields topics in the Salesforce help.

    Tip: We recommend creating a section for D&B fields and grouping them there. To create a section, from the **Fields** group, just drag the `Section` element into place on the page.

6. If you use the Do Not Auto-Update validation rule provided in the Data.com Reports AppExchange package, add the `Data.com Does Not Auto-Update` field.
7. From the list of page element categories, click **Buttons**. Drag the **Clean** button into place on the page.
8. Click **Save**.
9. Now repeat these steps to configure your Lead page layouts. You'll need the `Clean Status` field and the **Clean** button. The only D&B field available on Lead page layouts is `Company D-U-N-S number`. Add that.
10. If you use the Do Not Auto-Update validation rule provided in the Data.com Reports AppExchange package, add the `Data.com Does Not Auto-Update` field.
11. Finally, add the `Clean Status` field and **Clean** button to your Contact page layouts. (Contacts does not include any D&B fields.)
12. If you use the Do Not Auto-Update validation rule provided in the Data.com Reports AppExchange package, add the `Data.com Does Not Auto-Update` field.

Setting Field-Level Security for Data.com

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

User Permissions Needed	
To set field-level security:	"Customize Application"

If your organization uses Data.com Corporate or Data.com Premium, you can view a number of D&B fields on account records, and those fields are included when users manually clean records. To make sure your users can read and edit the fields and their values, and that they appear on the Account Card, you need to set field-level security (FLS) for:

- `Account Site`
- `Ownership`
- `SIC Code`
- `Ticker Symbol`

There are multiple ways to set field-level security, but since you only need to set FLS for four fields, we recommend starting from the fields and choosing the user profiles for users who use Data.com.

1. Click **Your Name** > **Setup** > **Customize** > **Accounts** > **Fields**.
2. Click the field label to open the detail page for each of these fields: `Account Site`, `Ownership`, `SIC Code` and `Ticker Symbol`.
3. On each field's detail page, click `Set Field-Level Security`. For each profile whose users need to read and edit the fields, select the **Visible** checkbox. For example, if users in the Standard User profile will use Data.com Clean, select the **Visible** checkbox for that profile.

Defining Your Data.com Clean Preferences (Data.com Clean Only)

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

User Permissions Needed	
To define Data.com Clean Preferences:	"Customize Application"

Clean preferences let you specify:

- Which objects' records to clean with automated jobs.
- How you want to clean them.

Jobs can clean account, contact, and lead records by flagging all fields whose values are different from Data.com values so that users can compare the records and accept changes manually. You can also elect to auto-fill blank fields with Data.com data. Your preferences take effect when the next scheduled clean job runs, and users will see the flags, as appropriate, when they open records.

> **Note:** *Converted* leads are excluded from Leads clean jobs.

1. Click **Your Name** > **Setup** > **Data.comAdministration** > **Clean** > **Preferences**.
2. Select the **Enable Clean jobs** checkbox for each object whose records you want to clean. (If you clear the **Enable Clean jobs** checkbox, automated jobs will not run for objects of that type.)
3. For each object you've enabled, select either:

   - `Flag all differences per record` to *only identify* fields whose values are different from Data.com values or
   - `Flag differences and auto-fill blank fields` to identify fields whose values are different and *fill blank fields* with values from Data.com.

Scheduling Data.com Clean Jobs (Data.com Clean Only)

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

User Permissions Needed	
To schedule Data.com Clean jobs and view job history:	"Customize Application"

To keep your records' clean status up to date, schedule automated jobs to compare your records with Data.com. Jobs are queued according to your scheduling settings, and they run independently for accounts, contacts, and leads.

If you schedule jobs for at least one day of the week, jobs will process *all records of enabled objects* once every two weeks, *even if no records have changed*. This is called a *full sync*. In between these full syncs, based on the schedule you select, jobs will process *only records of enabled objects that have* `Not Compared` *clean status* (likely because Salesforce records have changed since the previous job was run). This is called an *incremental sync*.

1. Click **Your Name** > **Setup** > **Data.com Administration** > **Clean** > **Jobs**.
2. Select the days of the week when you want jobs to run.
3. Select your preferred start time.

   > **Note:** Jobs run independently, so their exact start times may vary.

4. Click **Save**.

Installing the Data.com Reports AppExchange Package

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

User Permissions Needed	
To install packages:	"Download AppExchange Packages"

The Data.com Reports AppExchange package offers:

- Several preconfigured Data.com reports and a corresponding set of analytics and impact dashboards. Use these tools to monitor the impact of Data.com data on your leads, forecast, and revenue.
- A custom field you can add to your account, contact, and lead page layouts to identify the records you don't want auto-updated by Data.com Clean jobs; and a validation rule that identifies attempted auto-updates on fields within those records. The validation rule tells the clean job to skip those records.

> **Important:** Starting July 1, 2012, this package will not be compatible with the Jigsaw for Salesforce AppExchange package.

1. Go to the Data.com Reports AppExchange page to download the product.
2. To install Data.com Reports, follow the instructions in Installing a Package.
3. Let your users know that the Data.com reports and dashboards are available.

Preventing Data.com Clean Auto-Updates for Account, Contact, and Lead Records

Data.com available in: **Contact Manager**, **Developer**, **Enterprise**, **Group**, **Professional**, and **Unlimited** Editions

Data.com Clean available in: **Developer**, **Enterprise**, **Professional**, and **Unlimited** Editions

User Permissions Needed	
To implement Data.com:	"Customize Application"
To enable Data.com users:	"Manage Users"
To install AppExchange packages:	"Download AppExchange Packages"

You can prevent individual account, contact, and lead records from having blank fields filled with Data.com data when automated Clean jobs are run. To do so, download and install the Data.com Reports AppExchange package. It provides a custom field you add to your page layouts to identify the records you don't want auto-updated, and a validation rule that identifies attempted auto-updates on fields within those records. The validation rule tells the clean job to skip those records.

> **Important:** If you use the Block Auto-Update validation rule, keep this best practice in mind.
>
> - This validation rule generates entries and related messages in Data.com Clean job logs, but your jobs may generate other entries and errors, as well, so make sure you examine your job logs carefully.

1. Download and install the Data.com Reports AppExchange package.
2. For each object you run Clean jobs on, edit your page layouts to add the Data.com Does Not Auto-Update checkbox, so it's available to users.
3. Open each record that you do not want to be auto-updated, and select the `Do Not Auto-Update` checkbox.
   When automated jobs run, for each record that is not updated, you'll see a message in the job log: "`This record has been excluded from automated field updates from Data.com Clean jobs.`"

Understanding How Salesforce and Data.com Records are Matched

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

If you clean your Salesforce account, contact, and lead data with Data.com Clean, it's important to understand how your Salesforce records are compared and matched with records from Data.com.

Tip: For complete details about how the Data.com matching algorithm works, including a graphic overview and extensive examples, please see our white paper, Data.com Record Matching in Salesforce.

Salesforce and Data.com records can be compared and matched in two ways.

- Manually, when a user clicks **Clean** on an individual account, contact, or lead record.
- Via Clean jobs, which automatically attempt to match all your account, contact, or lead records.

Automated clean jobs are only available to organizations that purchase Data.com Clean. *Manual* clean is available to all licensed Data.com users.

The first time a Salesforce record is cleaned—either manually or via automated job—the matching engine searches Data.com for similar records. It examines the field values in each record and looks for enough identical or similar information to indicate that the two records represent the same entity (that is—the same account, contact, or lead). If Data.com finds a match, the two records are linked by a numeric value in the `Data.com Key` field. The Data.com Key value is rematched every time the Salesforce record is cleaned. If the Salesforce record changes substantially, the next time it is cleaned, the matching engine may look for a better match from other Data.com records.

For contacts and leads, the important fields are:

- `Name`
- `Email`

   Ideally, use a direct email address rather than a group address like info@org.com. (Identical Email values will almost always trigger a match unless other values in the record conflict.) **Note:** Data.com does not store emails that may be personal contact information, such as those from Gmail or Yahoo.

- `Account Name` for contacts; `Company` for leads.
- `Title`
- `Phone`

For accounts, the important fields are:

- `Account Name`

- ◊ Make sure the account name doesn't contain any unrelated artifacts, such as numbers (1002), special characters (!#@#), or unrelated words. (These symbols are acceptable if they are part of the company's name.)
- ◊ Try to avoid country and state names as values unless they are part of the company's name.
- ◊ If the account name contains more than one word, like `DSGI Business (PC World Business)` try both of them.
- ◊ If an account name is also a Website (like `salesforce.com`), try leaving off the subdomain (`.com` and the like).

- `Billing Address`

  - ◊ Use a full address if possible
  - ◊ Make sure the `Country` field value is correct. If you don't know the country, leave the field blank.
  - ◊ Make sure to specify the `State` or `ZIP code` value if you know it.
  - ◊ If you know the account's street name but not its street number, use the street name only. A street name without a street number is better than no value.

- `Website`
- `Phone`

Reviewing Data.com Clean Match Results

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

User Permissions Needed	
To implement Data.com Clean:	"Customize Application"

After you complete your Data.com Clean implementation and your first Clean jobs are complete, you should regularly review your Data.com Clean match results to make sure your records are being matched accurately. Run the Accounts by Clean Status report to get started.

> **Important:** If your records appear to be matched incorrectly with Data.com records, you should consider carefully before selecting `Flag differences and auto-fill blank fields` as a clean preference. If mismatches occur with a large number of your records, contact Salesforce Support.

1. Click the Dashboards tab, then select Data.com Analytics. Run the Accounts by Clean Status report.
   If your clean jobs have run successfully, you'll find your accounts grouped by their clean status values.

   > **Tip:** Check out the topic Understanding Data.com Clean Status for definitions of all the clean status values.

2. On the report, find any Salesforce records with a clean status of `Different`. Open several records and click **Clean** to look at the differences.
3. Repeat the comparison process with records that have a clean status of `Not Found`.

Viewing Your Data.com Clean Record Match Rates

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

User Permissions Needed	
To view Data.com Clean match rates:	"Customize Application"

If you clean account, contact, or lead records—manually with Data.com or automatically with Data.com Clean—it's important that you check your match and update rates on a regular basis.

1. Click *Your Name* > **Setup** > **Data.com Administration** > **Clean** > **Metrics & Analytics**.
2. To find out when the last calculation occurred, check the `Last Calculated` field above the table.

   > **Note:** The data in the tables is calculated daily, but we store the time and calculate the date based on GMT, so depending on time adjustments, the date shown may be different from the date when the calculations occurred.

3. View match and update information in the Match and Update Rates section. This table defines the columns in each of the two tables.

Column	Definition
Records	The object enabled for Data.com Clean: accounts, contacts, or leads.
Total	The number of object records (accounts, contacts, or leads) that your organization has in Salesforce.
Processed	The number of Salesforce records of each type (accounts, contacts, or leads) processed by Data.com Clean.
Matched	The number of processed Salesforce records (accounts, contacts, or leads) that match with Data.com records.
Updated	The number of matched Salesforce records that have been updated either manually or via automated jobs since your organization implemented Data.com Clean.

Column	Definition
Records	The object enabled for Data.com Clean: accounts, contacts, or leads.
Match Rate (% of Processed)	The percentage of processed Salesforce records (accounts, contacts, or leads) that match with Data.com records.
Update Rate (% of Matched)	The percentage of matched Salesforce records that have been updated either manually or via automated jobs since your organization implemented Data.com Clean.

USING DATA.COM CLEAN

Cleaning Records Manually With Data.com Clean

User Permissions Needed	
To clean account records:	"Edit" on accounts
To clean contact records:	"Edit" on contacts
To clean lead records:	"Edit" on leads

Use Data.com Clean to make sure your CRM records are always up to date.

Clean works for *all* the account, contact, and lead records you have access to in Salesforce—not just those you previously added from Data.com.

If your organization uses Data.com Premium and you clean an account record that doesn't yet have a D&B Company record linked to it, Salesforce will create one.

> **Note:** If you clean your account records with the Data.com Corporate or Premium product or Data.com Clean, Data.com converts non-USD currencies to USD every month, which may cause the values in this field to change. For organizations that use non-USD currencies, we ignore the `Annual Revenue` field when determining a record's clean status (so the `Clean Status` field's value does not change). We also remove the value from the `Annual Revenue` field on account records and the clean comparison page.

1. Check the record's `Clean Status` field.
2. If the status is not `In Sync`, click **Clean** to open the comparison page and compare the Salesforce record with Data.com's.

   > **Tip:** From the `Clean Status` field, you can also get additional status information (such as which fields have different data in Data.com) and then clean the record. Just click the status icon (🟠) and the popup will guide you.

3. Compare the two records side by side. You'll see a check mark next to any Data.com field value that matches the corresponding value in your Salesforce record.
4. Select the check box next to any Data.com value you want to accept.
5. Click **Save** when you're satisfied that the record is accurate, even if you don't accept any data from Data.com.
   The `Clean Status` field reflects the record's current status and its time stamp is updated to reflect your activity.

   > **Note:** If you click **Cancel**, your Salesforce record's data won't be updated, but if Data.com finds a better match for the record, the values in its `Clean Status` and `Data.com Key` fields may change. These two fields always reflect the best match from Data.com as of the most recent clean process, whether the record was cleaned manually (by you) or automatically (via Clean jobs).

If your organization uses Data.com Premium and you've cleaned an account record that doesn't yet have a D&B Company record linked to it, Salesforce will create a D&B Company record and link it when you click **Save**. The next time you open the comparison page, the linked record will be identified by its D-U-N-S Number in the `D&B Company Record Linked` field.

Comparing Salesforce and Data.com Data at a Glance

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

When you manually clean a Salesforce account, contact, or lead record, you compare the data in your Salesforce record with data from Data.com. When you click the **Clean** button from a record, the comparison page appears. There you'll see the Salesforce record's fields and values side by side with the Data.com record's fields and values. If your organization uses Data.com Corporate or Data.com Premium, the page includes the Dun and Bradstreet (D&B) fields provided with those products.

Cleaning records is easier if you understand how to read and use the comparison page. Here's what you'll find there.
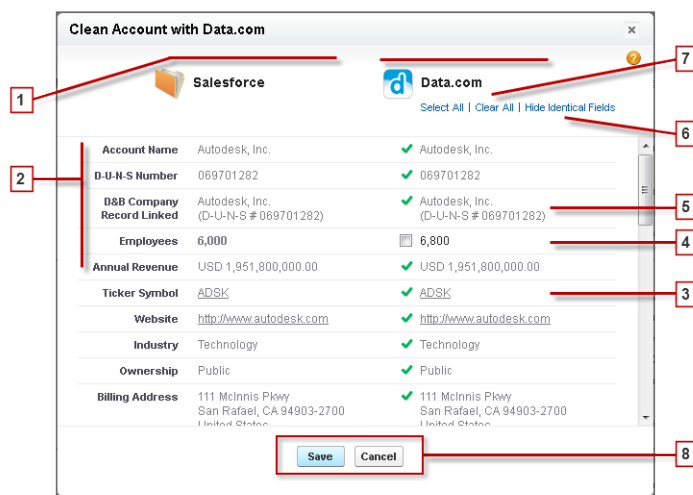
1. The columns present Salesforce and Data.com records side by side, so you can easily compare the data from each source.
2. Field names appear on the left. If a field is blank, that means the source (Salesforce or Data.com) has no data for that field.

   > **Note:** Some account and lead fields are available only to organizations that purchase Data.com Corporate or Data.com Premium.

3. If your Salesforce data matches Data.com's you'll see a green checkmark (✔) for that field in the Data.com column.
4. If Data.com has data for a field that's blank or different in Salesforce, you'll see a checkbox. Select it to accept Data.com's data.
5. If you use Data.com Premium, when you clean an account record, we create a D&B Company record, if one doesn't yet exist, and link it to the account. The D&B Company record is identified on the comparison page.
6. By default, fields that have identical data are hidden. Click `Show Identical Fields` to see them all, along with the fields that have different data (as in this example). If there are a lot of fields, a scroll bar may appear. To hide identical fields, click `Hide Identical Fields`.
7. The **Select All** and **Clear All** links do just what they say.
8. Click **Save** when you're satisfied that you have the data you want, even if you don't make any changes. The Salesforce record's clean status will be updated to `Reviewed` or `In Sync`. If you click **Cancel**, your Salesforce record's data won't be updated, but if Data.com finds a better match for the record, the values in its `Clean Status` and `Data.com Key`

fields may change. These two fields always reflect the best match from Data.com as of the most recent clean process, whether the record was cleaned manually (by you) or automatically (via Clean jobs).

Note: You can't see the entire `D-U-N-S Number` value for an account (on the comparison page or the account card) until the account has been added to Salesforce from Data.com or (for existing records) cleaned with Data.com. Until you add or clean the record, the number's first five digits are masked with asterisks (*).

Understanding Data.com Clean Status

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

If you use Data.com, the Salesforce CRM records you have access to show a status message in the `Clean Status` field.

To *clean* a record is to bring it up to date with the values you want—either accepting some or all of the latest values from Data.com, or keeping all of the values in the Salesforce record. If a user has compared two records and opted to keep one or more values from the Salesforce record, the record's status is `Reviewed`. If the Data.com and Salesforce records are identical, either before or after they've been compared by a user, the Salesforce record's clean status is `In Sync`. Both `Reviewed` and `In Sync` records are considered to be *clean*.

This table explains each clean status message and tells you how to clean records in other states (such as `Not Compared` and `Different`).

Clean Status	Definition	How to Clean the Salesforce Record
⚠ `Not Compared`	The current version of the Salesforce record has not been compared with Data.com. This status may occur because: • The Salesforce record was previously compared with Data.com, but later edited by a user and not compared again. • The Salesforce record was previously compared with Data.com, but later updated by a workflow or other automated process (such as lead conversion) and not compared with Data.com again. • The record was *created manually* in Salesforce (not *added from Data.com*), and has not yet been compared with Data.com. **Note:** Records you add from Data.com always have an `In Sync` status until the data changes in one or both of the records.	Click **Clean** and compare the records side by side. If you want to keep all of the values in the Salesforce record, click **Save**. The Salesforce record's clean status changes to `Reviewed`. If you want to accept any or all of the Data.com values, select the checkboxes as appropriate, then click **Save**. The Salesforce record's clean status changes to `Reviewed` until: • The two records are identical (`In Sync` status). • The record is updated in Salesforce or Data.com (`Different` status). • The record becomes inactive in Data.com (`Inactive` status).

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Clean Status	Definition	How to Clean the Salesforce Record
✅ In Sync	When your Salesforce record was last compared with the Data.com record, the two were identical. Records in `In Sync` status are considered to be clean.	Click the icon in the `Clean Status` field and check the time stamp to see when the record was last compared.
✅ Reviewed	When your Salesforce record was last compared with the Data.com record, the user who compared them accepted one or more field values from the Data.com record and kept one or more values from the Salesforce record. Records in `Reviewed` status are considered to be clean, but you can repeat the clean process.	Click **Clean** and compare the records side by side. Accept or skip Data.com values as appropriate. The Salesforce record remains in `Reviewed` status until: • The two records are identical (`In Sync` status). • The record is updated in Salesforce or Data.com (`Different` status). • The record becomes inactive in Data.com (`Inactive` status).
⚠️ Different	The Salesforce record has different data from the corresponding Data.com record. **Note:** It's important to remember that a record's clean status can change from `In Sync` or `Reviewed` to `Different` when values change in the matched Data.com record. This may happen regularly as updated information from D&B and Data.com is made available.	Click **Clean** and compare the records side by side. Accept or skip Data.com values as appropriate. The Salesforce record remains in `Different` status until: • The two records are identical (`In Sync` status). • A user reviews the two records and keeps one or more values from the Salesforce record (`Reviewed` status). • The record becomes inactive in Data.com (`Inactive` status).
🚫 Not Found	The Salesforce record has no similar records in Data.com record.	The record can't be cleaned in Salesforce because Data.com could not find a record to match it with.
🚫 Inactive	The Data.com record corresponding to the Salesforce record has been marked inactive. A record may be inactive if it includes an invalid email address or the company is no longer in business.	You currently can't clean records whose status is `Inactive`.

Data.com Clean Administration Enhancements

For Summer '12, Data.com Clean includes these administration enhancements.

Data.com Clean Section on Data.com Licenses & Limits Page

The Data.com Licenses & Limits page now includes information about your organization's Clean capabilities and implementation. The `Available To` field tells which of your Salesforce users can manually clean records. The `Automation` field tells you whether automated clean jobs are available for your organization, and if so, whether you've scheduled jobs.

New Data.com Setup Tree

The Data.com Setup tree now includes a section for Data.com Clean. There, you'll find links to Data.com Clean administration pages. Just click *Your Name* > **Setup** > **Data.com Administration** > **Clean**. All organizations that use Data.com Corporate or Premium see links to Settings and Metrics & Analytics pages. Organizations that purchase Data.com Clean get links to those pages plus Preferences and Jobs pages.

Platform-Ready `Clean Status` Field

The `Clean Status` field is now platform-ready: you can add it to page layouts, filters, reports, workflows, and triggers. It's also available as read-only in the Force.com API.

Expanded Data.com Clean Documentation

Now that Data.com Clean is in GA release, it has a complete set of documentation, including:

- A Data.com Clean implementation guide in PDF format. Its content is identical to the Salesforce help topics, but it's handy for those who prefer the PDF format.
- Comprehensive help, including expanded FAQ sections for both system administrators and users.

Data.com Clean Feature Enhancements

For Summer '12, Data.com Clean includes these feature enhancements.

Show/Hide Identical Fields When You Clean Records

When you manually clean a Salesforce record, on the comparison page, you can click the Show/Hide Identical Fields link, depending on whether you want to see all the fields that have the same values in Data.com record. **Hide Identical Fields** is the default, so if you're not seeing as many fields as you expect, click **Show Identical Fields**.

Data.com Corporate D&B Fields Available for Data.com Clean

Using Data.com Corporate or Premium, when you manually clean a Salesforce record, you can view and accept values from the D&B fields that are available in Data.com Corporate. Those fields are identified in the "Account Fields" and "Lead Fields" topics in the Salesforce help.

FORCE.COM

Visual Workflow Enhancements

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

Security Enhancement for Flow Finish Behavior

You can no longer redirect flow users to a URL that's external to your Salesforce organization. Previously, a flow administrator could use the Visualforce `finishLocation` attribute to redirect flow users to an external website, for example, by using the `URLFOR` function to point to an absolute URL. These external redirects are now blocked because they pose security risks.

Visual Workflow Subflows

Starting in Summer '12, the Cloud Flow Designer supports subflows. You can reduce the complexity of a flow by reusing other flows. A subflow element references another flow and calls that flow at runtime. When a flow contains a subflow element, we call it the *master flow* to distinguish it from the referenced flow.

With subflows, you can simplify your overall flow architecture. Build reusable flows to perform common tasks. For example, you can build reusable flows to capture address and credit card information, and authorize a credit card purchase amount. Then you can have multiple product-ordering flows call the reusable flows as needed.

The Palette now lists the other flows in your organization. Drag one of the flows onto the canvas to create a subflow element. In the subflow overlay, set up input/output variable assignments to transfer data between the master flow and the referenced flow.

At runtime, the master flow calls the *active* version of each referenced flow by default. If a referenced flow has no active version, then the master flow calls the *latest* version of the referenced flow. To run only the latest version of each referenced flow, use one of the following methods:

- Open the master flow in the Cloud Flow Designer, and click **Run with Latest** in the button bar.
- Run the master flow from the flow URL appended with `?latestSub=true`.

> **Note:** Only flow administrators can run inactive flows. For other users, the flow will fail at runtime if a subflow element tries to call a flow with no active version.

Control Input/Output Access for Each Flow Variable

New in Summer '12, you can control how each flow variable can be accessed when the flow is called by applications, pages, or other flows. For each variable, use the `Input/Output Type` field to enable or disable the following types of access:

- Input—Variable can be set at the start of the flow using URL parameters, Visualforce controllers, or subflow inputs.
- Output—Variable's value can be accessed from Visualforce controllers and other flows.

Variables serve as interfaces into the flow. With the `Input/Output Type` field, you can control which of these variables to expose. For example, you'd want to make internal counters private to the flow but expose variables for transferring data into and out of the flow.

To avoid negatively impacting existing pages and applications that call flows, the default behavior of the `Input/Output Type` field depends on the version in which the variable is created.

- Both input and output access are *disabled* by default for each variable created in Summer '12 and later or in API version 25.0 and later.
- Both input and output access are *enabled* by default for each variable created in Spring '12 and earlier or in API version 24.0.

> **Caution:** Disabling input or output access for an existing variable may impact the functionality of applications and pages that call the flow and access the variable via URL parameters, Visualforce controllers, and subflows.

To see the new `Input/Output Type` field, create or open a flow in the Cloud Flow Designer. From the Resources tab, double-click **Variable**. You can also open an existing variable from the Explorer tab.

Sort Records Retrieved by a Record Lookup

The Record Lookup element selects only the first record from the lookup results, which aren't retrieved from the database in any particular order. In Summer '12, you can sort the retrieved records by a sortable field before the Record Lookup element selects the first record of the resulting list.

To see the new sort-related fields, create or open a flow in the Cloud Flow Designer. From the Palette, drag a Record Lookup element onto the canvas. Select the object whose records you want to look up. Then select the `Sort results by` checkbox and specify a sortable field.

Sort and Limit Choices Generated by a Dynamic Choice Resource

A dynamic choice looks up data from an object's records and dynamically generates a set of choices at runtime. The records aren't retrieved from the database in any particular order. In Summer '12, you can sort the retrieved records by a sortable field to control the order of the displayed set of choices. You can also limit the number of choices that are generated from the retrieved records, up to a maximum of 200.

To see the new sort- and limit-related fields, create or open a flow in the Cloud Flow Designer. From the Resources tab, double-click **Dynamic Choice**. Select the object whose records contain the data that you want in the choices. Find the checkboxes to:

- `Sort results by` a specified sortable field.
- `Limit number of choices to` a specified maximum.

Customize a Flow's User Interface with Visualforce

New in Summer '12, you can customize the look and feel of your flow's user interface at runtime, using a combination of CSS classes and Visualforce flow attributes. Override the default flow style classes with your own and change the background, field labels, and other components of the flow. The new `buttonLocation` flow attribute lets you decide where you want the **Next**, **Previous**, and **Finish** buttons to appear in the flow user interface. See Customizing a Flow's User Interface in the *Visualforce Developer's Guide*.

Updates to the Cloud Flow Designer's Button Bar

We made some changes to the button bar in the Cloud Flow Designer. Three buttons that previously had text labels are now represented only as icons:

- Undo is now .

- Redo is now .

- Flow Properties is now .

We also added three new buttons, representing new functionality for Summer '12:

- Copy (   )
- Paste (   )
- Run with Latest—This button appears only when the open flow contains a subflow element. When clicked, the flow runs as usual, but each subflow element calls the *latest* version of its referenced flow, even if that version is not active.

Copy and Paste Elements

Now you can select canvas items in the Cloud Flow Designer to copy and paste them. Click to select a single element, or click and drag to select multiple elements on the canvas. Once you've selected what you want to copy, click   , and then click   .

Note: When you copy and paste an element, the new copy has the unique name of the original, appended with "_x", where "x" is a number. The first copy of an element has "_0" appended to its unique name, and the number increments from there with subsequent copies of the same element.

Plain Text Editor

Starting in Summer '12, you can choose between a plain text editor and a rich text editor to create content in the Cloud Flow Designer. Previously, you could only use a rich text editor, which saves content in HTML. The plain text editor is now available for:

- Display text fields
- Text templates
- Help text for screens and fields
- Error messages for user input validation

For new content, the plain text editor appears by default. For content that was created in Spring '12 or earlier, the rich text editor appears by default because the existing content is in HTML. Click   to switch between the plain text editor and the rich text editor.

If you use the rich text editor, the content is saved as HTML.

Default Values of the `Scale` Field

The default values of the `Scale` field have changed in Summer '12. The scale is the maximum number of digits allowed to the right of the decimal point for resources whose data types are Number or Currency.

Resource Type	Default Value Starting in Summer '12	Previous Default Value
Screen input field	0	2
Variable	2	0
Formula	2	0

User Interface Text Improvements

In Summer '12, all Cloud Flow Designer overlays that enable you to add rows of outcome conditions, record filters, field assignments, and variable assignments now have column headers and improved ghost text for each field.

New "Run Flows" User Permission

The following users can run flows from custom buttons, custom links, Visualforce tabs, and flow URLs:

- (New in Summer '12) Users who have the "Run Flows" user permission
- Users whose user detail pages have the `Force.com Flow User` field enabled

Cloud Flow Designer and API Limits

Starting in Summer '12, the Cloud Flow Designer no longer makes API calls that count against your organization's API limit.

Visualforce References to Flows

If you create a managed package that includes a Visualforce page referencing a flow, including the namespace in the name attribute for the flow is optional starting in Summer '12. The namespace is required only when your Visualforce page references a flow that comes from another managed package.

Visualforce Enhancements

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

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

Summer '12 introduces several new features that enhance the capabilities of previous versions of Visualforce. For detailed information on these enhancements, see the *Visualforce Developer's Guide*.

Flow Customization Enhancements

New in Summer '12, you can customize the look and feel of your flow's user interface at runtime, using a combination of CSS classes and Visualforce flow attributes. Override the default flow style classes with your own and change the background, field labels, and other components of the flow. The new `buttonLocation` flow attribute lets you decide where you want the **Next**, **Previous**, and **Finish** buttons to appear in the flow user interface. See Customizing a Flow's User Interface in the *Visualforce Developer's Guide*.

Visualforce References to Flows

If you create a managed package that includes a Visualforce page referencing a flow, including the namespace in the name attribute for the flow is optional starting in Summer '12. The namespace is only required when your Visualforce page references a flow that came from another managed package.

Flow Variable Access Control

New in Summer '12, flow administrators can control whether and how each flow variable is accessed when the flow is called by Visualforce pages, applications, or other flows.

You can only set variables that allow input access and get variables that allow output access. For each flow variable, input and output access is controlled by these fields:

- `Input/Output Type` variable field in the Cloud Flow Designer.
- `isInput` and `isOutput` fields on `FlowVariable` in the Metadata API.

For a variable that doesn't allow input or output access, attempts to set or get the variable are ignored, and compilation might fail for the Visualforce page, its `<apex:page>` component, or the Apex class.

To avoid negatively impacting existing pages and applications that call flows, all flow variables that were created in Spring '12 and earlier allow both input and output access by default. Flow variables created in Summer '12, however, don't allow input or output access by default.

Enhanced Chatter Component

You asked for it! This enhancement is from an idea on the IdeaExchange.

In Summer '12, the `<chatter:feed/>` Visualforce component offers two additional attributes:

- `showPublisher`—Controls whether the publisher displays on a user's profile page or a record's detail page.
- `feedItemType`—Controls filtering for a user's profile page or a record's detail page.

The new attributes help you change the look and feel of a feed. For example, you can customize a standard feed page for branding purposes.

Chatter Messenger for Visualforce Pages

In Summer '12, the `apex:page` Visualforce component offers the `showChat` attribute. The `showChat` attribute is a Boolean value that specifies whether the Chatter Messenger chat widget is included in the page. If true, the chat widget is displayed. If not specified, the value defaults to the Visualforce Settings selected in **Your Name** > **Setup** > **Customize** > **Chatter** > **Chat Settings**.

PDF Rendering Pipeline Optimizations

In Summer '12, we've optimized PDF generation by shortening the rendering pipeline. In most cases this can result in faster responses when using `renderAs="pdf"` with your Visualforce pages. The improvements will vary depending on whether request processing is spent in generating the page to be rendered (more improvement), or in rendering the page into PDF (less improvement).

This change is versioned, and you must update your Visualforce pages to API version 25.0 to access the new implementation.

For pages that are composed of multiple sub-pages, using `<apex:include>`, `<apex:composition>`, and so on, the API version for PDF rendering is determined by the API version of the **top-level** requested page.

For pages rendered as a PDF in Apex from a `PageReference`, there are two possibilities:

- When your controller calls `PageReference.getContent()` on a page that uses `<apex:page renderAs="PDF">`, the API version used for PDF rendering is the **lower** of the Visualforce page API version and the calling Apex controller API version.
- When your controller calls `PageReference.getContentAsPdf()` on a page, the API version used for PDF rendering is the Visualforce page API version, and the API version of the calling Apex controller is ignored.

The new PDF rendering pipeline significantly changes the lifecycle of the request. Previously when a Visualforce page was rendered as a PDF, the page was effectively processed twice, firing controller constructors and action methods either twice or not at the appropriate time. Direct PDF rendering eliminates redundant calls and ensures that action methods are executed right before the page markup is converted to PDF, potentially changing the number of times your page's methods are called. We recommend comprehensive testing on any existing pages that use `renderAs="pdf"` as part of your process of upgrading them to API version 25.0.

In addition to improving efficiency, the new PDF rendering implementation improves the correctness of the processing lifecycle, which resolves issues that some customers encountered. For the purposes of creating an appropriate test plan, here are a few of the resolved issues:

- The results of action methods were not always preserved when the action, for instance clicking a **Print** button, immediately preceded PDF rendering.
- Controller constructors and, in rare cases, action methods, could be executed more than once. When this happened counters could be incremented unnecessarily, extra records could be inserted, and so on.
- It wasn't possible for a page set to `renderAs="pdf"` to redirect to another page after the PDF was generated.
- Getter and setter methods that had side effects could behave unpredictably.

> **Important:** It's a long-standing recommendation that controller getter and setter methods be idempotent, that is, not have side effects. Visualforce doesn't define the order in which getters and setters are called, or how many times they might be called in the course of processing a request. This is true whether the request is rendered as a PDF or rendered as a normal HTML page.

Apex Describe Support for Field Sets

Visualforce dynamic bindings have supported field sets for some time. In Summer '12, Apex provides describe support for field sets, which makes it possible to dynamically generate the SOQL necessary to load all fields in a field set. This makes field sets easier to use in Visualforce pages that use custom controllers.

This sample uses `Schema.FieldSet` and `Schema.FieldSetMember` methods to dynamically get all the fields in the Dimensions field set for the Merchandise custom object. The list of fields is then used to construct a SOQL query that ensures those fields are available for display. The Visualforce page uses this class as its controller.

```
public class MerchandiseDetails {

    public Merchandise__c merch { get; set; }

    public MerchandiseDetails() {
        this.merch = getMerchandise();
    }

    public List<Schema.FieldSetMember> getFields() {
        return SObjectType.Merchandise__c.FieldSets.Dimensions.getFields();
    }

    private Merchandise__c getMerchandise() {
        String query = 'SELECT ';
        for(Schema.FieldSetMember f : this.getFields()) {
            query += f.getFieldPath() + ', ';
        }
        query += 'Id, Name FROM Merchandise__c LIMIT 1';
        return Database.query(query);
    }
}
```

The Visualforce page using the above controller is simple:

```
<apex:page controller="MerchandiseDetails">
    <apex:form >

      <apex:pageBlock title="Product Details">
          <apex:pageBlockSection title="Product">
              <apex:inputField value="{!merch.Name}"/>
          </apex:pageBlockSection>
```

```
        <apex:pageBlockSection title="Dimensions">
            <apex:repeat value="{!fields}" var="f">
                <apex:inputField value="{!merch[f.fieldPath]}"
                    required="{!OR(f.required, f.dbrequired)}"/>
            </apex:repeat>
        </apex:pageBlockSection>

    </apex:pageBlock>

</apex:form>
</apex:page>
```

One thing to note about the above markup is the expression used to determine if a field on the form should be indicated as being a required field. A field in a field set can be required by either the field set definition, or the field's own definition. The expression handles both cases.

Single View State—Generally Available

The Single View State optimization introduced as a pilot feature in Spring '12 is generally available in Summer '12.

Single View State will be activated on existing organizations within 24 hours of deployment of Summer '12 on your Salesforce instance.

JavaScript Remoting Enhancements

We've enhanced JavaScript remoting in several ways.

To make it easier to work with namespaces, especially for pages that make remoting calls to methods provided in packages, you can use the $RemoteAction global to automatically resolve the correct namespace, if any, for your remote action. To use this facility, you must explicitly invoke JavaScript remoting. The pattern for doing this is:

```
Visualforce.remoting.Manager.invokeAction(
    'fully_qualified_remote_action',
    invocation_parameters
);
```

The fully qualified remote action is a string that represents the complete path to the remote action method, including namespace, base class, and so on: *namespace*[.*BaseClass*][.*ContainingClass*].*ConcreteClass.Method*. Use $RemoteAction in an expression to automatically resolve the namespace, for example {!$RemoteAction.MyController.getAccount}.

Invocation parameters are the arguments used to perform the remote method invocation, and are the same arguments used to make a standard remoting call:

- The parameters to send to the @RemoteAction method, if any.
- The callback function, which handles the returned result.
- Configuration details for the invocation, if any.

For example, you might define a remote invocation to retrieve an account like this:

```
<script type="text/javascript">
function getRemoteAccount() {
    var accountName = document.getElementById('acctSearch').value;

    Visualforce.remoting.Manager.invokeAction(
        '{!$RemoteAction.MyController.getAccount}',
        accountName,
```

```
        function(result, event){
            if (event.status) {
                document.getElementById('acctId').innerHTML = result.Id
                document.getElementById('acctName').innerHTML = result.Name;
            } else if (event.type === 'exception') {
                document.getElementById("responseErrors").innerHTML = event.message;
            } else {
                document.getElementById("responseErrors").innerHTML = event.message;
            }
        },
        {escape: true}
    );
}
</script>
```

This JavaScript remoting call doesn't need to know the details of the namespace in which the controller is defined, whether it's in your own namespace or something provided by an installed package. It also handles the situation where your organization doesn't have a namespace defined.

Keep your JavaScript console open during development when using JavaScript remoting. Errors encountered when calling `invokeAction` are reported only in the JavaScript console. For example, if `$RemoteAction` finds matching `@RemoteAction` methods in multiple namespaces, it returns the first matching method and logs a warning to the JavaScript console. If a matching controller or action is not found, the call silently fails and an error is logged to the JavaScript console.

Second, you can now declare `@RemoteAction` methods with interface parameters and return types, instead of being restricted to concrete classes. This, for example, allows a package provider to package a remote method and associated interface, which subscriber organizations can call from pages, passing in their own class that implements the packaged interface.

Here's a brief example:

```
public class RemoteController {
    public interface MyInterface { String getMyString(); }
    public class MyClass implements MyInterface {
        private String myString;
        public String getMyString() { return myString; }
        public void setMyString(String s) { myString = s; }
    }

    @RemoteAction
    public static MyInterface setMessage(MyInterface i) {
        MyClass myC = new MyClass();
        myC.setMyString('MyClassified says "' + i.getMyString() + '".');
        return myC;
    }
}
```

Objects sent from a JavaScript remoting call to a `@RemoteAction` that declares interface parameters must include an `apexType` value, which must be a fully-qualified path to the concrete class, that is, *namespace*[.*BaseClass*][.*ContainingClass*].*ConcreteClass*. For example, to make a JavaScript remoting call to the above controller:

```
Visualforce.remoting.Manager.invokeAction(
    '{!$RemoteAction.RemoteController.setMessage}',
    {'apexType':'thenamespace.RemoteController.MyClass', 'myString':'Lumos!'},
    handleResult
);
```

If the class definition is within your organization, you can simplify the remoting call, and also use the default c namespace:

```
RemoteController.setMessage(
    {'apexType':'c.RemoteController.MyClass', 'myString':'Lumos!'},
    handleResult
);
```

Layout Attribute for Custom Components

You can control the enclosing HTML tag that wraps a custom component with the new *layout* attribute. The possible values are:

- block wraps the component with an HTML div tag.
- inline wraps the component with an HTML span tag.
- none does not wrap the component with any generated HTML tag.

The default value is inline, which preserves existing behavior.

> **Note:** If you specify an HTML ID for a component using the *id* attribute and also specify layout='none' on the component, the ID is silently dropped because the enclosing HTML tag isn't available.

Disable Development Mode Button

The Visualforce development mode footer has a new button that disables development mode and reloads the page. It removes the Visualforce development mode footer and loads the page normally, instead of inside an iframe. This is useful if you suspect that the development mode footer JavaScript or iframe is interfering with your page's correct behavior.

Development mode remains off until you re-enable it. To enable development mode again:

1. Click *Your Name* > **Setup** > **My Personal Information** > **Personal Information**, and click **Edit**.
2. Select the Development Mode checkbox.
3. Optionally, select the Show View State in Development Mode checkbox to enable the View State tab on the development footer. This tab is useful for monitoring the performance of your Visualforce pages.
4. Click **Save**.

Referential Integrity Validation Improvements

With additional referential integrity checking, it's now more difficult to unintentionally break a Visualforce page by making a change to an Apex class, methods, and so on, in the Salesforce application. It's no longer possible to make a Visualforce page or component invalid by:

- Deleting or changing the name of an Apex method used in the Visualforce markup.
- Deleting, changing the name, or changing the data type of a controller property used in the Visualforce markup.
- Changing the method signature of an Apex method used in the Visualforce markup.

Other Optimizations

Summer '12 also brings a number of internal enhancements to improve the performance and robustness of Visualforce. You won't see them, but we think you'll feel them.

Search Enhancements

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

Improved Article Search Relevancy

We made multiple enhancements to the way article searches work:

- The default search operator in Salesforce Knowledge searches is OR, so if you search for multiple terms, your results include articles that contain one or more of the search terms. In Summer '12, articles that contain more search terms appear higher compared to articles that contain fewer or just one search term.
- Results for searches with multiple synonyms now have improved ordering and relevancy.
- If your search terms contain punctuation, matches on punctuation no longer drive search result ordering.
- We updated the usage information we track for articles to get more accurate ordering for popular articles.

Improved File Search Relevancy

We modified the amount of boosting we do for files that you own so that it does not impact other relevancy boosts. We also updated the usage information we track for files to get more accurate ordering for popular files.

Improved Global Search Scope and Ordering

Global search keeps track of which objects you use and how often you use them, and arranges the search results accordingly. Search results for the objects you use most frequently appear at the top of the list. Search already tracks information about detail page visits, including any changes you make to these pages, for scoping and ordering your results. In Summer '12, we add tracking for your interactions with Visualforce pages and use that information to improve your search scope and ordering.

Developer Console Enhancements

Available in: **Unlimited**, **Developer**, **Enterprise**, and **Database.com** Editions

Summer '12 includes several updates to the Developer Console. The following updates are generally available:

Creating and Deleting Workspaces in the Developer Console

A workspace is a collection of tabs (also called *views*) located in the lower panel of the Developer Console. A tab can contain a log, source code, a heap dump, or an object view.

You can create a workspace for each group of tabs that you use together. Then, while you're working in the Developer Console, switch between workspaces to keep your work organized. For example, the Apex Workbook creates and edits the classes KitchenUtility, Fridge, and Toaster. While working on the Apex Workbook, you can create a workspace called *Apex Workbook Source* for these classes. You can then create a workspace called *Apex Workbook Test* for the debug logs. Switch between the workspaces as you code and test.

To create a workspace:

1. Click **Workspace:***Name*, then select **Workspace Manager**.
2. Click **New** and enter a name for the workspace.

3. Open the logs, source code, heap dumps or object views that you want grouped together in the workspace. When you switch to a different workspace or close the Developer Console, the Developer Console saves the state of the tabs (and the panels within the tabs) in the current workspace.

To delete a workspace:

1. Click **Workspace:***Name*, then select **Workspace Manager**.
2. Select a workspace and click **Delete**.

To rename a workspace:

1. Click **Workspace:***Name*, then select **Rename Current Workspace**.
2. Enter a new name and click **OK**.

> **Note:** Rename Current Workspace overwrites a workspace with a new name; it is not a Save As command.

Navigating through Tab History

When you open a log, a heap dump, or an item from the repository, it opens in a new tab (also called a *view*) in the workspace. You can have multiple tabs open at the same time.

To move backward and forward through your tab history, click the ⟨ ⟩ buttons. You can also use these shortcuts:

- Backward—CTRL+,
- Forward—CTRL+.

Clicking ⟨ moves through your previously viewed tabs in the order that you viewed them. When you click the ⟨ button, the ⟩ button becomes active.

Navigating to Method and Variable Declarations

You can navigate directly to a method or variable declaration, rather than having to scroll or search to find it.

1. Mouse over a method or variable name. If the method or variable name is underlined, you can navigate to its declaration.
2. Click in an underlined method or variable name.
3. Press CTRL+ALT+N or click **Go To** to move the cursor to the declaration.

If the declaration is in another file, the file opens in a new tab.

Syntax Highlighting

Syntax highlighting colors comments, numbers, strings, reserved keywords, primitive data types, variable declarations, and references.
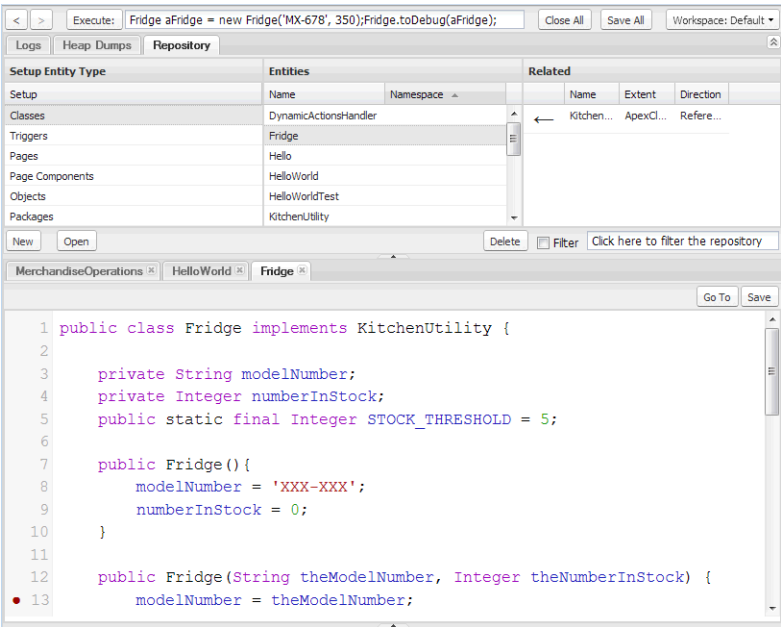
Performance Tree

In System Log view, the Stack pane now includes a performance tree. The performance tree aggregates operations to give you a better look at the performance of an operation as a whole. For example, if a `for` loop calls `System.debug()` 10 times, you see the duration of each call in the execution tree:

In the performance tree, the calls are aggregated so you see the total duration of every call to `debug` from `hello`:

This example calls `debug` only from the `hello` method. Calls to `debug` from other locations are aggregated in those nodes. Calls from all locations are aggregated in the executed unit.

Overlaying Apex Code and SOQL Statements

When troubleshooting a runtime issue, you might want information about the state of a variable or the state of the database. You might also want to create a specific condition in which to test your code. Use the Developer Console to overlay a diagnostic output on the run without instrumenting the code. Write Apex code and SOQL statements that run when code at a heap dump location executes.
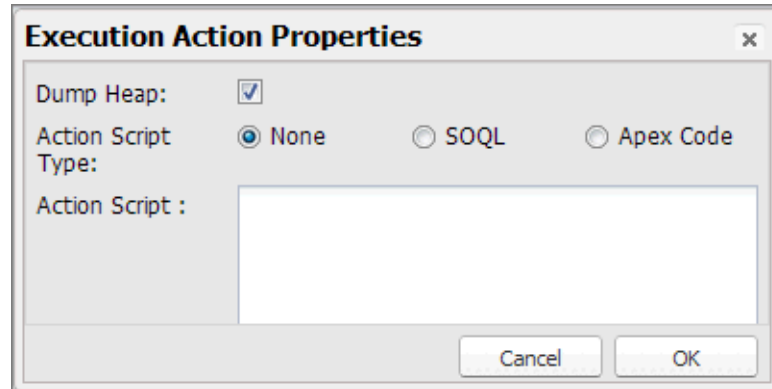
1. Select a heap dump location.

2. Click **Edit Properties**.
3. Select SOQL or Apex Code.
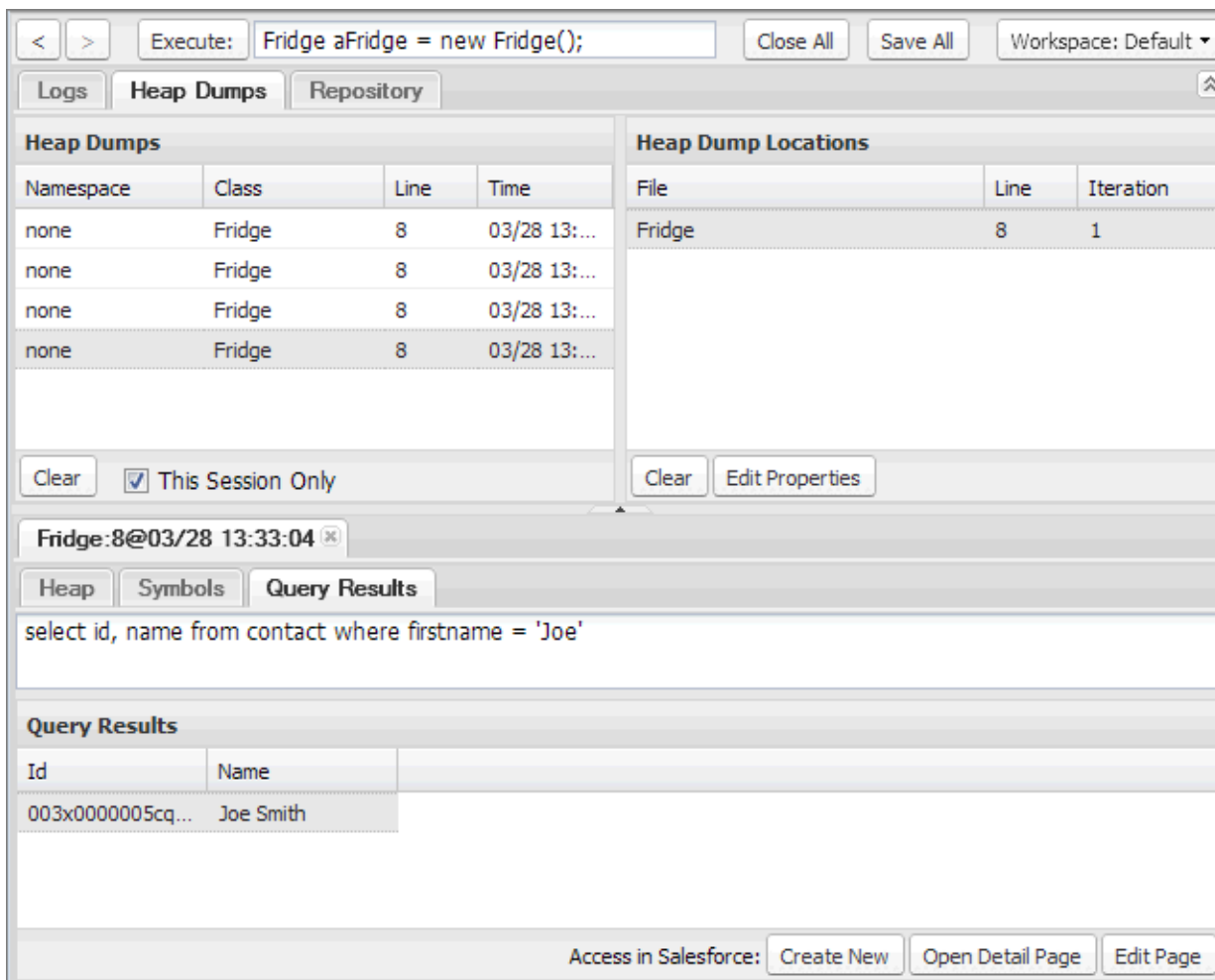
4. To run the diagnostic code without generating a heap dump, deselect **Dump Heap**.
5. Enter SOQL or Apex code in the script box and click **OK**.

> **Note:**
>
> You can't refer to local objects because an anonymous block is a new stack frame. Refer to static objects or create new objects. Also, you can't use bind variables in SOQL queries used in overlays.

View the results of a SOQL query in Query Results view:

To create a new record for the outer entity of the `select` statement, click **Create New**.

To open a record's detail page in Salesforce, select the row and click **Open Detail Page**.

To edit a record in Salesforce, select the row and click **Edit Page**.

View Apex execution results in Apex Execution Results view:

<	>	Execute:	Fridge aFridge = new Fridge();		Close All	Save All	Workspace: Default ▾

Logs	**Heap Dumps**	Repository	⌃

Heap Dumps

Namespace	Class	Line	Time
none	Fridge	8	03/28 13:...

Heap Dump Locations

File	Line	Iteration
Fridge	8	1

Clear	☑ This Session Only		Clear	Edit Properties

Fridge:8@03/28 13:52:58 ✕

Heap	Symbols	**Apex Execution Results**

`System.debug('Fridge stock: ' + Fridge.STOCK_THRESHOLD);`

Results

Name ▲	Value
compiled	true
exceptionColumn	-1
exceptionLine	-1
success	true

Note: The value `-1` for `exceptionColumn` and `exceptionLine` indicates that these fields are not applicable.

Execute Anonymous Apex Code Enhancements

The Summer '12 release includes several significant enhancements to the Execute Anonymous Apex code feature. The Execute text box has been moved to the top of the Developer Console so you can access it no matter which tool is selected. When you click in the Execute text box, an Enter Apex Code window pops up.
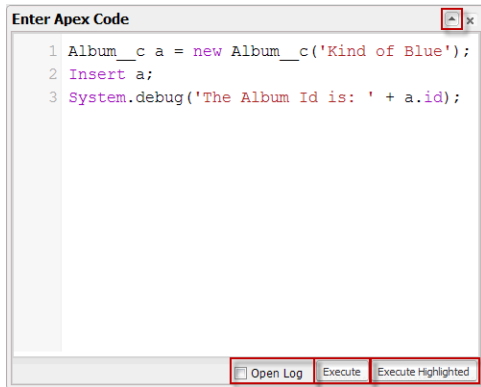
This window has several enhancements:

- To automatically open a debug log when the code executes, select **Open Log**.
- To execute a section of the code, select those lines and click **Execute Highlighted**. (To execute all the code in the window, click **Execute**, as you did in previous releases.)
- To open an execute anonymous editor in a new browser window, click [icon].
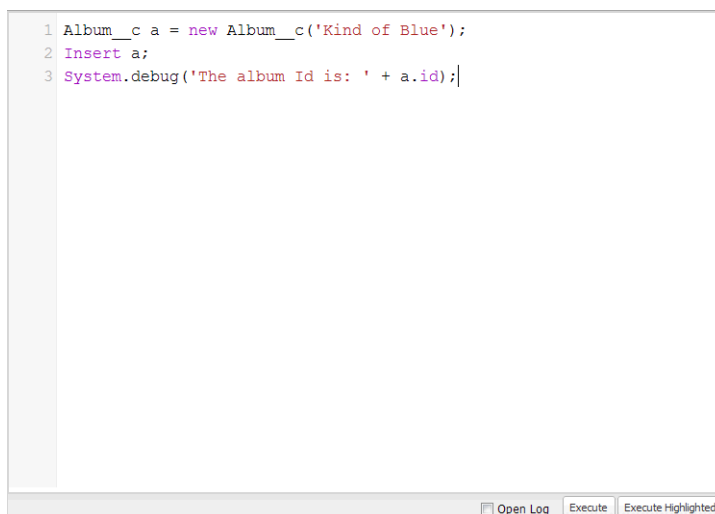
Force.com IDE Enhancements

Available in: **Unlimited**, **Developer**, **Enterprise**, and **Database.com** Editions

The Summer '12 release of the Force.com IDE contains the following enhancements:

- Support for Metadata API version 25.0
- All documentation includes Summer '12 content

The Force.com IDE is available as a standalone application or as an Eclipse plug-in.

- To install the latest version of the Force.com IDE standalone application or Eclipse plug-in, download an installer from `wiki.developerforce.com/page/Force.com_IDE_Installation`.
- To upgrade to the latest version of the Force.com IDE Eclipse plug-in, follow the directions at `wiki.developerforce.com/page/Updating_the_Force.com_IDE`.

After you install the Summer '12 Force.com IDE, you can upgrade your projects. To upgrade a Force.com project:

1. Right click a project and choose **Force.com** > **Upgrade Project** to open the Project Upgrade wizard.
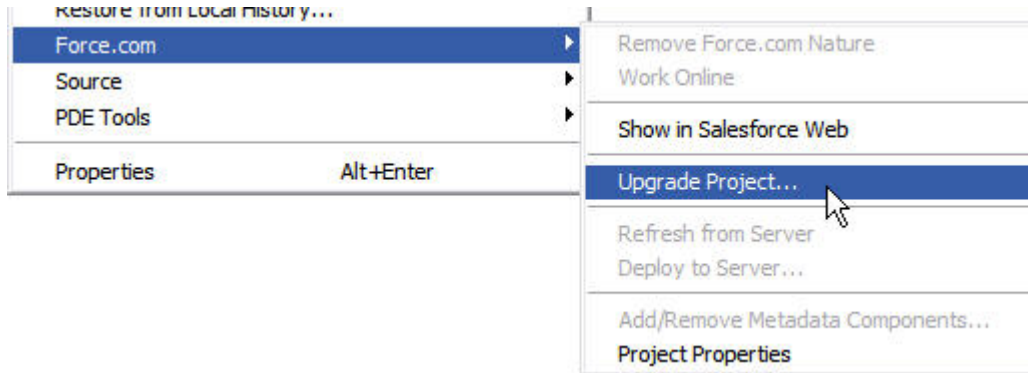
2. On the first page of the wizard, review the information and click **Next** to continue.
3. On the second page of the wizard, review the full details of what will be changed. If you don't want to upgrade all of these components, click **Cancel**. Otherwise click **Finish**.
4. On the final page of the wizard, review your changes.
5. Click **Finish** to retrieve the specified components.

Note: Force.com IDE releases prior to Winter '09 were "Developer Preview" releases. To migrate to the latest Force.com IDE from a "Developer Preview" release, delete all Force.com projects from your workspace, uninstall the older IDE plug-in from Eclipse, and install the latest release.

Schema Builder--Generally Available

You asked for it! This enhancement is from an idea on IdeaExchange.

Available in: All Editions

With the Summer '12 release, the graphical Schema Builder is now generally available in all editions.

Schema Builder gives you a visual interface for developing database schemas. You can use it to create objects as well as custom fields of any type, including master-detail and lookup relationships, formulas, and roll-up summaries.
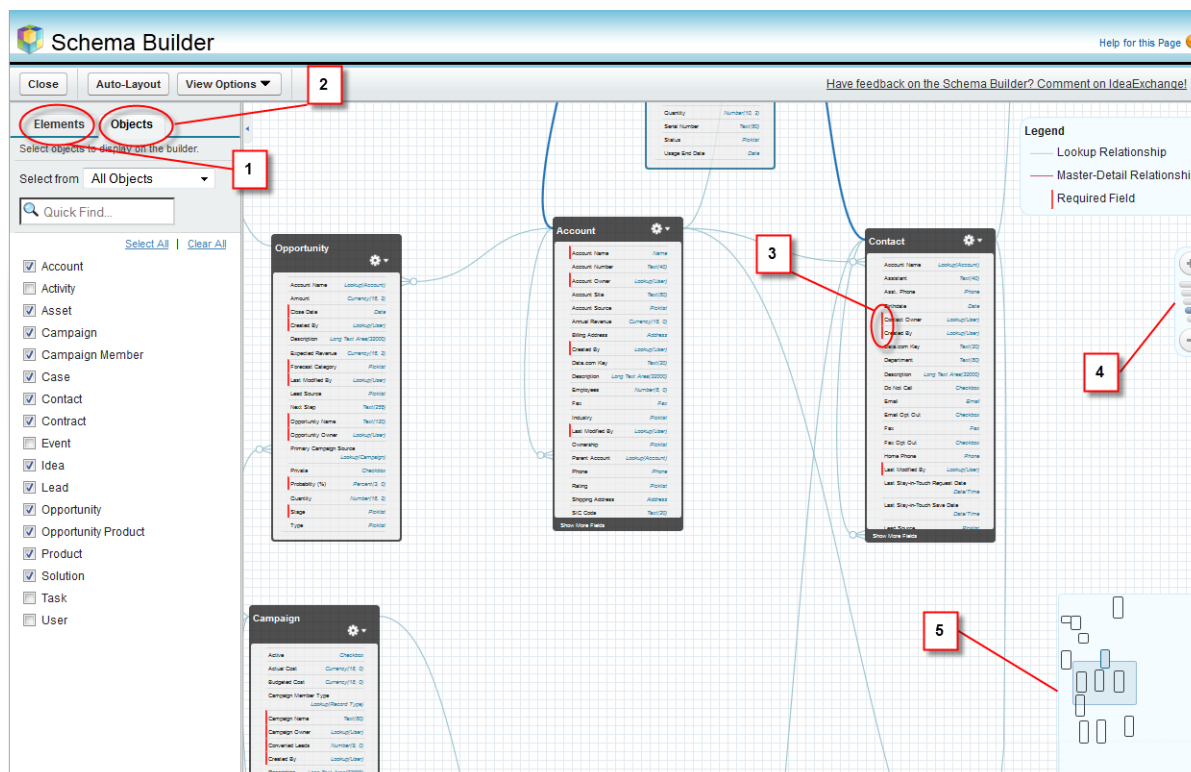
1. Use the Elements tab to create fields and objects by dragging them onto the canvas.
2. Use the Objects tab to find and show/hide objects.
3. A red line indicates the field is required.
4. Use the zoom control to view more or less of the schema.
5. The bird's eye view indicates where you are in the schema.

Summer '12 includes the following enhancements:

Edit properties of a custom field

We enhanced the Schema Builder documentation to describe the Edit Field Properties... option in the context menu for custom fields. To edit properties of a custom field, right-click the field name or label and select **Edit Field Properties...**.

Manage permissions for a custom field

To manage permissions of a custom field, click the element name or label and select **Manage Field Permissions**. Use the dialog box that appears to manage the field's visibility and writability for all standard and custom profiles.

Custom fields support all types

Schema Builder completes its support of custom field types by adding support for the following types:

Type	Description
Auto Number	Automatically assigns a unique number to each record. The maximum length of any auto-number field is 30 characters, 20 of which are reserved for prefix or suffix text.

Type	Description
Formula	Allows users to automatically calculate values based on other values or fields such as merge fields. See "Building Formulas" in the online help and "Operators and Functions" in the online help. **Note:** Salesforce uses the round half up tie-breaking rule for numbers in formula fields. For example, 12.345 becomes 12.35 and –12.345 becomes –12.34.
Picklist	Allows users to select a value from a list you define.
Picklist (Multi-select)	Allows users to select more than one picklist value from a list you define. These fields display each value separated by a semicolon.
Roll-Up Summary	Automatically displays the record count of related records or calculates the sum, minimum, or maximum value of related records. The records must be directly related to the selected record and on the detail side of a custom master-detail relationship with the object that contains the roll-up summary field. For example, a customfield called "Total Number of Guests" displays the number of guest custom object records in the Guests related list.
Text (Encrypted)	Allows users to enter any combination of letters, numbers, or symbols that are stored in encrypted form. You can set a maximum length of up to 175 characters. Encrypted fields are encrypted with 128-bit master keys and use the AES (Advanced Encryption Standard) algorithm. You can archive, delete, and import your master encryption key. To enable master encryption key management, contact salesforce.com. See also "Managing Master Encryption Keys" in the online help.

Security Enhancements

Available in: **All** Editions

Summer '12 introduces several new features that enhance security.

Verifying the Expiration Date for a CA Certificate

Prior to Summer '12, the expiration date shown on the Certificate and Key Management page could be incorrect for certificates signed by an external certificate authority (CA). For example, you could have received a Certificate Signing Request through Salesforce and then had it signed by a CA. Salesforce could have set the certificate's life at two years, but the CA may have set the certificate to be valid for one year. When you returned the signed certificate to Salesforce for use, the original two-year expiration may not have been updated to one year in the user interface.

Verify a CA-signed certificate's expiration date by clicking the certificate's label in the list at **Your Name** > **Setup** > **Security Controls** > **Certificate and Key Management**. On the Certificates page, the Expiration value in the Certificate entry is the correct date.

Enable SMS-based Identity Confirmation

SMS-based identity confirmation is now available for all users in addition to email-based confirmation. Salesforce will use either of these methods to verify the user when necessary, such as when a user tries to log in from an unknown IP address.

Administrators enable this feature by checking `Enable SMS-based identity confirmation` at **Your Name** > **Setup** > **Security Controls** > **Session Settings**.

Once the feature is enabled, every user sees a screen after logging in that asks them to register for mobile verification. The user can take one of the following actions:

- Enter a mobile phone number and then have it verified with a text message.
- Skip entering a mobile number now, but get asked again at their next login.
- Completely opt out of mobile verification.

Administrators can also enter a user's mobile number, including country code, and pre-verify it. If `Enable SMS-based identity confirmation` is set when an administrator enters a mobile number for a user, or when a mobile number is set from an API using the `User` object, the mobile number is automatically considered verified. If `Enable SMS-based identity confirmation` is not set, the new mobile phone number is not considered verified. "Verified" means that Salesforce will not ask the user to verify a mobile phone number at login, and that Salesforce will use the number to send the user a verification code when necessary for SMS-based identity confirmation.

Support for Bearer Authentication Headers

OAuth access tokens may now be presented to the APIs using the OAuth bearer token format:

```
Authorization: Bearer access_token
```

For example, provide the access token in your REST requests:

```
curl https://instance_name.salesforce.com/services/data/v20.0/ -H 'Authorization: Bearer
 access_token'
```

The previous syntax, `Authorization: OAuth access_token`, is still supported.

Specify the HttpOnly Attribute

You can now specify the HttpOnly attribute for your session ID cookies. If the HttpOnly flag is included in the HTTP response header, the cookie cannot be accessed through client-side scripts. Set the HttpOnly attribute by selecting `Require HttpOnly attribute` at **Your Name** > **Setup** > **Security Controls** > **Session Settings** for new and existing orgs.

Note: If you have a custom or packaged application that uses JavaScript to access session ID cookies, selecting `Require HttpOnly attribute` breaks your application because it denies the application access to the cookie. The Developer Console and AJAX Toolkit debugging window are also not available if the `Require HttpOnly attribute` is selected.

Clickjacking Protection Applied to Setup Pages

Setup pages now include protection against clickjack attacks, which are also known as user interface redress attacks. Setup pages are those pages accessed from the left side of the screen after clicking *Your Name* > **Setup** on the upper-right part of the user interface. While there are reasons to frame pages, framed pages can be used by hackers.

It's possible that setup pages will either display as a blank page or without the frame if either of the following conditions exists:

- Your organization displays Salesforce.com user interface pages within a frame or iframe.
- You use custom Visualforce pages with the `showHeader` attribute in the `apex:page` element set to true within a frame or iframe.

The behavior varies depending on your browser and its version. Take one of the following actions to ensure that these pages will continue to work correctly in your organization:

- Don't turn off clickjacking protection for your organization. Instead, discontinue displaying these pages within a frame or iframe. This is the recommended solution.
- Ask Salesforce support to disable clickjack protection for your organization. This allows you to continue framing Salesforce pages, but the setup pages remain vulnerable to clickjack attacks. This solution is not recommended, but is available.

OAuth Version Support Clarified

Salesforce is compatible with Draft v2–25 of the OAuth 2.0 protocol from the IETF working group.

Prompt Parameter Now Available in OAuth

The prompt parameter is available for the OAuth 2.0 User-Agent and Web Server Authentication flows. This optional parameter specifies how the authorization server prompts the user for reauthentication and reapproval.

See "OAuth 2.0 User-Agent Flow" in the online help and "OAuth 2.0 Web Server Authentication Flow" in the online help.

Some OAuth Scope Values Are Nested

Some OAuth scope values contain other scope values for convenience. For example, specifying `api` includes access to all APIs, such as REST API and Chatter API. See "Scope Parameter Values" in the online help.

Managed Packages No Longer Use Remote Access Objects

Remote access application definitions should no longer be included in packages. Existing packages that use remote access applications to connect end-users with application are still supported. OAuth applications now work with the remote access application where ever it is defined: the remote access application definition doesn't have to be in the same organization as the OAuth application.

Data Residency Option Now Available

The new Data Residency Option (DRO) lets your organization benefit from use of salesforce.com cloud solutions even when your compliance policy requires that certain data fields are only readable within your organization, country, or region.

DRO is a proxy-based solution installed on your network, not in a Salesforce data center. Once configured, the DRO encryption proxy uses locally-managed policies and encryption keys to encrypt or tokenize data before sending it to or storing it on the Salesforce platform. Encrypted data can only be viewed as plain text after decryption by your organization's proxy.

Contact your Salesforce representative to learn about purchasing DRO for your organization.

Permission Sets Enhancements

Assigned App Settings

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

User Permissions Needed	
To view assigned app settings:	"View Setup and Configuration"
To edit assigned app settings:	"Manage Users"

Starting in Summer '12, permission sets include an assigned apps page, where you can specify which apps are visible to users with the selected permission set. Unlike profiles, you can't assign a default app in permission sets. You can only control whether apps are visible.

Note:
- In packages and change sets, assigned app settings aren't included in permission set components.
- Some user licenses restrict the number of apps a user can access. Salesforce calculates the total number of settings for assigned apps in a user's assigned profile, plus any assigned permission sets. For users with a license that restricts the number of apps, you can't assign more than the allotted limit through their assigned profile and permission sets. For example, the Force.com - One App license allows one assigned custom app per user. If a user with this license has a profile with one assigned custom app, you can't assign that user a permission set that enables another custom app.

To view or edit assigned apps for a permission set:

1. Click *Your Name* > **Setup** > **Manage Users** > **Permission Sets**.
2. Select a permission set, or create one.
3. On the permission set overview page, click **Assigned Apps**.
4. To change the assigned apps, click **Edit**.
5. To assign apps, select them from the Available Apps list and click **Add**. To remove apps from the permission set, select them from the Enabled Apps list and click **Remove**.
6. Click **Save**.

Tab Settings

You asked for it! This enhancement is from an idea on the IdeaExchange.

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

User Permissions Needed	
To view tab settings:	"View Setup and Configuration"
To edit tab settings:	"Manage Users"

Starting in Summer '12, permission sets include tab settings, where you can specify which tabs are visible to users with the selected permission set.

Note:

- In packages and change sets, tab settings aren't included in permission set components.
- Some user licenses restrict the number of tabs a user can access. Salesforce calculates the total number of settings for tabs in a user's assigned profile, plus any assigned permission sets. For users with a license that restricts the number of tabs, you can't assign more than the allotted limit through their assigned profile and permission sets.
- The Console tab isn't available in permission sets.

To view or edit tab settings in a permission set:

1. Click *Your Name* > **Setup** > **Manage Users** > **Permission Sets**.
2. Select a permission set, or create one.
3. In the **Find Settings...** box, enter the name of the tab you want and select it from the list.
4. To change the tab settings, click **Edit**.
5. Specify the tab settings.

   The tab settings in permission sets differ from the labels in profiles.

Enabled Settings in Permission Sets	Enabled Setting in Profiles	Description
`Available`	`Default Off`	The tab is available on the All Tabs page. Individual users can customize their display to make the tab visible in any app.
`Available` and `Visible`	`Default On`	The tab is available on the All Tabs page and appears in the visible tabs for its associated app. Individual users can customize their display to hide the tab or make it visible in other apps.
`None`	`Tab Hidden`	The tab isn't available on the All Tabs page or visible in any apps.

> **Note:** If a user has another permission set or profile with enabled settings for the same tab, the most permissive setting applies. For example, if permission set A has no settings enabled for the Accounts tab, but permission set B enables the `Available` setting for the Accounts tab, and permission sets A and B are assigned to a user, the user sees the Accounts tab on the All Tabs page.

6. Click **Save**.

Object and Field Permissions Page Renamed

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

In Summer '12, the Object and Field Permissions page is now named "Object Settings." This page has the same functionality it had in previous releases, and now includes tab settings as well.

To view this page, click *Your Name* > **Setup** > **Manage Users** > **Permission Sets**, select a permission set, then click **Object Settings**.

Permission for Setting Apex Class and Visualforce Page Access

Apex classes are available in: **Enterprise, Unlimited, Developer**, and **Database.com** Editions

Visualforce pages are available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Unlimited**, and **Developer** Editions

Starting in Summer '12, the "Customize Application" permission is no longer required to edit users' access to Apex classes and Visualforce pages. Now only the "Manage Users" permission is required. This change applies to profiles as well as permission sets.

Sharing Enhancements

Separate Organization-Wide Defaults for External Users—Pilot

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

User Permissions Needed	
To set default external sharing access:	"Manage Users"
	AND
	"View Setup and Configuration"

> **Note:** Separate Organization-Wide Defaults for External Users is available through a pilot program. For more information on enabling this feature for your organization, contact salesforce.com.

Starting in Summer '12, custom objects can have separate organization-wide defaults for internal and external users, therefore simplifying your sharing rules configuration and improving recalculation performance. Having separate defaults for internal

and external users makes it easier for admins to understand which information is being shared to portals and other external users. This can help prevent inappropriate sharing of data outside the company. External users include:

• Authenticated website users
• Service Cloud Portal users
• Customer Portal users
• Partner Portal users
• Guest users

Previously, if your organization wanted Public Read Only or Public Read/Write access for internal users but Private for external users, you would have had to set the default access to Private and create a sharing rule to share records with all internal users, which impacted recalculation performance.

With separate organization-wide defaults, you can achieve similar behavior by setting the default internal access to Public Read Only or Public Read/Write and the default external access to Private. Setting the default internal access to Public Read Only or Public Read/Write also speeds up performance for reports, list views, searches, and API queries.

Enable separate organization-wide defaults by clicking **Your Name** > **Setup** > **Security Controls** > **Sharing Settings** and clicking the **Enable External Sharing Model** button.

Note: If you don't see the **Enable External Sharing Model** button, your organization is not set up for separate organization-wide defaults. Contact salesforce.com to enable this feature.

After enabling the external sharing model, you can perform these tasks in the Organization-Wide Defaults panel:

• Edit the default internal and external access by clicking the **Edit** button. The **Default External Access** level must be more restrictive or equal to the **Default Internal Access** level.
• Disable separate organization-wide defaults by clicking the **Disable External Sharing Model** button. This button may be grayed out if at least one of your custom objects has different internal and external access levels. Each of your custom objects must be set to the same **Default External Access** and **Default Internal Access** levels before you can disable this feature. If you have soft-deleted a custom object with different external and internal defaults, you have to undelete them and change the defaults to the same levels or hard-delete them before you can disable the feature.

See "Separate Organization-Wide Defaults" in the online help.

Enable and Assign Partner Super User Access

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

User Permissions Needed	
To enable Partner Super User Access:	"Customize Application"
To view contacts:	"Read" on contacts

Partner Super Users can access the data owned by other Partner Users and Partner Super Users of the same role or those below them in the portal account hierarchy, even if the organization-wide default setting is Private.

Before Summer '12, you would have to contact salesforce.com to enable Partner Super User access. You can now enable Partner Super User Access in your partner portals by following these steps.

1. Click `Your Name` > **Setup** > **Customize** > **Partners** > **Settings**.
2. In the Partner Relationship Management Settings page, click **Set Portal Role and User Defaults**.
3. Click **Edit** and select the `Enable Partner Super User Access` checkbox.
4. Click **Save**.
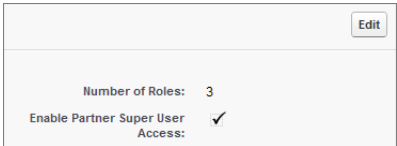
> **Note:** To disable Partner Super User Access, deselect the `Enable Partner Super User Access` checkbox. However, if you reenable this feature, all users who were assigned Partner Super User Access before the feature was disabled will automatically gain Partner Super User Access again.

Selecting the `Enable Partner Super User Access` checkbox allows you to assign Partner Super User Access to Partner Users. When this checkbox is selected, you can see the **Enable Partner Super Access** option in the **Work with Portal** drop-down list on the Contact Detail page of a partner account. For more information, see "Assigning Partner Super User Access" in the online help.
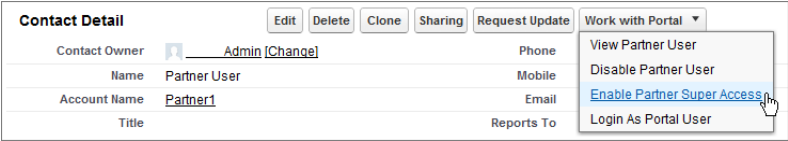
- To view a list of Partner Portal Super Users who have access to a record, click the **Sharing** button on the record. High-volume portal users (Service Cloud portal users) and Customer Portal super users are excluded from this list. You can also verify if a partner user is a Partner Super User in the User Detail page, denoted by the `Partner Super User` checkbox. See "Viewing Which Users Have Access" in the online help for more information.
- On the Partner Relationship Management Settings page, the **Set Portal Role and User Defaults** link was previously labeled **Set number of roles per Portal Account**.

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Apex Code Enhancements

Apex includes the following enhancements in Summer '12. For detailed information on these enhancements, refer to the *Force.com Apex Code Developer's Guide*.

JSON Parsing Enhancements

JSON support in Apex allows you to parse and generate JSON-encoded content. In Summer '12, JSON methods for deserializing JSON content now perform more lenient parsing by default. They don't throw any errors if the JSON input string contains attributes, such as fields or objects, that don't exist in the type of the deserialized output object. They simply ignore these extra attributes when deserializing the JSON string. Note that the default behavior of these methods for Apex saved using Salesforce.com API version 24.0 or earlier hasn't changed. This means that the extra attributes aren't ignored and cause a run-time exception. The affected methods are:

- `deserialize` in `System.JSON`
- `readValueAs` in `System.JSONParser`

Also, new methods have been added that perform strict parsing when deserializing JSON content. Unlike their counterpart methods, these methods do throw a run-time exception if the JSON content contains extra attributes that aren't present in the deserialized type. These methods are:

- `deserializeStrict` in `System.JSON`
- `readValueAsStrict` in `System.JSONParser`

Using the new `deserializeUntyped` method of `System.JSON`, you can now deserialize any JSON-encoded content without having to specify a type. This allows you to deserialize JSON content regardless of the underlying types it contains. Also, previously, it wasn't possible to deserialize JSON content into an Object type or a Map containing Object values (for example, Map<String, Object>). This new method allows you to do so.

The following is a description of the `deserializeUntyped` method and an example.

Description	Deserializes the specified JSON string into collections of primitive data types.
Arguments	String *jsonString*
Return Type	Any type
Example	The following example deserializes a JSON representation of an appliance object into a map that contains primitive data types and further collections of primitive types. It then verifies the deserialized values.

```
String jsonInput = '{\n' +
    ' "description" :"An appliance",\n' +
    ' "accessories" : [ "powerCord", ' +
    '{ "right":"door handle1", ' +
    '"left":"door handle2" } ],\n' +
    ' "dimensions" : ' +
    '{ "height" : 5.5 , ' +
    '"width" : 3.0 , ' +
    '"depth" : 2.2 },\n' +
    ' "type" : null,\n' +
    ' "inventory" : 2000,\n' +
    ' "price" : 1023.45,\n' +
    ' "isShipped" : true,\n' +
    ' "modelNumber" : "123"\n' +
    '}';

Map<String, Object> m =
```

```
                              (Map<String, Object>)
                                  JSON.deserializeUntyped(jsonInput);

                          System.assertEquals(
                              'An appliance', m.get('description'));

                          List<Object> a =
                              (List<Object>)m.get('accessories');
                          System.assertEquals('powerCord', a[0]);
                          Map<String, Object> a2 =
                              (Map<String, Object>)a[1];
                          System.assertEquals(
                              'door handle1', a2.get('right'));
                          System.assertEquals(
                              'door handle2', a2.get('left'));

                          Map<String, Object> dim =
                              (Map<String, Object>)m.get('dimensions');
                          System.assertEquals(
                              5.5, dim.get('height'));
                          System.assertEquals(
                              3.0, dim.get('width'));
                          System.assertEquals(
                              2.2, dim.get('depth'));

                          System.assertEquals(null, m.get('type'));
                          System.assertEquals(
                              2000, m.get('inventory'));
                          System.assertEquals(
                              1023.45, m.get('price'));
                          System.assertEquals(
                              true, m.get('isShipped'));
                          System.assertEquals(
                              '123', m.get('modelNumber'));
```

New Type Methods

Two new instance methods have been added to `System.Type`. Using `getName`, you can now get the Type name that corresponds to a Type instance. Also, `newInstance` allows you to create an instance of the current Type. Using the new `newInstance` method with the existing `forName` method, package subscribers can implement interface methods of an interface provided in a package and have the package call their implementation. The following are the method descriptions and a sample.

Method	Return Type	Description
getName	String	Returns the name of the current type.
		This example shows how to get a Type's name. It first obtains a Type by calling `forName`, then calls `getName` on the Type object.

		``
		Type t =
		    Type.forName('MyClassName');
		
		String typeName =
		    t.getName();
		System.assertEquals('MyClassName',
		    typeName);
		``

Method	Return Type	Description
newInstance	Any type	Creates an instance of the current type and returns this new instance.
		This method enables you to instantiate a Type that implements an interface and call its methods while letting someone else provide the methods' implementation. For example, a package developer can provide an interface that a subscriber who installs the package can implement. The code in the package calls the subscriber's implementation of the interface methods by instantiating the subscriber's Type.
		This example shows how to create an instance of a Type. It first gets a Type by calling `forName` with the name of a class, then calls `newInstance` on this Type object. The `newObj` instance is declared with the interface type that the `ShapeImpl` class implements.

```
Type t =
    Type.forName('ShapeImpl');

Shape newObj =
    t.newInstance();
```

Sample: Instantiating a Type Based on Its Name

The following sample shows how to use the Type methods to instantiate a Type based on its name. A typical application of this scenario is when a package subscriber provides a custom implementation of an interface that is part of an installed package. The package can get the name of the class that implements the interface through a custom setting in the subscriber's org. The package can then instantiate the type that corresponds to this class name and invoke the methods that the subscriber implemented.

In this sample, `Vehicle` represents the interface that the `VehicleImpl` class implements. The last class contains the code sample that invokes the methods implemented in `VehicleImpl`.

This is the `Vehicle` interface.

```
global interface Vehicle {
    Long getMaxSpeed();
    String getType();
}
```

This is the implementation of the `Vehicle` interface.

```
global class VehicleImpl implements Vehicle {
    global Long getMaxSpeed() { return 100; }
    global String getType() { return 'Sedan'; }
}
```

The method in this class gets the name of the class that implements the `Vehicle` interface through a custom setting value. It then instantiates this class by getting the corresponding type and calling the `newInstance` method. Next, it invokes the methods implemented in `VehicleImpl`. This sample requires that you create a public list custom setting named

CustomImplementation with a text field named className. Create one record for this custom setting with a data set name of Vehicle and a class name value of VehicleImpl.

```
public class CustomerImplInvocationClass {

    public static void invokeCustomImpl() {
        // Get the class name from a custom setting.
        // This class implements the Vehicle interface.
        CustomImplementation__c cs = CustomImplementation__c.getInstance('Vehicle');

        // Get the Type corresponding to the class name
        Type t = Type.forName(cs.className__c);

        // Instantiate the type.
        // The type of the instantiated object
        //   is the interface.
        Vehicle v = (Vehicle)t.newInstance();

        // Call the methods that have a custom implementation
        System.debug('Max speed: ' + v.getMaxSpeed());
        System.debug('Vehicle type: ' + v.getType());
    }
}
```

Sorting Support for Non-Primitive Data Types in Lists

You can now sort Lists that contain non-primitive data types, such as sObjects or user-defined types, using the List.sort method. By default, you can sort Lists of sObjects. To sort Lists of your own Apex types, you must implement the new built-in Comparable interface with its compareTo method in your Apex class.

The Comparable interface contains the following method.

Name	Arguments	Return Type	Description
compareTo	Object *objectToCompareTo*	Integer	Returns an Integer value that is the result of the comparison. The implementation of this method should return the following values: • 0 if this instance and *objectToCompareTo* are equal • > 0 if this instance is greater than *objectToCompareTo* • < 0 if this instance is less than *objectToCompareTo*

To implement the Comparable interface, you must first declare a global class with the implements keyword as follows:

```
global class Employee implements Comparable {
```

Next, your class must provide an implementation for the following method:

```
global Integer compareTo(Object compareTo) {
    // Your code here
}
```

This is an example implementation of the Comparable interface. The compareTo method in this example compares the employee of this class instance with the employee passed in the argument. The method returns an Integer value based on the comparison of the employee IDs.

```
global class Employee implements Comparable {

    public Long id;
    public String name;
    public String phone;

    // Constructor
    public Employee(Long i, String n, String p) {
        id = i;
        name = n;
        phone = p;
    }

    // Implement the compareTo() method
    global Integer compareTo(Object compareTo) {
        Employee compareToEmp = (Employee)compareTo;
        if (id == compareToEmp.id) return 0;
        if (id > compareToEmp.id) return 1;
        return -1;
    }
}
```

Knowledge Management Publishing Service Class

Summer '12 introduces full Apex support to manage your knowledge base programmatically.

Before the introduction of this Apex class, the only way to manage the article lifecycle was through the user interface. Now, it's possible to use Apex to perform many essential actions on an article and its translations including:

- Publishing
- Unpublishing
- Updating
- Retrieving
- Deleting
- Submitting for translation
- Setting translation to complete or incomplete status
- Restoring
- Archiving

With Summer '12, the following new static methods are available in KbManagement.PublishingService:

Method	Description
archiveOnlineArticle	Archives an online version. If *scheduledDate* is null, the article is archived immediately. Otherwise, it archives the article according to the *scheduledDate*.
assignDraftArticleTask	Assigns a review task related to a draft article.
assignDraftTranslationTask	Assigns a review task related to a draft translation.
cancelScheduledArchivingOfArticle	Cancels the scheduled archiving of an online article.
cancelScheduledPublicationOfArticle	Cancels the scheduled publication of a draft article.
completeTranslation	Puts a translation in a completed state that is ready to publish.

Method	Description
deleteArchivedArticle	Deletes an archived article.
deleteArchivedArticleVersion	Deletes a specific version of an archived article.
deleteDraftArticle	Deletes a draft article.
deleteDraftTranslation	Deletes a draft translation.
editArchivedArticle	Creates a draft article from the archived master version.
editOnlineArticle	Creates a draft article from the online version and unpublishes the online article, if *unpublish* is set to true.
editPublishedTranslation	Creates a draft version of the online translation for a specific language and unpublishes the article, if set to true.
publishArticle	Publishes an article. If *flagAsNew* is set to true, the article is published as a major version.
restoreOldVersion	Creates a draft article from an existing online article based on the specified archived version of the article.
scheduleForPublication	Schedules the article for publication. If *scheduledDate* is null, the article is published immediately.
setTranslationToIncomplete	Sets a draft translation that is ready for publication back to "in progress" status.
submitForTranslation	Submits an article for translation to the specified language. Also assigns a user and a due date to the submittal.

See *Salesforce Knowledge Developer's Guide* for more information on using Apex to manage the publication lifecycle of articles.

Describe Support for Field Sets

A field set is a grouping of fields. For example, you could have a field set that contains fields describing a user's first name, middle name, last name, and business title. If the page is added to a managed package, administrators can add, remove, or reorder fields in a field set to modify the fields presented on the Visualforce page without modifying any code. The new Schema.FieldSet and Schema.FieldSetMember classes allow you discover field sets and the fields they contain. This allows you to create dynamic SOQL queries based on the fields contained within a field set.

Use the methods in the Schema.FieldSet class to discover the fields contained within a field set, and get details about the field set itself, such as the name, namespace, label, and so on. The following example shows how to get a collection of field set describe result objects for an sObject. The key of the returned Map is the field set name, and the value is the corresponding field set describe result.

```
Map<String, Schema.FieldSet> FsMap =
    Schema.SObjectType.Account.fieldSets.getMap();
```

Use the methods in the Schema.FieldSetMember class to get details about fields contained within a field set, such as the field label, type, a dynamic SOQL-ready field path, and so on. The following example shows how to get a collection of field set member describe result objects for a specific field set on an sObject:

```
List<Schema.FieldSetMember> fields =
    Schema.SObjectType.Account.fieldSets.getMap().get('field_set_name').getFields();
```

Field set describe calls count toward the governor limit of 100 total describes per request. Two new Limits methods allow you to monitor these resources:

- `getFieldSetsDescribes` returns the number of field set describe calls that have been made
- `getLimitFieldSetsDescribes` returns the total number of field set describe calls that can be made

Sample: Displaying a Field Set on a Visualforce Page

This sample uses `Schema.FieldSet` and `Schema.FieldSetMember` methods to dynamically get all the fields in the Dimensions field set for the Merchandise custom object. The list of fields is then used to construct a SOQL query that ensures those fields are available for display. The Visualforce page uses this class as its controller.

```
public class MerchandiseDetails {

    public Merchandise__c merch { get; set; }

    public MerchandiseDetails() {
        this.merch = getMerchandise();
    }

    public List<Schema.FieldSetMember> getFields() {
        return SObjectType.Merchandise__c.FieldSets.Dimensions.getFields();
    }

    private Merchandise__c getMerchandise() {
        String query = 'SELECT ';
        for(Schema.FieldSetMember f : this.getFields()) {
            query += f.getFieldPath() + ', ';
        }
        query += 'Id, Name FROM Merchandise__c LIMIT 1';
        return Database.query(query);
    }
}
```

The Visualforce page using the above controller is simple:

```
<apex:page controller="MerchandiseDetails">
    <apex:form >

      <apex:pageBlock title="Product Details">
          <apex:pageBlockSection title="Product">
              <apex:inputField value="{!merch.Name}"/>
          </apex:pageBlockSection>

          <apex:pageBlockSection title="Dimensions">
              <apex:repeat value="{!fields}" var="f">
                  <apex:inputField value="{!merch[f.fieldPath]}"
                      required="{!OR(f.required, f.dbrequired)}"/>
              </apex:repeat>
          </apex:pageBlockSection>

      </apex:pageBlock>

    </apex:form>
</apex:page>
```

One thing to note about the above markup is the expression used to determine if a field on the form should be indicated as being a required field. A field in a field set can be required by either the field set definition, or the field's own definition. The expression handles both cases.

New Interfaces and Methods for Running Apex on Package Install/Upgrade and Uninstall

Two new interfaces have been added that enable running Apex code when a subscriber installs, upgrades, or uninstalls a managed package.

`InstallHandler`

App developers can implement this interface to specify Apex code that runs automatically after a subscriber installs or upgrades a managed package. This makes it possible to customize the package install or upgrade, based on details of the subscriber's organization. For instance, you can use the script to populate custom settings, create sample data, send an email to the installer, notify an external system, or kick off a batch operation to populate a new field across a large set of data.

`UninstallHandler`

App developers can implement this interface to specify Apex code that runs automatically after a subscriber uninstalls a managed package. This makes it possible to perform cleanup and notification tasks based on details of the subscriber's organization.

These two new methods in the `Test` class allow you to test the implementation of the above interfaces.

Name	Arguments	Return Type	Description

testInstall	InstallHandler *installImp*
	
	Version *ver*
	
	Boolean *isPush*
		Void	Tests the implementation of the `InstallHandler` interface, used for specifying a post install script in packages. Tests will run as the test initiator in the development environment.
			
			The *installImp* argument is a class that implements the `InstallHandler` interface.
			
			The *ver* argument specifies the version number of the existing package installed in the subscriber organization.
			
			The *isPush* argument is optional and specifies if the upgrade is a push. It's default value is `false`.
			
			This method throws a run-time exception if the test install fails.
			
			<pre>@isTest static void test() {
			  PostInstallClass postinstall =
			    new PostInstallClass();
			
			Test.testInstall(postinstall,
			    new Version(1,0));
			  }</pre>

testUninstall	UninstallHandler*uninstImp*	Void	Tests the implementation of the `UninstallHandler` interface, used for specifying an uninstall script in packages. Tests will run as the test initiator in the development environment.

Name	Arguments	Return Type	Description
			The *uninstImp* argument is a class that implements the `UninstallHandler` interface.
			This method throws a run-time exception if the test uninstall fails.
			```@isTest static void test() { UninstallClass uninstall = new UninstallClass(); Test.testUninstall(uninstall); }```

For more information, see

Desupport of Package.Version* Methods

In Summer '12, the `Package.Version*` and `runAs(Package.Version)` methods, used to customize behavior for different package versions, are no longer supported. These are being superseded by the `System.Version` and `runAs(System.Version)` methods, respectively, which are more general and allow for greater flexibility.

Apex Test Execution and Code Coverage Results Changes

You can now reset code coverage results for all classes and triggers in your organization to 0% from the Apex Classes page. To do so, click *Your Name* > **Setup** > **Develop** > **Apex Classes** > **Clear Code Coverage**.

Also, we've added two new options to give you more control over how code coverage results are computed and how asynchronous Apex tests are executed from the Apex Test Execution page. To access these options, click *Your Name* > **Setup** > **Develop** > **Apex Test Execution** > **Options...**.

- **Store Only Aggregated Code Coverage**: Stores code coverage results aggregated for all test methods. This option reduces code coverage calculation time when your organization contains large volumes of test methods and Apex code, that is, when the number of test methods multiplied by the number of all classes and triggers is in the amount of hundreds of thousands. With this option enabled, you can't view code coverage results for an individual test method. Also, if you modify test methods that are defined in a test class (a class annotated with `@isTest`), you'll have to clear code coverage results by clicking **Clear Code Coverage** on the Apex Classes page. This is because the existing code coverage results of classes and triggers that these test methods cover aren't automatically cleared when using this option and modifying the tests. This option applies to test methods regardless of how they're executed—synchronously or asynchronously.
- **Disable Parallel Apex Testing**: Executes asynchronous tests one at a time. This helps prevent test interference on shared data when tests run at the same time and access the same data. This only occurs when tests don't create their own data and turn off data isolation to access the organization's data. This option doesn't affect the asynchronous execution of tests, which continue to run asynchronously from the Apex Test Execution page.

Change in Running Asynchronous Processes in Test Methods

Previously, batch and scheduled Apex, which run asynchronously, executed in test methods only when included within the `startTest` and `stopTest` Test methods. They executed after `stopTest`, and then the test could be verified. These asynchronous processes now execute at the end of test methods when you don't specify the `startTest` and `stopTest` methods. This change applies only to Apex that is saved using Salesforce.com API version 25.0 and later, but not in earlier versions. Note that future methods (methods annotated with `@future`) continue to execute at the end of test methods when they're not included within the `startTest` and `stopTest` methods.

DML Support for Permission Set sObjects

DML operations are now supported with the following sObjects:

- FieldPermissions
- ObjectPermissions
- PermissionSet
- PermissionSetAssignment
- SetupEntityAccess

With this added support, you can now perform DML operations such as create, update, and delete on these objects from Apex. This allows you to use Apex to manage permissions in your organization programmatically.

New Site setPortalUserAsAuthProvider Method

The `setPortalUserAsAuthProvider` method is now available in the `Site` class. You can use this method to add user information from an authentication provider, such as Facebook©, to your Force.com site.

Name	Arguments	Return Type	Description
setPortalUserAsAuthProvider	sObject *user* String *contactId*	Void	Sets the specified user information within the site's portal via an authentication provider. • This method is only valid when a site is associated with a Customer Portal. • For more information on an authentication provider, see `Auth.RegistrationHandler` in the Force.com *Apex Code Developer's Guide.*

Changed isUpdateable Method of DescribeFieldResult

The `isUpdateable` method in `Schema.DescribeFieldResult` now indicates whether the field can be edited by the current user, or, if the field is a master-detail relationship field on a custom object, whether the child records can be reparented to different parent records (`true`), or not (`false`).

Callout Limit Increase for Batch Apex

The limit of callouts (HTTP requests or Web services calls) for each method execution in a batch Apex class increased from 1 to 10. The `start`, `execute`, and `finish` methods can make up to 10 callouts each.

Active Query Cursor Limit Increase

The limit of active query cursors per user increased from 5 to 50. All Apex code has this higher limit except for the batch Apex `start` method, which has a limit of 5 open cursors per user. The remaining batch methods have the higher limit of 50 cursors.

With this higher limit, SOQL queries in your code are less likely to reach the cursor limit and cause errors resulting from having cursors released by the system. Query cursors are created when SOQL queries execute and make use of inner queries or generate large result sets.

Cursor limits for different Force.com features are tracked separately. For example, you can have 50 Apex query cursors, 50 batch cursors, and 50 Visualforce cursors open at the same time.

Cleaning Up Old AsyncApexJob Records

The new purgeOldAsyncJobs System method allows you to delete asynchronous Apex job records (records in AsyncApexJob) for jobs that have finished execution before the specified date with a Completed, Aborted, or Failed status, and returns the number of records deleted. This method takes as its argument the date up to which old records are deleted. The date comparison is based on the CompletedDate field of AsyncApexJob, which is in the GMT time zone.

The system cleans up asynchronous job records for jobs that have finished execution and are older than seven days. You can use this method to further reduce the size of AsyncApexJob by cleaning up more records. This method is especially handy when you have a large AsyncApexJob object with more than 100,000 records, in which case, queries against AsyncApexJob might take a long time or might be terminated. Reducing the size of AsyncApexJob helps you avoid these situations.

Each execution of this method counts as a single row against the governor limit for DML statements.

This example shows how to delete all job records for jobs that have finished before today's date.

```
Integer count = System.purgeOldAsyncJobs
    (Date.today());
System.debug('Deleted ' +
    count + ' old jobs.');
```

Change in Sending Emails for Unhandled Exceptions

Starting in Summer '12, there has been a change concerning sending error emails to developers for unhandled exceptions. If the exception error is a duplicate, the corresponding email isn't suppressed and is still sent for Apex code running asynchronously—batch Apex, scheduled Apex, or future methods (methods annotated with @future.) Also, the subject of the error email now includes the job ID for asynchronous jobs. For Apex code running synchronously, duplicate error emails may get suppressed.

API Enhancements

Available in: **Enterprise**, **Unlimited**, **Developer**, and **Database.com** Editions

Summer '12 (API version 25.0) improvements:

Changes across the API layer:

- New and Changed Objects
    - ◊ Chatter API Objects
- SOQL Enhancements

Changes to individual APIs:

- SOAP API Enhancements
- Streaming API Enhancements
- Metadata API Enhancements

New and Changed Objects

For information about new and changed Chatter objects, see

New Objects

These objects are new in API version 25.0.

- The ChatterAnswersActivity object represents the reputation of a User in Chatter Answers communities.
- The DandBCompany object enables read-only access to D&B Company records and is available to organizations that have purchased Data.com Premium.
- The KnowledgeArticleVersionHistory object enables read-only access to the full history of an article.
- The SetupEntityAccess object represents enabled Apex class and Visualforce page access settings for the parent PermissionSet. This means you can use the API to query these settings in profiles and permission sets.
- The LiveChatButtonSkill is a junction object between LiveChatButton and Skill.
- The LiveChatTranscriptSkill is a junction object between LiveChatTranscript and Skill.
- The TaskRelation object is available to organizations that have Shared Activities enabled.
- The ForecastingQuota object is available to organizations that use Forecasts originally released in Winter '12.

Changed Objects

These objects have changed in API version 25.0.

- On the Account object, the name of the `DataDotcomCleanStatus` field has been changed to, simply, `CleanStatus`.
- The CallCenter object now includes a `CustomSettings` field, which specifies settings in the call center definition file, such as whether the call center uses the Open CTI, and SoftPhone properties, such as height in pixels.
- On the Contact object, the name of the `DataDotcomCleanStatus` field has been changed to, simply, `CleanStatus`.
- On the Lead object, the name of the `DataDotcomCleanStatus` field has been changed to, simply, `CleanStatus`.
- You can now use the PermissionSet object to query users' permissions and access settings in their profile as well as assigned permission sets. The PermissionSet object now includes the following read-only fields, which associate every profile with a permission set that stores the profile's user, object, and field permissions, as well as setup entity access settings.

  ◊ `IsOwnedByProfile`—specifies whether the permission set is owned by a profile (`true`) or not (`false`).
  ◊ `ProfileId`—when the permission set is owned by a profile, specifies the ID of the Profile.

- The Question object now includes a `HasSingleFieldForContent` field, which indicates if:

  ◊ The content of a Chatter Answers question is included in only one field: `Title` if the content is unformatted and less than 255 characters or `Body` if the content is formatted or is more than 255 characters (`true`)
  ◊ The content is included in two fields: `Body` and `Title` (`false`)

  This field also determines if content displays in one or two fields in Chatter Answers questions' feeds.
- The LiveChatTranscript object now includes the following fields:

  ◊ `ChatKey`, which is the session ID of a chat before it's persisted. This field can be used with advanced integrations in the Service Cloud console.
  ◊ `LiveChatDeploymentID`, which is the ID of the Live Agent deployment the chat session originated from.

- The LiveChatUserConfig object now includes a `HasNotifications` field, which determines whether desktop notifications are enabled for an agent configuration.
- The Task object has two new fields if your organization uses Shared Activities: `WhatCount` and `WhoCount`. Additionally, `query()`, `delete()`, and `update()` aren't allowed with tasks related to more than one contact in API versions 23.0 and lower.
- Certain fields on the following objects no longer include the Filter and Sort properties:

Object	Field
LiveChatDeployment	Domains
QuickText	Message

Chatter API Objects

Changed Chatter Objects and Chatter-Related Fields

These objects have changed in API version 25.0.

- On the ContentDocument object, the following fields have changed:

  ◊ `OwnerId`—This field is now updateable.
  ◊ `ParentId`—This field is now nillable.

- On the ContentDocumentLink object, the following fields have changed:

  ◊ The `ContentDocumentId` and `LinkedEntityId` fields are now createable.
  ◊ The `ShareType` field is now required.

  In addition to the field changes, the ContentDocumentLink object now supports the `update()` call and ContentDocumentLink objects with a `LinkedEntityId` of types `User`, `Group`, or `Organization` can be created and deleted via the API.

- On the User object, the following fields have changed:

  ◊ `CurrentStatus`—This field is deprecated in API version 25.0 and later.

    To add a post of type `UserStatus` on the user's profile in Chatter, post to the user directly by creating a FeedItem with the user's ParentId.

  ◊ `UserPreferencesEnableAutoSubForFeeds`—This field is now available in API version 25.0 and later.

    When `true`, the user automatically subscribes to feeds for any objects the user creates.

  ◊ `UserPreferencesDisableAutoSubForFeeds`—This field is deprecated in API version 25.0 and later. Starting with API version 25.0, use `UserPreferencesEnableAutoSubForFeeds` to enable or disable auto-follow for objects a user creates.

  ◊ `UserPreferencesDisableFileShareNotificationsForApi`—This field is now available in API version 25.0 and later.

    When `false`, email notifications are sent from the person who has shared a file to the users with whom the file has been shared.

Additional Enhancements

- You can now query and retrieve lead feed items that are associated with a converted lead record using the LeadFeed, NewsFeed, and UserProfileFeed objects.

SOQL Enhancements

Use the Salesforce Object Query Language (SOQL) to construct query strings used in Salesforce APIs. For a full description of the SOQL query syntax, see the *Salesforce SOQL and SOSL Reference Guide*.

SOQL Pagination—Generally Available

SOQL Pagination enables you to specify the starting row of the result set your SOQL query returns. You use SOQL Pagination via the SOQL OFFSET clause. Using SOQL OFFSET is helpful for paging through large result sets when you need to quickly jump to a particular subset of the entire results. As the offset calculation is done on the server and only the result subset is returned, using OFFSET is more efficient than retrieving the full result set and then filtering the results locally. For example, this SOQL query returns a result set that skips the first 10 rows:

```
SELECT Name
FROM Merchandise__c
WHERE Price__c > 5.0
ORDER BY Name
LIMIT 100
OFFSET 10
```

The maximum offset is 2,000 rows. Requesting an offset greater than 2,000 will result in a NUMBER_OUTSIDE_VALID_RANGE error.

SOAP API Enhancements

Changed Calls

These calls have changed in API version 25.0.

Call	Argument or Result Object	Field	Change	Description
describeSObjects()	DescribeSObjectResult	updateable property of the Field object obtained from the DescribeSObjectResult	Now also indicates whether child records in a master-detail relationship field on a custom object can be reparented to different parent records.	Indicates whether the field can be edited by the current user, or, if the field is a master-detail relationship field on a custom object, the child records can be reparented to different parent

Call	Argument or Result Object	Field	Change	Description
				records (`true`), or not (`false`).

Previous Versions

For links to documentation for previous versions of the API, see the What's New section of the relevant API or object reference document.

Streaming API Enhancements

New Events Usage Field

A new field on the Company Information page lets you see at a glance:

- How many Streaming API events your organization has used within the last 24 hours (from the current time)
- The maximum number of events within a 24–hour period that your organization has

To see the `Streaming API Events` field, navigate to *Your Name* > **Setup** > **Company Profile** > **Company Information**.

Metadata API Enhancements

Metadata REST API—Pilot

The Metadata REST API allows you to retrieve your organization's customization information, such as custom object definitions and page layouts, using the simplified approach of REST. In Summer '12, the service allows you to read metadata. It will be expanded in the future to write, update, and delete. The goal of this pilot is to allow developers to experience the new API and provide feedback that will guide implementation.

> **Note:** Because this is a pilot, changes will be made to improve the service that may alter the current resources. Pilot features are for testing and learning purposes only. Please don't use this pilot API for production projects.

To enable the Metadata REST API for your organization, contact salesforce.com. We appreciate your interest and look forward to your feedback.

For more information, see the Metadata REST API Developer's Guide.

New Metadata Types

These metadata types are new in Metadata API version 25.0.

Metadata Type	Description
CustomApplicationComponent	Represents a custom console component (Visualforce page) assigned to a CustomApplication that is marked as a Service Cloud console. Custom console components extend the capabilities of Service Cloud console apps.
SecuritySettings	Represents an organization's security settings. Security settings define trusted IP ranges for network access, password and login requirements, and session expiration and security settings. Note: This metadata type is only supported by the `retrieve()`, `describeMetadata()`, and `listMetadata()` calls. It's not supported by the `deploy()`, `create()`, `delete()`, or `update()` calls. You can deploy this type with all the retrieved settings or with any retrieved settings removed except for `ipRanges`. However, you can't edit any settings. If you deploy with any changed values or any incorrect `ipRanges`, an error message is returned.

Updated Metadata

These metadata fields have been added or changed in Metadata API version 25.0.

Metadata Type or Related Object	Field	Change	Description
CustomApplication	customApplicationComponents	New	Represents custom console components (Visualforce pages) assigned to a Service Cloud console app.
CustomApplication	detailPageRefreshMethod	New	Determines how detail pages refresh in a Service Cloud console app.
CustomApplication	domainWhitelist	New	Represents any external domains that users can access from within a Service Cloud console app. For example, `www.yourdomain.com`.
CustomApplication	isServiceCloudConsole	New	Indicates if the application is a Service Cloud console app.
CustomApplication	listPlacement	New	Represents how lists display in a Service Cloud console app. Required if `isServiceCloudConsole` is `true`.
CustomApplication	listRefreshMethod	New	Determines how lists refresh in a Service Cloud console app.
CustomApplication	workspaceMappings	New	Represents how records open in a Service Cloud console app. Required if `isServiceCloudConsole` is `true`.

Metadata Type or Related Object	Field	Change	Description
CustomField	reparentableMasterDetail	New	Indicates whether the child records in a master-detail relationship on a custom object can be reparented to different parent records. The default value is `false`.

CustomField	deleteConstraint	New	Provides deletion options for lookup relationships. Valid values are:
			
			SetNull
			    This is the default. If the lookup record is deleted, the lookup field is cleared.
			
			Restrict
			    Prevents the record from being deleted if it's in a lookup relationship.
			
			Cascade
			    Deletes the lookup record as well as associated lookup fields.
			
			Note: `deleteConstraint` may be visible in earlier versions of Metadata API, but it is only enabled in version 25.0.

DashboardComponent	chartSummary	New	Specifies the summary field for the chart data. Required if `isAutoSelectFromReport` is set to `false`.
DashboardComponent	componentType	Changed	This existing field has the following new valid values: • `ColumnLine` • `ColumnLineGrouped` • `ColumnLineStacked` • `ColumnLineStacked100`
DashboardComponent	groupingColumn	New	Specifies the field by which to group data. This data is displayed on the X-axis for vertical column charts and on the Y-axis for horizontal bar charts.
Flow	subflows	New	An array of subflows.
Flow	FlowSubflow	New	A subflow element references another flow, which it calls at runtime. The flow that contains the subflow element is referred to as the master flow. FlowSubflow extends FlowNode and inherits all of its fields.

Metadata Type or Related Object	Field	Change	Description
Flow	FlowSubflowInputAssignment	New	Assigns an element or value from the master flow to a variable in the referenced flow. Input assignments occur when the subflow calls the referenced flow.
Flow	FlowSubflowOutputAssignment	New	Assigns the value of a variable from the referenced flow to a variable in the master flow. Output assignments occur when the referenced flow is finished running.
Flow (a new field on FlowVariable)	isInput	New	Indicates whether the variable can be set at the start of the flow using URL parameters, Visualforce controllers, or subflow inputs. Default value: • False for a variable created in API version 25.0 and later or in the Cloud Flow Designer in Summer '12 and later. • True for a variable created in API version 24.0 or in the Cloud Flow Designer in Spring '12 and earlier. ⚠ **Caution:** Disabling input or output access for an existing variable may impact the functionality of applications and pages that call the flow and access the variable via URL parameters, Visualforce controllers, and subflows.
Flow (a new field on FlowVariable)	isOutput	New	Indicates whether the variable's value can be accessed from Visualforce controllers and other flows. Default value: • False for a variable created in API version 25.0 and later or in the Cloud Flow Designer in Summer '12 and later. • True for a variable created in API version 24.0 or in the Cloud Flow Designer in Spring '12 and earlier. ⚠ **Caution:** Disabling input or output access for an existing variable may impact the functionality of applications and pages that call the flow and access the variable via URL

Metadata Type or Related Object	Field	Change	Description
			parameters, Visualforce controllers, and subflows.
Flow (a new field on FlowDynamicChoiceSet)	`limit`	New	Maximum number of choices to include in the generated set of choices. Maximum and default: 200.
Flow (a new field on FlowDynamicChoiceSet and FlowRecordLookup)	`sortField`	New	Field that is used for sorting the records that meet the filter criteria. If this field isn't specified then the returned records are not sorted.
Flow (a new field on FlowDynamicChoiceSet and FlowRecordLookup)	`sortOrder`	New	Order in which to sort the records. If this field isn't specified, then the results are not sorted.
Layout	`customConsoleComponents`	New	Represents custom console components (Visualforce pages) on a page layout. Custom console components only display in the Service Cloud console.
Profile	`loginHours`	New	Indicates the hours within which a user with this profile may log in. If not specified, the profile doesn't restrict a user's login hours.
Report (a new field on ReportAggregate)	`isCrossBlock`	New	Determines whether the custom summary formula is a cross-block formula, which is available with joined reports. `true` indicates a cross-block custom summary formula. `false` indicates a standard custom summary formula.
Report (a new field on ReportBlockInfo)	`blockID`	New	Required. `blockId` is used in cross-block custom summary formulas and joined report charts to identify the block containing each summary field. `blockId` is assigned automatically. Valid values are B1 through B5.

SITE.COM ENHANCEMENTS

User Roles and Permissions Enhancements

> Available for purchase in: **Enterprise** and **Unlimited** Editions
>
> Available (with limitations) in: **Developer** Edition

Summer '12 enhances the permissions features for Site.com by adding user roles at the site level. Prior to roles, site-level permissions were controlled by the license users had on their user profile in Salesforce. Now, permissions are a combination of the user's license and their assigned role at the site level. Roles are assigned using Manage User Roles in the Site Configuration section of each site.

Every user must have a role assigned at the site level. Using roles, you can modify permissions for individual sites. Users can only have one role per site, but their roles can vary between sites. For example, a person can be a publisher on one site and be a contributor on another. To manage roles for a site, you must have a Publisher license plus the "Manage Users" permission. There are three user roles.

- Publisher—Publishers are users who can manage all content. They can create sites, templates, style sheets, pages, and add data functions. If they have the "Manage Users" permission, they can also assign roles, set up domains, and publish sites. This role requires the Publisher license.
- Designer—Designers are similar to publishers in that they have lots of control over content, but they can't manage domains or publish sites. If they have the "Manage Users" permission, they can also assign roles. This role requires the Publisher license.
- Contributor—Contributors have the most restricted access to content. They typically are restricted to editing content blocks. Even if contributors have the "Manage Users" permission, they can't manage roles at the site level. This role requires the Contributor license.

In addition to adding roles, the "Manage User" and "Customize Application" permission requirements on some features have changed. For example, the "Manage Users" permission is no longer required to create and import sites. This table lists the main features and their role, permission, and license requirements.

Site.com Studio Feature Requirements			
Feature	**License (Publisher or Contributor)**	**Permissions ("Manage User" or "Customize Application")**	**Site.com Studio User Role (Publisher, Designer, Contributor)**
Assign feature license to user profile		"Manage Users"	
Add users and roles at the site level	Publisher	"Manage Users"	Publisher or Designer
Enable contributors to add pages and edit content blocks and graphics	Publisher		Publisher or Designer

Site.com Studio Feature Requirements			
Feature	License (Publisher or Contributor)	Permissions ("Manage User" or "Customize Application")	Site.com Studio User Role (Publisher, Designer, Contributor)
Create websites	Publisher		(Users who create a site are automatically added to that site as a Publisher)
Delete websites	Publisher		Publisher or Designer
Import websites	Publisher		(Users who import a site are automatically added to the new site as a Publisher)
Export websites	Publisher		Publisher or Designer
Duplicate websites	Publisher		Publisher or Designer
Manage Domains (Unavailable for Developer Editions)	Publisher		Publisher
Publish changes to the live website (Unavailable for Developer Editions)	Publisher		Publisher
Create page templates	Publisher		Publisher or Designer
Create website pages	Publisher or Contributor		Publisher or Designer Contributor only if enabled by the Publisher or Designer in the page template's Properties pane
Create and modify style sheets	Publisher		Publisher or Designer
Modify layout and design, and add page elements	Publisher		Publisher or Designer
Add repeaters and other data services page elements	Publisher		Publisher or Designer
Modify the Guest User profile to set access permissions to Salesforce objects for data services	Publisher	"Manage Users" and "Customize Application"	Publisher or Designer
Import assets, such as images	Publisher or Contributor		Any assigned role
Edit content and images	Publisher or Contributor		Publisher or Designer Contributor only if enabled by the Publisher or Designer in the page template's Properties pane

Site.com Studio Feature Requirements			
Feature	License (Publisher or Contributor)	Permissions ("Manage User" or "Customize Application")	Site.com Studio User Role (Publisher, Designer, Contributor)
Preview website pages	Publisher or Contributor		Any assigned role

For more information about roles and permissions, see "About Site.com User Roles" in the online help.

Additional Site.com Enhancements

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

Available (with limitations) in: **Developer** Edition

ZIP File Import

With Summer '12, contributors, designers, and publishers can now import folders of assets and maintain the folder structure in the site. Just create the ZIP file of the content and select **Unzip files** during the upload process to import it as you would any other asset. You can upload and unzip a file of up to 200 MB.

See "Importing and Managing Assets" in the online help.

HTML Tag Property

The updated `HTML Tag` property (previously called `Render Tag`) lets designers and publishers modify the default `div` tag of panels, repeaters, repeater elements, custom code, and content blocks. This gives you greater flexibility and control over the way the page element is displayed on the page.

> **Caution:** The HTML Tag property provides a powerful means of controlling how page elements are displayed. However, if you change a page element's HTML tag, you may generate invalid HTML. Before publishing any changes, ensure you test the page thoroughly.

See "Changing a Page Element's HTML Tag" in the online help.

Change in Behavior for Editable Components

When you create a page or template from another page template, the content of all editable components on the derived page or template is linked to the content of the editable components on the parent page template. Updates to an editable component on the parent template will push down to your derived page or page template. However, if you make changes to an editable component at the derived page or template level, you break the link, and any subsequent changes made to the component on the parent template won't trickle down to your derived page or template. Note that this linking behavior only works one level down from the parent template.

Publishing History

Designers and publishers can now see a publishing history for their sites. The history contains the date, publisher, and detail information for each publish activity.

See "About the Publish History" in the online help.

Trash Can

New for Summer '12 is the trash can feature. When you delete a page, template, stylesheet, or asset, it goes into the trash can. Deleted items remain in the trash can indefinitely. Retrieved items are restored to their original location. If the original location no longer exists, they restore to the top level root directory.

Repeater and Data Table Pagination—Generally Available

When working with repeaters and data tables, publisher or designers can let users page through the displayed data by adding one of three pagination events. These events—Previous Page, Next Page, and Go To Page—are now generally available in the Events pane in Site.com Studio when the page is open. This feature is particularly useful when working with large amounts of data.

See "Adding Pagination to Repeaters and Data Tables" in the online help.

Adding Domains Using TXT Records

If you want to reuse a domain name that's currently in use, you can now use TXT records to add the domain name to a site's list of managed domains. For example, if you're migrating from an existing site, you can use TXT records to transition seamlessly to the new site when you're ready to go live. This method is suitable only for existing sites that use domain name system (DNS) A records.

See "Adding Domains Using TXT Records in Site.com" in the online help.

ISVforce Enhancements

Summer '12 has several enhancements that make it easier to install, upgrade, uninstall, debug, and support packages. It also introduces Checkout, a service that enables customers to pay for your apps directly on the AppExchange.

Running Apex on Package Install/Upgrade

App developers can specify an Apex script to run automatically after a subscriber installs or upgrades a managed package. This makes it possible to customize the package install or upgrade, based on details of the subscriber's organization. For instance, you can use the script to populate custom settings, create sample data, send an email to the installer, notify an external system, or kick off a batch operation to populate a new field across a large set of data. For simplicity, you can only specify one post install script. It must be an Apex class that is a member of the package.

The post install script is invoked after tests have been run, and is subject to default governor limits. It runs as a special system user that represents your package, so all operations performed by the script appear to be done by your package. You can access this user by using UserInfo. You will only see this user at runtime, not while running tests.

If the script fails, the install/upgrade is aborted. Any errors in the script are emailed to the user specified in the **Notify on Apex Error** field of the package. If no user is specified, the install/upgrade details will be unavailable.

The post install script has the following additional properties.

- It can initiate batch, scheduled, and future jobs.
- It can't access Session IDs.

- It can only perform callouts using an async operation. The callout occurs after the script is run and the install is complete and committed.

How does a Post Install Script Work?

A post install script is an Apex class that implements the `InstallHandler` interface. This interface has a single method called `onInstall` that specifies the actions to be performed on installation.

```
global interface InstallHandler {
  void onInstall(InstallContext context)
}
```

The `onInstall` method takes a context object as its argument, which provides the following information.

- The org ID of the organization in which the installation takes place.
- The user ID of the user who initiated the installation.
- The version number of the previously installed package (specified using the `Version` class). This is always a three-part number, such as 1.2.0.
- Whether the installation is an upgrade.
- Whether the installation is a push.

The context argument is an object whose type is the `InstallContext` interface. This interface is automatically implemented by the system. The following definition of the `InstallContext` interface shows the methods you can call on the context argument.

```
global interface InstallContext {
  ID organizationId();
  ID installerId();
  Boolean isUpgrade();
  Boolean isPush();
  Version previousVersion();
}
```

Version Methods and Class

You can use the methods in the `System.Version` class to get the version of a managed package and to compare package versions. A package version is a number that identifies the set of components uploaded in a package. The version number has the format *majorNumber.minorNumber.patchNumber* (for example, 2.1.3). The major and minor numbers increase to a chosen value during every non-patch release. Major and minor number increases will always use a patch number of 0.

The following are instance methods for the `System.Version` class.

Method	Arguments	Return Type	Description
compareTo	System.Version *version*	Integer	Compares the current version with the specified version and returns one of the following values: - Zero if the current package version is equal to the specified package version - An Integer value greater than zero if the current package version is greater than the specified package version

Method	Arguments	Return Type	Description
			• An Integer value less than zero if the current package version is less than the specified package version If a two-part version is being compared to a three-part version, the patch number is ignored and the comparison is based only on the major and minor numbers.
major		Integer	Returns the major package version of the calling code.
minor		Integer	Returns the minor package version of the calling code.
patch		Integer	Returns the patch package version of the calling code or `null` if there is no patch version.

The `System` class contains two methods that you can use to specify conditional logic, so different package versions exhibit different behavior.

- `System.requestVersion`: Returns a two-part version that contains the major and minor version numbers of a package. Using this method, you can determine the version of an installed instance of your package from which the calling code is referencing your package. Based on the version that the calling code has, you can customize the behavior of your package code.
- `System.runAs(System.Version)`: Changes the current package version to the package version specified in the argument.

When a subscriber has installed multiple versions of your package and writes code that references Apex classes or triggers in your package, they must select the version they are referencing. You can execute different code paths in your package's Apex code based on the version setting of the calling Apex code making the reference. You can determine the calling code's package version setting by calling the `System.requestVersion` method in the package code.

For more information, including a code example, see Version Methods in the *Force.com Apex Code Developer's Guide*.

Example of a Post Install Script

The following sample post install script performs these actions on package install/upgrade.

- If the previous version is null, that is, the package is being installed for the first time, the script:

  ◊ Creates a new Account called "Newco" and verifies that it was created
  ◊ Creates a new instance of the custom object Survey, called "Client Satisfaction Survey"
  ◊ Sends an email message to the subscriber confirming installation of the package

- If the previous version is 1.0, the script creates a new instance of Survey called "Upgrading from Version 1.0"
- If the package is an upgrade, the script creates a new instance of Survey called "Sample Survey during Upgrade"

• If the upgrade is being pushed, the script creates a new instance of Survey called "Sample Survey during Push"

```
global class PostInstallClass implements InstallHandler {
  global void onInstall(InstallContext context) {
    if(context.previousVersion() == null) {
      Account a = new Account(name='Newco');
      insert(a);

      Survey__c obj = new Survey__c(name='Client Satisfaction Survey');
      insert obj;

      User u = [Select Id, Email from User where Id =:context.installerID()];
      String toAddress= u.Email;
      String[] toAddresses = new String[]{toAddress};
      Messaging.SingleEmailMessage mail =
        new Messaging.SingleEmailMessage();
      mail.setToAddresses(toAddresses);
      mail.setReplyTo('support@package.dev');
      mail.setSenderDisplayName('My Package Support');
      mail.setSubject('Package install successful');
      mail.setPlainTextBody('Thanks for installing the package.');
      Messaging.sendEmail(new Messaging.Email[] { mail });
      }
    else
      if(context.previousVersion().compareTo(new Version(1,0)) == 0) {
      Survey__c obj = new Survey__c(name='Upgrading from Version 1.0');
      insert(obj);
      }
    if(context.isUpgrade()) {
      Survey__c obj = new Survey__c(name='Sample Survey during Upgrade');
      insert obj;
      }
    if(context.isPush()) {
      Survey__c obj = new Survey__c(name='Sample Survey during Push');
      insert obj;
      }
    }
  }
```

You can test a post install script using the new `testInstall` method of the `Test` class. This method takes the following arguments.

• A class that implements the `InstallHandler` interface.
• A `Version` object that specifies the version number of the existing package.
• An optional Boolean value that is `true` if the installation is a push. The default is `false`.

This sample shows how to test a post install script implemented in the `PostInstallClass` Apex class.

```
@isTest
static void testInstallScript() {
  PostInstallClass postinstall = new PostInstallClass();
    Test.testInstall(postinstall, null);
    Test.testInstall(postinstall, new Version(1,0), true);
    List<Account> a = [Select id, name from Account where name ='Newco'];
    System.assertEquals(a.size(), 1, 'Account not found');
  }
```

Specifying a Post Install Script

Once you have created and tested the post install script, you can specify it in the **Post Install Script** lookup field on the Package Detail page. In subsequent patch releases, you can change the contents of the script but not the Apex class.

The class selection is also available via the Metadata API as `Package.postInstallClass`. This is represented in package.xml as a `<postInstallClass>foo</postInstallClass>` element.

Running Apex on Package Uninstall

App developers can specify an Apex script to run automatically after a subscriber uninstalls a managed package. This makes it possible to perform cleanup and notification tasks based on details of the subscriber's organization. For simplicity, you can only specify one uninstall script. It must be an Apex class that is a member of the package.

The uninstall script is subject to default governor limits. It runs as a special system user that represents your package, so all operations performed by the script will appear to be done by your package. You can access this user by using UserInfo. You will only see this user at runtime, not while running tests.

If the script fails, the uninstall continues but none of the changes performed by the script are committed. Any errors in the script are emailed to the user specified in the **Notify on Apex Error** field of the package. If no user is specified, the uninstall details will be unavailable.

The uninstall script has the following restrictions. You can't use it to initiate batch, scheduled, and future jobs, to access Session IDs, or to perform callouts.

How does an Uninstall Script Work?

An uninstall script is an Apex class that implements the `UninstallHandler` interface. This interface has a single method called `onUninstall` that specifies the actions to be performed on uninstall.

```
global interface UninstallHandler {
  void onUninstall(UninstallContext context)
}
```

The `onUninstall` method takes a context object as its argument, which provides the following information.

- The org ID of the organization in which the uninstall takes place
- The user ID of the user who initiated the uninstall

The context argument is an object whose type is the `UninstallContext` interface. This interface is automatically implemented by the system. The following definition of the `UninstallContext` interface shows the methods you can call on the context argument.

```
global interface UninstallContext {
  ID organizationId();
  ID uninstallerId();
}
```

Example of an Uninstall Script

The sample uninstall script below performs the following actions on package uninstall.

- Inserts an entry in the feed describing which user did the uninstall and in which organization
- Creates and sends an email message confirming the uninstall to that user

```
global class UninstallClass implements UninstallHandler {
  global void onUninstall(UninstallContext ctx) {
    FeedItem feedPost = new FeedItem();
    feedPost.parentId = ctx.uninstallerID();
    feedPost.body = 'Thank you for using our application!';
    insert feedPost;

    User u = [Select Id, Email from User where Id =:context.uninstallerID()];
    String toAddress= u.Email;
    String[] toAddresses = new String[] {toAddress};
    Messaging.SingleEmailMessage mail = new Messaging.SingleEmailMessage();
    String[] toAddresses = new String[] {'admin@package.dev'};
    mail.setToAddresses(toAddresses);
    mail.setReplyTo('support@package.dev');
    mail.setSenderDisplayName('My Package Support');
    mail.setSubject('Package uninstall successful');
    mail.setPlainTextBody('Thanks for uninstalling the package.');
    Messaging.sendEmail(new Messaging.Email[] { mail });
  }
}
```

You can test an uninstall script using the `testUninstall` method of the `Test` class. This method takes as its argument a class that implements the `UninstallHandler` interface.

This sample shows how to test an uninstall script implemented in the `UninstallClass` Apex class.

```
@isTest
static void testUninstallScript() {
  Id UninstallerId = UserInfo.getUserId();
  List<FeedItem> feedPostsBefore =
    [SELECT Id FROM FeedItem WHERE parentId=:UninstallerId AND CreatedDate=TODAY];
  Test.testUninstall(new UninstallClass());
  List<FeedItem> feedPostsAfter =
    [SELECT Id FROM FeedItem WHERE parentId=:UninstallerId AND CreatedDate=TODAY];
  System.assertEquals(feedPostsBefore.size() + 1, feedPostsAfter.size(),
    'Post to uninstaller failed.');
}
```

Specifying an Uninstall Script

Once you have created and tested the uninstall script and included it as a member of your package, you can specify it in the **Uninstall Script** lookup field on the Package Detail page. In subsequent patch releases, you can change the contents of the script but not the Apex class.

The class selection is also available via the Metadata API as `Package.uninstallClass`. This is represented in package.xml as an `<uninstallClass>foo</uninstallClass>` element.

Enhancements to Subscriber Support Console

Summer '12 has these enhancements for subscriber support.

- The Subscriber Support Console works with sandbox orgs. Admins working in a sandbox can grant login access and you can log in as them.
- You can launch the Developer Console when logged in as a subscriber and see your debug information without needing to first set up a debug log.

AppExchange Checkout

Checkout is a service from salesforce.com and Recurly that lets your customers pay for your applications directly on the AppExchange. The service bills your customers' credit cards automatically and deposits money into your account. If access to your app is sold as a subscription, the service will bill your customers on a periodic basis.

Checkout gives you seamless access to Recurly's no-touch recurring billing and subscription management, including initial payment, add-on, reduction, cancellation, and automatic renewal. It also automatically updates licenses in the License Management Application (LMA). Checkout makes it easier for customers to pay for your app while saving you the pain of managing recurring billing and licenses.

To sign up for Checkout:

1. Click the Publishing tab on AppExchange.
2. Click **Edit Listing** for your app.
3. Click the Pricing tab on the Listing page.
4. Click **Sign up for Checkout**.
5. An overlay appears that explains the service and verifies that you're using your AppExchange Publishing Organization (APO) and that you've linked your partner account to your AppExchange provider profile. Click **Sign Up** to continue.
6. An overlay appears with terms and conditions from Recurly and from salesforce.com. Accept the terms to continue.
7. A message appears confirming that you've signed up for Checkout. Finish specifying the pricing information in the Pricing tab for your app.

This completes the Checkout signup process. To make Checkout live on your listing, you'll need to register with Recurly. You can do this by clicking the **Go to Recurly** link that appears in the warning message informing you of this last step. In Recurly, you'll need to:

1. Specify your payment gateway and merchant bank account information.
2. Provide a credit card that will be used to bill you on a monthly basis. The amount charged is 15% of your revenues billed through AppExchange Checkout.
3. Activate the service by going live.

For more information on these tasks, visit http://appexchange-docs.recurly.com.

Once you've activated Checkout, all customers who buy your app on the AppExchange will be asked to provide their credit card information. If they proceed to install your app, they will be charged according to the payment details you've specified.

Service Cloud Console Apps for the AppExchange

Available in: **Enterprise**, **Unlimited**, and **Developer** Editions with the Service Cloud

User Permissions Needed	
To create packages:	"Create AppExchange Packages"
To upload packages to the AppExchange:	"Upload AppExchange Packages"

The Service Cloud console is designed for users in fast-paced environments who need to find, update, and create records quickly. The AppExchange is an online marketplace where Salesforce users can browse, share, sell, and purchase applications for their Salesforce organizations. With Summer '12, users with the appropriate permissions can package, distribute, or install Service Cloud Console apps from the AppExchange.

For more information, see "Service Cloud Console Overview" and "Overview of Packages" in the online help.

Desupported Features

In Summer '12, some existing functionality has been desupported as it has been superseded by newer features.

Desupport of Package-Based Branding

In Summer '12, package-based email branding is being superseded by the Trialforce branding feature, which was GA in Spring '12. Trialforce branding gives you greater flexibility for customizing branding across multiple products, not just for emails but for login sites as well. For more information about Trialforce branding, see "About Trialforce Branding" in the online help. If you have questions about migrating your existing branding setup, visit the salesforce.com partner portal.

Desupport of Package.Version* Methods

In Summer '12, the `Package.Version*` and `runAs(Package.Version)` methods, used to customize behavior for different package versions, are no longer supported. These are being superseded by the `System.Version` and `runAs(System.Version)` methods, respectively, which are more general and allow for greater flexibility.

Additional Force.com Enhancements

Troubleshooting with Inbound Email Snapshots

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

User Permissions Needed	
To request, view, download, and delete email snapshots:	"Modify All Data"

Inbound email snapshots capture a copy of inbound email messages, helping you diagnose issues with email services such as Email to Salesforce, Email-to-Case, and Apex email services. Request a snapshot by specifying criteria for the email's To and From addresses, and when an inbound message meets that criteria, the snapshot records a single copy that you can view and download. The email itself is processed normally without alteration. Snapshots contain the:

- Sender's address
- Inbound email service address
- Date and time of the snapshot
- Full message contents, including headers and attachments

To access inbound email snapshots, click *Your Name* > **Setup** > **Monitoring** > **Email Snapshots**.

- To request an inbound email snapshot, enter criteria for the To address (required) and From address (optional). Then click **Request Snapshot**. The requested snapshot is added to the list of Pending and Completed Snapshots. As soon as an inbound message meets your specified criteria, we take a snapshot and complete the request.
- To view a completed snapshot, you can:

Option	Description
View snapshot details	Click **Show Details** to see when the snapshot was taken, the sender's address, and the inbound email service address. Click **Hide Details** to collapse the details section.
Download the snapshot	Click **Download** then either open the email as a .txt file or save it to your computer.

Consider these tips when using inbound email snapshots:

- You can have a maximum combined total of 25 pending and completed snapshots. Delete some to free up space for new snapshots. You can delete any pending or completed snapshot, even if someone else originally requested it.
- Deleted snapshots are permanently deleted. They're not moved to the Recycle Bin.
- When specifying criteria for the To address, keep these tips in mind.

    ◊ The criteria apply to any of the addresses specified in an email's To, CC, or BCC fields (not only the To field).
    ◊ Inbound email service addresses always end in `salesforce.com`.
    ◊ You may want to look up the addresses your organization uses. This table summarizes where to find them.

Type of inbound email address	Where to find addresses
The user's unique Email to Salesforce address	Every user can click **Your Name** > **Setup** > **Email** > **My Email to Salesforce** to view the unique address assigned to the user when your organization enabled Email to Salesforce.
Email routing addresses for Email-to-Case or On-Demand Email-to-Case	Click **Your Name** > **Setup** > **Customize** > **Cases** > **Email-to-Case** to open the Email-to-Case settings page. View the Routing Addresses section.
Your organization's email service addresses	Click **Your Name** > **Setup** > **Develop** > **Email Services**, then the name of an email service.

- You can use an asterisk (*) wildcard in both the local-part of the email address (the part before the @ symbol) and in the domain-part (the part after the @ symbol). Spaces, commas, and semicolons aren't valid characters. Salesforce email addresses are case-insensitive. Each address field can contain a maximum of 255 characters.
- You can click **Request Snapshot** multiple times if you want to request more than one snapshot with identical criteria.
- If you believe a snapshot should have completed but it still shows Pending status, try refreshing the page.
- Snapshots don't expire. Requested snapshots can remain in Pending status indefinitely if no inbound emails match the specified criteria. Completed snapshots persist until you delete them.

To enable this convenient self-service troubleshooting tool, contact Customer Support.

Data Export File Size Increased

The maximum size of data export archival files has increased from 128 MB to 512 MB. If you export large data volumes, you may have fewer files to download.

To access data export in the application, navigate to **Your Name** > **Setup** > **Data Management** > **Data Export**.

Recent Items in Setup—Beta

You asked for it! This enhancement is from an idea on the IdeaExchange.

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

User Permissions Needed	
To modify user interface settings:	"Customize Application"

Now, it takes only one click to view your recently-modified items. The Recent Items list displays metadata items that you've recently viewed, edited, or created, and their related objects.

Note:
This release contains a beta version of the Recent Items list that is production-quality but has known limitations.

The Recent Items list displays the following metadata items:

- Apex classes

- Apex triggers
- Apps
- Fields
- Objects
- Page layouts
- Permission sets
- Profiles
- Static resources
- Tabs
- Users
- Validation rules
- Visualforce pages
- Visualforce components

Note: The Recent Items list on the Force.com Home page is independent of the Recent Items section in the sidebar column of most Salesforce pages. The Recent Items list on the Force.com Home page displays items used by administrators, while the Recent Items section in the sidebar column displays records that end users have worked with.

Standard Object Limits in Setup

You asked for it! This enhancement is from an idea on the IdeaExchange.

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

In Summer '12, a standard object limits page shows details about your usage of customizations on an object, such as the custom fields you've added or sharing rules you've applied. When an item exceeds the limit allowed for the object, or reaches 75% of the limit, a tip displays that suggests what you can do next.

You can refer to the standard object limits page when planning how you want to customize a particular standard object, or to monitor the usage and limits of customizations on that object.

To access the standard object limits page, click **Your Name** > **Setup** > **Customize**, click the name of the desired standard object, then click the limits option for that object.

Note: The object limit percentages displayed for items used are truncated, not rounded. For example, if your organization uses 95.55% of the limit for a particular item, the percentage displayed is 95%.

Force.com Migration Tool Documentation Location

The *Force.com Migration Tool Guide* isn't included in the Force.com Migration Tool .zip file for Summer '12. You can always find the most up-to-date version of the *Force.com Migration Tool Guide* at www.salesforce.com/us/developer/docs/daas/salesforce_migration_guide.pdf (PDF) or www.salesforce.com/us/developer/docs/daas/index.htm (HTML).

Enhanced Profile User Interface: Object and Tabs Page Renamed

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

In Summer '12, the Objects and Tabs page in the enhanced profile user interface is now named "Object Settings." This page has the same functionality—only the name has changed.

If the enhanced profile user interface is enabled in your organization, you can view this page by clicking `Your Name` > **Setup** > **Manage Users** > **Profiles**, selecting a profile, then clicking **Object Settings**.

Organization Administrators Can Log in as Any User

You asked for it! This enhancement is from an idea on the IdeaExchange.

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

User Permissions Needed	
To set login access policies:	"Manage Users"
To log in as any user:	"Modify All Data"

With Summer '12, administrators can log in as any user in their organization without asking end-users to grant login access.

Note: This feature doesn't apply to portal users who have login access granted automatically, and Chatter Free users.

To enable this login access policy:

1. Contact salesforce.com to have this feature enabled in your organization. You can't complete the remaining steps until salesforce.com enables the feature.
2. Click `Your Name` > **Setup** > **Security Controls** > **Login Access Policies**.
3. On the Login Access Policies page, enable **Administrators Can Log in as Any User**.
4. Click **Save**.

When this is enabled, users won't have the option to grant login access to administrators, but they can still grant login access to salesforce.com or partner support agents, depending on the login access policies specified for the organization.

Regardless of the login access policy, when an administrator logs in as another user, the login and logout events are recorded in the setup audit trail.

Allow Reparenting Option in Master-Detail Relationship Definitions

In Summer '12, a new advanced relationship field option enables administrators to allow child records in master-detail relationships on custom objects to be reparented to different parent records. Select the `Allow reparenting` option in the master-detail relationship definition. By default, records in master-detail relationships can't be reparented.

Custom Object Limits in Setup

You asked for it! This enhancement is from an idea on the IdeaExchange.

In Summer '12, a new related list at the bottom of custom object definition pages displays information about the usage of:

- Custom fields
- Roll-up summary fields
- Custom relationship fields
- Active workflow rules
- Total workflow rules
- Approval processes
- Active lookup filters
- Active validation rules
- VLOOKUP functions
- Sharing rules (Both owner- and criteria-based)
- Sharing rules (Criteria-based only)

When an item exceeds the limit allowed for the object, or reaches 75% of the limit, a tip displays that suggests what you can do next.

Note: The object limit percentages displayed for items used are truncated, not rounded. For example, if your organization uses 95.55% of the limit for a particular item, the percentage displayed is 95%.

Changes in Full Sandbox Configuration

Available in: **Enterprise**, **Unlimited**, and **Database.com** Editions

When you create or refresh a full sandbox in Summer '12, you can configure it not to copy some data that is generally not useful in a sandbox. Keeping the minimum selections will speed up your sandbox copy.

- The **Case History** option allows you to select the number of days of case history from your production organization to copy to your sandbox. You can copy from 0 to 180 days, in 30 day increments. The default value is 30 days.
- By default, Chatter data won't be copied to your sandbox. Chatter data includes feeds, messages, and discovery topics. Select the **Copy Chatter Data** checkbox if you need to copy it.
- The setup audit trail history of your production organization won't be copied to your sandbox. The audit trail for your sandbox organization will start when you begin to use it.
- Archived activities (tasks and events that aren't available in the production organization because they're over a year old) and password history (users' previous passwords) won't be copied to your sandbox.

Note: Don't increase the default selections unless special circumstances require it. Too much data can cause significant delays in the time it takes to copy your sandbox.

Corrections to Sandbox Retention Policy

Available in: **Enterprise**, **Unlimited**, and **Database.com** Editions

The Spring '12 documentation incorrectly said that before an unactivated or locked sandbox is scheduled for deletion, you'll receive at least three email notifications. You'll get two emails reminding you to activate or obtain additional licenses before these sandboxes are deleted.

In addition, you'll have 60 days, not 30 days, before a locked sandbox is scheduled for deletion. Sandboxes become locked when all the licenses for that type of sandbox expire.

New Lookup Relationship Options

Available in: **All** Editions.

Starting in Summer '12, you have new choices when you create a lookup relationship between two records, giving you more control over how you define the relationship. First, you can make the lookup field required or optional. If the lookup field is optional, you can specify one of three behaviors to occur if the lookup record is deleted:

- `Clear the value of this field` This is the default. Clearing the field is a good choice when the field does not have to contain a value from the associated lookup record.
- `Don't allow deletion of the lookup record that's part of a lookup relationship` This option restricts the lookup record from being deleted if you have any dependencies, such as a workflow rule, built on the relationship.
- `Delete this record also` Available only if a custom object contains the lookup relationship, not if it's contained by a standard object. However, the lookup object can be either standard or custom. Choose when the lookup field and its associated record are tightly coupled and you want to completely delete related data.

> **Caution:** Choosing `Delete this record also` can result in a *cascade-delete*. A cascade-delete bypasses security and sharing settings, which means users can delete records when the target lookup record is deleted *even if they don't have access to the records*. To prevent records from being accidentally deleted, cascade-delete is disabled by default. Contact Salesforce.com to get the cascade-delete option enabled for your organization.

Formula Function Changes

We have improved how we compile many formula functions. Compiled formula fields still cannot exceed 5,000 bytes, but individual functions (such as DATEVALUE) now contribute less to the function's total compile size. This should improve the performance of affected formulas.

We also made some improvements around error checking for the DATE function.

Finally, we've improved the documentation for several formula functions on the Operators and Functions online help:

- CASESAFEID has been added.
- The Description is improved for the following functions:

    ◊ BR
    ◊ HTMLENCODE
    ◊ IMAGE
    ◊ ISNEW
    ◊ JSENCODE
    ◊ JSINHTMLENCODE
    ◊ REGEX

◊ URLENCODE

Supported Locale Online Help Enhanced

We've added three locales to the Supported Locales documentation: Hungarian (Hungary), Indonesian (Indonesia), and Turkish (Turkey).

Custom field labels changes

We now support only plain text in custom field labels for organizations not currently using HTML in their labels.

Time-Dependent Field Updates Can Retrigger Workflow Rules

Available in: **Enterprise**, **Unlimited**, **Developer**, and **Database.com** Editions.

In Summer '12, field update actions for time-based workflow rules can trigger the re-evaluation of workflow rules. Previously, time-dependent field updates that caused field values to change didn't trigger workflow rule re-evaluation on the associated objects.

Help and Training Enhancements

Videos

The following videos are now available:

- Introducing Chatter Messenger
- How Do I Set Up Data.com Clean?
- Using the Data.com Industry Selector
- Using the Developer Console to Edit, Execute, and Debug Apex Classes
- Tips for Scheduling Reports
- Using Cross Filters in Reports
- Sharing Files in Chatter

Tip Sheets and Implementation Guides

The following new or updated documents are now available:

- *FAQ: Scheduling Reports* is a new resource for all commonly asked questions about report scheduling.
- The *Salesforce Knowledge Implementation Guide* has a new chapter that describes how to implement Knowledge-Centered Support (KCS) features in your organization. This exciting group of features helps you to create more efficient collaboration within your team of Salesforce Knowledge users, and provide pertinent and accurate information to your customers.

Developer Guides

The following new or updated developer documentation is now available:

- *SOAP API Developer's Guide*–This guide was previously called the *Web Services API Developer's Guide*. Many code samples in this guide have been updated.
- *Salesforce SOQL and SOSL Reference Guide*–A new guide that describes the Salesforce Object Query Language and Salesforce Object Search Language. This documentation, originally part of the *SOAP API Developer's Guide*, is now a standalone guide.
- *Force.com Streaming API Developer's Guide*—A new code example for Streaming API has been added. This code sample takes you step-by-step through the process of creating a Visualforce page, subscribing to a channel, and receiving notifications on the page as a result of data updates. This page lets you interactively subscribe and unsubscribe to any channel.
- The *Salesforce Knowledge Developer's Guide* has a new chapter that explains how to use REST or Apex APIs to manage the publication lifecycle of Salesforce Knowledge articles.
- *Customizing Case Feed with Visualforce*–A new guide that describes how to create customized Case Feed pages within the Service Cloud console using Visualforce.

Workbooks

The following new or updated workbooks are now available:

- *Forecasts Administrator's Workbook*—Introduces you to setting up the Forecasts product, originally released in Winter '12. Through a series of tutorials, you'll become familiar with the easy-to-use Forecasts settings and features.
- *Cloud Flow Designer Workbook*: HTML | PDF—Introduces you to the creation of flows through a series of tutorials using the native-to-Salesforce Cloud Flow Designer. For Summer '12, we added a 4th tutorial that walks you through one of the many ways you can deliver a completed flow to your users.
- *Apex Workbook*: HTML | PDF—Introduces you to the Apex programming language and shows you how to use Apex for adding custom business logic on the Force.com platform.

Usability Enhancements

- Access the Salesforce Help and Training portal without having to log in:

  ```
  http://help.salesforce.com/apex/hthome
  ```

  The help portal has a new widget that provides Quick Start topics—one page with all the resources you need to get started with reports and dashboards, Salesforce for Outlook, Data.com, and other important features.