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Salesforce.com Winter '10 Release Notes

Note: 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.

Last updated: September 22, 2009

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About the Release Notes

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

What's Included in the Release Notes

For every new major enhancement, the Release Notes provide:

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

Beyond the major new features, the Additional Enhancements sections include a list and brief description of every other enhancement or functional change included in the latest release—everything from new profile management enhancements, to workflow enhancements, to new functions for formulas, to new chart types for reports.

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.com. 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. You can also help us make the Release Notes better by adding your comments to this IdeaExchange idea. Let us know what you think!
- IdeaExchange—We're listening to your ideas too. Winter '10 includes your top documentation-related ideas: "Released Feature in IdeaExchange linked to help and training" and "Help Text for Standard Fields." Visit IdeaExchange for a complete list of ideas coming in Winter '10.
- Force.com Platform Documentation Enhancements—To help you build apps on the platform, we've introduced several enhancements to the Force.com developer guides, like syntax highlighting in code samples, clipboard copy for code samples, and improved search on Developer Force.

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

Summary of Winter '10 Features and Impact on Salesforce.com Users

Winter '10 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 for any changes. Other features require direct action by an administrator before users can benefit from the new functionality.

The following tables summarize the Winter '10 features and whether they will have an immediate impact on users. Review the feature details for the applicable Salesforce.com Editions.

Sales Cloud Enhancements

Marketing Automation

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.
Campaign Enhancements: Dynamic Campaign Viewing		✅		
Campaign Enhancements: Campaign Summaries		✅		
Campaign Enhancements: Campaign Assistant			✅	
Campaign Enhancements: Web to Lead Campaign Member Creation Update			✅	
Campaign Enhancements: Additional Campaign Updates	✅			

Salesforce to Salesforce and Partner Relationship Management

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 to Salesforce: Connection Finder			✅	
Salesforce to Salesforce: Sharing Attachments	✅			
Salesforce to Salesforce: Logging Errors	✅			

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 to Salesforce: Auto-Accepting Person Account Records	✅			

Salesforce CRM Content

Feature	Automatically visible to all users. No setup required.	Automatically visible to all admins. No setup required.	Not automatically visible. Feature is available but requires some setup.	Contact salesforce.com to enable this feature.
Content API Access		✅		
Content API Support for Bulk Insert and Update with the Force.com Data Loader and Excel Connector		✅		
Salesforce CRM Content for Salesforce Mobile			✅	
Content Deliveries—Generally Available			✅	
Enhanced Document Viewer		✅		
Support for Microsoft Office 2007 Full-Text Search	✅			
New Field in Custom Content Reports	✅			

Salesforce Mobile

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 CRM Content for Salesforce Mobile			✅	
Mobile Support for Notes			✅	
SSL Connection	✅			

Email

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.
Managing Large Email Messages		✅		
Enhanced Security for Outbound Email Messages		✅		
Notification When Mass Email Completes		✅		
Routing Error Emails to a Chosen Email Address		✅		
Apex Triggers for Email Messages				

Other Salesforce Automation 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.
Extended Mail Merge Enhancement	✅			
New Guidelines for Testing the Relationship Groups Package	✅			

Service Cloud Enhancements

Customer Portal

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.
High-Volume Customer Portal Users				✅
Case Auto-Response Rules for the Customer Portal			✅	

Feature	Automatically visible to all users. No setup required.	Automatically visible to all administrators. No setup required.	Not automatically visible. Feature is available but requires some setup.	Contact salesforce.com to enable this feature.
Force.com Sites Support for High-Volume Customer Portal Users		✅ Automatically enabled if you have purchased High-Volume Customer Portal User licenses.		

Cases, Case Comments, Solutions, Assignment Rules, and Email-to-Case

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.
Apex Triggers for Case Comments			✅	
Enhanced `Hide Save & Close Button` Setting for Cases		✅		
Users with "Modify All Cases" or "Transfer Cases" Can Create and Assign Cases Via the API and Apex	✅			
"Public Knowledge Base" Renamed "Public Solutions"	✅			
On-Demand Email-to-Case Truncates Email Text Over 100 KB		✅		
Assignment Rules Work Properly with Apex Trigger that Update Cases or Leads During the Save Process	✅			

Community

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.
New Community Application		✅ Automatically enabled for new organizations. Existing organizations must enable this feature		
Support for Uploading Images	✅			

Custom Cloud Enhancements

Administration 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.
"Disable Outbound Messages" Profile Permission is Now "Send Outbound Messages"		✅		
Enhanced Profile Management			✅	
Profile Change Tracking for Apex Class Access and Visualforce Page Access		✅		

Analytics Enhancements

Feature	Automatically visible to all users. No setup required.	Automatically visible to all admins. No setup required.	Not automatically visible. Feature is available but requires some setup.	Contact salesforce.com to enable this feature.
New Combination Charts	✅			

Feature	Automatically visible to all users. No setup required.	Automatically visible to all admins. No setup required.	Not automatically visible. Feature is available but requires some setup.	Contact salesforce.com to enable this feature.
Allow Drill Down to Filtered Reports from a Dashboard	✅			
Show Hover Details on Charts in Reports and Dashboards	✅			
Combine Small Groups into a Single "Others" Area	✅			
Use the Chart in the Source Report for Dashboards	✅			
Set Colors for Picklist Values in Charts		✅		

Apex and 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.
Batch Apex			✅	
Apex Scheduler				✅
Custom Settings			✅	
Force.com Apex Code General Enhancements			✅	
Visualforce Enhancements		✅		

Application Distribution 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.
Package Anything		✅		
Fixing Uniqueness of Developer Name for Components		✅		

Customization 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.
Lookup Filters—Beta		✅		
Custom Field-Level Help for Standard Fields		✅		

Formula 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.
New ISBLANK and BLANKVALUE Functions		✅		
Inline Comments in Formulas		✅		
ISNUMBER Function Available in Formula Fields		✅		
Spanning Formula Limit Increase		✅		

Force.com Sites 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.
Out-of-the-Box Integration with Google Analytics		✅		
Support for Custom Service Not Available Page		✅		
Sample Error Pages Use a Static Resource		✅		
Support for High-Volume Customer Portal Users		✅		
		Automatically enabled if you have purchased		

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.
		High-Volume Customer Portal User licenses.		
Secure Web Address Displayed		✅		

Platform Documentation Enhancements

Feature	Automatically visible to all users. No setup required.	Automatically visible to all admins. No setup required.	Not automatically visible. Feature is available but requires some setup.	Contact salesforce.com to enable this feature.
Syntax Highlighting in Visualforce and Apex Code Samples	✅			
Clipboard Copy for Visualforce and Apex Code Samples	✅			
Technical Library Search on Developer Force	✅			
Documentation in UTF-8 Character Encoding	✅			

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.
Single Sign-On for Portals			✅	
Remote Access Applications			✅	

User Interface and Other Force.com Platform 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.
Ukrainian and Vietnamese—New Languages Supported				✅
Support for Internet Explorer 8	✅			

Web Services API and Developer Tools Enhancements

Feature	Automatically visible to all users. No setup required.	Automatically visible to all administrators. No setup required.	Not automatically visible. Feature is available but requires some setup.	Contact salesforce.com to enable this feature.
Force.com Development as a Service			✅	
Sandbox to Production—Change Sets Beta		✅		
Force.com Web Services API Enhancements			✅	
Fast Data Loading with New Bulk API			✅	

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.
Process Visualizer—Generally Available		✅		
Workflow Email Alerts—Override the From Email Address			✅	
Workflow System Log Enhancements		✅		
Workflow Action Changes and Deletions		✅		

SALES CLOUD

Campaign Enhancements

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

Available for an additional cost in: **Professional** Edition

Winter '10 introduces several major enhancements to campaigns, including:

Dynamic Campaign Viewing

You can now create campaign member record types and assign them to campaign members using the `Campaign Member Type` field on campaigns. The campaign member type on a campaign determines the page layout for members of that campaign. You can also summarize campaign reports using the campaign member type. For additional information, see Campaign in the changed objects section in Force.com Web Services API Enhancements.

Campaign Summaries

You can now use roll-up summary fields on campaigns to summarize campaign member statuses or campaign member custom fields.

Campaign Assistant

When you enable the Winter '10 New Campaign Member Creation Behavior update, Salesforce.com evaluates triggers, validation rules, and workflow rules for campaign members created using the campaign member import and update wizards. When you activate this update, you have the option to run workflow and define custom fields when you create campaign members using these methods.

Web to Lead Campaign Member Creation Update

When you enable the Winter '10 New Campaign Member Creation Behavior update, Salesforce.com evaluates triggers, validation rules, and workflow rules for campaign members created using Web-to-Lead and the `Campaign` field when you create or clone a lead. When you activate this update, workflow runs automatically and custom fields are automatically populated for campaign members created using these methods.

Additional Campaign Updates

- You can now upload up to 50,000 records using the Campaign Update Wizard.
- If your organization uses multiple currencies, you can now use the `Campaign Member Currency` field on campaign members—formerly the `Currency` field—to track financial figures for campaign members. Previously, this field was read-only and displayed the organization's corporate currency. Also see CampaignMember in the changed objects section in Force.com Web Services API Enhancements.
- Campaign member records created after October 20, 2009 are counted at 1 KB per record in data storage. To view your organization's data storage usage, click **Setup ➤ Data Management ➤ Storage Usage**.
- The **Update Members — Import File** option in the **Manage Members** drop-down button on campaign detail page is now called **Update & Add Members — Import File**.
- The **Update Campaign History** button is now called **Update & Add Campaign Members**.

Implementation Tips

- Create campaign member record types for each channel, for example: email, direct mail, Web response, and trade show.
- Use campaign roll-up summary fields to create RSVP counts based on member status or a custom RSVP field on campaign members.
- Use the currency field to track registration fees for an international event with participants paying with several currencies.

About Campaign Enhancements

Dynamic Campaign Viewing

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

User Permissions Needed	
To create or change record types:	"Customize Application"
To change campaign member type:	"Customize Application"
	AND
	`Marketing User` checked in your user information

Campaign member record types control the page layout for members of a campaign. For example, you can create a page layout with email custom fields and a page layout with event custom fields, then associate these layouts with campaign member record types called Email and Event, respectively.

Campaign member record types are assigned per campaign, so members of campaigns assigned the Email campaign member record type will have email custom fields, and members of campaigns assigned the Event campaign member record type will have event custom fields.

To create campaign member record types, click **Setup ➤ Customize ➤ Campaigns ➤ Campaign Members ➤ Record Types**. For more information, see "Creating Record Types" in the Salesforce.com online help.

Assign campaign member record types using the `Campaign Member Type` field on new or existing campaigns.

Campaign Summaries

> Available in: **Enterprise**, **Unlimited**, and **Developer** Editions
>
> Available for an additional cost in: **Professional** Edition

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

Create up to five roll-up summary fields on a campaign to summarize the status of the campaign's members, or the values of campaign member custom fields. For example, create a roll-up summary field on a campaign to track RSVP count based on an RSVP custom field on the campaign's members.

To create roll-up summary fields on a campaign, click **Setup ➤ Customize ➤ Campaigns ➤ Fields**, then click `New` in the Custom Fields & Relationships section. For more information, see "Adding Fields and Relationships" in the Salesforce.com online help and "About Roll-Up Summary Fields" in the Salesforce.com online help.

What is the Winter '10 New Campaign Member Creation Behavior Update?

> Available in: **Enterprise**, **Unlimited**, and **Developer** Editions
>
> Available for an additional cost in: **Professional** Edition

User Permissions Needed	
To view the Winter '10 New Campaign Member Creation Behavior update:	"View Setup"
To activate the Winter '10 New Campaign Member Creation Behavior update:	"Customize Application" AND "Modify All Data"

The Winter '10 New Campaign Member Creation Behavior update enables Salesforce.com to evaluate triggers, validation rules, and workflow rules when you create campaign members using:

- the Lead Import Wizard
- the Campaign Update Wizard
- Web-to-Lead
- the Campaign field when creating or cloning a lead

Additionally, the New Campaign Member Creation Behavior allows you to map import fields to campaign member custom fields. For example, you can now map "Attended?" and "# Questions Asked" fields in an import file to campaign member custom fields called "Attended?" and "# Questions Asked."

When you activate this update, you have the option to run workflow and map campaign member custom fields when you create campaign members using the Lead Import Wizard or Campaign Update Wizard. Workflow runs automatically and default campaign member custom field values are automatically populated for campaign members created using Web-to-Lead or the Campaign field when you create or clone a lead. For campaign members created using the Lead Import Wizard, you can now define the Campaign Member Status on a per-row basis.

If you deactivate this update, Salesforce.com does not evaluate the triggers, validation rules, and workflow rules for campaign members created using the Lead Import Wizard, Campaign Update Wizard, Web-to-Lead, or the Campaign field when creating or cloning a lead, and you can't map import fields to campaign member custom fields.

> **!** **Important:** This critical update changes the behavior of campaign members created using the campaign member wizards, Web-to-Lead, and the Campaign field when creating a new or cloned lead. Customizations to these features may behave differently when you activate this update, for example:
>
> - Lead and campaign member triggers dependent on simultaneous campaign member and lead creation won't work because campaign members are created after leads.
> - If import file data conflicts with existing campaign member triggers and validation rules, the leads and campaign members will not be inserted.
> - Apex triggers that result in leads being converted before being added to a campaign, for example, an `after insert` trigger, result in a campaign member with only contact fields populated. These records are not included in the campaign's converted lead count.
>
> If your organization has any of these customizations, read the examples to understand how you might be affected and how you can correct unintended functionality.

Salesforce.com recommends activating this update because it ensures that campaign members are created with the same rules regardless of how they are created. and the quality of your data is improved.

> **!** **Important:** Activation of this update impacts campaign member records in the user interface, API, and desktop clients, such as Connect for Outlook.

The Winter '10 New Campaign Member Creation Behavior update is automatically activated for new customers that sign up after the Winter '10 release in October 2010; if this update is automatically activated, you can't deactivate it.

If this update is not activated by default, Salesforce.com automatically activates the update on the date specified in the auto-activation column on the Critical Updates page. Before that time, Salesforce.com recommends testing the update by activating it in your Sandbox or production environment during off-peak hours. You can activate and deactivate the update an unlimited number of times.

Activating the Winter '10 New Campaign Member Creation Behavior Update

To activate the Winter '10 New Campaign Member Creation Behavior update:

1. Click **Setup ➤ Critical Updates**.
2. Click **Review** next to the New Campaign Member Creation Behavior update.

   The Critical Update detail page displays feature customizations that may be affected by activating the update.

3. Determine if activating the update will cause unintended functionality, and if so, modify your customizations.
4. Click **Activate**.
5. Optionally, enter comments and click **Activate**. Comments appear in the activation history.

Deactivating the Winter '10 New Campaign Member Creation Behavior Update

To deactivate the Winter '10 New Campaign Member Creation Behavior update:

1. Click **Setup ➤ Critical Updates**.
2. Click **Review** next to the New Campaign Member Creation Behavior update.
3. Click **Deactivate**.
4. Optionally, enter comments and click **Deactivate**. Comments appear in the activation history.

New Campaign Member Creation Behavior Examples

Workflow Rule Example

Let's say you use the Lead Import Wizard to add members to a campaign named "Newsletter." You have a workflow rule that emails a newsletter to members added to this campaign.

-   Update activated: You can choose to run workflow rules from the Lead Import Wizard. Your workflow rule is evaluated for imported members and the newsletters are sent.
-   Update deactivated: Your workflow rule isn't evaluated for members added to the campaign via the Lead import Wizard and the newsletters aren't sent.

Apex Trigger Example

Assume there's an Apex trigger on campaign members that updates the `Number Attended` campaign custom field when members with the "Attended" status are added to the "Webinar" campaign. You want to use the Campaign Update Wizard to update the status for members of this campaign.

-   Update activated: The Apex trigger fires for campaign members updated using the Campaign update Wizard, and the `Number Attended` campaign custom field is updated.
-   Update deactivated: The Apex trigger doesn't fire for members updated using the Campaign Update Wizard and the `Number Attended` campaign custom field isn't updated.

Validation Rule Example

Imagine there's a campaign member validation rule that requires users to select a custom field called "RSVP-Yes" if the member's status is "RSVP-Yes."

-   Update activated: Campaign members imported with the status "RSVP-Yes" must also have the "RSVP-Yes" field in the import file set to "TRUE," or they aren't created.
-   Update deactivated: You can import campaign members with the status "RSVP-Yes," regardless of the "RSVP-Yes" custom field value.

Campaign Member Custom Field Example

You want to map import fields called "Attended?" and "# Questions Asked" to campaign member custom fields of the same names.

-   Update activated: You can map these import fields during import to campaign member custom fields called "Attended?" and "# Questions Asked."
-   Update deactivated: You cannot map these import fields to campaign member custom fields.

Salesforce to Salesforce Enhancements

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

Salesforce to Salesforce includes the following enhancements in Winter '10:

Note: Salesforce to Salesforce Winter '10 enhancements will be available late October 2009.

Connection Finder

If your partners use Salesforce.com, it is beneficial to connect your Salesforce.com organizations so that you can share records and collaborate on relevant business processes. Before you can connect, you need to find out if your partners use Salesforce.com. Use Connection Finder to email your partners a link to a simple survey asking if they use Salesforce.com. Survey responses are recorded on the contact and account records for each partner. You can then create a custom list view or custom report to track survey responses in one convenient location. Once you know a partner's status, you can invite them to connect using Salesforce to Salesforce.

Sharing Attachments

You can now share attachment records with Salesforce to Salesforce connections. If you subscribe to the Attachment object, public attachments with the `Share With Connections` checkbox selected are automatically shared when you share the parent record.

Logging Errors

Salesforce to Salesforce now logs errors in the Connection History related list and sends email notifications with error details to the connection owner. Logging errors enforces data integrity in sharing relationships.

Auto-Accepting Person Account Records

Salesforce to Salesforce can now auto-accept person accounts. If an organization with person accounts enabled shares a person account with an organization that is not using them, a business account is created in the subscriber's organization with the person account's `Last Name` used as the `Account Name`. Any changes to `Last Name` and `Account Name` are synchronized.

About Salesforce to Salesforce Enhancements

Connection Finder

About Connection Finder

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

If your partners use Salesforce.com, it is beneficial to connect your Salesforce.com organizations so that you can share records and collaborate on relevant business processes. Before you can connect, you need to find out if your partners use Salesforce.com. Use Connection Finder to email your partners a link to a simple survey asking if they use Salesforce.com. Survey responses are recorded on the contact and account records for each partner. You can then create a custom list view or custom report to track survey responses in one convenient location. Once you know a partner's status, you can invite them to connect using Salesforce to Salesforce.

Setting Up Connection Finder

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

User Permissions Needed	
To enable Connection Finder and edit settings:	"Modify All Data"

Connection Finder allows you to email surveys to find out if your partners are Salesforce.com customers. Once you know a partner's status, you can invite them to connect using Salesforce to Salesforce.

To use connection finder, you must perform the following activities:

1. Enable connection finder in your organization.
2. Configure connection finder settings.
3. Add the **Find Connections** button to the contacts list view by customizing the search layout. Add the button to the contact detail page by customizing the contacts page layout.
4. Add the `Uses salesforce.com` field to the contacts page layout.
5. Add the `Salesforce.com Customer` field to the account page layout.

> **Note:** You can create custom reports using the `Uses salesforce.com` and `Salesforce.com Customer` fields.
>
> The `Uses salesforce.com` and `Salesforce.com Customer` fields also appear on the contact and account records in any Customer Portal or partner portal you set up.

Enabling Connection Finder

To activate connection finder:

1. Go to **Setup ➤ Customize ➤ Salesforce to Salesforce ➤ Connection Finder**.
2. Click **Edit**.
3. Select `Enabled`.
4. Click **Save**.

The connection finder settings are now available to configure. Additionally, the default email template and required related fields are created and available for use.

> **Note:** Disabling connection finder inactivates outstanding surveys and removes the **Find Connections** button. The `Uses salesforce.com` and `Salesforce.com Customer` fields remain on contact and account records, respectively.

Configuring Connection Finder Settings

You can determine the content and look of the email you send to partners.

1. Go to **Setup ➤ Customize ➤ Salesforce to Salesforce ➤ Connection Finder**.
2. Click **Edit**.
3. Select an email template.

   The default connection finder template is automatically selected. You can also create custom email templates for your survey.

   > **Note:** Custom email templates must contain the survey URL. `{!Contact.PartnerSurveyURL}` is available as a contact merge field when creating templates.

4. Optionally, select a logo using the lookup.

   > **Note:** You must first upload your logo to the Documents tab and mark it as `Externally Available Image`.

   Salesforce.com recommends adding a branded logo, as it appears at the top of the survey page. If no logo is selected, the logo portion of the survey page remains blank.

5. Click **Save**.

Finding Out if Your Partners Use Salesforce.com

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

User Permissions Needed	
To email partners asking if they use Salesforce.com:	"Send Email" (single recipient)
	OR
	"Mass Email" (multiple recipients)

If your partners use Salesforce.com, it is beneficial to connect your Salesforce.com organizations so that you can share records and collaborate on relevant business processes. Before you can connect, you need to find out if your partners use Salesforce.com. Use Connection Finder to email your partners a link to a simple survey asking if they use Salesforce.com. Survey responses are recorded on the contact and account records for each partner. You can then create a custom list view or custom report to track survey responses in one convenient location. Once you know a partner's status, you can invite them to connect using Salesforce to Salesforce.

1. In the Contact list view, select the partners you want to survey and click **Find Connections**. Alternatively, on a contact detail page, click **Find Connections**.

    Note: Find Connections doesn't appear if:

    - The contact record doesn't have a valid email address
    - The contact is not associated with an account

    If the contact is a person account, **Find Connections** appears in the list view, but shows an error message if the user clicks the button. **Find Connections** does not appear on the contact detail page.

2. Enter a subject for the email.
3. Edit the body text, supplied by the default template, or click **Change Template** to choose a different email template.

    Note: The default email template is selected by your administrator. You can select a different template or edit the body text, however, you must include the survey URL: `{!Contact.PartnerSurveyURL}`.

    You cannot edit body text if you chose multiple recipients.

4. Click **Check Spelling** to spell check the body text.
5. Click **Preview** to see what your email will look like to the recipient.
6. Click **Send**.

    Note: The number of emails you can send is determined by the daily mass email limit.

The email is sent to the selected partners, who have 90 days to respond to the survey before the link becomes invalid. The partner's response is recorded in the `Uses salesforce.com` field on the partner's contact record and the `Salesforce.com Customer` field on the account record. A closed activity is also added for the contact.

Tip: Salesforce.com recommends creating a custom list view or custom report so that you can track customer responses in one convenient location.

If the partner's organization uses Salesforce.com, the survey displays a section asking if the recipient has administrator privileges for Salesforce.com. If not, the recipient can optionally provide their administrator's contact information and a new contact record is created in Salesforce.com for that user, unless one already exists.

Note: This section doesn't show up if a contact for that partner, whose `Uses salesforce.com` value is `Yes, admin user`, already exists in your organization .

Tips and Additional Considerations for Connection Finder

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

* Create a custom list view or custom report to track your survey responses in one location. Add the `Uses salesforce.com` field to contact list views and reports. Add the `Salesforce.com Customer` field to account list views and reports.
* Create translated versions of the default connection finder template to send to international partners. To do so, clone the default template, make the necessary language changes, and include the survey URL: `{!Contact.PartnerSurveyURL}`. You can then choose the appropriate template when sending out requests to your partners.

  Note: The survey page is in English, but includes a `Language` drop-down so that recipients can view the survey in their native language.

* When creating validation rules for the `Uses salesforce.com` field, use the API value, not the label seen in the user interface. For example:

```
CONTAINS(TEXT(UseSalesforce ), 'YesNotAdmin')
```

`Uses salesforce.com` drop-down value	API value
No	No
No Response	NoResponse
Not Sure	NotSure
Yes, admin user	YesAdmin
Yes, not admin user	YesNotAdmin

* If a partner provides details for their Salesforce.com administrator, Salesforce.com checks to see if there is already a contact in your Salesforce.com organization with that email address. If so, the `Uses salesforce.com` field on the contact record is set to `Yes, admin user`. If the field is already set to `No`, it is not updated.

  Note: A partner can only add an administrator if one does not already exist as a contact in your organization.

- The `Salesforce.com Customer` field is dependant upon the values in its contacts' `Uses salesforce.com` field.

Sharing Attachments

Available in: **All** Editions

Sharing Attachments

You can share attachments as child records of any supported object. Attachments are automatically accepted by a connection, providing the following criteria are met:

- The Attachment object type is published to your connection and your connection is subscribed to the object.
- The parent record for the attachment is shared with the connection.
- The attachment is not marked "Private."
- The `Share With Connections` checkbox on the attachment is selected.

To stop sharing attachments:

1. From the parent record's detail page, click **Edit** next to the attachment.
2. Select the `Private` checkbox. Alternatively, deselect the `Share With Connections` checkbox.
3. Click **Save**.

Logging Errors

Available in: **All** Editions

Salesforce to Salesforce now logs details in the Connection History related list for errors that occur as a result of the following activities:

- Records manually accepted
- Records automatically accepted
- Records updated by Connection User

An email containing details about the error(s) is also sent to the connection owner.

To view the list of errors:

1. Click the Connections tab.
2. On the Connections subtab, click the name of the connection that you want to view.
3. On the connection detail page, view the Connection History related list.
4. To export the connection history, select **Download connection history (csv)**.

Salesforce CRM Content Enhancements

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

Salesforce CRM Content enhancements in Winter '10 include:

Content API Access

The ContentDocument, ContentDocumentHistory, ContentVersion, ContentVersionHistory, ContentWorkspace, and ContentWorkspaceDoc objects are now accessible in the API.

Content API Support for Bulk Insert and Update with the Force.com Data Loader and Excel Connector

Bulk insert and update documents into Salesforce CRM Content via the API and the Force.com Data Loader or Excel Connector.

Mobile Support for Salesforce CRM Content

Salesforce CRM Content is available in Salesforce Mobile. Users can share content with customers and colleagues from the mobile application when they're away from their desks.

General Availability of Content Deliveries

Content deliveries are now generally available. Enhancements include encrypted delivery URLs and the ability for administrators to control which users can create deliveries. If you do not have access to the Content Delivery feature, contact Salesforce.com Customer Support to activate it. For more information, see Content Deliveries—Generally Available on page 26.

Enhanced Document Viewer

New navigation options make viewing documents in content deliveries and Salesforce CRM Content easier than ever.

Support for Microsoft® Office 2007 Full-Text Search

The Salesforce CRM Content search engine supports full-text search for all Microsoft Office 2007 Word, Excel, and PowerPoint files.

New Field in Custom Content Reports

The `Content Type` field is available in custom content reports.

About Salesforce CRM Content Enhancements

Content API Access

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

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

Content API objects allow you to query content documents, versions, and workspaces and also create and upload document versions into Salesforce CRM Content. For more information, see the *Force.com Web Services API Developer's Guide*.

Content API Support for Bulk Insert and Update with the Force.com Data Loader and Excel Connector

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

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

Perform document migrations or bulk edits in Salesforce CRM Content via the API and the Force.com Data Loader or Excel Connector. For more information, see the *Force.com Web Services API Developer's Guide*.

Mobile Support for Salesforce CRM Content

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

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

Salesforce CRM Content is available in Salesforce Mobile. Users can share content with customers and colleagues from the mobile application when they're away from their desks. To enable Salesforce CRM Content for the mobile application, mobilize the content object and specify which content records are synchronized to the mobile device. For more information, see Salesforce CRM Content for Salesforce Mobile.

Enhanced Document Viewer

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

The document viewer allows users to view a document without downloading it, whether it be in a content delivery sent to a prospect, partner, or colleague, or internally in Salesforce CRM Content. The document viewer has three modes: the Preview tab on the content details page (preview mode), the content delivery URL (delivery mode), and full screen mode, which displays when you click the full-screen option on the content details page or in a content delivery. In Winter '10 the document viewer has been updated to provide the following capabilities for easy navigation :

- In addition to using the next page (▶), previous page (◀), first page (◀◀), and last page (▶▶) icons on the document tool bar, you can navigate page-by-page through a document by right-clicking and choosing **Next Page** and **Previous Page**. The right-click menu is not available in preview mode.
- You can jump directly to a page by entering the page number and clicking Enter. This option is not available in full-screen mode.
- From the right-click menu you can choose the **Fit Width** option to expand the width of the document or the **Fit Full Page** option to view the whole page of the document. The fit width icon (↦↤) and fit full page icon (⛶) are also available on the tool bar.
- From the right-click menu you can choose the **Full Screen** option to view the document in full screen mode or the **Exit** option to exit full screen mode. The full screen icon (▭) and exit icon (✕) are also available on the tool bar.
- From the right-click menu you can **Zoom In** or **Zoom Out**. The zoom-in icon (🔍) and zoom-out icon (🔍) are also available on the tool bar.
- You can use the scroll bar to move continuously through a document without needing to click the **Next Page** and **Previous Page** icons. Continuous scrolling is not available in preview mode or for PowerPoint documents in any mode.
- You can use the keyboard arrow keys to navigate page-by-page through a document. Click on the document viewer and use the keys as follows:

  - Right-arrow key: moves a PowerPoint document forward one slide and moves a PDF, Word, or Excel document forward one page.
  - Left-arrow key: moves a PowerPoint document backward one slide and moves a PDF, Word, or Excel document backward one page.
  - Up-arrow key: moves a PowerPoint document forward one slide and scrolls a PDF, Word, or Excel document up the page.
  - Down-arrow key: moves a PowerPoint document backward one slide and scrolls a PDF, Word, or Excel document down the page.

  Navigating with keyboard-arrow keys is not available in preview mode.

To enable these features for your organization, click **Setup ➤ Customize ➤ Salesforce CRM Content ➤ Settings** and select `Enable enhanced document viewer`.

Support for Microsoft Office 2007 Full-Text Search

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

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

Previously, when you searched for a term in Salesforce CRM Content, the search engine would perform a full-text search of the following file types: rich-text format (RTF), UTF-8 encoded TXT, HTML, XML, Adobe® PDF, and Microsoft Office 97 through Microsoft Office 2003 Word, Excel, and PowerPoint files. Search results containing Office 2007 files would only be returned if the search term was found in metadata. Now, full-text search is also supported for Office 2007 Word, Excel, and PowerPoint files.

New Field in Custom Content Reports

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

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

Content types are the containers for custom fields in Salesforce CRM Content; content types determine which fields are available during the publishing process and how the fields display on the content details page.

In Winter '10 you can generate a report that tells you which content type is assigned to each piece of content. To generate a report, go to the Reports tab and choose **Create New Custom Report ➤ Salesforce CRM Content ➤ Content Report**.

Content Deliveries—Generally Available

Available in: **All** Editions

A *content delivery* allows you to easily convert documents such as Microsoft® PowerPoint and Word files into an optimized web-based version for easy online viewing. Once you create your delivery, you can send its encrypted URL to any recipient, such as leads, customers, partners, and colleagues, and then track how often the content is viewed or downloaded. In addition to tracking, content deliveries provide several benefits over sending files as attachments, such as giving you control over how long the delivery is available to viewers and whether a viewer can download a file or see it online only. Content deliveries can be created from the Content Deliveries related list on leads, accounts, contacts, opportunities, cases, campaigns, or custom objects. Salesforce CRM Content users can also create a content delivery from the content details page or the Related Content related list.

General Availability Enhancements

Enhancements to content deliveries in Winter '10 include:

- Encryption of content-delivery URLs for enhanced security.
- A "Deliver Uploaded Files and Personal Content" user permission that allows non-Salesforce CRM Content users to create and use content deliveries. If this perm is enabled in a Salesforce CRM Content user's profile, that user can create and send content deliveries from his or her personal workspace. The "Deliver Content" permission is on by default in all standard profiles.
- A "Deliver Content" privilege in workspace permissions that allows administrators to control access to content deliveries at the shared-workspace level.
- An updated document viewer that gives delivery recipients intuitive controls and easy navigation for viewing content deliveries. See Enhanced Document Viewer on page 25.

Implementation Tips

- To ensure quality of service, the total number of content-delivery views allowed within a 24-hour period is limited to 10,000. Also, the amount of bandwidth allocated to content deliveries is limited to 1 GB within a 24-hour period. If a recipient tries to view a delivery when a rate limit has been exceeded, a notification displays that asks the viewer to try again later. Salesforce.com may be able to increase rate limits on an exception basis. For more information, contact your sales representative.
- When you create a content delivery, Salesforce.com copies the original file and creates a new version of that file especially for online viewing. Note the following information concerning supported file types:

  - Microsoft® Office 97 through Microsoft Office 2003 Word, Excel, and PowerPoint files are supported for online views
  - Adobe® PDF files are supported for online views
  - JPG, BMP, GIF, and PNG are supported for online views
  - Microsoft Office 2007 Word, Excel, and PowerPoint files are not supported for online views
  - Any document over 25 MB is not supported for online views

  You can create a content delivery with any file type, but if the file type is not supported for online viewing, your recipient can only download the document in its original file format.
- Always preview your content delivery before sending the URL to recipients. In some cases, formatting in the original file such as colors and non-standard fonts may not display properly in the online version. If you are not happy with the quality of the online version, the content-delivery wizard gives you the option of making your content available for download in its original file format.
- Content deliveries require Adobe Flash version 9.0.115. If a recipient does not have Flash installed, a download option displays.
- Customer Portal and partner portal users cannot create content deliveries.
- Only the creator of a content delivery can delete the delivery record or edit details such as the expiration date.
- Each time a content delivery's URL is clicked, Salesforce.com records the click as one view and distinguishes between internal and external views. An internal view is a view by a Salesforce.com user, for example, clicking the delivery URL on the delivery detail page or the View option on the Content Deliveries related list is an internal view. The Content Deliveries related list provides a count of all views for each delivery. Open the delivery details page to see information about a specific view.

  > **Note:** For password-protected content deliveries, a view is recorded when the recipient clicks on the delivery URL regardless of whether he or she enters the password and views the delivery.

- To delete a Salesforce CRM Content file that is associated with a content delivery, first delete the content delivery.
- Salesforce CRM Content users can deliver content from shared workspaces or a personal workspace.

Best Practices

- After creating a content delivery, always preview it before sending the URL to your recipients to ensure that the formatting in the original file displays properly in the online version. For example, colors and non-standard fonts may not display

properly in the preview player. If you are not happy with the quality of the online version, click **Previous** and choose to make your content available in its original file format or as a PDF file only. Your recipients will be able to download the file, and you can track whether the file was downloaded on the delivery detail page.

- Animation and timings in PowerPoint files are not supported in the content delivery's online version. Hyperlinks in all file types are also unsupported. See the implementation tips for a complete list of supported file types.
- Because content-delivery URLs can be sent to leads, customers, or any unauthenticated user, Salesforce recommends requiring password protection if your users will send confidential documents via content delivery. The options below allow you to select an organization-wide default for content-delivery password protection.
- If you are a Salesforce CRM Content user and want recipients of your content delivery to always see the latest version of a file rather than the version available on the delivery-creation date, open the delivery detail page and click **Edit**. Select the `Content Delivery Opens Latest Version` checkbox.
- If you select `Notify Me of First View or Download`, you will receive an email when the content delivery is viewed for the first time.

About Content Deliveries

Setting up Content Deliveries

User Permissions Needed	
To enable content deliveries:	"Customize Application"

To enable content deliveries for your organization:

1. Click **Setup ➤ Customize ➤ Content Deliveries ➤ Settings** and select the `Enable content deliveries` checkbox. If you do not have access to the Content Delivery feature, contact Salesforce.com Customer Support to activate it.
2. Choose a default option for content-delivery passwords. If you choose to require a password, users who create a content delivery receive a password when the delivery is generated; users must send the password and the delivery URL to delivery recipients. Delivery recipients are prompted for the password when they click the content-delivery URL:

   - **Password protection is optional and defaults to OFF**—If this option is selected, users can choose to require a password when they create a content delivery, but the `Require Password to Access Content` field on the create-delivery wizard is not checked by default.
   - **Password protection is optional and defaults to ON**—If this option is selected, the `Require Password to Access Content` field on the create-delivery wizard is checked by default. Users can uncheck the option if they do not want to require a password.
   - **Password protection is required**—If this option is selected, a password is generated each time a content delivery is created. Users cannot opt out of the password requirement.

     Note: Content-delivery passwords display with the content-delivery URL when the delivery is created. You can also access the password on the delivery detail page for the life of the content delivery.

When content delivery is enabled, all users should add the Content Deliveries related list to their page layouts for leads, accounts, contacts, opportunities, cases, campaigns, or custom objects. All Salesforce CRM Content users will see a **Deliver**

Content option on each content details page. For detailed instructions on creating a content delivery, see "Creating Content Deliveries" in the Salesforce.com online help.

Creating Content Deliveries

To create a new content delivery:

1. From the Content Deliveries related list, Related Content related list, or the content details page, click **Deliver Content**.
2. Upload a file or confirm the file name. If you are a Salesforce CRM Content user, search for the content in your workspaces that you want to deliver. Salesforce CRM Content users can search for content in shared workspaces or a personal workspace.
3. Optionally, modify the `Delivery Name` field. This is the name that identifies your content delivery in Salesforce.com. We recommend using a name that will make the delivery easily distinguishable from other deliveries on the same record. The default delivery name includes the file name and today's date.
4. Select the delivery methods that determine how your content can be viewed. The options that appear depend on the file format you uploaded.

    *   Choose `Allow Recipient to View in the Browser` to create an online version of the file that recipients can view in their browser.
    *   Choose `Allow Recipient to Download as [file type] file` to allow the recipient of your content delivery to view the content in its original format. For example, if you uploaded a Microsoft® Word file, this field will be `Allow download as .doc file`.
    *   Choose `Allow Recipient to Download as PDF` to create a .pdf version of the file. This option is only available for Microsoft® PowerPoint, Word, and Excel files.

5. Select `Notify Me of First View or Download` if you want to receive an email the first time your recipient clicks the content-delivery URL.
6. If the content you are delivering is time-sensitive, select the `Remove Access to Content on` checkbox and enter an expiration date. By default, the expiration date is 90 days from the current date. After creating your content delivery, you can change the expiration date at any time on the delivery detail page.
7. Optionally, select `Require a Password to Access Content`. When you create the content delivery you will receive a password to include with the delivery URL that you send to your recipients. The password is available for the life of the delivery on the delivery detail page.
8. Optionally, use the lookup to associate your content delivery with a Salesforce.com record. The record you were viewing when you clicked **Deliver Content** is selected by default.
9. Click **Save & Next**. Your delivery will usually be ready within a few moments, but you can click **Notify Me** to exit the content delivery wizard and be notified via email when your content delivery is ready.
10. If you did not exit the content delivery wizard, click **Preview** to verify that you are satisfied with the delivery.

    > **! Important:** Formatting in the original file may not display correctly in the online version. If you chose `Allow Recipient to View in the Browser`, preview your content delivery before sending its URL to your recipients. If you are not happy with the quality of the online version, click **Previous** and choose to make your content available in its original file format or a PDF only.

11. Copy and paste the delivery URL and, if applicable, its password into an email or instant message for delivery. The URL is available on the delivery detail page. For more information, see "Viewing and Editing Content Deliveries" in the Salesforce.com online help.

Viewing and Editing Content Deliveries

User Permissions Needed	
To view the delivery detail page:	Access to the associated content details page in Salesforce CRM Content OR Access to the record associated with the content delivery
To edit, expire, or delete a content delivery:	Owner of the record OR "Modify all Data"

On the Content Deliveries related list or the Content Deliveries list page, click the name of a content delivery to open the detail page.

Viewing Content Delivery Details

The delivery detail page provides all the information associated with a content delivery, including the URL required to access the content delivery, the number of times the delivery has been viewed, and the delivery settings. For a description of each field, see "Content Delivery Fields" in the Salesforce.com online help.

Editing Content Delivery Details

Click **Expire Now** to immediately remove access to the content delivery. Click **Edit** to modify details such as the delivery methods, expiration date, or the record the delivery is associated with. For a description of each field, see "Content Delivery Fields" in the Salesforce.com online help.

Deleting Content Deliveries

Click **Delete** to remove access to the content delivery and delete the delivery record from Salesforce.com. Salesforce CRM Content users cannot delete files that are associated with a content delivery until the content delivery is deleted.

Tracking Content Deliveries

Each time a content delivery's URL is opened, Salesforce.com records the event as a *view*. The Views related list on the content delivery detail page lists every view associated with the delivery. Information about the view includes the date and time, whether the view was by an internal (Salesforce.com) user, and whether the view included a download. If the content delivery provided the ability to download the file in its original file format or as a PDF file, the `File Downloaded` flag indicates that a download occurred, but you cannot distinguish between file types.

Content Delivery Fields

Field	Description
`Allow Recipient to View in the Browser`	If checked, the content delivery can be viewed online in a custom Web page. On the delivery details page, this field is labeled `Allow View in the Browser`.

Field	Description
Allow Recipient to Download as PDF	If checked, the content delivery converts Microsoft® Word, Excel, and PowerPoint files into PDF files and gives the recipient the option of downloading the PDF. If the file you uploaded was not a PDF, Word, Excel, or PowerPoint file, this option does not appear in the create-delivery wizard. On the delivery details page, this field is labeled `Allow Download as PDF`.
Allow Download in Original Format	If checked, the content delivery allows recipients to download the original file. In the create-delivery wizard, this field is called `Allow Recipient to Download as [file type]` where `[file type]` is the original file's file type, such as .ppt, .pdf, or .doc.
Author	For Salesforce CRM Content files, the user who published the file. (Read only)
Content Delivery Name	The name assigned to the content delivery. By default, the `Content Delivery Name` includes the file name and the creation date.
Content Delivery Opens Latest Version	For Salesforce CRM Content files, this flag indicates that the recipient of a content delivery sees the most current version of a file. For example, if a file is updated between the delivery-creation date and today's date, a recipient who views the delivery today sees the newest version.
Content Delivery Expires	A flag that indicates whether access to the content delivery will expire on the expiration date. In the create-delivery wizard, this flag corresponds to the checkbox next to the `Remove access to content on` field.
Created By	The user who created the content delivery, including creation date and time. (Read only)
Description	For Salesforce CRM Content files, the description provided when the file was published. (Read only)
Expiration Date	The date on which the content delivery can no longer be viewed. In the create-delivery wizard, this is the date entered in the `Remove Access to Content on` field.
File Downloaded	A flag that indicates whether a file in the content delivery was downloaded. For example, if a content delivery includes options to view the content in the browser, download the content in its original file format, and download the content as a PDF file, this flag is checked if the recipient downloads the original file or the PDF file. (Read only)
Internal View	A flag that indicates whether a Salesforce.com user viewed the content delivery. A view is considered internal if the user opens the delivery URL from within Salesforce.com, for

Field	Description
	example by clicking **View** on the Content Deliveries related list or clicking the delivery URL on the delivery detail page. If the user copies the URL and pastes it into his or her browser, the view is considered external. (Read only)
Last Modified By	The user who last modified the content delivery, including modification date and time. (Read only)
Last Viewed	The date and time on which the content delivery was last viewed. A view is one click of the content-delivery URL. (Read only)
Notify Me of First View or Download	If checked, the user who created the content delivery receives an email notification the first time the content delivery URL is clicked.
Owner Name	The user who owns the content delivery. (Read only)
Related To	The record that the content delivery is associated with, such as an account, opportunity, or custom object. Users with sharing access to the record can click it to view more details.
Require Password to Access Content	If checked, the recipient must enter the provided password before viewing the content delivery. The password appears when the content delivery is generated and for the life of the delivery on the delivery detail page.
Title	For Salesforce CRM Content files, the title of the file included in the content delivery. (Read only)
View Count	Total number of views for the content delivery, including internal and external. (Read only)

Salesforce Mobile Enhancements

Winter '10 includes many new features that improve the capabilities of Salesforce Mobile. These include:

- Salesforce CRM Content for Salesforce Mobile
- Mobile Support for Notes
- SSL Connection

About Salesforce Mobile Enhancements

Salesforce CRM Content for Salesforce Mobile

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

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

With Winter '10, you can take your documents on the go. Preview presentations, sales literature, and other documents in the mobile application, then send them to colleagues, customers, or prospects. Preview is available for certain document types, and delivery is available depending on user permissions.

> **Note:** Mobile users must upgrade to the latest version of Salesforce Mobile and have a Salesforce CRM Content license to use Salesforce CRM Content. To find out how to upgrade the mobile application on a BlackBerry smartphone or iPhone, refer to the topic titled "Upgrading Salesforce Mobile" in the Salesforce Mobile User Guide for BlackBerry or the Salesforce Mobile User Guide for iPhone.

Implementation Tips

- Content record information is synchronized to the device; however, the files associated with the content records are not. This allows users to deliver content from the mobile application even when a file is too large to be downloaded to a mobile device.
- Users can't search for a specific piece of content in the mobile application. They can only share the content available on the Content tab, which is automatically synchronized to their device based on the filters in their assigned mobile configuration.
- Users can't view a list of their subscribed content in the mobile application. They also can't filter the list of records on the Content tab based on a particular workspace.
- While users can preview and share content from the mobile application, they can't update the file associated with a content record. If they have the required permissions, they can edit the fields on the content detail page.
- Users must be in wireless coverage to preview and deliver content. Without a wireless connection, they can only view the content detail page.
- Content is only supported by the BlackBerry and iPhone mobile client applications.
- Content is not available in Mobile Lite, which is the free version of the mobile application.
- You can't block mobile permissions for the content object. Currently, the content object in the mobile application is read-only.
- You can't edit the mobile page layout for the content object. The content detail page in the mobile application is hard-coded to display only a few fields.

Setting Up Mobile Content

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

You can set up the mobile application so that your users are able to share content with customers and colleagues directly from their mobile devices. When you mobilize the content object in your organization's mobile configurations, the Content tab appears in the mobile application.

To set up Content for the mobile application:

1. Click **Setup ➤ Mobile Administration ➤ Mobile Configurations**, and then click the name of a mobile configuration.
2. In the Data Sets related list, click **Edit**.
3. Click **Add...**.
4. In the popup window, select Content, then click **OK**.
5. Use field filters to specify which content records are synchronized.

   Because users can't search for content in the mobile application, it's essential to set up filters that make important content available on the device. You can't create filters based on workspaces or subscriptions, but here are a few options for setting up useful filter conditions:

   - **Date:** Filter on the `Last Modified Date`, `Content Modified Date`, or `Created Date` fields. Use special date values like LAST 90 DAYS or LAST 180 DAYS to ensure that recently updated content records are synchronized.
   - **Owner:** Filter on the author if certain people in your organization are responsible for publishing content.
   - **File Type:** Filter on certain types of documents. For example, your sales team might generally be interested in presentations or PDF documents.
   - **Custom Fields:** If you created custom content fields that help you categorize your content, filter on the custom fields. For example, if you built a `Functional Use` field with picklist values, you could set up a filter condition where `Functional Use` equals `Sales`.

6. Optionally prevent content records from consuming all the memory on a mobile device by selecting the second radio button under Set Max Record Limit and entering the maximum number of content records this configuration can transfer to mobile devices. Use the Order By and Sort drop-down lists to specify which records are synchronized if the data size limit is exceeded.
7. Click **Done** when you're finished.
8. Optionally modify other mobile configurations and mobilize the content object.

Using Salesforce CRM Content in Salesforce Mobile

The Content tab lets you share content with customers and colleagues directly from the mobile application. The Content tab displays the content records that are automatically synchronized to your device. While the content record information is synchronized, the actual files associated with the content records are not. This lets you deliver content from the mobile application even when a file is too large to be downloaded to your device.

To display content records, open the Content tab. You can't search for content records on the Content tab. You also can't view a list of your subscribed content in the mobile application or filter the list of records based on a particular workspace. If

you need a content record that isn't synchronized to your device, contact your Salesforce.com administrator and request an adjustment to your mobile configuration.

Viewing Content Details

To view information about a file, select a file name in the Content tab to open the content detail page. The preview option is available on the content detail page depending on the type of content you are viewing and your permissions.

In the mobile application, you can't download a file to your device, upload a new version of the file, or subscribe to a content record.

Previewing Content

You can preview content before delivering it, but your device must have a wireless connection. To preview content:

iPhone

1. Open a content record, then tap **Preview**.

   • For PowerPoint files, the preview page displays a viewer that lets you navigate between the slides in the presentation.
   • For other file types, the preview page displays the first page of the content.
   • Some file types, like .exe files, can't be previewed.

2. If the preview displays only the first page of content, tap **Open** to view it in Safari. Safari can display many file types, such as .pdf, .doc, .xls, and .ppt.
3. Tap **Done** when you're finished previewing the content, or tap **Send** to deliver the content.

BlackBerry

1. Open a content record, then select **Preview Content** from the menu.
2. Open the menu and click **Preview Content**.

   The preview page opens in a temporary tab called Preview Content.

   • For PowerPoint files, the preview page displays a viewer that lets you navigate between the slides in the presentation.
   • For other file types, the preview page displays the first page of the content.
   • Some file types, like .exe files, can't be previewed.

3. Open the menu and click **Close Browser** when you're finished previewing the content, or click the **Send** button to deliver the content.

Delivering Content

Creating a content delivery in the mobile application sends the content's encrypted URL to any recipient, such as leads, customers, partners, and colleagues. To deliver content:

iPhone

1. Open a content record, then tap **Preview**.
2. Tap **Send**.

3. Tap **Send Email**.

4. Tap the **To** field to select a Salesforce.com user, contact, or lead.

   To deliver content to a personal contact, skip this step. When you preview the email, you can select a recipient from your personal contacts.

5. Tap **Next** to preview the email.

6. To deliver content to a personal contact, type one or more names or email addresses in the `To` or `Cc` fields, or tap **+** and choose a contact to add the contact's email address.

7. Optionally personalize the subject and body of the message. Don't edit the delivery URL.

   To change the Salesforce.com recipient, tap **Cancel** to return to the previous page.

8. Tap **Send**.

BlackBerry

1. Open a content record, then select **Preview Content** from the menu.

   The preview page opens in a temporary tab called Preview Content.

2. Click the **Send** button.

3. Click **Send Email**.

4. Open the menu and click **Add To:**.

5. Select a recipient:

   • Click **Contact** to select a Salesforce.com contact.
   • Click **Lead** to select a prospect you entered in Salesforce.com.
   • Click **User** to select a co-worker that uses Salesforce.com.
   • Click **Enter a New Address** to manually type the email address.
   • Click **Look Up Address Book** to select a recipient from your BlackBerry address book.

6. Optionally add carbon copy email addresses by opening the menu and selecting **Add Cc:** or **Add Bcc:**.

   Your email address is automatically added to the `Cc` field when you create the content delivery.

7. Optionally personalize the subject and body of the message. Don't edit the delivery URL.

8. Open the menu and click **Send**.

9. Open the menu and click **Close Browser** to close the preview page and return to the Content tab.

Mobile Support for Notes

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

Winter '10 provides support for the notes object in Salesforce Mobile. After administrators set up their mobile configurations to include the notes object, users can access the Notes related list in the mobile application.

Note: Mobile users don't need to upgrade to the latest version of the client application to use the Notes feature. After you enable notes in your organization's mobile configurations, the Notes related list is available to users the next time the device synchronizes with Salesforce.com.

Setting Up Mobile Notes

To make notes available to mobile users, add the notes object to your organization's mobile configurations. To enable notes for the mobile application:

1. Click **Setup ➤ Mobile Administration ➤ Mobile Configurations**, and then click the name of a mobile configuration.
2. In the Data Sets related list, click **Edit**.
3. In the data tree, click the name of a parent data set. Only certain objects can have a Notes related list, such as accounts, contacts, and opportunities.
4. Click **Add...** to add a child data set.
5. In the popup window, select Note, then click **OK**.
6. Continue adding notes as a child data set until you're finished.
7. Click **Done**.

Working with Notes in the Mobile Application

You can create, view, and edit notes from the Notes related list for certain types of records, such as accounts, contacts, leads, opportunities, and products.

In the iPhone mobile application:

*   To access the Notes related list, open a record, scroll to the bottom of the detail page, then tap **Notes** in the Related Lists section.
*   To view the contents of a note, tap the name of the note.
*   To create a note, open the Notes related list, then tap **+**. Specify a description of the note and its contents, then tap **Save**.
*   To edit a note, open it, then tap **Edit**. Make the changes you want, then tap **Save**.
*   To delete a note, open it, tap **Delete**, then tap **Delete** again to confirm.
*   To clone a note, open it, then tap **Clone**. Make the changes you want, then tap **Save**.
*   To reassign a note, open it, then tap **Change Owner**. Select another user, then tap **Save**.

In the BlackBerry mobile application:

*   To access the Notes related list, open a record, then select **Note** from the menu. You can also scroll to the bottom of the detail page and click **Note** in the Related Lists section.
*   To view the contents of a note, click the name of the note.
*   To edit a note, open it or highlight it in the Notes related list, then select **Edit** from the menu. Make the changes you want, then select **Save** from the menu.
*   To create a note, open the Notes related list, then select **New** from the menu. Specify a description of the note and its contents, then select **Save** from the menu.

In the Windows Mobile application:

*   To access the Notes related list, open a record, then select **Actions ➤ Related To ➤ Note**. You can also scroll to the bottom of the detail page and select **Note** in the Related Items section.
*   To view the contents of a note, select the note's name.
*   To edit a note, open it or highlight it in the Notes related list, then select **Actions ➤ Edit**. Make the changes you want, then select **Save**.
*   To create a note, open the Notes related list, then select **Actions ➤ New**. Specify a description of the note and its contents, then select **Save**.

SSL Connection

With Winter '10, Salesforce Mobile uses Secure Sockets Layer (SSL), the well-known industry standard protocol, to initiate a secure connection to the mobile server. While the previous mechanism used government-class security, it was proprietary. SSL is a proven and widely accepted protocol.

Note: If your organization uses a BlackBerry Enterprise Server, your BlackBerry administrator might need to open port 443.

Additional Sales Cloud Enhancements

Email Enhancements

Managing Large Email Messages

> Available in: **Enterprise**, **Unlimited** and **Developer** Editions
>
> Use of email services in installed AppExchange packages also available in: **Group** and **Professional** Editions

To allow Salesforce.com email services to accept large email messages, you can now configure email services to truncate email body text, body HTML, and text attachments to 100,000 characters (approximate). See "Defining Email Services" in the Salesforce.com online help.

Routing Error Emails to a Chosen Email Address

> Available in: **Enterprise**, **Unlimited** and **Developer** Editions
>
> Use of email services in installed AppExchange packages also available in: **Group** and **Professional** Editions

When Salesforce.com email services cannot process an incoming email message, you can now send the resulting error email message to a chosen address instead of notifying the sender. See "Defining Email Services" in the Salesforce.com online help.

Enhanced Security for Outbound Email Messages

> Available in: **All** Editions

Salesforce.com now supports Transport Layer Security (TLS) options for outbound email messages to chosen domains. See "Configuring Deliverability Settings" in the Salesforce.com online help.

Notification When Mass Email Completes

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

You can now choose whether you want Salesforce.com to notify senders when mass emails complete. See "Configuring Deliverability Settings" in the Salesforce.com online help.

Apex Triggers for Email Messages

Now you can define Apex triggers associated with email messages.

For email messages, click **Setup ➤ Cases ➤ Email Messages ➤ Triggers**.

Other Salesforce Automation Enhancements

Extended Mail Merge Enhancement

With Winter '10, the Mass Mail Merge Wizard has been enhanced so you can select multiple records across different pages. Previously, when you selected records on one page and clicked to view the records on another page, the records you selected on the prior page were deselected.

New Guidelines for Testing the Relationship Groups Package

The Salesforce.com online help now includes information on how to successfully test the relationship groups managed package. See "Testing the Relationship Groups Package" in the Salesforce.com online help.

SERVICE CLOUD

High-Volume Customer Portal Users

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

With Winter '10, you can use the High-Volume Customer Portal User and Platform Portal User user licenses to add significantly more users to a Customer Portal. After you purchase one of these high-volume user licenses, you can assign them to portal-enabled contacts so that large numbers of users can log in to a Customer Portal without affecting its performance.

Note: High-volume Customer Portal users and platform portal users are currently available through a pilot program. For information on enabling high-volume Customer Portal users or platform portal users, contact salesforce.com.

Implementation Tips

- You must purchase High-Volume Customer Portal User or Platform Portal User user licenses before you can assign them to portal users.
- To view the user licenses in your organization, click **Setup ➤ Company Profile ➤ Company Information**.
- Contact salesforce.com for information about how many high-volume Customer Portal users you can activate for a Customer Portal.
- You can only enable contacts as high-volume Customer Portal users via the API. See the *Force.com Web Services API Developer's Guide*.
- You can't assign the High-Volume Customer Portal User or Platform Portal User user license to person accounts.
- Review the details of Customer Portal user licenses before assigning them to users. The following table shows the Customer Portal user licenses with their associated profiles and positions in the Customer Portal role hierarchy:

User License	Profiles	Roles and Sharing
High-Volume Customer Portal User and Platform Portal User (both user licenses are high-volume Customer Portal users)	High-Volume Customer Portal User or Platform Portal User profile, or a profile cloned and customized from one of these - Can access custom objects depending on profile settings. - Can't assign to person accounts.	High-volume Customer Portal users don't have roles. See "Granting High-Volume Customer Portal Users Access to Objects" in the Salesforce.com online help. Can't share but can transfer records they own or have access to. Can't include in: - Personal groups or public groups - Sharing rules - Account teams, sales teams, or case teams - Salesforce CRM Content workspaces

User License	Profiles	Roles and Sharing
Customer Portal Manager Standard	Customer Portal User profile or a profile cloned and customized from the Customer Portal User profile - Can access custom objects depending on profile settings. - Can access Salesforce CRM Content depending on feature license and profile settings. See "Enabling Salesforce CRM Content in the Customer Portal" in the Salesforce.com online help.	Can only assign to the User role. Can only view and edit data they directly own and can view and edit cases where they are listed in the `Contact Name` field.
Customer Portal Manager Custom	Customer Portal Manager profile or a profile cloned and customized from the Customer Portal Manager profile - Can access custom objects depending on profile settings. - Can access reports depending on profile settings. - Can access Salesforce CRM Content depending on feature license and profile settings. See "Enabling Salesforce CRM Content in the Customer Portal" in the Salesforce.com online help. - Can receive the "Portal Super User" and "Delegated Portal User Administrator" permissions. - The settings on the Customer Portal Manager and Customer Portal User profiles are similar. However, users associated with the Customer Portal Manager profile can be assigned greater access to data via the Customer Portal role hierarchy and sharing rules.	Can assign to either the Executive, Manager, or User role. Can view and edit data they directly own or data owned by or shared with users below them in the Customer Portal role hierarchy; and they can view and edit cases where they are listed in the `Contact Name` field. Can have data shared to them just like other Salesforce.com users.

Best Practices

- Add Salesforce.com users to the High-Volume Customer Portal Users share group to grant them access to records owned by high-volume Customer Portal users. See "Sharing Records Owned by High-Volume Customer Portal Users to Salesforce.com Users" in the Salesforce.com online help.
- Don't assign the High-Volume Customer Portal User user license to Customer Portal users who you want in:

  - Personal groups or public groups
  - Sharing rules
  - Account teams, sales teams, or case teams
  - Salesforce CRM Content workspaces

- Avoid granting ownership of accounts to high-volume Customer Portal users because they can't own accounts.

About High-Volume Customer Portal Users

Granting High-Volume Customer Portal Users Access to Objects

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

User Permissions Needed
To grant high-volume Customer Portal users access to objects: "Customize Application"

Note:

- High-volume Customer Portal users are currently available through a pilot program. For information on enabling high-volume Customer Portal users, contact salesforce.com.
- High-volume Customer Portal users include both the High-Volume Customer Portal User and Platform Portal User license types.

High-volume Customer Portal users are limited-access portal users intended for organizations with many thousands to millions of portal users. Unlike other portal users, high-volume Customer Portal users don't have roles, which eliminates performance issues associated with role hierarchy calculations.

Specifically, high-volume Customer Portal users:

- Are contacts enabled to access a Customer Portal
- Are assigned to the High-Volume Customer Portal User or Platform Portal User user license
- Can access records if all of the following conditions are met:

  - The records are associated with the high-volume Customer Portal user's account or contact
  - The high-volume Customer Portal user has read only or read/write access to an object's records

- Only share the records they own with Salesforce.com users in the High-Volume Customer Portal Users share group. See "Sharing Records Owned by High-Volume Customer Portal Users to Salesforce.com Users" in the Salesforce.com online help.

Limitations of high-volume Customer Portal users include:

- High-volume Customer Portal users can't manually share records they own or have access to, but they can transfer such records.
- You can't assign the High-Volume Customer Portal User or Platform Portal User user license to person accounts.
- High-volume Customer Portal users can't own accounts.
- You can't include high-volume Customer Portal users in:

  - Personal groups or public groups
  - Sharing rules
  - Account teams, sales teams, or case teams

- Salesforce CRM Content workspaces

- You can only enable contacts as high-volume Customer Portal users via the API. See the *Force.com Web Services API Developer's Guide*.

To grant high-volume Customer Portal users access to objects:

1. Click **Setup ➤ Customize ➤ Customer Portal ➤ Settings**.
2. In the Sharing Settings for High-Volume Customer Portal Users section, click **Set Up** or **Edit** next to an object.

> **Note:**
>
> - Objects with **Set Up** in the Action column have not been customized for high-volume Customer Portal user access. Until you configure them, their access is determined by organization-wide sharing defaults.
> - Custom objects only display if the `Available for Customer Portal` field is selected. See "Managing Custom Objects" in the Salesforce.com online help.

3. Grant access based on an account or contact lookup:

   - To grant access to all high-volume Customer Portal users on an account, select `All high-volume Customer Portal users whose account matches` and then select a field. For example, choose this option if you want all high-volume Customer Portal users in an account to access all of the cases for their account.
   - To grant access to an individual contact as a high-volume Customer Portal user, select `Only the high-volume Customer Portal user who matches` and then select a field. For example, choose this option if you want individual high-volume Customer Portal users to only access cases associated with their contact.
   - To prohibit access to all high-volume Customer Portal users, select `Don't grant access to high-volume Customer Portal users`.

4. Choose an access level of Read Only or Read/Write.
5. Click **Save**.

Your settings apply to all of your organization's Customer Portals.

Sharing Records Owned by High-Volume Customer Portal Users to Salesforce.com Users

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

User Permissions Needed	
To share records owned by high-volume Customer Portal users to Salesforce.com users:	"Customize Application"

> **Note:**
>
> - High-volume Customer Portal users are currently available through a pilot program. For information on enabling high-volume Customer Portal users, contact salesforce.com.
> - High-volume Customer Portal users include both the High-Volume Customer Portal User and Platform Portal User license types.

High-volume Customer Portal users are limited-access portal users intended for organizations with many thousands to millions of portal users. Unlike other portal users, high-volume Customer Portal users don't have roles, which eliminates performance issues associated with role hierarchy calculations. Because high-volume Customer Portal users are not in the role hierarchy while Salesforce.com users are, a *share group* allows you to specify the Salesforce.com users who can access records owned by high-volume Customer Portal users. Each Customer Portal has its own share group.

To specify the Salesforce.com users who can access records owned by high-volume Customer Portal users:

1. Click **Setup ➤ Customize ➤ Customer Portal ➤ Settings**.
2. Click the name of a Customer Portal.
3. Click the Share Group Settings subtab.
4. Click **Activate** to turn on the share group.

    Activating the share group can take a while. An email is sent to you when the process finishes.

    > **Note:** Deactivating a share group removes *all* Salesforce.com users' access to records owned by high-volume Customer Portal users. An email isn't sent to you when the deactivation process finishes.

5. Click **Edit** to add Salesforce.com users to the share group:

    a. From the `Search` drop-down list, select the type of member to add.
    b. If you don't see the member you want to add, enter keywords in the search box and click **Find**.
    c. Select members from the Available Members box, and click **Add** to add them to the group.
    d. Click **Save**.

Additional Service Cloud Enhancements

Case Enhancements

Enhanced `Hide Save & Close Button` Setting for Cases

Spring '09 introduced two settings that when used together let you reduce the number of clicks it takes users to close cases: the `Show Closed Statuses in Case Status Field` and `Hide Save & Close Button` settings. Winter '10 enhances the `Hide Save & Close Button` setting by renaming it `Hide Save & Close Button and Cls Links` and increasing its functionality to remove unnecessary **Cls** links on Cases related lists.

You can access these settings by clicking **Setup ➤ Customize ➤ Cases ➤ Support Settings**. For more information, see "Customizing Support Settings" in the Salesforce.com online help.

Users with "Modify All Cases" or "Transfer Cases" Can Create and Assign Cases Via the API and Apex

Users no longer need the "Modify All Data" permission to simultaneously create and assign cases to other users via the API and Apex. Now, users with "Modify All Cases" or "Transfer Cases" can also create and assign cases via the API and Apex.

Apex Triggers for Case Comments

Now you can define Apex triggers associated with case comments. For example, you can set a trigger so that whenever a user adds a case comment, that user is added to the case team so that they can receive notices set up for team members. For case comments, click **Setup ➤ Cases ➤ Case Comments ➤ Triggers**.

On-Demand Email-to-Case Truncates Email Text Over 100 KB

On-Demand Email-to-Case no longer bounces emails with text over 100 KB. Instead, the email text is automatically truncated to 32 KB to fit a case record.

Case Auto-Response Rules for the Customer Portal

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

An auto-response rule is a set of conditions for sending automatic email responses to case or lead submissions based on the attributes of the submitted record. Previously, auto-response rules for cases only applied to cases submitted through a Self-Service portal, a Web-to-Case form, an Email-to-Case message, or an On-Demand Email-to-Case message. With Winter '10, users with the "Customize Application" permission now have the option to use auto-response rules instead of workflow alerts for cases submitted through a Customer Portal.

Auto-response rules provide functionality similar to workflow alerts. The following table lists some of the differences between workflow alerts and auto-response rules to help you determine which process to use:

Type of Process	Designed For	Runs When	Sends Email To	Number of Emails Sent
Workflow alerts	Notifications to interested parties.	A case or lead is created or edited.	Anyone you choose who is associated to the Case or Lead object.	Sends as many emails as there are matching criteria in the workflow.
Auto-response rules	Initial response to the contact who created a case or the person who submitted the lead on the Web.	A case or lead is created.	Contact on a case or the person who submitted the lead on the Web.	Sends one email based on the first rule entry criteria it matches in a sequence of rule entries.

To set auto-response rules for cases:

1. Click **Setup ➤ Customize ➤ Cases ➤ Auto-Response Rules**.
2. Click **New**.
3. Enter the rule name.
4. Select the active checkbox to activate the rule. Only one rule can be active at a time.
5. Click **Save**.
6. Create rule entries:

    a. Select the rule name.
    b. Click **New** from the rule detail page.
    c. Enter a number to specify the order in which to process this entry.
    d. Enter your rule criteria. For example, choose `criteria are met` and set the case filter to `Priority equals High` if you want case records with the `Priority` field marked High to trigger the rule.
    e. Enter an email sender's name.
    f. Enter an email address for the sender.
    g. Select an email template.
    h. Click **Save**.

For more information, see "Creating Auto-Response Rules" in the Salesforce.com online help.

Assignment Rule Enhancements

Lead Assignment Rules available in: **Group**, **Professional**, **Enterprise**, **Unlimited**, and **Developer** Editions

Case Assignment Rules available in: **Professional**, **Enterprise**, **Unlimited**, and **Developer** Editions

Assignment Rules Work Properly with Apex Trigger that Update Cases or Leads During the Save Process

Assignment rules now work properly when cases or leads are created with the **Assign using active assignment rules** checkbox selected, and during the save process, an Apex trigger updates the case or lead.

Solution Enhancements

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

"Public Knowledge Base" Renamed "Public Solutions"

The public knowledge base is your organization's collection of solutions made available to people outside of your organization. In Winter ' 10, "public knowledge base" has been renamed "public solutions" in the Salesforce.com user interface and documentation.

Community Enhancements

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

New Community Application

Community is a new application available in the Force.com app menu in Salesforce.com. If you are a new organization that began using Salesforce.com in the Winter '10 release, the Community application has already been enabled. Older organizations need to enable the Community application manually.

The Community application:

- Replaces the Ideas application in the Force.com app menu.
- Includes both the Ideas and Answers tabs. Answers is currently available through a pilot program. For information on enabling the answers feature, contact salesforce.com.

> ⚠️ **Caution:** Once you migrate to the Community application, you cannot return to the old Ideas application. The Ideas tab with all your existing data will still be available in the new Community application.

To migrate to the Community application:

1. Click **Setup ➤ Customize ➤ Ideas ➤ Settings**.

   The Community message appears at the top of the Ideas Settings page. If the Community message does not appear, the Community application is already enabled for your organization.

2. Click **Enable** below the Community message. Salesforce.com checks your organization for any custom objects named Community. If such an object exists, you must delete or rename the object before enabling the Community app.

3. Click **Enable** when Salesforce.com confirms it's okay to migrate to the Community application.

Support for Uploading Images

When posting an idea or comment to a community, you can now upload an image by browsing to the image location on your file system, or you can include an image by specifying the image's URL. Previous releases only allowed you to specify the image URL.

Custom Cloud

Analytics Enhancements

Available in: **All** Editions

Winter '10 includes many new features that improve the capabilities of Salesforce.com analytics:

- New Combination Charts
- Allow Drill Down to Filtered Reports from a Dashboard
- Show Hover Details on Charts in Reports and Dashboards
- Combine Small Groups into a Single "Others" Area
- Use the Chart in the Source Report for Dashboards
- Set Colors for Picklist Values in Charts

About Analytics Enhancements

New Combination Charts

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

Available in: **All** Editions

User Permissions Needed	
To create custom reports:	"Create and Customize Reports"

In previous releases, though you had multiple calculated summary values in a report, you couldn't show more than one in a chart. If your report contained both projected and actual sales, you couldn't show a comparison of those values in a single chart. With Winter '10, you can create combination charts. A *combination chart* plots multiple sets of data on a single chart. Each set of data is based on a different field, so values are easy to compare. You can also combine certain chart types to present data in different ways in a single chart. For example, add quota to closed business, add quantity to closed amount, add lead count to campaign cost.

With combination charts, you can:

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

To use combination charts:

1. Go to the Select Chart & Highlights step of the report wizard for any summary or matrix report.

2. Choose a chart type that allows combination charts:

   - Horizontal Bar
   - Vertical Column
   - Vertical Column - Grouped
   - Vertical Column - Stacked
   - Line
   - Line Cumulative

3. Select the **Combination Chart** checkbox to plot additional values on the chart. The chart preview updates as you configure your combination chart.

4. Select from the `Display as` drop-down list to add a line, cumulative line, columns, or bars to your chart. Available options differ based on your chart type.

   - For columns or bars, click **Add another set** to add up to three sets.
   - When adding a line to a vertical column chart, select **Use a Second Axis** to show a separate axis for the added line on the right side of the column chart. A separate axis can be useful when the two values have different ranges or units.

     > **Note:** Selecting **Use a Second Axis** makes more values available in the `Values` drop-down list. Without this option, you can only pick from values of the same type as the primary Y-axis—for example, number, currency, or percentage. This option is only available for certain combination charts.

5. Use the `Values` drop-down list to specify each additional value to plot on the chart.

6. Once you've set up your report, click **Run Report** or **Save**.

Example Combination Charts

There are many reasons to use combination charts. This section gives just a few examples.

Column-on-Column

Add columns to a column chart to show multiple values against a single axis range.

To create the chart in this example, choose the Vertical Column chart type, set the opportunity sum of amount as the `Y-Axis`, stage as the `X-Axis`, and use the **Combination Chart** option to add the sum of expected revenue as a column.

You can quickly compare the actual values against the expected values for each stage.
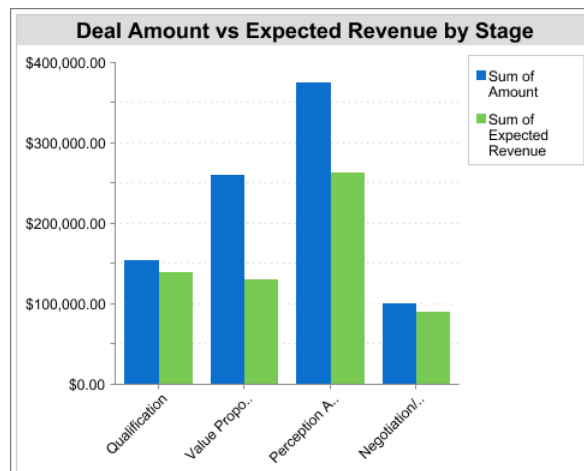
Line-on-Column

Add a line to a column chart to show two chart types together. Using a second axis allows you to add different types of values to the chart.

To create the chart in this example, choose the Vertical Column chart type, set the opportunity sum of amount as the `Y-Axis`, fiscal year as the `X-Axis`, and use the **Combination Chart** option to add the number of deals as a line. Summary values of different types won't be available in the `Values` drop-down list unless you select **Use a Second Axis**.

You can see both the total amount and number of deals for each year on a single chart.
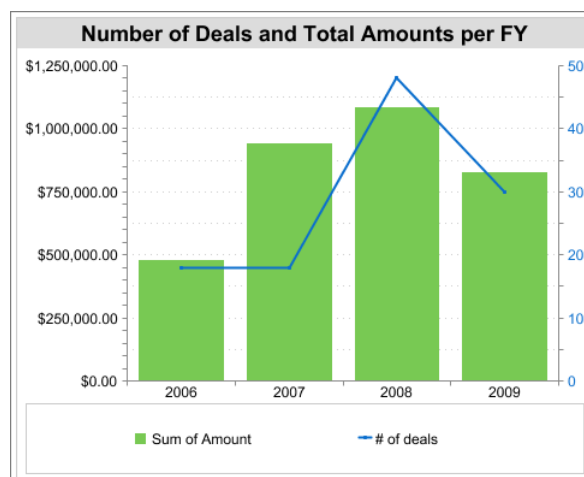
Line-on-Line

Add a line to a line chart to compare two continuous summary values.

To create the chart in this example, set up a custom summary formula to calculate a three-week moving average of opportunity amounts, then choose the Line chart type, set the opportunity sum of amount as the `Y-Axis`, date as the `X-Axis`, and use the **Combination Chart** option to add the calculated three-week moving average as a line.

You can compare sales against the moving average over time.
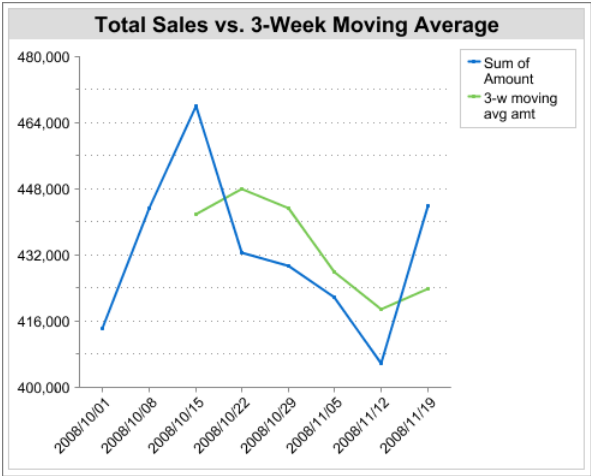
The custom summary formula used in this example is shown here:

```
(OppProductTrends__c.Amount__c:SUM+ PREVGROUPVAL(OppProductTrends__c.Amount__c:SUM,
OppProductTrends__c.as_of_date__c) + PREVGROUPVAL(OppProductTrends__c.Amount__c:SUM,
OppProductTrends__c.as_of_date__c,2))/3
```

Allow Drill Down to Filtered Reports from a Dashboard

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

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

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

In previous releases, when users clicked a dashboard, they were taken to the source report or to a URL that you specified. With Winter '10, you can also allow users to click individual groups, axis values, or legend entries of a dashboard to view the source report filtered by what they clicked. For example, if users click a wedge of a pie chart, they are taken to the source report filtered to show values for just that wedge.

To allow users to drill-down to the filtered report based on what they clicked in a dashboard component:

1. From the Dashboards tab, click **Edit**.
2. Click **Add Component** to create a new component, or **Edit** to update an existing one.
3. Set the `Component Type` to **Chart**.
4. Set the `Drill Down to` option to **Filtered Source Report**.

5. Set `Custom Report` to the source report to use for the dashboard component.

6. Click **Save**.

Show Hover Details on Charts in Reports and Dashboards

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

Available in: **All** Editions

User Permissions Needed	
To create custom reports:	"Create and Customize Reports"
To create, edit, and delete dashboards:	"Run Reports"
	AND
	"Manage Dashboards"

With Winter '10, you can allow users to view the details of charts in reports and dashboards by hovering over values. Hovering over points on a line or individual bars or columns shows the label and value; hovering over wedges or segments in pie, donut, and funnel charts shows the label, value, and percentage. Hover details depend on chart type.

To enable hover for the chart in a report:

1. Go to the Select Chart & Highlights step of the report wizard for any summary or matrix report.

2. Select a chart type.

3. Under Chart Presentation, select **Show Details on Hover**. This option is available for all chart types.

4. Once you've set up your report, click **Run Report** or **Save**.

To enable hover for the chart in a dashboard:

1. From the Dashboards tab, click **Edit**.

2. Click **Add Component** to create a new component, or **Edit** to update an existing one.

3. Set the `Component Type` to **Chart**.

4. Set `Custom Report` to the report to use for the dashboard component.

5. Under Chart Settings, configure your chart and select **Show Details on Hover**. If you select **Use Chart as Defined in Source Report**, hover must be enabled for the chart in the report.

6. Click **Save**.

Combine Small Groups into a Single "Others" Area

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

Available in: **All** Editions

User Permissions Needed	
To create custom reports:	"Create and Customize Reports"

In previous releases, for pie, donut, and funnel charts, all small group values were automatically combined into a single group called "Others." With Winter '10, you can choose to turn this feature on or off by setting an option for the chart.

To set the grouping of small values:

1. Go to the Select Chart & Highlights step of the report wizard for any summary or matrix report.
2. Set the `Chart Type` to Pie, Donut, or Funnel.
3. Under Chart Presentation, select **Combine Small Groups into "Others"** to combine all groups less than or equal to 3% of the total into a single "Others" wedge or segment. Deselect it to show all values individually on the chart.
4. Once you've set up your report, click **Run Report** or **Save**.

Use the Chart in the Source Report for Dashboards

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

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

In previous releases, you had to configure chart settings for both the source report and the dashboard using that report. With Winter '10, you can use the chart that you defined in the source report for the dashboard component. If you defined a combination chart in the source report, select this option to use that combination chart on the dashboard.

To use the chart from the report in your dashboard component:

1. From the Dashboards tab, click **Edit**.
2. Click **Add Component** to create a new component, or **Edit** to update an existing one.
3. Set the `Component Type` to **Chart**.
4. Set `Custom Report` to the report to use for the dashboard component.

5. Select the **Use Chart as Defined in Source Report** checkbox. Dashboard chart settings are hidden and the chart settings in the source report determine how the chart displays in the dashboard.

6. Click **Save**.

Set Colors for Picklist Values in Charts

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

Available in: **All** Editions

User Permissions Needed	
To change picklists:	"Customize Application"

With Winter '10, you can assign fixed colors to picklist values when shown in charts. Charts based on those picklists will always show the same color for particular picklist values in all charts in reports and dashboards across your organization. For example, if your team creates the same chart for every month, you can make sure that the groupings are always shown in the same color.

The following figure shows a dashboard with three charts grouped by opportunity stages. Fixed colors were assigned to the Stage picklist values so that the "Closed Won" stage is always shown in green and "Closed Lost" in red. Notice that even though another stage appears on the second chart, the assigned colors remain the same.
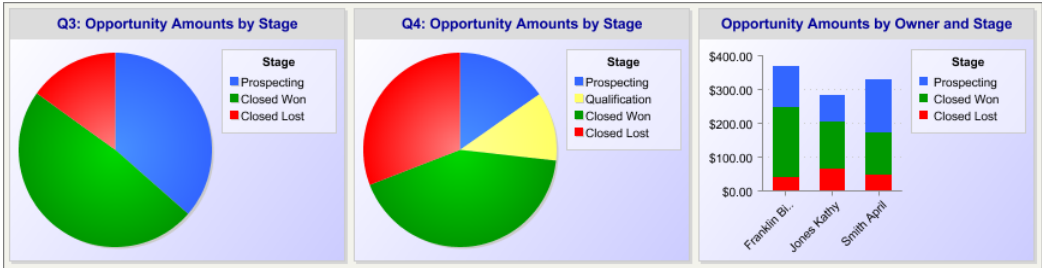
To assign colors to standard or custom picklist fields:

1. Navigate to the fields page for your object. For example, for account fields, click **Setup ➤ Customize ➤ Accounts ➤ Fields**.

    For custom objects, click **Setup ➤ Create ➤ Objects**, then click the name of an object.

2. Click the name of the picklist you want to update.

3. Click **Chart Colors** and select an option to assign colors to picklist values for use in charts:

    •   **Assign fixed colors to all values** assigns a fixed color to each value from the standard set of chart colors. The `Chart Colors` column shows the assigned colors. Manually change assigned colors by editing picklist values. For example, if you want Closed Lost values to always show up as red in charts grouped by Opportunity Stage, assign red to that picklist value.

    •   **Assign colors to values dynamically** assigns colors when a chart is generated. The `Chart Colors` column shows "Assigned dynamically" for all colors. Assign fixed colors by editing picklist values. For example, if you only need certain

picklist values to show up as fixed colors in charts, manually assign colors to those values and leave the rest as "Assigned dynamically."

Manual assignments are overridden each time you click an option in **Chart Colors**.

> **Note:** Chart colors aren't available for multi-select picklists, currency picklists, or Task Subject, Event Subject, and Opportunity Competitor picklists.

4. To assign colors to individual picklist values:

    a. In the Picklist Values section, click **Edit** next to a value.

    b. In the Picklist Edit page, assign a color for use in charts by clicking the ▦ button. To assign a color dynamically when a chart is generated, click **Assign color dynamically**.

    c. Click **Save**.

Lookup Filters—Beta

Available in: **All** Editions

> **Note:** This release contains a beta version of lookup filters that is production-quality but has known limitations. The most significant limitation is the inability to create a dependent lookup filter. That is, you cannot create a lookup filter that relies on values on the record to restrict the values available in a lookup field. For example, you cannot restrict the lookup results of the case `Contact` field based on the case `Account` field.
>
> Click the IdeaExchange link in the top banner of the lookup filters Edit page to provide feedback and suggestions for this feature.

After a successful Pilot release in Summer '09, a beta version of lookup filters is now available to all customers in Winter '10.

Lookup filters are administrator settings on lookup, master-detail, and hierarchical relationship fields that restrict the valid values and lookup dialog results for the field. The restrictions for the field are based on criteria such as a field on the lookup object or the user's profile. If a user manually types an invalid value in the field when editing a record and clicks **Save**, Salesforce.com blocks the save and displays an error message. Administrators can customize the error message.

Lookup filters improve user productivity and ensure data quality. For example, restrict the `Account Name` lookup field on opportunities to only allow accounts with a record type of Customer, filtering out Partners and Competitors. Or, if you have a custom relationship field that references accounts and your organization has numerous inactive accounts, restrict users to choosing active accounts only.

Each object can have up to five active lookup filters. You can add lookup filters on relationship fields that point to accounts, contacts, users, and custom objects, with the following exceptions:

- Relationship fields on activities
- System fields that are always read only, such as `Created By` and `Modified By`
- Relationship fields that support queues, such as `Case Owner`, `Lead Owner`, and `Delegated Approver`

Beta Limitations

- Lookup filters cannot restrict the lookup dialog results and valid values based on fields on the source object. For example, you cannot restrict the lookup results of the case `Contact` field based on the case `Account` field.
- You cannot define lookup filters in the custom field wizard. To add a lookup filter to a new custom field, first create the field, then edit that field to add the filter criteria.
- Lookup filters are available in the Metadata API but are not available in the Force.com IDE.

Best Practices

- Add custom help text to the field to let users know about the business rule that the lookup filter enforces. For example, `Only active accounts can be associated to opportunities`.
- Customize the lookup filter error message to guide users who manually enter invalid values. For example, `Value does not exist or is not an active account`.
- Use the translation workbench to translate lookup filter custom error messages if your organization uses multiple languages.
- Use `Current User Profile: Name` in the filter criteria to define different filter criteria for different users, or to give administrators the ability to enter values that do not match the filter criteria. See "Lookup Filter Examples" in the Salesforce.com online help.
- Test lookup filters to ensure they are enforcing your business rule without being too restrictive.
- When creating lookup filters, remember that some relationship fields may be read only to users with certain profiles. Make sure that the lookup filters you create do not prevent such users from editing records that are critical to their job functions.
- Fields in lookup filter criteria that are not required might be blank, so consider whether or not to allow blank values. To accommodate blank values, use the Advanced Options to define the criteria to include blank values. For example, if you want the `Email Address` field on contacts to only include people from your company but you want to allow for the possibility that the email address is blank, use the following lookup filter criteria:

  1. `Email` contains Acme
  2. `Email` equals

  Leave the value empty for the second line in the criteria, and set the advanced filter conditions to `1 OR 2`.

Implementation Notes

- Filter criteria can include fields from both the lookup object and objects directly related to the lookup object (one level only). For example, a lookup filter on a lookup field pointing to contacts can reference fields on:

  - Accounts related to the contact via the `Account Name` relationship field
  - Contacts related to the contact via the `Reports To` relationship field

  Each field that a lookup filter reference on the related lookup object counts against the cross-object reference limit of the lookup object, not the source object. For example, the two unique relationships described above count against the cross-object reference limit for the Contact object.
- Salesforce.com displays a funnel icon in the Data Type column on the Fields page next to relationship fields that have an active lookup filter.
- The lookup filters you create in Salesforce.com also appear in the partner portal and Customer Portal.
- Lookup filters are case-sensitive.
- If you create a lookup filter that makes an existing value for that field invalid, the value persists; however, when a user edits the record, Salesforce.com does not save the user's changes unless the user changes the invalid value.
- If your organization uses person accounts, note the following:

  - Lookup filter criteria on `Account Name` only applies to business accounts; it does not apply to person accounts. For example, if your lookup filter criteria is `Account Name does not contain book`, business accounts with "book" in the name, such as John's Bookstore, are not valid, but person accounts with "book" in the name, such as John Booker,

are still valid values and appear in the lookup dialog for the `Account` field. If you need to filter on the name for a person account, use the `First Name` or `Last Name` fields instead.

- Use the `Is Person Account` field in your lookup filter criteria to restrict the valid values of a lookup field to one type of account (either person accounts or only business accounts). For example, to restrict a lookup to only person accounts, include the following in your lookup filter criteria: `Is Person Account equals True`.
- You cannot package lookup filters that reference standard fields that are specific to person accounts, such as the `Email` and `Title` fields.

- Lookup filters function similarly to validation rules when you save a record. That is, actions that cause related records to save, such as changes to a roll-up summary fields, also trigger the lookup filters on the related record and block the save.
- If you define a lookup filter on the `Owner` field, that filter is only enforced when the record is created and when the `Owner` is changed. It is not enforced when the record is edited.
- Salesforce.com ignores lookup filters when converting leads if the `Enforce Validation and Triggers from Lead Convert` checkbox on the Lead Settings page is deselected.
- Versions 16.0 and higher of the Salesforce.com API support lookup filters. Lookup filters are enforced when you load data through the API.
- Lookup filters on currency fields do not convert currencies. For example, if your organization uses multiple currencies and a lookup filter criteria is `Expected Revenue` greater than 100000, the lookup shows any account record on which the `Expected Revenue` field is set to a value greater than 100,000, regardless of the currency.
- You cannot use special date values, such as "Today" or "This Month," in lookup filter criteria.
- You cannot delete fields that are referenced in an active lookup filter.
- You cannot change the field type of fields referenced by an active lookup filter.
- If you configure a lookup filter to show inactive users only, the relationship field has no valid options because inactive users are never valid for relationship fields that point to the User object.

Managing Lookup Filters

Available in: **All** Editions

User Permissions Needed	
To manage lookup filters:	"Customize Application"

To manage lookup filters:

- Define lookup filters on lookup, master-detail, and hierarchical relationship fields, such as the standard `Manager` field on the User object.
- Disable lookup filters that you currently do not want to use but might need again in the future.
- Delete lookup filters that you never want to use again.

Defining Lookup Filters

To define a lookup filter:

1. Navigate to the fields area of the object that contains the lookup field:

   - For standard objects, click **Setup ➤ Customize**, select the appropriate object from the **Customize** menu, and click **Fields**.

- For custom objects, click **Setup ➤ Create ➤ Objects**, and select one of the custom objects in the list.

2. Click **Edit** next to the name of the lookup or master-detail relationship field to which you want to apply the filter.
3. In the Lookup Filter Options section, select **Use filter criteria to limit valid records for this field**.
4. Specify the filter criteria a record must meet to be a valid value for this field. To specify fields in the filter criteria, click the lookup icon or type in the Field column. If you type in the Field column, Salesforce.com searches the list of available fields and lists fields that match.

> **Note:** The Field column only allows fields that are on one of the following:
>
> - The lookup object (the object to which the lookup field points)
> - A parent object of the lookup object
> - The current user's record
> - The current user's profile
> - The current user's role

5. To specify advanced filter conditions, click the **Advanced Options** link. See "Working with Advanced Filter Conditions" in the Salesforce.com online help for more information.
6. Specify whether you want Salesforce.com to display the standard error message or a custom message if a user enters an invalid value. If you choose to display a custom error message, enter the message in the text field below that option.
7. Click **Save**.

> **Important:** When creating a lookup filter on a master-detail relationship field, verify that the current values of the field on all of the detail records meet the criteria you specify. If you specify criteria that an existing value does not meet, Salesforce.com prevents the user from saving changes to the detail record. If this occurs, the user must first modify the value on the master record to meet the criteria. For example, consider a custom object with a master-detail relationship field that points to accounts. If you define a lookup filter that excludes all accounts with a `Create Date` less than 01/01/2009, verify that no existing records of that custom object have a master-detail relationship with any account created before 2009. A quick way to do this is to create a report that shows all accounts with a `Create Date` less than 01/01/2009.

Deactivating Lookup Filters

Deactivating a lookup filter preserves its configuration but prevents it from applying to the relationship field, prevents it from impacting the cross-object references limit, and removes it as a dependency for fields referenced in the lookup filter criteria.

1. Navigate to the fields area of the object that contains the lookup field.
2. Edit the relationship field.
3. Select the **All records are valid and included in the lookup dialog** radio button in the Lookup Filter options section.
4. Click **Save**.

Deleting Lookup Filters

Deleting a lookup filter permanently removes it:

1. Navigate to the fields area of the object that contains the lookup field.
2. Edit the relationship field.
3. Click **Clear Filter Criteria**.
4. Select **All records are valid and included in the lookup dialog**.
5. Click **Save**.

Lookup Filter Examples

Available in: **All** Editions

User Permissions Needed	
To define lookup filters:	"Customize Application"

Filtering on Record Types
If the value of a relationship field should only consist of records with a particular record type, specify the record type in a lookup filter. For example, if the Account Name field on opportunities should only have accounts with a Customer Account custom record type, define the following lookup filter to restrict users to only creating or editing opportunities associated with accounts that have a Customer Account record type, excluding accounts with Partner Account and Competitor Account record types:

Filter Criteria	1. Account Record Type equals Customer Account
Custom Error Message	Account does not exist or is not a customer account. Click the lookup icon to select a valid account.

Filtering on Record Status
If the value of a relationship field should only consist of records with particular status, specify the status in a lookup filter. For example, consider a Job Application object with a relationship field that points to the Position object. If the relationship field should only have open positions, define the following lookup filter to restrict users to only creating or editing job applications for positions with the Status field set to Open:

Filter Criteria	1. Status equals Open
Custom Error Message	Position does not exist or is not an open position. Click the lookup icon to select a valid position.

Filtering on Profiles
When a business rule does not apply to users with every profile, use the Current User Profile global variable fields to define lookup filters that only affect users with a particular profile.

For example, the following lookup filter on the Case object Account Name field restricts users with a "Domestic Sales" profile to only creating or editing cases associated with accounts that have a billing country of "USA" while allowing other users to associate cases with any account:

Filter Criteria	1. Current User Profile: Name equals Domestic Sales 2. Billing Country equals USA 3. Current User Profile: Name not equal to Domestic Sales

Advanced Criteria	(1 AND 2) OR 3
Custom Error Message	Account does not exist or the account billing country is not USA. Domestic sales reps can only create cases for accounts in the United States. Click the lookup icon to select a valid account.

You can modify the above example to simultaneously restrict users with a "Global Sales" custom profile to only associating cases to accounts with a non-US billing country:

Filter Criteria	1. `Current User Profile: Name` equals Global Sales 2. `Billing Country` does not equal USA 3. `Current User Profile: Name` equals Domestic Sales 4. `Billing Country` equals USA 5. `Current User Profile: Name` not equal to Global Sales, Domestic Sales
Advanced Criteria	(1 AND 2) OR (3 AND 4) OR 5
Custom Error Message	Account does not exist or the account billing country is not in your sales area. Sales reps can only create cases for accounts in their sales area. Click the lookup icon to select a valid account.

Filtering on Roles

When a business rule does not apply to users in every role, use the `Current User Role` global variable fields to define lookup filters that only affect users with particular roles. For example, in a recruiting application that has a Position object with a lookup field to a Compensation Package object, you can restrict users from editing or creating positions that have an executive compensation plan unless they are executive administrators or vice presidents. To do this, define the following lookup filter on the Position object `Compensation Package Name` field:

Filter Criteria	1. Current User Role: Name does not start with VP 2. Current User Role: Name does not equal Executive Administrator 3. Plan Type does not equal Executive 4. Current User Role: Name does start with VP 5. Current User Role: Name equals Executive Administrator
Advanced Criteria	((1 OR 2) AND 3) OR (4 OR 5)
Custom Error Message	The compensation plan does not exist, or you have selected an executive compensation plan but do not have access to create executive positions. Click the lookup icon to select a valid compensation plan.

Enhanced Profile Management

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

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

In Winter '10, enhanced list views are available for profiles. Administrators can create lists of profiles and use them to compare profile settings, print lists of profiles, and make mass updates across multiple profiles. Enhanced profile management reduces administrative overhead and saves configuration time, while increasing the visibility and granular control that administrators have with profiles.

Enhanced profile management is useful in the following types of situations:

- A help desk manager is concerned that some profiles with "Modify All Data" allow too much access to users who don't need it. The manager can create a list of all profiles where "Modify All Data" is enabled, then select specific profiles in the list, and disable "Modify All Data" in the selected profiles.
- An organization administrator recently created a custom object permission and wants to revoke it from all profiles except the ones that the object was intended for. The administrator can create a list of all profiles where the permission is enabled, then select specific profiles in the list, and disable the permission in the selected profiles.
- An information security officer wants to audit and print a collection of permission grants for compliance purposes. The officer can create and print one or more lists that display specific permissions for all profiles.

To enable enhanced profile management for your organization, click **Setup ➤ Customize ➤ User Interface**, then select **Enable Enhanced Profile Management**.

Note: The Metadata API doesn't support configurations for profile list views.

About Enhanced Profile Management

Viewing Profile Lists

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

User Permissions Needed	
To view profiles:	"View Setup and Configuration"
To create, edit, and delete profiles:	"Manage Users"
To create, edit, and delete profile list views:	"Manage Users"
To print a profile list:	"View Setup and Configuration"

To view the profiles in your organization, click **Setup ➤ Manage Users ➤ Profiles**.

Viewing the Basic Profile List

- To view a profile's details, click the profile name.
- To edit or delete a profile, click **Edit** or **Del** next to the profile name.
- To create a profile, click **New**.

Viewing Enhanced Profile Lists

If enhanced profile management is enabled for your organization, you can use additional tools to customize, navigate, manage, and print profile lists. You can also edit permissions directly in a list view.

- To show a filtered list of profiles, select a view from the drop-down list.
- To create a profile, click **New Profile**, or click **Clone** next to the profile that you want to base the new profile on.
- To create a view, click **Create New View**.
- To print a list view, select the view from the drop-down list and click the **Printable View** button (🖶).
- To edit a view, select it from the drop-down list and click **Edit**
- To delete a view, select it from the drop-down list and click **Delete**.
- To refresh the list view after creating or editing a view, click **Refresh**.
- To edit or delete a profile, click **Edit** or **Del** next to the profile name.
- To create a profile that is based on an existing profile, click **Clone** next to the profile name.

Creating and Editing Profile List Views

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

User Permissions Needed	
To create, edit, and delete profile list views:	"Manage Users"

If enhanced profile management is enabled for your organization, you can create profile list views to show a set of profiles with the fields you choose. For example, you could create a list view of all profiles in which "Modify All Data" is enabled.

Creating a Profile List View

1. In the Profiles page, click **Create New View**.
2. Enter the view name.
3. Under Specify Filter Criteria, specify the conditions that the list items must match, such as `Modify All Data equals True`.

    a. Type a setting name, or click the lookup icon 🔍 to search for and select the setting you want.
    b. Choose a filter operator.
    c. Enter the value that you want to match.
    d. To specify another filter condition, click **Add**. You can specify up to 25 filter condition rows.

    > **Note:** To remove a filter condition row and clear its values, click the remove row icon ✖.

4. Under Select Columns to Display, specify the profile settings that you want to appear as columns in the list view.

    a. From the Search drop-down list, select the type of setting you want to search for.
    b. Enter part or all of a word in the setting you want to add and click **Find**.

    > **Note:** If the search finds more than 500 values, no results appear. Use the preceding steps to refine your search criteria and show fewer results.

    c. To add or remove columns, select one or more column names and click the **Add** or **Remove** arrow.
    d. Use the **Top**, **Up**, **Down**, and **Bottom** arrows to arrange the columns in the sequence you want.

    > **Note:** You can add up to 15 columns in a single list view.

5. Click **Save**.

Editing a Profile List View

To edit or clone an existing list view:

1. In the Profiles page, select the view you want from the drop-down list.

2. Click **Edit**.
3. Edit the fields as described in the procedure for creating a list view.
4. Click **Save**. To clone an existing view, rename the list view and click **Save As**.

Editing Profiles Using Profile Lists

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

User Permissions Needed
To edit profiles: "Manage Users"

If enhanced profile management is enabled for your organization, you can change permissions in up to 200 profiles directly from the list view, without accessing individual profile pages. Editable fields display a pencil icon (✐) when you hover over the field, while non-editable fields display a lock icon (🔒). In some cases, such as in standard profiles, the pencil icon appears but the setting is not actually editable.

⚠️ **Caution:** Use care when editing profiles with this method. Because profiles affect a user's fundamental access, making mass changes may have a widespread effect on users in your organization.

To change permissions in one or more profiles:

1. Select or create a list view that includes the profiles and permissions you want to edit.
2. To edit multiple profiles, select the checkbox next to each profile you want to edit. If you select profiles on multiple pages, Salesforce.com remembers which profiles are selected.
3. Double-click the permission you want to edit. For multiple profiles, double-click the permission in any of the selected profiles.
4. In the dialog box that appears, enable or disable the permission. In some cases, changing a permission may also change other permissions. For example, if "Manage Cases" and "Transfer Cases" are enabled in a profile and you disable "Transfer Cases," then "Manage Cases" is also disabled. In this case, the dialog box lists the affected permissions.
5. To change multiple profiles, select **All *n* selected records** (where *n* is the number of profiles you selected).
6. Click **Save**.

📝 **Note:**

- For standard profiles, inline editing is available only for the "Single Sign-On" and "Affected By Divisions" permissions.
- If you edit multiple profiles, only those profiles that support the permission you are changing will change. For example, if you use inline editing to add "Modify All Data" to multiple profiles and one profile is a platform profile (which doesn't have "Modify All Data") the platform profile won't change.

If any errors occur, an error message appears, listing each profile in error and a description of the error. Click the profile name to open the profile detail page. The profiles you've clicked appear in the error window in gray, strike-through text.

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

To review your changes in the setup audit trail, select **Setup ➤ Security Controls ➤ View Setup Audit Trail**.

Process Visualizer—Generally Available

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

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

With Winter '10, the Process Visualizer for approval processes is now generally available. The Process Visualizer also includes these enhancements:

Printable View

Print an annotated diagram of your approval process using the new **Printable View**.

Find Text in an Approval Process Diagram

Quickly find detailed information within an approval process by searching for keywords within approval steps, tasks, email alerts, fields updates, outbound messages, and approval process properties.

Zoom

Zoom in and out of the approval process diagram to view large, complex processes easily.

Navigation Pane

Use the new navigator to quickly view different areas of a large approval process diagram.

New Process Visualizer Notation

Familiar flowchart shapes and step-expansion functions help you see how everything happens within your approval process.

About the Process Visualizer

Using the Process Visualizer

You can use the Process Visualizer to:

- Display a flowchart of each saved approval process
- Improve communication about the approval process and gain buy-in from step owners
- Reinforce your company's policies by documenting the decisions you reached when the approval process was designed
- Print an annotated version of the approval process, where numbers added to the diagram correspond to details in a table, which is included in the printable view
- Share approval process diagrams by saving annotated versions as PDF files (requires an Adobe® PDF print driver)
- Help you quickly locate key details by searching multi-step or complex diagrams for matching text
- Help you visualize and understand graphically:

    - The steps necessary for a record to be approved

- The designated approvers for each step
- The criteria used to trigger the approval process
- The specific actions to take when a record is approved, rejected, recalled, or first submitted for approval

Launching the Process Visualizer

Before you can use the Process Visualizer, you must:

- Enable or download the Adobe Flash Player plugin, version 9.0.115 or later, in your browser
- Have at least one approval process defined in your organization

After completing the prerequisites:

1. Click **Setup ➤ Create ➤ Workflow & Approvals ➤ Approval Processes**.
2. Click the name of the approval process you want to view.
3. On the detail page for the approval process, click **View Diagram**.

Each approval process diagram is for viewing purposes only. You cannot update an approval process from the Process Visualizer. After saving your changes to the approval process, click **View Diagram** to view the updates or, if the Process Visualizer window is still open, click **Refresh**.

Understanding the Process Visualizer User Interface

About the Process Visualizer UI

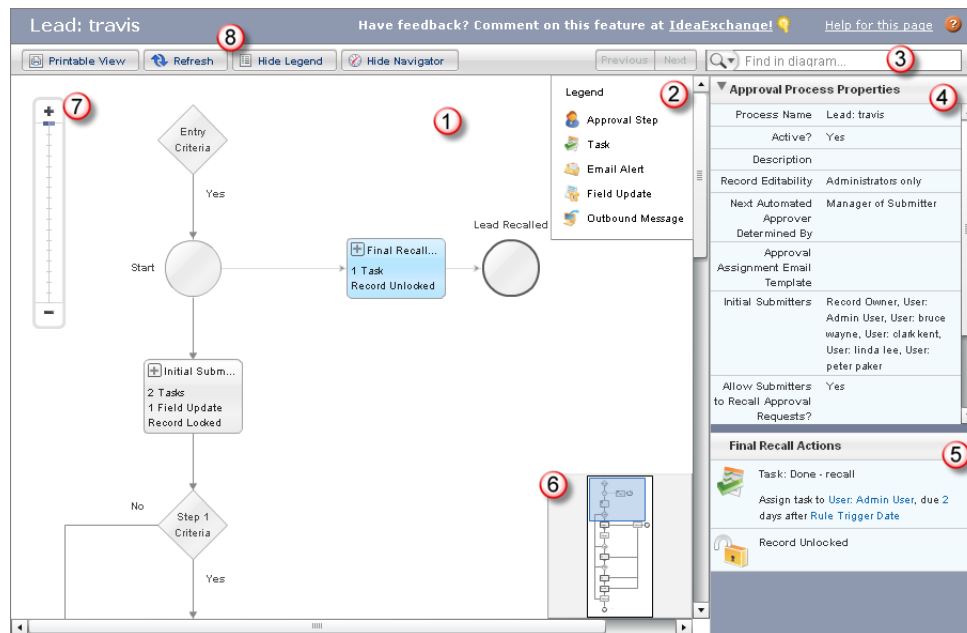The user interface for the Process Visualizer has several functional areas.

Figure 1: Process Visualizer User Interface

The highlighted numbers in the illustration correspond to the following descriptions:

1. The main area contains the approval process diagram, helping you visualize the overall flow, rules, actions, and dependencies. The diagram's orientation is top-to-bottom, left-to-right. The entry criteria for the approval process are shown at the top of the diagram. Record processing moves down the flowchart until the final approval or rejection. Each flowchart component uses a shape, an icon, or both to represent the type of processing that may happen.

2. The diagram's legend summarizes the icons. When you first use the Process Visualizer, the legend is hidden. To display the legend, click **Show Legend**. When you subsequently open other diagrams, the Process Visualizer remembers your last setting (shown or hidden).

3. The banner has a find box so you can find matching text within the approval diagram. Use the **Previous** and **Next** buttons to scroll through your matches.

4. Next to the diagram is an informational sidebar. The top pane in the sidebar presents the Approval Process Properties, which is collapsed by default. The Approval Process Properties pane lists information such as the name of the approval and whether it has been activated. Expand the pane by clicking the arrow icon.

5. The bottom pane of the sidebar contains the hover details, which lists information about the currently selected component on the diagram. You can hover over or click a component to view its details.

6. In the lower right of the diagram pane is a navigator window. Drag the pane within the navigator to view different parts of the diagram.

7. In the upper left of the diagram pane is a zoom slider. Use it to zoom in and out of your process diagram.

8. In the left side of the banner, use the buttons to get a printable view of the diagram, to refresh the diagram, or to hide or show the legend and navigator.

Displaying Hover Details for an Approval Process Diagram

When you hover over or click a flowchart component, the Process Visualizer displays information about it in the sidebar, which remains there until you hover over or click a different component.

The following table lists the type of information you can see in the hover details.

Component Type	Hover Detail Message Formats
Approval steps	Approval required from: • User: `user-name` • Role: `role-name` Or if defined for the step, one of the following values: • Submitter can choose approver • Automatically assigned to Manager field • Unanimous approval required from: `approver-1, approver-n...` • Approval based on first response from: `approver-1, approver-n...` • Related User: `object-name` Owner • The approver's delegate may also approve this request Description:
Field updates	• Update `field-name` with lookup value: `lookup-value` • Update `field-name` with value: `value` • Update `field-name` with formula: `formula`
Email alerts	Send (`email-template`) email to `recipient-1, recipient-n...` and additional recipients: `cc email field of email alert`

Component Type	Hover Detail Message Formats
Tasks	Assign task to `assignee` with due date: `date`
Outbound messages	Send to endpoint `endpoint-url` the following fields: `field-1, field-n,...`

Displaying Approval Process Properties

In the sidebar, the Approval Process Properties pane lists the information shown in the following table. Click the arrow to expand or collapse it. When you subsequently open other diagrams, the Process Visualizer remembers your last setting (expanded or collapsed).

Property	Description
Process Name	A user-defined name of the approval process.
Entry Criteria?	Appears only when there are no entry criteria for the process, displaying with a "No" value.
Active?	Indicates whether the approval process is active.
Description	The description of the approval process.
Record Editability	Shows the defined value for this property. For example: Administrator or current approver.
Next Automated Approver Determined By	Shows the value for this property. For example: Manager of Owner
Approval Assignment Email Template	The name of the template used for email alerts. For example: Leads: New assignment notification (SAMPLE)
Initial Submitters	Shows the defined value for this property. For example: Record Owner
Allow Submitters to Recall Approval Requests?	Shows the defined value, Yes or No, for this property.
Created By	The `name` of the person who created the approval process.
Modified By	The `name` of the last person to modify the approval process.

Printing Diagrams and Saving PDFs

To print an annotated version of the diagram, click **Printable View**. In this view, the numbers on the diagram correspond to details shown in a table directly below it. Use the printed or PDF version of the diagram to communicate information about the approval process, get buy-in from the people who participate in the approval decisions, and help the approval process users understand the requirements and flow. Click **Print** and select a printer. If you have an Adobe PDF print driver installed, you can save the printable view as a PDF file. To return to the diagram, click **Exit Printable View**.

Finding Text in a Diagram

Use the find function in the Process Visualizer banner to find detailed information quickly. This is helpful when you view a diagram with ten or more steps, complex formulas, or the names of many people or roles on the approvers' lists. You can find matching text within the diagram and the Approval Process Properties pane, and view the results highlighted in the sidebar. The number of matches is displayed beside the **Previous** and **Next** buttons, which you can use to scroll through your matches. Find is case insensitive, and treats the search terms as a phrase in quotes.

Use the find filters to limit results to a specific parameter: Approval Steps, Tasks, Email Alerts, Field Updates, and Outbound Messages. Click the arrow next to the **Find** field to select a filter. For example, to find all tasks for `Jane Smith`, click the arrow next to the **Find** field, select **Tasks**, then enter `Jane Smith`.

> **Note:** **All** is the only filter that includes Approval Process Properties, Entry Criteria, and `Go Back` steps in its search parameters. If you select a filter but don't enter any text, all instances of that filter item are highlighted in the diagram and navigation pane.

Refreshing an Approval Process Diagram

Each approval process diagram is for viewing purposes only. You cannot update an approval process from the Process Visualizer. After saving your changes to the approval process, click **View Diagram** to view the updates or, if the Process Visualizer window is still open, click **Refresh**.

Changing an Approval Process Diagram's Zoom Level

Use the zoom slider in the upper left to change the diagram's size. Click **+** to zoom in, and **—** to zoom out, or drag the slider tab up and down the bar. This feature is especially helpful when you are viewing large, complex approval processes in the Process Visualizer.
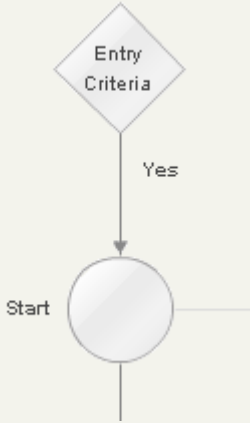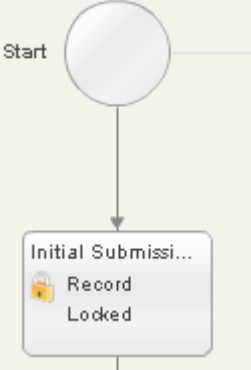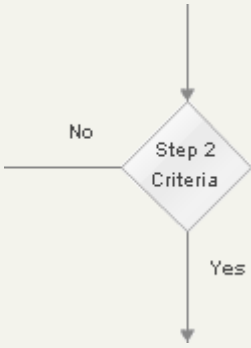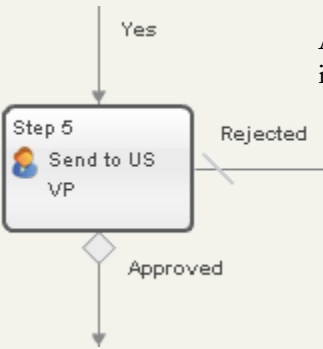
> **Note:** The zoom feature is only visible for diagrams that exceed the dimensions of the display window.
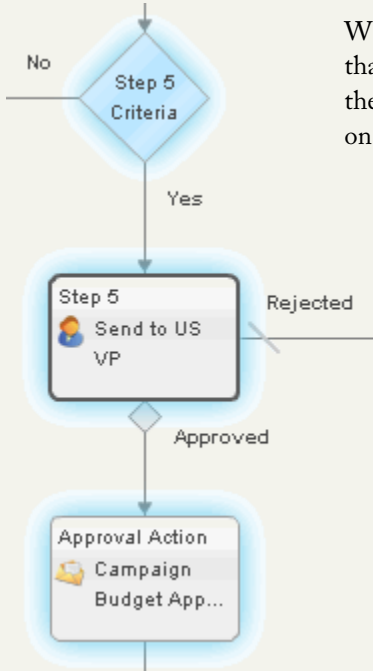
Using the Navigator
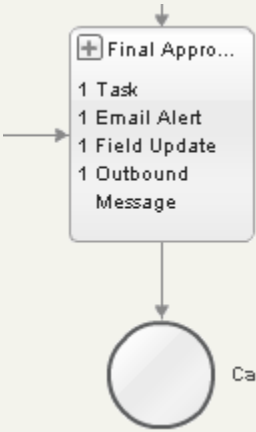
Click and drag the pane around the navigator window to quickly view different areas of a large approval process diagram. When you use the find feature, the navigator window changes to highlight the matches, which allows you to see items not visible in the main diagram display area. The navigator also reflects changes to the size of the diagram in the main display when you use the zoom slider.

Understanding the Process Visualizer Notation

The Process Visualizer uses the following notation to graphically represent each approval process. The shapes are based on the Business Process Modeling Notation (BPMN) standard. In the Process Visualizer, a shape's color changes from gray to blue when you hover over or click it.

Icon and Shape Examples	Description
	Near the top of the diagram, a `Start` circle indicates the beginning of the approval process. If defined, an `Entry Criteria` diamond precedes the `Start` circle. When you hover over or click `Entry Criteria`, the Process Visualizer displays the entry criteria in the sidebar's hover details pane. For example, an approval process for a lead is triggered when `Lead.AnnualRevenue >= 10000`. The arrow below the `Start` circle leads to the next criteria in the approval process. If a recall action was defined for the entry criteria, a line to the right connects to the `Final Recall Actions` rectangle.
	The rectangle labeled `Initial Submission Actions` represents any actions you defined in initial submission. At a minimum, this element shows the record lock set automatically by Salesforce.com to prevent updates by other users. Later during the approval process, after the record is approved, rejected, or recalled, the record is unlocked.
	A diamond with `Yes` or `No` branches represents the numbered step's criteria or formula that is evaluated before proceeding. Hover over or click the diamond to see the criteria or formula in the sidebar's hover details. For example, the criteria could be used to determine whether the `Lead.Rating = Hot`. If true, the approval process continues to the next step on the `Yes` branch. If false, the approval process continues to the next step on the `No` branch.
	A rectangle containing a human icon, represents an approval step. The Approved path includes a small diamond. The Rejected path uses a backslash.

Icon and Shape Examples	Description
(diagram: Approval Action / Update Status rectangle)	A rectangle without a human icon or a plus sign represents a single action. The action types and icons are: • Send an email alert: • Start a task: • Perform a field update: • Send an outbound message: In this example, a task has been assigned. When you hover over or click the rectangle, look for more information in the sidebar's hover details.
(diagram: Approved diamond → +Approval Ac... / 1 Task / 1 Email Alert)	A rectangle with a plus sign (+) represents multiple actions. The actions shown inside are performed simultaneously, as a unit. To expand the display and view the individual actions, click the plus sign. In the expanded display, the Process Visualizer displays the individual actions, one per rectangle.
(diagram: Step 5 Criteria decision with No/Yes branches → Step 5 Send to US VP / Rejected, Approved → Approval Action / Campaign Budget App...)	When you hover over or click a shape on the diagram, and it is part of a step, all the elements that comprise the step use a glowing background color. This visual clue helps you locate all the decisions and actions that comprise each step, and how the processing may branch based on the record's values.

Icon and Shape Examples	Description
	In the approval process definition, if the option was enabled to perform only the rejection actions for this step and send the approval request back to the most recent approver. (go back one step), the diagram displays a `Go Back` circle. When you hover over or click the `Go Back` circle, the hover details pane displays a message. For example: `On rejection send the request back to any one of the following steps, depending on the most recent approver: - `*list-of-steps*`. If no approvers are found, the request goes to Final Rejection.` The identified steps depend on where in the approval process the Go Back was defined. The possible steps are highlighted when you hover over the `Go Back` circle. In the diagram, the Process Visualizer displays the `Go Back` circle only for a step where its preceding step is defined as a skip.
	The `Final Approval Actions` rectangle leads to a circle labeled `Approved`, as shown here. The `Final Rejection Actions` rectangle leads to a circle labeled `Rejected`. If a recall action was defined, the `Final Recall Actions` rectangle shows that the record is now unlocked, and the arrow leads to a circle labeled `Recalled`.

Workflow Email Alerts—Override the From Email Address

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

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

With Winter '10, you can now customize each email alert to replace the user's `From` email address with a standard organization-wide email address, such as `support@company.com`. Recipients of the email alert then reply to the global email address instead of to the Salesforce.com user who updated the record.

Implementation Tips

- Set up your organization-wide email addresses before customizing the `From Email Address` for an email alert.
- You can choose a different organization-wide email address as the `From` address for each email alert, or you can designate that all email alerts for an object use the same `From` email address.

- Only verified organization-wide email addresses display in the `From Email Address` picklist.

- You cannot delete or change an organization-wide email address if it is used by an email alert.

About Overriding the From Email Address for Email Alerts

Setting a Global From Email Address for Email Alerts

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

You can now override the `From Email Address` in email alerts and set it to a previously configured and verified organization-wide email address. This allows you to use a standard global email address for your organization (such as `support@company.com`) instead of the default From field, which is the email address of the person who updates the record.

To use an organization-wide address as your `From Email Address` in an email alert:

1. Click **Setup ➤ Create ➤ Workflow & Approvals ➤ Email Alerts**
2. Click **Edit** to update an existing email alert. If you don't have any email alerts yet, see "Creating Email Alerts for Workflow and Approvals" in the Salesforce.com online help
3. Scroll down to the `From Email Address` field. The default value is Current User's email address.
4. Select an organization-wide address. If Current User's email address is your only option, then there is no verified organization-wide email address set up for your organization. For more information, see Organization-Wide Addresses on page 73.
5. Optionally, select the `Make this the default From email address for this object's email alerts` checkbox.

   > **Note:** If you select **Make this the default From email address for this object's email alerts**, it overrides the `From Email Address` for all email alerts associated with that object. Upon saving, a dialog box prompts you to confirm your selection. You can still customize individual email alerts to use a different `From Email Address`.

6. Click **Save**.

Organization-Wide Addresses

Available in: **All** Editions

User Permissions Needed	
To configure organization-wide addresses:	"Modify All Data"

If your organization requires users to share a common email alias, you can define a list of *organization-wide addresses* for each user profile. Organization-wide addresses define a common email address that a user profile can use. When sending email

from Salesforce.com, users with these profiles can choose a different `From` address than the email address they have defined. Replies are delivered to the organization-wide address.

For example, assume your organization has several users under a single Support Profile. A Support Profile can be associated with an email address called `support@acme.com` and a `Display Name` of `Acme Support`. When Support Profile users send an outbound email through Salesforce.com, they can choose to have their `From` address appear as `support@acme.com` instead of their own Salesforce.com email address.

The highlighted sections in the following image represents the changes to the `From` address and `Display Name` that the recipient of an email might see:

```
Date: Wed, 22 Apr 2009 18:44:19 +0000
From: Acme Support <support@acme.com>
Sender: <no-reply@salesforce.com>
To: "friend@xyz.com" <friend@xyz.com>
Message-ID: <21746402.461240425859813.JavaMail.sfdc@na1-app1-12-sfm.ops.sfdc.net>
Subject: Here is your data
```

After an organization-wide address is verified, it is available as a `From` address when sending an email or an email alert.

To display the list of defined organization-wide addresses, click **Setup ➤ Email Administration ➤ Organization-Wide Addresses**. From this page you can:

•   Click **Add** to create a new organization-wide address.
•   Click **Edit** to change any of the fields associated with the alias:

    -   `Display Name` is the word or phrase users who receive your email will see as the sender of the email.
    -   `Email Address` is the email address that is used when sending an outbound email.
    -   `Allowed Profiles` lists the profiles which use the email address as an alias.
    -   `Status` shows the current stage of verification. When you add a new organization-wide address, it must be verified as a valid email address before becoming available for use. If you have not received your verification email, click **Resend** to have another one sent.

•   Click **Del** to remove the alias.

> **Note:** You cannot use an organization-wide address to send a mass email or a Stay-in-Touch request. You cannot delete or change an organization-wide email address if it is used by an email alert.

Force.com Sites Enhancements

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

Winter '10 includes new features that improve the capabilities of Force.com sites:

•   Out-of-the-Box Integration with Google Analytics
•   Support for Custom Service Not Available Page
•   Sample Error Pages Use a Static Resource
•   Support for High-Volume Customer Portal Users
•   Secure Web Address Displayed

About Force.com Sites Enhancements

Out-of-the-Box Integration with Google Analytics

With Winter '10, Force.com sites provides out-of-the-box integration with Google Analytics. Use Google Analytics to track the usage of your sites and site pages, including number of visits, number of page views, average time spent on site, and more.

To track a site using Google Analytics:

1. Sign up for an account at Google Analytics.
2. Add a new profile in Google Analytics and enter the domain or full URL for the site you want to track.
3. Copy the `Web Property ID` from Google's tracking status information and paste it into the `Analytics Tracking Code` field on the Site Edit page for the site you want to track. The Web property ID starts with the letters UA followed by your account and profile numbers. For example, UA-9049246-2.
4. Click **Save**.
5. To track the Visualforce pages associated with your site, enter the following tag in the site template for those pages, or in the individual pages themselves:

   ```
   <site:googleAnalyticsTracking/>
   ```

   Pages that don't contain the tag and aren't associated with a site template that contains the tag won't be tracked. The default site template already contains the tag, so all pages using that template will be tracked—including certain default pages.

   > **Note:** Google recommends adding the component at the bottom of the page to avoid increasing page load time.

6. Go to the Google Analytics site and follow their instructions for completing the process. After signing up, it may take up to 24 hours to see initial tracking results in Google Analytics.

   > **Tip:** To track multiple sites separately, create separate profiles using the full site URLs and enter a different Web property ID in the `Analytics Tracking Code` field for each site.

You can also reference the new `Analytics Tracking Code` field in the following ways:

- Use the `{!$Site.AnalyticsTrackingCode}` expression in Visualforce pages and email templates.
- Use the new `Site.getAnalyticsTrackingCode` method in Apex.

Support for Custom Service Not Available Page

> **Note:** Not available for Developer Edition or sandbox organizations.

With Winter '10, you can set a custom Service Not Available page to show site users when Salesforce.com servers are unavailable. This custom page is rendered from a static resource that you choose. The static resource is uploaded to the cache server when

assigned as the Service Not Available page, and when updated after assignment. The custom page is shown for HTTP requests only; caching is not used for HTTPS.

The static resource:

- Must be a public zip file 1 MB or smaller.
- Must contain a page named `maintenance.html` at the root level of the zip file. Other resources in the zip file, such as images or CSS files, can follow any directory structure.

To assign the Service Not Available page:

1. Click **Setup ➤ Develop ➤ Sites**.
2. Click the name of the site you want to modify.
3. Click **Page Assignment** on the Error Pages related list.
4. For the `Service Not Available Page`, use the lookup to assign a static resource to use.
5. Click **Save**.

Sample Error Pages Use a Static Resource

With Winter '10, all sample error pages use the SiteSamples static resource for their stylesheet and images. Don't rename or delete SiteSamples or you may get an error.

To view the SiteSamples resource, click **Setup ➤ Develop ➤ Static Resources**.

Support for High-Volume Customer Portal Users

Note: High-volume Customer Portal users are currently available through a pilot program. For information on enabling high-volume Customer Portal users, contact salesforce.com.

Force.com sites allows users to register for or log in to an associated portal seamlessly from your site.

With Winter '10, Force.com sites fully supports the High-Volume Customer Portal User user license. High-volume Customer Portal users are limited-access portal users intended for organizations with many thousands to millions of portal users. Unlike other portal users, high-volume Customer Portal users don't have roles, which eliminates performance issues associated with role hierarchy calculations.

For more information, see High-Volume Customer Portal Users on page 40.

Secure Web Address Displayed

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

With Winter '10, the `Secure Web Address` field—the unique Force.com URL for this site when using SSL—is displayed on the Site Details page and the Login Settings page.

To view the `Secure Web Address` for your site:

1. Click **Setup ➤ Develop ➤ Sites**.

2. Click the name of the site you want to control. The Site Details page displays the `Secure Web Address`.

You can also see the `Secure Web Address` by clicking **Login Settings** on the Site Details page.

Formula Enhancements

Available in: **All** Editions

Winter '10 delivers a set of formula enhancements that increase the productivity of both administrators and users.

New ISBLANK and BLANKVALUE Functions
In Winter '10, Salesforce.com introduces two new functions: ISBLANK and BLANKVALUE. Use these functions to determine if fields of any type (except picklists) are empty. In previous releases, you had to use different functions depending on the data type of the field. For example, you could use ISNULL and NULLVALUE to determine if an email was empty, but you had to use LEN()=0 to determine if a text field was empty.

Note: Salesforce.com will continue to support all functions, including ISNULL, NULLVALUE, and LEN, so there is no need to rewrite existing formulas; however, use ISBLANK and BLANKVALUE for new formulas for improved consistency of data type handling.

ISBLANK

Description:	Determines if an expression has a value and returns TRUE if it does not. If it contains a value, this function returns FALSE.
Use:	`ISBLANK(expression)` and replace `expression` with the expression you want evaluated.
Example:	`(IF(ISBLANK(Maint_Amount__c), 0, 1) + IF(ISBLANK(Services_Amount__c), 0,1) + IF(ISBLANK(Discount_Percent__c), 0, 1) + IF(ISBLANK(Amount), 0, 1) + IF(ISBLANK(Timeline__c), 0, 1)) / 5` This formula takes a group of opportunity fields and calculates what percent of them are being used by your sales personnel. This formula field checks five fields to see if they are blank. If so, a zero is counted for that field. A "1" is counted for any field that contains a value and this total is divided by five (the number of fields evaluated). Note that this formula requires you select the `Treat blank fields as blanks` option under Blank Field Handling while the Advanced Formula subtab is showing.
Tips:	• Use ISBLANK instead of ISNULL in new formulas. ISBLANK has the same functionality as ISNULL, but also supports text fields. Salesforce.com will continue to support ISNULL, so you do not need to change any existing formulas.

- A field is not empty if it contains a character, blank space, or zero. For example, a field that contains a space inserted with the spacebar is not empty.
- Use the BLANKVALUE function to return a specified string if the field does not have a value; use the ISBLANK function if you only want to check if the field has a value.
- If you use this function with a numeric field, the function only returns TRUE if the field has no value and is not configured to treat blank fields as zeroes.

BLANKVALUE

Description:	Determines if an expression has a value and returns a substitute expression if it does not. If the expression has a value, returns the value of the expression.
Use:	BLANKVALUE(*expression*, *substitute_expression*) and replace *expression* with the expression you want evaluated; replace *substitute_expression* with the value you want to replace any blank values.
Example:	Example 1 BLANKVALUE(Department, "Undesignated") This formula returns the value of the Department field if the Department field contains a value. If the Department field is empty, this formula returns the word Undesignated. Example 2 (BLANKVALUE(Payment_Due_Date__c, StartDate +5) This formula returns the date five days after the contract start date whenever Payment Due Date is blank. Payment Due Date is a custom date field on contracts.
Tips:	• Use BLANKVALUE instead of NULLVALUE in new formulas. BLANKVALUE has the same functionality as NULLVALUE, but also supports text fields. Salesforce.com will continue to support NULLVALUE, so you do not need to change existing formulas. • A field is not empty if it contains a character, blank space, or zero. For example, a field that contains a space inserted with the spacebar is not empty. • Use the BLANKVALUE function to return a specified string if the field does not have a value; use the ISBLANK function if you only want to check if the field has a value. • If you use this function with a numeric field, the function only returns the specified string if the field does not have a value and is not configured to treat blank fields as zeroes.

Inline Comments in Formulas

Improve the maintenance and debugging of your formulas by using slash-star (/* */) inline comments in formulas everywhere except on Visualforce pages. Inline comments are annotations within a formula that begin with a forward slash followed by an asterisk (/*), and conclude with an asterisk followed by a forward slash (*/). For example,

```
/*This is a formula comment*/
```

You can also do multiline comments, such as:

```
/*

   This is
   a multiline
   comment

*/
```

Comments are useful for explaining specific parts of a formula to administrators viewing the formula definition. For example:

```
AND(
/*competitor field is required, check to see if field is empty */
LEN(Competitor__c) = 0,
/* rule only enforced for ABCD record types */
$RecordType.Name = "ABCD Opportunity",
/* checking for any closed status, such as closed won and closed lost…allows for additional
 closed picklist values in the future */
CONTAINS(TEXT(StageName), "Closed")
)
```

You can also use comments to *comment out* sections of your formula when debugging and checking the syntax to locate errors in the formula.

> **Note:**
>
> •   Nesting comments causes a syntax error. For example, you cannot save a formula that has the following:
>
> ```
> /* /* comment */ */
> ```
>
> •   Commenting out a whole formula causes a syntax error.
> •   Comments count against the character and byte size limits in formulas.

ISNUMBER Function Available in Formula Fields

When creating formula fields, you can now use the ISNUMBER function to check if a text field value is a number. This allows you to catch potential error conditions when performing calculations with text fields, like in the following number formula field that determines the importance of an account:

```
IF(ISNUMBER(Rating__c), (Rating__c * Ranking__c), (Ranking__c))
```

In previous releases, the ISNUMBER function was not available in formula fields. With Winter '10, the ISNUMBER function is available everywhere formulas exist except report summary fields.

Spanning Formula Limit Increase

Salesforce.com now allows a maximum of ten unique relationships per object in cross-object formulas. The limit is cumulative across all formula fields, rules, and lookup filters. For example, if two different formulas on opportunities reference two different fields of an associated account, only one unique relationship exists (from opportunities to accounts).

The limit increase does not affect organizations with customized cross-object formula limits. If your limit was previously higher than five but lower than ten, contact salesforce.com to increase your organization's limit.

Fast Data Loading with New Bulk API

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

Winter '10 introduces a new Bulk API that is optimized to insert, update, or upsert a large number of records asynchronously. The new Bulk API allows you to load large batches of data that are processed in the background. The Bulk API offers a number of benefits over loading data with the regular SOAP-based Web Services API:

- You can load data faster because of parallel processing and fewer network round-trips.
- You can monitor currently processing and completed data loads by navigating to **Setup ➤ Monitoring ➤ Bulk Data Load Jobs**. You can also abort current data loads from this page. You need the new "Manage Data Integrations" permission to access the monitoring page.
- You can enjoy improved robustness as large data loads complete quicker and are less likely to be disrupted by network failures.

Developing Clients for the Bulk API

Java developers who want to write Bulk API clients can take advantage of the open source Web Service Connector (WSC) Java toolkit maintained by salesforce.com and available at `code.google.com/p/sfdc-wsc/`.

Because the Bulk API follows REST principles, it is straightforward to write clients on a variety of platforms and in many programming languages. The *Bulk API Developer's Guide* shows you how to build Bulk API clients.

Using Data Loader with the Bulk API

Salesforce.com offers support for the Bulk API in the Data Loader desktop client. To download Data Loader, click **Setup ➤ Data Management ➤ Data Loader**.

Data Loader uses the SOAP-based Web Services API by default. To use the Bulk API instead:

1. Open the Data Loader client.
2. Click **Settings ➤ Settings**.
3. Select the `Use Bulk API for Insert, Update, and Upsert` checkbox.
4. Click **OK**.

There is an additional `Enable serial mode for Bulk API` option that allows you to use serial instead of parallel processing for the Bulk API. Processing in parallel can cause database contention. When this is severe, the load may fail. Using serial mode guarantees that batches are processed one at a time. Note that using this option may significantly increase the processing time for a load.

For more information about the Data Loader, see "Data Loader Overview" in the Salesforce.com online help.

Monitoring Bulk Data Load Jobs

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

User Permissions Needed	
To monitor bulk data load jobs:	"Manage Data Integrations"

To track the status of bulk data load jobs that are in progress or recently completed, click **Setup ➤ Monitoring ➤ Bulk Data Load Jobs**.

The In Progress Jobs list contains the following columns, shown in alphabetical order:

Column	Description
Job ID	The unique, 15–character ID for this job.
Object	The object type for the data being processed. All data in a job must be of a single object type.
Operation	The processing operation for all the batches in the job. The valid values are: • `insert` • `upsert` • `update`
Progress	The percentage of batches processed relative to the total number of batches submitted. Progress is not shown when the job is open because the total number of batches in the job is not known until the job is closed. Progress may not accurately reflect the number of records processed. Batches may not all contain the same number of records and they may be processed at different speeds.
Records Processed	The number of records already processed. This number increases as more batches are processed.
Start Time	The date and time when the job was submitted.
Status	The current state of processing for the job. The valid values are: • `Open`: The job has been created, and batches can be added to the job. • `Closed`: No new batches can be added to this job. Batches associated with the job may be processed after a job is closed. You cannot edit or save a closed job. • `Aborted`: The job has been aborted. • `Failed`: The job has failed. Batches that were successfully processed in the job cannot be rolled back.
Submitted By	The name of the user that submitted the job.

The Completed Jobs list contains the following columns, shown in alphabetical order. Completed jobs are removed from the list seven days after completion.

Column	Description
End Time	The date and time when the job completed.
Job ID	The unique, 15–character ID for this job.
Object	The object type for the data being processed. All data in a job must be of a single object type.

Column	Description
Operation	The processing operation for all the batches in the job. The valid values are: • `insert` • `upsert` • `update`
Records Processed	The number of records already processed. This number increases as more batches are processed.
Start Time	The date and time when the job was submitted.
Status	The current state of processing for the job. The valid values are: • `Open`: The job has been created, and batches can be added to the job. • `Closed`: No new batches can be added to this job. Batches associated with the job may be processed after a job is closed. You cannot edit or save a closed job. • `Aborted`: The job has been aborted. • `Failed`: The job has failed. Batches that were successfully processed in the job cannot be rolled back.
Submitted By	The name of the user that submitted the job.
Time to Complete	The total time to complete the job.

Force.com Web Services API Enhancements

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

The Force.com Web Services API version 17.0 contains new features and bug fixes that improve the capabilities of applications that leverage the Force.com platform. Considerable effort has been made to ensure backwards capability for applications that have been written against previous versions of the API, starting with API 2.5.

The new API provides a number of powerful enhancements that further improve any integration already in place between Salesforce.com and your other systems.

After the Winter '10 release, the 16.0 version of the WSDL file is no longer available. Instead, all requests for a WSDL return a 17.0 version. Please remember to save WSDL files with your project, as the enterprise WSDL is custom to your organization. Salesforce.com maintains backwards compatibility with previous versions of our API in accordance with our stated support policy. We recommend that developers migrate to the latest version of the API as often as is feasible in order to receive the benefit of new enhancements from release to release. Developers with integrations on API versions prior to version 2.5 should plan to migrate to the most recent API in preparation for the eventual end of support for the older API versions.

Generally Available Enhancements

The Force.com Web Services API has been improved for Winter '10:

New Login Endpoint

`https://login.salesforce.com/services/Soap/c/`*`api_version`* is the new recommended endpoint for API login requests, where *`api_version`* specifies the API version, such as 17.0. If you send non-login requests to

https://login.salesforce.com/services/Soap/c/*api_version*, an error is returned. The less secure version of the URL—http://login.salesforce.com/services/Soap/c/*api_version*—is also supported, but not recommended. It is helpful for debugging through proxy servers.

If you send a login request to the previously recommended endpoint, https://www.salesforce.com/services/Soap/c/*api_version*, it will still complete successfully, but https://login.salesforce.com/services/Soap/c/*api_version* is the preferred option.

New Objects

The following new objects have been added in API version 17.0:

- The following new objects were added for Salesforce CRM Content:

  - The ContentDocument object represents a document that has been uploaded to a workspace.
  - The ContentDocumentHistory object represents the history of a document.
  - The ContentVersion object represents a specific version of a document.
  - The ContentVersionHistory object represents the history of a specific version of a document.
  - The ContentWorkspace object represents a public workspace.
  - The ContentWorkspaceDoc object represents a link between a document and a workspace.

- The CronTrigger object represents an Apex scheduled job.
- The Question object represents a topic that users can view and reply to.
- The Reply object represents a reply that a user has submitted in response to a question.

  Note: The Question and Reply objects are part of the answers pilot feature, which is disabled by default. These objects do not appear until answers is enabled.

Changed Objects

The following objects have been changed in API version 17.0:

- The Attachment object includes the following new fields to support Salesforce to Salesforce:

  - ConnectionReceivedID
  - ConnectionSentID
  - IsPartnerShared

- The Campaign object includes the CampaignMemberRecordTypeId field, which is used to set the record type for CampaignMember records associated with a campaign.
- The CampaignMember object includes the CurrencyIsoCode field to support currency changes on CampaignMember records, and the RecordTypeId field to display the record type associated with the CampaignMember. The CampaignMember record type is set using the CampaignMemberRecordTypeId field on an associatedCampaign.
- The LanguageLocaleKey field has been renamed in the CategoryNodeLocalization, ScontrolLocalization, and WebLinkLocalization objects. It is now the Language field. The Language field is available in version 17.0 and later. The LanguageLocaleKey field is available in version 16.0 and earlier.
- The EmailServicesFunction object includes these fields:

  - IsErrorRoutingEnabled and ErrorRoutingAddress to support sending error notification email messages to a chosen email address instead of notifying the sender
  - IsTextTruncated to support truncating oversize emails

- The User object includes the AccountId field to support High-Volume Customer Portal Users.

- The Vote object can now be used to vote on the new Reply object.

Changed Calls

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

The DescribeGlobalResult object returned by the `describeGlobal()` call no longer supports the `types` property. Instead, DescribeGlobalResult has a new `sobjects` property that enhances the information that was previously available in the `types` property. In many cases, the new property can increase performance as the extra information that it includes reduces the need for subsequent `describeSObjects()` calls for further information.

The DescribeSObjectResult and DescribeGlobalSObjectResult objects include the `customSetting` field to support custom setting objects.

The `sendEmail()` call now includes:

- `contentType` and `inline` properties on EmailFileAttachment to specify email attachments' Content-Types and Content-Dispositions
- `inReplyTo` and `references` arguments for SingleEmailMessage to support tracking of email threads

API Migration Issues

The following technical notes are available to assist you in migrating from earlier versions:

- Release 4.0: http://www.salesforce.com/developer/tech-notes.jsp?tn=TN-10
- Release 5.0: http://www.salesforce.com/developer/tech-notes.jsp?tn=TN-13
- Release 6.0: http://www.salesforce.com/developer/tech-notes.jsp?tn=TN-15
- Release 7.0: http://www.salesforce.com/developer/tech-notes.jsp?tn=TN-17
- Release 8.0: http://www.salesforce.com/developer/tech-notes.jsp?tn=TN-19
- Release 9.0:
  http://wiki.apexdevnet.com/index.php/What%27s_New_in_Apex_Web_Services_API_Spring_%2707
- Release 10.0:
  http://wiki.apexdevnet.com/index.php/What%27s_New_in_Apex_Web_Services_API_Summer_%2707
- Release 11.0:
  http://wiki.apexdevnet.com/index.php/What%27s_New_in_Force.com_Web_Services_API_Winter_%2708
- Release 12.0:
  http://wiki.apexdevnet.com/index.php?title=What%27s_New_in_Force.com_Web_Services_API_Spring_%2708
- Release 13.0:
  http://wiki.apexdevnet.com/index.php/What%27s_New_in_Force.com_Web_Services_API_Summer_%2708
- Release 14.0: Force.com Web Services API Developer's Guide Version 14.0
- Release 15.0: Force.com Web Services API Developer's Guide Version 15.0
- Release 16.0: Force.com Web Services API Developer's Guide Version 16.0

Documentation for these earlier versions is also available. See wiki.developerforce.com/index.php/Earlier_Reference_Documentation on Developer Force for links to online and PDF versions.

Force.com Apex Code Enhancements

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

Force.com Apex code includes the following enhancements in Winter '10. Refer to the Force.com Apex Code Developer's Guide for complete information about Apex.

Limited Release Features

The following enhancement is available only as a limited release:

Apex Scheduler

You can schedule Apex classes to run at specific times. For more information, see Apex Scheduler on page 91.

Generally Available Enhancements

The following enhancements are generally available:

Batch Apex Generally Available

Batch Apex was introduced in a limited release in Summer '09. As of Winter '10, batch Apex is generally available. Batch Apex provides developers the ability to operate over large amounts of data by chunking the job into smaller parts, thereby keeping within the governor limits. Using batch Apex, a developer can build complex, long-running processes on the Force.com platform. For more information, see Batch Apex on page 88.

Custom Settings Generally Available

Previously, custom settings were only available as pilot. As of Winter '10, custom settings are generally available. Custom settings provide developers a mechanism to deliver application metadata and associate this data at the organization, profile, and user level. Custom settings are cached and provide efficient programmatic access without the cost of database queries. This data can be used by Apex, Visualforce, formula fields, validation rules, and the Force.com Web services API. For more information, see Custom Settings on page 96.

Parameterized Typing Enabled for Interfaces

Parameterized typing allows interfaces to be implemented with generic data type parameters that are replaced with actual data types upon construction.

Custom Iterators

You can create your own iterators to set your own criteria for traversing through a collection by implementing the `Iterable` and `Iterator` interfaces. These can also be used with Lists and batch Apex.

New Database Method `emptyRecycleBin` Added

The `emptyRecycleBin` method permanently deletes the specified records or sObjects from the database. It returns a new object, Database.EmptyRecycleBinResult. The `emptyRecycleBin` method uses the DML governor limits. The item or items deleted are added to the number of items processed by a DML statement, and the method call is added to the total number of DML statements issued.

New Password Methods Added

The new `System.resetPassword` and `System.setPassword` methods enable you to reset passwords or create new passwords for users. The System.ResetPasswordResult object is returned by `System.ResetPassword`.

⚠ **Caution:** These methods should only be employed in applications that require custom password logic. It is important to review all design aspects of an implementation that uses these methods. These methods should not be exposed directly to end users without careful and thorough design.

Math Methods Now Accept Decimals

The following Math methods now accept Decimal as well as Double values:

- `abs`
- `acos`
- `asin`
- `atan`
- `atan2`
- `cbrt`
- `ceil`
- `cos`
- `cosh`
- `exp`
- `floor`
- `log`
- `log10`
- `pow`
- `rint`
- `roundToLong`
- `signum`
- `sin`
- `sinh`
- `sqrt`
- `tan`
- `tanh`

Precision Values for Decimal More Accurate

Prior to Winter '10, only the first place after a decimal point was counted if all the places were held by zeros. For example, 123.000 had a precision of 4, not 6. As of Winter '10, the value 123.000 has a precision of 6.

New Fields on the InboundEmail Object and InboundEmail.TextAttachment Object

The InboundEmail Object now includes these fields:

- To indicate when inbound emails are truncated, the InboundEmail Object now includes these fields:

  - `htmlBodyIsTruncated`
  - `plainTextBodyIsTruncated`

- The InboundEmail.TextAttachment Object now includes the `bodyIsTruncated` field.
- To facilitate inbound email threading, the InboundEmail Object now includes these fields:

  - `inReplyTo`
  - `messageId`
  - `references`

New Single Email Message Methods

`setInReplyTo` and `setReferences` specify emails' In-Reply-To and References fields.

New EmailFileAttachment Methods

`setContentType` and `setInline` specify email attachments' Content-Type and Content-Disposition.

Code Summary—Changes to Apex Quick View

Winter '10 introduces a new way to view Apex classes. The **Class Summary** tab, which is available when viewing any Apex class, lists the access level and signature for each method and variable in the Apex class, as well as any inner classes. In addition, the following has changed:

- The **Generate WSDL** button only displays if your class has a method defined as a `webService`.
- For Apex classes included in managed packages, you can view the prototype for various package versions only if the class is defined as `global`.
- For Apex classes included in a managed package, the **Security** link only displays for classes defined as `global`.
- Package subscribers can now view which Apex identifiers are available in specific package versions.

Apex Triggers for Case Comments and Email Messages

Now you can define Apex triggers associated with case comments and email messages. For example, you can set a trigger so that whenever a user adds a case comment, that user is added to the case team so that they can receive notices set up for team members.

To set up triggers:

- For case comments, click **Setup ➤ Cases ➤ Case Comments ➤ Triggers**.
- For email messages, click **Setup ➤ Cases ➤ Email Messages ➤ Triggers**.

Triggers Not Enabled in Content Objects

You cannot associate an Apex trigger with the new content objects: ContentDocument, ContentDocumentHistory, ContentVersion, ContentVersionHistory, ContentWorkspace, ContentWorkspaceDoc.

For more information see, Content API Access.

Callouts and HTTP Content-Type Header

In API versions 16.0 and earlier, HTTP responses for callouts are always decoded using UTF-8, regardless of the Content-Type header. In API versions 17.0 and later, HTTP responses are decoded using the encoding specified in the Content-Type header.

Documentation Updates

The following updates have been made to the *Force.com Apex Developer's Guide*:

- The `Database.upsert` method signature was documented incorrectly. The signature uses `Schema.sObjectField` for the external ID.
- You cannot add a list of messages as sObjects to ApexPages using the `addMessages` method.
- The `Process` method for Approval can be used with a single `Approval.ProcessRequest` item or with a list of `Approval.ProcessRequest` items. Both the single case and the list case can also use the optional *all_or_nothing* parameter.
- Date and DateTime have a method `Parse` that constructs a Date or Datetime from the specified String.
- The `DescribeFieldResult.getReferenceTo` method actually returns a list of `schema.sobjectType` objects
- DescribeFieldResult has a `getRelationshipOrder` method that returns the type of relationship.
- The `DescribeFieldResult.getSOAPType` method returns a Schema.SOAPType object, which has enum values such as Boolean, Date, and so on.

- The `DescribeFieldResult.getType` method returns a Schema.DisplayType object. Also, the Schema.DisplayType values include EncryptedString and Time.
- DescribeFieldResult has a `isWriteRequiresMasterRead` method that returns the type of permission necessary to read or write to the child object in the relationship.
- Limits have the methods `getQueryLocatorRows` and `getLimitQueryLocatorRows` for QueryLocators.
- You can add both Lists and Sets using the `addAll` method for a List.
- The Map `putAll` method using a list of sObjects returns Void.
- Schema does not have a method `rowCause`. It is a property.
- The sObject methods `getSObject` and `getSObjects` take an schema.SObjectField object for an argument.
- The sObject method `putSObject` takes a schema.SObjectField object for an argument.
- The schema.DescribeSObjectResult object has a method `getSObjectType` for determining the type of the sObject.
- The Schema.DescribeSObjectResult object does not have an `isTriggerable` method.
- String has a `Format` method for formatting values.
- String has a `fromCharArray` method for creating a string from a list of integers.
- The String method `indexOf` can be used just with a substring. You don't have to specify a starting index.
- System has a method `currentPageReference` used with Visualforce to return a reference to the current page.
- System has a method `Process`, used to process workflow approvals.
- System has a method `Submit` used to submit workflow approvals that have been processed.
- Test has a method `setCurrentPageReference` used to set the current page reference for the controller.
- `HTTP` has a method `toString` that returns a string that displays and identifies this object's properties.
- The `HttpRequest` method `setHeader` actually takes two strings as arguments, one for the key, the other for the value.
- The `HttpRequest` method `getMethod` does not take an argument.
- The correct Sites method is `getanalyticsTrackingCode`.
- For Sites, the last argument (*old_password*) is optional for the `ChangePassword` method.
- For Sites, the last argument (*password*) is optional for the `CreatePortalUser` method.
- `XmlStreamReader` has a method `getPIData` that returns the data section of a processing instruction.
- `XmlStreamReader` has a method `getPITarget` that returns the target section of a processing instruction.
- `XmlStreamReader` method `getEventType` returns additional values.
- `XmlStreamWriter` has the method `setDefaultNamespace`, that binds a URI to the default namespace.

Batch Apex

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

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

Batch Apex was introduced in a limited release in Summer '09. As of Winter '10, batch Apex is generally available.

Batch Apex provides developers the ability to operate over large amounts of data by chunking the job into smaller parts, thereby keeping within the governor limits. Using batch Apex, a developer can build complex, long-running processes on the Force.com platform. For example, a developer could build an archiving solution that runs on a nightly basis, looking for records past a certain date and adding them to an archive. Or a developer could build a data cleansing operation that goes through all Accounts and Opportunities on a nightly basis and reassigns them if necessary, based on custom criteria.

All batch Apex jobs run asynchronously. After a job is placed in the job queue, it runs when system resources become available.

The following enhancements have been made to batch Apex for Winter '10:

- The `executeBatch` method has been renamed to `execute`.
- Instead of a list of sObjects, the `execute` method now takes the following parameters:

  - A `Database.BatchableContext` object for keeping track of the batch job while it's running
  - A list of sObjects or *parameterized types*, that is, a list in which the data type is not defined until the interface is called

- The `start` and `finish` methods also take the `Database.BatchableContext` object for keeping track of the batch job while it's running.
- The `start` method now takes either a Database.QueryLocator object or a custom iterable.
- A maximum of 50 million records can be returned in the `Database.QueryLocator` object.
- You can have a maximum of five queued or active batch jobs.
- You can now perform callouts from batch classes that implement the `Database.AllowsCallouts` interface.
- You can now maintain state across a batch execution in classes that implement the `Database.Stateful` interface.
- The `Database.executeBatch` method now takes an optional *scope* parameter, which can be used to limit the number of records to be passed as a single chunk to the `execute` method.
- When an exception occurs during the execution of a batch job, an email notification is now sent.

Batch Apex Best Practices

- Batch Apex jobs should be run as background processes and not tied to transactional events. Though you can use a trigger to start a batch Apex job, remember that you can have only five queued or active batch jobs.
- When you call `Database.executeBatch`, Salesforce.com only places the job in the queue at the scheduled time. Actual execution may be delayed based on service availability.
- The `Database.executeBatch` method takes an optional parameter *scope*. This parameter specifies the number of records that should be passed into the `execute` method. This parameter must be less than 200. Use this when you have many operations for each record being passed in and are running into governor limits. By limiting the number of records, you are thereby limiting the operations per transaction.
- Use `Database.Stateful` with the class definition if you want to share variables or data across job transactions. Otherwise, all instance variables are reset to their initial state at the start of each transaction.
- Methods declared as `future` are not allowed in classes that implement the `Database.Batchable` interface.
- Methods declared as `future` cannot be called from a batch Apex class.
- You cannot call the `Database.executeBatch` method from within any batch Apex method.
- In the event of a catastrophic failure such as a service outage, any operations in progress are marked as Failed. You should run the batch job again to correct any errors.
- When a batch Apex job is run, email notifications are sent either to the user who submitted the batch job, or, if the code is included in a managed package and the subscribing organization is running the batch job, the email is sent to the recipient listed in the **Apex Exception Notification Recipient** field.
- Each method execution uses the standard governor limits anonymous block, Visualforce controller, or WSDL method.
- Each batch Apex invocation creates an AsyncApexJob record. Use the ID of this record to construct a SOQL query to retrieve the job's status, number of errors, progress, and submitter. For more information about the AsyncApexJob object, see AsyncApexJob in the *Force.com Web Services API Developer's Guide.*
- All methods in the class must be defined as `global`.
- For a sharing recalculation, Salesforce.com recommends that the `execute` method delete and then re-create all Apex managed sharing for the records in the batch. This ensures the sharing is accurate and complete.

About Batch Apex

Implementing the `Database.Batchable` **Interface**

The `Database.Batchable` interface contains three methods that must be implemented:

- `start` method

  ```
  global void (Database.QueryLocator | Iterable<sObject>) start(Database.batchableContext
    bc) {}
  ```

  The `start` method is called at the beginning of a batch Apex job. Use the `start` method to collect the records or objects to be passed to the interface method `execute`. This method returns either a Database.QueryLocator object or an iterable that contains the records or objects being passed into the job.

  Use the Database.QueryLocator object when you are using a simple query (`SELECT`) to generate the scope of objects used in the batch job. If you use a QueryLocator object, the governor limit for the total number of records retrieved by SOQL queries is bypassed. For example, a batch Apex job for the Account object returns a QueryLocator for all account records in an organization. Another example is a sharing recalculation for the Contact object that returns a QueryLocator for all contact records in an organization.

  Use the iterable when you need to create a complex scope for the batch job. You can also use the iterable to create your own custom process for iterating through the list.

  > ⚠ **Important:** If you use an iterable, the governor limit for the total number of records retrieved by SOQL queries is still enforced.

- `execute` method:

  ```
  global void execute(Database.BatchableContext BC, list<P>){}
  ```

  The `execute` method is called for each batch of records passed to the method. Use this method to do all required processing for each chunk of data.

  This method takes the following:

  - A reference to the Database.BatchableContext object.
  - A list of sObjects, such as `List<Acccount>`, or a list of parameterized types. If you are using a Database.QueryLocator, the returned list should be used.

- `finish` method

  ```
  global void finish(Database.BatchableContext BC){}
  ```

  The `finish` method is called after all batches are processed. Use this method to send confirmation emails or execute post-processing operations.

All of the methods require a reference to a Database.BatchableContext object. Use this object to keep track of the context of the batch job. For example:

```
global void finish(Database.BatchableContext BC){
   // Get the ID of the AsyncApexJob representing this batch job
   // from Database.BatchableContext.
```

```
      // Query the AsyncApexJob object to retrieve the current job's information.
      AsyncApexJob a = [Select Id, Status, NumberOfErrors, JobItemsProcessed,
         TotalJobItems, CreatedBy.Email
         from AsyncApexJob where Id =
         :BC.getAsyncApexJobId()];
      // Send an email to the Apex job's submitter notifying of job completion.
      Messaging.SingleEmailMessage mail = new Messaging.SingleEmailMessage();
      String[] toAddresses = new String[] {a.CreatedBy.Email};
      mail.setToAddresses(toAddresses);
      mail.setSubject('Apex Sharing Recalculation ' + a.Status);
      mail.setPlainTextBody
      ('The batch Apex job processed ' + a.TotalJobItems +
      ' batches with '+ a.NumberOfErrors + ' failures.');
      Messaging.sendEmail(new Messaging.SingleEmailMessage[] { mail });
}
```

The Database.BatchableContext method `getJobId` returns the Id of the AsyncApexJob object associated with this batch job as a string. Use this method to track the progress of records in the batch job.

Each execution of a batch Apex job is considered a discrete transaction. For example, a batch Apex job that contains 1,000 records and is executed without the optional *scope* parameter from `Database.executeBatch` is considered five transactions of 200 records each. The Apex governor limits are reset for each transaction. If the first transaction succeeds but the second fails, the database updates made in the first transaction are not rolled back.

Apex Scheduler—Limited Release

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

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

You can schedule Apex classes to run at specific times. First implement the `Schedulable` interface for the class, then specify the schedule using either the Schedule Apex page in the Salesforce.com user interface, or the `System.schedule` method. In addition, you can use the new method `System.abortJob` to stop a job after it has been scheduled.

Note: The Apex scheduler is currently available through a limited release program. To verify if it is possible to join the limited release program and enable the Apex scheduler for your organization, contact salesforce.com.

Implementation Tips

- You must implement the `Schedulable` interface for the class first before you can schedule the class.
- Use either the `System.schedule` method or the Schedule Apex page in the Salesforce.com user interface to schedule the class.
- After you schedule a job, you can monitor the progress of the job on the All Scheduled Jobs page.
- Salesforce.com only enqueues the process at the scheduled time. Actual execution may be delayed based on service availability.
- Once the job has completed, you can see specifics about the job (such as whether it passed or failed, how long it took to process, the number of records process, and so on) on the Apex Jobs page.
- The `System.schedule` method uses the user's timezone for the basis of all schedules.
- Use the `System.abortJob` to stop jobs that were scheduled using `System.schedule`.

Best Practices

- Scheduled jobs should be run as background processes and not tied to transactional events. Though you can use a trigger to schedule a job, remember that you can have only ten queued or active scheduled jobs.
- Though it's possible to do additional processing in the `execute` method, Salesforce.com recommends that all processing take place in a separate class.

About Apex Scheduler

Implementing the `Schedulable` **Interface**

To schedule an Apex class to run at regular intervals, first write an Apex class that implements the Salesforce.com-provided interface `Schedulable`.

To monitor or stop the execution of a scheduled Apex job using the Salesforce.com user interface, click **Setup ➤ Monitoring ➤ Scheduled Jobs**. For more information, see "Monitoring Scheduled Jobs" in the Salesforce.com online help.

To stop execution of a job that was scheduled using the `System.schedule` method, use the `System.abortJob` method.

The `Schedulable` interface contains one method that must be implemented, `execute`.

```
global void execute(SchedulableContext sc){}
```

Use the SchedulableContext object to keep track of the scheduled job once it's scheduled. The SchedulableContext method `getTriggerId` returns the Id of the CronTrigger object associated with this scheduled job as a string. Use this method to track the progress of the scheduled job.

Use this method to instantiate the class you want to schedule.

Tip: Though it's possible to do additional processing in the `execute` method, Salesforce.com recommends that all processing take place in a separate class.

The following example implements the `Schedulable` interface for a class called `mergeNumbers`:

```
global class scheduledMerge implements Schedulable{
   global void execute(SchedulableContext SC) {
      mergeNumbers M = new mergeNumbers();
   }
}
```

The following example uses the `System.Schedule` method to implement the above class.

```
scheduledMerge m = new scheduledMerge();
        String sch = '20 30 8 10 2 ?';
        system.schedule('Merge Job', sch, m);
```

You can also use the `Schedulable` interface with batch Apex classes. The following example implements the `Schedulable` interface for a batch Apex class called `batchable`:

```
global class scheduledBatchable implements Schedulable{
   global void execute(SchedulableContext sc) {
      batchable b = new batchable();
      database.executebatch(b);
```

```
    }
}
```

Using the `System.Schedule` **Method**

> **Note:** The Apex scheduler is currently available through a limited release program. To verify if it is possible to join the limited release program and enable the Apex scheduler for your organization, contact salesforce.com.

After you implement a class with the `Schedulable` interface, use the `System.Schedule` method to execute it.

> **Note:** Scheduled jobs should be run as background processes and not tied to transactional events. Though you can use a trigger to schedule a job, remember that you can have only ten queued or active scheduled jobs.

The `System.Schedule` method takes three arguments: a name for the job, an expression used to represent the time and date the job is scheduled to run, and the name of the class. This expression has the following syntax:

```
Seconds Minutes Hours Day_of_month Month Day_of_week optional_year
```

> **Note:** Salesforce.com only enqueues the process at the scheduled time. Actual execution may be delayed based on service availability.
>
> The `System.Schedule` method uses the user's timezone for the basis of all schedules.

The following are the values for the expression:

Name	Values	Special Characters
Seconds	0–59	None
Minutes	0–59	None
Hours	0–23	, - * /
Day_of_month	1–31	, - * ? / L W
Month	1–12 or the following: • JAN • FEB • MAR • APR • MAY • JUN • JUL • AUG • SEP • OCT • NOV • DEC	, - * /
Day_of_week	1–7 or the following: • SUN • MON • TUE	, - * ? / L #

Name	Values	Special Characters
	• WED • THU • FRI • SAT	
optional_year	null or 1970–2099	, - * /

The special characters are defined as follows:

- , —Delimits values. For example, use JAN, MAR, APR to specify more than one month.
- - —Specifies a range. For example, use JAN-MAR to specify more than one month.
- * —Specifies all values. For example, if *Month* is specified as *, the job is scheduled for every month.
- ? —Specifies no specific value. This is only available for *Day_of_month* and *Day_of_week*, and is generally used when specifying a value for one and not the other.
- / —Specifies increments. The number before the slash specifies when the intervals should begin, and the number after the slash is the interval amount. For example, if you specify 1/5 for *Day_of_month*, the Apex class runs every fifth day of the month, starting on the first of the month.
- L —Specifies the end of a range (last). This is only available for *Day_of_month* and *Day_of_week*. When used with *Day of month*, L always means the last day of the month, such as January 31, February 28 for leap years, and so on. When used with *Day_of_week* by itself, it always means 7 or SAT. When used with a *Day_of_week* value, it means the last of that type of day in the month. For example, if you specify 2L, you are specifying the last Monday of the month. Do not use a range of values with L as the results may be unexpected.
- W —Specifies the nearest weekday (Monday-Friday) of the given day. This is only available for *Day_of_month*. For example, if you specify 20W, and the 20th is a Saturday, the class runs on the 19th. If you specify 1W, and the first is a Saturday, the class does not run in the previous month, but on the third, which is the following Monday.

  Tip: Use the L and W together to specify the last weekday of the month.

- # —Specifies the *nth* day of the month, in the format *weekday#day_of_month*. This is only available for *Day_of_week*. The number before the # specifies weekday (SUN-SAT). The number after the # specifies the day of the month. For example, specifying 2#2 means the class runs on the second Monday of every month.

The following are some examples of how to use the expression.

Expression	Description
0 0 13 * * ?	Class runs every day at 1 P.M.
0 0 22 ? * 6L	Class runs the last Friday of every month at 10 P.M.
0 0 10 ? * MON-FRI	Class runs Monday through Friday at 10 A.M.
0 0 20 * * ? 2010	Class runs every day at 8 P.M. during the year 2010.

In the following example, the class `proschedule` implements the `Schedulable` interface. The class is scheduled to run at 8 A.M., on the 13th of February.

```
proschedule p = new proschedule();
        String sch = '0 0 8 13 2 ?';
        system.schedule('One Time Pro', sch, p);
```

Scheduling Apex

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

Note: The Apex scheduler is currently available through a limited release program. To verify if it is possible to join the limited release program and enable the Apex scheduler for your organization, contact salesforce.com.

Use the Apex scheduler if you have specific Apex classes that you want to run on a regular basis, or to run a batch Apex job using the Salesforce.com user interface.

Important: Salesforce.com only enqueues the process at the scheduled time. Actual execution may be delayed based on service availability.

To schedule jobs using the Apex scheduler:

1. Implement the `Schedulable` interface in an Apex class that instantiates the class you want to run.
2. Click **Setup ➤ Develop ➤ Apex Classes** and click **Schedule Apex**.
3. Specify the name of a class that you want to schedule.
4. Specify how often the Apex class is to run.

   - For **Weekly**—specify one or more days of the week the job is to run (such as Monday and Wednesday).
   - For **Monthly**—specify either the date the job is to run or the day (such as the second Saturday of every month.)

5. Specify the start and end dates for the Apex scheduled class. If you specify a single day, the job only runs once.
6. Specify a preferred start time. The exact time the job starts depends on what other jobs are in the queue at that time.
7. Click **Save**.

Note: You can only have ten active or scheduled jobs concurrently.

After you schedule an Apex job, you can monitor the progress of the job on the All Scheduled Jobs page.

Once the job has completed, you can see specifics about the job (such as whether it passed or failed, how long it took to process, the number of records process, and so on) on the Apex Jobs page.

Custom Settings

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

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

Custom settings provide developers a mechanism to deliver application metadata and associate this data at the organization, profile, and user level. Custom settings are cached and provide efficient programmatic access without the cost of database queries. This data can be used by Apex, Visualforce, formula fields, validation rules, and the Force.com Web services API.

About Custom Settings

Custom Settings Overview

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

User Permissions Needed	
To manage, create, edit, and delete custom settings:	"Customize Application"

Custom settings are similar to custom objects and enable application developers to create custom sets of data, as well as create and associate custom data for an organization, profile, or specific user. All custom settings data is exposed in the application cache, which enables efficient access without the cost of repeated queries to the database. This data can then be used by formula fields, validation rules, Apex, and the Force.com Web Services API.

There are two types of custom settings:

List Custom Settings

A type of custom setting that provides a reusable set of static data that can be accessed across your organization. If you use a particular set of data frequently within your application, putting that data in a list custom setting streamlines access to it. Data in list settings does not vary with profile or user, but is available organization-wide. Examples of list data include two-letter state abbreviations, international dialing prefixes, and catalog numbers for products. Because the data is cached, access is low-cost and efficient: you don't have to use SOQL queries that count against your governor limits.

Hierarchy Custom Settings

A type of custom setting that uses a built-in hierarchical logic that lets you "personalize" settings for specific profiles or users. The hierarchy logic checks the organization, profile, and user settings for the current user and returns the most specific, or "lowest," value. In the hierarchy, settings for an organization are overridden by profile settings, which, in turn, are overridden by user settings.

The following examples illustrate how you can use custom settings:

- A Salesforce.com partner has created a shipping application that requires users to fill in the country codes for international deliveries. By creating a list setting of all country codes, users have quick access to this data without needing to query the database.
- A Salesforce.com partner has created an application to calculate and track compensation for its sales reps, but commission percentages are based on seniority. By creating a hierarchy setting, the administrator can associate a different commission percentage for each profile in the sales organization. Within the application, one formula field can then be used to correctly calculate compensation for all users; the personalized settings at the profile level inserts the correct commission percentage.
- A Salesforce.com partner has created an application that displays a map of account locations, the best route to take, and traffic conditions. This information is useful for sales reps, but account executives only want to see account locations. By creating a hierarchy setting with custom checkbox fields for route and traffic, you can enable this data for just the "Sales Rep" profile.

Follow these steps to create and use custom settings:

1. Create the custom setting.
2. Add fields to the custom setting.
3. Add data and set the access level for the custom setting data.
4. Reference the custom setting data in your application, using formula fields, validation rules, Apex, or the Force.com Web Services API.

You can also include a custom setting in a package. The visibility of the custom setting in the package depends on the `Visibility` setting.

> **Note:** Only custom settings definitions are included in packages, not data. If you need to include data, you must populate the custom settings using a standard Apex or API script run by the subscribing organization after they have installed the package.

Managing Custom Settings

Click **New** to create a new custom setting. After you create a custom setting, you must add fields to it.

After you create a custom setting, you can do any of the following:

- Click **Edit** next to the name of a custom setting to change the name, label, or description of a custom setting.
- Click **Del** to delete a custom setting.

> **Note:** A ⬇ icon indicates that the custom setting is in an installed managed package. You cannot edit or delete a custom setting installed from a managed package.

- Click **Manage** to add data to a custom setting. You should add fields before you add data.

Custom Settings Limits

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

User Permissions Needed	
To manage, create, edit, and delete custom settings:	"Customize Application"

Salesforce.com imposes these limits on the amount of cached data and on custom settings:

- 10 MB of cached data per organization.
- 300 fields per custom setting.
- You cannot share a custom setting object or record.
- No owner is assigned when a custom setting is created, so the owner cannot be changed.

Defining Custom Settings

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

User Permissions Needed	
To manage, create, edit, and delete custom settings:	"Customize Application"

To create or edit a custom setting:

1. Click **Setup ➤ Develop ➤ Custom Settings**.
2. Click **New** to create a new custom setting, click **Edit** next to the name of a custom setting, or click **Edit** while viewing the details of a custom setting.

   > **Note:** A ⬇ icon indicates that the custom setting is in an installed managed package. You cannot edit or delete a custom setting installed from a managed package.

3. Define the following:

   - `Label`—Enter the label displayed in the application.
   - `Object Name`—Enter the name to be used when the custom setting is referenced by formula fields, validation rules, Apex, or the Force.com Web Services API.
   - `Setting Type`—Select a type of List or Hierarchy. The List type defines application-level data, such as country codes or state abbreviations. The Hierarchy type defines personalization settings, such as default field values, that can be overridden at lower levels in the hierarchy.

     > **!** **Important:** After you save a custom setting, you cannot change this value.

- Visibility—Select a visibility of Protected or Public.

    - Protected—If the custom setting is contained in a managed package, subscribing organizations can't see the custom setting: it doesn't display as part of the package list. In addition, subscribing organizations can't access the custom setting using either Apex or the API, however, developer organizations can. If the custom setting is contained in an unmanaged package, the custom setting is available through the Enterprise WSDL like any custom object (as if the Visibility was Public.)
    - Public—The custom setting is available through the Enterprise WSDL like any custom object. You can package custom settings defined as public. The subscribing organizations can edit the values, as well as access them using Apex and the API, regardless of the type of package (either managed or unmanaged).

> **Important:** After you save a custom setting, you cannot change this value.

4. Enter an optional description of the custom setting. A meaningful description will help you remember the differences between your custom settings when you are viewing them in a list.
5. Click **Save**.

> **Note:** Only custom settings definitions are included in packages, not data. If you need to include data, you must populate the custom settings using a standard Apex or API script run by the subscribing organization after they have installed the package.

After you create a custom setting, you must also add fields to the custom setting.

Adding Custom Settings Fields

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

User Permissions Needed	
To manage, create, edit, and delete custom settings:	"Customize Application"

After you define custom settings, you need to add custom fields to it. The custom fields contain the data, used by the custom setting.

To add custom fields to a custom setting:

1. Click **Setup ➤ Develop ➤ Custom Settings**.
2. Click the name of the custom setting that you want to add fields to. (If you just created a custom setting, you are taken directly to the Custom Setting Detail page.)
3. Click **New**.
4. Select a field type and click **Next**.
5. Enter the details for your custom field.
6. Once you confirm the information, click **Save** or **Save & New**.

After you add the required fields, you need to add data and for hierarchy custom settings, specify the access level.

Adding Custom Settings Data

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

User Permissions Needed	
To manage, create, edit, and delete custom settings:	"Customize Application"

After you define your custom settings and add fields, you need to populate the fields with data.

You can define one or more data sets. For list custom settings, each data set is named and can be accessed by that name using Apex, formula fields, and so on.

For custom settings that are hierarchies, the data is accessed based on the access level (user, profile, or organization). The lowest level is used first, which means if you defined a data set at the user level, unless otherwise specified in your application, that data is used. For example, you might want to specify different contact numbers for your application: one for the general user, and one that is only displayed for system administrators.

To add data to custom setting fields:

1. Click **Setup ➤ Develop ➤ Custom Settings**, then click **Manage** next to a custom setting. Or from the detail page for a custom setting, click **Manage**.
2. Click **New** or **Edit** next to an existing data set.
3. Add or change data.

   For custom settings that are lists, do the following:

   a. Specify or change the name for the data set. This name is used by Apex, formula fields, and so on.
   b. Enter or change data for all fields.
   c. Click **Save**.

   For custom settings that are hierarchies, do the following:

   a. For the default organization level values, enter or change the data for the fields. The default organization location is automatically populated.
   b. For profile or user level values, select either `Profile` or `User` from the `Location` picklist. Enter the name of the profile or user, or use the lookup dialog search. Then enter or change the data for the fields.
   c. Click **Save**.

Accessing Custom Settings

You can access custom settings from formula fields, validation rules, Apex, and the Force.com Web Services API. Some sample code segments are provided below.

Formula Fields

Formula fields only work for hierarchy custom settings; they cannot be used for list custom settings. For more information on using formula fields, see Creating On-Demand Applications: An Introduction to the Force.com Platform.

```
{!$Setup.CustomSettingName__c.CustomFieldName__c}
```

Apex

Apex scripts can access both custom setting types.

> **Note:** If **Privacy** for a custom setting is `Protected`, and the custom setting is contained in a managed package, the subscribing organization cannot edit the values or access them using Apex.

For more information on all the custom setting methods and Apex, see the Force.com Apex Code Developer's Guide.

Samples for List Custom Settings

When you add data to a custom setting, you must name each set of data. Then you can distinguish between the sets of data by the data set name. The following returns a map of custom settings data. The `getAll` method returns values for all custom fields associated with the list setting.

```
Map<String_dataset_name, CustomSettingName__c> mcs = CustomSettingName__c.getAll();
```

The following example uses the `getValues` method to return all the field values associated with the specified data set. This method can be used with both list and hierarchy custom settings, using different parameters.

```
CustomSettingName__c mc = CustomSettingName__c.getValues(data_set_name);
```

Samples for Hierarchy Custom Settings

The following example uses the `getOrgDefaults` method to return the data set values for the organization level:

```
CustomSettingName__c mc = CustomSettingName__c.getOrgDefaults();
```

The following example uses the `getInstance` method to return the data set values for the specified profile. The `getInstance` method can also be used with a user Id.

```
CustomSettingName__c mc = CustomSettingName__c.getInstance(Profile_ID);
```

Force.com Web Services API

Custom settings that have **Privacy** defined as `Public` are exposed to the API in the same way custom objects are exposed.

> **Note:** If **Privacy** is defined as `Protected`, and the custom setting is contained in a managed package, the custom setting is not accessible using the API in either the developer organization or a subscribing organization.

Use any tool with API access to perform query or profile-permission-setting operations. For more information, see the Force.com Web Services API Developer's Guide.

Force.com Development as a Service

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

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

> **Note:** There is no new Force.com IDE release for Winter '10, so changes to the Metadata API for version 17.0 are not reflected in that tool.

New Metadata Types

The following metadata types are new in Metadata API version 17.0:

Metadata Type	Description
BusinessProcess	The BusinessProcess metadata type enables you to display different picklist values for users based on their profile. Multiple business processes allow you to track separate sales, support, and lead lifecycles. A sales, support, lead, or solution process is assigned to a record type. The record type determines the user profiles that are associated with the business process.

Updated Metadata

The Metadata API has been improved for Winter '10:

List Views for Standard Objects

The Metadata API now supports list views for standard objects, such as accounts, as well as continued support for list views for custom objects.

Picklist Value Translations for Standard Fields

The Metadata API now supports picklist value translations for standard fields, as well as continued support for picklist value translations for custom fields.

Standard Object Tab Visibility in Profiles

The Profile metadata type now supports visibility of tabs for standard objects. The manifest file must include the standard object corresponding to a standard tab to retrieve the tab visibility in a profile.

Deletion of Folders Containing Documents in the Recycle Bin

The Metadata API now supports deletion of a folder containing documents moved to the Recycle Bin. When you delete the folder, any related documents in the Recycle Bin are permanently deleted.

The following metadata fields have been added or changed in Metadata API version 17.0:

Metadata Type or Result Object	Field	Change	Description
AsyncResult	secondsToWait	Removed	This field has been removed. Client applications use the checkStatus() call to determine when operations are complete. A reasonable approach is to wait one second before calling checkStatus() initially. Double your wait time for each successive iteration of checkStatus() calls until the operation is complete.
CustomObject	businessProcesses	New	A list of business processes associated with the object.
CustomObject	customSettingsType	New	When this field is present, this component is not a custom object, but a custom setting. This field returns the type of custom setting.
CustomObject	customSettingsVisibility	New	When this field is present, this component is not a custom object, but a custom setting. This field returns the visibility of the custom setting.
CustomObject	namedFilter	New	Represents the metadata associated with a lookup filter. Use this metadata type to create, update, or delete lookup filter definitions.
CustomSite	analyticsTrackingCode	New	The tracking code associated with your site. This code can be used by services like Google Analytics to track page request data for your site.
CustomSite	serverIsDown	New	The name of the static resource to be displayed from the cache server when Salesforce.com servers are down.
DashboardComponent	drillEnabled	New	Specifies whether to take users to the full or filtered source report when they click the dashboard component. Set to false to drill to the full source report; set to true to drill to the source report filtered by what they clicked. If set to true, users can click individual groups, axis values (X-axis on line and column charts, Y-axis on bar charts), or legend entries.
DashboardComponent	enableHover	New	Specifies whether to display values, labels, and percentages when hovering over charts. Hover details depend on chart type. Percentages apply to pie, donut, and funnel charts only.

Metadata Type or Result Object	Field	Change	Description
DashboardComponent	expandOthers	New	Specifies whether to combine all groups less than or equal to 3% of the total into a single 'Others' wedge or segment. This only applies to pie, donut, and funnel charts. Set to true to show all values individually on the chart; set to false to combine small groups into 'Others.'
DashboardComponent	useReportChart	New	Specifies whether to use the chart defined in the source report on this dashboard component. The chart settings in the source report determine how the chart displays in the dashboard, and any chart settings you define for the dashboard are overridden. If you defined a combination chart in the source report, use this option to use that combination chart on this dashboard.
FileProperties	manageableState	Updated	The deprecated enumeration value was added.
Folder	sharedTo	New	Sharing access for the folder.
ListView	division	New	If your organization uses divisions to segment data and you have the "Affected by Divisions" permission, records in the list view must match this division. This field is only available if you are searching all records.
ListView	filterScope	Updated	The following enumeration values were added: • Delegated • MyTerritory • MyTeamTerritory • Team
ListView	language	New	The language used for filtering if your organization uses the translation workbench and you are using the startsWith or contains operator. The values entered as search terms must be in the same language as the filter language. See "Entering Filter Criteria" in the Salesforce.com online help.
ListView	sharedTo	New	Sharing access for the list view.
PicklistValue	color	New	Indicates the color assigned to the picklist value when used in charts on reports and dashboards. The color is in hexadecimal

Metadata Type or Result Object	Field	Change	Description
			format; for example #FF6600. If a color is not specified, it will be assigned dynamically on chart generation.
Profile	`loginIpRanges`	New	The list of IP address ranges from which users with a particular profile can log in.
Profile	`userLicense`	New	The `User License` for the profile. A user license entitles a user to different functionality within Salesforce.com and determines the profiles available to the user.
RecordType	`businessProcess`	New	The `fullName` of the business process associated with the record type. This field is required in record types for lead, opportunity, solution, and case, and not allowed otherwise.
Report	`division`	New	If your organization uses divisions to segment data and you have the "Affected by Divisions" permission, records in the report must match this division.
Report	`roleHierarchyFilter`	New	The role name for a report drill down. Some reports, such as opportunity and activity reports, display Hierarchy links that allow you to drill down to different data sets based on the role hierarchy.
Report	`territoryHierarchyFilter`	New	The territory name for a report drill down. If your organization uses territory management, some reports display Hierarchy links that allow you to drill down to different data sets based on the territory hierarchy.
Report	`userFilter`	New	The user name for a report drill down. Some reports, such as opportunity and activity reports, display Hierarchy links that allow you to drill down to different data sets based on the user hierarchy.
ReportChart	`chartSummaries`	New	Specifies the summaries you want to use for the chart.
ReportChart	`chartType`	Updated	The following enumeration values were added: • `VerticalColumnLine` • `VerticalColumnGroupedLine` • `VerticalColumnStackedLine`

Metadata Type or Result Object	Field	Change	Description
ReportChart	enableHoverLabels	New	Specifies whether to display values, labels, and percentages when hovering over charts. Hover details depend on chart type. Percentages apply to pie, donut, and funnel charts only.
ReportChart	expandOthers	New	Specifies whether to combine all groups less than or equal to 3% of the total into a single 'Others' wedge or segment. This only applies to pie, donut, and funnel charts. Set to `true` to show all values individually on the chart; set to `false` to combine small groups into 'Others.'
ReportChart	summaryAggregate	No longer supported	No longer supported in API version 17.0 and later. See `chartSummaries`.
ReportChart	summaryColumn	No longer supported	No longer supported in API version 17.0 and later. See `chartSummaries`.
WorkflowAlert	senderAddress	New	The address in the From field for the email alert. This allows you to use a standard global email address for your organization (such as `support@company.com`) instead of the default From field, which is the email address of the person who updates the record. You can only specify a value in this field if the `senderType` is set to `OrgWideEmailAddress`.
WorkflowAlert	senderType	New	The email used as the sender's From and Reply-To addresses.

Fixing Uniqueness of Developer Name for Components

Previously, the `fullName` field for various components in the Metadata API was not case-sensitive. Thus, different components of the same type could have the following `fullName` values:

- Foo
- FoO
- FOO

This issue is resolved in Winter '10. Any previous components with the same case-insensitive values are renamed to match the following pattern:

- Foo
- FoO_2
- FOO_3

The numeric suffix is based on the component's creation date: a larger number indicates a newer component.

Any components created after Winter '10 cannot have a `fullName` value that matches any preexisting value.

> ⚠️ **Caution:** This change only affects organizations that use the Metadata API and maintain a copy of their metadata outside of Salesforce.com, such as in a version control system.

Only the following components are affected:

- Analytic Snapshots
- Applications
- Custom Labels
- Custom Report Types
- Custom Tabs
- Dashboards
- Documents
- Email Templates
- Folders
- Letterheads
- List Views
- Record Types
- Reports
- Tabs
- Validation Rules

Other components with the `fullName` field have never allowed duplicate values.

Sandbox to Production—Change Sets Beta

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

Available in **Enterprise**, **Unlimited**, and **Free** Editions

Use change sets to move configuration changes using the Web interface. If you've struggled with moving changes from sandbox to production, or have been searching for an easier tool to use than the Force.com IDE or the Force.com Migration Tool, change sets will drastically increase your productivity.

Implementation Tips

Permissions required to use change sets

To send a change set to another organization, a user must have the "Create and Upload Change Sets" profile permission.

To deploy a change set received from another organization, a user must have the "Deploy Change Sets" profile permission.

Authorization required to upload changes

Before you can deploy a change set from one organization to another, an administrator in the target organization must authorize uploads across the deployment connection between the two organizations.

Deployment Connections list displays all connections

The Deployment Connections list is automatically populated with your production organization and all sandboxes. It is possible to deploy between any of these organizations, but no other organizations.

Change set connections unavailable during maintenance

Authorizing deployment connections and uploading pages require information from the production organization, and are unavailable when production is undergoing maintenance. During this time you can construct outbound change sets but not upload them.

Sandboxes must be available

If an organization has no sandboxes provisioned, the user may see an Insufficient Privileges error on the Deployment Connections page.

Deployment is a one-way transaction

Deploying a change set happens in a single transaction. If the deployment is unable to complete for any reason, the entire transaction will be rolled back. After a deployment completes successfully, all changes will be committed to your organization and the change set cannot be rolled back.

Best Practices

Change sets is a beta feature limited to a select number of customers. During the beta period, functionality may change at any time in order to fix bugs, remove limitations, or improve the feature in other ways. The following list contains best practices.

Deploy all dependent components

Make sure each change set contains all interdependent components that don't exist in the target organization. If you try to deploy a component that refers to another component missing from the target organization and from the change set, the deployment will fail.

Change sets give you fine-grained control over what you deploy. For example, you can migrate custom fields individually. To deploy a custom object and all of its fields, you must add the custom object and every field to the change set; adding just the custom object to the change set won't cause deployment to fail, but results in an empty custom object.

Plan deployments around maintenance schedule

Plan your deployment activities around the maintenance schedule for both your production and sandbox organizations. Some features require information from your production organization when accessed from a sandbox.

View change set details

If you deploy an inbound change set in the target organization that was uploaded by someone else, and the deployment fails, you may want to contact the person who uploaded it so they can fix the problem. To find out who uploaded the change set, look in the Uploaded By field.

Change sets limited to 1500 components

If you have more than 1500 components, you can create separate change sets for email templates, dashboards, and reports. These components are the most numerous and have fewer dependencies. For more information, see Migrating Files in Batches.

Deleting and renaming components

You can't use change sets to delete or rename components. To delete components, use the Web interface on the target organization. To rename a component, first delete the component on the target organization and then upload the new component in a change set.

About Change Sets

Change Sets—Beta

Available in **Enterprise**, **Unlimited**, and **Free** Editions

Note: Change sets are available as a beta feature.

- The beta release has known limitations; functionality may change at any time.
- Salesforce.com Customer Support does not officially support change sets during the beta period.
- This feature will be enabled shortly after your production organization is upgraded to Winter '10.

A *change set* is a means by which one organization can send customizations to another organization. For example, you could create new object in a sandbox organization and send it to your production organization using a change set. Change sets can only contain modifications you can make through the Setup menu; therefore, you can't use a change set to upload a list of contact records. In other words, change sets contain *metadata*, not data.

When you want to send customizations from your current organization to another organization, you create an *outbound change set*. Once you send the change set, the receiving organization sees it as an *inbound change set*.
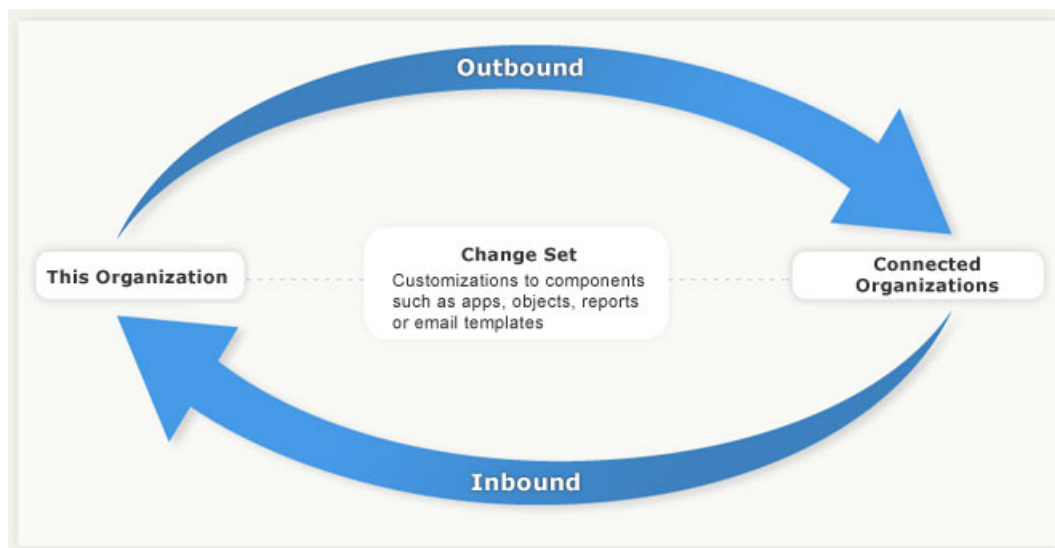

Figure 2: Outbound and Inbound Change Sets

Sending a change set between two organizations requires a deployment connection. Currently, change sets can only be sent between organizations that are affiliated with a production organization, for example, a production organization and a sandbox, or two sandboxes created from the same organization.

Components Available in Change Sets

In order to add a component to a change set, the component must be available in the Metadata API. The following types of components may be added to a change set, but note that during this beta release, the list of available components may change at any time:

- Apex class
- Apex trigger
- Analytic snapshot
- Custom application
- Custom object or standard object
- Custom object translation
- Custom field
- Custom label
- Custom page Web link
- Custom site
- Custom tab
- Dashboard
- Document
- Email template
- Folder
- Home page component
- Home page layout
- Page layout
- Letterhead
- Picklist
- Portal
- Record type
- Report
- Report type
- S-control
- Static resource
- Translation workbench
- Validation rule
- Visualforce component
- Visualforce page
- Web link
- Workflow

> **Note:** If you create or modify components that are not available in the Metadata API, you cannot send those components from one organization to another in a change set. In this case, migrate the changes manually by repeating the steps you performed when you created or modified the component.

Deployment Connections

User Permissions Needed	
To edit deployment connections:	"Deploy change sets"

In order for change sets to be sent from one organization to another, a deployment connection is required between the organizations. Deployment connections can't be created between arbitrary organizations; instead, a deployment connection is created between all organizations affiliated with a production organization. For example, if you have a production organization (Prod) and two sandboxes (Dev and Test), a deployment connection will be created between production and each sandbox (Prod and Dev, and another connection between Prod and Test), as well as between the sandboxes (Dev and Test).

A deployment connection alone doesn't enable change sets to be sent between organizations. Each organization must be authorized to send and receive change sets. This added level of security enforces code promotion paths and keeps organizations' setup metadata from being overwritten by mistake.

For example, the following figure illustrates a production organization and two sandboxes. In this example, the IT department decided that the production organization can only receive changes that have been fully tested, so only the Test sandbox is authorized to upload change sets to production. Also, they wanted to make sure that the Prod organization can send change sets to the Dev sandbox, but not to the Test sandbox. Finally, because the features in development need iterative testing, Dev and Test sandboxes should be able to send change sets back and forth.
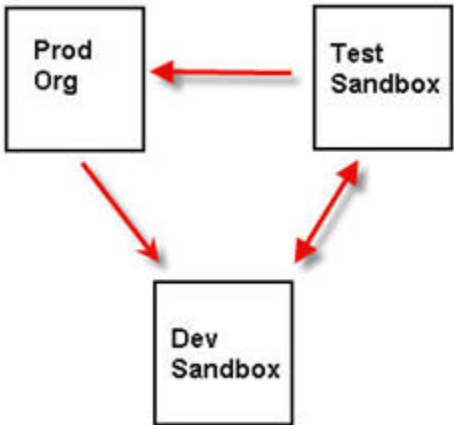

Figure 3: Change Set Authorization Enforces Code Path

Note: This illustration describes one possible code migration path. Your IT department must create its own policies for organizations to send and receive change sets to one another.

Viewing Available Deployment Connections

A deployment connection enables customizations to be copied from one organization to another. The deployment connections list shows which organizations are authorized to upload changes to this organization, and which organizations allow this organization to upload changes to them.

To view available connections:

- Click **Setup ➤ Deploy ➤ Deployment Connections**

Action

Click **Edit** next to the organization that you want to allow or disallow change sets from.

Name

A list of organizations that have deployment connections to the organization you are currently logged into. Click the name of an organization to view more information about the connection.

Description

A brief description of the connected organizations.

Type

The type of organization you are connected to. Possible values are Production, Full Copy Sandbox, Configuration-only Sandbox, and Developer Sandbox.

Upload Authorization Direction

The arrows show the direction in which uploads can occur. A broken line means that no change sets are authorized in either direction. To authorize the connected organization to send you inbound change sets, edit the deployment connection for this organization. If you want to send outbound change sets to a connected organization, the administrator for that organization must edit the connection for that organization.

Viewing Details of a Deployment Connection

A deployment connection enables customizations to be copied from one organization to another. The deployment connections list shows which organizations are authorized to upload changes to this organization, and which organizations allow this organization to upload changes to them.

To view connection details:

1. Click **Setup ➤ Deploy ➤ Deployment Connections**.
2. Click the name of the organization you want to view.

Name

The name of the selected organization. This is not the organization you are logged into.

Description

A brief description of the organization.

Type

The type of organization you are connected to. Possible values are Production, Full Copy, Configuration-only, and Developer.

Allow Inbound Changes

If selected, the named organization can send change sets to the organization you are currently logged into.

Accepts Outbound Changes

If selected, the named organization allows change sets to be sent to it from the organization you are currently logged into.

Authorizing a Deployment Connection

In order for another organization to send change sets to the organization you are logged into, you must authorize the inbound change set:

1. Click **Setup ➤ Deploy ➤ Deployment Connections**.
2. Click **Edit** next to the organization you want to authorize.
3. Select **Allow Inbound Changes**.
4. Click **Save**.

Outbound Change Sets

User Permissions Needed	
To create, edit, or upload outbound change sets:	"Create and Upload Change Sets"

An *outbound change set* is a change set created in the organization you are logged into and that you want to send to another organization. Typically, an outbound change set is used for customizations created and tested in a sandbox and then sent to a production organization.

Sending an outbound change set to another organization doesn't guarantee that the changes will be implemented in that organization. The change set must deployed (accepted) by the target organization before the changes take effect.

Creating an Outbound Change Set

An outbound change set is a change you want to send from the organization you are logged into to another organization.

1. Click **Setup ➤ Deploy ➤ Outbound Change Sets**.
2. Click **New**.
3. Enter a name and description and click **Save**.

Selecting Components for an Outbound Change Set

To select the components in an outbound change set:

1. Click **Setup ➤ Deploy ➤ Outbound Change Sets**.
2. In the Change Sets list, click the name of a change set.
3. Click **Add**.
4. Choose the type of component and the components you want to add and then click **Add to Change Set**.

> **Note:** Change sets are limited to 1500 components.

Uploading an Outbound Change Set

Once you have assembled the components in a change set, you can upload it to another organization. Note that once you upload a change set, you can't edit it or recall it.

1. Click **Setup ➤ Deploy ➤ Outbound Change Sets**.
2. Click the name of a change set.
3. Select the organization you want to send the change set to.
4. Click **Upload**.

Inbound Change Sets

User Permissions Needed	
To deploy inbound change sets:	"Deploy Change Sets"

An *inbound change set* is a change set that has been sent from another organization to the organization you are logged into. A change sent must be *deployed* for the changes to take effect. You can deploy or reject the contents of an inbound change set as a whole, but not on a component-by-component basis.

Viewing Inbound Change Sets

The Inbound Change Sets page lists change sets awaiting deployment, as well as the history of deployed change sets:

• Click **Setup ➤ Deploy ➤ Inbound Change Sets**.

Viewing Change Set Details

The Change Sets detail page lists information about a particular change set..

1. Click **Setup ➤ Deploy ➤ Inbound Change Sets**.
2. Click the name of a change set.

Deploying a Change Set

To deploy a change set:

1. Click **Setup ➤ Deploy ➤ Inbound Change Sets**.
2. In the Change Sets Awaiting Deployment list, click the name of the change set you want to deploy.
3. Click **Deploy**.

> **Note:** The Force.com platform requires at least 75% of your code to be covered by unit tests before you can deploy it to a production organization. Ideally, you should strive for 100% coverage. The code coverage restriction is not enforced for sandbox or Developer Edition organizations.

Monitoring Deployments

The size and complexity of the change set determines how long it takes for a change set to deploy. During this time, it can be helpful to monitor the deployment. To track the status of deployments that are in progress click **Setup ➤ Deploy ➤ Inbound Change Sets ➤ Change Set Detail**. Under the Deployment History related list, click **View Results**.

Note: The Monitor Deployments page can be used for checking the status of deployments made through the Metadata API. However, change sets are not currently supported in the Monitor Deployments page.

Remote Access Applications

Available in: **All** Editions

A remote access application is an application external to Salesforce.com that uses the OAuth protocol to verify both the Salesforce.com user and the external application. Use remote access applications to access Salesforce.com data in an external application.

Implementation Tips

There are many steps when authenticating a user and application using OAuth. See "Authenticating Remote Access Application OAuth" in the Salesforce.com online help.

About Remote Access Applications

Remote Access Application Overview

Available in: **All** Editions

User Permissions Needed	
To manage, create, edit and delete OAuth applications:	"Manage Remote Access"

Salesforce.com supports the OAuth protocol for authenticating Web applications that access data in a Salesforce.com instance. OAuth is an open protocol that allows secure authentication and is often described as the valet key of software access. A valet key only allows access to certain features of your car: you cannot open the trunk or glove compartment using a valet key. Similarly, OAuth limits access to a software application, without having to hand out the user's username and password.

Note: Salesforce.com currently supports OAuth version 1.0.A.

For more information on the OAuth standard, see the OAuth.net documentation.

A remote access application is an application external to Salesforce.com that uses the OAuth protocol to verify both the Salesforce.com user and the external application.

Tip: OAuth does **not** automatically limit access to a user's Salesforce.com data. Limits to data access are either specified by the user's profile or by the package access controls of a remote access application that is included in a managed package.

For more information on terminology, see "Remote Access Applications and OAuth Terminology" in the Salesforce.com online help.

The following is the general flow for using a remote access application with Salesforce.com:

1. A developer uses the remote access pages in Salesforce.com (**Setup ➤ Develop ➤ Remote Access**) to define a remote access application.

   In this example, the remote access application is a Google gadget, which uses data that already exists in Salesforce.com.

2. The developer uses the generated consumer secret and key from the remote access application detail page and develops the Google gadget using the consumer secret and key and the OAuth library.

3. A user starts to use the Google gadget application.

4. The user performs an action with the Google gadget that requires access to Salesforce.com data.

5. The user is presented with a login to Salesforce.com.

6. The Remote Access Authorization page displays. It verifies if the user wants to grant the remote access application, that is, the Google gadget, access to the user's Salesforce.com data.

7. If the user approves access, the approval page displays. The approval page may contain a verification code that the user must enter in the Google gadget application.

8. If the user denies access, the user is prompted to log out of Salesforce.com.

9. After a user has granted access to a remote access application, he or she can revoke that access by clicking **Setup ➤ My Personal Information ➤ Personal Information** and clicking **Deny** next to the name of the application in the Remote Access related list.

Defining Remote Access Applications

Available in: **All** Editions

User Permissions Needed	
To manage, create, edit and delete OAuth applications:	"Manage Remote Access"

Use the remote access pages to define remote access applications that can access a Salesforce.com instance.

To define a remote access application:

1. Click **Setup ➤ Develop ➤ Remote Access**, and click **New**. Alternatively, click **Setup ➤ Create ➤ Packages**, click the name of the managed package, then click **New** in the Remote Access section.

   Important: If you create a remote access application from a package, it is automatically included in that package. Once you add a remote access application to a package, you cannot remove it from the package. The only way to remove a remote access application from a package is to delete it from your organization.

2. Specify the name of the application. This is required. Salesforce.com recommends that this name match the name of the actual application.

3. Specify the **Callback URL**, which is the URL that the user should be returned to after they approve access for the application. If **Callback URL** is defined, the oauth_callback parameter must be set to the oob when trying to get the request token. This URL must be secure (uses https).

4. If the application has a specific logo, you can specify that using the **Logo Image URL**. The URL must be secure (uses https).

5. If appropriate, specify the **Contact Phone** and **Contact Email**.

6. Enter a description of the application. When a user grants access to an application, this description displays.

7. If you used **Setup ➤ Develop ➤ Remote Access** to create this remote access application, you can select a managed package to include this remote access application in.

> **!** **Important:** If you create a remote access application and do not include it in a managed package, you can never add it later.

8. Click **Save**.

When you save the remote access definition, the consumer key and consumer secret are automatically generated. The consumer key and consumer secret are available globally in all Salesforce.com instances. The consumer should store these in their application. The keys are used in authenticating a user using the remote access application.

> **Note:** Even if you change the name of the application, the consumer key and consumer secret are **not** regenerated.

Remote Access Applications and OAuth Terminology

Available in: **All** Editions

User Permissions Needed	
To manage, create, edit and delete OAuth applications:	"Manage Remote Access"

AccessToken

A value used by the consumer to gain access to protected resources on behalf of the user, instead of using the user's Salesforce.com credentials.

Consumer

A website or application that uses OAuth to authenticate both the Salesforce.com user as well as the application on the user's behalf.

Consumer Key

A value used by the consumer to identify itself to Salesforce.com.

Consumer Secret

A secret used by the consumer to establish ownership of the consumer key.

Nonce

A number, often a random number, used during authentication to ensure that requests cannot be reused.

OAuth Protocol Parameters

Parameters with names beginning with `oauth_`, such as `oauth_consumer_key` and `oauth_nonce`.

RequestToken

A value used by the consumer to obtain authorization from the user, and exchanged for an AccessToken.

Service Provider

A Web application that allows access using OAuth. This is your Salesforce.com instance after remote access has been enabled.

TokenSecret

A secret used by the consumer to establish ownership of a given token, both for RequestTokens and AccessTokens.

User

An individual who has a Salesforce.com login.

Packaging Remote Access Applications

Available in: **All** Editions

User Permissions Needed	
To manage, create, edit and delete OAuth applications:	"Manage Remote Access"

When defining a remote access application, take the following into consideration when deciding whether to package remote access applications:

- You can only package remote access applications in managed packages.
- If you create a remote access application from a package, it is automatically included in that package. Once you add a remote access application to a package, you cannot remove it from the package. The only way to remove a remote access application from a package is to delete it from your organization.
- When you delete a remote access application contained in a managed package, access to that remote access application is **immediately** removed from all subscribing organizations. The subscribing organizations do not have to wait until a new version of the managed package is released.
- Even if you change the name of the application, the consumer key and consumer secret are **not** regenerated.
- When a remote access application is in a managed packaged, only subscriber organizations can use the generated consumer key. If a remote access application is not contained in a package, any organization or user can use the key.
- If you create a new version of a managed package that contains a remote access application, the existing remote access applications will still work with the newest version. In addition, until you delete a remote access application, the package version number is always going to be the first version of the package that the remote access application is included in.

Single Sign-On for Portals

Customer Portal is available in: **Enterprise**, **Unlimited**, and **Developer** Editions

Partner Portal is available in: **Enterprise** and **Unlimited** Editions

Single sign-on enables the users of your organization to sign-on to Salesforce.com once, rather than several times for each product that has been integrated with Salesforce.com.

As of Winter '10, single sign-on has been enabled for both Customer Portals and partner portals.

Note: Single sign-on for portals will not be available until after October 12, 2009.

About Single Sign-On for Portals

Enabling Single Sign-On for Portals

Customer Portal is available in: **Enterprise**, **Unlimited**, and **Developer** Editions

Partner Portal is available in: **Enterprise** and **Unlimited** Editions

User Permissions Needed	
To view the settings:	"View Setup and Configuration"
To edit the settings:	"Customize Application"
	AND
	"Modify All Data"

Single sign-on is a process that allows network users to access all authorized network resources without having to log in separately to each resource. Single sign-on allows you to validate usernames and passwords against your corporate user database or other client application rather than having separate user passwords managed by Salesforce.com.

You can set up Customer Portals and partner portals to use single sign-on, so that a customer only has to login once.

To enable single sign-on for portals:

1. Configure Salesforce.com for SAML.
2. In the SAML assertion, add the `portal_id` and `organization_id` as attributes. To find these IDs:

   a. Click **Setup ➤ Company Profile ➤ Company Information** and copy the ID located in the `Salesforce.com Organization ID`.

b. For Customer Portals, click **Setup ➤ Customize ➤ Customer Portal ➤ Settings**, click the name of the Customer Portal, and copy the ID located in the `Portal ID`.

For partner portals, click **Setup ➤ Customize ➤ Partners ➤ Settings**, click the name of the partner portal, and copy the ID located in the `salesforce.com Portal ID`.

Best Practices for Implementing Single Sign-On for Portals

- Only SAML version 2.0 can be used with portals.
- Only Customer Portals and partner portals are supported.
- Service provider initiated login is not supported.
- Both the `portal_id` and `organization_id` attributes are required for single sign-on for portals. If only one is specified, the user receives an error.
- If both the `portal_id` and `organization_id` attributes are populated in the SAML assertion, the user is directed to that portal login. If neither is populated, the user is directed to the regular SAML Salesforce.com login.
- More than one portal can be used with a single organization.

Sample SAML Assertions

The following shows the `portal_id` and `organization_id` attributes in a SAML assertion statement:

```
<saml:AttributeStatement>
    <saml:Attribute Name="portal_id">
        <saml:AttributeValue xsi:type="xs:anyType">060D00000000SHZ</saml:AttributeValue>
    </saml:Attribute>

    <saml:Attribute Name="organization_id">
        <saml:AttributeValue xsi:type="xs:anyType">00DD0000000F7P5</saml:AttributeValue>
    </saml:Attribute>
</saml:AttributeStatement>
```

The following is a complete SAML assertion statement. The organization is using federated sign-on, which is included in an attribute, not in the subject.

```
<samlp:Response ID="_f97faa927f54ab2c1fef230eee27cba21245264205456"
        IssueInstant="2009-06-17T18:43:25.456Z" Version="2.0">
    <saml:Issuer Format="urn:oasis:names:tc:SAML:2.0:nameid-format:entity">
        https://www.salesforce.com</saml:Issuer>

    <samlp:Status>
        <samlp:StatusCode Value="urn:oasis:names:tc:SAML:2.0:status:Success"/>
    </samlp:Status>

    <saml:Assertion ID="_f690da2480a8df7fcc1cbee5dc67dbbb1245264205456"
        IssueInstant="2009-06-17T18:43:25.456Z" Version="2.0">
        <saml:Issuer Format="urn:oasis:names:tc:SAML:2.0:nameid-format:entity">
            https://www.salesforce.com</saml:Issuer>

        <saml:Subject>
            <saml:NameID
Format="urn:oasis:names:tc:SAML:1.1:nameid-format:unspecified">null</saml:NameID>

            <saml:SubjectConfirmation Method="urn:oasis:names:tc:SAML:2.0:cm:bearer">
            <saml:SubjectConfirmationData NotOnOrAfter="2009-06-17T18:48:25.456Z"

Recipient="https://www.salesforce.com/?saml=02HKiPoin4f49GRMsOdFmhTgi_0nR7BBAflopdnD3gtixujECWpxr9klAw"/>

            </saml:SubjectConfirmation>
        </saml:Subject>
```

```
        <saml:Conditions NotBefore="2009-06-17T18:43:25.456Z"
NotOnOrAfter="2009-06-17T18:48:25.456Z">

        <saml:AudienceRestriction>
            <saml:Audience>https://saml.salesforce.com</saml:Audience>
        </saml:AudienceRestriction>
    </saml:Conditions>

    <saml:AuthnStatement AuthnInstant="2009-06-17T18:43:25.456Z">

        <saml:AuthnContext>

<saml:AuthnContextClassRef>urn:oasis:names:tc:SAML:2.0:ac:classes:unspecified</saml:AuthnContextClassRef>

        </saml:AuthnContext>
    </saml:AuthnStatement>

    <saml:AttributeStatement>

    <saml:Attribute FriendlyName="Friendly Name" Name="federationId"
        NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:unspecified">
        <saml:AttributeValue
xsi:type="xs:string">saml_portal_user_federation_id</saml:AttributeValue>
        <saml:AttributeValue xsi:type="xs:string">SomeOtherValue</saml:AttributeValue>
    </saml:Attribute>

    <saml:Attribute Name="portal_id">
     <saml:AttributeValue xsi:type="xs:anyType">060D00000000SHZ</saml:AttributeValue>

    </saml:Attribute>

    <saml:Attribute Name="organization_id">
     <saml:AttributeValue xsi:type="xs:anyType">00DD0000000F7Z5</saml:AttributeValue>

    </saml:Attribute>

    <saml:Attribute Name="ssostartpage"
        NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:unspecified">

        <saml:AttributeValue xsi:type="xs:anyType">
            http://www.salesforce.com/qa/security/saml/saml20-gen.jsp
        </saml:AttributeValue>
    </saml:Attribute>

    <saml:Attribute Name="logouturl"
        NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:uri">

        <saml:AttributeValue xsi:type="xs:string">
            http://www.salesforce.com/qa/security/del_auth/SsoLogoutPage.html
        </saml:AttributeValue>
    </saml:Attribute>
    </saml:AttributeStatement>
  </saml:Assertion>
</samlp:Response>
```

Force.com Platform Documentation Enhancements

In addition to updates for all new features in Winter '10, the Force.com Platform documentation suite also includes the following additional enhancements:

Syntax Highlighting in Visualforce and Apex Code Samples

The online versions of the *Visualforce Developer's Guide* and *Apex Developer's Guide* now apply color-coded syntax highlighting to all code samples and snippets. The highlighting conventions match those used by the Visualforce and Apex code editors in Salesforce.com.

Clipboard Copy for Visualforce and Apex Code Samples

The online versions of the *Visualforce Developer's Guide* and *Apex Code Developer's Guide* now offer clipboard copy

functionality for syntactically correct code samples. To use clipboard copy, click the **Copy this code?** icon ( ) above any syntactically correct code sample. You can then paste the code sample into the editor of your choice with all formatting intact.

Clipboard copy relies on Flash 10 to render appropriately in all browsers that Salesforce.com supports. If you don't have Flash installed, the icon won't display.

Technical Library Search on Developer Force

You can now use Developer Force search to find topics in the following Force.com reference guides:

- *Force.com Apex Code Developer's Guide*
- *Force.com Visualforce Developer's Guide*
- *Force.com Web Services API Developer's Guide*
- *Force.com Bulk API Developer's Guide*
- *Force.com Metadata API Developer's Guide*
- *Force.com Migration Tool Guide*
- *Force.com AJAX Toolkit Developer's Guide*
- *Force.com Office Toolkit Developer's Guide*

To limit your search results to just the articles and reference guides in the Technical Library, first click the Developer Force Search icon ( ) to display the Search page, then limit your results with the drop-down filter list.

Documentation in UTF-8 Character Encoding

All documentation available from Salesforce.com is now encoded in UTF-8. UTF-8 is an encoding standard that supports multiple languages and can display almost any character set. It is the preferred format for Internet applications.

For access to all Force.com platform documentation, visit the Developer Force Documentation page.

Additional Custom Cloud Enhancements

Custom Field-Level Help for Standard Fields

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

Available in: **All** Editions

Field-level help is custom text that explains the purpose and function of a field. Users can view field-level help by hovering over the help icon next to fields on detail and edit pages.

Before Winter '10, field-level help was only available for custom fields. Now, you can create field-level help for standard fields as well.

To define field-level help:

1. Select the field for which you want to define custom help text:

    •   For standard objects, click **Setup ➤ Customize**, select the appropriate object from the **Customize** menu, and click **Fields**.
    •   For custom objects, click **Setup ➤ Create ➤ Objects**, and select one of the custom objects in the list.

2. Click **Edit** next to the field.
3. In the `Help Text` field, enter the text you want displayed when a user hovers the mouse over the Info icon that appears adjacent to the field on a detail or edit page. You can enter up to 255 characters.
4. Click **Save**.

> **Note:** Field-level help is not available for some standard fields, including fields on the User object, system read only fields, auto-number fields, multi-currency fields, Salesforce CRM Ideas fields, and Community fields.

"Disable Outbound Messages" Profile Permission is Now "Send Outbound Messages"

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

In Winter '10, the "Disable Outbound Messages" permission has been renamed "Send Outbound Messages" and its value has been inverted. In profiles where "Disable Outbound Messages" was enabled, "Send Outbound Messages" is now disabled, and vice versa. For organizations that use workflow outbound messaging, this change now allows users to send outbound messages.

The Force.com API versions 16.0 and earlier are still compatible with "Disable Outbound Messages," which is called PermissionsDisableNotifications in the API. The API versions 17.0 and higher are compatible with "Send Outbound Messages," which is called PermissionsEnableNotifications in the API. The API profile setting PermissionsEnableNotifications replaces the previous API profile setting PermissionsDisableNotifications. If you port code from the API version 16.0 or earlier to version 17.0 or later, make sure that the new permission is disabled if it was enabled in your original code, and vice versa.

Package Anything

You asked for it! This enhancement is from ideas on the IdeaExchange about page layouts, list views, validation rules, and record types.

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

The following components are now packageable on standard objects:

•   List Views
•   Page Layouts
•   Record Types
•   Validation Rules

Previously, these components were only included implicitly from custom objects.

Apex sharing reasons can also be packaged on base package custom objects used in an extension package.

Setup Audit Trail Enhancements

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

Profile Change Tracking for Apex Class Access and Visualforce Page Access

With Winter '10, details on changes to Apex class access and Visualforce page access are tracked in the setup audit trail history.

To view the setup audit trail history, click **Setup ➤ Security Controls ➤ View Setup Audit Trail**.

Workflow Action Changes and Deletions

Changes and deletions to workflow actions are now logged in the setup audit trail.

Support for Internet Explorer 8

Available in: **All** Editions

Salesforce.com now supports Microsoft® Internet Explorer versions 6.0, 7.0, and 8.0. For better performance, we strongly recommend using version 8.0.

Ukrainian and Vietnamese—New Languages Supported

Available in: **All** Editions

Ukrainian (uk) and Vietnamese (vi) are now available as end user languages for Salesforce.com upon request.

Users can update their personal language settings as follows:

1. Click **Setup ➤ My Personal Information ➤ Personal Information**.
2. Click **Edit**.
3. Select a language from the Language picklist.
4. Click **Save**.

Visualforce Enhancements

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

Winter '10 includes the following new feature for Visualforce. For detailed information, see the Visualforce Developer's Guide.

New messaging:attachment component attributes:

- inline—specifies whether inline attachments are allowed
- renderAs—specifies how to render attachments

Workflow Enhancements

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

Workflow System Log Enhancements

If a workflow field update encounters a field where the existing value and the updated value match, that field update is skipped, and this message appears in the system log console at **Setup ➤ Monitoring ➤ Debug Logs**: `Skipping Field Update since the old value and new value for the field are the same: <value>`