



Salesforce.com: Winter '13

# Salesforce.com Winter '13 Release Notes



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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 practices to help you maximize the benefit
- Complete end-to-end instructions

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, to new report types, to security and packaging.

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. Winter '13 includes some of your top ideas. Visit [IdeaExchange](#) for a complete list of ideas coming in Winter '13.

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
January 3, 2013	<a href="#">Browser Enhancements</a>	Added a note to the Browser Enhancements section to clarify that Internet Explorer 10 is not supported for the Service Cloud console.
January 3, 2013	<a href="#">Chatter Reporting</a> and <a href="#">Chatter API Objects</a>	Updated the description of reports for hashtag (#) topics and of the HashtagDefinition object to include hashtags used only in public posts and comments and not those used on records or in private groups.
November 21, 2012	<a href="#">Help and Training Enhancements</a>	<ul style="list-style-type: none"> <li>Added information on help portal change for sandbox and DE users, as well as for additional languages.</li> <li>Added a description of the new case collaboration feature.</li> <li>Changed title of "Usability Enhancements" section to "Help and Training Portal Enhancements."</li> </ul>
November 21, 2012	<a href="#">Known Issue Involving API and Email Integration Compatibility</a>	<p>The API version 25.0 or earlier doesn't return events with multiple contacts related to the events.</p> <p>If you use Connect for Outlook or Connect for Lotus Notes, you'll lose event data when you relate multiple contacts to an event that you update in Salesforce and sync these events from Salesforce to your email system.</p>
November 21, 2012	<a href="#">Expanded Definition of Data.com Inactive Status</a>	The Data.com <code>Inactive</code> status now includes records that have been classified as non-marketable by D&B.
November 21, 2012	<a href="#">Expanded International Data from D&amp;B</a>	Data.com has more international records available, giving you more account and contact search results.
November 21, 2012	<a href="#">Chatter REST API Enhancements</a>	The Bookmarks Resources topic contained an incorrect example of the Feed-Items resource. The correct example is: <code>/chatter/feed-items/0D5D0000000Ir6zKAC?isBookmarkedByCurrentUser=true</code>
November 14, 2012	<a href="#">Chatter REST API Enhancements</a>	The File Input request body incorrectly listed the <code>description</code> parameter. The correct name of the parameter is <code>desc</code> .
November 14, 2012	<a href="#">Chatter REST API Enhancements</a>	The Group Member response body incorrectly stated that the value of the <code>id</code> property was a user ID. The correct value of the <code>id</code> property is a group membership ID.
November 7, 2012	<a href="#">Salesforce Touch</a>	A downloadable version of Salesforce Touch that can be installed directly on iPad devices is now available from the Apple App Store and AppExchange Mobile. The Touch Settings page has been updated to include a new enablement option for the Salesforce Touch downloadable app.
November 7, 2012	<a href="#">Force.com IDE Enhancements</a>	Added section about Force.com IDE update.

Date	What's New	Description
October 31, 2012	<a href="#">Clarified Support for IE Conditional Comments</a>	Clarified details of IE conditional comments, noting that only a limited subset of Visualforce is supported within conditional comments.
October 31, 2012	<a href="#">Push Major Upgrade</a>	Added a note saying this feature is available only to eligible salesforce.com partners.
October 24, 2012	<a href="#">Link to Known Issues Site</a>	Added link to the Salesforce Known Issues site.
October 24, 2012	<a href="#">Chatter for iPhone and iPad – Version 2.4 Generally Available</a>	Added a section announcing the release of Chatter for iOS v2.4.
October 17, 2012	<a href="#">Chatter Desktop Enhancements</a>	Updated release date and removed more frequent feed updates.
October 17, 2012	<a href="#">Aggregate Function Enhancements</a>	Added information about updates to SOQL aggregate functions.
October 10, 2012	<a href="#">Unfollow Unused Record Subscriptions</a>	Added clarifications about the script for unfollowing unused record subscriptions.
October 10, 2012	<a href="#">“Create and Own New Chatter Groups” User Permission</a>	Added a section on the “Create and Own New Chatter Groups” user permission.
October 3, 2012	<a href="#">Workflow Evaluation Criteria Usability Enhancements</a>	Updated for further changes made to the workflow evaluation criteria area of the user interface and documentation, based on early customer feedback.
October 3, 2012	<a href="#">Chatter Enhancements</a>	Updated <a href="#">Chatter Reporting</a> to “Not automatically visible. Feature is available but requires some setup.” because it requires a new custom report type.
October 3, 2012	<a href="#">New Behavior for Customer Portal Email Notifications When No Change Owner to Portal User Template is Selected and New Behavior for Partner Portal Email Notifications When No Change Owner to Portal User Template is Selected</a>	Updated the title and information to accurately reflect email notification behavior when the Change Owner to Portal User Template isn't set for a portal.
October 3, 2012	<a href="#">Search by D-U-N-S Number</a>	Added entry to the Data.com user enhancements section indicating you can search Salesforce by D-U-N-S Number.
September 26, 2012	<a href="#">Work.com in Chatter—Pilot</a>	Added a section on Work.com features.
September 21, 2012	<a href="#">Help and Training Enhancements</a>	Added the new <i>Service Cloud Workbook</i> and updated <i>Analytics Workbook</i> to the Help and Training section.
September 21, 2012	<a href="#">Opportunity Team Known Limitations</a>	Added a known limitation about renaming tabs and labels for an opportunity team member.
September 21, 2012	<a href="#">Help and Training Enhancements</a>	Added the Help and Training section, which lists videos and documents that are new or updated for Winter '13.
September 21, 2012	<a href="#">Chatter Desktop Enhancements</a>	Added a list of new features available after mid-October, 2012.
September 13, 2012	<a href="#">Geolocation Custom Field—Beta</a>	Added the Geolocation custom field beta announcement.



Date	What's New	Description
September 12, 2012	<a href="#">Connected Applications—Pilot</a>	Added the Connected Applications announcement.
September 12, 2012	<a href="#">Salesforce Touch</a>	<p>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.</p> <p>Removed references to Touch App. When the downloadable version of Salesforce Touch is available, we'll update these release notes.</p>
September 12, 2012	<a href="#">Environment Hub—Pilot</a>	Added editions table for Environment Hub.
September 12, 2012	<a href="#">Exportable Joined Reports</a>	Added edition availability for printable joined reports.
September 12, 2012	<a href="#">Starting a Batch Job from Another Batch Job</a>	Added a section announcing a change for Apex batch jobs.
September 12, 2012	<a href="#">Geolocation Custom Field—Beta</a>	Updated geolocation field editions table.
September 12, 2012	<a href="#">Chatter and Salesforce Communities (Pilot)</a>	Added edition availability for Salesforce Communities and some Chatter features.
September 12, 2012	<a href="#">Percentage sizing for &lt;apex:chart&gt;</a>	Added details for a minor new feature, sizing Visualforce charts with percentages, in addition to pixels.
September 12, 2012	<a href="#">CRUC Notification for Changes to Escaping Behavior in Visualforce</a>	Added details about notification of a pending critical update for this change in Visualforce.
September 5, 2012	<a href="#">Browser Enhancements</a>	Added a note on discontinued support for Internet Explorer® 6.
September 5, 2012	<a href="#">New Access Token Method</a>	Added an entry for the new <code>getAccessTokenMap</code> method of the <code>Auth.AuthToken</code> Apex class.
September 5, 2012	<a href="#">Force.com Canvas—Pilot</a>	The name of the Canvas Framework feature has changed to Force.com Canvas.
September 5, 2012	<a href="#">Chatter API—Connect in Apex (Pilot)</a>	Changed the content from a note in the Chatter REST API section to its own topic. Also added the topic to the <a href="#">Apex Code Enhancements</a> section.

# Summary of Winter '13 Features and Impact on Salesforce Users

Winter '13 has features that immediately impact all users after the release. You may 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.

These release notes describe the new and modified features available in this release. For visibility into known salesforce.com issues, please refer to the [Known Issues Site](#).

The following table summarizes the Winter '13 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.
<a href="#">Salesforce Communities (Pilot)</a>				✓
<a href="#">Browser Enhancements</a>	✓			

## 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.
<a href="#">Polls</a>	✓			
<a href="#">Chatter Tab Navigation Enhancements</a>	✓			
<a href="#">Chatter Influence Calculation Enhancement</a>		✓		
<a href="#">Improved Posting Experience</a>	✓			
<a href="#">Chatter Desktop Enhancements</a>			✓	

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.
<a href="#">Preview Links</a>	✓			
<a href="#">Work.com in Chatter—Pilot</a>				✓
<a href="#">Administrator Settings for Rich Media Previews</a>		✓		
<a href="#">Salesforce Communities (Pilot)</a>				✓
<a href="#">Chatter Messenger Enhancements (available within 24 hours after the Winter '13 release)</a>	✓			
<a href="#">Chatter Reporting</a>			✓	
<a href="#">Improved Feed Sorting Includes Polls</a>	✓			
<a href="#">Post Visibility</a>	✓			
<a href="#">Updated Chatter Icons and Buttons</a>	✓			
<a href="#">Chatter Feed Search Label Change</a>	✓			
<a href="#">View the External Apps Approved to Access Chatter Data</a>	✓			
<a href="#">Unfollow Unused Record Subscriptions</a>	✓			
<a href="#">“Create and Own New Chatter Groups” User Permission</a>	✓			
<a href="#">Google Talk in Salesforce No Longer Supported By Google</a>			✓	
<a href="#">Chatter REST API Enhancements</a>	✓			
<a href="#">Chatter API—Connect in Apex (Pilot)</a>				✓

## 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.
Use Chatter People Hovers (Rep Hovers)	✓			
Create Forecasting Custom Report Types		✓		
Forecast Managers Can Adjust Forecasts in Any Currency	✓			
Configurable Forecast List View for the Opportunity Pane		✓		
Customizing Opportunity Teams			✓	
Opportunity Team Known Limitations			✓	
Enabling Team Selling		✓		
Disabling Team Selling		✓		
Editing Multi-Line Layouts for Opportunity Teams			✓	
Using Opportunity Teams			✓	
Adding Members to an Opportunity Team			✓	
Viewing Your Salesforce World in Microsoft® Outlook®—Beta			✓	
Syncing Recurring Events			✓	
Saving Time with Email Associations	✓			
Shared Activities for Events			✓	
Known Issue Involving API and Email Integration Compatibility			✓	
Enabling Shared Activities			✓	
Activity Rollup to Accounts for Contacts			✓	
Event and EventAttendee Object Changes			✓	

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.
Label Change for Upload New Document Page	✓			
New Behavior for Partner Portal Email Notifications When No Change Owner to Portal User Template is Selected	✓			
Salesforce Communities (Pilot)				✓

## 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.
<b>Case Feed Enhancements</b>				
New Customization Options in Case Feed		✓		
Custom Publishers in Case Feed			✓	
New Feed Items Available in Case Feed			✓	
Email Drafts and Approvals			✓	
Support for Chatter Answers in Case Feed			✓	
Smart Email Templates in Case Feed			✓	
Updated Look for Case Feed	✓			
New Case Feed Methods in the Interaction API			✓	
<b>Chatter Answers Enhancements</b>				
Encouraging Community Participation with Chatter Answers Reputation			✓	

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.
Customizing Chatter Answers in Portals using Visualforce Pages			✓	
Adding a Custom Visualforce Page to a Portal			✓	
Creating Questions from the Questions Tab		✓		
Enhancements to Questions and Answers in the Feed	✓			
New Options to Customize Questions		✓		
Format Text and Add Photos to Questions			✓	
API Access to Names and Photos from the Feed			✓	
Option to Remove Sign-In Links from Chatter Answers			✓	
New Limits for Chatter Answers Questions and Replies			✓	
<b>Customer Portal Enhancements</b>				
New Behavior for Customer Portal Email Notifications When No Change Owner to Portal User Template is Selected	✓			
Salesforce Communities (Pilot)				✓
<b>Ideas Enhancements</b>				
Moderate Ideas Communities with the Service Cloud Console		✓		
Idea Themes		✓		
Customize Idea Themes		✓		
<b>Live Agent Enhancements</b>				
Auto Away Option in Live Agent Configurations			✓	
<b>Salesforce Knowledge Enhancements</b>				

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.
Minor Salesforce Knowledge Enhancements	✓			
API Access Article Type			✓	
Mail Merge Template Available for Articles	✓			
Sharing Rules for Knowledge			✓	
Share Articles with Public Links			✓	
Automatic Knowledge Filtering—Beta			✓	
Universal Knowledge (Sunlight Search)—Pilot				✓
<b>Service Cloud Console Enhancements</b>				
Custom Hotkeys for the Service Cloud Console		✓		
Automatically Saved User Sessions for the Service Cloud Console		✓		
Service Cloud Console Integration Toolkit: Multiple Domains			✓	
Service Cloud Console Integration Toolkit: Console Notifications			✓	

## 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.
Printing and Exporting Joined Reports	✓			
Joined Reports on Dashboards	✓			
Scatter Charts on Dashboards	✓			

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.
More Support for the Enhanced Reports Tab	✓			

## 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 Touch			✓	
Chatter for iPhone and iPad – Version 2.4 Generally Available			✓	

## Data.com New Features and 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.
Expanded international data gives you more accounts and contacts	✓			
Map Data.com fields to Salesforce account, contact, and fields		✓		
Respect Do-Not-Contact settings in Data.com search results and exports		✓		
Allow duplicate Data.com account, contact, and lead records in Salesforce		✓		
Enjoy new Data.com search filters: Employee, Revenue, and Location Type	✓			



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.
Get better identification of Data.com records you've added, exported, or cleaned	✓			
Exclude "green dot" records from exports	✓			
Preserve selected records across pages of search results	✓			
Get more accurate mapping for the Industry field	✓			
Find the more accurate Industry field on the Account Card	✓			
Enjoy improved Data.com record addition error logs	✓			
Get improved reports from the Data.com Reports AppExchange package			✓	
Search Salesforce by D-U-N-S Number	✓			
(Data.com Premium + Data.com Clean Product) Get clean jobs for D&B Company records linked to accounts and leads		✓		
Get field-level Clean settings for accounts, contacts, and leads			✓	
(Data.com Premium + Data.com Clean Product) Prevent Data.com Clean auto-updates for account, contact, and lead records			✓	
(Data.com Clean product) The Data.com Clean product is now automatically enabled	✓			
(Data.com Clean product) Our definition of Inactive now includes the D&B designation of "non-marketable"	✓			
(Data.com Corporate and Premium) Clean is automatically enabled for Data.com Corporate and Premium	✓			

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.
(Data.com Premium) D&B Companies for Leads-GA			✓	
(Data.com Premium) Set up D&B Companies for leads			✓	
(Data.com Premium + Data.com Clean Product) Set Up D&B Company Clean jobs		✓		
(Data.com Premium) Get D&B Company records (if available) when you add Data.com contacts as leads	✓			
(Data.com Premium) Get D&B Company records (if available) when you clean leads	✓			
(Data.com Premium) Find and add Data.com Accounts by Global Ultimate D-U-N-S Number			✓	

## 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.
Page Breadcrumbs	✓			
Updated Menu Source Options	✓			
Page Visibility in Menus and Breadcrumbs	✓			
Site Map Links	✓			
Cascading Editability	✓			
Default Content in Editable Page Elements	✓			

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 Linking in Data Elements	✓			
New Status Column	✓			
“Nested Templates” Renamed “Child Templates”	✓			
Repeaters and Repeater Elements Renamed	✓			

## Force.com Enhancements

### Permission Sets and 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.
Organization-Wide Permission Sets		✓		
User Sharing—Pilot (available within 24 hours after the Winter '13 release)				✓

### 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.
Search Controls in the Cloud Flow Designer		✓		

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.
Zoom Controls in the Cloud Flow Designer		✓		
New Types of Flow Screen Fields		✓		
Visualforce Controller Access to Subflow Variables		✓		
Flow Navigation Options		✓		
Resources for Getting Started with the Cloud Flow Designer		✓		
Additional Cloud Flow Designer Usability Enhancements		✓		
Merge Fields in Help Text and User Input Validation Messages		✓		
Desktop Flow Designer No Longer Supports New API Versions		✓		
Desktop Flow Designer Links and Documentation		✓		

## Schema Builder 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.
Deleting Custom Objects with Schema Builder	✓			
Deleting Custom Fields with Schema Builder	✓			
More Custom Object Properties in Schema Builder	✓			

## 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.
<a href="#">Auth Providers Detect and Link to Existing Users</a>	✓			
<a href="#">Updated OAuth 2.0 Bearer Assertion Request</a>	✓			
<a href="#">OAuth 2.0 JWT Bearer Token Flow</a>	✓			
<a href="#">New Auth Provider Parameters</a>	✓			
<a href="#">Login Policy for My Domains Now Explicitly Configured</a>	✓			
<a href="#">Clickjacking Protection Available</a>	✓			
<a href="#">Service Provider-Initiated Request Binding</a>	✓			
<a href="#">New getAccessTokenMap Method</a>	✓			
<a href="#">Connected Applications—Pilot</a> This feature is visible to all users in new Development Edition organizations. To enable this feature in existing Development Edition organizations or other organizations, contact salesforce.com.	✓			

## Developer Console 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.
<a href="#">Tests Tool</a>	✓			

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.
<a href="#">Query Editor</a>	✓			
<a href="#">Perspectives in a System Log View</a>	✓			
<a href="#">Command Line Window</a>	✓			
<a href="#">Navigating through Views</a>	✓			
<a href="#">Viewing Keyboard Shortcuts</a>	✓			
<a href="#">Resuming Updates to the Developer Console</a>	✓			

## Force.com IDE 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.
<a href="#">Force.com IDE Enhancements</a>	✓			

## 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.
<a href="#">API Enhancements</a>	✓			
<a href="#">SOQL Polymorphism—Developer Preview</a>				✓
<a href="#">Geolocation Custom Field SOQL Queries—Beta</a>	✓			

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.
<a href="#">SOSL Enhancements</a>	✓			
<a href="#">Connected Applications—Pilot</a> This feature is visible to all users in new Development Edition organizations. To enable this feature in existing Development Edition organizations or other organizations, contact salesforce.com.	✓			
<a href="#">Force.com Canvas—Pilot</a> (available within 24 hours after the Winter '13 release) This feature is visible to all users in new Development Edition organizations. To enable this feature in existing Development Edition organizations or other organizations, contact salesforce.com.	✓			

## 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 but requires some setup.	Contact salesforce.com to enable this feature.
<a href="#">Non-Primitive Types in Map Keys and Sets</a>	✓			
<a href="#">Support for Testing Callouts</a>	✓			
<a href="#">Chatter API—Connect in Apex (Pilot)</a>				✓
<a href="#">New ID.getSObjectType Method</a>	✓			
<a href="#">New String Methods</a>	✓			

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.
Loading Test Data from Static Resources	✓			
Global Interface Method Implementations No Longer Need to Be Global	✓			
New <code>Type.toString</code> Method	✓			
<code>String.valueOf</code> and <code>System.debug</code> Use <code>toString</code> for Argument String Conversion	✓			
SOQL Polymorphism Available in Apex—Developer Preview	✓			
JSON Support for Additional Built-In Types	✓			
Code Coverage Percentage Details	✓			
Creating sObjects with Default Values Using the <code>newSObject</code> Method	✓			
Starting a Batch Job from Another Batch Job	✓			
New <code>getVariableValue</code> Method	✓			
New Network Class and Method	✓			
New Messaging Method	✓			
New Access Token Method	✓			
<code>Support.EmailTemplateSelector</code> Interface	✓			
Parameterized Interfaces No Longer Supported	✓			



## 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.
Visualforce Charting—Generally Available		✓		
<code>support:caseFeed</code> Component			✓	
NoSignIn Option for Chatter Answers Communities			✓	
Enhancements to JavaScript Remoting		✓		
Pass-Through HTML Attributes		✓		
Support for Internet Explorer Conditional Comments			✓	
Inline Editing for Dependent Picklists		✓		
Map Attributes for Custom Components		✓		
Dynamic References to Lists and Maps with <code>&lt;apex:inputText&gt;</code>		✓		
Improved Handling of Formula Fields in <code>&lt;apex:outputField&gt;</code>			✓	
Changes to Escaping Behavior			✓	
Changes to Expression Evaluation with Null Values			✓	
Restrictions and Validation on Help URLs in <code>&lt;apex:sectionHeader&gt;</code>		✓		

## 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.
<a href="#">Push Major Upgrade</a>				✓
<a href="#">Environment Hub—Pilot</a>				✓

## 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.
<a href="#">Workflow Evaluation Criteria Usability Enhancements</a>	✓			
<a href="#">Geolocation Custom Field—Beta</a>	✓			
<a href="#">Custom Object Truncation</a>			✓	
<a href="#">Retention Policy for Unused Sandboxes</a>		✓		
<a href="#">Full Sandbox Configuration</a>		✓		
<a href="#">Portal Users Not in Developer and Configuration Sandboxes</a>		✓		
<a href="#">Eastern Name Order for Vietnamese Locales</a>	✓			
<a href="#">Minor Branding Changes to User Interface Elements</a>	✓			
<a href="#">Updates to Platform Portal User Licenses</a>				✓

# GENERAL ENHANCEMENTS

## Salesforce Communities (Pilot)

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



**Note:** Salesforce Communities is available through a pilot program. Contact your Salesforce.com representative to find out if your organization qualifies for the pilot.

Communities are customizable public or private spaces for employees, end-customers, and partners to collaborate on best practices and business processes. You can create multiple communities within your organization for different purposes. For example, you could create a community for your company and its partners to discuss channel business, or you could have a community specifically dedicated to an upcoming event.

You can customize communities to meet your business needs, including:

- Choosing which members from your company and which customers, partners, or other people outside your company can join
- Selecting which Salesforce features to include
- Applying your company's branding so that the community is recognizable
- Enabling your employees, customers, and partners to collaborate on Chatter and business processes (records)
- Creating public facing and authenticated pages for your communities
- Enabling login options based on SAML for single sign-on for people outside your company



**Note:** Salesforce Knowledge article URLs within communities have changed. Reset any community article links or bookmarks you saved before Winter '13.

## Browser Enhancements

Salesforce now supports Microsoft® Internet Explorer® 10, except for the Service Cloud console. Additional browser support updates include:

- Google Chrome Frame™ plug-in for Microsoft® Internet Explorer® 7 is now supported.
- Apple® Safari® version 5.1.x is supported on Mac OS X.

As of Summer '12, we discontinued support for Internet Explorer® 6. Existing features that have previously worked in this browser may continue to work through 2014. If you use Internet Explorer®, we recommend using the latest version. See “Supported Browsers” in the online help for details on browser support.

# CHATTER

## Polls

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



You asked for it! This enhancement is from an [idea](#) on the IdeaExchange.


Starting in Winter '13, you can create a poll in your feed. Polls are a great way to get people's opinions or gather data by providing a list of choices. For example, you are in charge of planning an annual sales meeting and need to find out when most people are available to attend the meeting. Instead of emailing everybody in the sales organization, you could create a poll in the Sales Chatter group that lists possible dates and ask people to vote for the date that works best for them.


## Posting a Poll

1. Above the feed, click **Poll**.
2. Type a question in the text box.  
You can add a hashtag or mention someone.
3. Type at least two choices.  
Click **Add more choices** to add another choice. You can enter up to ten choices.
4. Select to post the poll to your followers or to a group.  
If you're posting the poll to a group, select the name of the group from the drop-down list.
5. Click **Share** to post the poll.

Anybody with access to the poll or the post can select one of the choices and click **Vote** to submit their vote. People can only cast one vote, but they have the option to change their vote.

## Chatter Tab Navigation Enhancements

We've collapsed the Chatter Tab sidebar to streamline the navigation on the Chatter tab. On the left sidebar of the Chatter Tab, you now see  **Feed**, which contains all of your feeds. The feeds are still the same. We just renamed them and consolidated them into one navigation filter.

Click  **Feed** to see available feeds, then click a feed to display the associated subset of posts.

**What I Follow**

This feed was previously called My Chatter and displays everything you follow, including posts from people you follow, groups you are a member of, and files and records you're following. Use the drop-down list at the top of your feed to further narrow the subset of posts.

**To Me**

This feed was previously called @Me and displays posts others make to your profile feed and posts where you have been mentioned.

**Bookmarked**

We didn't rename this feed. It displays your bookmarked posts in your feed.

**All Company**

This feed was previously called All Chatter and displays all posts and comments from your entire company.

We've also renamed Chatter to Feed or removed the word Chatter in other places throughout the application to match the new navigation. For example, the Show Chatter and Hide Chatter links on the Home tab now say Show Feed and Hide Feed, respectively.

Chatter Influence Calculation Enhancement

Chatter activity statistics include how many posts and comments you've made, how many comments you've received, and how many people liked your posts and comments. Chatter influence shows how your activity stacks up to other people's. Because influence is a relative calculation, users in some organizations might become top influencers very quickly without much activity. Other organizations might feel that too many of their users are top influencers. Winter '13 introduces the ability to customize Chatter activity thresholds to better fit your organization's activity patterns. You can now tailor how Chatter influence is calculated for your organization by specifying the minimum activity before users are included in the calculation.

Customizing Chatter Influence

Customize Chatter activity thresholds to improve the Chatter influence calculation.

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

User Permissions Needed	
To customize Chatter influence:	"Customize Application"

1. Click **Your Name** > **Setup** > **Customize** > **Chatter** > **Influence**.

2. Click **Edit** to change the minimum activity thresholds.

All minimum activity thresholds default to zero. If you set non-zero thresholds, users who don't meet all three minimums are considered observers and aren't counted when calculating people's relative rank in the organization. Users who do meet all three minimums but have low activity numbers relative to active influencers and top influencers are also considered observers; however, they are counted when calculating influence.

3. Click **Save**.

Chatter influence is recalculated when you save these values.



**Warning:** Use caution when setting new thresholds because users' influence levels can change immediately.

## Improved Posting Experience

We've made posting even easier. You can now post to your followers or to any group you're a member of directly from the Home tab, Chatter tab, or your profile.

1. Above your feed, select **Post**, **File**, **Link**, or **Poll**.
2. Type something about your post in the text box.
3. Select **My Followers** or **A Group** from the drop-down list below the text box.

If you're posting to a group, type part of the group's name in the Search Groups field and select the group from the drop-down list.

4. Click **Share**.

## Chatter Desktop Enhancements

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

The latest version of Chatter Desktop—a desktop app that increases your productivity by letting you collaborate in Chatter outside of your Web browser—introduces Chatter Messenger for Desktop. With Chatter Messenger for Desktop, you can chat with one or more people in your organization right from the Chatter Desktop app.



You asked for it! This enhancement is from an [idea](#) on the IdeaExchange.

Also in this version, you can:

- Like comments
- View a list of people who like a post or comment
- View files attached to comments
- View dashboard snapshots
- View shared messages

Starting after October 2012:

- Attach files to comments
- View your chat list sorted by first name
- View the last activity date for your Chatter groups
- View multiple chats more easily
- Sort your chat favorites by people's availability

- See improved icons for your Chatter feed and dragging and dropping files to your posts

Several bugs have been fixed, 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.

## Preview Links

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

Starting with Winter '13, you can preview several other links in your feed in addition to videos from the YouTube community. These rich media previews are powered by Embed.ly, a third-party service. Currently, we support preview links for the following domains:

- YouTube
- Vimeo
- Mashable
- Techcrunch
- NYTimes
- ReadWriteWeb
- SoundCloud

We don't share any content, user, organization, or account data with Embed.ly. We only share the URLs that are on the domain whitelist, which are currently the seven domains mentioned above. Additionally all of our URL requests pass through a Salesforce proxy, meaning Embed.ly never receives calls directly from the client and therefore doesn't have information about who's making the URL request.

## Sharing a Preview Link

1. Above your feed, click **Link**.
2. Type a link URL to one of the supported domains.
3. Type a name for the link or leave the Link Name field blank.

If you provide a link name, we'll use yours. If you leave the Link Name field blank, the preview populates the link name with the title or name from the site URL.

4. Click **Share**.

After the post is rendered in the feed, we transform the post to a rich media preview including thumbnails, descriptions and video players (for video URLs). If a post doesn't render a link as a rich preview in the feed, the URL domain for that link either isn't supported or Embed.ly was unable to return the preview content for the URL.

Rich media previews are supported for link posts, but not for URLs that are added to the text body of the post itself.

## Work.com in Chatter—Pilot

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



**Note:** This feature is currently available through a pilot program. For information on enabling it for your organization, please contact salesforce.com.

Work.com is a suite of human capital management products that enable you to find, align, and motivate your workforce. Starting with Winter '13, some Work.com features are integrated into Chatter. You can now create a Thanks post to recognize a colleague and view Work.com profile content in Chatter.

### Enabling Work.com in Your Organization

1. Click **Name** > **Setup** > **Customize** > **Work.com** > **Work.com Thanks**.
2. Select **Enable** and click **Save**. A Work.com login dialog appears.
3. Enter your Work.com username and password, which are separate from your Salesforce credentials. If you haven't yet created a Work.com account, you can sign up for an account on the Work.com login page. After successfully logging into your Work.com account, you'll be asked to approve the connection between Salesforce and Work.com.
4. Click **Approve**.

To disable Work.com features, click **Name** > **Setup** > **Customize** > **Work.com** > **Work.com Thanks** and deselect **Enable**. Users will no longer see the **Thanks** action in the Chatter publisher. However, previously created Thanks posts will not be deleted and might still be visible where they were posted.

### Creating a Thanks Post in Chatter

If Work.com has been enabled for your organization, you'll see a **Thanks** button in the Chatter publisher. To create a Thanks post that recognizes a colleague for work well done:

1. Click **Thanks** in the Chatter publisher. A drop-down form appears in which you can enter various items needed for the post.



**Note:** The first time you click **Thanks**, you'll be required to log in to Work.com. Your Work.com username and password are separate from your login credentials for Salesforce. If you don't have a Work.com account, you can sign up for one from this login screen. After logging in to Work.com, you'll be asked to approve the connection between Salesforce and Work.com. Click **Approve** to complete this process. This enables the Thanks feature for you and you won't be asked to log in again.

2. Type in the name of the person you wish to thank. Currently, you can only choose one recipient for a Thanks post. However, you're free to @mention other people in the body of your post. This is not the same as thanking them directly but lets them know about your Thanks post.



3. Optionally, you can change the badge associated with the post. Each post is assigned a default badge, based on your company's settings in Work.com. Click **Change Badge** and select another, more specific badge to associate with this post. In the popup window that appears, browse the available badges and click the one most appropriate. After clicking a badge, you'll see details about it and have the option of selecting it for your post, or going back and selecting another badge. At any time, you can close the popup window to abort picking another badge.



**Note:** If you want to create a new badge, you must log in to Work.com. New badges cannot currently be created from inside Salesforce.

4. Type in details about why you're thanking the recipient. You're free to @mention other people in the body of the text. This is not the same as thanking them directly, but lets them know about the post.
5. Click **Share** to finalize the post. You'll see the post in your feed and the recipient of the thanks is notified. Anyone that was @mentioned in the post's description text is also notified.

If posting from a Chatter group or a standard record page (for example, Leads, Accounts, Opportunities, Cases, and so on), the post is made to that group's or record's wall. Anyone who follows the group or record sees the post in their feed. The recipient of the Thanks post is always notified.

## Viewing Work.com Profile Content in Chatter

If Work.com has been enabled for your organization and your administrator has also enabled the display of Work.com profile content in Chatter profiles, you'll see a **Work.com** button on the left side when viewing a Chatter profile (including your own). This allows you to see someone's Work.com profile in addition to their Chatter profile.



**Note:** The first time you click **Work.com**, you'll be required to sign in using your Work.com username and password, which are separate from your login credentials for Salesforce. If you don't have a Work.com account, you can sign up for one from this login screen. After logging in to Work.com, you'll be asked to approve the connection between Salesforce and Work.com. Click **Approve** to complete this process.

When viewing a Work.com profile (including your own), you can browse and interact with the content shown there.

## Administrator Settings for Rich Media Previews

You can now enable or disable rich media previews in link posts. Post with links to rich media content are rendered as a preview, including thumbnails, descriptions and video players for video URLs. The rich media content is provided by Embed.ly, a third-party service.

We don't share any content, user, organization, or account data with Embed.ly. We only share the URLs that are on the domain whitelist, which currently includes the YouTube, Vimeo, Mashable, Techcrunch, NYTimes, ReadWriteWeb, and SoundCloud domains. All of our URL requests pass through a Salesforce proxy, meaning Embed.ly never receives calls directly from the client and therefore doesn't have information about who's making the URL request.

Rich media previews are enabled by default. If you disable rich media previews, users can only preview videos from the YouTube community.

## Enabling and Disabling Rich Media Previews

Rich media previews in links are enabled by default.


1. Click **Your Name** > **Setup**.
2. Under App Setup, click **Customize** > **Chatter** > **Settings**.
3. Click **Edit**.
4. Select **Allow Rich Link Previews**.
5. Click **Save**.

If a post doesn't render a link as a rich preview in the feed, the URL domain for that link either isn't supported or Embed.ly was unable to return the preview content for the URL.

## ADDITIONAL CHATTER ENHANCEMENTS

### Chatter Messenger Enhancements

Chatter Messenger now includes limited chat history. When you start a chat with someone, your conversations with them from the last 72 hours are automatically shown. To see a list of all conversations from the last 72 hours:

1. Click the Chat header to expand the chat window.
2. Click .
3. Click someone's name to see your chat history with them.

Additionally, your chats and chat history are maintained if you switch between multiple browser tabs.

### Chatter Reporting

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

You can now create two new custom report types—one that shows Chatter activity statistics and influence rank and one that shows how your organization is using public hashtag (#) topics. Public hashtag topics are those used on profiles and in public groups. For privacy reasons, hashtag topic usage reports don't include hashtags used on records or in private groups.

When defining a custom report type with Chatter activity statistics and influence rank data, choose the `Chatter Activity` primary object and select from the following fields:

- Comment Count—Number of comments made by the parent
- Comment Received Count—Number of comments received by the parent
- Influence Raw Rank—Number indicating the parent's influence rank, which is calculated based on the parent's Chatter activity statistics, relative to the other users in the organization
- Like Received Count—Number of likes received by the parent
- Parent—User name

- **Post Count**—Number of posts made by the parent

When defining a custom report type with hashtag topic usage data, choose the **Hashtag Definitions** primary object and select from the following fields:


- **Created Date**—Date the hashtag topic was created
- **Hashtag Text**—Text following the hashtag (#)
- **Normalized Hashtag Text**—Text following the hashtag (#), without capitalization and punctuation
- **Hashtag Count**—Number of times the hashtag is used

## Improved Feed Sorting Includes Polls

You can now sort your feed by most recent activity or post date. Sorting by most recent activity shows the posts with the most recent comments at the top of your feed, including polls with new comments. Sorting by post date shows the latest posts at the top, regardless of whether they have new comments. For new users, the feed is sorted by most recent activity, by default. You can toggle the feed sorting at any time by clicking **Post Date** or **Most Recent Activity** above your feed.

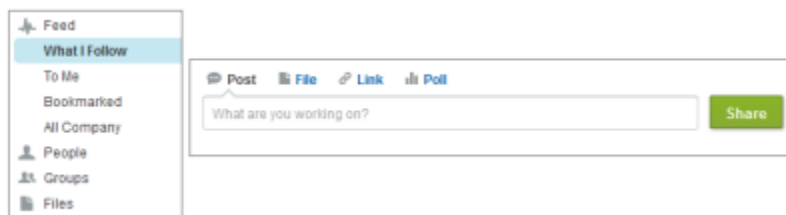
## Post Visibility

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

We've added a visibility widget to help you determine who can see the posts and where your posts can be found in Chatter. The widget is available for each post type (Post, File, Link, or Poll). Select your post type and click  below the text box to open the visibility widget.

## Updated Chatter Icons and Buttons

We've changed the appearance of the Chatter icons and buttons to improve the overall navigation and cohesion throughout the app. For example, the color of the Share button above the feed changed from blue to green and the sidebar on the Chatter tab now uses gray icons.



## Chatter Feed Search Label Change

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

In keeping with changes to the [Chatter tab navigation](#), we've renamed **Search Chatter Updates** to **Search Chatter Feeds** on the global search results page.

## View the External Apps Approved to Access Chatter Data

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

If your organization has Chatter Free users, Chatter Only users, or customers in Chatter groups, Winter '13 offers them approved connections, a new security feature. Whenever they authorize an external app such as Chatter Desktop or Chatter Mobile, they can now see these apps listed in Chatter, for added security.

Approved connections is the list of external applications that can access your data in Chatter. You authorize this access the first time you run the external application. For example, if you use Chatter Desktop, you created a connection between the Chatter Desktop application and the login you use to access Chatter on the Web. The first time you authorized the connection in Chatter Desktop, it was saved as an approved connection. To view your approved connections, click **Your Name > My Settings** at the top of any page, then click **Approved Connections**. You can view and remove your approved connections on this page but you can't add them directly.

Removing an approved connection means that you're revoking the external application's access to your data in Chatter. The next time you access the external application, you won't be able to connect using the previously authorized login.



**Warning:** Only click **Remove** if you're sure you want to revoke the connection. There is no confirmation step and the approved connection is removed immediately.

To restore a connection that you've removed, simply create the connection again the next time you access the external application. After you authorize the connection, it's saved as a new approved connection.

## Google Talk in Salesforce No Longer Supported By Google

User Permissions Needed	
Deactivating Google Talk:	"Customize Application"

Google is constantly changing and evolving their technology infrastructure. As a result of these changes, the Google Talk sidebar is no longer available within Salesforce.

To deactivate Google Talk in Salesforce:

1. Click **Your Name > Setup > Google Apps > Settings**.
2. In the Activate Google Apps Services list, next to the Google Talk Sidebar Component option, click **Edit**.

3. Deselect the `Active` checkbox.
4. Click **Save**.

For alternative ways to use Google Talk, see [the Google Talk online help](#).

## Unfollow Unused Record Subscriptions

In Winter '13, we're running a script to clean up follows for inactive records. We remove subscriptions to records that meet all of the following criteria:

- The record never had any posts or comments.
- The record was never changed in any way that's tracked in Chatter during the past 45 days.
- The record has no tracked change of any age that's been liked or commented on.

We run the script only once after your organization gets the Winter '13 release. The script automatically unsubscribes anyone who was following the record. We don't remove the record itself, just the subscription to the record. Removing unused record subscriptions frees up subscription capacity for customers getting close to their subscription limit.

## "Create and Own New Chatter Groups" User Permission

Use the "Create and Own New Chatter Groups" user permission to control which users can create new Chatter groups or be assigned as owners of Chatter groups. This permission is turned on by default for all standard profiles.

## Chatter REST API Enhancements

Winter '13 (Chatter API version 26.0) 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

- Version information was added to all the resources in the documentation, as well as all request bodies and response bodies. Now it's easier to see when something new is added to Chatter API.
- The rate limits for Chatter API have been more finely tuned and are measured by per user, per application, per hour rate limit. Most customers shouldn't see the difference. When you exceed the rate limit, all Chatter API resources return a 503 Service Unavailable error code for both the user and the application. When polling for feed updates or private messages, do not exceed one poll per minute (60 per hour.) In addition, use the `/feeds/news/me | userId/is-modified` resource to determine if a feed has been updated since the last specified time and date.

- Chatter in Communities is supported by all the resources in Chatter API. Instead of using the regular URL to access the resource, use the Community URL. For example:

```
https://na1.salesforce.com/services/data/v26.0/connect
/communities/communityId/chatter/feeds/news/me/feed-items
```

In addition, information about communities is returned by many of the response bodies.



**Note:** Communities are available as a pilot program. Contact your salesforce.com representative to find out if your organization qualifies for the community pilot.

## Chatter API—Connect in Apex (Pilot)

Force.com developers no longer need to use Apex callouts to access Chatter API data. Now, many Chatter API resources have been exposed and are directly accessible using Connect in Apex. The Connect in Apex documentation is available in the *Chatter REST API Developer's Guide*.



**Note:** Connect in Apex is currently available through a pilot program. For information on enabling Connect in Apex, please contact your salesforce.com representative.

## New and Changed Resources

- The Bookmarks Resources topic contained an incorrect example of the Feed-Items resource. The correct example is: `/chatter/feed-items/0D5D0000000Ir6zKAC?isBookmarkedByCurrentUser=true`.
- The new Connect resource returns the list of available resources for the organization.
- The new Communities resources return information about all communities, or the specified community.
- The new Feed Items: Feed Poll resource returns information about a feed poll associated with a specific feed item. It can also be used to vote in a poll.
- The new Files Information, Batch resource returns file information for a list of file IDs.
- The Files resource now accepts the following HTTP methods:

◇ DELETE

◇ PATCH

In addition, PATCH has a new parameter, `title`, used to rename an existing file.

- The Flat feed resource is no longer available for all feeds.
- The Is-Modified resource is now available. Use this resource to poll a news feed to see if it's been updated or changed since the specified time and date: `/chatter/feeds/news/me/is-modified`



**Note:** Though the Is-Modified resource is generally available, your organization may not have permission to use it automatically. If you can't access this resource, contact your salesforce.com representative and ask about the "Enabled Chatter Feed Polling" permission.

- The Users resource now returns recommendations for a specific action and key prefix.
- The News, Record, To, and User-Profile Feed-Items resources all have the following new POST request parameters:

- ◇ `isBookMarkedByCurrentUser` parameter with POST to specify whether the new feed item should be bookmarked.
- ◇ `pollChoice1` through `pollChoice10`—The choices used to create a new feed item with a poll.
- ◇ `visibility` parameter with POST to specify who can see the feed item.



**Note:** With Record Feed-Item resources, you can set `visibility` to `InternalUser` for records that are not groups or users. At this time, for all other feed-item resources, you can only set `visibility` to `AllUsers`.

- The documentation incorrectly specified the return for the User Groups resource. The correct return is the User Groups page response body.

## New and Changed Response Bodies

- The Group Member response body incorrectly stated that the value of the `id` property was a user ID. The correct value of the `id` property is a group membership ID.
- The `result` property on the Batch Result Item response body now returns File response bodies for the resource `/chatter/files/batch/fileIds`.
- The `organization` property on the Chatter Directory response body is no longer available as of version 26.0. Use the `organization` property on the Connect Directory response body instead.
- A new Connect Directory response body was added, which provides information about the organization.
- The new Community and Community page response bodies were added, which provide information about the communities in the organization.
- The `community` property was added to the following response bodies:
  - ◇ Favorite
  - ◇ Group
  - ◇ Subscription
- The Feed Item Page response body was incorrectly documented: It does not return a `previousPageUrl` property.
- A new Feed Item Attachment: Poll response body was added, which provides information about the feed poll associated with the feed item.
- A new Feed Poll Choice response body was added, which provides information about the feed poll choice.
- The following changes were made to the Feed Item response body:
  - ◇ `attachment` now includes the new Feed Item Attachment: Poll response body
  - ◇ `type` now includes the following new feed item types:
    - `ChatTranscriptPost`
    - `FacebookPost`
    - `PollPost`
    - `RypplePost`
    - `ReplyPost`
    - `TwitterPost`
  - ◇ A new `visibility` property was added, which gives information about who can see this feed item.
- The File Summary and Feed Item Attachment: Content response bodies have the following new properties:
  - ◇ `checksum`—Specifies the MD5 checksum for the file
  - ◇ `fileExtension`—Specifies the extension of the file

- ◊ `isInMyFileSync` —Reserved for future use
- ◊ `mimeType`—Specifies the MIME type of the file

In addition, the Feed Item Attachment: Content response body now includes `renditionUrl`, a URL to the rendition resource for the file.

- The Flat Feed and Flat Feed Item response bodies are no longer available.
- The Group Page does not include a `total` property as previously listed in the documentation.
- A `name` property has been added to both the Organization and Organization Summary response bodies.
- An `id` property has been added to the Record Summary response body.
- The User Group Page response body was missing from the documentation. It is returned by the User Groups resource.
- The `isChatterGuest` property on the User Detail and User Summary response bodies is no longer available as of version 26.0. Use the new `userType` property in the response body instead.
- An `isActive` property has been added to the User Summary response body.
- The User Settings response body has the following new properties:
  - ◊ `hasAccessToInternalOrg`—User is a member of an internal organization.
  - ◊ `hasFileSync`—Reserved for future use.
- The Features response body includes `chatterTopics`, which is reserved for the Chatter topics pilot.
- Prior to version 26.0, the following responses were rendered differently in JSON than in XML. The XML response did not include some Boolean properties. As of version 26.0, all responses are identical in both the JSON and XML versions.
  - ◊ The FeedItem response body `event` property
  - ◊ The Comment response body `isDeletable` property

## New and Changed Request Bodies

- The File Input request body incorrectly listed the `description` parameter. The correct name of the parameter is `desc`.
- Feed Poll is a new input body for voting on polls.
- In the Feed Item Input request body, the `attachment` property now takes a new input body, Attachment Input: Feed Poll, for creating a new poll associated with the feed item. Note that the Feed Item `body` property is used for the poll question in these feed items.



# SALES

## FORECASTS ENHANCEMENTS

### Use Chatter People Hovers (Rep Hovers)

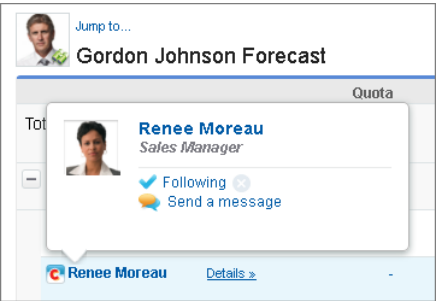
Available in: **Professional**, **Enterprise**, **Unlimited**, and **Developer** Editions



User Permissions Needed	
To use Forecasts:	“Allow Forecasting”
To enable Chatter:	“Customize Application”



**Note:** This information applies to the Forecasts product beginning with the Winter '12 release and not to Customizable Forecasts.

Now you can use Chatter to connect with your colleagues right from within your forecast with Rep Hovers on Forecasts. Users must have Chatter enabled and be forecast managers to use this functionality.



1. Hover over a subordinate’s name. A  appears.
2. Hover over  to display Chatter options and make a selection.

# Create Forecasting Custom Report Types

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

User Permissions Needed	
To create or update custom report types:	"Manage Custom Report Types"
To delete custom report types:	"Modify All Data"



**Note:** This information applies to the Forecasts product beginning with the Winter '12 release and not to Customizable Forecasts. You must enable Forecasts to create a forecasting custom report type.



You asked for it! These enhancements are from the IdeaExchange: [Forecast Quota/Reporting](#), [Improved Forecasts Reports](#), and [Reporting on All Objects](#).

Administrators can now create forecasting custom report types for their users with Analytics for Collaborative Forecasts. A *report type* defines the set of records and fields available to a report based on the relationships between a primary object and its related objects. Reports display only records that meet the criteria defined in the report type. Use this table to understand the report types that you can create for users.

Primary Object	Use to create a report for...
Forecasting Items	<p>Viewing information about forecasting line items, including adjustment amount information. As a best practice, use all default fields in the report type, including the following:</p> <ul style="list-style-type: none"> <li>• <b>Owner Only Amount</b>—The sum of all of a person's opportunities, without adjustments. For example, if you own two opportunities, each worth \$10,000, the Owner Only Amount is \$20,000.</li> <li>• <b>Amount Without Adjustments</b>—The sum of all of a person's owned opportunities and also his or her's subordinates' opportunities, without adjustments. Subordinates include everyone reporting up to a person in the forecast hierarchy. For example, if the sum of the amount of all opportunities owned by you is \$20,000 and the sum of the amount of your subordinates' opportunities is \$55,000, the Amount Without Adjustments is \$75,000.</li> <li>• <b>Amount Without Manager Adjustments</b>—The forecast number as seen by the forecast owner. This is the sum of the owner's opportunities and his or her subordinates' opportunities, including adjustments made on the subordinates' forecasts. <i>It doesn't include adjustments made by forecast managers above the owner in the forecast hierarchy.</i> For example, say Anne has an Amount Without Adjustments of \$75,000, made up of \$20,000 of her own opportunities and \$55,000 of opportunities owned by her subordinate Ben. Additionally, she adjusted Ben's amount to \$65,000 for a total of \$85,000. If you adjust Anne's number from \$85,000 to \$100,000, then you see \$85,000 in <b>Amount Without Manager Adjustments</b> because this is what Anne sees (and Anne can't see your adjustments as you're her manager). To see the amount that includes <i>your</i> adjustment to \$100,000, look at <b>Forecast Amount</b>.</li> <li>• <b>Forecast Amount</b>—The forecast from the forecast manager's perspective and the sum of the owner's and subordinates' opportunities, including all forecast adjustments. For example, say you're a forecast manager and have another forecast manager reporting to you who has</li> </ul>

Primary Object	Use to create a report for...
	<p>an Amount Without Manager Adjustment totaling \$85,000. If you adjust the forecast to \$100,000, the Forecast Amount is \$100,000.</p> <ul style="list-style-type: none"> <li>• <b>Has Adjustment</b>—A checkbox that indicates if an adjustment's been made on a forecast owner's <b>Amount Without Adjustments</b>. For example, if you make an adjustment to one of your subordinate's forecast amounts, this box is checked. If your subordinate makes an adjustment to one of his or her subordinate's amounts, this box is also checked. <i>However, unless you have the "View All Data" permission, if your forecast manager makes an adjustment to your forecast amount, this box remains unchecked; you don't have access to your forecast manager's adjustment information.</i></li> </ul>
Forecasting Items with Opportunities as a related object	Viewing opportunity information for specific forecasting line items. For example, you might want to create a summary report for each of your subordinates that includes the opportunity names and last activity dates for their forecasting items, alongside adjustment information and final forecast amounts.
Forecasting Quotas	Viewing data about individual or team quotas. As a best practice, include all the default fields in the report type. For example, you can include lookup fields, such the full name of the owner. When running the report, you can filter by your own name to see quotas you created and their related accounts and owners.

To make a forecasting report available to users, administrators must create a custom report type.

1. Start creating a custom report type by clicking **Your Name > Setup > Create > Report Types** and **New Custom Report Type**.
2. For Primary Object, select a Forecasting object, such as Forecasting Items or Forecasting Quotas.
3. For Store in Category, select Forecasts.

After deploying the report types, let your users know their locations and names.

## Forecast Managers Can Adjust Forecasts in Any Currency

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

User Permissions Needed	
To use Forecasts:	"Allow Forecasting"
To adjust Forecasts:	"Override Forecasts"



**Note:** This information applies to the Forecasts product beginning with the Winter '12 release and not to Customizable Forecasts. You must enable Forecasts to create a forecasting custom report type.




You asked for it! This enhancement is from the IdeaExchange: [Amounts in the Forecast to use the same currency](#).

Now forecast managers can adjust direct subordinates’ forecasts, no matter what forecast display currency the manager uses. Previously forecast managers had to set their display currencies to the forecast currency. For example, say the forecast currency for your organization is set to the organization’s corporate currency of U.S. Dollars. Without changing the display currency to U.S. Dollars, a forecast manager using Canadian Dollars to forecast can now adjust a subordinate’s forecast who might use Indian Rupees. The forecast manager will see the adjusted amount in Canadian Dollars. To update the forecast display currency, from your own forecast page click **Display Settings > Change**.

# Configurable Forecast List View for the Opportunity Pane

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

User Permissions Needed	
To customize the opportunity pane:	“Customize Application”
To view setup and configuration:	“View Setup and Configuration”

 **Note:** This information applies to the Forecasts product beginning with the Winter ‘12 release and not to Customizable Forecasts.

Configurable Forecast List View is available! Opportunities appear below the rollup table in a forecast in a list that responds to user selections. Administrators select up to 15 standard and custom fields that appear in the opportunity pane. Users see the fields selected based on their field level security settings. Opportunity Name is a required field. Additionally, salesforce.com recommends adding Forecast Category to the pane.

1. Click **Your Name > Setup > Customize > Forecasts > Settings**.
2. Under Opportunity List Column, select fields and click **Add** and **Remove** to move them between the Available Fields list and the Selected Fields list. To determine field order in the layout, select fields and click **Up, Down, Top, or Bottom**.
3. Click **Save**.

# OPPORTUNITY TEAMS ENHANCEMENTS

## Customizing Opportunity Teams

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

User Permissions Needed	
To enable team selling:	“Customize Application”
To create or change custom fields:	“Customize Application”
To define or change field validation rules:	“Customize Application”
To define Apex triggers:	“Author Apex”
To set up team roles:	“Customize Application”
To add a custom button or link:	“Customize Application”
To edit page layouts:	“Customize Application”



You asked for it! This enhancement helps address the following ideas on the IdeaExchange.

- [Enable opportunity team automatic notifications](#)
- [Modify visibility of Opportunity Team related list buttons](#)
- [Make opportunity team member fields visible](#)
- [Email opportunity team members](#)
- [Track time spent by an opportunity team on an opportunity](#)
- [Alert opportunity team members when added](#)
- [Make opportunity team fields available in custom report types](#)
- [Make primary campaign source field visible for opportunity team report](#)
- [Generate an opportunity history with opportunity team report](#)
- [Include opportunity team in backup](#)

Opportunity team selling allows a team of users, called an *opportunity team*, to share and work on an opportunity together.



**Note:** Previously, opportunity teams were called sales teams. If your organization had enabled sales teams prior to Winter '13, opportunity team selling will be automatically enabled in Winter '13.

As an administrator, you can customize opportunity team roles for your organization, such as Account Executive or Sales Representative. Then, your users can add members to an opportunity team on a particular opportunity, and assign each member a team role for that opportunity.

In Winter '13, opportunity teams have been expanded to allow greater customization and control. You can define opportunity team layout pages and add custom fields, custom buttons and links, and related lists to them. You can define validation rules and triggers to verify and automate team selling and opportunity team changes. And you can create custom report types for opportunity teams.

When team selling is enabled, you can customize opportunity teams for your organization.

- [Enable team selling](#) and select which existing page layouts will include the Opportunity Team related list. To change the location of the related list on a particular page, customize the page layout.
- Create a custom field for the opportunity team. Custom fields appear on the Opportunity Team Member page and can be included in opportunity team reports. You can create a maximum of 50 custom fields.



**Note:** If you delete a custom field, filters that use the custom field are also deleted, and the result of assignment or escalation rules that rely on the custom field's data might change.

- Define and activate validation rules that opportunity team data must meet before a user can save the record.
- Define and activate Apex code that executes before or after specific data manipulation language (DML) events occur, such as before opportunity team records are inserted into the database, or after records have been deleted.
- Define opportunity team roles for your organization.
- Optionally, replace existing team roles.

You can globally replace an existing value in a picklist with a new value that you've first created using the picklist edit page. Replacing an existing team role affects opportunity team and account team members.

- Add a custom button or link to the opportunity team.
- Customize the Opportunity Team Member page layout and specify [which fields will appear](#) on the Opportunity Team Member multi-line page. You can add custom fields, buttons and links, and customizable related lists to a page layout.
- Edit the Opportunity Team related list properties on each page layout containing the Opportunity Team related list. You can add custom fields and buttons to the related list. To display opportunity team information in a related list on a parent page, you must create a link between the opportunity team member and the parent. For example, to display opportunity team member information on the associated account detail page, create a custom lookup relationship field for account on the opportunity team, add it to the Opportunity Team Member multi-line page, and then set this field to the parent account for each opportunity team member.
- View limits that apply to the opportunity team such as the maximum number of custom fields you can define.
- Create custom report types for opportunity teams. The opportunity team must always have a parent object and can't have any child objects. For example, an opportunity team member in a custom report type can be related to a parent account but a contact can't be related to a parent opportunity team member.
- [Disable team selling](#) to remove default opportunity teams and existing teams on opportunities.

## Opportunity Team Known Limitations

- Administrators can't define workflows for opportunity teams.
- Administrators can't create a look up from an object, such as an account, to an opportunity team member.
- Administrators can create a custom report type for an opportunity team but the opportunity team must always have a parent object and can't have any child objects. For example, an opportunity team member in a custom report type can be related to a parent account but a contact can't be related to a parent opportunity team member.

- Administrators can't rename tabs and labels for an opportunity team member. When you select **Your Name > Setup > Customize > Tab Names and Labels > Rename Tabs and Labels**, opportunity team member isn't included in the list of tabs and labels.
- Triggers and validation rules aren't supported when a user adds the default opportunity team on an opportunity.

## Enabling Team Selling

Enabling team selling gives your users access to create and use opportunity teams on opportunities.

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

User Permissions Needed	
To enable team selling:	"Customize Application"

- Click **Your Name > Setup > Customize > Opportunities > Opportunity Teams**.
- Click **Settings**.
- Select **Enable Team Selling** and click **Save**.
- Select the opportunity page layouts that will display the new Opportunity Team related list.
- Optionally, select **Append to users' personal related list customization**.
- Click **Save**.

When team selling is enabled, you can add custom fields, custom buttons and links, validation rules, and Apex triggers to opportunity teams. You can also edit opportunity team page layouts and create custom report types for opportunity teams.

## Disabling Team Selling

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

User Permissions Needed	
To disable team selling:	"Customize Application"

- Delete any custom fields, custom buttons and links, page layouts, validation rules, or Apex triggers that you have added to opportunity teams. You must also delete any custom reports that include opportunity team information and uninstall any Apex packages that use opportunity teams.
- Click **Your Name > Setup > Customize > Opportunities > Opportunity Teams**.
- Click **Settings**.
- Select **Disable Team Selling** and click **Save**.

5. Select **Yes** at the prompt and click **OK**. All opportunity teams assigned to opportunities and all default opportunity teams are permanently deleted.



**Note:** You can't disable team selling for your organization if team members are referenced in Apex. For example, if Apex code references the `Team Member` field (represented as `OpportunityTeamMember` in the code), team selling cannot be disabled. See [Apex Code Overview](#).

## Editing Multi-Line Layouts for Opportunity Teams

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

User Permissions Needed	
To edit multi-line layouts for opportunity teams:	"Customize Application"

You can specify which fields appear on the Opportunity Team Member multi-line page. To view this page, [add a new member](#) to an opportunity team.

1. Click **Your Name > Setup > Customize > Opportunities > Opportunity Teams > Page Layouts**.
2. Next to the name of an opportunity team page layout, click **Edit**.
3. Click **Edit Multi-Line Layout** in the top right corner.
4. Move fields between Available Fields and Selected Fields.
  - To customize which fields display in the layout, select one or more fields in Available Fields and click **Add** or **Remove**.
  - To sort fields in the layout, select one or more fields in Selected Fields and click **Up** or **Down**.
  - To select multiple fields individually, use **CTRL+click**.
  - To select multiple fields as a group, use **SHIFT+click**.
5. Click **Save** to apply your changes.

## Using Opportunity Teams

As a user, you can now do more with opportunity teams.

- When adding or editing members to your opportunity teams, specify values for any custom fields that your administrator has defined.
- Create custom reports for opportunity teams to get a clear picture of how your teams are performing.
- Include custom fields for opportunity teams in your reports.
- View the Opportunity Team related list on additional pages, if your administrator has customized page layouts to include this list.



**Note:** Previously, opportunity teams were called sales teams.



# Adding Members to an Opportunity Team

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

User Permissions Needed	
To add team members to an opportunity:	“Read” on opportunities  Owner of opportunity record, or above owner in your organization's role hierarchy
To view an opportunity for which you're a team member:	“Read” on the opportunity

1. View the opportunity and navigate to the Opportunity Team related list, then click **Add**.
2. Enter the member's name in the User column. If the partner portal is enabled, choose whether the member is a Partner User or User, and then enter the member's name.



**Note:** When you add an opportunity team member, the member is automatically granted read access to the associated account.

3. Select an opportunity team role for the member.
4. Select the opportunity access for the member. The access level can't be less than your organization's default opportunity sharing access.
5. Specify values for any custom fields that your administrator has created for opportunity teams.



**Important:** If your administrator has defined custom fields but not added them to the Add Opportunity Team Members page, you can't see them when you add a new team member. See “Working with Custom Fields for Opportunity Teams” in the online help.

6. Click **Save**.



**Tip:** Run the Opportunities with Opportunity Teams report to list the opportunity team members for the opportunities owned by you or users below you in the role hierarchy. The report also shows information about the opportunities you own and opportunity teams to which you belong.

## SALESFORCE FOR OUTLOOK ENHANCEMENTS

### Boosting Productivity with Salesforce for Outlook

For Winter '13, Salesforce for Outlook includes new features that help your users boost their productivity and improve their overall experience syncing items with and adding emails to Salesforce.

Feature	With this feature, users can	Learn more about this feature in
Salesforce Side Panel	View up to a total of four Salesforce contacts and leads in a side panel that appears in Microsoft® Outlook® when users select an email.  Users can manually add emails to either one contact <i>and</i> one account or opportunity, or one lead only.	<a href="#">Viewing Your Salesforce World in Microsoft® Outlook®—Beta</a>
Recurring Events	Sync recurring events between Outlook and Salesforce.	<a href="#">Syncing Recurring Events</a>
Simplified Email Associations	Save time managing the My Unresolved Items page when Salesforce encounters unresolved email addresses from emails added to Salesforce.	<a href="#">Saving Time with Email Associations</a>

## Viewing Your Salesforce World in Microsoft® Outlook®—Beta



You asked for it! This enhancement is from an [idea](#) on the IdeaExchange.

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

User Permissions Needed	
To display the Salesforce Side Panel in Outlook:	“Side Panel”
To add Outlook emails to Salesforce:	“Email to Salesforce”  AND “Add Email”
To add email attachments to Salesforce:	“Always save email attachments” in your Email to Salesforce settings



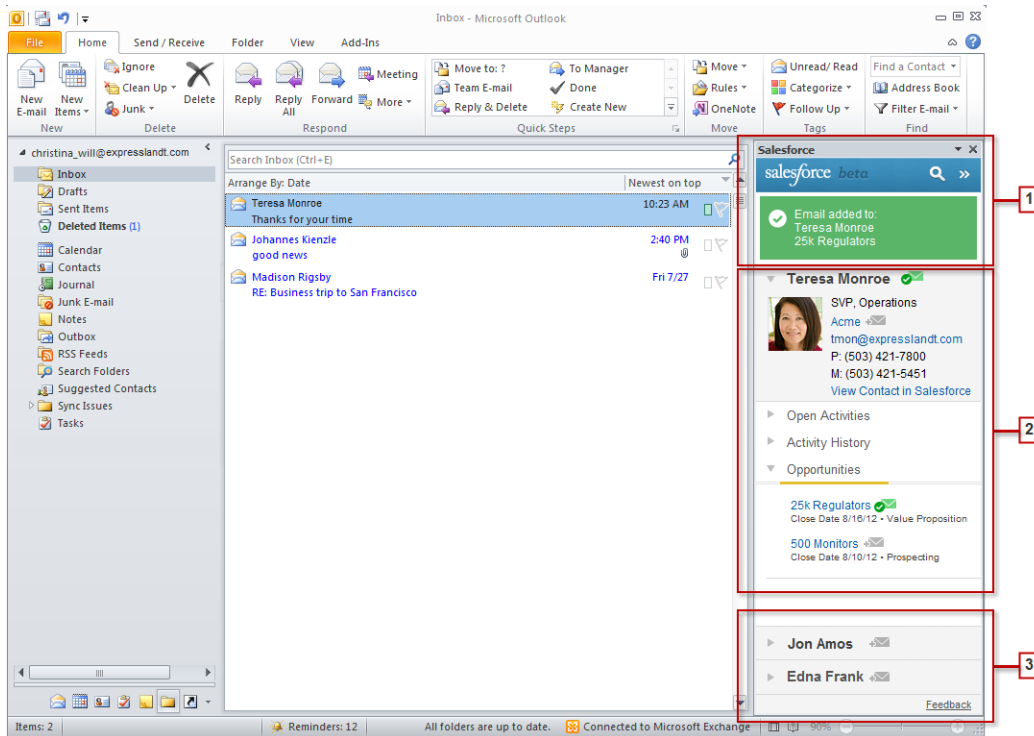
**Note:** Salesforce contact and lead details can now appear directly in Outlook with the new Salesforce Side Panel, which is currently available as a beta feature in Salesforce for Outlook v2.0 and later.

When your users select emails in Outlook, they can now view contact and lead details in the new Salesforce Side Panel. This side panel displays up to a total of four contacts and leads from the **From**, **To**, and **Cc** fields in your users’ emails.

In addition, your users can:

- See up to a total of four open and past activities and opportunities related to the contacts and leads that appear in the side panel.
- Manually add emails to either one contact and one account or opportunity, or one lead only.

- See whether Salesforce encounters duplicate contacts or leads, and choose the most appropriate ones to display in the side panel.
- Search for additional contacts, leads, accounts, and opportunities.
- Use the blue text links to view details directly in Salesforce.




1. Users can see the contacts, leads, activities, and opportunities to which they've added emails. Your users can also click the search icon (🔍) to find other contacts, leads, accounts, and opportunities, and then add emails to them. There's even a collapse icon (») to hide the side panel.
2. The side panel displays contacts and leads based on the order they appear in the **From**, **To**, and **Cc** fields in your users' emails. Users can view:
  - Contacts and their related activities and opportunities
  - Leads and their related activities

If you have the Social Accounts and Contacts feature enabled in Salesforce, the side panel displays either Facebook® or Twitter™ profile pictures for contacts and leads that maintain profile pictures on those sites.

3. Additional contacts and leads from your users' emails appear, which your users can select to display contact and lead details along with related activities and opportunities.

## Considerations for Using the Salesforce Side Panel

It's important that you understand the following details before you enable the side panel for your users.

- When you enable the Salesforce Side Panel, the **Add Emails** button no longer appears directly in Outlook. Instead, your users can click  to add emails to either one contact and one account or opportunity, or one lead only.

In addition, the **Send and Add** button no longer appears in individual Outlook emails that your users send. For this beta release, we don't offer a Send and Add feature.

- Supported browsers include Microsoft Internet Explorer® 8 or later.
- The DELETE function in the search box is inactive. To modify search entries, users can either press BACKSPACE, or click **Done** and then search again.

## Enabling the Salesforce Side Panel

1. Click **Your Name > Setup > Desktop Administration > Outlook Configurations**.
2. Either create a new Outlook configuration, or edit an existing one.
3. Select **Side Panel**.

4. Select any other options that apply to your Outlook configuration.
5. Click **Save**.
6. If you don't yet have a remote site configured for your organization, create one now. To do so, click **Your Name > Setup > Security Controls > Remote Site Settings**.
7. Click **New Remote Site**.
8. Add a remote site name. Then, add a remote site URL, which is your organization's Salesforce URL.

9. Click **Save**.

# Syncing Recurring Events



You asked for it! This enhancement is from an [idea](#) on the IdeaExchange.

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

## User Permissions Needed

To sync recurring events between Outlook and Salesforce:	“Recurring Events”
	In addition, “Read” and “Edit” on events, and event sync direction set to any of the following directions.
	Outlook to salesforce.com,
	Salesforce.com to Outlook, or
	Sync both ways

Your users can now keep Outlook and Salesforce recurring events in sync with Salesforce for Outlook, which supports the following recurrence patterns.

- Daily
- Weekly
- Monthly
- Yearly

After syncing recurring events to Salesforce, your users can assign the recurrences to related records, like contacts, accounts, opportunities, and so on. Syncing recurring events also helps your users maintain an accurate view of their availability when they create events and request meetings from their Salesforce calendars.

## Considerations for Enabling the Recurring Events Feature

It's important that you understand the following details before you enable recurring events for your users.

- When you enable recurring events, you enable the feature for your entire organization. You can, however, choose the Outlook configurations for which you want recurring events to sync.
- After you enable this feature, you can't disable it without help from the salesforce.com Support team.
- All Salesforce for Outlook users will need to upgrade to Salesforce for Outlook v2.0 or later.
- Recurring events do not appear on the My Unresolved Items page. Instead, your users can go directly to the recurring events in their calendars to associate the recurring events with Salesforce records.
- Your users' Salesforce for Outlook configuration settings don't indicate whether their Outlook configurations are set up to sync recurring events.
- In Salesforce, if your users delete all occurrences within a series, but not the series itself, Salesforce for Outlook generates an error message after it syncs to Outlook. Your users can ignore this error message, which clears during the next sync.

You can also learn about important, although not critical, details in [Understanding Differences Between Outlook and Salesforce](#) and [Modifying Recurring Series](#).

## Enabling the Recurring Events Feature

1. In Salesforce, click **Your Name** > **Setup** > **Desktop Administration** > **Outlook Configurations**.
2. For your Outlook configuration, click **Edit**.
3. Under Advanced Settings, select **Recurring Events**.

4. Click **Save**.

## Understanding Differences Between Outlook and Salesforce

Recurring events work differently between Outlook and Salesforce.

For	You should know that
Ranges of occurrences	<p>If your users' recurrences include more than 100 occurrences, Salesforce for Outlook creates the series with 100 occurrences in Salesforce.</p> <p>After the dates of occurrences pass, Salesforce for Outlook then automatically adds another group of occurrences, bringing the total future occurrences up to 100 again. The schedule on which Salesforce adds these groups depends on the number of occurrences that passed and when users last synced, as well as whether users changed any existing occurrences.</p> <p>In addition, when users set up recurring events in Outlook, they must select the option <b>End by</b>. Salesforce doesn't support recurring series set with the following options.</p> <ul style="list-style-type: none"> <li>• <b>No end date</b></li> <li>• <b>End after</b></li> </ul>
Monthly occurrences	<p>Salesforce for Outlook doesn't support the following Outlook recurrence pattern options.</p> <ul style="list-style-type: none"> <li>• <b>weekend day</b></li> <li>• <b>weekday</b></li> </ul>
Yearly occurrences	<p>Salesforce for Outlook lets your users set up events that recur every year. If users enter a number other than 1 for the <b>Recur every</b> option in Outlook recurrence patterns, Salesforce for Outlook won't sync the recurring series. This means that your users can set up yearly recurrences, but not recurrences for every other year or every three years.</p> <p>In addition, Salesforce for Outlook doesn't support the following Outlook recurrence pattern options.</p> <ul style="list-style-type: none"> <li>• <b>weekend day</b></li> <li>• <b>weekday</b></li> </ul>
Events lasting longer than 24 hours	<p>Salesforce doesn't support recurring events lasting longer than 24 hours.</p>

For	You should know that
Updates to events	Salesforce doesn't notify attendees of meeting updates through email. Instead, Salesforce for Outlook updates attendees' Salesforce calendars immediately.

## Modifying Recurring Series

Users can modify recurring series, but it's good to know what to avoid, so that your users won't lose any details for occurrences they've individually modified.

If users modify	You should know that
Recurring series in Outlook	<p>Those modifications won't propagate to individually modified occurrences in Salesforce.</p> <p>For example, your user modifies the appointment time of an occurrence, and then later modifies the appointment time for the entire series. The appointment time modification for the series won't propagate to the one modified occurrence.</p> <p>Critical changes include modifications to:</p> <ul style="list-style-type: none"> <li>• Appointment times</li> <li>• Recurrence patterns</li> <li>• Ranges of occurrences</li> </ul> <p>If your users make critical changes to their recurring series, individually modified occurrences lose their modifications.</p>
Start dates for recurring series in Outlook	Salesforce doesn't support modifications to start dates that already occurred.
End dates for recurring series in Salesforce	Those modifications won't propagate to Outlook. Users can, however, modify end dates in Outlook, but that type of critical change will clear all modifications your users made to individual occurrences—in both Outlook and Salesforce.
Individual occurrences	Users may lose those changes if they make critical changes to the recurring series.
Recurring series to single events <i>and</i> Single events to recurring series	Salesforce doesn't support these types of modifications.
The order of occurrences	Outlook doesn't support this type of occurrence. For example, your user set up a daily recurring series. Later, your user wants to change the October 10th occurrence to occur on October 8th, therefore creating two occurrences on October 8th. Outlook doesn't support this.
Individual occurrences in Outlook	<p>Outlook modifications propagate to occurrences in Salesforce, regardless of whether the ones in Salesforce include critical modifications.</p> <p>Deleted occurrences in Salesforce, however, remain deleted, and aren't replaced with individually modified occurrences from Outlook.</p>

# Saving Time with Email Associations



You asked for it! This enhancement is from an [idea](#) on the IdeaExchange.

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

We listened to what your users wanted, so we reinstated the way Salesforce handled unresolved email associations on the My Unresolved Items page. Starting in Spring '12, we displayed separate rows for each unresolved email address in the **To** and **Cc** fields of emails your users added to Salesforce. With these separate rows, Spring '12 and Summer '12 increased the time required for maintaining the My Unresolved Items page.

With Winter '13, the My Unresolved Items page now displays only one row for each email when Salesforce can't match any email addresses for recipients that appear in the **To** and **Cc** fields of emails your users add to Salesforce. Users will also notice that we replaced the **Recipient** column with the reinstated **From/To** column on the My Unresolved Items page.

The screenshot displays the 'My Unresolved Items' page in Salesforce. The page has a navigation bar at the top with links like Home, Chatter, Profile, Groups, Files, Leads, Accounts, Contacts, Opportunities, Reports, Dashboards, Products, and Forecasts. Below the navigation bar, there's a 'Create New...' button and a 'Shortcut' section with a link to 'Unresolved Items'. The main content area shows a table with the following data:

Subject	Date	From/To
Promising leads	7/19/2012 10:01 AM	mringsby@unioncontainers.com gjohnson@centurycontainers.com

Below the table, there's a section titled 'Assign to Salesforce.com Records' with two dropdown menus: 'Contact' (set to 'Contact') and 'Account' (set to 'Account'). There are also 'Save', 'Cancel', and 'Batch Edit' buttons. A 'Recycle Bin' link is visible at the bottom left of the page.



# SHARED ACTIVITIES ENHANCEMENTS

## Shared Activities for Events

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! This enhancement addresses [ideas](#) on the IdeaExchange.

Winter '13 expands Shared Activities to let your users relate as many as 10 contacts to a single non-recurring event. One contact is the primary contact and all others are secondary contacts. This allows your users to easily track the overall activity and the individual contact activities for the event. It also allows your users to generate useful and accurate activity metrics reports that include the number of contacts related to an event.



**Note:** Shared Activities now includes both tasks and events. If you’ve already enabled Shared Activities for tasks, Shared Activities will be enabled automatically for events with Winter ’13.

Users select contacts using the Select Contacts dialog box, regardless of the number of contacts they relate to an event.

**Select Contacts**

You can relate this event to as many as 10 contacts, including a designated primary contact. [Tell me more!](#)

Search  **Find**

**Available: (2)**

- Edward Stamos Global Media
- Carole White Global Media

**Add**

**Remove**

**Selected: (10)**

- Jack Rodgers Global Media
- Jon Amos Global Media
- Liz D'Cruz Global Media
- Sean Forbes Global Media
- Edna Frank Global Media
- Rose Gonzalez Global Media
- Avi Green Global Media
- Jane Grey Global Media
- Geoff Minor Global Media
- Tom Ripley Global Media

**Make Primary**

**Done** **Cancel**

Shared Activities lets your users view:

- Shared events on the event detail page when the user has access to at least one contact, lead, or related record. Users can also view events if the user's role is above the activity owner's in your organization's hierarchy. Keep in mind, when users relate contacts to which other users have access, those users can view the activity along with the names, account names, and titles of all the contacts related to the activity—including the contacts to which those users may not otherwise have access.
- All contacts related to an event on the event detail page if the administrator has added the Name related list to the event page layout.
- The number of contacts related to an event when the Relation Count column is included in activity reports.
- One row per contact for each activity in the Activities with Contacts report when the user selects at least one field from the related contact list.
- An activity's primary contact in two reports: Tasks and Events, and Activities with Cases. The primary contact also appears in the Name field on the event detail page.

**Note:**

The Activities with Contacts report displays all contacts related to an activity but doesn't indicate which is the primary contact.

# Known Issue Involving API and Email Integration Compatibility

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

## User Permissions Needed

To view activity settings:	“View Setup and Configuration”
To customize activity settings:	“Customize Application”

Before you enable Shared Activities, it’s important you understand an issue that may impact administrators or developers using our API version 25.0 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 25.0 or earlier	The API doesn’t return events with multiple contacts related to the events. To avoid this issue, upgrade to API version 26.0.
User	Either of the following email integration applications: <ul style="list-style-type: none"> <li>• Connect for Outlook</li> <li>• Connect for Lotus Notes</li> </ul>	You will lose event data when you: <ul style="list-style-type: none"> <li>• Relate multiple contacts to an event that you update in Salesforce, <i>and</i></li> <li>• Sync these events from Salesforce to your email system</li> </ul> <p>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.</p>

# Enabling Shared Activities

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

## User Permissions Needed


To view activity settings:	“View Setup and Configuration”
To customize activity settings:	“Customize Application”

The process for enabling Shared Activities 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 and events.

1. Go to **Your Name > Setup > Customize > Activities > Activity Settings**.

2. Select `Allow Users to Relate Multiple Contacts to Tasks and Events`.
3. Click **Submit**.
4. Add the Name related list to the task detail and event detail page layouts so users can see all contacts on an activity. This is particularly important for Salesforce Mobile users.

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




**Tip:** To check the status of the process for enabling Shared Activities, view the Activity Settings page. Salesforce provides helpful messages about both the status and what you need to do if the enabling process doesn't finish successfully.

## Activity Rollup to Accounts for Contacts

If you create an activity and relate it to an account and a contact, and that contact is related to a different account, the activity rolls up to the contact's parent account. For example:

- The "Sales Rep Call" task is related directly to the Global Media account and also to the contact Ron Dean.
- Ron Dean's parent account is HiTech Solutions.
- The "Sales Rep Call" task appears in the Global Media account details and also in the HiTech Solution account details.




**Note:** This behavior occurs only when Shared Activities is enabled.

## Event and EventAttendee Object Changes

Important changes have been made to the Event and EventAttendee API objects. Now any customer or partner can modify event attendees with the API. These changes might impact existing Apex and API packages.

- The EventAttendee object is no longer supported.
- There is a new EventRelation object with fields to manipulate Whos, Whats, and invitees on events. You can modify invitees on an event.




**Note:** A *Who* is a related contact or lead, and a *What* is a related record.

- Update operations on child events are very limited.

These changes allow you to create and modify event attendees (invitees) through the API. Previously, this was possible through the UI only. The new API also supports Shared Activities for events so users can relate non-recurring events to as many as 10 contacts. Even if you don't enable Shared Activities for events for your users, the following event object changes will affect you.

What has changed?	How has it changed?
Event Object	The Event object has two new fields: <code>WhatCount</code> and <code>WhoCount</code> .

What has changed?	How has it changed?
<b>EventAttendee Object</b>	<p>The EventRelation object replaces the EventAttendee object.</p> <ul style="list-style-type: none"> <li>The EventRelation object represents a person (user, contact, or lead) or resource (such as a conference room) invited to an event.</li> <li>The EventRelation object allows you to add or remove invitees from an event, and to manage invitee responses to invitations through the API.</li> <li>When Shared Activities is enabled, an EventRelation object can also represent a Who or What object.</li> <li>The EventAttendee object is no longer visible to users with API version 26.0 and greater. Existing Apex and API packages that use API version 25.0 and older can still query the EventAttendee object.</li> </ul>
<b>Invitee Information</b>	<p>The RelationId field contains the ID of the person or resource invited to the event. The value of this field can't be changed after it has been specified. When Shared Activities for events is enabled, this field can also contain the ID of the event's Who or What.</p>
<b>Shared Activities for Events</b>	<p>The EventRelation object includes the following fields.</p> <ul style="list-style-type: none"> <li>AccountId is the Account ID of the relation.</li> <li>IsInvitee indicates whether the relation is an invitee.</li> <li>IsParent indicates whether the relation is a Who/What.</li> <li>IsWhat indicates whether the relation is the Who or the What.</li> </ul> <p> <b>Note:</b> AccountId, IsParent, and IsWhat, are visible when Shared Activities is enabled. IsInvitee is visible when Shared Activities is enabled, or is in the process of being enabled or disabled.</p>
<b>Child Events</b>	<p>You can update only the IsReminderSet and ReminderDateTime fields of a child event. You can query and delete a child event.</p> <p>You can't create an EventRelation object for a child event. The EventId field of an EventRelation object always points to the master record. An invitee on an event can query the EventRelation object to view the master record.</p>
<b>Adding, Removing, Updating Invitees</b>	<p>You can add or remove invitees, and update invitee status through the API. To create an invitee:</p> <ul style="list-style-type: none"> <li>If Shared Activities is not enabled, create an EventRelation object for the invitee.</li> <li>If Shared Activities is being enabled or rolled back, or is enabled, and the invitee is already a Who, update IsInvitee to true. If the invitee is not already a Who, create an EventRelation object for the invitee with IsInvitee set to true. IsInvitee is defaulted to true during enablement and rollback, and when Shared Activities is enabled if IsInvitee, IsParent, and IsWhat are not set. This ensures compatibility for code written prior to enabling Shared Activities when EventRelation represents event attendees only.</li> </ul>

# ADDITIONAL SALES ENHANCEMENTS

## Label Change for Upload New Document Page

User Permissions Needed	
To upload new documents:	“Create” on documents

On the Upload New Document page, we’ve changed the Internal Use Only checkbox to Indicate Document is Internal for clarity.

## New Behavior for Partner Portal Email Notifications When No Change Owner to Portal User Template is Selected

In Winter ’13, we’ve improved the behavior of change owner email notifications sent from portals that don’t have Change Owner to Portal User Template or a default template set. When a portal user changes the owner of a record to another portal user whose profile is associated with multiple portals, the email notification sent to the user includes a link to the portal in which the change of ownership occurred. In previous releases, the link pointed to the oldest login-enabled portal that the user was a member of.

# SERVICE

## CASE FEED ENHANCEMENTS

### New Customization Options in Case Feed

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

Winter '13 gives you more control over the fields and information you include on feed layouts in Case Feed.

1. Choose whether the publisher menu appears in the left column or the center column on the Case Feed page.
2. Customize the Email publisher by:
  - Selecting which header fields to include.
  - Selecting which email tools, such as templates, to make available to agents.
  - Enabling the rich text editor and, optionally, making it required when agents write email.
  - Specifying **From** addresses.
  - Making the body field collapsible.
  - Making the email header collapsible.
  - Replacing the standard **Send Email** button in the Email publisher with a custom button. You can use any custom button you've created for cases, except those that have s-controls as content sources.
3. Customize the articles tool to give agents the option of attaching articles to email messages as PDFs, and use the tool to replace the standard Salesforce Knowledge sidebar in the Service Cloud console
4. Choose which buttons, lists, and links to include on the Case Feed page, and specify where on the page they appear.
5. Choose where and how the feed filters list appears, including making the list floating so that it moves down the page when agents scroll, rather than remaining static.
6. Choose the feed filters to include on the Case Feed page.

The screenshot displays the Salesforce Case Feed for a case titled "Unit freezes after downloads". The interface includes a top header with case details (Case 00001004, Created Date 11/15/2011 2:03 PM, Status New, Priority Medium, Case Owner Karen Williams) and a customer profile (Carole White, Global Media, (415) 555-1212). Below the header is a navigation bar with buttons: Answer Customer (1), Log a Call, Write Case Note, Change Status, and More. The main content area is divided into two columns. The left column contains an email composer (2) with fields for From, To, Bcc, and Subject, and a "Send Email" button. Below the email composer is an "Articles" section (3). The right column contains a "Reopen Case" button (4), a "Following" status, a "Followers" list, and "Custom Links". At the bottom, there is a "All Updates" dropdown (5) and a list of updates including "Status Changes" and "Case Notes" (6).

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

In addition, you can now rename the Case Feed publishers and feed filters so they match the terms your company uses. For example, if your company refers to customers as guests, you might rename the Answer Customer publisher “Answer Guest.”

For more information, see “Renaming Publishers and Feed Filters in Case Feed” in the online help.

## Custom Publishers in Case Feed

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

Publishers in Case Feed let support agents perform tasks like emailing customers, writing case notes, and changing the status of a case. Using Visualforce pages, you can create custom publishers that offer agents more functionality.

Here are some examples of custom publishers:

- A Case Comment publisher that lets agents write comments on cases longer than the standard 1000 characters for case notes.
- A Task publisher that lets agents create tasks related to a case.
- An Entitlements publisher that shows the service level agreement (SLA) status—such as past due, on time, or time to milestone—on a case and lets agents mark milestones as complete.

You can use any Visualforce page that uses the standard case controller as a custom publisher.

For more information on creating Visualforce pages to use as custom publishers, see [Customizing Case Feed with Visualforce](#).




## New Feed Items Available in Case Feed

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

Winter '13 introduces two new kinds of feed items in Case Feed:

- **Live Agent transcripts**—The transcript for each Live Agent chat session associated with a case appears in the feed for the case. The feed item shows basic information about the chat and the first few lines of it. Click **More** to see more of the chat directly in the feed, or click **View Transcript** to see the full transcript record.
- **Social posts**—Facebook and Twitter posts associated with a case, such as those created with Salesforce Social Hub, appear in the feed.

To include these items in your feed, add them to your list of selected feed filters:

1. Click **Your Name** > **Setup** > **Customize** > **Cases** > **Page Layouts**.
2. In Page Layouts for Case Feed Users, click  next to a layout and choose **Edit feed view**.
3. In Feed and Filter Options, move the items you want to include in the feed from the **Available** list to the **Selected** list.
4. Click **Save**.

## Email Drafts and Approvals

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

Draft emails let support agents save messages they write to customers without having to send them immediately, and also make it possible for administrators to create approval processes for email messages. For example, agents can save messages as drafts so they can gather additional information or confirm troubleshooting steps before replying to a customer, or can take breaks and log out of Salesforce without losing their work.

Approval processes determine how your organization handles draft email messages—specifying, for example, which messages require approval and whether approvers are automatically assigned. You can create customized approval processes based on your company's needs. You might create an approval process to ensure that newer support agents can't send messages until they're reviewed by a supervisor, or one that requires all messages related to sensitive issues such as financial transactions to be approved before they're sent.

For more information, see “Working with Draft Emails” in the online help and “Reviewing and Approving Email Drafts” in the online help.

To learn more about approval processes for email messages, see “Creating Approval Processes for Email Drafts” in the online help.

## Enabling Email Drafts in Case Feed

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

User Permissions Needed	
To change support settings:	“Manage Cases”
	AND
	“Customize Application

Before enabling draft emails, set up Email-to-Case and Case Feed.

Enabling draft emails gives support agents who use Case Feed the ability to write and save messages without having to send them immediately. This option also makes it possible to implement approval processes so messages can be reviewed by supervisors or senior agents before they're sent to customers.

1. Click **Your Name** > **Setup** > **Customize** > **Cases** > **Support Settings**.
2. Click **Edit**.
3. Select **Enable Email Drafts**.
4. Click **Save**.



**Note:** Changes to fields other than **To**, **From**, **CC**, **BCC**, and **Subject** in the Email publisher aren't saved when a messages is saved as a draft. We recommend removing any additional fields from the Email publisher if you plan to use draft emails.

## Support for Chatter Answers in Case Feed

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

In organizations with Chatter Answers enabled, support agents can now use the Portal publisher in Case Feed to post replies to cases that have been escalated from questions.

The Portal publisher shows two options when agents are working on cases that are associated with questions:

1. **Customer Only**—Selecting this option posts a private reply to the customer who asked the question. Optionally, agents can select **Send Email** to send a message to the customer letting them know that a reply to their question has been posted.
2. **Everyone**—Selecting this option posts a public reply that's visible to anyone in the Chatter Answers community where the question was posted.

For more information on using the Portal publisher to reply to customers, see “Communicating with Customers via the Customer Portal and Chatter Answers” in the online help.

## Smart Email Templates in Case Feed

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

Default email templates make it easy for support agents to respond to customers more quickly, more accurately, and with greater consistency. The email templates are preloaded, so agents don’t need to browse for the templates they need before writing email. You can create as many templates as needed and assign them based on your company’s needs. For example, if your support center handles issues related to multiple products, you can create a specific template for each product and preload the appropriate template based on a case’s origin, subject, or other criteria.

Before you can enable default email templates, you need to create text, HTML, or Visualforce templates, and create an Apex class that contains template selection logic. This class must implement the new `Support.EmailTemplateSelector` interface.

For more information on enabling and configuring default templates, see “Enabling Default Email Templates in Case Feed” in the online help.

## Updated Look for Case Feed

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

The Case Feed page has an updated look, with redesigned buttons and a cleaner, more streamlined feel.

# New Case Feed Methods in the Interaction API

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

With Winter '13, the Interaction API, which also includes Open CTI, has been expanded to include two new methods: `onObjectUpdate()` and `refreshObject()`. These methods let developers set interactions between elements on a Case Feed page.

## `onObjectUpdate()`

### Usage

Registers a function to call when case fields, the case feed, or case-related list data has changed on a Case Feed page.



**Note:** Use this method with Visualforce pages you want to use as custom publishers in Case Feed. For more information on creating Visualforce pages to use as custom publishers, see [Customizing Case Feed with Visualforce](#).

### Syntax

```
sforce.interaction.entityFeed.onObjectUpdate(callback:function)
```

### Arguments

Name	Type	Description
callback	function	JavaScript method called upon completion of the method.

### Sample Code–JavaScript

```
<apex:page standardController="Case">
  <apex:includeScript value="/support/api/26.0/interaction.js"/>
  <script type="text/javascript">
    var callback = function(response) {
      alert('Case was updated. Fields = ' + response.fieldsUpdated +
        ' Related lists = ' + response.relatedListsUpdated + ' Feed = ' +
        response.feedUpdated);
    };
    //Invokes API method
    sforce.interaction.entityFeed.onObjectUpdate(callback);
  </script>
</apex:page>
```

### Response

This method is asynchronous so it returns its response in an object in a callback method. The response object contains the following fields:

Name	Type	Description
fieldsUpdated	boolean	true if one or more case fields were updated.
relatedListsUpdated	boolean	true if one or more case related lists were updated.
feedUpdated	boolean	true if the case feed was updated.

## refreshObject()

### Usage

Notifies the Case Feed page that case fields, the case feed, or case-related list data has changed, and forces an update of these on the page.



**Note:** Use this method with Visualforce pages you want to use as custom publishers in Case Feed. For more information on creating Visualforce pages to use as custom publishers, see [Customizing Case Feed with Visualforce](#).

### Syntax

```
sforce.interaction.entityFeed.refreshObject(
    objectId:string,
    refreshFields:boolean,
    refreshRelatedLists:boolean,
    refreshFeed:boolean, callback:function)
```

### Arguments

Name	Type	Description
objectId	string	The record ID of the case object.
refreshFields	boolean	Indicates that one or more fields on the case have changed.
refreshRelatedLists	boolean	Indicates that one or more case-related lists have changed.
refreshFeed	boolean	Indicates that the case feed has changed.
callback	function	JavaScript method called upon completion of the method.

### Sample Code–JavaScript

```
<apex:page standardController="Case">
    <apex:includeScript value="/support/api/26.0/interaction.js"/>
    <a href="javascript:void(0);"
onclick="sforce.interaction.entityFeed.refreshObject('{!case.id}', true, true, true,
function(response) {alert('Case was updated: ' + response.result);});">Refresh Case</a>
</apex:page>
```

## Response

This method is asynchronous so it returns its response in an object in a callback method. The response object contains the following fields:

Name	Type	Description
result	boolean	true if the Case Feed page was successfully updated, false if it was not.

# CHATTER ANSWERS

## Encouraging Community Participation with Chatter Answers Reputation

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

Tap into the expertise and knowledge of your most active community members by rewarding their activity. By enabling reputations, you let users earn points and ratings that display on hover over a user's photo in the feed. As your star posters engage more frequently, they improve the overall content in your community and provide better answers for users who are searching for help with an issue. This means that users who are searching for a solution can be confident that an answer from a community expert can be trusted, which means fewer support calls for your organization.

The screenshot displays the Chatter Answers interface. On the left, there are navigation links: 'New here?' with a 'Sign Up' button, 'Have an account?' with a 'Sign In' button, 'Best Answers' (highlighted with a green checkmark), 'Open Questions' (with a question mark icon), and a 'Topics' section with links for 'Video Conferencing' (highlighted), 'General Questions', 'VX5', and 'Cirrus View'. The main content area shows a search bar with the text 'What would you like to know?'. Below the search bar, a user's profile is visible. A red box highlights a reputation overlay for the user 'Antony Passemard'. The overlay shows a 'Newbie' badge, '5 Total Posts', and '1 Best Answer'. Below the profile, a question is posted: 'I need 4 webcams in the same room (one per person). Is this possible?' dated 'July 11, 2012' with 'Like 1' and 'Follow 0'. A response from 'Sarah Patel' is shown below, dated 'July 11, 2012' with 'Like 0' and '0' comments. At the bottom, there is a 'Show 3 answers' link.

Users earn points when their posts receive votes or are selected as a best answer in any of the communities to which they belong. When they earn enough points, the hover shows their reputation as well as the number of posts and best answers they have in that community.

Chatter Answers comes with the following pre-defined reputation levels that apply to all communities:

Name	Points per Level	Color
Newbie	0 – 499	Green
Smartie	500 – 1999	Blue
Pro	2000 – 4999	Purple
All Star	5000+	Orange

To add or edit reputation level names or points per level in any of your communities, use the `ChatterAnswersReputationLevel` object in the API. You can create up to 25 different reputation levels in the application. Colors for the different reputation levels can be changed at the stylesheet (CSS) level.

## Customizing Chatter Answers in Portals using Visualforce Pages

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

You can create a Visualforce page that displays a Chatter Answers community in a Customer Portal or Partner Portal. By using a Visualforce page, you can add custom widgets to Chatter Answers, such as announcements or ads, which let you extend your branding and change the community experience for users. The page you create must include the `chatteranswers:allfeeds` component to display the community. After users log in to one of your portals, they can access Chatter Answers from a tab and interact with that community. When you add Chatter Answers using a Visualforce page, users only see the community that is related to the page; they can't switch communities as they can when using the standard Chatter Answers tab on a portal.



**Note:** The Visualforce page is visible to portal users only. Internal users can see the Chatter Answers tab, but need to log in through the portal to view the contents of the tab using the portal.

## Adding a Custom Visualforce Page to a Portal

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

User Permissions Needed	
To set up and update the Customer Portal:	"Customize Application"

To add a custom Visualforce tab to a portal:

1. Click **Your Name** > **Setup** > **Create** > **Tabs** to display a list of your organization's Visualforce tabs.

2. Click **New** to create a new Visualforce tab.
3. Select the Visualforce page and add details for the other fields on the page.
4. Click **Next**.
5. Select which user profiles can see the tab.
6. Select the portals that will include the new tab.

## Creating Questions from the Questions Tab

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

User Permissions Needed	
To view the Questions tab:	"Read" on questions
To ask and reply to questions:	"Create" on questions



**Note:** Since your administrator determines the fields on questions, some fields might not be included in the following steps.

You can use the Questions tab in both the application and the console to ask questions of the communities that you moderate and manage. Asking community members for input or opinions is an easy way to assess interest in topics or create engagement in the community.

To post a question to the community from the Questions tab:

1. Click **New Question** from the Questions list view page or click **New** from the Recent Questions list on the Questions overview page.
2. Select a community for your question.
3. Add a title for your question.
4. Optionally, enter a description of your question.  
Use the rich text editor to format your text or upload an image. To ensure that your images appear correctly in the feed, Salesforce recommends that they be less than 450 pixels wide.
5. Select a category for your question.  
Questions must be assigned to a category to appear in the community. Questions that don't have a category are still visible to the owner of the question, but not to other members of the community.
6. Click **Save**.

## Enhancements to Questions and Answers in the Feed

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

In Winter '13, we've made using Chatter Answers even easier by enhancing the way questions and answers appear in the feed.



- The option to flag a post has been moved into the question or answer in the feed. Previously, you had to click **More** to select flagging options.
- Click question titles to display a new view of the question with all of its related answers. This replaces the option **See Detail**.
- Use **Like** to show support for a question, answer, or knowledge article. With Winter '13, **Like** replaces **Useful** in the feed. Additionally, in Open Questions you can now **Like** a post without having to **Follow** it. You still receive email updates on a post when you **Follow** it.
- You can now **Unfollow** questions that are selected as best answers after you've followed them. Previously, there was no way to stop following those questions. You'll stop receiving emails when you unfollow the post.

## New Options to Customize Questions

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

### User Permissions Needed

To create or change custom buttons and links:	"Customize Application"
To add custom page layouts:	"Customize Application"

With Winter '13, administrators have more options to display a custom view of the Questions detail, edit, and list view pages. Administrators can create custom page layouts, and add buttons and links to Questions.

- Use a Visualforce page that contains apex:detail to override the default single item view for questions. When you override the default page layout, you can create different page layouts to display Questions.
- By adding custom buttons and links to the Questions detail page, you can add external URLs and access to applications and other modules.

See "Customizing Page Layouts" and "Understanding Buttons and Links" in the online help.

## Format Text and Add Photos to Questions

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

In Winter '13, administrators can give community members access to a rich text editor, enabling them to format text and add images when posting questions. Images can be up to 32 KB in size.

## API Access to Names and Photos from the Feed

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

Using the API, developers have programmatic access to a portal user's first and last name, profile photo, and thumbnail photo from the feed, enabling them to create a customized view of feed items. In Winter '13, the following fields have been added to the `Case`, `CaseComments`, `Question`, and `Reply` objects.

Field	Description
<code>CreatorFullPhotoUrl</code>	URL of the user's profile photo from the feed. Chatter Answers must be enabled to view this field.
<code>CreatorName</code>	Name of the user who posted the question or reply. Only the first name of internal users (agents) appears to portal users in the feed. Chatter Answers must be enabled to view this field.
<code>CreatorSmallPhotoUrl</code>	URL of the user's thumbnail photo from the feed. Chatter Answers must be enabled to view this field.

## Option to Remove Sign-In Links from Chatter Answers

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



In Winter '13, you can use the `NoSignIn` Boolean attribute in the `chatteranswers: allfeeds` to remove all sign-in links from your community. Use this option when you have an external sign-in path and want to ensure that your users follow it instead of the standard Chatter Answers sign-in. When the `NoSignIn` Boolean attribute is `true`, users can still search and view publicly accessible content for the community. If they already have a valid session, they can still post questions, replies, vote, and flag content.

## IDEAS

## Moderate Ideas Communities with the Service Cloud Console

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

With Idea Moderation, moderators can facilitate healthy and respectful community discussions right from the agent console:

- Moderators and administrators can review, update, create, and manage Ideas and the related Idea Themes from a tab within the console.
- Moderators can now edit and delete ideas from the Ideas list view, making it even easier to manage an Ideas community. Click the **Edit** or **Del** link next to the idea you're working with.
- Switch views quickly and easily from the Ideas tab within the application. Click  **Tab** to display the Ideas tab. Click  **List** to toggle back to the list view.

## Idea Themes

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



[Encourage Collaboration with Idea Themes](#) (3:30 minutes)



You asked for it! This enhancement is from an [idea](#) on the IdeaExchange.

Idea Themes lets you invite community members to post ideas about specific topics so that members can solve problems or propose innovations for your company. For example, to engage with your community and create excitement around the launch of a new product, you can ask community members to work together to create the product's name. Community members collaborate and add ideas to the idea theme, while you monitor their activities as they vote and comment on each other's ideas until they find a winner.

When you create an idea theme, you can add pictures, videos, and other multimedia content to showcase or explain the idea that you're presenting to the community. You can also view and manage the list of ideas that have been posted to the idea theme.

**Idea Theme**

[Edit Layout](#) | [Printable View](#) | [Help for this Page](#)

### Pick the color for our new Spider Laptop

[Ideas \(2\)](#)

**Idea Theme Detail**
[Edit](#) [Delete](#) [Clone](#)

Status

New

Categories

Laptop Design

Title

Pick the color for our new Spider Laptop

Description

What colors would you like to see for our new line of laptops?

Community

[Spider Laptops](#)

[Edit](#) [Delete](#) [Clone](#)

**Ideas**

[Post an Idea](#)

Action	Title	Posted By	Vote Score	Comments
<a href="#">Edit</a>   <a href="#">Del</a>	<a href="#">I'm all for primary colors</a>	<a href="#">nqupta</a>	20	1
<a href="#">Edit</a>   <a href="#">Del</a>	<a href="#">White and black are an industry standard</a>	<a href="#">kadams</a>	20	0

## Enabling Idea Themes

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

User Permissions Needed	
To customize Idea Themes settings:	"Customize Application"

1. Click ***Your Name*** > **Setup** > **Customize** > **Ideas** > **Idea Themes** > **Settings**.
2. Click **Edit**.
3. Select **Enable Idea Themes**.
4. Click **Save**.



**Note:** Once you enable Idea Themes, you can't disable it.

## Creating and Editing Idea Themes

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

User Permissions Needed	
To view the Idea Themes tab:	"Read" on Idea Themes
To create Idea Themes:	"Create" on Ideas

You can use the Idea Themes tab in both the application and the console to create and edit Idea Themes for the communities that you manage.


1. Click **New Idea Theme** from the Idea Themes list view page or click **New** from the Recent Idea Themes list on the Idea Themes overview page.
2. Select a community for the idea theme and click **Continue**.
3. Select the idea theme's **Status**.
4. Select a category for the theme.  
Idea themes must be assigned to a category to appear in the community.
5. Add a title for the idea theme.
6. Optionally, enter a description of the theme.  
Use the HTML editor to format your text or add an image or video.
7. Click **Save**.

## Using Idea Themes

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

User Permissions Needed	
To view the Idea Themes tab:	“Read” on Idea Themes
To create Idea Themes:	“Create” on Ideas

Click the Idea Themes tab to view, filter, moderate, and create themes from lists.

- Click **Create New View** to define your own custom list views. To edit or delete any view you created, select it from the View drop-down list and click **Edit**. If your organization has multiple communities, we recommend you add **Community** to your views so that you can see the name of the community associated with each idea theme.
- Click **New Idea Theme** from the Idea Themes list view page or click **New** from the Recent Idea Themes list on the Idea Themes overview page to [create a new idea theme](#).
- Click  to refresh a list that’s been updated.
- Click **Edit** or **Del** to [edit](#) or delete an idea theme.



**Note:** Deleting an idea theme also deletes the ideas that are associated with it. Conversely, undeleting an idea theme also undeletes the ideas that are associated with it.

## Managing Idea Themes

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

User Permissions Needed	
To view the Idea Themes tab:	“Read” on Idea Themes
To create and edit Idea Themes:	“Create” on Ideas

From the Idea Themes detail page, you can manage an idea theme and its related ideas. As an administrator, you can perform the following tasks:

- [Edit](#), [Delete](#), or [Clone](#) an idea theme.
- [Edit](#) or [Delete](#) ideas that have been submitted to the idea theme.
- Move an idea from one idea theme to another in your communities.

When you edit an idea, you can change the name of the idea theme, which removes the idea from the current idea theme and moves it to another idea theme that you select.

- Create an idea and post it to the idea theme in which you're working.

## Customize Idea Themes

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

User Permissions Needed	
To create or change custom buttons and links:	"Customize Application"
To add custom page layouts:	"Customize Application"

With Winter '13, administrators can display a custom view of the Idea Themes detail, edit, and list view pages. Administrators can create custom page layouts, add custom fields, and add buttons and links to Idea Themes.

- When you override the default page layout, you can use Visualforce pages to create different page layouts for Idea Themes.
- By adding custom buttons and links to the Idea Themes detail page, you can add external URLs and access to applications and other modules.
- Add custom fields to tailor your Idea Themes to your organization's unique requirements.
- Use triggers to create workflow rules or actions for Idea Themes. For example, you can use triggers to change the status of an idea theme once it has reached the end date.

## LIVE AGENT ENHANCEMENTS

### Auto Away Option in Live Agent Configurations

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"

Agent configurations control how Live Agent appears and functions for agents using it in the Live Agent console or the Service Cloud console. With the **Auto Away on Decline** option, you can decide whether agents' status should automatically be changed to Away when they decline incoming chat requests.

1. Click **Your Name** > **Setup** > **Customize** > **Live Agent** > **Agent Configuration**.
2. Click **New**, or click **Edit** next to the name of an existing configuration.

3. Select `Auto Away on Decline` to automatically change agents' status to `Away` when they decline chat requests. Note: this option applies only when agents are assigned to chat buttons that use push routing.
4. Click **Save**.

For more information about agent configurations, see “Agent Configuration Overview” in the online help.

## SERVICE CLOUD CONSOLE

### Custom Hotkeys 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 Winter '13, administrators can create and customize keyboard shortcuts for each of their organization's Service Cloud console apps. Keyboard shortcuts let users perform actions by pressing a combination of keys instead of having to use a mouse. Keyboard shortcuts can make working with a Service Cloud console more efficient. For example, instead of typing case details and then using a mouse to click **Save**, you can create a keyboard shortcut so that users can type case details and press CTRL+S.

### Customizing Keyboard Shortcuts for a Service Cloud Console

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

User Permissions Needed
To customize keyboard shortcuts for a Service Cloud console: “Customize Application”

Once you enable keyboard shortcuts for a console, several default shortcuts are available for customization, such as opening and closing tabs, moving between tabs, and saving records. Before you can create custom shortcuts, a developer must define the shortcut's action with the `addEventListener()` method in the Service Cloud Console Integration Toolkit. You can't create keyboard shortcuts for actions performed outside of the console.

To enable and customize keyboard shortcuts:

1. Click **Your Name** > **Setup** > **Create** > **Apps**.
2. Click **Edit** next to a Service Cloud console app.
3. Click **Customize keyboard shortcuts**.
4. Click **Edit** on the top of the page.
5. Select `Enable keyboard shortcuts`.
6. Edit an existing keyboard shortcut or create a new one:

- To edit a shortcut, click **Edit** next to the shortcut, type the combination of key commands to use, and click **OK**.
- To create a shortcut, click **+Add Keyboard Shortcut**, type the action the shortcut will perform, a `Console Event Name`, which is a unique identifier, the combination of key commands to use, and click **OK**. For the new shortcut to work, you must send the `Console Event Name` to the developer who defined your shortcut's action so that he or she can add it to the method that will trigger your shortcut.
- To deactivate a shortcut, deselect **Active** next to the shortcut's name. You can't delete the default shortcuts provided by Salesforce, but you can edit or deactivate them.

## 7. Click **Save**.

After you've customized keyboard shortcuts for a console, notify users assigned to that console about the actions they can perform.



### Note:

- You can have up to 144 shortcuts for each console, which includes the default shortcuts provided by Salesforce and any you create.
- Keyboard shortcuts aren't case sensitive, even if you press **SHIFT** before a letter key. For example, **SHIFT+b** is the same as **SHIFT+B**.
- If **CTRL**, **ALT**, or **SHIFT** is in a keyboard shortcut, the sequence of those keys doesn't matter. For example, **CTRL+ALT+A** is the same as **ALT+CTRL+A**.
- If you create or customize keyboard shortcuts to include standard browser shortcuts, such as **CTRL+F**, your shortcuts might not work as intended.



**Tip:** You can include as many keys in a shortcut as you want, but we recommend that you limit a shortcut to three keys so that users can easily remember it.

## Default Keyboard Shortcuts for a Service Cloud Console

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

After an administrator enables keyboard shortcuts for a Service Cloud console, the following shortcuts display automatically and are available for customizing.

Action (Keyboard Shortcut)	Description	Key Command
Focus keyboard shortcuts on the console	Activates keyboard shortcuts in a browser displaying a Service Cloud console.	ESC
Go to the navigation tab	Selects the navigation tab.	V
Go to tab details	Selects details on a tab.	SHIFT+S
Go to the primary tabs	Selects the row of primary tabs.	P
Go to the subtabs	Selects the row of subtabs on a primary tab.	S
Go to list view	Selects the list view.	N

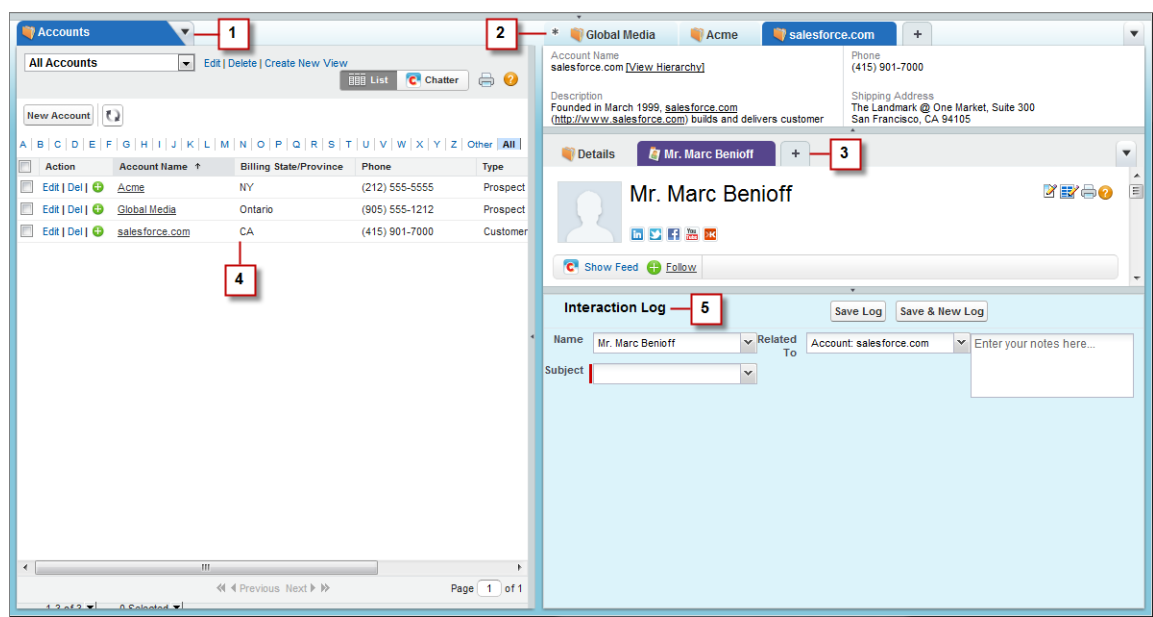


Action (Keyboard Shortcut)	Description	Key Command
Go to the first list view item	Selects the first item on the list view.	SHIFT+F
Go to header search box	Moves the cursor to the header search box.	R
Move left	Moves the cursor left.	LEFT ARROW
Move right	Moves the cursor right.	RIGHT ARROW
Move up	Moves the cursor up.	UP ARROW
Move down	Moves the cursor down.	DOWN ARROW
Open drop-down button on tabs	Opens the drop-down button on tabs to select more actions.	D
Open tab	Opens a new tab.	T
Close tab	Closes a selected tab.	C
Enter	Activates a command.	ENTER
Edit	Switch from detail to edit page.	E

## Automatically Saved User Sessions 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. Now, if a Service Cloud console is set up, you can choose to save user sessions so that when console users close their browsers or log out of Salesforce, any previously open navigator tabs, primary tabs, or subtabs automatically display when they log in again. Additionally, if console users resize an interaction log or any sidebar components, such as pinned lists; or they close the global search header, those customizations automatically display when users log in again. This helps users to continue working from where they last left off in a console without having to start from scratch. For example, here's a Service Cloud console with several open tabs, a hidden global header, a resized interaction log, and a resized pinned list. Even if this user sessions ends, all of these items display to a user when he or she logs in again:



- 1. Navigator tab
- 2. Primary tabs
- 3. Subtabs
- 4. Pinned list
- 5. Interaction log

Saving User Sessions for a Service Cloud Console

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

User Permissions Needed	
To save user sessions for a Service Cloud console:	“Customize Application”

If a Service Cloud console is set up, you can choose to save user sessions so that when console users close their browsers or log out of Salesforce, any previously open navigator tabs, primary tabs, or subtabs automatically display when they log in again. Additionally, if console users resize an interaction log or any sidebar components, such as pinned lists; or they close the global search header, those customizations automatically display when users log in again. This helps users to continue working from where they last left off in a console without having to start from scratch.

- 1. Click **Your Name > Setup > Create > Apps**.
- 2. Select a Service Cloud console app.
- 3. Click **Edit**.
- 4. Click **Save User Sessions**.
- 5. Click **Save**.

Repeat these steps for each console.

## SALESFORCE KNOWLEDGE

### Minor Salesforce Knowledge Enhancements

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

The following Salesforce Knowledge enhancements are available in Winter '13.

- For easier editing, the HTML field in the article editor is now the full width of your display.
- Salesforce Knowledge article URLs within communities have changed. Reset any community article links or bookmarks you saved before Winter '13.

### API Access Article Type

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

Using the API, developers now have programmatic access to article type in both the master and translated versions. This access allows developers to run reports on specific article versions. In Winter '13, the following field has been added to the KnowledgeArticleVersion object.

Field	Description
ArticleType	Indicates the API Name of the article type. The <code>ArticleType</code> is assigned to the article when it's created. You can't change the value of this field. This field is available in API version 26.0 and later



**Note:** These fields appear on the article object. For example if you have an article type called FAQ, the article object with the field is: FAQ\_kav.

# Mail Merge Template Available for Articles

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

In Winter '13, you can have a mail merge template for articles. A mail merge template allows you to send a personalized email with the article.



**Note:** The Send Test and Verify Merge Fields popup for text, HTML, and custom email templates is not supported for article types.

For more information, see “Managing Mail Merge Templates” in the online help.

## Sharing Rules for Knowledge



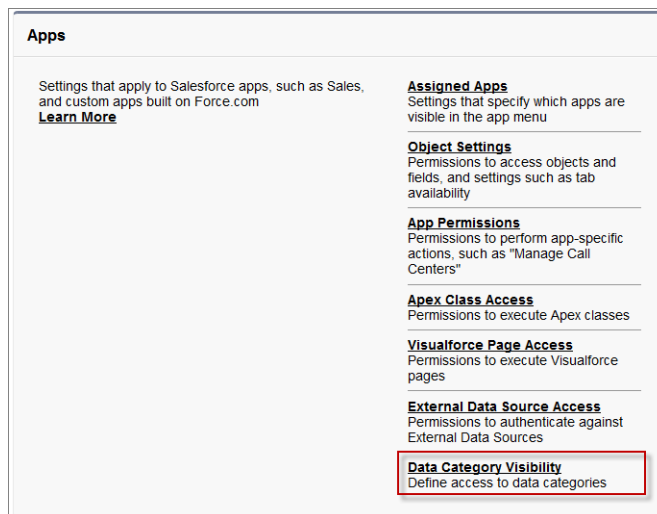
You asked for it! Salesforce Knowledge addresses the following ideas on the IdeaExchange: [improve data category selection and visibility](#) and [article visibility based on permission sets](#).

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

Data category visibility determines the individual data categories, categorized articles, and categorized questions that a user can see. In Winter '13, data category visibility can be assigned with permission sets and profiles, as well as roles. This allows administrators to assign visibility to High Volume Customer Portal users who don't have roles.

Now, both the Permission Set and Profile setup pages have options to assign data category visibility.

1. Click **Your Name** > **Setup** > **Manage Users** > **Permission Sets** or **Your Name** > **Setup** > **Manage Users** > **Profiles**.
2. Click on a permission set or profile name.
3. Click **Data Category Visibility**.



- Click **Edit** next to the data category group you want to assign access to. Access to data categories is assigned to Permission Sets and Profiles the same way it is for roles.
- Select **Custom**.

- Select the categories you want the permission set or profile to have access to from the Available Categories list and add them to the Selected Categories list.
- Click **Save**.

For more information, see “About Category Group Visibility” in the online help.

## Share Articles with Public Links



You asked for it! This enhancement is from an [idea](#) on the IdeaExchange.

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

In Winter '13, customer service agents who are working in case feed can share an article from your public knowledge base or public chatter answers site with a URL, instead of emailing a large PDF.



To allow your agents to share articles with public links:

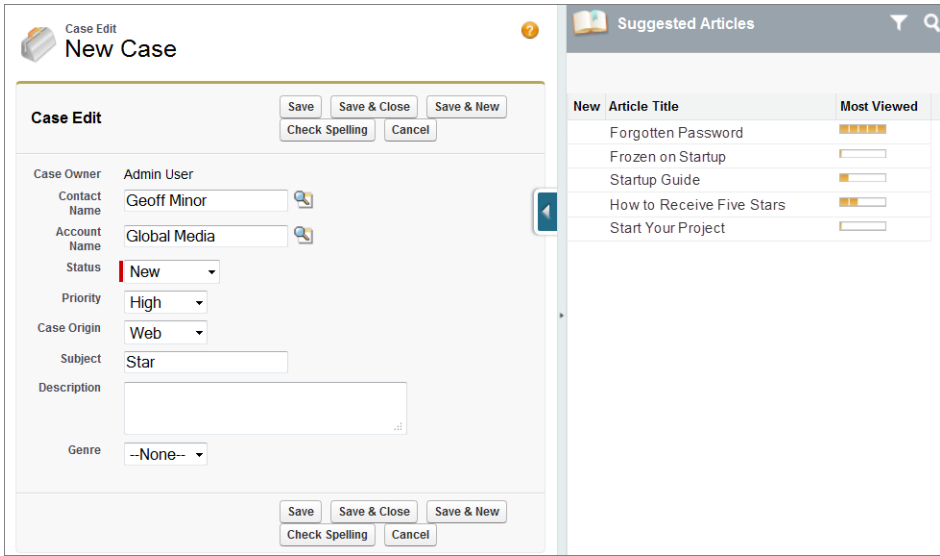
- Click **Your Name** > **Setup** > **Customize** > **Knowledge** > **Settings**.
- Click **Edit**.
- Under Case Settings, select **Allow users to share articles via public URLs**.
- In the Available Sites list, select the sites you want to allow your agents to send URLs from and add them to the Selected sites list.
- Click **Save**.

From the case feed, agents have the ability to share the article's link from any of the selected sites.

# Automatic Knowledge Filtering—Beta

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

In Winter '13, you can define which articles appear in the Article tab, advanced search, and the article sidebar component with data category mapping. For example in the figure below, as an agent enters case information, the suggested articles sidebar is populated with relative articles.



Using data category mapping, select which case fields map to which data category groups and set a default data category for cases that have no value for the mapped fields. For example, you can map a products custom case field with a products data category group to filter the articles for the customer's products.

1. Go to **Your Name > Setup > Customize > Knowledge > Data Category Mappings**.

Case to Data Category Mapping (beta) [Help for this Page](#)

Define which case fields map to which data category groups and set a default data category for cases that have no value for the mapped fields. For example, you can map a products custom case field with a products data category group to filter the articles for the customer's products.

Action	Case Field	Data Category Group	Default Data Category
<a href="#">Remove</a>	Products	Products	All
<a href="#">Add</a>	-- None --	-- None --	-- None --

2. In the `Case Field` column, use the drop-down list to add a field (contact, organization, etc.).
3. In the `Data Category Group` column, use the drop-down list to map the information from the lookup field to a data category group.
4. In the `Default Data Category` column, use the drop-down to list assign a data category should the information not map as defined.
5. Click **Add**.

## Beta limitation

Pre-filtering articles based on case information is only supported in text and picklist fields.

## Universal Knowledge (Sunlight Search)—Pilot

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

In Winter '13, a redesign of the Salesforce Knowledge Article tab is available in pilot. The new tab displays all your Salesforce Knowledge articles and any external data sources, such as Microsoft SharePoint. This new Knowledge tab uses federated search to search all these resources at once, then you can filter article results according to language and data category. To participate in the pilot program contact your salesforce.com representative.

## ADDITIONAL SERVICE ENHANCEMENTS

### Service Cloud Console Integration Toolkit: Multiple Domains

The Service Cloud console is designed for users in fast-paced environments who need to find, update, and create records in Salesforce quickly. The Service Cloud Console Integration Toolkit is a user interface API that 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. Previously, the toolkit only functioned with Visualforce. Now, the toolkit is available for use with third-party domains, such as `www.yourdomain.com`, so that developers can embed third-party applications in the console. To enable the toolkit for third-party domains, you must add the domains to the whitelist of a Service Cloud console.

For more information (English only) about the toolkit, see the [Service Cloud Console Integration Toolkit Developer's Guide](#). To learn how to enable the toolkit for third-party domains, see “Whitelisting Domains for a Service Cloud Console” in the online help.

### Service Cloud Console Integration Toolkit: Console Notifications

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.

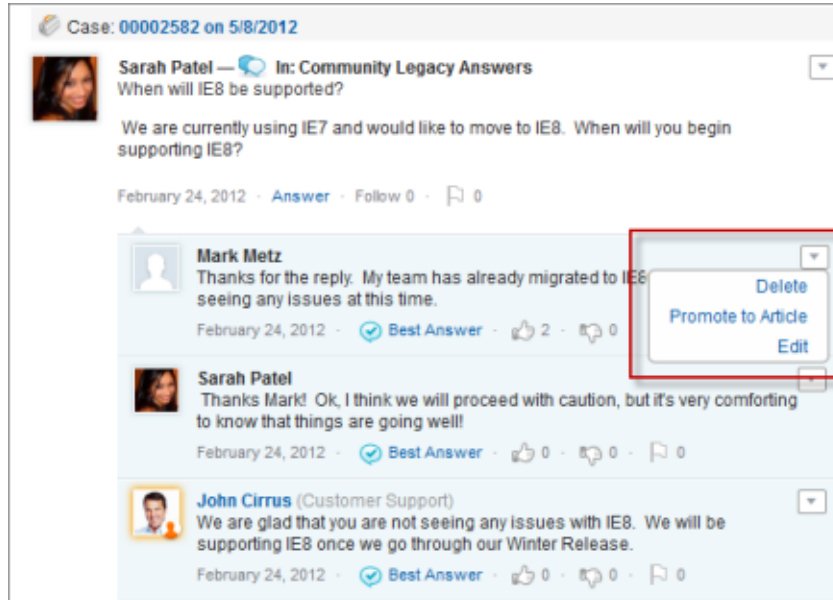
With Winter '13, the following new methods are available.

Method	Description
<code>addPushNotificationListener()</code>	Adds a listener for a push notification. A user can only register a listener once until he or she removes the listener, or the listener is removed by another user.
<code>getPageInfo()</code>	Returns page information for the specified tab after its content has loaded. If the tab ID is null, it returns page information for the enclosing primary tab or subtab.
<code>getPrimaryTabIds()</code>	Returns all of the IDs of open primary tabs.
<code>getSubtabIds()</code>	Returns all of the IDs of the subtabs on the primary tab specified by a primary tab ID. If the primary tab ID is null, it returns the IDs of the subtabs on the current primary tab.
<code>removePushNotificationListener()</code>	Removes a listener that gets added for a push notification.

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

## Editing Replies to Questions

In Winter 13, moderators can edit replies to questions that are posted to the community. When you select a question from the Questions tab, click  on one of the question's replies and select **Edit** to edit the fields in an existing reply.





## New Limits for Chatter Answers Questions and Replies

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

In Winter '13, the maximum number of characters users can type in questions and replies has increased. When you select the `Optimize Question Flow` permission on the Chatter Answers Settings page, questions can be up to 32,000 characters in length. Public replies also increase to 32,000 characters and private replies increase to 4,000 characters. Without `Optimize Question Flow` enabled, questions and all replies can be up to 1,000 characters in length.

## New Behavior for Customer Portal Email Notifications When No Change Owner to Portal User Template is Selected

In Winter '13, we've improved the behavior of change owner email notifications sent from portals that don't have `Change Owner to Portal User Template` or a default template set. When a portal user changes the owner of a record to another portal user whose profile is associated with multiple portals, the email notification sent to the user includes a link to the portal in which the change of ownership occurred. In previous releases, the link pointed to the oldest login-enabled portal that the user was a member of.

# ANALYTICS

## Exportable Joined Reports

You can now select a printable view of joined reports. You can use that view to export all the data that's displayed in your joined report to a spreadsheet application. The data is grouped, filtered, aggregated, and displayed the same way as in your browser.

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



You asked for it! This enhancement addresses an [idea](#) on the IdeaExchange.

Use the printable view when you want to work with the data in a joined report while not logged into Salesforce. For example, you might want to share data with a colleague, or pull a table into a presentation slide.

- For a complete view, click **Show Details**, then **Printable View**. When you open the resulting `.xls` file, all of the data in your report is present. Your printable view can display up to 2000 rows of data.
- For a summary view, click **Hide Details**, then **Printable View**. This `.xls` file shows a condensed view of your report, using the summary fields you have chosen.

## Joined Reports on Dashboards

You can now show a joined report on a dashboard by selecting the chart used in the report.

Available in: **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"

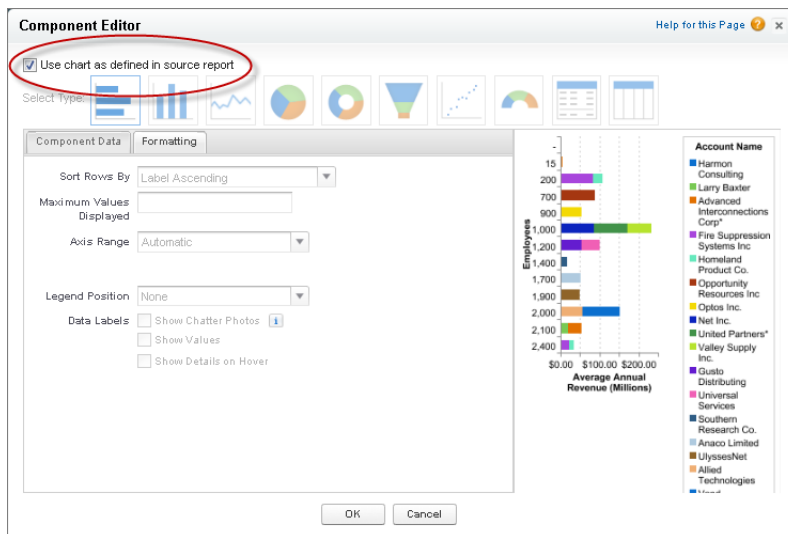


You asked for it! This enhancement addresses an [idea](#) on the IdeaExchange.

A joined report can contain data from multiple standard or custom report types.

To show a joined report on a dashboard:

1. Edit the dashboard.
2. From the Data Sources tab, drag and drop a joined report that includes a report chart.
3. Edit the joined report dashboard component and select **Use chart as defined in the source report**.



You can schedule and email a dashboard that has joined reports for refresh. You can't filter data on a joined report in dashboard view or add a filter to a dashboard that only has joined reports.

## Scatter Charts on Dashboards

You can now select the scatter chart type on your dashboard to display report information. Scatter charts show meaningful information using one or two groups of report data plus summaries.

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



You asked for it! This enhancement addresses an [idea](#) on the IdeaExchange.

The scatter chart component type in dashboards has these limitations:

- It doesn't show tabular reports.
- You can't sort by labels or values.
- You can only change how Y-axis units are displayed.
- You can manually define the range for Y-axis alone.

For more information, see “Scatter Chart Example” in the online help.

## More Support for the Enhanced Reports Tab

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

Starting this release, the enhanced reports tab is available without enabling the user interface theme and is supported in accessibility mode.

The user interface theme setting, `Enable New User Interface Theme`, is located under **Your Name** > **Setup** > **Customize** > **User Interface**.

To learn more about the reports tab, see the tipsheet [Using the Reports Tab](#).

# MOBILE

## Salesforce Touch

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

Salesforce Touch—a version of Salesforce that’s designed specifically for touchscreen mobile devices—is now generally available! Using Salesforce Touch, you have 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 95 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
- Automatic updates and enhancements, so you’re always using the most current version
- Support for many of your organization’s Salesforce customizations

There are two versions of Salesforce Touch:

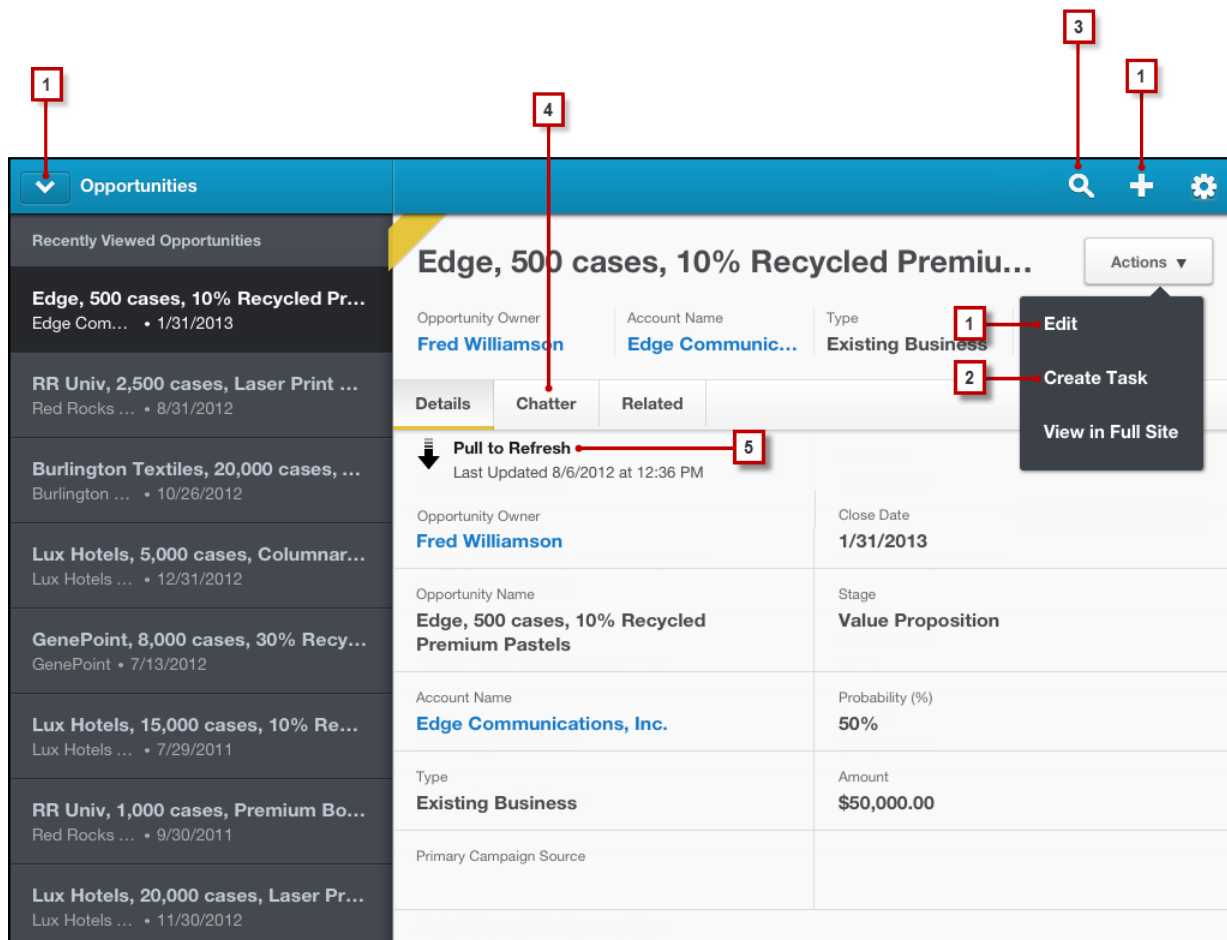
- A downloadable app that is available from the Apple App Store or AppExchange Mobile and installs directly on iPad devices
- A mobile browser app that runs in the Safari® for iPad web browser

The downloadable app offers the convenience and time savings of maintaining your Salesforce session, so you don’t need to log in every time you access Salesforce Touch. Use the mobile browser version if you don’t want to bother with installing an app on your device.

## 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

Salesforce Touch is generally available in Winter '13. This release includes these enhancements:

- There are now two versions of Salesforce Touch to choose from. In addition to the mobile browser app that runs in the Safari on iPad web browser, there's also a downloadable app that's available from the Apple App Store or AppExchange Mobile and installs directly on your iPad.
- 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 the Salesforce**

Touch mobile browser app. This option now 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.

The Salesforce Touch Settings page also includes a new option called `Enable the Salesforce Touch downloadable app`. This option allows users to log in to the Salesforce Touch app that users download and install on their mobile devices. It applies to all users in your organization and is enabled by default.

- You can now mention people in Chatter posts and comments.
- There's a small label change to the Chatter tab in Salesforce Touch. To be consistent with Chatter enhancements in the full site, the **My Chatter** feed filter is now called **What I Follow**. The **@Me** filter, however, hasn't been renamed to match the full site.

And in case you missed it, these important enhancements were released in July '12:

- You can create and edit account, contact, opportunity, and task records, as well as records for custom objects that are included in your Salesforce Sales app. You can't create or edit events at this time.
- The Salesforce Touch user interface has a new, lighter look. As a result of the redesign, the Chatter subtabs now use **Feed**, **Groups**, and **People** labels instead of icons.
- The *Salesforce Touch FAQ* was reorganized to incorporate 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 both the downloadable and mobile browser versions of 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, Hebrew, and so forth), which aren't currently supported.

Advanced currency management isn't currently supported.

## 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 Web Services API:	"API Enabled" "Manage Users"

To enable Salesforce Touch for your organization:

1. Click **Your Name** > **Setup** > **Mobile Administration** > **Salesforce Touch** > **Settings**.
2. Use `Enable the Salesforce Touch downloadable app` to control access to the Salesforce Touch app that users download and install on their mobile devices.

By default, the downloadable app is enabled for all users in your organization. If you disable this option, users can still install the app but they're unable to use it to log in to their Salesforce accounts.

3. Use `Enable the Salesforce Touch mobile browser app` to control access to Salesforce Touch from mobile browsers.

By default, the mobile browser app is disabled for all users in your organization. If you enable this option, users who log in to Salesforce from the Safari® on iPad web browser are automatically redirected to Salesforce Touch.

**Note:**

If users prefer to access the full Salesforce site from Safari instead, they can turn off the mobile browser app 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 the mobile browser app off (or on) for users. When the mobile browser version of 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 access to the mobile browser app—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.

4. Click **Save**.



If you enable both the downloadable and mobile browser apps, users can access either version of Salesforce Touch interchangeably.

## Accessing Salesforce Touch

The way users access Salesforce Touch depends on the versions that you've enabled for your organization.

- **Salesforce Touch Downloadable App:** If you opt to keep the downloadable version of Salesforce Touch enabled, users can download and install the app from the Apple App Store or AppExchange Mobile. Once installed, they can launch the app from the iPad Home screen and log in to their Salesforce accounts as they would normally. By default, the downloadable app connects to your production environment.



**Note:** If you disable the downloadable version of Salesforce Touch, your users aren't blocked from downloading or installing the app. Any attempts to log in to Salesforce from the app, however, will fail with an error message.


- **Salesforce Touch Mobile Browser App:** If you enable the mobile browser version of Salesforce Touch, users simply access the mobile browser app by logging in to their Salesforce accounts from the Safari web browser. Login sessions from iPad devices are automatically redirected to the mobile browser app.



**Note:** If a user sees the full site instead of the mobile browser app, 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.

If you enable both versions of Salesforce Touch, users can access either option interchangeably.

## Using Salesforce Touch

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

## 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 any 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 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
- Shared Activities for tasks or events
- 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 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.		✓
	If territory management is enabled, you can't assign or modify a record's territory rules.	✓	✓

Category	Issue	Creating Records	Editing Records
Accounts and Contacts	The <b>Copy Billing Address to Shipping Address</b> and <b>Copy Mailing Address to Other Address</b> links aren't available.	✓	✓
	If territory management is enabled, the <b>Evaluate this account against territory rules on save</b> 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 <b>Probability</b> or <b>Forecast Category</b> fields. However, values are automatically added to these fields (based on the value of the <b>Stage</b> 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 <b>Name</b> field to <b>Lead</b> , the <b>Related To</b> field shouldn't be available but it's editable in Salesforce Touch. You'll get a validation error if there's data in <b>Related To</b> when you save the record.	✓	✓
	The <b>Email</b> and <b>Phone</b> fields for an associated contact aren't displayed.	✓	✓
	You can't use <b>Shared Activities</b> to relate multiple contacts to a task.	✓	✓
	You can't create recurring tasks or change the details for recurring tasks.	✓	✓
	Spell-checking the <b>Comments</b> fields isn't available.	✓	✓
	You can't add 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	✓	✓

Category	Issue	Creating Records	Editing Records
	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 site, or that were uploaded to a comment. (Note that you can view files that were attached to a post on a Chatter feed. The Salesforce Touch downloadable app can display these file types only: .doc, .docx, .pdf, .ppt, .pptx, .xls, .xlsx, and all image files, including .gif, .jpg, and .png formats.)
- 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 full Chatter feed (as with the **Feed** filter in the full site)
- Filter or follow records
- Use Chatter as a moderator

## 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>.


## Chatter for iPhone and iPad – Version 2.4 Generally Available

Chatter for iPhone and iPad v2.4 is now generally available. This release includes several enhancements to the Chatter mobile app:

### Sharing Posts

With the latest version of Chatter for iOS, you can share public Chatter posts to your profile.

To share a post:

1. In your feed, tap the post you want to share.
2. Tap .
3. Tap **Share to my profile**.

### Comments: “Like” and File Sharing

This release makes it easier to collaborate from the mobile app by providing two new features for comments. You can now:

- Like comments.
- Attach files and photos to comments. The process for adding files and photos to comments is exactly the same as adding them to posts.

### Dashboard Snapshots

In this version of Chatter for iOS, you can view dashboard snapshots in your feed.

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 v2.4 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

You can upgrade to the latest version of Chatter for iOS by installing the pending update that appears in the App Store on your iPhone or iPad.



**Note:** iPad users who have an old version of the Chatter for iPad app – Chatter for iPad v2.0 or earlier – must download the app from the App Store. Those users won't see a pending update on their device.

# DATA.COM

## Data.com Product Suite Overview



[Watch a Demo](#) (3:19 minutes)

Data.com is salesforce.com's solution for delivering leading business data inside your CRM. Your team can spend less time entering and updating data and more time growing your business. Data.com combines crowd-sourced contacts with account information from D&B, managed in the cloud, so you can keep your CRM clean and up to date in real time. 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.

The screenshot shows the Data.com interface within a Salesforce environment. The top navigation bar includes links for Home, Chatter, Profile, Data.com, D&B Companies, Files, Accounts, Contacts, Leads, Reports, and Dashboards. The Data.com section is active, displaying search filters and a list of results.

**Search Filters:**

- Company or Website:** (2) United States, California
- Industry:** (2) Software & Internet, Computers

**Filters:**

- Options:** Show Inactive Records
- Employees:** Min to Max
- Revenue (USD):** Min to Max
- Location Type:** Branch, Headquarters, Single Location
- Ownership:** Public, Private, Government, Other

**Results Table:**

Name	City	State	Country	Location Type	Active Contacts...	Updated
Paypal Inc paypal.com +1.877.672.9725	San Jose	CA	United States	Headquarters	857	Last 6 Months
Seagate Technology LLC www.seagate.com +1.408.658.1000	Cupertino	CA	United States	Headquarters	810	Last 6 Months
Xilinx, Inc. www.xilinx.com +1.408.559.7778	San Jose	CA	United States	Headquarters	802	Last 6 Months
Twentieth Century Fox Film C www.foxmovies.com +1.310.369.1000	Los Angeles	CA	United States	Headquarters	789	Last 6 Months
Polycom, Inc. www.polycom.com +1.925.924.6000	Pleasanton	CA	United States	Headquarters	737	Last 6 Months
PC Mail, Inc. www.pcmall.com +1.310.354.5600	Torrance	CA	United States	Headquarters	677	Last 6 Months
Sanmina-SCI Corporation www.sanmina.com +1.408.964.3500	San Jose	CA	United States	Headquarters	671	Last 6 Months
Applied Materials, Inc. www.appliedmaterials.com +1.408.727.5555	Santa Clara	CA	United States	Headquarters	617	Last 6 Months

### New in Winter '13: D&B Companies for Leads

In Summer '12, we introduced D&B Companies for accounts. Winter '13 gives you D&B Companies for leads.

The D&B Companies object and related records are available to organizations that purchase Data.com Premium. When you add a lead from Data.com—or clean a lead—a corresponding D&B Company record (if one exists in Data.com) is automatically created in Salesforce and linked to that record via its `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.

For example, if you add a lead record for Richard Dijkstra at Domino's Pizza LLC, when you open the lead record, the `D&B Company` field value is Domino's Pizza, LLC. The value is underlined to identify it as a link. Just click the link to open the Domino's Pizza LLC D&B Company record.

## 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 and leads.
- 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

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 two corresponding dashboards. 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 Jigsaw for Salesforce

Jigsaw for Salesforce 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 Data.com product suite built in to Salesforce. The Salesforce online help and release notes describe the built-in Data.com Corporate and Premium products only, not Jigsaw for Salesforce. If your organization is still using Jigsaw for Salesforce, you should consider migrating to the built-in Data.com product suite for your prospecting and cleaning needs. For information, please contact your Salesforce account manager.



**Important:**

You should not attempt to migrate to the built-in Data.com Clean product without having first purchased it through your Salesforce account manager. 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.

## DATA.COM

### Data.com Administrator Features and Enhancements

Setting up and maintaining Data.com has never been easier. In Winter '13, we bring you the following new features.

- [Map Data.com fields to Salesforce Account, Contact, and Lead fields. Before you begin, make sure you understand how field mapping works.](#)
- [Respect Do-Not-Contact settings when you add or export Data.com contacts or leads.](#)
- [Allow duplicate account, contact, and lead records in Salesforce.](#)

You'll also want to learn about these enhancements.

- [Enhanced record addition error logs.](#)

Field Mapping

Field Mapping

Save

Undo

Field Mapping Help

Map Data.com fields to Salesforce account, contact, and lead fields. You can also skip mapping individual Data.com fields, but values for skipped fields won't be added, exported, or considered when we calculate a record's clean status.

Accounts

Data.com field

Account field

Company Name

→

Account Name

D-U-N-S Number

→

[Default] D-U-N-S Number

D&B Company

→

[Default] D&B Company

Number of Employees

→

[Default] Employees

Annual Revenue

→

[Default] Annual Revenue

Ticker Symbol

→

[Default] Ticker Symbol

Website

→

[Default] Website

Industry

→

[Default] Industry

Ownership

→

[Default] Ownership

Address

→

[Default] Billing Address

Shipping Address

→

Skip Mapping

Phone

→

[Default] Phone

Fax

→

[Default] Fax

Account Site

→

[Default] Account Site

Tradestyle

→

[Default] Tradestyle

Year Started

→

[Default] Year Started

SIC Code

→

[Default] SIC Code

SIC Description

→

[Default] SIC Description

NAICS Code

→

[Default] NAICS Code

NAICS Description

→

[Default] NAICS Description

Company Description

→

Skip Mapping

Reset to Defaults

Customizing Data.com-to-Salesforce Field Mappings

Data.com available in: <b>Contact Manager, Developer, Enterprise, Group, and Professional</b> Editions
Data.com available for an additional cost in: <b>Unlimited</b> Edition
Data.com Clean available in: <b>Developer, Enterprise, and Professional</b> Editions
Data.com Clean available for an additional cost in: <b>Unlimited</b> Edition

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

Before you begin, make sure you understand how mapping works, what preparations to make, and what kind of results you should expect.

- 1. Click **Your Name** > **Setup** > **Data.com Administration** > **Field Mapping**.

- For each Data.com field you want to map, select a Salesforce field. If you don't want to map a field, select **Skip Mapping**.



**Note:** Not all Data.com fields are available for all Salesforce fields. To be mappable, the new Salesforce field must be the same data type as the default field. For example, the `Description` field can be mapped to a long text area field with 1,000 characters or more.

Custom field mappings apply when:

- Data.com records are added to Salesforce
- Salesforce records are matched with Data.com records and cleaned either manually or with automated jobs

## Understanding Data.com-to-Salesforce Custom Field Mapping

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

Data.com available for an additional cost in: **Unlimited** Edition

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

Data.com Clean available for an additional cost in: **Unlimited** Edition

Create custom mappings from Data.com fields to Salesforce account, contact, and lead fields to get Data.com values in the Salesforce fields where you want them. Not all Data.com fields are available for all Salesforce fields. To be mappable, the new Salesforce field must be the same data type as the default field. For example, the `Description` field can be mapped to a long text area field with 1,000 characters or more.

Custom field mappings apply when:

- Data.com records are added to Salesforce
- Salesforce records are matched with Data.com records and cleaned either manually or with automated jobs

Before you map fields, make sure you understand these potential outcomes and the related actions you should take.

- Mapping fields or updating mappings forces a full sync with Data.com: all records of enabled CRM objects (accounts, contacts, and leads) are updated, even if no records have changed.
- Data.com field mappings may conflict with any Salesforce field customizations (such as approvals, workflow rules, or Apex triggers) you use for accounts, contacts, or leads. Review and edit your customizations as needed so they will work with the values supplied by your mappings.
- You can skip mapping individual Data.com fields, but values for skipped fields won't be added, exported, or considered when we calculate a record's clean status.
- Skipping or changing mappings for fields used to match Salesforce and Data.com records may change some records' clean status to `Not Found`.
- If you export Data.com search results, the column headers in your Excel file will show the mapped field names. For example, if you map the Data.com `Phone` field to the Contact object's `Mobile` field, you'll see a header called "Mobile" for contacts, not "Phone".
- If you map Data.com fields that do not have values, some Salesforce records might revert to `Not Found` clean status.
- If you map a Data.com field to a custom Salesforce field, the custom field's label will appear on the Clean comparison page.

- If you want to track changes to field mappings, you'll find them in the Setup Audit Trail. Click **Your Name** > **Security Controls** > **View Setup Audit Trail**.

## Respecting Do-Not-Contact Settings in Data.com Search Results and Exports

Data.com available in: <b>Contact Manager, Developer, Enterprise, Group, and Professional</b> Editions
Data.com available for an additional cost in: <b>Unlimited</b> Edition
Data.com Clean available in: <b>Developer, Enterprise, and Professional</b> Editions
Data.com Clean available for an additional cost in: <b>Unlimited</b> Edition

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

In Data.com search results and export files, you can mask out or remove email and phone values for contact and lead records already in Salesforce that have **Do Not Call** or **Email Opt Out** selected.

For example: You have a lead record in Salesforce for Sally Larkin and on that record the **Do Not Call** checkbox is selected. You search for Sally Larkin as a contact on the Data.com tab and her record appears in the search results list, marked as already in Salesforce (●). The **Phone** field is masked in the search results list, and also on Sally's contact card. If you export the record, its **Phone** field is blank in the .csv file.

- Click **Your Name** > **Setup** > **Data.com Administration** > **Preferences**.
- Select the **Respect Do-Not-Contact Settings** checkbox.  
For records that have **Do Not Call** or **Email Opt Out** selected, **Phone** or **Email** field values are masked in the search results and on the **Contact Card**, and blank in .csv files created when you export records.

## Allowing Duplicate Data.com Records in Salesforce

Data.com available in: <b>Contact Manager, Developer, Enterprise, Group, and Professional</b> Editions
Data.com available for an additional cost in: <b>Unlimited</b> Edition
Data.com Clean available in: <b>Developer, Enterprise, and Professional</b> Editions
Data.com Clean available for an additional cost in: <b>Unlimited</b> Edition

Organizations that use a sharing model may want to allow Data.com users to add duplicate account, contact, or lead records to Salesforce. There are several things to keep in mind when setting your duplicate preferences.

- Records are considered duplicates when they have the same Data.com ID number in the `Data.com Key` field.
- Duplicates can only be allowed, by object, for the entire organization, not for individual users. If, however, you want to prevent a user from being able to add duplicates, you can create a trigger.
- Records that have already been added to Salesforce by any Data.com user are marked with an icon (●) in the search results and can be re-added by any Data.com user.
- When a record is added as a duplicate, it will *not* be counted against the user's monthly record addition limit. Adding a record only counts against a user's monthly addition limit the first time it's added to Salesforce.

To set up your duplicate preferences, follow these steps.

1. Click ***Your Name*** > **Setup** > **Data.com Administration** > **Preferences**.
2. In the Duplicate Preferences section of the page, select which objects you want to allow duplicates for (accounts, contacts, or leads).

## Data.com User Enhancements

Data.com offers lots of enhancements for users in Winter '13.

- [Expanded international data offers more accounts and contacts.](#)
- [Use new Employee, Revenue, and Location filters to refine your search results.](#)
- [We've expanded the scope of the green dot \(●\), which now identifies records you've added, exported, or cleaned—either manually or with automated clean jobs.](#)
- [You can now exclude records you've already exported or records already in Salesforce when you export Data.com search results.](#)
- [Selections you make from your Data.com search results are now preserved across multiple pages.](#)
- [Data.com now uses the primary SIC, NAICS, and Data.com Industry Category codes to determine the Industry field on account records.](#)
- [The Industry field value on the account card is now the same Industry value that's on the account record.](#)
- [If you're prevented from adding Data.com records to Salesforce, you'll now get an error log that tells you which records couldn't be added and why not.](#)
- [If you use Data.com Premium, search D&B records for Global Ultimate D-U-N-S Number to see a list of accounts within an organization's corporate structure. You can add those records to Salesforce.](#)
- [We've made several improvements to the reports in the Data.com Reports AppExchange Package, which make analyzing your data easier than ever.](#)
- [You can now search Salesforce by D-U-N-S Number.](#)

## Expanded International Data from D&B

In Winter '13, Data.com continues to deliver more account and contact information from D&B, including expanded data for Australia, India, Ireland, New Zealand, Singapore, South Africa, and the United Kingdom.

## New Filters: Employee, Revenue, and Location Type

Data.com offers several new filters you can use to narrow your account and contact search results.

Use the `Employee` and `Revenue` filters to manually enter a range for the number of employees within an organization and the organization's annual revenue, respectively. Entering ranges is easy when you use abbreviations for multiples of thousands (K for thousand, M for million, and B for billion). For example, entering 10K automatically converts to 10,000.

Use the `Location Type` filter to refine your results based on whether an account (or an account associated with a contact) is a headquarters, single location, or branch.

## Better Identification of Data.com Records Added, Exported, or Cleaned



You asked for it! This enhancement is from an [idea](#) on the IdeaExchange.

In previous Salesforce releases, the green dot (●) next to records in your Data.com search results represented only records you added from Data.com to Salesforce. With the Winter '13 release, the green dot now represents:

- Data.com records you added.
- Data.com records you exported.
- Records you manually added to Salesforce that have been matched with Data.com Clean either manually or via automated jobs.

## Exclude Green Dot Records from Export

When exporting account or contact records from Data.com, you can exclude any records that have already been exported or are already in Salesforce. Just select that option from the export confirmation message.

## Selected Records are Preserved Across Search Results Pages

When you select Data.com records from your account or contact search results, your selections are now preserved across multiple pages of results. That means you can select records on one page of your search results and move to another page to select more records without losing the selections on the first page. You can select up to 1,000 records.

## 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, 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 `Government` 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.

## Industry Field on Account Card

The `Industry` field value on the account card is now the same `Industry` field value that's on the account record. This makes the account card more useful when you're deciding whether you want to add an account to Salesforce.

## Data.com Record Addition Error Logs

Data.com now provides an easy way to see which records couldn't be added to Salesforce and why. The error log includes all the information necessary to help you resolve the errors so you can get access to the records you need.

### Resolving Data.com Record Addition Errors

Data.com available in: <b>Contact Manager, Developer, Enterprise, Group, and Professional</b> Editions
Data.com available for an additional cost in: <b>Unlimited</b> Edition
Data.com Clean available in: <b>Developer, Enterprise, and Professional</b> Editions
Data.com Clean available for an additional cost in: <b>Unlimited</b> Edition

User Permissions Needed	
To add accounts from Data.com:	"Create" on accounts
To add contacts from Data.com:	"Create" on contacts
To add Data.com contacts from an account	"Read" on accounts AND "Create" on contacts
To add Data.com contacts as leads	"Create" on leads

If errors are preventing you from adding one or more Data.com records to Salesforce, we'll provide a .csv error log file. How we provide the error log depends on what you were trying to do.

- If you were trying to add fewer than 200 records, you'll see a message with a link to the error log on the Files tab.
  - If you were trying to add 200 records or more, you'll receive an email with a link to the error log on the Files tab.
  - If you were trying to add any number of records and you *do not* have Chatter enabled, you'll receive an email with the error log attached.
1. Open the record addition error log and review the errors, then take one of these actions.
    - If you see errors regarding duplicate records, you don't need to do anything. "Duplicate" errors mean that the records are already in Salesforce, so you don't need to add them again. If your Data.com preferences are set to allow duplicates, the error log will not include any "duplicate" errors.
    - If you see errors regarding your organization's custom configurations, such as triggers, validation rules, or workflow, let your system administrator know because they may need to correct these configurations.
    - For all other errors, contact your system administrator, who may need to contact Support.
  2. After the errors have been resolved, try again to add the Data.com records to Salesforce.

## Improved Data.com Reports AppExchange Package

There have been several improvements to the Data.com Reports AppExchange Package, including modifications to a number of reports in order to provide more useful data. Also, numerous report names have been changed slightly to better align with the data in the report. For a comprehensive list of the entire Data.com Reports AppExchange Package, see "Using Data.com Reports and Dashboards" in the Salesforce online help.

## Search by D-U-N-S Number

You can now search Salesforce by D-U-N-S Number. Just enter the 9-digit D-U-N-S Number in the global search box and your search results will return any accounts or leads with that D-U-N-S Number.

# DATA.COM CLEAN

## Data.com Clean Administrator Features and Enhancements

Winter '13 offers powerful new Clean features and enhancements.

- If you use Data.com Premium and the Data.com Clean product, you can now set up clean jobs to automatically update D&B Company records linked to accounts and leads.
- You can also map Data.com fields to Salesforce account, contact, and lead fields. When you export or clean records, put Data.com values in the Salesforce fields where you want them.
- We now offer field-level Clean settings for your accounts, contacts, and leads. You can either flag differences only, or flag them and auto-fill with Data.com data.



- We've updated the Data.com Reports AppExchange package to include a preconfigured validation rule that lets you exclude individual account, contact, and lead records from being cleaned with automated clean jobs. The rule works for organizations that use Data.com Premium and the Data.com Clean product, which provides automated jobs.
- If you've purchased the Data.com Clean product, you'll find that we've automatically enabled it for you. The Data.com Clean product offers *automated Clean jobs*.
- If you use Data.com Corporate or Data.com Premium, you'll find that we've enabled Data.com Clean for you. With Corporate or Premium, your users can *manually* clean account, contact, and lead records.

## Defining Your Data.com Clean Job Preferences (Data.com Clean Only)

Data.com available in: <b>Contact Manager, Developer, Enterprise, Group, and Professional</b> Editions
Data.com available for an additional cost in: <b>Unlimited</b> Edition
Data.com Clean available in: <b>Developer, Enterprise, and Professional</b> Editions
Data.com Clean available for an additional cost in: <b>Unlimited</b> Edition

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 either:

- Flag all fields in a Salesforce record whose values are different from those in the matched Data.com record, or
- Flag fields with different values and *also* auto-fill blank fields

You can set flag-only or flag and auto-fill preferences for entire records or field by field. If you use Data.com Premium, you can also clean D&B Company records that are linked to accounts and leads. D&B Company clean jobs automatically fill or overwrite field values on D&B company records, but do not change data on linked account or lead records.

Your preferences take effect when the next scheduled clean job runs, and users will see the flags, as appropriate, when they clean records manually.



**Note:** *Converted* leads are excluded from Leads clean jobs.

1. Click **Your Name > Setup > Data.com Administration > 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 your clean preference.
  - Flag all differences per record to *only identify* fields whose values are different from Data.com values

- Flag differences and auto-fill blank fields to identify fields whose values are different and *fill blank fields* with values from Data.com.
  - Customize settings field by field.
4. If you select the `Customize` option for any object, you can select either `Flag` or `Flag & Auto-Fill` for individual fields.
  5. If you want to clean D&B Company records, select the `Enable Clean jobs for D&B Companies` checkbox.
  6. When you finish setting clean preferences for all the objects you want to clean, click **Save**.

## Preventing Data.com Clean Auto-Updates for Account, Contact, and Lead Records

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

Data.com available for an additional cost in: **Unlimited** Edition

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

Data.com Clean available for an additional cost in: **Unlimited** Edition

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.



**Tip:** You can use the Data Loader or a custom trigger to select this checkbox for multiple records.

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."

## Data.com Clean Product Automatically Enabled

In Summer '12, when you implemented the Data.com Clean product, you had to enable it before you could set up automated Clean jobs and users could manually clean account, contact, and lead records. With Winter '13, we've eliminated that extra step and enabled the Data.com Clean product for you. To take a look, just go to **Your Name** > **Setup** > **Data.com Administration** > **Clean** > **Settings**. For complete details, check out "Implementing Data.com Clean" in the Salesforce online help.

## Data.com Corporate and Premium Now Come with Clean Enabled

In Summer '12, when you implemented Data.com Corporate or Data.com Premium, you had to enable Clean functionality before your users could manually clean account, contact, and lead records. With Winter '13, we've eliminated that extra step and enabled Clean for you. To take a look, just go to **Your Name** > **Setup** > **Data.com Administration** > **Clean** > **Settings**. For complete details, check out "Configuring Data.com Corporate," "Configuring Data.com Premium," in the Salesforce help.



**Note:** To get automated clean jobs, you need to purchase the Data.com Clean product.

## Data.com Clean User Features and Enhancements

Check out these new Data.com Clean user features for Winter '13.

- When you add a Data.com contact as a lead or clean a lead record, if Data.com has a D&B record for the lead's company, we'll create a D&B Company record and link it to the lead through its **D&B Company** field. Read the "D&B Companies" section of these release notes for more information about D&B Company records added to leads.
- Our definition of **Inactive** now includes the D&B designation of "non-marketable". This may cause you to see more records with **Inactive** status.

## Adding Data.com Contacts as Leads

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

Data.com available for an additional cost in: **Unlimited** Edition

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

Data.com Clean available for an additional cost in: **Unlimited** Edition

User Permissions Needed	
To add Data.com contacts as leads:	"Create" on leads

Need leads? Get them from Data.com. First search for contacts, then add the contacts you want to Salesforce as leads. Records you've already added from Data.com (●) won't be added again unless the record has been deleted from Salesforce or your organization allows duplicates.

If you use Data.com Premium, when you add a lead from Data.com, a corresponding D&B Company record (if one exists in Data.com) is automatically created in Salesforce and linked to the lead record via its **D&B Company** field.

1. Search for contacts.
2. Select the contacts you want to add and click **Add to Salesforce**.
3. Select **Leads** to add the records as leads and click **Continue**.



**Note:** If one or more records can't be added to Salesforce because of errors, we'll notify you and provide a .csv file with the error details.

4. Click **Go to Leads** to view the list of new records on the Leads home page.

## Cleaning Records Manually With Data.com Clean

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

Data.com available for an additional cost in: **Unlimited** Edition

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

Data.com Clean available for an additional cost in: **Unlimited** Edition

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 or lead record that doesn’t yet have a D&B Company record linked to it, Salesforce will create one if it’s available in Data.com and link the two records. You’ll also see a **D&B Company Record Linked** field on the comparison page when you clean the account or lead.



**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 **Different** or **Not Compared**, 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 or lead record that doesn't yet have a D&B Company record linked to it, Salesforce will create a D&B Company record (if available) 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.

## Expanded Definition of `Inactive` Status for Account Records

A Data.com status of `Inactive` now includes records that D&B has classified as non-marketable. The expanded definition now includes any of the following.

- The record contains out-of-date or inaccurate information, such as an invalid email address.
- The company associated with the account or contact record is no longer in business.
- The company associated with the account record has been classified by D&B as *non-marketable*

A non-marketable company, as defined by D&B, is one that is believed to be in business and *has not* requested exclusion from the D&B database; but whose D&B record *has not* been updated in the past 24 months and *does not* include a complete business name, a valid physical or mailing address, or an SIC code.

## D&B COMPANIES

## D&B Companies Administrator Features and Enhancements

Winter '13 offers lots of great enhancements for D&B Companies.

- With Data.com Corporate and Premium, get D&B Company fields on lead records. With Premium, get a linked D&B Company record (if available) when you add or clean a lead record.
- If you use Data.com Premium and the Data.com Clean product, you can now set up clean jobs to automatically update D&B Company records linked to accounts and leads.

## D&B Companies for Leads–GA

For the Winter '13 release, Data.com has enhanced its D&B Companies offering to include leads.

In Summer '12, with Data.com Corporate and Premium products, you got D&B fields on account records, and with Premium, when you added or cleaned a record, you got a D&B Company record (if available) linked to that record through its D&B Company field.

With Winter '13, you get the same features and rich data for leads. To set up D&B Companies for leads, make sure you follow the guidelines in the Salesforce help topics "Implementing Data.com" and "Implementing Data.com Clean".

## D&B Companies Overview

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

Data.com available for an additional cost in: **Unlimited** Edition

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

Data.com Clean available for an additional cost in: **Unlimited** Edition

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 structures, 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 or lead from Data.com, a corresponding D&B Company record is automatically created and linked to that record via its `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. If the D&B Company record is linked to an account, 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.

For accounts and leads not added from Data.com (those created manually, for example), if a corresponding D&B Company record exists, it is added to Salesforce and linked to the account or lead record the first time that record is cleaned.

If your company also uses the Data.com Clean product, you can use automated jobs to update your D&B Company records.

## Implementing D&B Companies

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

Data.com available for an additional cost in: **Unlimited** Edition

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

Data.com Clean available for an additional cost in: **Unlimited** Edition

### User Permissions Needed

To implement D&B Companies:	“Customize Application”
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If your organization has purchased Data.com Premium, you have access to the D&B Companies object, which provides D&B data for accounts and leads you add to Salesforce. Cleaning an account or lead record also creates a D&B Company record if you don't yet have one in Salesforce.

The D&B Companies tab lists all the D&B Company records you have in Salesforce.

Each D&B Company record displays a large set of D&B fields. If you've purchased the Data.com Clean product, you can also use automated jobs to clean D&B Company records. Cleaning a D&B Company record automatically fills blank fields and overwrites old data with new.

Setting up D&B Companies is easy to do—just follow the steps for configuring Data.com Premium, and keep these guidelines in mind.



**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 Guidelines

- Make sure you add the D&B Companies tab to user profiles.
- [If you use the Data.com Clean product and want to automatically update D&B Company records, define that preference.](#)
- 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. Automated clean jobs are available if you use the Data.com Clean product.
- Because the D&B Company object is read-only (except for Data.com Clean updates), 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 the appropriate profile permissions. Standard profiles automatically have the `Read D&B Company records` permission, but need to be assigned the `Delete D&B Company records` permission. Custom profiles need to be assigned both permissions.



## Defining Your Data.com Clean Job Preferences (Data.com Clean Only)

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

Data.com available for an additional cost in: **Unlimited** Edition

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

Data.com Clean available for an additional cost in: **Unlimited** Edition

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 either:

- Flag all fields in a Salesforce record whose values are different from those in the matched Data.com record, or
- Flag fields with different values and *also* auto-fill blank fields

You can set flag-only or flag and auto-fill preferences for entire records or field by field. If you use Data.com Premium, you can also clean D&B Company records that are linked to accounts and leads. D&B Company clean jobs automatically fill or overwrite field values on D&B company records, but do not change data on linked account or lead records.

Your preferences take effect when the next scheduled clean job runs, and users will see the flags, as appropriate, when they clean records manually.



**Note:** *Converted* leads are excluded from Leads clean jobs.


1. Click **Your Name > Setup > Data.com Administration > 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 your clean preference.
  - Flag all differences per record to *only identify* fields whose values are different from Data.com values
  - Flag differences and auto-fill blank fields to identify fields whose values are different and *fill blank fields* with values from Data.com.
  - Customize settings field by field.
4. If you select the **Customize** option for any object, you can select either **Flag** or **Flag & Auto-Fill** for individual fields.
5. If you want to clean D&B Company records, select the **Enable Clean jobs for D&B Companies** checkbox.
6. When you finish setting clean preferences for all the objects you want to clean, click **Save**.

# D&B Companies User Features and Enhancements

Here are the new user features for D&B Companies.

- With Data.com Corporate and Premium products, get D&B Company fields on lead records. With Premium, get a linked D&B Company record (if available) when you add or clean a lead record..
- When you convert a lead, D&B Company data is transferred to the account and lead records that are created.
- If you use Data.com Premium, search Data.com by Global Ultimate D-U-N-S Number to see a list of accounts within an organization's corporate structure and then add those records to Salesforce.

Data.com
D&B Companies
Files
Accounts
Contacts
Leads
Reports
Dashboards
+


D&B Company  
**Salesforce.com, Inc.**

[Edit Layout](#) | [Printable View](#) | [Help for this Page](#)

[« Back to List: Leads](#)

[Accounts \[1\]](#)

**D&B Company Detail**
Delete
Search Global Ultimate D-U-N-S

**▼ Overview**

Company Description
salesforce.com knows the power of good customer relations. The company offers hosted applications that manage customer information for sales, marketing, and customer support, providing clients with a rapidly deployable alternative to buying and maintaining enterprise software. salesforce.com's applications are used by more than 100,000 clients for generating sales leads, maintaining customer information, and tracking customer interactions. The company's applications can be accessed from PCs and mobile devices. salesforce.com's customers come from a variety of industries, including financial services, telecommunications, manufacturing, and entertainment.

Inactive
☐

**▼ Primary Data**

Primary Business Name	Salesforce.com, Inc.	URL	<a href="http://www.salesforce.com">http://www.salesforce.com</a>
Primary Address	1 Market Ste 300 San Francisco, CA 94105-5188 United States	Mailing Address	
Telephone Number	+1.415.901.7000	Facsimile Number	
International Dialing Code	0001	Year Started	1999
Annual Sales Volume	1,657,139,000	Annual Sales Volume Indicator	
Local Currency Code	U.S. Dollar	Location Type	Headquarters/Parent Branches and/or subsidiaries report to the business
Ownership Type Indicator	Public	Out Of Business Indicator	Not Out of Business
Stock Exchange	NYSE	Ticker Symbol	CRM
FIPS MSA Code	41860	FIPS MSA Code Description	
Primary TradeStyle		D-U-N-S Number	072148831
Primary SIC Code	7372	Primary SIC Description	Prepackaged Software
Primary NAICS Code	511210	Primary NAICS Description	Software Publishers
Longitude	-122.394746	Latitude	+37.794340

## Adding Data.com Contacts as Leads

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

Data.com available for an additional cost in: **Unlimited** Edition

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

Data.com Clean available for an additional cost in: **Unlimited** Edition

User Permissions Needed	
To add Data.com contacts as leads:	"Create" on leads

Need leads? Get them from Data.com. First search for contacts, then add the contacts you want to Salesforce as leads. Records you've already added from Data.com (●) won't be added again unless the record has been deleted from Salesforce or your organization allows duplicates.

If you use Data.com Premium, when you add a lead from Data.com, a corresponding D&B Company record (if one exists in Data.com) is automatically created in Salesforce and linked to the lead record via its D&B Company field.

1. Search for contacts.
2. Select the contacts you want to add and click **Add to Salesforce**.
3. Select **Leads** to add the records as leads and click **Continue**.



**Note:** If one or more records can't be added to Salesforce because of errors, we'll notify you and provide a .csv file with the error details.

4. Click **Go to Leads** to view the list of new records on the Leads home page.

## Understanding Lead Conversion

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

When you convert a lead, Salesforce creates a new account, contact, and, optionally, an opportunity using the information from the lead. Any campaign members are moved to the new contact and the lead becomes read only. If an existing account and contact have the same names as those specified on the lead, you can choose to update the existing account and contact. Information from the lead is inserted only into blank fields; Salesforce does not overwrite existing account and contact data.

All open and closed activities from the lead are attached to the account, contact, and opportunity. You can assign the owner of the records, and schedule a follow-up task. When you assign a new owner, only the open activities are assigned to the new owner. If you have custom lead fields, that information can be inserted into custom account, contact, or opportunity fields. Converted leads can't be viewed, although they appear in lead reports. Salesforce updates the `Last Modified Date` and `Last Modified By` system fields on converted leads when picklist values included on converted leads are changed.

Consider the following when converting leads.

Campaigns	<p>If the lead matches an existing contact and both records are linked to the same campaign, the campaign member status is determined by whichever is further along in the lifecycle of the campaign. For example, if the lead member status is “sent” and the contact member status is “responded,” the responded value is applied to the contact.</p> <p>Related campaign information is always associated with the new contact record, regardless of the user's sharing access to the campaign.</p> <p>When more than one campaign is associated with a lead, the most recently associated campaign is applied to the <code>Primary Campaign Source</code> field on the opportunity, regardless of the user's sharing access to the campaign.</p>
Chatter	<p>When you convert a lead into an existing account, you don't automatically follow that account. However, when you convert the lead into a new account, you automatically follow the new account, unless you disabled feed tracking for accounts in your Chatter settings.</p>
Data.com / D&B Company	<p>If you use Data.com Premium, when you add a lead from Data.com, a corresponding D&amp;B Company record (if one exists in Data.com) is automatically created in Salesforce and linked to the lead record via its <code>D&amp;B Company</code> field. If you later convert that lead:</p> <ul style="list-style-type: none"> <li>• If the account is created from the conversion, the lead's <code>Company D-U-N-S Number</code> field value transfers to the account's <code>D-U-N-S Number</code> field, and the lead's <code>D&amp;B Company</code> field value transfers to the account's <code>D&amp;B Company</code> field.</li> <li>• The lead's <code>Data.com Key</code> field value transfers to the contact's <code>Data.com Key</code> field.</li> </ul> <p>If you use Data.com Corporate, no D&amp;B Company record is created, but the lead's <code>Data.com Key</code> field value transfers to the contact's <code>Data.com Key</code> field.</p>
Divisions	<p>The new account, contact, and opportunity are assigned to the same division as the lead. If you update an existing account during lead conversion, the account's division is not changed, and the new contact and opportunity inherit the account's division.</p>
Local Lead Names	<p>The <code>Company Name (Local)</code> on the lead automatically maps to <code>Account Name (Local)</code>, along with their associated standard name fields.</p>
Person Accounts	<p>If your organization uses person accounts, you can convert leads to either person accounts or business accounts. Leads with a blank <code>Company</code> field are converted to person accounts. The default person account record type for your profile is applied to the new person account. Note that you can only create leads with a blank <code>Company</code> field using the Force.com API. Leads with a value in the <code>Company</code> field are converted to business accounts. The default business account record type for your profile is applied to the new business account.</p> <p>As a best practice, use different lead record types and page layouts to differentiate leads that will be converted to person accounts from those that will be converted to business accounts. In particular, remove the <code>Company</code> field from the page layouts of leads that will be converted to person accounts, and make the <code>Company</code> field required on the page layouts of leads that will be converted to business accounts.</p> <p>If you create a lead, convert it, and then attach it to a person account owned by someone else, the person account owner becomes the contact owner.</p> <p>If you convert a lead owned by someone else and attach it to a person account that you own, the lead owner becomes the contact owner.</p>

Record Types	<p>If the lead has a record type, the default record type of the user converting the lead is assigned to records created during lead conversion.</p> <p>The default record type of the user converting the lead determines the lead source values available during conversion. If the desired lead source values are not available, add the values to the default record type of the user converting the lead.</p>
Salesforce to Salesforce	<p>When you convert a lead, Salesforce to Salesforce inactivates the shared record and updates the External Sharing related list in your connection's lead record with an Inactive (converted) status. Due to inactivation of the shared record, changes to the Lead Status during conversion aren't reflected in your connection's lead record.</p>
Standard and Custom Lead Fields	<p>The system automatically maps standard lead fields to standard account, contact, and opportunity fields (see “Lead Conversion Mapping” in the online help).</p> <p>For custom lead fields, your administrator can specify how they map to custom account, contact, and opportunity fields (see “Mapping Custom Lead Fields” in the online help).</p> <p>The system assigns the default picklist values for the account, contact, and opportunity when mapping standard lead picklist fields that are blank. If your organization uses record types, blank values are replaced with the default picklist values of the new record owner.</p>
Territory Management	<p>If your organization uses territory management, the new account is evaluated by account assignment rules and may be assigned to one or more territories. If the rules assign the account to exactly one territory, then the opportunity will also be assigned to that territory. If the rules assign the account to multiple territories, then the opportunity is not assigned to any territory.</p>
Triggers	<p>During lead convert, Apex triggers are fired, and universally required custom fields and validation rules are enforced, only if validation and triggers for lead convert are enabled in your organization.</p> <p>Salesforce ignores lookup filters when converting leads if the <code>Enforce Validation and Triggers from Lead Convert</code> checkbox on the Lead Settings page is deselected.</p>
Workflow	<p>You can't convert a lead that's associated with an active approval process or has pending workflow actions. For more information, see “Managing Approval Processes” in the online help and “Managing Workflow Rules” in the online help.</p> <p>Converting a lead to a person account won't trigger workflow rules.</p> <p>When a lead is converted by someone who isn't the lead owner, all workflow tasks associated with the lead that are assigned to that user, except email alerts, are reassigned to the lead owner. Workflow tasks assigned to users other than the lead owner and lead converter aren't changed.</p>

## Cleaning Records Manually With Data.com Clean

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

Data.com available for an additional cost in: **Unlimited** Edition

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

Data.com Clean available for an additional cost in: **Unlimited** Edition

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 or lead record that doesn't yet have a D&B Company record linked to it, Salesforce will create one if it's available in Data.com and link the two records. You'll also see a **D&B Company Record Linked** field on the comparison page when you clean the account or lead.



**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 **Different** or **Not Compared**, 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 or lead record that doesn't yet have a D&B Company record linked to it, Salesforce will create a D&B Company record (if available) 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.

## Finding and Adding Data.com Accounts by Global Ultimate D-U-N-S Number

Data.com available in: <b>Contact Manager, Developer, Enterprise, Group, and Professional</b> Editions
Data.com available for an additional cost in: <b>Unlimited</b> Edition
Data.com Clean available in: <b>Developer, Enterprise, and Professional</b> Editions
Data.com Clean available for an additional cost in: <b>Unlimited</b> Edition

User Permissions Needed	
To add accounts from Data.com	"Create" on accounts

If you use Data.com Premium, you can search D&B Company records by Global Ultimate D-U-N-S Number to see a list of accounts within an organization's corporate structure and then add those accounts to Salesforce. The Global Ultimate is the highest entity within an organization and is identified by a nine-digit Global Ultimate D-U-N-S Number. All companies that are part of the same corporate structure as the Global Ultimate are identified by the same Global Ultimate D-U-N-S Number.



**Note:** Before you can search by Global Ultimate D-U-N-S Number, the `Search Global Ultimate D-U-N-S` button must be added to the D&B Company page layout.

1. Go to the detail page of the D&B Company record you want to find accounts with the same Global Ultimate D-U-N-S Number for.
2. Click **Search Global Ultimate D-U-N-S**.  
The Data.com tab opens and displays a list of accounts that match the Global Ultimate D-U-N-S Number of the D&B Company record.
3. If the results list is long, you can sort the results by any table heading. The **Location Type** heading, for example, sorts results by headquarters, single location, and branch.
4. If you don't see what you're looking for, use filters to narrow your results.
5. For more information about a particular account, such as its account site, click the account name to see its account card.
6. Add all accounts or a selection to Salesforce.
7. From the confirmation message, click **Go to Accounts** to view the list of new records on the Accounts home page.

Here are some things to keep in mind when searching by Global Ultimate D-U-N-S Number.

- Global Ultimate D-U-N-S Number search results *only* include accounts that are in Data.com, so you may not get *complete* Global Ultimate D-U-N-S results if some members of the corporate structure are not in Data.com.
- You can use filters to narrow down your Global Ultimate D-U-N-S Number search results.

- You can export records from your Global Ultimate D-U-N-S Number search results.
- You can't save the search.



## Page Breadcrumbs

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

Available (with limitations) in: **Developer** Edition

In Winter '13, we added a new Breadcrumb page element that you can add to your Site.com pages and page templates to help users navigate through your site. Just like the Menu page element, a breadcrumb is based on the site map. You can customize the breadcrumb by changing the root node, the separator between the nodes, and the visual style of the breadcrumb itself.

For more information, see “Adding Breadcrumb Navigation to Pages” in the online help.

## Updated Menu Source Options

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

Available (with limitations) in: **Developer** Edition

In Winter '13, we updated the `Menu Source` field on the Properties pane to give publishers and designers greater flexibility when creating navigation menus for site pages.

- **Use Other Map** has been renamed to **Landing Pages** to better identify which pages it refers to.
- We also added two new options that let you choose from a wider array of site pages for your menu.
  - ◇ **Child Pages**—Create a menu using the child pages of the current page.
  - ◇ **Sibling Pages**—Create a menu using all the pages that share the same parent as the current page.

## Page Visibility in Menus and Breadcrumbs

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

Available (with limitations) in: **Developer** Edition

In Winter '13 we added a new checkbox to help you customize your navigation elements. You can hide a page in menus, breadcrumbs, and the site map by selecting the `Hide Page` checkbox found on the Properties pane for each page. This setting also prevents website visitors from accessing the page's direct URL. By default, all pages are visible.

## Site Map Links

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

Available (with limitations) in: **Developer** Edition

Now pages aren't the only things you can assign to your site map. Add internal or external URLs to your site map to customize your navigation menus and breadcrumbs. To create a site map link, click **New** in the Site Pages view on the Overview tab and select **Site Map Link**. Give it a name, type in a URL, and you're off!

Site map links are automatically included in navigation menus and breadcrumbs. However, you can't set a site map link as a custom root node in a breadcrumb.

## Cascading Editability

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

Available (with limitations) in: **Developer** Edition

Previously, when you made a page element in a page template editable, it was editable only in pages or templates based directly on that template. With Winter '13, we've removed that restriction.

When you enable the `Editable` property of a page element, any pages or child templates based on the template also inherit the enabled status. In turn, the enabled status in the child template cascades to any of *its* children, and so on. If you don't want its editability to cascade to any lower levels, disable the `Editable` property of a page element in a child template.


## Default Content in Editable Page Elements


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

Available (with limitations) in: **Developer** Edition

With Winter '13, content added to an editable area on a page template becomes default content for the area in derived pages and templates.

The content of all editable page elements on a child page or template is linked to the content of the editable elements on its parent page template. When you update the content of an editable page element on the parent template, the changes are pushed down to any child pages or page templates. However, if you modify the content of an editable page element at the child page or template level, you break the link between the elements, and any subsequent changes made to the page element on the parent template won't trickle down to its children.

Break the link between parent and child editable elements by selecting the child element on the page or in the Page Structure pane and clicking  > **Override Parent Content**.

You can return control of the editable page element to the parent template by selecting the child element on the page or in the Page Structure pane and clicking  > **Revert to Parent Content**. When you do this, any custom content in the child editable page element is lost.

Disabling the `Editable` property of a panel in a parent template overrides any changes made to that panel in child pages or templates. Changes to the panel at the child level disappear, and the panel reflects only the content from the parent template. However, the changes at the child level aren't lost. Re-enabling the `Editable` property of the panel in the parent template restores the custom content previously added to its children.

## Improved Linking in Data Elements

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

Available (with limitations) in: **Developer** Edition

When using data elements (previously called “repeater elements”), you can now more easily create hyperlinks to custom URLs, to items in your site, and to emails. The new link type options match those available when adding links in content blocks to provide a more consistent look and feel. You can also specify where to open the linked item, such as in a new browser window or in a popup window.

See “Displaying Data Using Data Elements” in the online help.

## New Status Column

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

Available (with limitations) in: **Developer** Edition

We've added a Status column to the Site.com site list page that shows you what state your site is in:

- In Development—The site has never been published.
- Published—The site has been published at least once.

## “Nested Templates” Renamed “Child Templates”

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

Available (with limitations) in: **Developer** Edition

When you create a page template from another page template, the derived template inherits the characteristics of its parent. Therefore, in the interest of clearer and more user-friendly terminology, “nested templates” are now “child templates.”

When working with page templates, the **Create Nested Template** menu option is now **Create Child Template**.

## Repeaters and Repeater Elements Renamed

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

Available (with limitations) in: **Developer** Edition

In Winter '13, Repeater Elements and Repeaters in the Page Elements pane are now called “Data Elements” and “Data Repeaters,” respectively.

## Geolocation Custom Field—Beta

Available in: **All** Editions

User Permissions Needed	
To create or change custom fields:	“Customize Application”

The geolocation custom field allows you to create a field that identifies a location by its latitude and longitude. You can then use the geolocation field with the `DISTANCE` and `GEOLOCATION` formula functions to calculate distances between locations. For example, you can calculate the distance between two geolocation fields (such as between the warehouse and the store), or between a geolocation field and any fixed latitude-longitude coordinates (such as between the warehouse and 37.775°, -122.418°, also known as San Francisco).



**Note:** This is a beta release of geolocation and its functionality has known limitations, outlined here. To provide feedback on geolocation, go to [IdeaExchange](#).

### Geolocation Field Limitations

Geolocation is a compound field that counts toward your organization’s limits as three custom fields: one for latitude, one for longitude, and one for internal use. In this beta release, support for the compound field (geolocation) vs. the field’s components (latitude and longitude) varies depending on the functionality you’re using in Salesforce. For example, you can create list views that show the field and its components, but you can’t select the compound geolocation field in Apex; you can only run SOQL queries on a geolocation field’s components.

Other limitations of this geolocation beta release include:

- History tracking is not available for geolocation fields.
- Geolocation fields are not supported in custom settings.
- Geolocation fields are not available in reports, dashboards, validation rules, Visual Workflow, or workflow and approvals.
- Geolocation fields cannot be searched.
- Geolocation fields are not available in Schema Builder.
- `DISTANCE` and `GEOLOCATION` formula functions are available only when creating formula fields and in Visual Workflow.
- Geolocation is supported in Apex only through SOQL queries, and only at the component level.

### Creating a Geolocation Custom Field

1. Click **Your Name** > **Setup** > **Create** > **Objects** and select one of the custom objects in the list.
2. In Custom Fields & Relationships, click **New**.
3. Choose **Geolocation** and click **Next**.

4. Enter the Geolocation field attributes, including **Latitude and Longitude Display Notation**, which determines how the notation appears in the Salesforce interface:

#### Degrees, Minutes, Seconds

A notation for angular measurement that is based on the number 60: there are 360 degrees to a circle, 60 minutes to a degree, and 60 seconds to a minute.

#### Decimal

Expresses the value as degrees, and converts the minutes and seconds to a decimal fraction of the degree. Decimal notation does not use cardinal points. North and East are positive values; South and West are negative values.

5. Follow the steps to complete the wizard.

## ORGANIZATION-WIDE PERMISSION SETS

### Organization-Wide Permission Sets Overview

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

User Permissions Needed	
To create and assign permission sets:	“Manage Users”

In Winter '13, you can create organization-wide permission sets, which aren't associated with a specific user license. In the past, if you wanted to assign one set of permissions and settings to users with different user licenses, you would create several permission sets—one for each type of user license. Now with organization-wide permission sets, you can create a single permission set and assign it to users with different user licenses.

For example, let's say you'd like to grant the “API Enabled” permission to several users in your organization—some have the Salesforce user license and others have the Salesforce Platform user license. You can now create a single organization-wide permission set with no associated user license and assign it to both types of users.

### Creating an Organization-Wide Permission Set

Before creating a permission set, consider who you'll assign it to. If you plan to assign the permission set to users with only one type of user license, it's still a best practice to associate that user license with the permission set. But if you plan to assign the permission set to users with different licenses, create an organization-wide permission set.

To create an organization-wide permission set:

1. Click **Your Name** > **Setup** > **Manage Users** > **Permission Sets**.
2. Click **New**.
3. Enter a label, API name, and description.

4. For User License, select --None--.
5. Click **Save**.

In the permission set overview page, a permission set with no associated user license has a blank User License field.

Permission Set  
**Warehousing App**

Find Settings... | Clone | Delete | Edit Properties

**Permission Set Overview** | Assigned Users

Description	Grants Create, Read, Edit, and Delete access to all objects in the Warehousing app.	API Name	Warehousing_App
User License		Namespace Prefix	
Created By	Jan Lange, 6/26/2012 4:54 PM	Last Modified By	Jan Lange, 6/26/2012 4:54 PM

## Showing Organization-Wide Permission Sets in List Views

Once you've created multiple permission sets, you might want to keep track of their user license assignments. For a quick overview of user license assignments in permission sets, create or edit a permission sets list view that includes the User License column.

1. Click **Your Name** > **Setup** > **Manage Users** > **Permission Sets**.
2. Click **Create New View**, or select a view and click **Edit**.
3. Under Specify Filter Criteria, specify the conditions that the list items must match.



**Tip:** To show only organization-wide permission sets (that is, permission sets with no user license), enter `User License` for the Setting, set the Operator to equals, and enter `" "` in the Value field.

4. Under Select Columns to Display, add `User License` to the settings that you want to appear as columns in the list view.
5. Click **Save**, or if you're cloning an existing view, rename it, and click **Save As**.

This permission sets list view includes a User License column. The Recruiter App permission set has no associated user license, so its User License entry is blank.

Permission Sets Help for this Page

Org Permission Sets | Edit | Delete | Create New View

New | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Other | All

Action	Permission Set Label ↑	User License
Del   Clone	Accounts - Custom Fields	Salesforce
Del   Clone	Additional Customer Portal Access	Customer Portal User
Del   Clone	Call Center - Additional Access	Service Cloud
Del   Clone	Recruiter App	
Del   Clone	Sales Manager Permissions	Salesforce

## Assigning Permission Sets

When you assign a permission set with no associated user license, all of its enabled settings and permissions must be allowed by the user's license, or the assignment will fail. For example, if you create an organization-wide permission set and enable "Read" on opportunities, you can't assign that permission set to users with the Salesforce Platform user license because the license doesn't allow access to opportunities.

To assign permission sets:

1. Click **Your Name** > **Setup** > **Manage Users** > **Users**.
2. Select a user.
3. In the Permission Set Assignments related list, click **Edit Assignments**.
4. To assign a permission set, select it from the Available Permission Sets box and click **Add**. To remove a permission set assignment, select it from the Enabled Permission Sets box and click **Remove**.
5. Click **Save**.

## Best Practices for Organization-Wide Permission Sets

### Specifying a user license option

You can only specify the user license when creating a new permission set; you can't change its user license when editing or cloning it.

### Editing organization-wide permission sets

When editing organization-wide permission sets that are already assigned to users, any additional permissions and settings that you enable must be allowed by all assigned users' licenses or the edit will fail. For example, if an existing permission set is assigned to a Salesforce Platform user, you can't enable "Modify All Data" in the permission set because the user license doesn't allow it.

### Using organization-wide permission sets in packages

When creating permission sets for AppExchange packages, you can't always anticipate the user licenses within organizations that will install a package. Furthermore, if you don't have the required user licenses in your own organization, you can't create permission sets that are associated with those licenses. Organization-wide permission sets are a great solution in these situations. As a best practice, create packaged permission sets that grant access to the components in a package, and not standard Salesforce components. As in any organization, organization-wide permission sets respect the contract terms of any user license.



# User Sharing—PILOT

## User Sharing Overview

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

Winter '13 introduces Sharing capabilities to the user object, enabling you to restrict or extend access to user records. These new features are collectively referred to as User Sharing, and they can't be used simultaneously with Chatter or the Communities pilot.



**Note:** User Sharing is available through a pilot program. In Winter '13, user sharing can't be disabled after it is turned on. For more information on enabling it for your organization, contact [salesforce.com](https://salesforce.com).

With User Sharing, you can grant Read/Write or Read Only access to user records. A user record contains a user's details, including his or her role and profile information. This table explains what it means to have Read access on a user record.

Read access to the record?	What can you see?
No	User's name only. You can't edit the record.
Yes	User's name and detail page. You can also see the user in lookups, list views, ownership changes, user operations, and search. Internal users with Read/Write access can edit the record, excluding fields such as role, profile, or permissions. Portal users can't edit user records.


User Sharing includes these new features:

- Organization-wide defaults for user records
- User sharing rules based on membership to a public group, role, or territory
- Manual sharing on individual user records
- “View All Users” permission

These features are introduced in the following sections.

# Setting the Organization-Wide Defaults for User Records

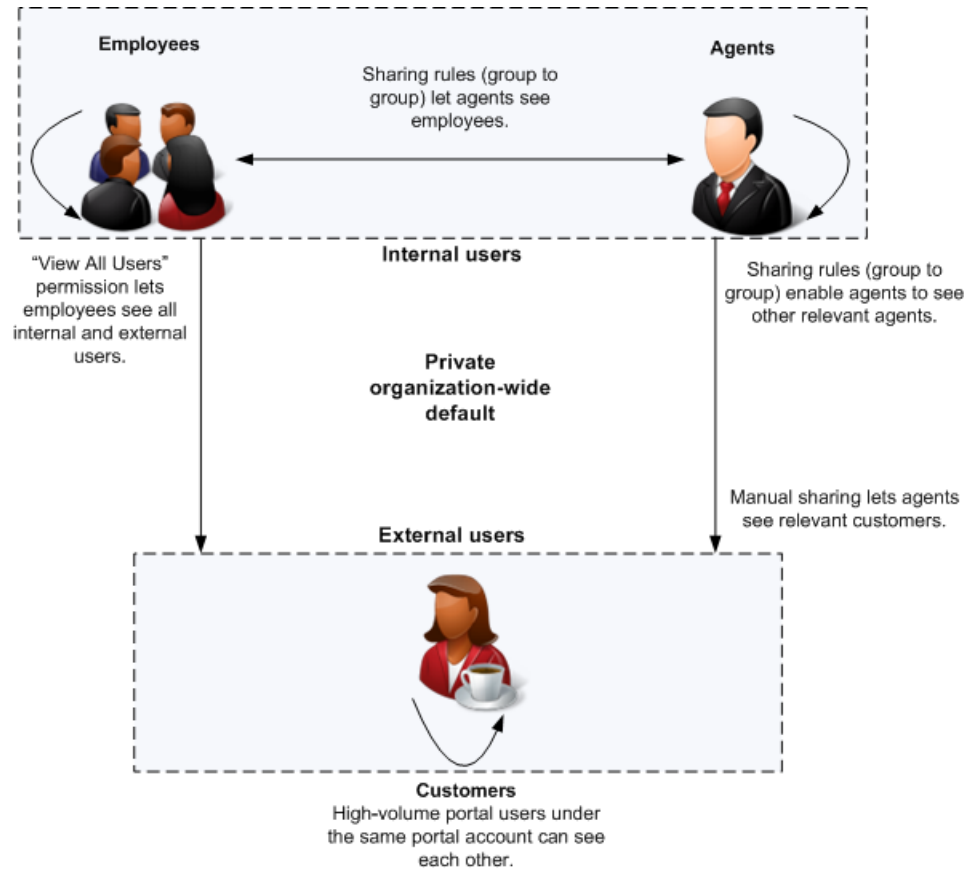
User Permissions Needed	
To set default sharing access:	“Manage Users”

 **Note:** When User Sharing is first turned on, the default access setting is Public Read Only for internal users, and Private for external users. If the default access is Private for external users such as high-volume portal users and guest users, they don’t have Read access to internal users. Internal users maintain Read/Write access to their own records. You can open up access using sharing rules, manual sharing, or user permissions.

Let’s say that your organization has internal users (employees and sales agents) and external users (customers/portal users) under different agents or portal accounts, with these requirements:

- Employees can see everyone.
- Sales agents can see employees, other selected agents, and their own customer user records only.
- Customers can see other customers only if they are under the same agent or portal account.

To achieve the above requirements, you can set the default internal and external access to Private, and extend access using sharing rules, manual sharing, or user permissions. Employees can be granted the “View All Users” permission. This graphic illustrates how the organization-wide defaults work with sharing rules, manual sharing, and the “View All Users” permission.



You can set the sharing defaults to Private or Public Read Only for internal and external user records. It must be set to Private if at least one user shouldn't see a record. After setting the defaults, you can open up access by granting Read/Write or Read Only access to selected user records.

To set the organization-wide sharing defaults for the user object:

1. Click **Your Name** > **Setup** > **Security Controls** > **Sharing Settings**.
2. Click **Edit** in the Organization-Wide Defaults area.
3. Select the default internal and external access you want to use.

The default external access must be more restrictive or equal to the default internal access.

4. Click **Save**.

You can't deselect **Grant Access Using Hierarchies** for the user object. Users that are higher in the role or territory hierarchy maintain Read access to their subordinates.



**Note:** Users inherit the same level of access to records that users below them in the role hierarchy have access to.

These are common combinations for default internal and external access.

	Default Internal Access	Default External Access	Description
Scenario 1	Private	Private	Users have Read access to those below them in the role hierarchy. External users don't have Read access to internal users and vice versa.
Scenario 2	Public Read Only	Private	Internal users have Read access to all internal and external users. External users don't have Read access to internal users.

Internal users have Read/Write access to their own records and Read access to their subordinates, regardless the defaults. External users include portal users and guest users. Portal users have Read access to other portal users if they are in the same portal account, even if the default external access is Private.

## Creating User Sharing Rules

User Permissions Needed	
To create sharing rules:	"Manage Users"

Create user sharing rules if you are extending access to user records. User sharing rules can be based on membership—public groups, roles, or territories—or on other criteria, such as Department and Title. You can define up to 300 user sharing rules, including up to 50 criteria-based sharing rules.

User sharing rules based on membership enable user records belonging to members of one group to be shared with members of another group. Before you can create a membership-based user sharing rule, confirm that the appropriate groups have been created. For example, if you wish to share users who are based in San Francisco with members of the Sales Agent role, you may have two groups with the selected members in each group.

To create a user sharing rule:

- 1. Click **Your Name > Setup > Security Controls > Sharing Settings**.
- 2. In the User Sharing Rules related list, click **New**.
- 3. Enter the **Label Name** and click the **Rule Name** field to auto-populate it.
- 4. Select a rule type.
- 5. Depending on the rule type you selected, do the following:

**Based on group membership**

Users that are members of a group can be shared with members of another group. In the **Users who are members of** line, select a category from the first drop-down list and a set of users from the second drop-down list (or lookup field, if your organization has over 200 groups, roles, or territories).

**Based on criteria**

Specify the Field, Operator, and Value criteria that records must match to be included in the sharing rule. The fields available depend on the object selected, and the value is always a literal number or string. Click **Add Filter Logic...** to change the default AND relationship between each filter.

- 6. In the **Share with** line, specify the group who should have access to the user records. Select a category from the first drop-down list and a set of users from the second drop-down list or lookup field.
- 7. Select the sharing access setting for users.

Access Setting	Description
Read Only	Users can view, but not update, records.
Read/Write	Users can view and update records.

High-volume portal users and guest users cannot be included in sharing rules. Use [manual sharing](#) when sharing high-volume portal users and guest users with internal users.

## Granting Access to User Records Manually

User Permissions Needed	
To grant access to your own user record:	“View All Users”
To grant access to any other user record:	“Manage Users”

Users can manually grant or increase access to user records if others cannot access it through other methods such as the organization-wide defaults, sharing rules, or role hierarchy. Users inherit the same access as users below them in the role hierarchy. High-volume portal users can be included in manual shares to be shared with other users.

To grant access to a user record:

- 1. Click **Sharing** on the user record you want to share.  
The Sharing Detail page lists the users, groups, roles, and territories that have access to the user record.
- 2. Click **Add**.
- 3. From the drop-down list, select the group, user, role, or territory to share with.

- 4. Choose the specific groups, users, roles, or territories who will have access by adding their names to the Share With list.
- 5. Select the access level for the record you are sharing.  
Possible values are Read/Write or Read Only, depending on your organization-wide defaults for users. You can only grant a higher access than your organization-wide default.
- 6. Click **Save**.

To edit or delete the record access, click **Sharing** on the record, and click **Edit** or **Del** next to the manual share. You can't edit the access in some cases, such as when your organization-wide defaults is set to Public Read Only and the only valid access level on the manual share is Read/Write.

Note these restrictions when sharing external users with internal users.

External users	Comments on manual sharing
High-volume portal users	Share with internal users only. You can't share internal users with high-volume portal users.
Guest users	Share with internal users, and vice versa.

“View All Users” User Permission

“View All Users” grants users Read access to all users in the organization, including both active and inactive users, portal users, and guest users. Only users in the User Sharing pilot program can use this permission, which lets a user view all user records regardless of the sharing settings.

System administrators and users with the “Manage Users” permission get the “View All Users” permission automatically with User Sharing.

VISUAL WORKFLOW ENHANCEMENTS

Search Controls in the Cloud Flow Designer

Search controls have been added to the Palette and expanded in the Explorer to help you quickly find what you need to build and update your flows.

## Searching the Palette



As you add Apex classes that use the `Process.Plugin` interface and add more flows to your organization, it becomes more challenging to find a specific Apex class or flow within the Palette. You can, however, search the Palette to quickly find what you need to add an Apex plug-in or subflow element to your flow.

Available in: <b>Enterprise</b> , <b>Unlimited</b> , and <b>Developer</b> Editions
--

User Permissions Needed
-------------------------

To open, edit, or create a flow in the Cloud Flow Designer: “Manage Force.com Flow”
---

Open a flow in the Cloud Flow Designer. Then use the following options to find a Palette item.

- On the Palette tab, enter search text.  
The Palette displays only the items that contain the entered text.
- Click  to filter the Palette tab contents to one type of element.
- To remove the filter, click  and select **SEARCH ALL**.

## Searching a Flow



As a flow grows and becomes more complex, it becomes more challenging to find things within it. The Cloud Flow Designer offers tools for quickly finding flow elements and resources.

Available in: <b>Enterprise</b> , <b>Unlimited</b> , and <b>Developer</b> Editions
--


User Permissions Needed
-------------------------

To open, edit, or create a flow in the Cloud Flow Designer: “Manage Force.com Flow”
---


Open the flow in the Cloud Flow Designer. Then use one or more of the following options to find an element or resource in the flow.

- On the Explorer tab, enter search text.  
The Explorer tab displays only the elements and resources whose properties contain the entered text.
- Click  to filter the Explorer tab contents to one type of element or resource.  
To remove the filter, click  and select **SEARCH ALL**.
- Select **Highlight Results on Canvas** to dim all visible elements on the canvas other than the Explorer search or filter results.
- Zoom in and out as desired using the controls near the top right corner of the canvas area.
- To see the location of an Explorer item on the canvas, complete one of the following procedures.

If the Explorer item is a canvas-visible element or a screen field:

1. Hover over the item on the Explorer tab.
2. Click its .

If the Explorer item is a resource that doesn't appear on the canvas:

1. Click the item on the Explorer tab.
2. Click the Usage tab in the Description pane.
3. Hover over an element listed on the Usage tab.
4. Click its .

The canvas shifts to display the element and momentarily highlights it.

## Zoom Controls in the Cloud Flow Designer

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

You can now zoom in and out using the controls located near the top right corner of the canvas area. Combine zoom with the new search options to greatly ease the management of large flows.

## New Types of Flow Screen Fields



You asked for it! This enhancement is from an [idea](#) on the IdeaExchange.

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

You can now add the following types of fields to flow screens. In the Cloud Flow Designer, these options appear on the Screen overlay's Add a Field tab.

- [Checkbox input](#)
- [Multi-select choice](#)
  - ◇ Multi-select checkboxes
  - ◇ Multi-select picklist

## Checkbox Input Fields Overview

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

A checkbox screen field is of type boolean. Use a checkbox screen field to offer flow users a yes or no choice. For example:

- Whether to opt into a marketing campaign.
- Whether to receive a follow-up call after a purchase or case resolution.
- Whether an important policy is understood.

In this case, you can validate that the user selects the checkbox before proceeding to the next screen.

## Multi-Select Choice Fields Overview

Multi-select checkboxes and multi-select picklist fields enable flow users to select multiple choices in a screen field. At runtime, each multi-select field stores its field value as a concatenation of the user-selected choice values, separated by semicolons.

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

When using multi-select choice fields, consider the following:

- At runtime, any semicolons in the selected choices' stored values are removed when added to the multi-select field value.
- Similar to single-selection choice fields, such as radio buttons and drop-down lists, you can populate multi-select choice fields with flow-specific choices and dynamic choices only. You can't populate multi-select picklists in flows with the picklist values of standard or multi-select picklist fields elsewhere in your organization.
- A multi-select choice field can have only one default value.
- A dynamic choice resource can be configured to assign field values from one user-selected record to variables in the flow. When the dynamic choice is used in a multi-select choice field, flow variables store the field values of only the last selected record in the dynamically generated set of choices. If the dynamic choice is used in multiple multi-select choice fields on the same screen, the flow variable assignments are determined by the first multi-select choice field on the screen.
- To ensure the correct runtime behavior of Decision elements that reference multi-select choice fields:
  - ◇ Configure a stored value for each choice that you use in multi-select choice fields.
  - ◇ Don't use the same choice in multiple multi-select choice fields on the same screen.

## Visualforce Controller Access to Subflow Variables

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

Previously, a Visualforce controller could access variable values in only the flow that's embedded in the Visualforce page. If that flow contained subflow elements, the values of variables in the referenced flows could not be obtained by the Visualforce controllers.

The new `getVariableValue` method in the `Flow.Interview` class enables a Visualforce controller to get the value of a flow variable. The variable may be in the flow embedded in the Visualforce page, or in a separate flow that is called by a subflow element. See [New `getVariableValue` Method](#) on page 187.



## Flow Navigation Options

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

At runtime, the system automatically determines which of the **Next**, **Previous**, and **Finish** buttons are relevant for each screen, depending on whether there are any preceding or following screens in the flow path. The new `Navigation Options` field on the Screen overlay enables you to restrict a screen from displaying either the **Previous** or **Finish** button.

Options:

- **No navigation restrictions**—(Default) The system displays all relevant navigation buttons on the screen.
- **Don't show Previous button**—Select this option if revisiting the previous screen triggers an action that musn't be repeated, such as a credit card transaction.
- **Don't show Finish button**—Select this option if you need the user to go back to a previous screen to continue or complete the flow.

For example, suppose the flow prompts the user to enter information to identify an existing contact. The flow then looks up the user-entered info in the database. If no matching contact is found, the flow displays a screen whose sole purpose is to tell the user to go back and try again. That screen shouldn't offer a **Finish** button to the user.

## Resources for Getting Started with the Cloud Flow Designer

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

When you open or create a flow in the Cloud Flow Designer, you will see a collection of useful resources to help you build flows with confidence.

- **Videos**—Watch demos on how to get started with Visual Workflow.
- **Flow Sample Package**—Install an AppExchange package of sample flows, including some that contain Apex plug-ins. The package also includes sample Apex classes you can plug into your flows.
- **Tutorials**—Follow simple, step-by-step instructions in the *Cloud Flow Designer Workbook* to create sample flows from scratch.

Whenever you want to view this collection of resources from the Cloud Flow Designer, click **Get Started**.

## Additional Cloud Flow Designer Usability Enhancements

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

- You can now edit choices, including dynamic choices, from the Screen overlay. Previously, you could only edit choices from the Explorer.

When you select a choice field in the preview pane of the Screen overlay, the Field Settings tab provides an edit option (✎) for each choice.

- You can now expand and collapse Palette sections and drop-down menu sections by clicking anywhere in the section header. Previously, you had to click the arrowhead to expand or collapse a section.
- You can use the keyboard to navigate drop-down menus.
  - ◇ Use the RIGHT ARROW and LEFT ARROW to expand and collapse sections.
  - ◇ Use the UP ARROW and DOWN ARROW to move up and down in a menu.
  - ◇ Press RETURN to select the highlighted item in a menu.
- Selected elements on the canvas now have a green border and no special shading. Previously, selected elements were shaded blue.
- Selected connectors are now green. Previously, selected connectors were colored red.

## Merge Fields in Help Text and User Input Validation Messages

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

You can now use merge fields in help text for screens and user input fields. In the Cloud Flow Designer, the help text editor includes a drop-down menu for selecting merge fields.

Merge fields now also work correctly in error messages for user input validation. If you added merge fields to error messages for user input validation in Summer '12, API version 25.0, or earlier releases, open and save the flows in the Winter '13 Cloud Flow Designer to enable the merge fields to work correctly at runtime.

## Desktop Flow Designer No Longer Supports New API Versions

The desktop Flow Designer supports API version 25.0 and earlier. To access new fields, metadata types, and other components or features introduced in API version 26.0 and later, use the Cloud Flow Designer to create your flows.

## Desktop Flow Designer Links and Documentation

Many flow administrators, almost all of whom use the Cloud Flow Designer, have been confused by the presence of legacy desktop Flow Designer links and documentation.

Therefore, we consolidated all legacy desktop Flow Designer-specific content in the user manual that is bundled with the desktop Flow Designer. You can access this content from within the desktop Flow Designer by clicking **Help > User manual**.

We also removed the following options from the Flows list page:

- Upload flows that were created in the legacy desktop Flow Designer.
- Download the latest version of the legacy desktop Flow Designer.

You can contact [salesforce.com](https://salesforce.com) to re-enable these options for your organizations. If you had previously uploaded flows that were created in the legacy desktop Flow Designer, the `Upload` button might already continue to appear in your organization.

## SCHEMA BUILDER ENHANCEMENTS


### Deleting Custom Objects with Schema Builder

Available in: All Editions
----------------------------

User Permissions Needed	
To delete custom objects in Schema Builder:	"Customize Application"

You can now delete custom object with Schema Builder.

Schema Builder displays list of side effects when you try to delete a custom object. Be sure you're ready to accept these side effects before finalizing the deletion. See "Deleting Custom Objects" in the online help and "Managing Deleted Custom Objects" in the online help.

1. Click  on the custom object's icon.
2. Select **Delete Object...** A dialog box displays that explains the side effects of deleting an object. Read this information carefully.
3. If you accept the conditions, check **Yes, I want to delete the custom object**.
4. Click **Delete**.

### Deleting Custom Fields with Schema Builder

Available in: All Editions
----------------------------

User Permissions Needed	
To delete custom fields in Schema Builder:	"Customize Application"

You can now delete custom fields using Schema Builder.

Schema Builder displays a list of side effects when you try to delete a custom field. Be sure you're ready to accept these side effects before finalizing the deletion. See "Managing Deleted Custom Fields" in the online help.

1. Right click on the custom field.
2. Select **Delete Field...** A dialog box displays that explains the side effects of deleting a custom field. Read this information carefully.

3. If you accept the conditions, check **Yes, I want to delete the custom field**.
4. Click **Delete**.

## More Custom Object Properties in Schema Builder

Two additional custom object properties can now be selected or deselected when working in Schema Builder:

### Enable Divisions

If your organization has divisions enabled, select this option to enable the custom object for divisions. Divisions group records for simplified search results, list views, reports, and other areas within Salesforce. Salesforce adds a `Division` field to the custom object, and if the custom object is the master in a master-detail relationship, any custom objects on the detail side also get the `Division` field and inherit their division from the master record.

### Available for Customer Portal

This option makes the custom object available through the Salesforce Customer Portal.

## Security Enhancements

Available in: **All Editions**

Winter '13 introduces several new features that enhance security.

### Auth Providers Detect and Link to Existing Users

The `createUser` method for the `Auth.RegistrationHandler` class is now able to return existing users as well as new users. It's no longer mandatory to create a new user when `createUser` is called. The single sign-on flow creates the link between the third-party identity and the returned user, then logs the user in.

### Updated OAuth 2.0 Bearer Assertion Request

Prior to Winter '13, when you requested a new access token with JWT or SAML in an OAuth bearer assertion request, all your previous approvals containing a refresh token were examined. If a matching approval was found, a new access token was issued with the most recent matching approval's scopes. If no prior approvals included a refresh token, no approved scopes were available, and the request failed.

Starting with Winter '13, we changed the behavior from taking only the scope of the most recent approval to combining the scope values from all matching approvals to issue the new access token. If no prior approvals contained a refresh token, the request still fails due to a lack of approved scopes.

### OAuth 2.0 JWT Bearer Token Flow

The OAuth 2.0 JWT bearer flow implementation now supports the HMAC SHA256 and RSA SHA256 algorithms. The HMAC SHA256 uses the consumer's private key as the signing secret, while RSA SHA256 uses an uploaded certificate. Previously, the JWT bearer token flow implementation used the certificate as the signing secret if one was uploaded, or the consumer's private key otherwise.

## New Auth Provider Parameters

You can now use two new parameters with authentication providers: `startURL` and `scope`. The `startURL` parameter directs your users to a specific location after authenticating. The `scope` parameter requests access tokens with additional permissions. For more information, see “Using Request Parameters with Client Configuration URLs” in the online help.

## Login Policy for My Domains Now Explicitly Configured

The Login Policy for My Domains is now explicitly rather than implicitly configured. Prior to Winter '13, if your organization had SAML enabled, you were automatically asked to log in with SAML instead of with your user name and password. Now, if you have SAML enabled, you'll still see the SAML login but also the option to use your user name and password choice. In addition, if a third-party Authentication Provider is enabled, you'll get that choice too. After you deploy your domain, you set your login policy in My Domain Settings.

## Clickjacking Protection Available

You can enable protection against clickjack attacks (also known as user interface redress attacks) for non-setup pages and your custom Visualforce pages. Setup pages already include protection against clickjack attacks. Click **Your Name** > **Setup** > **Security Controls** > **Session Settings** to select `Enable clickjack protection for non-setup Salesforce pages` and `Enable clickjack protection for non-setup customer Visualforce pages`.

It's possible that pages will either display as a blank page or without the frame if either of these settings is enabled and either of the following conditions exists:

- Your organization displays Salesforce.com user interface pages within a frame or iframe.
- You use custom Visualforce pages within a frame or iframe.

The behavior varies depending on your browser and its version. To ensure that these pages will continue to work correctly in your organization, discontinue displaying these pages within a frame or iframe.

## Service Provider-Initiated Request Binding

If you're using My Domains, you can choose the binding mechanism your identity provider requests for your SAML messages. Available request binding types are HTTP POST and HTTP Redirect. Make your selection from the Single Sign-On Settings page at **Your Name** > **Setup** > **Security Controls** > **Single Sign-On Settings**, and with **SAML Enabled** checked, click **Edit**. The default setting is HTTP POST.

## New `getAccessTokenMap` Method

The `Auth.AuthToken` Apex class has a new method to retrieve access tokens: `getAccessTokenMap`. Use this method if the user ID is mapped to multiple third-party users. `getAccessTokenMap` returns a map of access tokens for each third-party user. For Apex information, refer to the [Force.com Apex Code Developer's Guide](#).

# DEVELOPER CONSOLE ENHANCEMENTS

## Tests Tool

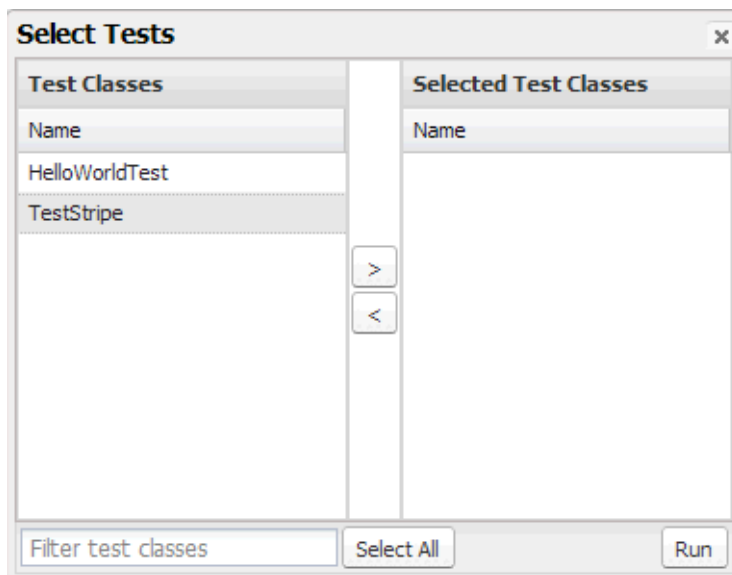
The Winter '13 release adds a Tests tool to the Developer Console. Use the Tests tool to run Apex unit tests on the server and check your code coverage. Now you can edit, debug, and test your applications without leaving the Developer Console.


## Creating and Running Test Runs

A test run is a collection of classes that contain test methods. Run a test run to execute the test methods in the classes.

1. In the Developer Console, click the Tests tab.
2. Click **New Run**.

Classes with test methods are listed in the Select Tests window.



3. To filter classes, type in the Filter box.
4. Select classes and click  to move the classes to the Selected Test Classes pane.  
To select multiple adjacent classes, select a single class and press the SHIFT key while you click the classes you want to select. To select nonadjacent classes, select a single class and press the CTRL key while you click the other classes you want to select. You can also click **Select All**.
5. When you've created a test run, click **Run** to queue and run the classes.



**Note:** If your test methods call other methods or classes defined as tests in your organization, those methods and classes are also run.

6. To stop a test, click **Abort**.
7. In the Tests tab, expand the test run to see the results for each method invoked by each class in the run.
8. The Overall Code Coverage pane displays the percentage of code coverage for each every class in your organization. The pane always displays the current percentage for every class. After you perform a test run, the pane also displays the overall percentage in bold.



**Note:** Test classes don't require code coverage. Therefore, test classes show 0% coverage and don't affect the overall code coverage percentage.

9. Double-click the completed test run to open the results in a Tests view.

The Tests view displays the tested class, the tested method, the duration, result (skip, pass, or fail), and an optional error message. If a test failed, a Stack Trace column shows the method and line number at which the test failed.

10. Select a Class in a Tests view to see the code coverage for each method invoked by the class in the Class Code Coverage pane.

The screenshot shows the Tests Tool interface with the 'Tests' tab selected. The top section displays a summary of the test run for '2012-08-02 12:48:36, jbleyle@180.de'. It includes columns for Status, Test Run, Duration, Failures, and Total. The test run is expanded, showing details for 'TestStripe' and 'HelloWorldTest'. The 'TestStripe' test run shows 2 failures and 5 total results, while 'HelloWorldTest' shows 1 failure and 1 total result.

Below the summary, there are buttons for 'New Run', 'Copy Run', 'Run All', 'Abort', 'Collapse All', and 'Expand All'. The '2012-08-02 12:48:36, jbleyle@180.de' test run is selected, and its details are shown in the bottom section.

The bottom section displays a table with columns for Class, Method, Duration, Result, and Errors. The table lists the following test results:

Class	Method	Duration	Result	Errors
TestStripe	testStripe	0:01	Skip	Methods defined as TestMethod do
TestStripe	testStripeCharge	0:00	Skip	Methods defined as TestMethod do
TestStripe	testStripeCustomer	0:00	Pass	
TestStripe	testStripeInvoice	0:00	Pass	
TestStripe	testStripePlan	0:00	Pass	
HelloWorldTest	validateHelloWorld	0:02	Fail	System.AssertException: Assertion

On the right side of the bottom section, there is a 'Class Code Coverage' pane showing the percentage of code coverage for each class. The table lists the following classes and their coverage percentages:

Class	Percent
Stripe	6
StripeCardResponseModel	100
StripeCharge	11
StripeErrorModel	100
StripeGetResponseValues	0
StripeResponseModel	100

# Checking Code Coverage

To deploy Apex code to a production organization, 75% of the code must be covered by tests. Code coverage is the percentage of code covered by tests.

The Developer Console retrieves and displays code coverage information from your organization. Code coverage results come from any tests you’ve run from an API or from a user interface (for example, the Developer Console, the Force.com IDE, or the Apex Test Execution page). When you edit a class, the code coverage for that class clears until you run the tests again.

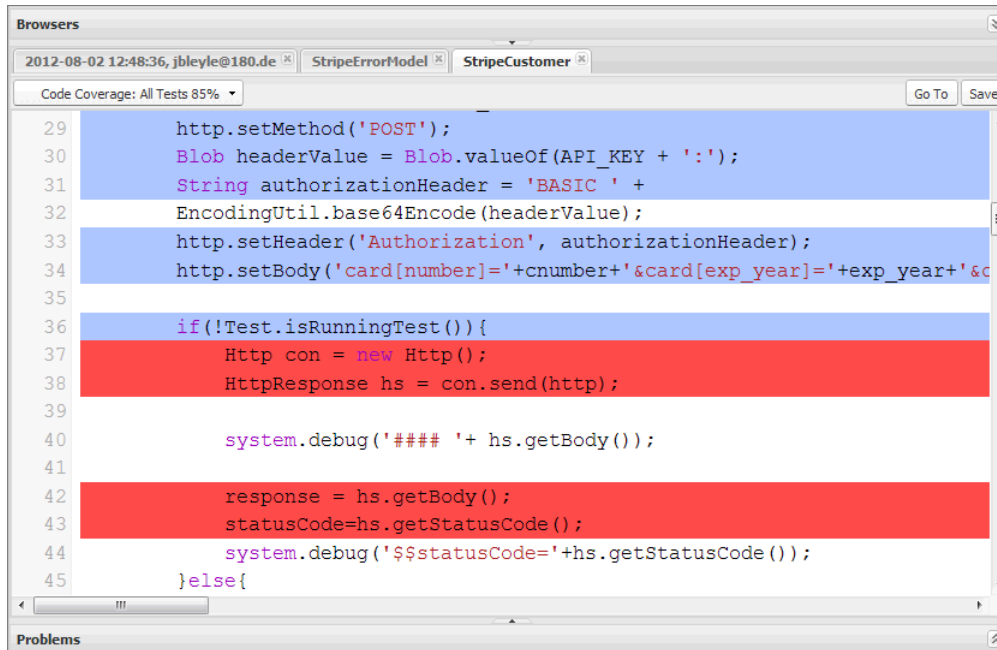
You can view code coverage in several places in the Developer Console.

- 1. Click the Tests tab. The Overall Code Coverage panel displays the code coverage percentage for every Apex class in your organization that has been included in a test run. It also displays the overall percentage.
- 2. Double-click a completed test run to open a Tests view.  
The Tests view displays the tested class, the tested method, the duration, result (skip, pass, or fail), and an optional error message. If the test failed, a Stack Trace column shows the method and line number at which the test failed.
- 3. Select a Class in a Tests view to see the code coverage for each method invoked by the class in the Class Code Coverage pane.
- 4. To view line-by-line code coverage for an Apex class, double-click the class in a Tests view or in the Repository tab to open it in a Source Code view.
- 5. From the Code Coverage menu, select one of the following:

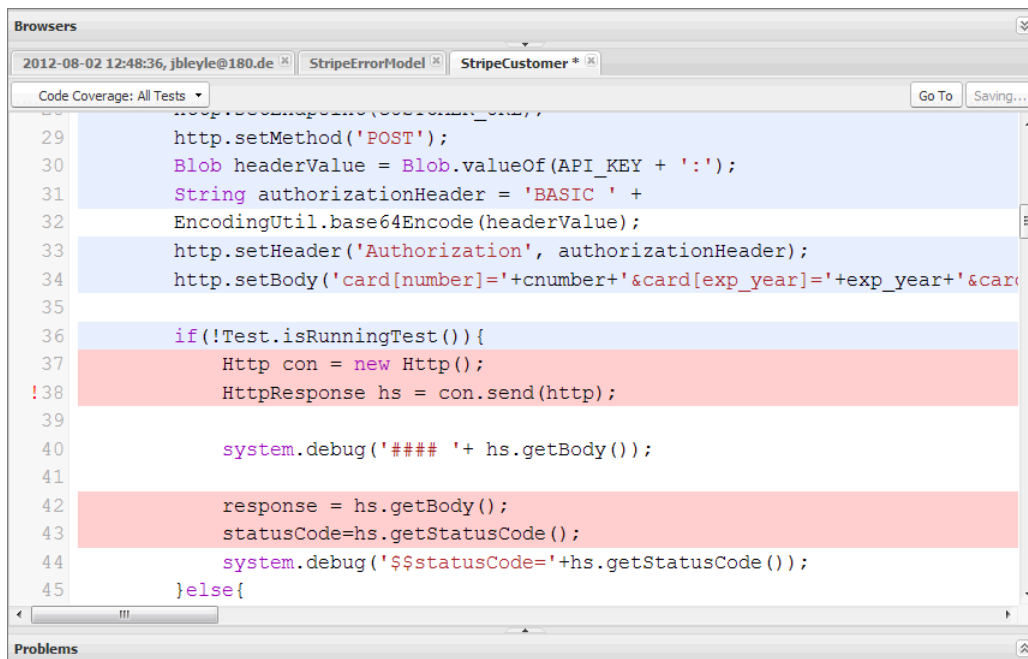
Option	Description
None	No tests have been run.
All Tests	The percentage of code coverage from all test runs.
<i>className.methodName</i>	The percentage of code coverage from a method executed during a test run.

Lines of code that are covered are blue. Lines of code that aren’t covered are red. Lines of code that don’t require coverage (for example, curly brackets, comments, and `System.debug` calls) are left white.





- When you edit class with code coverage, the blue and red dims to indicate that the coverage is no longer valid. When you edit and save a class, the coverage is removed for that class. In the Overall Code Coverage panel, the class name is marked with a small red triangle to indicate that it was edited since tests were run. To check coverage for that class, run the tests again.



## Query Editor

The Winter '13 release adds a Query Editor tool to the Developer Console. Use the Query Editor tool to query data from your organization. For example, while developing Apex code, write a SOQL query and verify that the results are what you expect. Edit and execute the query until you have the data you want. Then use the query in your code.

### Executing a SOQL Query

Use the Query Editor in the Developer Console to query data from your organization.

1. In the Developer Console, click the Query Editor tab.
2. Enter a SOQL query in the top pane of the Query Editor.
3. Click **Execute**.

If the query generates errors, the errors display in the bottom pane of the Query Editor.

The data displays in a Query Results view.

4. To rerun the query, click **Refresh Grid**.



**Warning:** If you click **Refresh Grid**, data in a Query Results view that you've edited but haven't saved is lost.

### Inserting Rows

You can create a record (insert a row) in the Object displayed in a Query Results view in the Developer Console.

To insert a row and save it, the query results must contain all the required fields of the object and the required fields must be simple text or number fields. If these conditions aren't true, a blank row is created but you can't save it. In this case, click **Create New** to create a new record in Salesforce.

1. In the Developer Console, click the Query Editor tab.
2. Execute a query that contains all the required fields of an object.
3. In the Query Results view, click **Insert Row**.

### Editing and Saving Rows

You can edit and save records (rows) in the Object displayed in a Query Results view in the Developer Console.

1. To edit a row in a Query Results view, double-click a field in the row and edit it.
2. To save modified rows to Salesforce, click **Save Rows**.



**Warning:** If you click **Refresh Grid**, data in a Query Results view that you've edited but haven't saved is lost.

## Deleting Rows

You can delete a record (row) in the Object displayed in a Query Results view in the Developer Console.

1. To delete a row, select it in the Query Results view.
2. Click **Delete**.

## Navigating to a Record in Salesforce

After executing a query, you can jump to the record in Salesforce.

1. Select a row in a Query Results view.
2. Click **Create New**, **Open Detail Page**, or **Edit Page** to jump to the record in Salesforce.

## Perspectives in a System Log View

When you open a debug log in the Developer Console, it opens in a System Log view which is a collection of panels for analyzing the log. In the Winter '13 release, you can create perspectives in a System Log view. A perspective is a layout of panels. Create perspectives to organize and simplify System Log views to match the way you work. Switch between perspectives as you change tasks. For example, you might have one perspective for analyzing performance and another perspective for all-purpose debugging.

## Creating Perspectives in a System Log View

A perspective is a layout of panels in a System Log view in the Developer Console.

The default perspective is "All," which displays every panel. Most tasks you perform in a System Log view don't require you to use every panel. When you perform a task in a System Log view, use a perspective that makes completing the task fast and easy. Every developer has a different style, but the following is a list of perspectives you could create to perform common tasks:

- "Log Only"—Contains the Execution Log panel. An all-purpose perspective for viewing log execution.
- "Performance"—Contains the Stack Tree panel and the Execution Overview panel. Use this perspective to test performance.
- "Limits"—Contains the Execution Overview panel. Use this perspective to check governor limits.



**Tip:** If you create a perspective that includes the Execution Log, you may want to include the Source panel. Use the Source panel to navigate from System Log view back to Source Code view to edit or view your code.

1. In the Developer Console, click the Logs Tab and double-click a debug log to open it in a System Log view.
2. Click **Perspective: *Perspective Name* > View Panels** and select the panels you want to include in the perspective.  
If you modify a perspective, an \* is appended to the perspective name. When you save the perspective, the \* is removed.
3. To create a new perspective, click **Save Perspective As** and enter a name for the perspective.

## Modifying Perspectives in a System Log View

A perspective is a layout of panels in a System Log view in the Developer Console. The default layout includes all panels. To create layouts that let you work quickly and easily, modify existing perspectives to include only the panels you need.

1. In the Developer Console, click the Logs Tab and double-click a debug log to open it in a System Log view.
2. Click **Perspective: *Perspective Name* > View Panels** and select the panels you want to include in the perspective.  
If you modify a perspective, an \* is appended to the perspective name. When you save the perspective, the \* is removed.
3. Click **Save Perspective**. You can also click in the System Log view and press CTRL+S (Windows) or Command+S (Mac OS).

## Switching Perspectives in a System Log View

A perspective is a layout of panels in a System Log view in the Developer Console. You can switch perspectives to best suit the task at hand.

1. In the Developer Console, click the Logs Tab and double-click a debug log to open it in a System Log view.
2. Click **Perspective: *Perspective Name* > Perspective Manager**.
3. Select a perspective name and click **Open**, or double-click the perspective.

## Deleting a Perspective in a System Log View

A perspective is a layout of panels in a System Log view in the Developer Console. You can delete perspectives you no longer need.

1. In the Developer Console, click the Logs Tab and double-click a debug log to open it in a System Log view.
2. Click **Perspective: *Perspective Name* > Perspective Manager**.
3. Select a perspective to delete and click **Delete**.

## Setting the Default Perspective in a System Log View

A perspective is a layout of panels in a System Log view in the Developer Console. When you open a log, it opens in the default perspective. Set your most commonly used perspective as the default.

1. In the Developer Console, click the Logs Tab and double-click a debug log to open it in a System Log view.
2. Click **Perspective: *Perspective Name* > Perspective Manager**.
3. Select a perspective name and click **Set Default**.

## Additional Enhancements to the Developer Console

In addition to the major features, the Winter '13 release includes the following minor enhancements to the Developer Console.

### Command Line Window

Winter '13 adds a Command Line Window to the Developer Console. Use the Command Line Window to execute anonymous Apex code and search the resulting debug log. Usually you work with debug logs in a System Log view. However, at some points during development, you might want to search the log for a specific term. In this case, use the Command Line Window.

### Developer Console Command Line Reference

To open the Developer Console Command Line Window, choose **Your Name > Developer Console** and press **CTRL+L**.

To close the Developer Console Command Line Window, press **CTRL+L**.

Command	Parameters	Description
commands	None.	A list of all commands.
exec <Apex statements>	<Apex statements>—One or more Apex statements.	Executes the <Apex statements> and generates a log.
exec [-o   -r]		-o: Opens the Execute Anonymous window. -r: Executes the code in the Execute Anonymous window and generates a log.
find <string>	<string>—A string of characters.	Searches the log for a string.
help	None.	Explains how to get information about commands.
man <command>	<command>—A Command Line Window command.	Displays the description of the command.

## Searching a Debug Log

To search for text in a debug log, use the Command Line Window in the Developer Console.

Before you can search a log, you must execute Apex statements to generate a log.

1. To open the Developer Console Command Line Window, choose **Your Name > Developer Console** and press **CTRL+L**.
2. To execute Apex code and generate a log, do one of the following:
  - To enter Apex statements at the command-line, type **exec <Apex statements>**.

For example, type:

```
exec List<Account> accts = new List<Account>();  
for (Integer i=0; i<20; i++){  
    Account a = new Account(name='Account Name ' + i);  
    accts.add(a);  
}
```

- To execute code that already exists in the Execute Apex Code window, type **exec -r**.
3. To search for text in the debug log, type **find <string>**.  
For example, type `find Account Name`.  
View the search results in the command-line window.
  4. To close the command-line, press **CTRL+L**.

## Navigating through Views

- To move left and right through views in a workspace, click the view's tab or use these shortcuts:
  - ◊ Left—CTRL+Page Up
  - ◊ Right—CTRL+Page Down

## Viewing Keyboard Shortcuts

- To see a list of Developer Console keyboard shortcuts, press CTRL+SHIFT+?.

## Resuming Updates to the Developer Console

After twenty minutes of inactivity, the Developer Console stops polling for new logs, test runs, and heap dumps.

- To resume updating the Developer Console, click Resume Updates in the global toolbar of the Developer Console.

# Force.com IDE Enhancements

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

The Winter '13 release of the Force.com IDE contains the following enhancements:

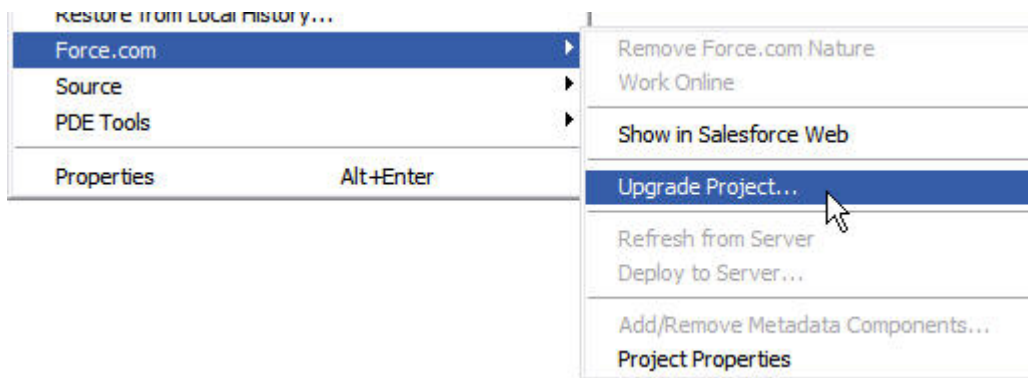
- Support for Metadata API version 26.0
- All documentation includes Winter '13 content

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](http://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](http://wiki.developerforce.com/page/Updating_the_Force.com_IDE).

After you install the Winter '13 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.

## Connected Applications—Pilot

Available in: **Developer** Editions

This feature is visible to all users in new Development Edition organizations. To enable this feature in existing Development Edition organizations or other organizations, contact salesforce.com.



**Note:** The Connected Applications feature is currently available through a pilot program. For information on enabling it for your organization, contact Salesforce. Any unreleased services or features referenced in this or other press releases or public statements are not currently available and may not be delivered on time or at all. Customers who purchase our services should make their purchase decisions based upon features that are currently available

A Connected Application, or Connected App, is an application that can connect to salesforce.com over identity and data APIs. Connected Applications use the standard OAuth 2.0 protocol to authenticate, provide Single Sign-On, and acquire access tokens for use with Salesforce APIs. In addition to standard OAuth capabilities, Connected Applications add additional levels of control, allowing administrators explicit control over who may use the application, and various security policies which should be enforced.

Connected Applications begin with a developer defining OAuth metadata about the application, including:

- Basic descriptive and contact information for the connected application
- The OAuth scopes and callback URL for the connected application
- Optional IP ranges where the connected application might be running
- Optional information about mobile policies the connected application can enforce

In return, the developer is provided an OAuth client ID and client secret, as well as an install URL for the connected application. The developer can then provide this URL to a Salesforce administrator.

The administrator can install the connected application into their organization and use profiles, permission sets, and IP range restrictions to control which users can access the application. Management is done from a detail page for the connected application. The administrator can also uninstall the connected application and install a newer version. When the app is updated, the developer can notify administrators that there is a new version available for the app – their existing installation URL installs the new version.

For more information, see the [Connected Application Tip Sheet](#).

## Force.com Canvas—Pilot

Available in: **Developer** Editions

This feature is visible to all users in new Development Edition organizations. To enable this feature in existing Development Edition organizations or other organizations, contact salesforce.com.



**Note:** The Force.com Canvas feature is currently available through a pilot program. For information on enabling it for your organization, contact salesforce.com. Any unreleased services or features referenced in this or other press



releases or public statements are not currently available and may not be delivered on time or at all. Customers who purchase our services should make their purchase decisions based upon features that are currently available.

Force.com Canvas enables you to easily integrate a third-party application in Salesforce. Force.com Canvas is a set of tools and JavaScript APIs that you can use to expose an application as a canvas app. This means you can take your new or existing applications and make them available to your users as part of their Salesforce experience.

Instead of redesigning and reintegrating your external applications, you can now use these tools to integrate your technology within Force.com Canvas. Force.com Canvas includes tools that handle:

- Authentication—If your application requires authorization, you can implement it by using a signed request or OAuth 2.0.
- Cross-Domain XHR—JavaScript support for cross-domain XML HTTP requests back to the Salesforce domain.
- Context—API support that enables you to retrieve context information about the environment in which the canvas app is running.

The third-party app that you want to expose as a canvas app can be written in any language. The only requirement is that the app has a secure URL (HTTPS).

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

## Force.com Canvas Scenarios

From a high-level view, there are two common scenarios where Force.com Canvas is implemented.

- Application integration—You're a partner, systems integrator, or customer that builds cloud apps, and you'd like to integrate these applications with Salesforce.
- Application rationalization/enterprise desktop—You're a large organization that has many existing apps that your users access in addition to Salesforce. You'd like to integrate these apps into Salesforce so that users can accomplish all of their tasks in one place.

## API Enhancements

Available in: <b>Enterprise, Unlimited, Developer, and Database.com</b> Editions
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Winter '13 (API version 26.0) improvements:

Changes across the API layer:

- [New and Changed Objects](#)
  - ◊ [Chatter API Objects](#)
- [SOQL Enhancements](#)
- [SOSL Enhancements](#)

Changes to individual APIs:

- [SOAP API Enhancements](#)

- [Metadata API Enhancements](#)

## New and Changed Objects

For information about new and changed Chatter objects, see [Chatter API Objects](#).

### New Objects

These objects are new in API version 26.0.

- The ChatterAnswersReputationLevel object represents a reputation level within a Chatter Answers community.
- The Domain object represents a custom web address assigned to a site in your organization.
- The DomainSite object is a junction object between the Domain and Site objects.
- The EventRelation object replaces the EventAttendee object. See [Event and EventAttendee Object Changes](#).
  - ◊ It includes several fields for Shared Activities: IsParent, IsWhat, IsInvitee, AccountId.
  - ◊ The RelationId field contains the ID of the person or resource invited to the event.
- The IdeaTheme object represents an invitation to community members to submit ideas that are focused on a specific topic.
- These objects are part of the [Salesforce Communities](#) pilot program:
  - ◊ The Network object represents a community.
  - ◊ The NetworkMember object represents a member of a community.
  - ◊ The NetworkProfile object represents a profile in a community.
- These objects are part of the [User Sharing](#) pilot program:
  - ◊ The UserShare object represents a sharing entry on a user record.
  - ◊ The UserMembershipSharingRule object represents the rules for sharing user records from a source group to a target group.
- The following objects are new and available to organizations that use Collaborative Forecasts (Forecasts, originally released in Winter '12).
  - ◊ ForecastingAdjustment: This object represents an individual user's adjustment for a subordinate's forecast via a ForecastingItem. Available in API versions 26.0 and greater.
  - ◊ ForecastingFact: This is a read-only object linking a ForecastingItem with its opportunities, such as opportunities that share the same owner or forecast category and have a closing date within the period of the forecasting item. Available in API versions 26.0 and greater.
  - ◊ ForecastingItem: This is a read-only object used for individual forecast amounts. Users see amounts based on their perspectives and forecast roles. The amounts users see include one of the following: AmountWithoutAdjustments, AmountWithoutManagerAdjustment, ForecastAmount, OwnerOnlyAmount.

### Changed Objects

These objects have changed in API version 26.0.

- The SiteDomain object has been deprecated. Use the Domain and DomainSite objects instead.

- In the Event object, the WhatCount and WhoCount fields have been added. In addition, you can update only the IsReminderSet and ReminderDateTime fields of a child event. See [Event and EventAttendee Object Changes](#).
- In the ForecastingQuota object, the StartDate field now includes nillable.
- In the KnowledgeArticleVersion object, the ArticleType field has been added.
- In the OpportunityTeamMember object, the CurrencyIsoCode field has been added. In addition, this object now supports describeLayout() and describeSObjects() calls.
- In the PermissionSet object, the UserLicenseId field is now nillable.
- In the Idea object, the IdeaThemeID field has been added.
- In the Case object, the CreatorFullPhotoUrl, CreatorName, and CreatorSmallPhotoUrl fields have been added.
- In the CaseComment object, the CreatorFullPhotoUrl, CreatorName, and CreatorSmallPhotoUrl fields have been added.
- In the Question object, the CreatorFullPhotoUrl, CreatorName, and CreatorSmallPhotoUrl fields have been added.
- In the Reply object, the CreatorFullPhotoUrl, CreatorName, and CreatorSmallPhotoUrl fields have been added.
- The EmailMessage object is now updateable, as are the following fields:

- ◊ Bcc Address
- ◊ Cc Address
- ◊ From Address
- ◊ From Name
- ◊ Headers
- ◊ Html Body
- ◊ Message Date
- ◊ Subject
- ◊ TextBody
- ◊ ToAddress

In addition, Draft is now available as a value for the Status field, and the ReplyToEmailMessageId field has been added.

- In the User object, the UserPreferencesHideCSNDesktopTask and UserPreferencesHideCSNGetChatterMobileTask fields have been added.
- In the LiveChatUserConfig object, the IsAutoAwayOnDecline field has been added.
- The NetworkId field, used for the Salesforce Communities pilot, has been added to the following objects:
  - ◊ ChatterActivity
  - ◊ CollaborationGroup
  - ◊ EntitySubscription
  - ◊ HashtagDefinition
- The NetworkScope and Visibility fields, used for the Salesforce Communities pilot, have been added to the following objects:
  - ◊ AccountFeed
  - ◊ AssetFeed
  - ◊ CampaignFeed

- ◊ CaseFeed
  - ◊ CollaborationGroupFeed
  - ◊ ContactFeed
  - ◊ ContentDocumentFeed
  - ◊ ContractFeed
  - ◊ DashboardComponentFeed
  - ◊ DashboardFeed
  - ◊ EntitlementFeed
  - ◊ EventFeed
  - ◊ FeedItem
  - ◊ LeadFeed
  - ◊ NewsFeed
  - ◊ OpportunityFeed
  - ◊ Product2Feed
  - ◊ ReportFeed
  - ◊ ServiceContractFeed
  - ◊ SolutionFeed
  - ◊ TaskFeed
  - ◊ UserFeed
  - ◊ UserProfileFeed
- The ContentDocumentLink object now has the `Visibility` field, which is used for the Salesforce Communities pilot program.
  - The User object has the following new fields:
    - ◊ UserPreferencesShowCityToExternalUsers
    - ◊ UserPreferencesShowCountryToExternalUsers
    - ◊ UserPreferencesShowEmailToExternalUsers
    - ◊ UserPreferencesShowFaxToExternalUsers
    - ◊ UserPreferencesShowManagerToExternalUsers
    - ◊ UserPreferencesShowMobilePhoneToExternalUsers
    - ◊ UserPreferencesShowPostalCodeToExternalUsers
    - ◊ UserPreferencesShowStateToExternalUsers
    - ◊ UserPreferencesShowStreetAddressToExternalUsers
    - ◊ UserPreferencesShowTitleToExternalUsers
    - ◊ UserPreferencesShowWorkPhoneToExternalUsers

## Chatter API Objects

### New Objects

These objects are new in API version 26.0.

- The HashtagDefinition object represents hashtag (#) topics in public Chatter posts and comments. Public posts and comments include those on profiles and in public groups, but not those on records or in private groups.

## Changed Objects

These objects have changed in API version 26.0.

- The `ChatterActivity` object now includes an `InfluenceRawRank` field, which indicates the `ParentId`'s Chatter influence rank. This number is calculated based on the `ParentId`'s ChatterActivity statistics, relative to the other users in the organization.
- The `Type` field for feed items now includes `PollPost`, which specifies a poll posted on a feed. The `PollPost` type is available for the following objects: `AccountFeed`, `AssetFeed`, `CampaignFeed`, `CaseFeed`, `CollaborationGroupFeed`, `ContactFeed`, `ContractFeed`, `DashboardFeed`, `EntitlementFeed`, `EventFeed`, `FeedItem`, `LeadFeed`, `NewsFeed`, `OpportunityFeed`, `Product2Feed`, `ReportFeed`, `ServiceContractFeed`, `SolutionFeed`, `TaskFeed`, `UserFeed`, and `UserProfileFeed`.

## 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 [Force.com SOQL and SOSL Reference](#).

### SOQL Polymorphism—Developer Preview

SOQL Polymorphism lets you select different sets of fields in your SOQL queries, depending on the object type of a polymorphic relationship field. For example, the `What` field in an `Event` record could reference an `Account`, `Opportunity`, or `Campaign`. You can now specify different fields to select based on the referenced object type using the `TYPEOF` clause. The following example specifies different fields for each of the possible object types:

```
SELECT
  TYPEOF What
    WHEN Account THEN Phone, NumberOfEmployees
    WHEN Opportunity THEN Amount, CloseDate
    WHEN Campaign THEN ExpectedRevenue, StartDate
    ELSE Name
  END
FROM Event
```

If the object type referenced by `Event.What` is an `Account`, the query returns the referenced `Account`'s `Phone` and `NumberOfEmployees` fields. If the object type is an `Opportunity`, the query returns the referenced `Opportunity`'s `Amount` and `CloseDate` fields. If the object type is a `Campaign`, the query returns the referenced `Campaign`'s `ExpectedRevenue` and `StartDate` fields. Finally, if the object type is any other type, the `Name` field is returned.

There are several considerations to keep in mind when using SOQL Polymorphism. See the [TYPEOF](#) and [Understanding Polymorphic Keys and Relationships](#) sections of the [Force.com SOQL and SOSL Reference](#) for more details.

### Geolocation Custom Field SOQL Queries—Beta

The geolocation custom field allows you to create a field that identifies a location by its latitude and longitude. You can then use the geolocation field with the `DISTANCE` and `GEOLOCATION` formula functions to calculate distances between locations. For example, you can calculate the distance between two geolocation fields (such as between the warehouse and the store), or between a geolocation field and any fixed latitude-longitude coordinates (such as between the warehouse and 37.775°, -122.418°, also known as San Francisco).

#### DISTANCE

Calculates the distance between two locations in miles or kilometers.

## GEOLOCATION

Returns a geolocation based on the provided latitude and longitude. Must be used with the `DISTANCE` function.

As a beta-release feature, geolocation is supported in the SOAP API, with limitations, in Winter '13:

- You can calculate distances in SOQL using the `DISTANCE` and `GEOLOCATION` functions.
- `DISTANCE` and `GEOLOCATION` are supported in `WHERE` and `ORDER BY` clauses in SOQL, but not in `GROUP BY` or `SELECT`.
- `DISTANCE` only supports the logical operators `>` and `<`, returning values within (`<`) or beyond (`>`) a specified radius.
- Syntax is restricted when running SOQL queries: When using the `GEOLOCATION` function, the geolocation field must precede the latitude and longitude coordinates. For example, `DISTANCE(warehouse_location__c, GEOLOCATION(37.775,-122.418), "km")` works but `DISTANCE(GEOLOCATION(37.775,-122.418), warehouse_location__c, "km")` doesn't work.
- Geolocation is supported in Apex only through SOQL queries, and only at the component level. In other words, you have to query the latitude or longitude; you can't query the compound location field.

For more information, including sample queries, see the [Force.com SOQL and SOSL Reference](#).

## Aggregate Function Enhancements

The `COUNT (fieldName)` SOQL aggregate function changed to ensure consistent behavior. In rare cases, a SOQL query using the `COUNT (fieldName)` aggregate function used to return a single row containing `null` if no rows matched the query filtering condition. This query now returns a single row containing 0. Note that this doesn't apply to `COUNT ()` when used without a field name. Also, queries using aggregate functions other than `COUNT (fieldName)`, such as `MAX ()`, returned an empty result set in some rare cases when no rows matched the filtering condition. This query now returns a single row containing `null`.

## SOSL Enhancements

Use the Salesforce Object Search Language (SOSL) to perform text searches using Salesforce APIs.

### SOSL Query Limits

The SOSL statement character limit is now tied to the SOQL statement character limit defined for your organization. By default, SOQL and SOSL queries cannot exceed 10,000 characters. However, if your organization is participating in the pilot program that allows a higher SOQL query length limit of up to 20,000 characters, the raised SOQL limit applies to SOSL queries as well. For a full description of the SOSL query syntax, see the [Force.com SOQL and SOSL Reference](#).

## SOAP API Enhancements

### New Calls

These calls are new in API version 26.0.

- `describeSearchScopeOrder()`: Use this call to retrieve an ordered list of objects in the global search scope of a logged-in user. The returned list reflects the object order in the user's default search scope, and does not account for any pinned objects on the user's search results page. This call is useful if you want to implement a custom search results page using the optimized global search scope. You must enable Chatter to enable global search.

- `sendMessage()`: Use this call to immediately send up to 10 draft email messages. The `ID()` specified must target `EmailMessage` objects whose `Status` is `Draft`.

## Polymorphic Relationship Field Changes—Developer Preview

If your organization has the SOQL Polymorphism feature enabled, polymorphic relationship fields, which were previously defined as `Names`, are now defined as `sObjects` in the Enterprise WSDL. As an example, you could now access the `Owner` field on a `Merchandise__c` custom object directly as an `SObject` as shown in the following Java snippet:

```
...
Merchandise__c myMerch = (Merchandise__c)queryRecord;
SObject merchOwner = myMerch.getOwner();
// Cast and access merchOwner as a User or Group depending on owner type
...
```

Without the SOQL Polymorphism feature, you would need to access the `Owner` field as a `Name`:

```
...
Merchandise__c myMerch = (Merchandise__c)queryRecord;
Name merchOwner = myMerch.getOwner();
// Use Name information in merchOwner to determine owner type and Id
...
```

See [SOQL Polymorphism—Developer Preview](#) for more details about SOQL Polymorphism.

## Chatter API Objects

### New Objects

These objects are new in API version 26.0.

- The `HashtagDefinition` object represents hashtag (#) topics in public Chatter posts and comments. Public posts and comments include those on profiles and in public groups, but not those on records or in private groups.

### Changed Objects

These objects have changed in API version 26.0.

- The `ChatterActivity` object now includes an `InfluenceRawRank` field, which indicates the `ParentId`'s Chatter influence rank. This number is calculated based on the `ParentId`'s `ChatterActivity` statistics, relative to the other users in the organization.
- The `Type` field for feed items now includes `PollPost`, which specifies a poll posted on a feed. The `PollPost` type is available for the following objects: `AccountFeed`, `AssetFeed`, `CampaignFeed`, `CaseFeed`, `CollaborationGroupFeed`, `ContactFeed`, `ContractFeed`, `DashboardFeed`, `EntitlementFeed`, `EventFeed`, `FeedItem`, `LeadFeed`, `NewsFeed`, `OpportunityFeed`, `Product2Feed`, `ReportFeed`, `ServiceContractFeed`, `SolutionFeed`, `TaskFeed`, `UserFeed`, and `UserProfileFeed`.

## Metadata API Enhancements

### Updated Metadata

These metadata fields have been added or changed in Metadata API version 26.0.

Metadata Type or Related Object	Field	Change	Description
CustomField	displayLocationInDecimal	New	Indicates how the value of a Geolocation custom field appears in the user interface. If <code>true</code> , the geolocation appears in decimal notation. If <code>false</code> , the geolocation appears as degrees, minutes, and seconds.
DashboardComponent (an existing field on Dashboard)	componentType	Changed	<p>Now has the following new valid values:</p> <ul style="list-style-type: none"> <li>Scatter</li> <li>ScatterGrouped</li> </ul> <p>Use these values to specify the scatter chart type for a dashboard component and to group the data again on the scatter chart. Specify the field by which to group the data using <code>groupingColumn</code>. For example, <code>&lt;groupingColumn&gt;FieldName&lt;/groupingColumn&gt;</code>.</p>
Flow (a new field on FlowScreen)	allowBack	New	<p>Indicates whether to show (<code>true</code>) or hide (<code>false</code>) the <b>Previous</b> button on the screen at runtime. When <code>true</code>, the <b>Previous</b> button appears only if the user visited a previous screen in the flow path. Set this to <code>false</code> when revisiting the previous screen would trigger an action that should not be repeated, such as a credit card transaction.</p> <p>Default: <code>true</code></p> <p>You can set either <code>allowBack</code> or <code>allowFinish</code> to <code>false</code>, but not both.</p>
Flow (a new field on FlowScreen)	allowFinish	New	<p>Indicates whether to show (<code>true</code>) or hide (<code>false</code>) the <b>Finish</b> button on the screen at runtime. When <code>true</code>, the <b>Finish</b> button appears only if the screen element is the end of a flow path. Set this to <code>false</code> if you need the user to go back to a previous screen to continue or complete the flow. For example, you wouldn't want to offer a <b>Finish</b> button on a screen that tells the user to go back and make corrections on a previous screen.</p>



Metadata Type or Related Object	Field	Change	Description
			<p>Default: true</p> <p>You can set either <code>allowBack</code> or <code>allowFinish</code> to false, but not both.</p>
Flow (an existing field on FlowScreen and FlowScreenField)	<code>helpText</code>	Changed	Now supports merge fields.
Flow (an existing field on FlowScreenField)	<code>choiceReferences</code>	Changed	Supports the new multi-select checkboxes and multi-select picklist screen fields.
Flow (an existing field on FlowScreenField)	<code>dataType</code>	Changed	<p>Must be set to <code>String</code> to support the new multi-select checkboxes and multi-select picklist screen fields.</p> <p>Also supports the new checkbox input screen field, which is specified by this combination of settings:</p> <ul style="list-style-type: none"> <li><code>dataType</code>—<code>Boolean</code></li> <li><code>fieldType</code>—<code>InputField</code></li> </ul>
Flow (an existing field on FlowScreenField)	<code>defaultSelectedChoiceReference</code>	Changed	Supports the selection of one <code>FlowChoice</code> element to use as the default value for a multi-select checkboxes field or a multi-select picklist field.
Flow (an existing field on FlowScreenField)	<code>fieldType</code>	Changed	<p>Now has the following new valid values:</p> <ul style="list-style-type: none"> <li><code>MultiSelectCheckboxes</code></li> <li><code>MultiSelectPicklist</code></li> </ul> <p>At runtime, each multi-select field stores its field value as a concatenation of the user-selected choice values, separated by semicolons. Any semicolons in the selected choice values are removed when added to the multi-select field value.</p> <p>Also supports the new checkbox input screen field, which is specified by this combination of settings:</p> <ul style="list-style-type: none"> <li><code>dataType</code>—<code>Boolean</code></li> <li><code>fieldType</code>—<code>InputField</code></li> </ul>
MobileSettings	All	New	New settings file located in the <code>orgSettings</code> directory of the corresponding package directory. Represents an organization's mobile

Metadata Type or Related Object	Field	Change	Description
			settings, such as mobile Chatter settings, whether Mobile Lite is enabled for an organization, and so on.
SecuritySettings	All	Changed	<p>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.</p> <p>In version 26.0, this type is supported by the <code>deploy()</code> and <code>update()</code> calls, in addition to the retrieve functionality available in version 25.0.</p> <p>In order to add an IP range, you need to deploy all existing IP ranges, as well as the one you want to add. Otherwise, the existing IP ranges are replaced with the ones you deploy. To remove all the IP ranges in an organization, leave the <code>networkAccess</code> field blank (<code>&lt;networkAccess&gt;&lt;/networkAccess&gt;</code>).</p>
PermissionSet	tabSettings	New	<p>Indicates the tab visibility settings for the permission set. The fields are:</p> <ul style="list-style-type: none"> <li><code>tab</code>—The tab name</li> <li><code>visibility</code>—The visibility settings for the tab: <ul style="list-style-type: none"> <li>◇ <code>Available</code>—The tab is available on the All Tabs page. Individual users can customize their display to make the tab visible in any app.</li> <li>◇ <code>None</code>—The tab isn't available on the All Tabs page or visible in any apps.</li> <li>◇ <code>Visible</code>—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.</li> </ul> </li> </ul>

# Apex Code Enhancements

Apex includes the following enhancements in Winter '13. For detailed information on these enhancements, refer to the [Force.com Apex Code Developer's Guide](#).

## Non-Primitive Types in Map Keys and Sets

You can now add map keys of a non-primitive data type. Map keys can be sObjects, collections, user-defined types, and built-in Apex types. Previously, map keys could only be primitive types. Similarly, sets can now contain elements of any data type. This provides you with more choice for what kind of data you can store in your collections.

For non-primitive types in map keys and sets, except for user-defined types, Apex determines the uniqueness of two map keys or set elements based on the field values. For user-defined types, you should provide implementations for the `equals` and `hashCode` methods. Apex uses these methods to compare the instances of your classes.

## Using Custom Types in Map Keys and Sets

When using a custom type (your Apex class) for the map key or set elements, provide `equals` and `hashCode` methods in your class. Apex uses these two methods to determine equality and uniqueness of keys for your objects.

### Adding `equals` and `hashCode` Methods to Your Class

To ensure that map keys of your custom type are compared correctly and their uniqueness can be determined consistently, provide an implementation of the following two methods in your class:

- The `equals` method with this signature:

```
public Boolean equals(Object obj) {  
    // Your implementation  
}
```

Keep in mind the following when implementing the `equals` method. Assuming `x`, `y`, and `z` are non-null instances of your class, the `equals` method must be:

- ◇ Reflexive: `x.equals(x)`
- ◇ Symmetric: `x.equals(y)` should return `true` if and only if `y.equals(x)` returns `true`
- ◇ Transitive: if `x.equals(y)` returns `true` and `y.equals(z)` returns `true`, then `x.equals(z)` should return `true`
- ◇ Consistent: multiple invocations of `x.equals(y)` consistently return `true` or consistently return `false`
- ◇ For any non-null reference value `x`, `x.equals(null)` should return `false`

The `equals` method in Apex is based on the [equals method in Java](#).

- The `hashCode` method with this signature:

```
public Integer hashCode() {  
    // Your implementation  
}
```

Keep in mind the following when implementing the `hashCode` method.

- ◇ If the `hashCode` method is invoked on the same object more than once during execution of an Apex request, it must return the same value.
- ◇ If two objects are equal, based on the `equals` method, `hashCode` must return the same value.
- ◇ If two objects are unequal, based on the result of the `equals` method, it is not required that `hashCode` return distinct values.

The `hashCode` method in Apex is based on the [hashCode method in Java](#).

Another benefit of providing the `equals` method in your class is that it simplifies comparing your objects. You will be able to use the `==` operator to compare objects, or the `equals` method. For example:

```
// obj1 and obj2 are instances of MyClass
if (obj1 == obj2) {
    // Do something
}

if (obj1.equals(obj2)) {
    // Do something
}
```

### Sample

This sample shows how to implement the `equals` and `hashCode` methods. The class that provides those methods is listed first. It also contains a constructor that takes two `Integers`. The second example is a code snippet that creates three objects of the class, two of which have the same values. Next, map entries are added using the pair objects as keys. The sample verifies that the map has only two entries since the entry that was added last has the same key as the first entry, and hence, overwrote it. The sample then uses the `==` operator, which works as expected because the class implements `equals`. Also, some additional map operations are performed, like checking whether the map contains certain keys, and writing all keys and values to the debug log. Finally, the sample creates a set and adds the same objects to it. It verifies that the set size is two, since only two objects out of the three are unique.

```
public class PairNumbers {
    Integer x,y;

    public PairNumbers(Integer a, Integer b) {
        x=a;
        y=b;
    }

    public Boolean equals(Object obj) {
        if (obj instanceof PairNumbers) {
            PairNumbers p = (PairNumbers)obj;
            return ((x==p.x) && (y==p.y));
        }
        return false;
    }

    public Integer hashCode() {
        return (31 * x) ^ y;
    }
}
```

This code snippet makes use of the `PairNumbers` class.

```
Map<PairNumbers, String> m = new Map<PairNumbers, String>();
PairNumbers p1 = new PairNumbers(1,2);
PairNumbers p2 = new PairNumbers(3,4);
// Duplicate key
PairNumbers p3 = new PairNumbers(1,2);
m.put(p1, 'first');
```

```

m.put(p2, 'second');
m.put(p3, 'third');

// Map size is 2 because the entry with
// the duplicate key overwrote the first entry.
System.assertEquals(2, m.size());

// Use the == operator
if (p1 == p3) {
    System.debug('p1 and p3 are equal.');
```

```

}

// Perform some other operations
System.assertEquals(true, m.containsKey(p1));
System.assertEquals(true, m.containsKey(p2));
System.assertEquals(false, m.containsKey(new PairNumbers(5,6)));

for(PairNumbers pn : m.keySet()) {
    System.debug('Key: ' + pn);
}

List<String> mValues = m.values();
System.debug('m.values: ' + mValues);

// Create a set
Set<PairNumbers> s1 = new Set<PairNumbers>();
s1.add(p1);
s1.add(p2);
s1.add(p3);

// Verify that we have only two elements
// since the p3 is equal to p1.
System.assertEquals(2, s1.size());
```

## Support for Testing Callouts

Apex now provides the ability to test callouts. The native support for handling callouts made in test context and generating artificial responses increases your code coverage by tests and simplifies the testing process. You no longer need to modify auto-generated code of an external SOAP Web service, or add extra logic for callouts made via the HTTP classes.

The new `Test.setMock` method instructs the Apex runtime to handle callouts in test methods and to generate a mock response that you specify.

### Testing HTTP Callouts

To deploy or package Apex, 75% of your code must have test coverage. By default, test methods don't support HTTP callouts and tests that perform callouts are skipped. However, you can enable HTTP callout testing by instructing Apex to generate mock responses in tests by calling `Test.setMock` and by specifying the mock response in one of the following ways:

- [By implementing the `HttpCalloutMock` interface](#)
- [By using Static Resources with `StaticResourceCalloutMock` or `MultiStaticResourceCalloutMock`](#)

## Testing HTTP Callouts by Implementing the `HttpCalloutMock` Interface

Provide an implementation for the `HttpCalloutMock` interface to specify the response sent in the `respond` method, which the Apex runtime calls to send a response for a callout.

```
global class YourHttpCalloutMockImpl implements HttpCalloutMock {
    global HTTPResponse respond(HTTPRequest req) {
        // Create a fake response.
        // Set response values, and
        // return response.
    }
}
```



### Note:

- The class that implements the `HttpCalloutMock` interface can be either global or public.
- You can annotate this class with `@isTest` since it will be used only in test context. In this way, you can exclude it from your organization's code size limit of 3 MB.

Now that you have specified the values of the fake response, instruct the Apex runtime to send this fake response by calling `Test.setMock` in your test method. For the first argument, pass `HttpCalloutMock.class`, and for the second argument, pass a new instance of your interface implementation of `HttpCalloutMock`, as follows:

```
Test.setMock(HttpCalloutMock.class, new YourHttpCalloutMockImpl() );
```

After this point, if an HTTP callout is invoked in test context, the callout is not made and you receive the mock response you specified in the `respond` method implementation.



**Note:** If the code that performs the callout is in a managed package, you must call `Test.setMock` from a test method in the same package with the same namespace to mock the callout.

This is a full example that shows how to test an HTTP callout. The interface implementation (`MockHttpResponseGenerator`) is listed first. It is followed by a class containing the test method and another containing the method that the test calls. The `testCallout` test method sets the mock callout mode by calling `Test.setMock` before calling `getInfoFromExternalService`. It then verifies that the response returned is what the implemented `respond` method sent. Save each class separately and run the test in `CalloutClassTest`.

```
@isTest
global class MockHttpResponseGenerator implements HttpCalloutMock {
    // Implement this interface method
    global HTTPResponse respond(HTTPRequest req) {
        // Optionally, only send a mock response for a specific endpoint
        // and method.
        System.assertEquals('http://api.salesforce.com/foo/bar', req.getEndpoint());
        System.assertEquals('GET', req.getMethod());

        // Create a fake response
        HTTPResponse res = new HTTPResponse();
        res.setHeader('Content-Type', 'application/json');
        res.setBody('{"foo":"bar"}');
        res.setStatusCode(200);
        return res;
    }
}
```

```
public class CalloutClass {
    public static HTTPResponse getInfoFromExternalService() {
```

```

        HttpRequest req = new HttpRequest();
        req.setEndpoint('http://api.salesforce.com/foo/bar');
        req.setMethod('GET');
        Http h = new Http();
        HttpResponse res = h.send(req);
        return res;
    }
}

@isTest
private class CalloutClassTest {
    @isTest static void testCallout() {
        // Set mock callout class
        Test.setMock(HttpCalloutMock.class, new MockHttpResponseGenerator());

        // Call method to test.
        // This causes a fake response to be sent
        // from the class that implements HttpCalloutMock.
        HttpResponse res = CalloutClass.getInfoFromExternalService();

        // Verify response received contains fake values
        String contentType = res.getHeader('Content-Type');
        System.assert(contentType == 'application/json');
        String actualValue = res.getBody();
        String expectedValue = '{"foo":"bar"}';
        System.assertEquals(actualValue, expectedValue);
        System.assertEquals(200, res.getStatusCode());
    }
}

```

## Testing HTTP Callouts Using Static Resources

You can test HTTP callouts by specifying the body of the response you'd like to receive in a static resource and using one of two built-in classes—[StaticResourceCalloutMock](#) or [MultiStaticResourceCalloutMock](#).

### Testing HTTP Callouts Using `StaticResourceCalloutMock`

Apex provides the built-in `StaticResourceCalloutMock` class that you can use to test callouts by specifying the response body in a static resource. When using this class, you don't have to provide your own implementation of the `HttpCalloutMock` interface. Instead, just create an instance of `StaticResourceCalloutMock` and set the static resource to use for the response body, along with other response properties, like the status code and content type.

First, you must create a static resource from a text file to contain the response body:

1. Create a text file that contains the response body to return. The response body can be an arbitrary string, but it must match the content type, if specified. For example, if your response has no content type specified, the file can include the arbitrary string `abc`. If you specify a content type of `application/json` for the response, the file content should be a JSON string, such as `{"hah":"fooled you"}`.
2. Create a static resource for the text file:
  - a. Click **Your Name** > **Setup** > **Develop** > **Static Resources**, and then **New Static Resource**.
  - b. Name your static resource.
  - c. Choose the file to upload.
  - d. Click **Save**.

To learn more about static resources, see “Defining Static Resources” in the Salesforce online help.

Next, create an instance of `StaticResourceCalloutMock` and set the static resource, and any other properties.

```
StaticResourceCalloutMock mock = new StaticResourceCalloutMock();
mock.setStaticResource('myStaticResourceName');
mock.setStatusCode(200);
mock.setHeader('Content-Type', 'application/json');
```

In your test method, call `Test.setMock` to set the mock callout mode and pass it `HttpCalloutMock.class` as the first argument, and the variable name that you created for `StaticResourceCalloutMock` as the second argument.

```
Test.setMock(HttpCalloutMock.class, mock);
```

After this point, if your test method performs a callout, the callout is not made and the Apex runtime sends the mock response you specified in your instance of `StaticResourceCalloutMock`.



**Note:** If the code that performs the callout is in a managed package, you must call `Test.setMock` from a test method in the same package with the same namespace to mock the callout.

This is a full example containing the test method (`testCalloutWithStaticResources`) and the method it is testing (`getInfoFromExternalService`) that performs the callout. Before running this example, create a static resource named `mockResponse` based on a text file with the content `{"hah": "fooled you"}`. Save each class separately and run the test in `CalloutStaticClassTest`.

```
public class CalloutStaticClass {
    public static HttpResponse getInfoFromExternalService(String endpoint) {
        HttpRequest req = new HttpRequest();
        req.setEndpoint(endpoint);
        req.setMethod('GET');
        Http h = new Http();
        HttpResponse res = h.send(req);
        return res;
    }
}

@isTest
private class CalloutStaticClassTest {
    @isTest static void testCalloutWithStaticResources() {
        // Use StaticResourceCalloutMock built-in class to
        // specify fake response and include response body
        // in a static resource.
        StaticResourceCalloutMock mock = new StaticResourceCalloutMock();
        mock.setStaticResource('mockResponse');
        mock.setStatusCode(200);
        mock.setHeader('Content-Type', 'application/json');

        // Set the mock callout mode
        Test.setMock(HttpCalloutMock.class, mock);

        // Call the method that performs the callout
        HttpResponse res = CalloutStaticClass.getInfoFromExternalService(
            'http://api.salesforce.com/foo/bar');

        // Verify response received contains values returned by
        // the mock response.
        // This is the content of the static resource.
        System.assertEquals('{"hah": "fooled you"}', res.getBody());
        System.assertEquals(200, res.getStatusCode());
        System.assertEquals('application/json', res.getHeader('Content-Type'));
    }
}
```



## Testing HTTP Callouts Using `MultiStaticResourceCalloutMock`

Apex provides the built-in `MultiStaticResourceCalloutMock` class that you can use to test callouts by specifying the response body in a static resource for each endpoint. This class is similar to `StaticResourceCalloutMock` except that it allows you to specify multiple response bodies. When using this class, you don't have to provide your own implementation of the `HttpCalloutMock` interface. Instead, just create an instance of `MultiStaticResourceCalloutMock` and set the static resource to use per endpoint. You can also set other response properties like the status code and content type.

First, you must create a static resource from a text file to contain the response body. See the procedure outlined in [Testing HTTP Callouts Using `StaticResourceCalloutMock`](#).

Next, create an instance of `MultiStaticResourceCalloutMock` and set the static resource, and any other properties.

```
MultiStaticResourceCalloutMock multimock = new MultiStaticResourceCalloutMock();
multimock.setStaticResource('http://api.salesforce.com/foo/bar', 'mockResponse');
multimock.setStaticResource('http://api.salesforce.com/foo/sfdc', 'mockResponse2');
multimock.setStatusCode(200);
multimock.setHeader('Content-Type', 'application/json');
```

In your test method, call `Test.setMock` to set the mock callout mode and pass it `HttpCalloutMock.class` as the first argument, and the variable name that you created for `MultiStaticResourceCalloutMock` as the second argument.

```
Test.setMock(HttpCalloutMock.class, multimock);
```

After this point, if your test method performs an HTTP callout to one of the endpoints

`http://api.salesforce.com/foo/bar` or `http://api.salesforce.com/foo/sfdc`, the callout is not made and the Apex runtime sends the corresponding mock response you specified in your instance of `MultiStaticResourceCalloutMock`.

This is a full example containing the test method (`testCalloutWithMultipleStaticResources`) and the method it is testing (`getInfoFromExternalService`) that performs the callout. Before running this example, create a static resource named `mockResponse` based on a text file with the content `{"hah": "fooled you"}` and another named `mockResponse2` based on a text file with the content `{"hah": "fooled you twice"}`. Save each class separately and run the test in `CalloutMultiStaticClassTest`.

```
public class CalloutMultiStaticClass {
    public static HttpResponse getInfoFromExternalService(String endpoint) {
        HttpRequest req = new HttpRequest();
        req.setEndpoint(endpoint);
        req.setMethod('GET');
        Http h = new Http();
        HttpResponse res = h.send(req);
        return res;
    }
}

@isTest
private class CalloutMultiStaticClassTest {
    @isTest static void testCalloutWithMultipleStaticResources() {
        // Use MultiStaticResourceCalloutMock to
        // specify fake response for a certain endpoint and
        // include response body in a static resource.
        MultiStaticResourceCalloutMock multimock = new MultiStaticResourceCalloutMock();
        multimock.setStaticResource(
            'http://api.salesforce.com/foo/bar', 'mockResponse');
        multimock.setStaticResource(
            'http://api.salesforce.com/foo/sfdc', 'mockResponse2');
        multimock.setStatusCode(200);
        multimock.setHeader('Content-Type', 'application/json');
```

```

// Set the mock callout mode
Test.setMock(HttpCalloutMock.class, multimock);

// Call the method for the first endpoint
HttpResponse res = CalloutMultiStaticClass.getInfoFromExternalService(
    'http://api.salesforce.com/foo/bar');
// Verify response received
System.assertEquals('{"hah":"fooled you"}', res.getBody());

// Call the method for the second endpoint
HttpResponse res2 = CalloutMultiStaticClass.getInfoFromExternalService(
    'http://api.salesforce.com/foo/sfdc');
// Verify response received
System.assertEquals('{"hah":"fooled you twice"}', res2.getBody());
}
}

```

## Testing Web Service Callouts

Generated code is saved as an Apex class containing the methods you can invoke for calling the Web service. To deploy or package this Apex class and other accompanying code, 75% of the code must have test coverage, including the methods in the generated class. By default, test methods don't support Web service callouts and tests that perform Web service callouts are skipped. To prevent tests from being skipped and to increase code coverage, Apex provides the built-in `WebServiceMock` interface and the `Test.setMock` method that you can use to receive fake responses in a test method.

### Specifying a Mock Response for Testing Web Service Callouts

When you create an Apex class from a WSDL, the methods in the auto-generated class call `WebServiceCallout.invoke`, which performs the callout to the external service. When testing these methods, you can instruct the Apex runtime to generate a fake response whenever `WebServiceCallout.invoke` is called. To do so, implement the `WebServiceMock` interface and specify a fake response that the Apex runtime should send. Here are the steps in more detail.

First, implement the `WebServiceMock` interface and specify the fake response in the `doInvoke` method.

```

global class YourWebServiceMockImpl implements WebServiceMock {
    global void doInvoke(
        Object stub,
        Object request,
        Map<String, Object> response,
        String endpoint,
        String soapAction,
        String requestName,
        String responseNS,
        String responseName,
        String responseType) {

        // Create response element from the autogenerated class.
        // Populate response element.
        // Add response element to the response parameter, as follows:
        response.put('response_x', responseElement);
    }
}

```



#### Note:

- The class implementing the `WebServiceMock` interface can be either global or public.
- You can annotate this class with `@isTest` since it will be used only in test context. In this way, you can exclude it from your organization's code size limit of 3 MB.

Now that you have specified the values of the fake response, instruct the Apex runtime to send this fake response by calling `Test.setMock` in your test method. For the first argument, pass `WebServiceMock.class`, and for the second argument, pass a new instance of your interface implementation of `WebServiceMock`, as follows:

```
Test.setMock(WebServiceMock.class, new YourWebServiceMockImpl());
```

After this point, if a Web service callout is invoked in test context, the callout is not made and you receive the mock response specified in your `doInvoke` method implementation.



**Note:** If the code that performs the callout is in a managed package, you must call `Test.setMock` from a test method in the same package with the same namespace to mock the callout.

This is a full example that shows how to test a Web service callout. The implementation of the `WebServiceMock` interface is listed first. This example implements the `doInvoke` method, which returns the response you specify. In this case, the response element of the auto-generated class is created and assigned a value. Next, the response Map parameter is populated with this fake response. This example is based on the WSDL listed in Understanding the Generated Code. Import this WSDL and generate a class called `docSample` before you save this class.

```
@isTest
global class WebServiceMockImpl implements WebServiceMock {
    global void doInvoke(
        Object stub,
        Object request,
        Map<String, Object> response,
        String endpoint,
        String soapAction,
        String requestName,
        String responseNS,
        String responseName,
        String responseType) {
        docSample.EchoStringResponse_element respElement =
            new docSample.EchoStringResponse_element();
        respElement.EchoStringResult = 'Mock response';
        response.put('response_x', respElement);
    }
}
```

This is the method that makes a Web service callout.

```
public class WebSvcCallout {
    public static String callEchoString(String input) {
        docSample.DocSamplePort sample = new docSample.DocSamplePort();
        sample.endpoint_x = 'http://api.salesforce.com/foo/bar';

        // This invokes the EchoString method in the generated class
        String echo = sample.EchoString(input);

        return echo;
    }
}
```

This is the test class containing the test method that sets the mock callout mode. It calls the `callEchoString` method in the previous class and verifies that a mock response is received.

```
@isTest
private class WebSvcCalloutTest {
    @isTest static void testEchoString() {
        // This causes a fake response to be generated
        Test.setMock(WebServiceMock.class, new WebServiceMockImpl());
    }
}
```

```

    // Call the method that invokes a callout
    String output = WebSvcCallout.callEchoString('Hello World!');

    // Verify that a fake result is returned
    System.assertEquals('Mock response', output);
}

```

## Chatter API—Connect in Apex (Pilot)

Force.com developers no longer need to use Apex callouts to access Chatter API data. Now, many Chatter API resources have been exposed and are directly accessible using Connect in Apex. The Connect in Apex documentation is available in the *Chatter REST API Developer's Guide*.



**Note:** Connect in Apex is currently available through a pilot program. For information on enabling Connect in Apex, please contact your salesforce.com representative.

## New ID.getSObjectType Method

The new `getSObjectType` method on the `ID` type enables you to obtain the `sObject` token that corresponds to the `sObject` of the `ID`. This is particularly helpful when you don't have access to the `sObject` itself, for example, in future methods that don't accept `sObject` types as their parameters, and therefore you can't call `getSObjectType` on the `sObject`. Also, with this new method, you don't have to perform a global describe call to obtain an `sObject` token for a specific `sObject` name. You can simply call `getSObjectType` on the `ID`. In this way, you also avoid reaching the describe governor limits.

This sample shows how to use the `getSObjectType` method to obtain an `sObject` token from an `ID`. The `updateOwner` method in this sample accepts a list of `IDs` of the `sObjects` to update the `ownerId` field of. This list contains `IDs` of `sObjects` of the same type. The second parameter is the new owner `ID`. Note that since it is a future method, it doesn't accept `sObject` types as parameters; this is why it accepts `IDs` of `sObjects`. This method gets the `sObject` token from the first `ID` in the list, then does a describe to obtain the object name and constructs a query dynamically. It then queries for all `sObjects` and updates their owner `ID` fields to the new owner `ID`.

```

public class MyDynamicSolution {
    @future
    public static void updateOwner(List<ID> objIds, ID newOwnerId) {
        // Validate input
        System.assert(objIds != null);
        System.assert(objIds.size() > 0);
        System.assert(newOwnerId != null);

        // Get the sObject token from the first ID
        // (the List contains IDs of sObjects of the same type).
        Schema.SObjectType token = objIds[0].getSObjectType();

        // Using the token, do a describe
        // and construct a query dynamically.
        Schema.DescribeSObjectResult dr = token.getDescribe();
        String queryString = 'SELECT ownerId FROM ' + dr.getName() +
            ' WHERE ';
        for(ID objId : objIds) {

```

```

        queryString += 'Id=\' + objId + \'\' OR ';
    }
    // Remove the last ' OR'
    queryString = queryString.substring(0, queryString.length() - 4);

    sObject[] objDBList = Database.query(queryString);
    System.assert(objDBList.size() > 0);

    // Update the owner ID on the sObjects
    for(Integer i=0;i<objDBList.size();i++) {
        objDBList[i].put('ownerId', newOwnerId);
    }
    Database.SaveResult[] srList = Database.update(objDBList, false);
    for(Database.SaveResult sr : srList) {
        if (sr.isSuccess()) {
            System.debug('Updated owner ID successfully for ' +
                dr.getName() + ' ID ' + sr.getId());
        }
        else {
            System.debug('Updating ' + dr.getName() + ' returned the following errors.');
```

```

                for(Database.Error e : sr.getErrors()) {
                    System.debug(e.getMessage());
                }
            }
        }
    }
}

```

## New String Methods

Apex now has a richer library of String methods. Additional methods have been added for String manipulation and utility operations. The new methods enable you to:

- Manipulate Strings, and make them longer or shorter:

```

◇ abbreviate
◇ center
◇ join
◇ leftPad
◇ remove
◇ removeEnd
◇ removeEndIgnoreCase
◇ removeStart
◇ removeStartIgnoreCase
◇ repeat
◇ rightPad
◇ splitByCharacterType
◇ splitByCharacterTypeCamelCase

```

- Change and check the case of String characters:

```

◇ capitalize

```

- ◇ `isAllLowerCase`
- ◇ `isAllUpperCase`
- ◇ `swapCase`
- ◇ `uncapitalize`

- Search and extract substrings:

- ◇ `containsAny`
- ◇ `containsIgnoreCase`
- ◇ `containsNone`
- ◇ `containsOnly`
- ◇ `containsWhitespace`
- ◇ `countMatches`
- ◇ `deleteWhitespace`
- ◇ `difference`
- ◇ `endsWithIgnoreCase`
- ◇ `getCommonPrefix`
- ◇ `indexOfAny`
- ◇ `indexOfAnyBut`
- ◇ `indexOfDifference`
- ◇ `indexOfIgnoreCase`
- ◇ `lastIndexOf`
- ◇ `lastIndexOfIgnoreCase`
- ◇ `left`
- ◇ `mid`
- ◇ `right`
- ◇ `startsWithIgnoreCase`
- ◇ `substringAfter`
- ◇ `substringAfterLast`
- ◇ `substringBefore`
- ◇ `substringBeforeLast`
- ◇ `substringBetween`

- Escape and unescape Strings:

- ◇ `escapeCsv`
- ◇ `escapeEcmaScript`
- ◇ `escapeHtml3`
- ◇ `escapeHtml4`
- ◇ `escapeXml`
- ◇ `unescapeCsv`
- ◇ `unescapeEcmaScript`
- ◇ `unescapeHtml3`
- ◇ `unescapeHtml4`
- ◇ `unescapeXml`

- Determine what type of characters are in the String:

- ◊ `isAlpha`
- ◊ `isAlphanumeric`
- ◊ `isAlphanumericSpace`
- ◊ `isAlphaSpace`
- ◊ `isAsciiPrintable`
- ◊ `isNumeric`
- ◊ `isNumericSpace`
- ◊ `isWhitespace`

- Other utility methods:

- ◊ `getLevenshteinDistance`
- ◊ `isBlank`
- ◊ `isEmpty`
- ◊ `isNotBlank`
- ◊ `isNotEmpty`
- ◊ `normalizeSpace`
- ◊ `reverse`

For more information about these methods, see the [Force.com Apex Code Developer's Guide](#).

## Loading Test Data from Static Resources

Using the new `Test.loadData` method, you can populate data in your test methods without having to write many lines of code. Simply, add the data in a .csv file, create a static resource for this file, and then call `Test.loadData` within your test method by passing it the `sObject` type token and the static resource name. For example, for Account records and a static resource name of `myResource`, make the following call:

```
List<sObject> ls = Test.loadData(Account.sObjectType, 'myResource');
```

The `Test.loadData` method returns a list of `sObjects` that correspond to each record inserted.

You must create the static resource prior to calling this method. The static resource is a comma-delimited file ending with a .csv extension. The file contains field names and values for the test records. The first line of the file must contain the field names and subsequent lines are the field values. To learn more about static resources, see “Defining Static Resources” in the Salesforce online help.

Once you create a static resource for your .csv file, the static resource will be assigned a MIME type. Supported MIME types are:

- `text/csv`
- `application/vnd.ms-excel`
- `application/octet-stream`
- `text/plain`

## Test.loadData Example

The following are steps for creating a sample .csv file and a static resource, and calling Test.loadData to insert the test records.

1. Create a .csv file that has the data for the test records. This is a sample .csv file with three account records. You can use this sample content to create your .csv file.

```
Name,Website,Phone,BillingStreet,BillingCity,BillingState,BillingPostalCode,BillingCountry
sForceTest1,http://www.sforcetest1.com,(415) 901-7000,The Landmark @ One Market,San Francisco,CA,94105,US
sForceTest2,http://www.sforcetest2.com,(415) 901-7000,The Landmark @ One Market Suite 300,San Francisco,CA,94105,US
sForceTest3,http://www.sforcetest3.com,(415) 901-7000,1 Market St,San Francisco,CA,94105,US
```

2. Create a static resource for the .csv file:
  - a. Click **Your Name** > **Setup** > **Develop** > **Static Resources**, and then **New Static Resource**.
  - b. Name your static resource testAccounts.
  - c. Choose the file you just created.
  - d. Click **Save**.
3. Call Test.loadData in a test method to populate the test accounts.

```
@isTest
private class DataUtil {
    static testmethod void testLoadData() {
        // Load the test accounts from the static resource
        List<sObject> ls = Test.loadData(Account.sObjectType, 'testAccounts');
        // Verify that all 3 test accounts were created
        System.assert(ls.size() == 3);

        // Get first test account
        Account a1 = (Account)ls[0];
        String acctName = a1.Name;
        System.debug(acctName);

        // Perform some testing using the test records
    }
}
```

## Global Interface Method Implementations No Longer Need to Be Global

When you implement methods of a global interface, you can declare those methods as public or global in your class. You're no longer required to declare them as global. This gives you a choice of how much visibility you would like your method implementations to have. If you're a package developer, you can include an interface implementation in a package and make it inaccessible to the subscriber's org by declaring the class and methods as public. For example, the package can include a public batch implementation class with public methods that isn't visible to the subscriber.

This also applies to overriding global class methods. The methods overriding global methods can be declared as public or global.



This first example shows that global interface methods can be implemented as public methods. The interface is listed first, followed by the class that implements it.

```
global interface Vehicle {
    Long getMaxSpeed();
    String getType();
}

public class Car implements Vehicle {
    // Implement global interface methods in public
    // methods.
    public Long getMaxSpeed() { return 100; }
    public String getType() { return 'Sedan'; }
}
```

This second example shows that global methods can be overridden as public methods in the class extension. The base class is listed first, followed by the class that extends it.

```
global virtual class MyBaseClass {
    global virtual String getMessage() {
        return 'Hello from MyClass!';
    }
}

public class MyExtension extends MyBaseClass {
    // Override the getMessage() method from MyBaseClass
    public override String getMessage() {
        return 'Overriding the returned message.';
    }
}
```

## New `Type.toString` Method

The `toString` method has been added to the `Type` class. This method returns the type name as a `String`. Other Apex methods, such as `String.valueOf` and `System.debug`, call this method to convert their `Type` argument into a `String`.

This example calls `toString` on the `Type` corresponding to a list of `Integers`.

```
Type t = List<Integer>.class;
String s = t.toString();
System.assertEquals('LIST<Integer>', s);
```

## `String.valueOf` and `System.debug` Use `toString` for Argument String Conversion

`String.valueOf` now performs `String` conversion for its object argument using the `toString` method on the argument, if available. And the same is true for `System.debug` since it calls `String.valueOf` to perform the `String` conversion of its object argument. If the argument to convert is a built-in type with a `toString` method, or a user-defined type with an overridden `toString` method, the `toString` method is called. Otherwise, `System.debug` and `String.valueOf` compute

a String representation of the argument. Previously, `System.debug` and `String.valueOf` always wrote or returned the argument's String representation and didn't call `toString`, even when available on the argument object.

This example illustrates the new behavior of `System.debug`. It calls `String.valueOf` and `System.debug` on a type, which invokes the `Type.toString` method.

```
Type t = List<Integer>.class;

// Converts to String using the Type.toString method
String s = String.valueOf(t);
// Returns: LIST<Integer>
// It used to return: Type:[aot=LIST<Integer>]
System.assertEquals('LIST<Integer>', s);

// System.debug use the Type.toString method
// to convert the type to a string.
// Writes LIST<Integer> to the debug output
System.debug(t);
```

This example shows how the overridden `toString` method of a user-defined class gets invoked by `String.valueOf` and `System.debug`. The class with the overridden `toString` method is listed first, followed by a code snippet that calls `String.valueOf` and `System.debug`.

```
public class PairNumbers {
    Integer x,y;

    public PairNumbers(Integer a, Integer b) {
        x=a;
        y=b;
    }

    public override String toString() {
        return '(' + x + ',' + y + ')';
    }
}
```

```
PairNumbers p = new PairNumbers(1,2);

// Converts to String using the Type.toString method
String s = String.valueOf(p);
// Returns: (1,2)
// It used to return: PairNumbers:[x=1, y=2]
System.assertEquals('(1,2)', s);

// System.debug use the Type.toString method
// to convert the type to a string.
// Writes (1,2) to the debug output
System.debug(p);
```

## SOQL Polymorphism Available in Apex—Developer Preview

You can use SOQL Polymorphism in your SOQL queries in Apex. This is typically done using the new `TYPEOF` clause. For more details about SOQL Polymorphism, see [SOQL Polymorphism—Developer Preview](#) on page 163.

## JSON Support for Additional Built-In Types

JSON serialization and deserialization support has been added to additional built-in Apex types. These types are the return types of Database methods, namely:

- DeleteResult
- EmptyRecycleBinResult
- LeadConvertResult
- SaveResult
- UndeleteResult
- UpsertResult

In addition to these supported types, JSON continues to be supported as previously for sObjects (standard objects and custom objects), Apex primitive and collection types, and instances of your Apex classes.

## Code Coverage Percentage Details

The code coverage percentage for a class or trigger displayed on the Apex Classes or the Apex Triggers page includes a fraction between parentheses with the numbers used to compute this percentage, for example, **90% (72/80)**. The code coverage percentage is calculated by dividing the number of lines covered by tests by the total number of lines that are part of the coverage calculation. Some lines of code are excluded from code coverage calculation, such as:

- Comments
- `System.debug` statements
- Test methods
- A code statement that is broken up into multiple lines—only the first line is counted

To generate code coverage results, you must run your Apex tests first. If no tests have been run, no code coverage data will exist and **0% (No coverage data)** displays for classes (except for test classes) and triggers on the Apex Classes and Apex Triggers pages.

## Creating sObjects with Default Values Using the newSObject Method

Using the `newSObject` method on the `sObject` token (of type `Schema.sObjectType`), you can now create new sObjects with custom fields prepopulated with default values that have been predefined in your organization. You can also specify the record type of the sObject to create. This is useful when default values vary for different record types, like for picklist and multi-select picklist custom fields. To learn more about default field values, see “About Default Field Values” in the Salesforce online help.

Name	Argument	Return Type	Description
<code>newSObject</code>	ID <i>recordTypeId</i> Boolean <i>loadDefaults</i>	<code>sObject</code>	<p>Constructs a new <code>sObject</code> of this type, and optionally, of the specified record type ID and with default custom field values.</p> <p>The <i>recordTypeId</i> argument specifies the record type ID of the <code>sObject</code> to create. If no record type exists for this <code>sObject</code>, use <code>null</code>. If the <code>sObject</code> has record types and you specify <code>null</code>, the default record type is used.</p> <p>The <i>loadDefaults</i> argument specifies whether to populate custom fields with their predefined default values (<code>true</code>) or not (<code>false</code>).</p> <p>Remarks:</p> <ul style="list-style-type: none"> <li>For required fields that have no default values, make sure to provide a value before inserting the new <code>sObject</code>. Otherwise, the insertion results in an error. An example is the Account Name field or a master-detail relationship field.</li> <li>Since picklists and multi-select picklists can have default values specified per record type, this method populates the default value corresponding to the record type specified.</li> <li>If fields have no predefined default values and the <i>loadDefaults</i> argument is <code>true</code>, this method creates the <code>sObject</code> with field values of <code>null</code>.</li> <li>If the <i>loadDefaults</i> argument is <code>false</code>, this method creates the <code>sObject</code> with field values of <code>null</code>.</li> <li>This method populates read-only custom fields of the new <code>sObject</code> with default values. You can then insert the new <code>sObject</code> with the read-only fields, even though these fields cannot be edited after they're inserted.</li> <li>If a custom field is marked as unique and also provides a default value, inserting more than one new <code>sObject</code> will cause a run-time exception because of duplicate field values.</li> </ul> <p>To learn more about default field values, see “About Default Field Values” in the Salesforce online help.</p> <p>For an example, see Sample: Create New <code>sObject</code> with Default Values.</p>

### Sample: Create New `sObject` with Default Values

This sample creates an account with any default values populated for its custom fields, if any, using the `newSObject` method. It also creates a second account for a specific record type. For both accounts, the sample sets the Name field, which is a required field that doesn't have a default value, before inserting the new accounts.

```
// Create an account with predefined default values
Account acct = (Account)Account.sObjectType.newSObject(null, true);
```

```
// Provide a value for Name
acct.Name = 'Acme';
// Insert new account
insert acct;

// This is for record type RT1 of Account
ID rtId = [SELECT Id FROM RecordType WHERE sObjectType='Account' AND Name='RT1'].Id;
Account acct2 = (Account)Account.sObjectType.newSObject(rtId, true);
// Provide a value for Name
acct2.Name = 'Acme2';
// Insert new account
insert acct2;
```

## Starting a Batch Job from Another Batch Job

You can now start a batch job from another batch job by calling `Database.executeBatch` from the `finish` method of the batch class. This allows you to link your batch jobs and create a chain of jobs. Note that the governor limits of batch jobs still apply. This change applies to batch Apex saved using Salesforce.com API version 26.0 and later. Previously, with Apex saved using Salesforce.com API version 25.0 and earlier, you couldn't call `Database.executeBatch` from within any batch Apex method. The version used is the version of the running batch class that starts another batch job. If the `finish` method in the running batch class calls a method in a helper class to start the batch job, the Salesforce.com API version of the helper class doesn't matter.

## New `getVariableValue` Method

The new `getVariableValue` method in the `Flow.Interview` class enables a Visualforce controller to get the value of a flow variable. The variable may be in the flow embedded in the Visualforce page, or in a separate flow that is called by a subflow element. This method is used with Visual Workflow.

Method	Arguments	Return Type	Description
<code>getVariableValue</code>	String <i>variableName</i>	Object	<p>Returns the value of the specified flow variable. The flow variable can be in the flow embedded in the Visualforce page, or in a separate flow that is called by a subflow element.</p> <p>The returned variable value comes from whichever flow the interview is currently running. If the specified variable can't be found in that flow, the method returns <code>null</code>.</p> <p>The <i>variableName</i> argument specifies the unique name of the flow variable.</p> <p>This method checks for the existence of the variable at run time only, not at compile time.</p>


### Sample

The following sample uses the `getVariableValue` method to obtain breadcrumb (navigation) information from the flow embedded in the Visualforce page. If that flow contains subflow elements, and each of the referenced flows also contains a `vaBreadcrumb` variable, the Visualforce page can provide users with breadcrumbs regardless of which flow the interview is running.

```
public class SampleController {  
  
    //Instance of the flow  
    public Flow.Interview.Flow_Template_Gallery myFlow {get; set;}  
  
    public String getBreadcrumb() {  
        String aBreadcrumb;  
        if (myFlow==null) { return 'Home';}  
        else aBreadcrumb = (String) myFlow.getVariableValue('vaBreadcrumb');  
  
        return(aBreadcrumb==null ? 'Home': aBreadcrumb);  
    }  
}
```

### New Network Class and Method

The `Network` class, which is used for the [Communities pilot](#), represents a community.



**Note:** Salesforce Communities is available through a pilot program. Contact your Salesforce.com representative to find out if your organization qualifies for the pilot.

This class contains the `getNetworkId` method. The `getNetworkId` method returns the user's current community. If Communities isn't enabled for the user's organization or the user is currently in the internal organization, this method returns `null`.

### New Messaging Method

The new `sendMessage` method in the `Messaging` class allows up to 10 draft email messages to be sent. This method is used with Case Feed.

Name	Argument	Return Type	Description
sendMessage	List <ID> <i>emailMessageIds</i>	Messaging.SendEmailResult[]	Sends up to 10 draft email messages as defined by the specified email message IDs and returns a list of SendEmailResult objects.
	Boolean <i>allOrNothing</i>		
			The <code>sendMessage</code> method assumes that the optional <code>opt_allOrNone</code> parameter is always <code>false</code> and ignores the value you set. This optional parameter specifies whether <code>sendMessage</code> prevents delivery of all other messages when any of the messages fail due to an

Name	Argument	Return Type	Description
			<p>error (<code>true</code>), or whether it allows delivery of the messages that don't have errors (<code>false</code>).</p> <p>Example:</p> <p>This example shows how to send a draft email message. It creates a case and a new email message associated with the case. Next, the example sends a draft email message and checks the results. Before running this example, make sure to replace the email address with a valid address.</p> <pre> Case c = new Case(); insert c;  EmailMessage e = new EmailMessage(); e.parentid = c.id; // Set to draft status. // This status is required // for sendEmailMessage(). e.Status = '5'; e.TextBody =     'Sample email message.'; e.Subject = 'Apex sample'; e.ToAddress = 'customer@email.com'; insert e;  List&lt;Messaging.SendEmailResult&gt;     results =         Messaging.sendEmailMessage(new ID[]             { e.id });  System.assertEquals(1, results.size()); System.assertEquals(true,     results[0].success); </pre>

## New Access Token Method

The `Auth.AuthToken` Apex class has a new method to retrieve access tokens: `getAccessTokenMap`. Use this method if the user ID is mapped to multiple third-party users. `getAccessTokenMap` returns a map of access tokens for each third-party user. For more information, see “About External Authentication Providers” in the Salesforce online help.

Name	Argument	Return Type	Description
<code>getAccessTokenMap</code>	String <i>authProviderId</i>  String <i>providerName</i>	Map<String, String>	Returns a map from the third-party identifier to the access token for the currently logged-in Salesforce user. The identifier value depends on the third party. For example, for Salesforce it would be the user ID, while for Facebook it would be the user number.

## Support.EmailTemplateSelector Interface

The `Support.EmailTemplateSelector` interface enables providing default email templates in Case Feed. With default email templates, specified email templates are preloaded for cases based on criteria such as case origin or subject.

To specify default templates, you must create a class that implements `Support.EmailTemplateSelector`. The `Support.EmailTemplateSelector` interface contains the following method.

Name	Arguments	Return Type	Description
<code>getDefaultTemplateId</code>	<code>ID caseId</code>	ID	Returns the ID of the email template to preload for the case currently being viewed in the case feed using the specified case ID.

### Example Implementation

This is an example implementation of the `Support.EmailTemplateSelector` interface. The `getDefaultEmailTemplateId` method implementation retrieves the subject and description of the case corresponding to the specified case ID. Next, it selects an email template based on the case subject and returns the email template ID.

```
global class MyCaseTemplateChooser implements Support.EmailTemplateSelector {
    // Empty constructor
    global MyCaseTemplateChooser() { }

    // The main interface method
    global ID getDefaultEmailTemplateId(ID caseId) {
        // Select the case we're interested in, choosing any fields that are relevant to
        our decision
        Case c = [SELECT Subject, Description FROM Case WHERE Id=:caseId];

        EmailTemplate et;

        if (c.subject.contains('LX-1150')) {
            et = [SELECT id FROM EmailTemplate WHERE DeveloperName = 'LX1150_template'];
        } else if (c.subject.contains('LX-1220')) {
            et = [SELECT id FROM EmailTemplate WHERE DeveloperName = 'LX1220_template'];
        }

        // Return the ID of the template selected
        return et.id;
    }
}
```

The following example tests the above code:

```
@isTest
private class MyCaseTemplateChooserTest {

    static testMethod void testChooseTemplate() {

        MyCaseTemplateChooser chooser = new MyCaseTemplateChooser();

        // Create a simulated case to test with
        Case c = new Case();
        c.Subject = 'I\'m having trouble with my LX-1150';
        Database.insert(c);

        // Make sure the proper template is chosen for this subject
```



```
Id actualTemplateId = chooser.getDefaultEmailTemplateId(c.Id);
EmailTemplate expectedTemplate =
    [SELECT id FROM EmailTemplate WHERE DeveloperName = 'LX1150_template'];
Id expectedTemplateId = expectedTemplate.Id;
System.assertEquals(actualTemplateId, expectedTemplateId);

// Change the case properties to match a different template
c.Subject = 'My LX1220 is overheating';
Database.update(c);

// Make sure the correct template is chosen in this case
actualTemplateId = chooser.getDefaultEmailTemplateId(c.Id);
expectedTemplate =
    [SELECT id FROM EmailTemplate WHERE DeveloperName = 'LX1220_template'];
expectedTemplateId = expectedTemplate.Id;
System.assertEquals(actualTemplateId, expectedTemplateId);
    }
}
```

Parameterized Interfaces No Longer Supported

Parameterized interfaces are not supported in Apex saved using Salesforce.com API version 26.0 and later.

Visualforce Charting—Generally Available

Available in: **Group, Professional, Enterprise, Unlimited, and Developer** Editions  
Custom controllers and standard controller extensions are not supported in **Group** or **Professional** Editions.

User Permissions Needed	
To create, edit, and set version settings for Visualforce pages:	“Customize Application”
To edit custom Visualforce controllers or Apex:	“Author Apex”

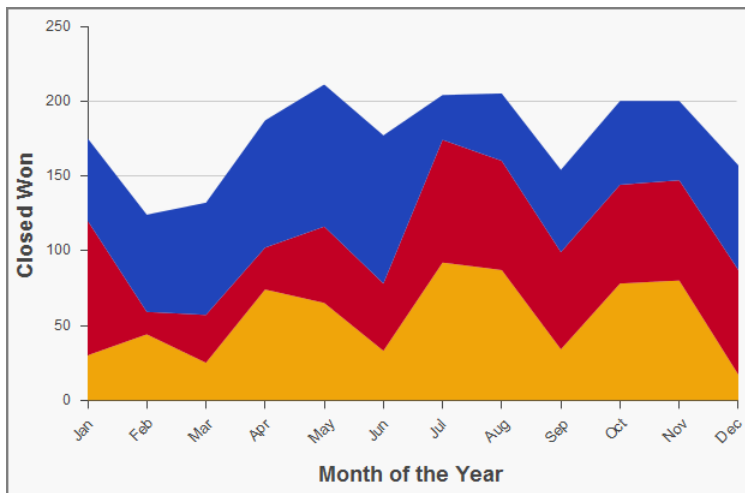
Visualforce charting is now Generally Available. In addition to being available to all Visualforce customers, charting features a number of enhancements.

New Chart Types

The existing Visualforce chart types (bar, line, and pie) are joined by four new chart types: area, gauge, radar, and scatter.

Area Charts with <apex:areaSeries>

Area charts are an alternative to vertical bar charts.

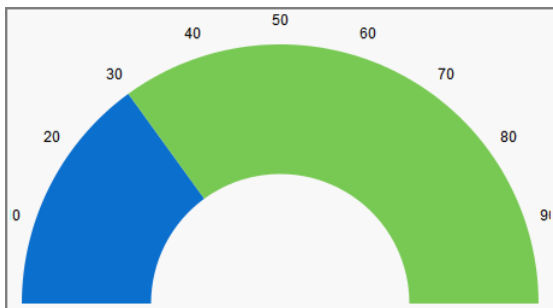


Area charts are plotted on the same rectangular grid as the other linear data series charts. You can combine multiple `<apex:areaSeries>`, `<apex:barSeries>`, `<apex:lineSeries>`, and `<apex:scatterSeries>` charts in the same chart.

See the [Visualforce Developer's Guide](#) for complete details of the area chart type.

### Gauge Charts with `<apex:gaugeSeries>`

Use gauge charts to show progress along a specific metric. They plot a single value from their data series and place it along the gauge axis, showing the total range of possible values.



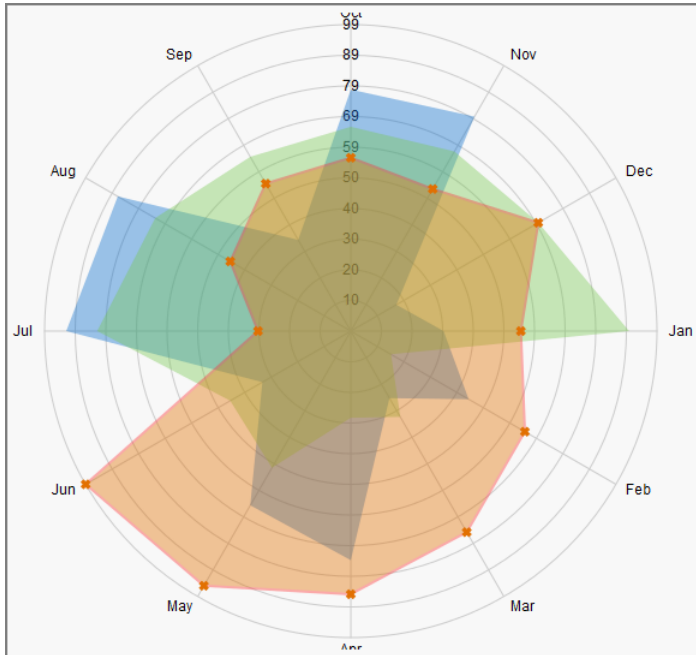
Like `<apex:pieSeries>` pie charts, gauge charts use one data series. Unlike `<apex:pieSeries>` charts, gauge charts use only the first data value. To use `<apex:gaugeSeries>` charts, add an `<apex:axis type="Gauge">` component, which sets the beginning and ending values for the gauge dial. Here's a simple example:

```
<apex:chart height="250" width="450" animate="true" legend="true" data="{!data}">
  <apex:axis type="Gauge" position="gauge" minimum="0" maximum="100" steps="10"/>
  <apex:gaugeSeries dataField="data1" highlight="true" tips="true" donut="50">
    <apex:chartLabel display="over"/>
  </apex:gaugeSeries>
</apex:chart>
```

See the [Visualforce Developer's Guide](#) for full details of the new chart type.

## Radar Charts with `<apex:radarSeries>`

Use radar charts to plot a series of connected points along a radial axis. Radar charts are sometimes called “spider web” charts.



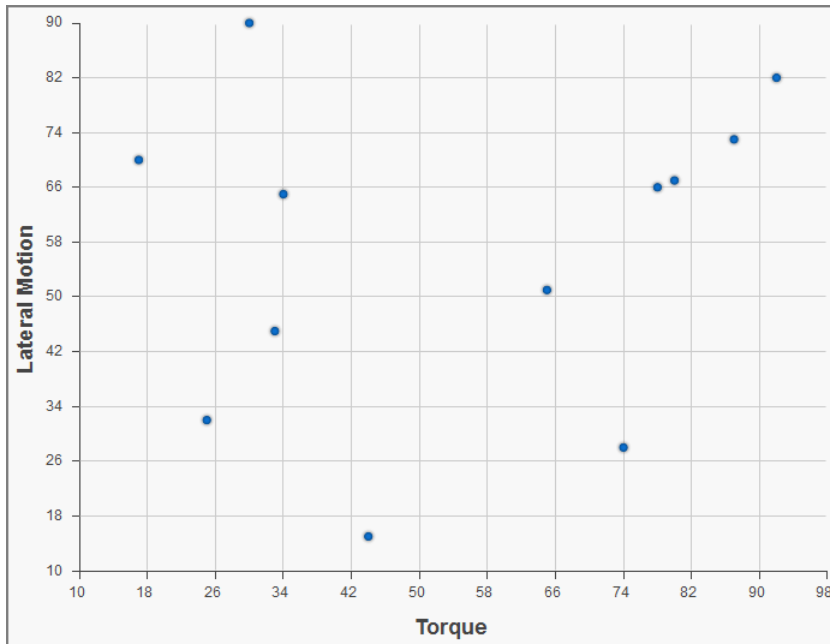
You can add multiple `<apex:radarSeries>` components to a single chart. To use an `<apex:radarSeries>` chart, add an `<apex:axis type="Radial">` component. Here's a simple example:

```
<apex:chart height="530" width="700" legend="true" data="{!data}">
  <apex:legend position="left"/>
  <apex:axis type="Radial" position="radial">
    <apex:chartLabel/>
  </apex:axis>
  <apex:radarSeries xField="name" yField="data1" tips="true" opacity="0.4"/>
  <apex:radarSeries xField="name" yField="data2" tips="true" opacity="0.4"/>
  <apex:radarSeries xField="name" yField="data3" tips="true"
    markerType="cross" strokeWidth="2" strokeColor="#f33" opacity="0.4"/>
</apex:chart>
```

See the [Visualforce Developer's Guide](#) for complete details about `<apex:radarSeries>` charts.

## Scatter Charts with `<apex:scatterSeries>`

Use scatter charts to plot individual (not connected) measurements on a linear grid.



Area charts are plotted on the same rectangular grid as the other linear data series charts. You can combine multiple `<apex:areaSeries>`, `<apex:barSeries>`, `<apex:lineSeries>`, and `<apex:scatterSeries>` charts in the same chart.

See the [Visualforce Developer's Guide](#) for complete details about scatter charts.

## Additional Charting Improvements

The default color scheme for Visualforce charts has been revised to better match the colors of the Salesforce reporting and analytics charts. The new color scheme makes it easier to create visually consistent dashboards.

In addition to the new default color scheme, most charting components support a `colorSet` attribute. Use this attribute to control the colors in charts and data series. Add HTML-style (hexadecimal) colors to the attribute, and the component cycles through them for each element. For example:

```
<apex:barSeries orientation="vertical" axis="left" xField="name" yField="data1"
  colorSet="#000000,#FF0000,#00FF00,#0000FF,#FFFF00,#00FFFF,#FF00FF"
  colorsProgressWithinSeries="true"/>
```

Most chart types have additional style customization options available through a data series component. See the [Visualforce Developer's Guide](#) for details of each chart's options.

Visualforce charting offers enhanced rendering control, including delayed loading of data, reloading data, showing and hiding charts, and support for re-rendering charts via partial-page refreshes. Rendering controls are generally used in conjunction with JavaScript Remoting.

The `<apex:chart>` component now supports setting the `height` and `width` attributes as percentages, in addition to pixels. Use pixels for consistent sizing and behavior across browsers and screen sizes. Use percentages when the size of your chart should vary with the screen size, or when the data set can produce very large and small charts.

## Compatibility with Charting Pilot

- Charts created using the Pilot version of Visualforce charting are compatible with the GA version of charting, with these exceptions:
- The `border` attribute is no longer available on the `<apex:chart>` component. Remove the `border` attribute from any charts that used it.
  - The change in the default color scheme means that the visual appearance of existing charts will change.

## Additional 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.

User Permissions Needed	
To create, edit, and set version settings for Visualforce pages:	“Customize Application”
To edit custom Visualforce controllers or Apex:	“Author Apex”

Visualforce includes the following enhancements in Winter ’13. For detailed information on these enhancements, refer to the [Visualforce Developer’s Guide](#).

### support:caseFeed Component

The new `support:caseFeed` component includes all of the standard Case Feed page elements: the Email, Portal, Log a Call, and Write Case Note publishers, case activity feed, feed filters, and highlights panel. You can use this component to create a version of the standard Case Feed page for certain users if your organization also wants to use Visualforce to create a customized Case Feed page for other users.

For example, a company might want to create a highly customized Case Feed page that’s tailored for field support agents using mobile devices while still allowing support agents in the contact center to use the standard Case Feed page. The company would create two Visualforce pages: one that uses `support:caseFeed`, assigned to agents working with desktop computers in the contact center; and one that uses a custom combination of other Case Feed components, assigned to field agents.

`support:caseFeed` can only be used in organizations that have enabled Case Feed, Chatter, and feed tracking on cases.

For more information on using `support:caseFeed` and the other Case Feed components, see [Customizing Case Feed with Visualforce](#).

## NoSignIn Option for Chatter Answers Communities

In Winter '13, you can use the `NoSignIn` Boolean attribute of the `<chatteranswers:allfeeds>` component to remove sign-in links from your community. Use this option when you have an external sign-in path and want to ensure that your users follow it instead of the standard Chatter Answers sign-in. When `NoSignIn` is `true`, users can still search and view publicly accessible content for the community. If they already have a valid session, they can still post questions, replies, vote, and flag content.

## Enhancements to JavaScript Remoting

When a `@RemoteAction` method throws an exception due to a programming error or other failure, the Apex stack trace is returned to the browser. Inspect the stack trace in a JavaScript debugger console or use it in the error handling of your response callback function. Here's a callback function that simply displays the stack trace when there's an exception:

```
<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 + "<br/>\n<pre>" + event.where + "</pre>";
            } else {
                document.getElementById("responseErrors").innerHTML = event.message;
            }
        },
        {escape: true}
    );
}
</script>
```



You asked for it! This enhancement is from an [idea](#) on the IdeaExchange.

In Winter '13 you can add an option to the remoting request configuration array to prevent automatic buffering of requests. JavaScript remoting optimizes requests that are executed close to each other in time and groups the calls into a single request. This buffering improves the efficiency of the overall request-and-response cycle, but sometimes it's useful to ensure all requests execute independently.

To disable buffering in the previous example, add `buffer: false` to the configuration block:

```
{escape: true, buffer: false}
```

When a `@RemoteAction` method is looked up or called, Visualforce inspects the page controller's inheritance hierarchy and finds `@RemoteAction` methods in the controller's ancestor classes.

Here's an example demonstrating this capability. The following Apex classes form a three-tier inheritance hierarchy:

```
global with sharing class ChildRemoteController
    extends ParentRemoteController { }
global virtual with sharing class ParentRemoteController
    extends GrandparentRemoteController { }

global virtual with sharing class GrandparentRemoteController {
    @RemoteAction
    global static String sayHello(String helloTo) {
        return 'Hello ' + helloTo + ' from the Grandparent.';
    }
}
```

This Visualforce page simply calls the `sayHello` remote action.

```
<apex:page controller="ChildRemoteController" >
    <script type="text/javascript">
        function sayHello(helloTo) {
            ChildRemoteController.sayHello(helloTo, function(result, event){
                if(event.status) {
                    document.getElementById("result").innerHTML = result;
                }
            });
        }
    </script>

    <button onclick="sayHello('Jude');">Say Hello</button><br/>
    <div id="result">[Results]</div>

</apex:page>
```

The remote method doesn't exist in the `ChildRemoteController` class. Instead, it's inherited from `GrandparentRemoteController`.

## Pass-Through HTML Attributes

You can add arbitrary attributes to the `<apex:outputPanel>` component that will be “passed through” to the rendered HTML. This is useful, for example, when using Visualforce with JavaScript frameworks, such as **jQuery Mobile** and **Knockout.js**, that use `data-*` attributes as hooks to activate framework functions.

To add a pass-through attribute to `<apex:outputPanel>`, prefix the attribute with “`html-`” and set the attribute value as normal:

```
<apex:page showHeader="false" standardStylesheets="false" doctype="html-5.0">

    <apex:outputPanel layout="block" html-data-role="panel" html-data-id="menu">
        <apex:insert name="menu"/>
    </apex:outputPanel>

    <apex:outputPanel layout="block" html-data-role="panel" html-data-id="main">
        <apex:insert name="main"/>
    </apex:outputPanel>

</apex:page>
```

This produces the following HTML output:

```
<!DOCTYPE HTML>
<html>
<head> ... </head>
<div id="..." data-id="menu" data-role="panel">
  <!-- contents of menu -->
</div>

<div id="..." data-id="main" data-role="panel">
  <!-- contents of main -->
</div>
</html>
```

Every attribute that begins with “html-” is passed through to the resulting HTML, with the “html-” removed.



**Note:** Pass-through attributes that conflict with built-in attributes for `<apex:outputPanel>` will generate a compilation error.

For additional considerations and examples of using HTML attributes, see [Setting Custom HTML Attributes on Visualforce Components](#) in the *Visualforce Developer's Guide*.

## Support for Internet Explorer Conditional Comments

Prior to Winter '13, HTML and XML comments were allowed in Visualforce pages but were automatically removed during page rendering. This included Internet Explorer-specific “conditional comments” that are often used to address browser compatibility issues. In Winter '13, these comments are recognized by Visualforce and passed through to the browser.

**This change is versioned, and you must update your Visualforce pages to API version 26.0 to enable this feature.**

### HTML Comments and IE Conditional Comments

Visualforce removes most HTML and XML comments from the page before rendering, without processing their contents. Internet Explorer conditional comments, however, *will* be rendered, allowing you to include IE-specific resources and meta tags.

[Internet Explorer conditional comments](#) are most commonly used to address browser compatibility issues, generally with older versions of IE. Although conditional comments work wherever they are used on the page, they are frequently placed inside the page's `<head>` tags, where they can be used to include version-specific stylesheets or JavaScript compatibility “shims.”

To place conditional comments inside a page's `<head>` tag, disable the standard Salesforce header, sidebar, and stylesheets, and add your own `<head>` and `<body>` tags:

```
<apex:page docType="html-5.0" showHeader="false" standardStylesheets="false">
  <head>
    <!-- Base styles -->
    <apex:stylesheet value="{!URLFOR($Resource.BrowserCompatibility, 'css/style.css')}" />

    <!--[if lt IE 7]>
      <script type="text/javascript"
        src="{!URLFOR($Resource.BrowserCompatibility, 'js/obsolete-ie-shim.js')}" />
    </script>
```



```

        <link rel="stylesheet" type="text/css"
            href="{!URLFOR($Resource.BrowserCompatibility, 'css/ie-old-styles.css')}"/> />
    <![endif]-->

    <!--[if IE 7]>
        <link rel="stylesheet" type="text/css"
            href="{!URLFOR($Resource.BrowserCompatibility, 'css/ie7-styles.css')}"/> />
    <![endif]-->
</head>
<body>
    <h1>Browser Compatibility</h1>
    <p>It's not just a job. It's an adventure.</p>
</body>
</apex:page>

```

Visualforce doesn't support or evaluate Visualforce tags, for example, `<apex:includeScript/>`, within standard HTML comments. However, it will evaluate the following expressions within IE conditional comments:

- Global variables, such as `$Resource` and `$User`
- The `URLFOR()` function

See [Microsoft's documentation for Internet Explorer conditional comments](#) for further details of how to use them.

## Migrating from Escaped Comments

Versions of Visualforce prior to Winter '13 allowed, in certain limited contexts, for conditional comments to be passed through to the browser when the comments were encoded using escaped "<" and ">" characters for the comment delimiters. This wasn't intended behavior, and has been corrected.

On pages that use API version 26.0 or later, escaped comments render literally on the page. The solution is to change these pages to use syntactically valid IE conditional comments.

Existing pages that use this unintended feature will, in most cases, continue to work in Winter '13 as long as the page is set to API version 25.0 or below. Customers who made use of this technique are encouraged to change their pages to use true IE conditional comments now that they are supported.

## Inline Editing for Dependent Picklists



You asked for it! This enhancement is from an [idea](#) on the IdeaExchange.

Dependent picklists support inline editing. To enable inline editing on the controlling or dependent `<apex:outputField>`, add an `<apex:inlineEditSupport>` child component to the field:

```

<apex:form>
    <apex:outputField value="{!Location.country}">
        <apex:inlineEditSupport event="ondblClick"/> />
    </apex:outputField>
    <apex:outputField value="{!Location.state}">
        <apex:inlineEditSupport event="ondblClick"/> />
    </apex:outputField>
    <apex:outputField value="{!Location.city}">
        <apex:inlineEditSupport event="ondblClick"/> />
    </apex:outputField>
</apex:form>

```

Pages must include the controlling field for a dependent picklist that is inline edit-enabled. Failing to include the controlling field on the page causes a runtime error when the page is displayed.

If you combine inline edit-enabled dependent picklists with Ajax-style partial page refreshes, refresh all fields with dependent or controlling relationships to each other as one group. Refreshing fields individually isn't recommended, and might result in inconsistent undo/redo behavior. Here's an example of the recommended way to partially refresh a form with inline edit-enabled dependent picklists:

```
<apex:form>
  <!-- other form elements ... -->

  <apex:outputPanel id="locationPicker">
    <apex:outputField value="{!Location.country}">
      <apex:inlineEditSupport event="ondblClick" />
    </apex:outputField>
    <apex:outputField value="{!Location.state}">
      <apex:inlineEditSupport event="ondblClick" />
    </apex:outputField>
    <apex:outputField value="{!Location.city}">
      <apex:inlineEditSupport event="ondblClick" />
    </apex:outputField>
  </apex:outputPanel>
  <!-- ... -->
  <apex:commandButton value="Refresh Picklists" reRender="locationPicker" />
</apex:form>
```

All of the inline edit-enabled picklists are wrapped in the `<apex:outputPanel>` component. The `<apex:outputPanel>` is rerendered when the `<apex:commandButton>` action method is fired.

## Map Attributes for Custom Components

It's now possible to assign maps to attributes of custom components. Declare the map attribute like this:

```
<apex:component>
  <!-- Attribute definitions -->
  <apex:attribute name="items" description="A map of items to be listed."
    type="map" required="true"/>

  <!-- Component implementation -->
  <ul>
    <apex:repeat value="{!items}" var="itemKey">
      <li><strong>{!itemKey}</strong> {!items[itemKey]}</li>
    </apex:repeat>
  </ul>
</apex:component>
```

You don't need to declare the specific data types for the map collection contents, it will be determined at runtime.

## Dynamic References to Lists and Maps with `<apex:inputText>`

Use dynamic references to lists and maps in an `<apex:inputText>` tag to create forms using data that isn't in your organization's custom objects. Working with a single map can be much simpler than creating a series of instance variables in an Apex controller or creating a custom object just for the form data.

Here's a Visualforce page that uses a map to hold form data for processing by a custom controller:

```
<apex:page controller="ListsMapsController">
  <apex:outputPanel id="box" layout="block">
    <apex:pageMessages/>
    <apex:form >

      <apex:repeat value="{!inputFields}" var="fieldKey">
        <apex:outputText value="{!fieldKey}"/>:
        <apex:inputText value="{!inputFields[fieldKey]}" /><br/>
      </apex:repeat>

      <apex:commandButton action="{!submitFieldData}"
        value="Submit" id="button" rerender="box"/>

    </apex:form>
  </apex:outputPanel>
</apex:page>
```

And here's a simple controller that works with the form:

```
public class ListsMapsController {

  public Map<String, String> inputFields { get; set; }

  public ListsMapsController() {
    inputFields = new Map<String, String> {
      'firstName' => 'Jonny', 'lastName' => 'Appleseed', 'age' => '42' };
  }

  public PageReference submitFieldData() {
    doSomethingInterestingWithInput();
    return null;
  }

  public void doSomethingInterestingWithInput() {
    inputFields.put('age', (Integer.valueOf(inputFields.get('age')) + 10).format());
  }
}
```

## Improved Handling of Formula Fields in <apex:outputField>

The <apex:outputField> component provides a read-only display of sObject fields. The component adapts its output to match the type of the field displayed, and the behavior is intended to match the standard Salesforce interface. Prior to Winter '13 this wasn't always the case; formula fields that used the `HYPERLINK()` function to create custom URLs weren't handled correctly by <apex:outputField>. The field value was escaped when it shouldn't have been, and instead of displaying an active link it displayed the HTML for the hyperlink. This is now fixed.

**This change is versioned, and you must update your Visualforce pages to API version 26.0 to enable the new behavior.**

The most common work around for the issue was to use <apex:outputText> with the `escape` attribute set to `false`:

```
<apex:outputText value="{!someSObject.customURL}" escape="false"/>
```

This can now be rewritten to use the more general `<apex:outputField>`:

```
<apex:outputField value="{!someSObject.customURL}"/>
```



**Warning:** Be aware that either approach might be a security risk because it allows arbitrary content, including JavaScript, that can be used in a malicious manner. This is true for all formula fields that use `HYPERLINK()`, whether displayed in Visualforce or in the standard Salesforce interface.

Formula fields are only unescaped in the above two situations. Formula fields displayed using expressions continue to be escaped. For example:

```
Here is the URL: {!someSObject.customURL}
```

When used this way, the URL field is escaped and appears as HTML in the user's browser, not as an active link.

## Changes to Escaping Behavior

Prior to the Winter '13 release, text in some Visualforce pages and components might have been generated incorrectly. This markup could contain fragments that should have been escaped (for example, the "<" character generated as "&lt;") but were not. These fragments might be interpreted by the browser as markup rather than as text in the page. This problem has been corrected for all pages with API version 26.0 or later.

Your organization might contain pages or components that depend on this incorrect processing. These pages need to be fixed. To fix them, use `<apex:outputText>` with the attribute `escape="false"` to generate unescaped text.

For existing organizations, the Critical Updates page shows a pending change. When you have corrected any pages or components that depend on the incorrect behavior, activate the change on the Critical Updates page. You must make this change by the date indicated on the Critical Updates page. See "Critical Updates Overview" in the online help for details about managing critical updates.

If your organization contains pages or components with the problem installed from managed packages, you might need to contact the package's supplier to obtain a newer, corrected, version.

## Changes to Expression Evaluation with Null Values

Expression evaluation has been changed to throw a specific exception when the value on either side of a relative comparison is null. For example, this expression causes a runtime error when `currentReservations` or `maxReservations` is null:

```
{! currentReservations < maxReservations}
```

The affected comparison operators are:

- < (less than)
- <= (less than or equals)
- > (greater than)
- >= (greater than or equals)

Previously, this programming error produced the value `null`, rather than a Boolean `true` or `false`. This often caused difficult-to-diagnose misbehavior on affected pages.

Additionally, the result of equality comparisons involving `null` values has changed to always return a Boolean `true` or `false`. The affected equality comparison operators are:

- `==` (equals)
- `!=` (not equals)


Previously, equality comparisons with `null` on either side resulted in `null`, rather than a Boolean value.

**This change is versioned. You must update your Visualforce pages to API version 26.0 to enable the new behavior.**

It's a best practice to verify that a variable isn't `null` before using it. For example, change the previous expression to:

```
{! (currentReservations != null) && (maxReservations != null) &&
(currentReservations < maxReservations)}
```

Alternatively, ensure that variables, properties, and attributes can't be `null`. For example, initialize member variables, set the default attribute on `<apex:attribute>`, and so on.

 **Note:** This change affects Visualforce expression evaluation only. Formula evaluation in custom fields is unchanged.

## Restrictions and Validation on Help URLs in `<apex:sectionHeader>`

New restrictions and validations for the `help` attribute of `<apex:sectionHeader>` address a security vulnerability with this component. A `help` URL must now be a fully-qualified, absolute, or relative URL. JavaScript URLs are no longer permitted.

This change is **not** versioned and affects all Visualforce pages. Existing pages with invalid help URLs will now display a warning icon (⚠️) instead of the usual “Help for this Page” link.

## Push Major Upgrade

Available in: <b>Developer</b> Edition	
User Permissions Needed	
To push an upgrade:	“Upload AppExchange Packages”

 **Note:** This feature is available only to eligible salesforce.com partners. For more information on the Partner Program, including eligibility requirements, please visit us at [www.salesforce.com/partners](https://www.salesforce.com/partners).

Starting with Winter '13, ISVs can push a new major version of your package directly to any subscriber. Previously, push upgrades were supported only for patches, that is, upgrades that did not add any new components. Winter '13 removes that restriction, enabling you to also push major upgrades involving significant new functionality.

**Warning:**

When you push an upgrade, you're making changes to a subscriber's organization without their explicit consent. Hence, it's important to plan ahead and exercise due caution.

## About Push Upgrades

You can push either a patch or a major upgrade. A patch only contains bug fixes and minor enhancements. In contrast, a major upgrade can include major enhancements and new features that add new components. At a high level, pushing an upgrade involves the following steps:

Pushing a major upgrade entails a higher degree of risk as it can break existing functionality in a subscriber's organization. This is because new components in the upgraded package might not be available to existing users of the package, or could overwrite users' customizations. As the app developer, it's your responsibility to protect users from any adverse impact due to upgrading. We strongly recommend you consider all potential consequences of the upgrade and take appropriate steps to prevent any problems.

When pushing a major upgrade, we recommend that you divide changes in your package into two categories:

1. Enhancements to existing features that users already have access to—Use a post install Apex script to automatically assign the relevant components to existing users. This ensures all current users of the package can continue using it without explicit action by administrators.
2. New features you're introducing for the first time—Don't use a post install Apex script to auto-assign components. This ensures your subscribers have the opportunity to decide if and when to use the new features.

Here are some additional guidelines to keep in mind when planning a push upgrade.

- Avoid changes to validation rules, formula fields, and errors thrown from Apex triggers, as they may negatively impact subscribers' integrations.
- Don't make visible changes to a package in a patch. This is because other than a change in the package version number, subscribers aren't notified of push upgrades.
- Test your upgraded package in multiple environments, replicating all relevant features of your customers' organizations, including editions, customizations, other installed packages, and permission sets.
- Schedule push upgrades at your customers' off-peak hours and outside of salesforce.com's major release windows, to minimize potential subscriber impact.
- Notify your subscribers in advance about the timing of the upgrade, its potential consequences, and any steps they need to take.

## Assigning Access to New Components and Fields

If the new version of your package includes new components or new fields in existing components, existing users of the package won't automatically have access to the new components and fields after the upgrade. This can limit them from using the new features you've added or prevent older features from working properly. By default, any new components in your package are assigned only to administrators. You have two options for ensuring that all users of the package have access to the new components and fields.

### Notify administrators to assign the appropriate permissions to all users of the package

We recommend this for any new features you're introducing. This ensures administrators have the option of deciding if and when to make the new features available.

### Assign the new components to existing users automatically, using a post install Apex script

We recommend this for enhancements to existing features. This ensures all current users of the package can continue using it without explicit action by administrators.

To assign access to new components automatically, you can use the following strategy.

1. Create new permission sets that define the default access settings for all new components and fields.
2. Include the new permission sets in the new package version.
3. Write a post install Apex script to run automatically in the subscriber organization after the package is upgraded. The script must perform these tasks.
  - a. For each new permission set, choose an existing component whose user assignment needs to be copied.
  - b. Find all profiles that can access that component.
  - c. Assign the new permission sets to every user with those profiles.



**Note:** The default permission sets for all standard profiles aren't editable. Hence, the post install script will trigger an exception if it tries to update one of these permission sets. It's important that you create a new permission set to assign access to the new components in your package.

### Sample Post Install Script for a Push Upgrade

This section shows a sample post install script that automates the assignment of new components to existing users of a package. For more information on writing a post install Apex script, see “Running Apex on Package Install/Upgrade” in the [ISVforce Guide](#).

The sample script covers a scenario in which an ISV is upgrading subscribers to a new package version that contains new Visualforce pages and a new permission set that grants access to those pages. After upgrading, existing users of the package will not have access to the new pages by default. The post install script resolves this problem by identifying which users have access to the Visualforce pages in the old version of the package and granting them access to the new pages. The script performs the following actions.

- Get the Id of the Visualforce pages in the old version of the package
- Get the permission sets that have access to those pages
- Get the list of profiles associated with those permission sets
- Get the list of users who have those profiles assigned
- Assign the permission set in the new package to those users

```
global class PostInstallClass implements InstallHandler {
    global void onInstall(InstallContext context) {

        //Get the Id of the Visualforce pages
        List<ApexPage> pagesList = [SELECT Id FROM ApexPage WHERE NamespacePrefix =
        'TestPackage' AND Name = 'vfpagel'];

        //Get the permission sets that have access to those pages
        List<SetupEntityAccess> setupEntityAccessList = [SELECT Id,
        ParentId, SetupEntityId, SetupEntityType FROM SetupEntityAccess
        where SetupEntityId IN:pagesList];
        Set<ID> PermissionSetList = new Set<ID> ();

        for(SetupEntityAccess sea : setupEntityAccessList){
            PermissionSetList.add(sea.ParentId);
        }
        List<PermissionSet> PermissionSetWithProfileIdList =
        [SELECT id,Name,IsOwnedByProfile,Profile.Name,
        ProfileId FROM PermissionSet where IsOwnedByProfile = true
        AND Id IN :PermissionSetList ];
```

```
//Get the list of profiles associated with those permission sets
Set<ID> ProfileList = new Set<ID> ();
for(PermissionSet per : PermissionSetWithProfileIdList){
    ProfileList.add(per.ProfileId);
}
//Get the list of users who have those profiles assigned
List<User> UserList = [SELECT id FROM User where ProfileId IN :ProfileList ];

//Assign the permission set in the new package to those users
List<PermissionSet> PermissionSetToAssignList = [SELECT id,Name
    FROM PermissionSet where Name='TestPermSet' AND
    NamespacePrefix = 'TestPackage'];
PermissionSet PermissionSetToAssign = PermissionSetToAssignList[0];
Set<ID> UsersSet = new Set<ID> ();
for(User us : UserList){
    PermissionSetAssignment psa= new PermissionSetAssignment();
    psa.PermissionSetId = PermissionSetToAssign.id;
    psa.AssigneeId = us.id;
    UsersSet.add(us.id);
}
}

@isTest
public static void test() {
    PostInstallClass myClass = new PostInstallClass();
    Test.testInstall(myClass, null);
}
}
```

## Known Limitations for Push Upgrade

The following are known limitations when pushing an upgrade.

- Settings for tab visibility are not carried over by permission sets. Hence, if your upgrade requires changes to tab settings, you can't implement the changes automatically using a post install script. Instead, you'll need to notify administrators to make the change manually.
- Push upgrade fails if the package contains Visualforce markup that attempts to access the `OpenActivity` entity. For example, the following code in the package will cause the push upgrade to fail.

```
<apex:outputLabel for="taskDate"
value="{!$ObjectType.OpenActivity.fields.ActivityDate.label}" />
```

As a workaround, avoid using the global `ObjectType` reference to obtain the label for `OpenActivity.ActivityDate` by specifying the label as follows:

```
<apex:outputLabel for="taskDate" value="Date" />
```

## Scheduling Push Upgrades

After you've created a patch version of your package, you can automatically deploy it to customers using a push upgrade.



**Tip:** Salesforce.com strongly recommends following this sequence for pushing package upgrades.

1. Push the upgrade to your own organizations so you can run tests and fix any bugs before upgrading subscribers.
2. When you're ready and have coordinated with your customers on their change management process, push to a small number of customer organizations. Try sandbox organizations first, if possible.
3. Once you're comfortable with the initial results, push to your wider customer base, based on your agreements with each customer.



4. Deprecate the previous version of your package in your main development organization. Replace the version on AppExchange if necessary, and update your [Trialforce](#) setup.
5. If your upgrade was a patch, after you've successfully distributed the upgrade to subscriber organizations, reintegrate those changes into your main development organization. For more information about combining patches into the main development organization, see "Working with Patch Versions" in the [ISVforce Guide](#).

For more information, see "Best Practices for Push Upgrades and Patch Versions" in the online help.

To schedule a push upgrade:

1. Log in to your main development organization.
2. Under **Your Name** > **Setup** > **Create** > **Packages**, click the name of the managed package whose upgrade you want to push. On the package detail page, click the **Versions** tab, and then click **Push Upgrades**.
3. Click **Schedule Push Upgrades**.
4. Select a package version to push from the **Patch Version** drop-down list.



**Note:** Beta versions aren't eligible for push.

5. Enter a **Scheduled Start Date**, indicating when a push upgrade should begin.
6. In the Select Target Organizations section, select the organizations to receive your push upgrade. If an organization already received a push upgrade for the selected package version, it won't appear in this list. You can select organizations by:
  - Entering a term that filters based on an organization's name or ID. Names can match by partial string, but IDs must match exactly.
  - Choosing between production and sandbox organizations from the **Organizations** drop-down list.
  - Choosing organizations that have already installed a particular version.
  - Clicking on individual organizations, or the **Select All** and **Deselect All** checkboxes.

This section lists the following information about the organization (in alphabetical order):

Field	Description
Current Version	The current package version an organization has installed.
Organization ID	The ID that uniquely identifies the organization to salesforce.com.
Organization Name	The name of the organization. Clicking this name shows the upgrade history for the organization.
Primary Contact	The name of the contact who installed the package.

7. Click **Schedule**.

While a push upgrade is in progress, you can click **Abort** to stop it.

## Viewing Push Upgrade Details

For information about a specific push upgrade that your organization sent, click **Your Name** > **Setup** > **Create** > **Packages**, click the name of the package you want to view, then click **Push Upgrades**. Clicking on the name of a **Target** takes you to the Push Upgrade Details page, which has information both for the push job and each organization that it was pushed to.

The Job Details section has the following information about the overall push upgrade (in alphabetical order):

Field	Description
End Date	The date and time the push upgrade finished.
Ignore Apex Test Failures	Whether Apex test failures that may cause the installed application not to function properly were ignored.
Scheduled By	The name of the user who initiated the push upgrade.
Start Date	The scheduled start date and time of the push upgrade.
Status	The status of the push upgrade, whether scheduled, in progress, completed, aborted, or completed with failures.
Version	The package version number that was pushed.

In the Organizations section, you can get a list of all the organizations that received a push upgrade. You can filter organizations by using the search box and entering a term that filters based on an organization's name or ID. Names can match by partial string, but IDs must match exactly. From the drop-down list, you can also filter based on the status of the push upgrade.

The list contains the following information specific to each organization (in alphabetical order):

Field	Description
Duration	The amount of time the push upgrade took.
Failure Type	Lists the type of failure that occurred (if any). If the push upgrade did fail, a possible explanation is provided in the collapsible section. If the push upgrade was unsuccessful, click <b>Retry</b> to try it again.
Organization ID	The ID that uniquely identifies the organization to salesforce.com.
Organization Name	The name of the organization. Clicking this name shows the upgrade history for the organization.
Start	The scheduled start date and time of the push upgrade.
Status	The status of the push upgrade, whether scheduled, in progress, completed, aborted, or completed with failures.

## Viewing Push Upgrade History

To view the details of all push upgrades sent by your organization, click **Your Name** > **Setup** > **Create** > **Packages**, click the name of the package you want to view, then click **Push Upgrades**.

The Push Upgrade History page lists the status of all your pending and previous push upgrades. To filter your push upgrade history:

1. Select a version number from the drop-down list. Not selecting any version is equivalent to selecting all of them.
2. Select one or more statuses from the Status list. Not selecting any status is equivalent to selecting all of them.
3. Click **Apply** to filter the list. Click **Clear** to remove all the filters.

The history displays the following information (in alphabetical order):

Column	Description
Action	While a push upgrade is in progress, you can click <b>Abort</b> to stop it.
Start Date	The scheduled start date and time of the push upgrade.
Status	The status of the push upgrade, whether scheduled, in progress, completed, aborted, or completed with failures.
Target	The name of the organization the push upgrade went to. For multiple organizations, this field only lists the first organization in the queue, followed by the number of the total selected organizations. Clicking on this link provides you with more information about the target push upgrade and each individual organization.
Version	The package version number that was pushed.

## Environment Hub—Pilot

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



**Note:** This feature is currently available through a pilot program. For information on enabling it for your organization, please contact salesforce.com.

Starting in Winter '13, you can use the Environment Hub to view details of all your Salesforce organizations from one, central location. This can make administration much easier, especially for companies that use a large number of organizations for development and testing.

From the Environment Hub, you can:

- Register all organizations currently used by your company
- Automatically detect relationships between organizations
- View details about each organization, such as its type (for example, Development, Patch, or Release) and tags
- Assign one or more tags to any organization
- Filter organizations by tag

### Setting Up the Environment Hub

You only need to set up the Environment Hub once.

1. Click **Name** > **Setup** > **Company Profile** > **Environment Hub**.
2. Click **Create Hub**.

Your current organization is now the Environment Hub. From the Hub, you can perform these actions.

- Click **Add Organization** to add another organization.
- Click the name of any organization to view details about it, including any child organizations it has.
- Click **Edit** next to an organization to update its details.

- Click **Remove** next to an organization to remove it from the Hub.
- Click **Filter** and then click the name of a tag to view a list of all organizations with that tag.
- Click **Remove Hub** to remove the Hub.

## Adding Organizations to the Environment Hub

To add an organization:

1. Click **Name > Setup > Company Profile > Environment Hub**.
2. Click **Add Organization**.
3. Enter your username and password for the organization.
4. Optionally, select **Auto-Detect Related Organizations** to add related organizations to the Hub.
5. Click **Save & Next**.
6. On the next page, optionally:
  - Edit the name of the organization
  - Write a description for it
  - Specify one or more tags, separated by commas
7. Click **Save**.

# ADDITIONAL FORCE.COM ENHANCEMENTS

## Workflow Evaluation Criteria Usability Enhancements

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

Tasks, Sites, and Email Alerts are not available in **Database.com**


The process of configuring a workflow rule involves specifying evaluation criteria. Many users found this area of the user interface confusing, so we clarified the text in the field label and options. We also reordered the options to present the simplest option first, and the most complex option last.



**Note:** The default setting hasn't changed, but it's now the last option in the list.

The evaluation criteria field now appears as follows:

Evaluate the rule when a record is:	Description
created	Evaluate the rule criteria each time a record is created. If the rule criteria is met, run the rule. Ignore all updates to existing records.  With this option, the rule never runs more than once per record.

Evaluate the rule when a record is:	Description
created, and every time it's edited	<p>Evaluate the rule criteria each time a record is created or updated. If the rule criteria is met, run the rule.</p> <p>With this option, the rule repeatedly runs every time a record is edited, as long as the record meets the rule criteria.</p> <p> <b>Note:</b> You can't add time-dependent actions to the rule if you select this option.</p>
created, and any time it's edited to subsequently meet criteria	<p>(Default) Evaluate the rule criteria each time a record is created or updated.</p> <ul style="list-style-type: none"> <li>For a new record, run the rule if the rule criteria is met.</li> <li>For an updated record, run the rule only if the record is changed from not meeting the rule criteria to meeting the rule criteria.</li> </ul> <p>With this option, the rule can run multiple times per record, but it won't run when the record edits are unrelated to the rule criteria.</p> <p>For example, suppose that for an opportunity record to meet the rule criteria, the opportunity probability must be greater than 50%. If you create an opportunity with a probability of 75%, the workflow rule runs. If you edit that opportunity by changing the probability to 25%, the edit doesn't cause the rule to run. If you then edit that opportunity by changing the probability from 25% to 75%, the edit causes the rule to run. With this last edit, the rule runs because the record is changed from not meeting the rule criteria to meeting the rule criteria.</p>

## Custom Object Truncation

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

User Permissions Needed	
To truncate custom objects:	"Customize Application"

Truncating custom objects is a fast way to permanently remove all of the records from a custom object, while keeping the object and its metadata intact for future use. Truncating is useful, for example, if you have created a custom object and filled it with test records. When you're done with the test data, you can truncate the object to purge the test records, but keep the object and put it into production. This is much faster than batch-deleting records and possibly recreating the object.

Truncating custom objects requires that you enable an organizational permission.



**Note:** You must turn on the truncate organization permission even if you had access to truncation in the pilot release.

1. Click **Your Name** > **Setup** > **Customize** > **User Interface**.
2. Select `Enable Custom Object Truncate`.

Truncating custom objects causes some irreversible changes to the truncated object and its records. After enabling the truncate permission, make sure you fully understand the implications of truncation before you use the feature. See “Truncating Custom Objects Overview” in the online help for more information.

## Retention Policy for Unused Sandboxes

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

With Winter '13, sandboxes that no one has logged into for 180 days are now deleted. Users who have created or most recently refreshed any sandbox for your organization will be notified prior to scheduling the sandbox for deletion. They will get at least three email notifications over 30 days. To keep a sandbox active and avoid email notifications, log in periodically.

## Full Sandbox Configuration

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

In Winter '13, new settings encourage you to further reduce the amount of data you copy when creating or refreshing a full sandbox. Using the minimum selections speeds up your sandbox copy.

- The **Opportunity History** option allows you to select the number of days of opportunity 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 0 days.
- The default values for the **Object History** and **Case History** options are changed from 30 days to 0 days.

## Updates to Platform Portal User Licenses

The Platform Portal User Licenses table has been updated to reflect the current permissions that can be given to a Platform portal user.

Users with this license have read and create access on ideas and questions and answers, and read-only access to documents, knowledge, price books, and products.

This table lists the permissions that can be given to Platform portal users.

	Create	Read	Update	Delete
<b>Documents</b>		✓		
<b>Ideas</b>	✓	✓		
<b>Knowledge</b>		✓		
<b>Price Books</b>		✓		

	Create	Read	Update	Delete
Products		✓		
Questions and Answers	✓	✓		

## Portal Users Not in Developer and Configuration Sandboxes

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

In an effort to improve the performance of sandbox copy, portal users are no longer copied to developer and configuration sandboxes. Contacts, which are required by portal users, weren't copied to those sandbox types. Therefore, the functionality of the sandbox remains the same without portal users. All portal licenses are still copied, so you can create portal users in your sandbox if you need them.

## Eastern Name Order for Vietnamese Locales

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

User Permissions Needed	
To view company information:	"View Setup and Configuration"
To change company information:	"Customize Application"
The available personal setup options vary according to which Salesforce Edition you have.	

The supported locales Vietnamese (vi) and Vietnamese (Vietnam) (vi\_VN) now display in Eastern name order (family name first) throughout Salesforce.

If you have existing reports run in organizations with Vietnamese or Vietnamese (Vietnam) as the locale and conditions on a person's name (such as Contact Name), you will need to update the report to have it display the new name order.

## Minor Branding Changes to User Interface Elements

In Winter '13, we made minor changes to the Aloha skin. We're now using more neutral colors for list views and related list headers. If you have Visualforce pages that overrode the styling for list views or related list headers by adding CSS to the page, your pages won't be impacted.

# Help and Training Enhancements

## Videos

- Who Sees What: This video series explains how you can control access and visibility to your organization's data.
  - ◇ [Overview](#)
  - ◇ [Organization Access](#)
  - ◇ [Object Access](#)
  - ◇ [Organization-Wide Defaults](#)
  - ◇ [Record Access via the Role Hierarchy](#)
  - ◇ [Sharing Rules](#)
  - ◇ [Field-level security](#)
- [Letting Your Salesforce Administrator Access Your Account](#) (1:42 minutes)
- [Making Your Reports Run Faster](#) (3:13 minutes)
- [Removing Users' Access to Salesforce](#) (3:45 minutes)
- [Building a Simple Flow](#) (3:29 minutes)
- [Getting the Most out of Chatter Feeds](#) (2:31 minutes)
- [Entitlements Management Setup](#) (2:46 minutes)
- [Idea Themes](#) (3:30 minutes)

## Tip Sheets and Implementation Guides

- [Service Cloud Console Implementation Guide](#)—Planning questions and implementation tips to get the most from Service Cloud Console apps.

## Developer Guides

- [Integration Patterns and Practices](#)—When you implement Salesforce, you frequently need to integrate it with other applications. Although each integration scenario is unique, there are common requirements and issues that developers must resolve.

This document describes strategies (in the form of patterns) for these common integration scenarios. Each pattern describes the design and approach for a particular scenario rather than a specific implementation. In this document you'll find:

- ◇ A number of patterns that address key “archetype” integration scenarios
- ◇ A selection matrix to help you determine which pattern best fits your scenario
- ◇ Integration tips and best practices

This document is for designers and architects who need to integrate the Force.com platform with their on-premises applications. This content is a distillation of many successful implementations by salesforce.com architects and partners.

If implemented properly, these patterns enable you to get to production as fast as possible and have the most stable, scalable, and maintenance-free set of applications possible. Salesforce.com's own consulting architects use these patterns as reference points during architectural reviews and are actively engaged in maintaining and improving them.

- [Force.com REST API Developer's Guide](#)—New information on authentication has been added in the “Understanding Authentication” section. The organization of the guide's “Reference” and “Using Rest Resources” sections has been improved.



## Workbooks

- *Service Cloud Workbook*: [PDF](#)—Gives you an introduction to creating a unified help desk for your support team.
- *Site.com Workbook*: [HTML PDF](#)—Introduces you to Site.com and shows you how to create a simple website using Site.com Studio.
- *Analytics Workbook*: [HTML PDF](#)—Updated to cover new reporting and dashboard features such as joined reports, buckets, cross filters, and dashboard filters.

## Help and Training Portal Enhancements

- You can now access the Salesforce Help and Training portal without having to log in: <http://help.salesforce.com>.
- Sandbox and Developer Edition organizations have been upgraded to use the public Help and Training portal. To contact Support, view your cases, or launch premier training courses, log in to your production organization. The login button is located in the upper right-hand corner of the help portal.
- The Help and Training portal provides a rich set of new resources and improvements, including an updated look and a more intelligent knowledge base to get you to the right answers faster. To view it, click **Help & Training** within Salesforce.
- Access to the new Help and Training portal was previously limited to English, French, German, Italian, Japanese, and Spanish users. The new help portal is now also available to users in these languages.
  - ◇ Chinese Simplified
  - ◇ Chinese Traditional
  - ◇ Danish
  - ◇ Dutch
  - ◇ Finnish
  - ◇ Korean
  - ◇ Portuguese
  - ◇ Russian
  - ◇ Swedish
  - ◇ Thai
- If your help search results include Salesforce videos hosted on YouTube, a separate tab displays them for your convenience.
- The case collaboration feature allows you to add up to 20 individuals from your organization to a case you file with salesforce.com Support to keep them up to date on the status of the case. You and case collaborators can reply to the email to add comments to the case.
- The Help and Training portal includes a new Quick Starts gadget that provides links to topics about a single area from different sources on one page. Use them to get started with reports and dashboards, Salesforce for Outlook, Data.com, and other important areas.