



Salesforce.com: Salesforce Winter '08

# Salesforce Winter '08 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.

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## About the Release Notes

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

### What's Included in the Release Notes

For every new major enhancement, the Release Notes provide:

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

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

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

## Summary of Winter '08 Features and Impact on Salesforce Users

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

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

Feature	Enabled by Default?	Immediate User Impact
<a href="#">Salesforce to Salesforce</a>	No. An administrator must set up this feature.	None until an administrator enables and configures a connection.
<a href="#">Campaign Sharing</a>	No.	None.
<a href="#">Campaign Hierarchies</a>	Yes.	None until an administrator makes the new campaign statistic fields, <code>Parent Campaign</code> field, and Campaign Hierarchy related list visible on campaign page layouts.
<a href="#">Advanced Currency Management Setup</a>	No.	None.
<a href="#">Group Tasks</a>	Yes.	A new Multiple Users tab displays on the assignee lookup dialog for the New Task page.
<a href="#">Case Escalation Rule Queue</a>	Yes.	None. However, administrators see a new page at <b>Setup</b> ► <b>Monitoring</b> ► <b>Monitor the Case Escalation Queue</b> that allows them to view pending case escalations and cancel them if necessary.
<a href="#">Consolidated Activity Settings Page</a>	Yes.	None. However, administrators see a new page at <b>Setup</b> ► <b>Customize</b> ► <b>Activities</b> ► <b>Activity Settings</b> that replaces several other activity setup pages.

Feature	Enabled by Default?	Immediate User Impact
Customizing Customer Portal Tabs	No.	None.
Customer Self-Registration for Your Customer Portals	No.	None.
Merging Accounts with Portal Users	Yes.	None. However, when users merge accounts, they can now merge accounts that have portal users.
Send Case Notifications from a System Address	No.	None.
Field History Tracking Available on Accounts and Contacts	No.	None until an administrator enables field history tracking on accounts or contacts and adds the related lists to page layouts.
Manual Sharing Forecasts	No.	None until an administrator enables manual forecast sharing.
Product Search Enhancements	Yes.	None.
Printable List Views	Yes.	A new <b>Printable View</b> link displays on most list views.
Campaign Reporting Enhancements	Yes.	Campaign reporting enhancements display to users who run campaign reports.
Floating Report Headers	Yes.	No matter how far users scroll down tabular report results, they will see report column headings, unless they are in accessibility mode or administrators disable the feature by clicking <b>Setup ► Customize ► User Interface</b> , and deselecting the <b>Enable Floating Report Headers</b> checkbox.
Reporting on Reports and Dashboards	Yes.	None until users with the "Manage Custom Report Types" permission create custom report types that include the reports and dashboards objects.
Cloning Custom Report Types	Yes.	None until users with the "Manage Custom Report Types" permission clone custom report types.
New Standard Reports	Yes.	None until users choose to run the new standard reports.
Contact Sharing Available for Organizations with Territory Management	No.	None.
Visualforce	Yes.	None.
Inline Editing	No. An administrator must set up this feature.	None until an administrator enables inline editing.
Tagging	No. An administrator must set up this feature.	None until an administrator enables tagging.
Mobile Administration Console	No. Contact salesforce.com to enable this feature.	None.

Feature	Enabled by Default?	Immediate User Impact
Salesforce Mobile for BlackBerry: Related Items Search	Yes.	None until users download the newest version of the Salesforce Mobile client application from <a href="http://mobile.salesforce.com/setup">http://mobile.salesforce.com/setup</a> .
Zero-Admin Mobile Deployment	Yes.	Users with assigned mobile licenses can immediately install and activate Salesforce Mobile on a mobile device without any administrator assistance. To prevent users from activating Salesforce before you are ready to deploy mobile in your organization, remove the mobile license from your user accounts by editing the user records and deselecting the <b>Mobile User</b> checkbox. For more information about mobile licenses, see "User Fields" in the Salesforce online help.
Apex	No.	None.
Apex Email Service	No.	None.
Force.com Web Services API 11.0	Yes.	None.
Search Settings Page	Yes.	None.
User Records: New Standard Manager Field	Yes.	The standard <code>Manager</code> field appears as an option for approval process routing. If a custom <code>Manager</code> field is already implemented, both the standard and custom field appear as options for approval process routing.
Workflow Rules and Approval Processes Visible with "View Setup and Configuration" Permission	Yes.	Users with the "View Setup and Configuration" immediately have read-only access to workflow rule and approval process configurations.
Workflow Rules for Mass Actions on Cases	Yes.	Workflow rules are triggered when users select multiple cases from a list view and click <b>Close</b> , <b>Change Owner</b> , or <b>Change Status</b> .
Email Signature from Salesforce.com Removed	Yes.	The email signature is no longer included unless the email is sent from a trial organization or Developer Edition.

# SALESFORCE APPLICATIONS

## Salesforce to Salesforce

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

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



**Note:** Salesforce to Salesforce is only available upon request. To enable Salesforce to Salesforce, contact your salesforce.com representative.

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

It allows your business partners to:

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

It allows you to:

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

### Implementation Tips

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

- [Enabling Salesforce to Salesforce](#)
- [Configuring Salesforce to Salesforce](#)

Once you have configured Salesforce to Salesforce, you can make connections with other organizations using Salesforce to Salesforce. To invite other companies make a connection with you using Salesforce to Salesforce, see [Sending an Invitation to Connect with your Business Partners using Salesforce to Salesforce](#). If you have received an invitation to make a connection using Salesforce to Salesforce, see [Accepting or Rejecting an Invitation to Join Salesforce to Salesforce](#). You can manage your connections using the [Connections Home Page](#).

After you have made a connection to another company using Salesforce to Salesforce, you can share records with that connection. See [Making Records Available to a Connection](#) and [Accepting or Rejecting Records Shared from a Connection](#).



# About Salesforce to Salesforce

## Enabling Salesforce to Salesforce

User Permissions Needed	
To enable Salesforce to Salesforce:	"Modify All Data"

Salesforce to Salesforce is not enabled by Salesforce. To request Salesforce to Salesforce for your organization, contact [salesforce.com](https://salesforce.com).



**Caution:** Once you have enabled Salesforce to Salesforce, you cannot disable it. By enabling Salesforce to Salesforce, you agree to allow [salesforce.com](https://salesforce.com) to process updates to information in your organization that has been shared with other organizations.

To enable Salesforce to Salesforce:

1. Click **Setup** ► **Customize** ► **Salesforce to Salesforce** ► **Enable**.
2. Click **Edit**.
3. Select **Enable**.
4. Click **Save**.

Upon enabling Salesforce to Salesforce, a new user named "Connection User" is created. This user does not count towards the number of used licenses for your organization, and is not included in any user management view. When your business partner updates a shared field, the update in your organization is done by this user, allowing you to easily track all changes made by your business partners.

After Salesforce to Salesforce is enabled:

1. Edit each profile assigned to users who will be working with Salesforce to Salesforce connections. Enable the "Manage Connections" permission and set the Connection tab visibility to **Default On**.  
All profiles with the "Modify All Data" permission automatically have the "Manage Connections" permission enabled.
2. Configure Salesforce to Salesforce settings, such as communication templates for sending invitations to your business partners.
3. Add the External Sharing related list to page layouts for the appropriate profiles. For more information, see "Sharing Records Using Salesforce to Salesforce" in the Salesforce online help.



**Note:** This related list can be made available to all users, not just users with the "Manage Connections" permission. A user cannot stop sharing a record unless the user has "edit" permissions on the record.

4. "Create and manage connections with your business partners." in the Salesforce online help

## Configuring Salesforce to Salesforce

User Permissions Needed	
To configure Salesforce to Salesforce:	"Modify All Data"

You can configure Salesforce to Salesforce to use communication templates for interacting with your business partners. In addition, you can configure the email address and name used when these communication templates are used. To configure any of these settings:

1. Click **Setup** ► **Customize** ► **Salesforce to Salesforce** ► **Settings**.
2. Click **Edit** and modify the following settings:

Setting	Description
From Email Address	The email address from which all Salesforce to Salesforce communication templates are sent, for example, "partner@acme.com." Salesforce sends the emails automatically, but they appear to your contacts as if they were sent from this email address. If a contact responds to a communication template, the response is sent to this address.
From Email Name	The name that will be associated with the "From" Email Address, for example, "Acme Channel Manager".
Invitation Template	Used to send invitations.
Deactivation Template	Used to notify a business partner that you have deactivated the connection.
Accept Invitation Template	Used to notify a business partner that you have accepted an invitation.
Reject Invitation Template	Used to notify a business partner that you have not accepted an invitation.
Update Connection Profile Template	Used to notify business partners of changes to an active connection profile.

3. Click **Save**.

## Sending an Invitation to Connect with your Business Partners using Salesforce to Salesforce


User Permissions Needed
To send an invitation to a business partner to connect using Salesforce to Salesforce: "Manage Connections"

Before you can start sharing data with your business partners, you need to set up a connection to them via Salesforce to Salesforce. To create that connection, you need to invite your business partner.



**Note:** Before beginning the invitation process, you need to create an account and an associated contact for your business partner.

To send an invitation to a business partner to connect using Salesforce to Salesforce:

1. Click the **Connections** tab.
2. Click **New**.
3. Enter a contact name or use the  icon to select a contact.



**Caution:** Make sure that the contact's email address is valid; otherwise, your invitation may be sent to the wrong person.

- Optionally, select a related account.



**Note:** The account associated with the connection can be changed after the invitation is sent.

- Choose a user to manage the connection.
- Click **Save & Send Invite**.

The person you invite will receive an email invitation to connect with you using Salesforce to Salesforce. They can choose to accept or decline your invitation. You can check whether they have accepted or declined the invitation by reviewing your connections on the Connections tab. If you choose, you can also resend or cancel the invitation. For more information on connections, including information on activating an accepted connection, see "Connections Home Page" in the Salesforce online help.

## Accepting or Rejecting an Invitation to Join Salesforce to Salesforce

User Permissions Needed
To accept or reject an invitation to connection using Salesforce to Salesforce: "Manage Connections"

If a business partner has sent you an invitation to connect using Salesforce to Salesforce, you can accept or reject that invitation by following these steps:

- Enable Salesforce to Salesforce for your organization, if it is not already enabled.
- Click the link in the invitation email to go to the Salesforce login page.
- Log in as a user with the "Manage Connections" permission.
- Review the details of the invitation.
- Click **Accept** to accept the invitation, or **Decline** to decline the invitation.

If you aren't sure whether you want to accept or decline, click **Decide Later**. The invitation displays on the Connections tab with a connection status of Invitation Received. From the Connections tab you can easily accept or decline the invitation at a later date.

When you accept or reject an invitation, the company that invited you receives an email notifying them of your decision. The content of that email can be configured by changing the appropriate email template. For more information, see "Configuring Salesforce to Salesforce" in the Salesforce online help.

## Connections Home Page

User Permissions Needed
To manage connections for Salesforce to Salesforce: "Manage Connections"

The Connections home page allows you to manage your Salesforce to Salesforce connections. These connections include everyone that you have invited, whether they have accepted, declined, or have not yet responded, as well as all the invitations you have received.

Clicking on the Connections tab displays a list of recent connections. To view additional connections, select a list view from the View drop-down list, or click **Create New View** to define your own custom view. For more information on list views, see "Creating Custom List Views" in the Salesforce online help.



**Note:** You must have the "Manage Connections" permission to create these list views. If you do not create custom list views, only users with the "Manage Connections" permission will be able to view objects shared from a connection.

To send an invitation to create a new connection, click **New**, then enter the connection details and click **Save & Send Invite**. For more information, see "Sending an Invitation to Connect with your Business Partners using Salesforce to Salesforce" in the Salesforce online help.

To view details about a connection, click the connection name. The connection details include information on the status of the connection, the owner of the connection, information about the company, object sharing information, and a connection history.

You can easily view your accounts and connection relationships by creating custom account reports. For more details on reporting and Salesforce to Salesforce, see "Tips for Using Salesforce to Salesforce" in the Salesforce online help.

## Sharing Records Using Salesforce to Salesforce

Once you have created a connection to another organization, to work with that organization, you can share leads, opportunities, and custom object data with them. Your business partners do not have direct access to your lead, opportunity, or custom object record; they have a record in their organization that is connected, via Salesforce to Salesforce, to your record. Any updates to the shared information on either record is reflected on the other record.



**Note:** Making records available to business partners is not the same as sharing records within your organization. For information on sharing records within your organization, see "Granting Access to Records" in the Salesforce online help.

You can control the type of records you share with your business partners by selecting which objects and fields to publish. For more information on publishing objects and fields, see "Publishing Objects in Salesforce to Salesforce" in the Salesforce online help and "Publishing Fields in Salesforce to Salesforce" in the Salesforce online help.

You can control how the information your business partner makes available to you is used in your organization by subscribing to objects and mapping the fields on those objects to fields on your own objects. For more information on subscribing to objects, see "Subscribing to Objects in Salesforce to Salesforce" in the Salesforce online help. For more information on mapping fields, see "Subscribing to Fields in Salesforce to Salesforce" in the Salesforce online help.

Individual records are made available to your connections by forwarding the record to one or more connections, or by assigning the record to a queue that contains connections. When you forward a record to a connection, you can send your connection contact an email notification that a record has been made available. For more information, see "Making Records Available to a Connection" in the Salesforce online help.

Similarly, your business partners can make records available to you. When a record has been made available to you by a business partner, you can view basic details about the record from a view on the object's home page. Then you choose whether to accept the record or not. For more information, see "Accepting or Rejecting Records Shared from a Connection" in the Salesforce online help.

Once you have accepted a record, you can make it available to other connections in the same way you can make any record available via Salesforce to Salesforce. This allows you to work in a multitiered business network. In a multi-tiered network, changes made to the shared record in any organization updates the information in all the organizations that are sharing the record.

You can easily view the relationship between your connections and your lead, opportunity, or custom objects by creating custom reports. For more details on reporting and Salesforce to Salesforce, see "Tips for Using Salesforce to Salesforce" in the Salesforce online help.

## Making Records Available to a Connection

User Permissions Needed	
To assign records to a connection:	"Read" and "Edit" on the record
To stop sharing a record:	"Read" and "Edit" on the record

Salesforce to Salesforce allows you to assign lead, opportunity, and custom object records, to business partners with whom you have connections. There are two ways to assign a record to a connection - forward the record to one or more connections or assign the record to a queue of connections. For more information about queues, see "Managing Queues" in the Salesforce online help.

To forward a record to a connection:

1. Select the record's detail page.
2. In the External Sharing related list, click the forward button. For example, on an opportunity, click **Forward this Opportunity**.
3. Specify the connections that you want to forward the record to.
4. Optionally, select **Send Notification Email** to send an email notifying the connection's representative that you are forwarding the record to them.
5. Click **Save**.

If you make the record available to more than one connection, the first connection to accept the record will have access to it. After a record has been accepted, you can no longer make it available to another organization.

If you can edit a record, you can stop sharing it with a connection.

1. Select the record's detail page.
2. In the External Sharing related list, click **Stop Sharing**.

When you stop sharing the record with a connection, the shared record is not deleted from the other organization. Rather, changes to the record in your organization are not reflected on the record in the connection's organization. Once you have stopped sharing a record with a connection, you can once more make that record available to your connections.

## Accepting or Rejecting Records Shared from a Connection




User Permissions Needed	
To accept or reject records:	"Read" and "Edit" on the object

Salesforce to Salesforce allows you to accept or reject leads, opportunities, and custom objects, that have been made available to you by business partners with whom you have connections. When accepting a record, you can assign it to yourself, another user, a queue, or, if it is a lead, use your organization's assignment rules to automatically assign it. If an object is on the detail side of a master-detail relationship, you can assign the master object when accepting it.

To accept records that have been made available to you:

1. Go to the object's home page.
2. On the object home page, select a connections list view. For example, on the leads home page, in the **Leads from Connections** section, select a list view and click **Go!**.
3. Select the desired records and click **Accept** to accept the record and assign it to yourself. If the object is on the detail side of a master-detail relationship, click **Accept and Assign Master**.

When you accept an opportunity, you have the option to create a new account or opportunity, or to use an existing account or opportunity. If you create a new opportunity or account, you can also set the owner of that record.

- To create a new account associated with the opportunity, enter the account name. You must have the "Create" permission on accounts.
- To associate an existing account with the opportunity, click the  icon to select an existing account.
- To accept the opportunity without associating it with an account, select **Use None**.
- To create a new opportunity from the shared record, select **Create New Opportunity**. You must have the "Create" permission on new accounts.
- To modify an existing opportunity by connecting it to your business partner's record, click the  icon to select an existing opportunity.
- If you have more than one record type for an account or opportunity, select the appropriate record type.
- Use the  icon to select an owner for any new records.
- Select **Send Notification Email** checkbox to send the record owner of the records notification of your changes.

To accept records that have been made available to your company and reassign them to someone else:

1. Go to the object's home page.
2. On the object home page, select a connections list view. For example, on the leads home page, in the **Leads from Connections** section, select a list view and click **Go!**.
3. Select the desired records and click **Accept & Change Owner**.
4. Select one of the following options to assign the record:

Option	Description
Assigned To	Assigns the record to the user or queue you specify. Optionally, select <b>Send Notification Email</b> to send an email to the new record owner.
Assign using active assignment rule	Automatically assigns leads using your organization's assignment rule. This option is only available for leads.

5. Click **Save**.



**Note:** You may not be able to save a record from a connection if your organization uses validation rules and the record does not pass the validation, or if the record was made available to multiple organizations in Salesforce to Salesforce, and another organization has already accepted it. If a record cannot be saved due to validation rules, it remains in the list view. If another organization has already accepted the record, it is removed from the list view.

After accepting a shared record, if you update a field that your business partner has subscribed to, the field is automatically updated on the record in your business partner's organization. Likewise, if your business partner updates a field to which you have subscribed, it is automatically updated in your organization. When your business partner updates the record, the **Last Updated By** field will be set to "Connection User".

Once you have accepted a record, you can make it available to other connections in the same way you can make any record available via Salesforce to Salesforce. This allows you to work in a multitiered business network. In a multi-tiered network, changes made to the shared record in any organization updates the information in all the organizations that are sharing the record.

# Campaign Sharing

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

Campaign sharing is now available with Winter '08, empowering you to control campaign access at a more granular level than ever before. You can now limit campaign access between roles or groups while still allowing individual users to see their necessary campaigns.

Campaign sharing includes:

- An organization-wide sharing default for campaigns
- Campaign sharing rules
- Manually sharing of campaigns for end users

## Implementation Tips

- Initially, the organization-wide default setting for campaigns is Full Access, which is the same as your existing visibility. Full Access allows all users to view all campaigns, while only users with `Marketing User` checked in their personal information can create, edit, delete, or transfer campaigns.
- As of Winter 08, users only need to have read access on the contact or lead to add, edit, or delete campaign history. Prior to Winter 08, there was inconsistency in the type of access necessary to edit and delete campaign history.
- With Full Access selected as the organization-wide default, users designated as a Marketing User can delete or transfer any campaign regardless of whether they are the campaign's owner. Changing the organization-wide default to something other than Full Access restricts the ability to delete or transfer a campaign to the campaign's owner and managers above him or her in the role hierarchy. Any manager above the campaign owner in the role hierarchy must also be designated as a Marketing User to delete or transfer campaigns.
- A user must be designated as a Marketing User to create, update, delete, transfer, or share campaigns.
- A user must be a Marketing User and have the "Edit" permission on campaigns to use the mass manage campaign member tools available from the campaign record, reports, or views.

## Best Practices

- In Enterprise, Unlimited, and Developer Editions, designate all users as Marketing Users when enabling campaign sharing. This simplifies administration and troubleshooting because access can be controlled using sharing and profiles.



**Note:** Professional Edition customers cannot manage users this way because custom profiles are not enabled in Professional Edition organizations.

- To segment visibility between business units while maintaining existing behavior within a business unit:
  1. Set the campaign organization-wide default to Private.
  2. Create a sharing rule to grant marketing users Full Access to all campaigns owned by users within their business unit.
  3. Create a sharing rule to grant all non-marketing users in a business unit Read Only access to all campaigns owned by users in their business unit.
- When a single user, such as a regional marketing manager, owns multiple campaigns and needs to segment visibility between business units, share campaigns individually instead of using sharing rules. Sharing rules apply to all campaigns owned by a user and do not allow segmenting visibility.
- Create all campaign sharing rules prior to changing your organization-wide default to reduce the affect the change has on your users.

- To share all campaigns in your organization with a group of users or a specific role, create a sharing rule that applies to campaigns owned by members of the "Entire Organization" public group.
- Minimize the number of sharing rules you need to create by using the "Roles and Subordinates" option instead of choosing a specific role.

## About Campaign Sharing

### Setting the Campaign Sharing Model

To maintain your organization's sharing model and specify sharing rules, click **Setup** ► **Security Controls** ► **Sharing Settings**. This page now includes organization-wide sharing defaults for campaigns as well as campaign sharing rules. Click **Edit** in the Organization Wide Defaults section to modify the default sharing for campaigns.

Access Setting	Description
Private	Users can view, update, delete, transfer, or share records they own or where they are the manager of the owner going up the role hierarchy.
Public Read Only	Users can view all records.
Public Read/Write	Users can view and update all records.
Full Access	Users can view, update, delete, or transfer all records.

### Setting Campaign Sharing Rules

Sharing rules allow you to selectively grant data access to defined sets of users. You can create campaign sharing rules based on who owns the campaign, and set default sharing access for campaigns.

1. If you plan to share data with public groups, confirm that the appropriate public groups have been created. To create your groups, see "Managing Groups" in the Salesforce online help.
2. Click **Setup** ► **Security Controls** ► **Sharing Settings**.
3. Click **New** in the campaign sharing rules related list. A page displays with sharing rule fields.
4. In the first line, select the source data set to be shared based on who owns the record. You can choose users who belong to public groups, roles, or roles and subordinates.
  - a. In the first drop-down list, choose a data set category. The available categories include:

Category	Description
Public Groups	All public groups defined by your administrator.
Roles	All roles defined for your organization. This includes all of the users in the specified role.
Roles and Subordinates	All roles defined by your organization including all of the users in the specified role plus all of the users in roles below that role in the role hierarchy.

- b. In the second drop-down list, choose a specific data set.



5. In the **Share with** line, select the set of users who should have access to that data.

a. In the first drop-down list, choose a category. The available categories include:

Category	Description
Public Groups	All public groups defined by your administrator.
Roles	All roles defined for your organization. This includes all of the users in the specified role.
Roles and Subordinates	All roles defined by your organization including all of the users in the specified role plus all of the users in roles below that role in the role hierarchy.

b. In the second drop-down list, choose a specific set of users.

6. In the **Campaign Access** drop-down list, select the sharing access that the users should have to campaigns. The available settings include:

Access Setting	Description
Ready Only	Users can view, but not update, records.
Read/Write	Users can view and update records.
Full Access	Users can view, update, delete, transfer or share records.

7. Click **Save**.

### Notes on Sharing Rules

- You can use sharing rules to grant wider access to data. You cannot restrict access below your organization-wide default levels.
- Sharing rules apply to all new and existing records that meet the definition of the source data set.
- Sharing rules apply to both active and inactive users.
- When you change the access levels for a sharing rule, all existing records are automatically updated to reflect the new access levels.
- When you delete a sharing rule, the sharing access created by that rule is automatically removed.
- When you transfer records from one user to another, the sharing rules are reevaluated to add or remove access to the transferred records as necessary.
- When you modify which users are in a group, role, or territory, the sharing rules are reevaluated to add or remove access as necessary.
- Sharing rules automatically grant additional access to related records.
- Managers in the role hierarchy are automatically granted the same access that users below them in the hierarchy have from a sharing rule.
- Making changes to sharing rules may require changing a large number of records at once.

## Sharing Campaigns

User Permissions Needed	
To view campaigns:	"Read" on campaigns
To share campaigns:	"Read" on campaigns AND Marketing User checked in your user information

Your administrator defines your organization's sharing model for campaign access. However, you can extend sharing privileges for your own campaigns individually. Use campaign sharing to *increase* access to your campaigns; you cannot restrict access beyond your organization's default access levels.

To extend the sharing of a campaign, click **Sharing** on the campaign you want to share. To grant access to others, see "Granting Access to Records" in the Salesforce online help. To view all users that have access to the record, see "Viewing Which Users Have Access" in the Salesforce online help.

### Special Considerations

- To share a campaign, you must have Full Access to the campaign and have the `Marketing User` checkbox selected in your personal information.
- The **Sharing** button is available depending on your organization-wide default for campaigns.
- Make sure you are sharing records with users who have the appropriate "Read" permission on their profiles for viewing the shared records. See "Standard Object Permissions" in the Salesforce online help.
- Sharing a campaign does not automatically grant read access to all the campaign members. Make sure that the user you are sharing a campaign with has visibility to the associated leads or contacts.
- The campaign hierarchy statistic fields provide aggregate data for a parent campaign and all the campaigns below it in the hierarchy, regardless of whether a user has sharing rights to a particular campaign within the hierarchy. Therefore, consider your organization's campaign sharing settings when enabling campaign hierarchy statistics. If you do not want users to see aggregate hierarchy data, remove any or all of the campaign hierarchy statistic fields from the Campaign Hierarchy related list. These fields will still be available for reporting purposes. For more information, see "Viewing Campaign Hierarchy Statistics" in the Salesforce online help.

## Campaign Hierarchies

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

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

Campaign hierarchies provide a powerful categorization tool that enables you to analyze and report on the health of your related campaigns. By associating campaigns with one another via a lookup relationship, you can group campaigns within a specific marketing program or initiative. A hierarchy can contain up to five levels, and each level can have an unlimited number of individual campaigns.

### Implementation Tips

- All campaigns in a hierarchy must use the same currency. If opportunities associated with the campaigns use different currencies, the opportunity value fields will be converted to the user's currency .

- Eight new summary statistic fields are included in the Campaign Hierarchy related list to summarize the totals from all campaigns in a hierarchy: `Total Responses in Hierarchy`, `Total Leads in Hierarchy`, `Total Converted Leads in Hierarchy`, `Total Contacts in Hierarchy`, `Total Opportunities in Hierarchy`, `Total Value Opportunities in Hierarchy`, `Total Won Opportunities in Hierarchy`, and `Total Value Won Opportunities in Hierarchy`. In Enterprise, Unlimited, and Developer Editions, use field-level security to make these new fields visible to users. In Professional Edition, add these fields to the related list by customizing the campaign page layout. If you prefer, you can also add these fields to the campaign page layout in a new section; the fields will appear in the new section and in the Campaign Hierarchy related list. In the related list, values for the new fields appear in the `Hierarchy Total` row.
- Calculating campaign hierarchy statistics may take a few minutes depending on the number of records affected and other factors.
- Campaign hierarchy statistics do not support validation or workflow rules.

### Best Practices

- The campaign hierarchy statistics fields provide aggregate data for a parent campaign and all the campaigns below it in the hierarchy, regardless of whether a user has sharing rights to a particular campaign within the hierarchy. Therefore, consider your organization's campaign sharing settings when enabling campaign hierarchy statistics. If you do not want users to see aggregate hierarchy data that includes campaigns to which the users do not have access, you can choose to omit any or all of the campaign hierarchy statistics fields from the Campaign Hierarchy related list or page layout. If you do not add the campaign hierarchy statistic fields to the campaign detail, you can still access these fields on reports.
- Create a classification scheme for your hierarchies that includes a unique name for each hierarchy level. For example, your organization might use "tactic," "program," "initiative," and "region" levels in a hierarchy. Add a custom picklist with these values to your campaign layouts so users can associate campaigns to hierarchy levels. The custom picklist enables you to run comprehensive reports that contain aggregate statistics for any hierarchy level across all of your campaigns.
- Use the Campaign Detail custom report and the Campaign ROI Analysis report to analyze campaign hierarchies. Both reports contain Campaign Hierarchy Statistics fields that provide aggregate values for a parent campaign and all the campaigns below it in the hierarchy. Sorting the reports by the hierarchy custom picklist will enable you to gauge the overall status of your marketing efforts at any hierarchy level.
- When running Campaign Detail or Campaign ROI Analysis reports, keep in mind that the Campaign Hierarchy Statistics fields provide a roll-up of campaign hierarchy data but the Campaign Planning and Statistics fields represent individual campaigns.

## About Campaign Hierarchies

### Creating a Campaign Hierarchy

After adding the `Parent Campaign` field to your page layout, repeat the following procedure for each campaign in a hierarchy:

1. On the campaign where you want to add a parent, click **Edit**.
2. Click the lookup icon next to the `Parent Campaign` field.
3. Search for a campaign or click **New** to create a new parent campaign. Searching for a campaign returns both active and inactive campaigns in the search results.



**Note:** Search results only include campaigns for which you have sharing access.

4. If you are creating a new campaign as the parent, provide the campaign details.
5. Click **Save** on the detail page.

## Viewing a Campaign Hierarchy

To view the hierarchy for a campaign, click **View Hierarchy** next to the Campaign Name field on the campaign detail page. If a campaign is not part of a hierarchy, its corresponding Campaign Hierarchy page shows only the campaign you selected.

On the Campaign Hierarchy page, campaigns are indented to show that they are related to the campaigns above them. Campaigns are listed in descending order based on their hierarchy level. Click any campaign name to open the detail page for that campaign. If you do not have sharing rights for a campaign in the hierarchy, you see the campaign name on the Campaign Hierarchy page but the corresponding fields are empty.

Statistics for an individual campaign are in the Campaign Statistics section of the campaign detail page. Aggregate statistics for parent and child campaigns are in the Campaign Hierarchy related list.

## Viewing Campaign Hierarchy Statistics

Campaign detail pages include a Campaign Hierarchy related list, which displays a parent campaign and all the campaigns directly below it in the campaign hierarchy.

The following fields provide summary statistics for each campaign in the list as well as the total value for the parent campaign and all the campaigns below it in the hierarchy:



**Note:** For Enterprise, Unlimited, and Developer Editions, these fields only appear in the Campaign Hierarchy related list if they are enabled via field-level security. For Professional Edition, these fields only appear in the Campaign Hierarchy related list if they are added to the campaign page layout. The values for these fields appear in the **Hierarchy Total** section of the Campaign Hierarchy related list.

- Total Leads in Hierarchy
- Total Converted Leads in Hierarchy
- Total Contacts in Hierarchy
- Total Opportunities in Hierarchy
- Total Won Opportunities in Hierarchy
- Total Value Won Opportunities in Hierarchy
- Total Value Opportunities in Hierarchy
- Total Responses in Hierarchy

The Campaign Hierarchy related list shows a maximum of two hierarchy levels: the parent campaign and its child campaigns. If a child campaign has children, those children do not appear in the related list but their data is included in the field values. The campaign hierarchy statistics fields provide aggregate data regardless of whether you have sharing rights to view individual campaigns within the hierarchy. However, if you do not have access to a campaign that appears in the related list, you cannot view its detail page from the link on the related list. To view all the levels in a campaign hierarchy, click the **View Hierarchy** link next to the Campaign Name on the campaign detail page.

## Additional Salesforce Application Enhancements

### Advanced Currency Management Setup

You can now enable advanced currency management without contacting salesforce.com.

To enable advanced currency management:

1. Enable multiple currencies for your organization. For more information, see "Managing Multiple Currencies" in the Salesforce online help.
2. Click **Setup** ► **Company Profile** ► **Manage Currencies**.
3. Click **Enable**.

4. When prompted, select **Yes, I want to enable Advanced Currency Management** and click **Enable**.

For more information on advanced currency management, see "About Advanced Currency Management" in the Salesforce online help.

## Group Tasks

You can create a task so that up to 100 users are each assigned an independent copy of the task. For example, you could create a task "Submit your expense reports" with the appropriate due date and assign it to a team of account executives. To build a list of users you want to assign to a newly-created task, open the assignee lookup on the New Task page and click the Multiple Users tab in the lookup dialog. Note that these copies are independent and not linked; they can be edited, transferred, or deleted individually. For more information, see "Creating Group Tasks" in the Salesforce online help.

## Case Escalation Rule Queue

Now, when Salesforce triggers a case escalation rule that has time-dependent actions, users with the "Modify All Data" permission can view pending case escalations and cancel them if necessary.

To view pending actions:

1. Click **Setup** ► **Monitoring** ► **Monitor the Case Escalation Queue**.
2. Click **Search** to view all pending actions for any active case escalation rule, or set the filter criteria and click **Search** to view only the pending actions that match the criteria.

To cancel pending actions:

1. Select the box next to the pending actions you want to cancel. Optionally, check the box in the column header to select all currently displayed items.
2. Click **Delete**. Salesforce cancels the pending action.

## Consolidated Activity Settings Page

Several organization-wide activity settings such as enabling activity reminders, enabling recurring events, and enabling email tracking have been consolidated on a single page at **Setup** ► **Customize** ► **Activities** ► **Activity Settings**. Previously, these settings were separated on different setup pages. For more information, see "Customizing Activity Settings" in the Salesforce online help.

## Customer Portal Enhancements

### Customizing Customer Portal Tabs

Now, you can choose which tabs display to all users logged in to a Salesforce Customer Portal, as well as customize the order in which tabs display to portal users. To customize the tabs for a Customer Portal, click **Setup** ► **Customize** ► **Customer Portal** ► **Settings**, select the name of the Customer Portal, and click **Customize Portal Tabs**.

### Customer Self-Registration for Your Customer Portals

Now, your customers can register themselves for your Customer Portal. To enable this feature, click **Setup** ► **Customize** ► **Customer Portal** ► **Settings** and select the **Enable Self-Registration** checkbox.

When you select this checkbox and add the **Allow Customer Portal Self-Registration** checkbox to contact page layouts, contacts whose records are marked **Allow Customer Portal Self-Registration** can view a self-registration area on the Login page of your Customer Portal. From the self-registration area, users can enter their email address and click **Submit** to receive an automatically assigned username and password for logging in to your Customer Portal. Other email notifications sent to users regarding their registration status include:

- Existing user, from which the user can enter another email address or click a **Forgot Password?** link to retrieve his or her password.

- New user, which informs the user that the email address he or she submitted does not match an existing contact in your organization. If an administrator has implemented Web-to-Case or Web-to-Lead to capture new user information, then the user can click a link to enter his or her information on the appropriate form.
- Internal error, which informs the user that an error occurred during the self-registration process and that your portal's administrator has been notified about the error.
- Ineligible user, which informs the user that he or she is not eligible for self-registration to your Customer Portal. This notification is sent when a submitted email address matches a contact that does not have the `Allow Customer Portal Self-Registration` checkbox selected. It is also sent when a submitted email address does not match any contacts, and your administrator has not set up Web-to-Lead or Web-to-Case to capture new user information.

Additionally, for users who self-register for your Customer Portal but lack an existing contact record, you can specify the URL of a Web-to-Lead or Web-to-Case form so that their information can be captured and converted to a contact. Furthermore, you can select the default role, profile, and user license for users who self-register for your Customer Portal. For more information on Web-to-Lead, Web-to-Case, roles, profiles, and user licenses, see the Salesforce online help.

### Merging Accounts with Portal Users

Now, you can merge accounts that have contacts associated with the same type of portal. For example, you can merge accounts that have contacts associated with a PRM portal or Customer Portal, but you cannot merge an account that has contacts associated with a PRM portal with an account that has contacts associated with a Customer Portal. Note that when you merge accounts that have contacts associated with multiple portals that a contact's access to a specific portal does not change. This is because a portal user's profile determines the portal he or she can access.

To merge accounts, simply click the **Merge** link on the Tools section of the Accounts tab. To ensure that merged accounts will include contacts associated with a portal, select the account with portal users as the master record during the merge process.

### Send Case Notifications from a System Address

Now, you can prevent Self-Service or Customer Portal users who update their cases from receiving any "out-of-office" emails from case owners whose email is set to "out-of-office". By clicking **Setup** > **Customize** > **Cases** > **Support Settings** and selecting `Send Case Notifications from System Address`, you can specify that case comment, attachment, and assignment notifications sent to case owners are sent from a system address, rather than the address of the user who updated the case. System notifications display a "From" email address of "noreply@salesforce.com", and an email "Name" related to the message, such as "Case Comment Notification".

### Field History Tracking Available on Accounts and Contacts

Field history tracking has been extended to include accounts, person accounts, and contacts. This new functionality provides the ability to track and audit changes to standard and custom account, person account, and contact fields. For more information, see [Tracking Field History](#).

### Manual Sharing Forecasts

Your administrator defines your organization's forecasting hierarchy, which determines which users can view the forecast data. However, your administrator can manually extend sharing privileges for forecast data, and you may be able to manually extend sharing privileges for your own forecast data as well. Manual forecast sharing can only increase access to forecast data; it cannot restrict access for users who already have access. To manually share a forecast, you must be an administrator or a forecast manager who has been given access to share your forecast data.

For more information on manually sharing forecasts, see "Manually Sharing a Forecast" in the Salesforce online help.

## Product Search Enhancements

The following search features are now available for products :

- Administrators can choose default columns and sort order in product searches by clicking **Customize...** and selecting **Columns For All Users** on the product search page.
- You can select which columns appear in your products search results and change the order of the selected columns by clicking **Customize...** and choosing **My Columns**. Use the Add and Remove arrows to move columns from the Available Fields list to the Selected Fields list and use the Up and Down arrows to change the order of the columns.
- Administrators can customize the numbers of records to display on product search pages. For more information, see Customizing Search Settings.

For more information on searching for products and opportunity products, see "Searching for Price Books and Products" in the Salesforce online help.

## Printable List Views

You can now print list views for most objects. List views that support this capability—including accounts, activities, cases, custom objects, leads, opportunities, and more—have a **Printable View** link in the colored title bar (next to the **Help for this Page** link). Clicking **Printable View** opens the contents of the current list view in a simple, print-ready format. For more information, see "Printing List Views" in the Salesforce online help.

## Report Enhancements

### Campaign Reporting Enhancements

A new series of campaign reporting enhancements provides marketing users greater visibility into campaign performance:

- The new Campaigns with Campaign Members report provides information about leads and contacts on multiple active or inactive campaigns.
- On the Campaigns with Leads and Campaigns with Contacts reports, the `Member ID` field has been renamed `Lead ID/Contact ID` and a new `Member ID` field has been added. This change enables users to sort data based on both types of IDs rather than the `Member ID` only. If users have existing reports that sort data based on the `Member ID` field, the field label will be automatically converted to `Lead ID/Contact ID`.
- Campaigns with Contacts and Campaigns with Leads reports can now include the contact owner role or lead owner role.
- Standard opportunity reports can now include the `Campaign Source` field.
- Campaigns with Leads, Campaigns with Contacts, and Campaigns with Campaign Member reports can now indicate whether a member has responded to the campaign.

### Floating Report Headers

Now, you can keep the column headings on tabular reports in sight no matter how far users scroll down report results. With floating report headers, users can scroll to the bottom of lengthy tabular reports without having to scroll back to the top to view the names of the column headings. Users can also click floating report headers to sort data in a specific column. When users sort data by clicking a floating report heading, the report refreshes and redirects users to the beginning of report results.. To disable this option for all users in your organization, click **Setup** > **Customize** > **User Interface**, and deselect the `Enable Floating Report Headers` checkbox.

Note that floating report headers do not display for users with accessibility mode enabled. For more information, see "Accessibility Overview" in the Salesforce online help.

### Reporting on Reports and Dashboards

Now, you can create custom report types from which users can report on your organization's reports and dashboards. When defining a custom report type, select Reports or Dashboards from the `Primary`



Object drop-down list on the New Custom Report Type page. For more information, see "Defining Custom Report Types" in the Salesforce online help.

### **Cloning Custom Report Types**

Now, you can clone custom report types instead of manually duplicating all the objects and fields included in an existing custom report type that you want to reuse. Click **Setup > Build > Report Types** to display the All Custom Report Types page, which shows the list of custom report types defined for your organization. Select the name of the custom report type you want to clone, and click **Clone**.

### **Diagrams of Object Relationships in Custom Report Types**

Now, when you choose or view object relationships for a custom report type, diagrams automatically display to help you better understand the object relationships included in the custom report type as well as the data displayed in reports run from it.

### **Territories Available for Custom Report Types**

You can now include territories in custom report types. This allows users with the "Manage Custom Report Types" permission to define report criteria from which users can run and create custom reports, such as accounts with territories and territories with opportunities.

Reports run from custom report types that include territories may display results differently than standard reports that include territories. This is because reports run from custom report types only display results *with* territories, such as accounts with territories, whereas standard reports that include territories may display results *without* territories. For example, if you select the Account Territory Report, results display accounts without territories. Furthermore, the Territories filter on report results run from custom report types that include territories does not include Multiple Territories or Missing Territories.

### **New Standard Reports**

Now, you can access two new standard reports by clicking the Reports tab and selecting the following:

- **Account History Report** - This report allows you to see the data history for accounts or person accounts if your organization tracks field history on accounts.
- **Contact History Report** - This report allows you to see the data history for contacts if your organization tracks field history on contacts.

### **Additional Fields Available for Reports**

Now, on the Select Columns page of the report wizard, you can add the following fields to reports:

- **Case Comment Created By Role** - This field allows you to see the role of a user who created a comment on a case. This field is only available on case reports.
- **Edited By Role** - This field allows you to see the role of a user who updated a record. This field is only available on history reports.

### **Contact Sharing Available for Organizations with Territory Management**

Prior to Winter '08, customers using Territory Management were unable to grant users access to an account without granting them access to all the contacts. Now in Winter '08, customers can use the Contact Sharing feature released in Summer '07 along with Territory Management.

The access settings on a territory now include an option to set the contact access for all accounts associated with that territory. The contact access setting on the territory does not appear until the sharing organization-wide default for contacts has been changed from "Controlled by Parent" to a different setting.



# FORCE.COM PLATFORM

## Visualforce

Available in: **Developer** Edition as a developer preview

Over the past several years, salesforce.com has created a comprehensive platform for building on-demand applications. Like other sophisticated application development platforms, the Force.com platform offers separate tools for defining:

- The structure of the data, that is, the *data model*
- The rules that detail how that data can be manipulated, that is, the *business logic*
- The layouts that specify how that data should be displayed, that is, the *user interface*

While the tools for building the data model and business logic for applications are powerful, robust solutions that run natively on Force.com platform servers, the existing tools for defining user interfaces have had certain limitations:

- **Page layouts**, the point-and-click tool that allows application developers to organize fields, buttons, and related lists on record detail pages, do not provide much flexibility in how sets of information are displayed. Fields must always appear above related lists, buttons must always appear above fields, and s-controls and custom links can only be placed in particular areas.
- **S-controls**, the tool that allows application developers to display custom HTML in a detail page or custom tab, provide more flexibility than page layouts, but:
  - Execute from within a browser, causing poor performance if displaying or updating values from more than a few records at a time
  - Do not provide an easy way to give custom user interface elements the same look-and-feel as standard Salesforce pages
  - Require developers to enforce field uniqueness and other metadata dependencies on their own

For these reasons, salesforce.com has now introduced Visualforce, the next-generation solution for building sophisticated custom user interfaces on the Force.com platform.

## About Visualforce

### What is Visualforce?

Visualforce is a framework that allows developers to build sophisticated, custom user interfaces that can be hosted natively on the Force.com platform. The Visualforce framework includes a tag-based markup language, similar to HTML.

In the Visualforce markup language, each Visualforce tag corresponds to a coarse or fine-grained user interface component, such as a section of a page, a related list, or a field. The behavior of Visualforce components can either be controlled by the same logic that is used in standard Salesforce pages, or developers can associate their own logic with a controller class written in Apex.

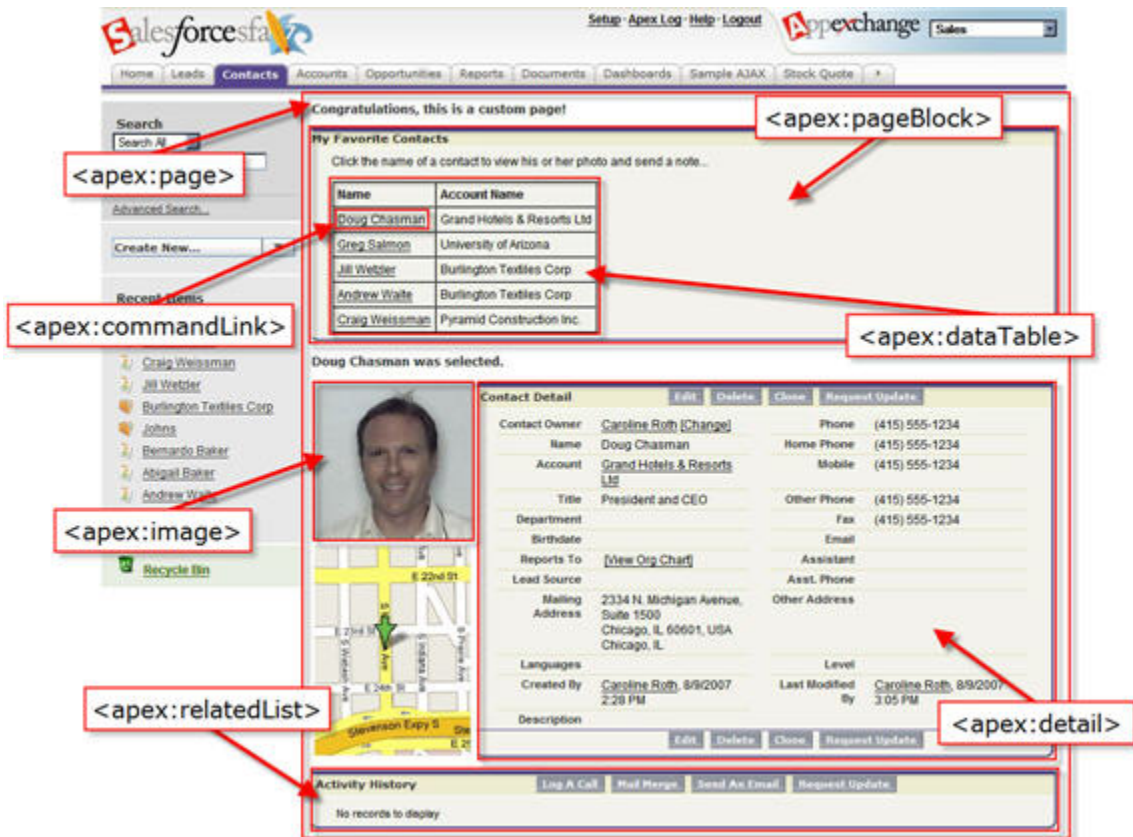


Figure 1: Sample Visualforce Components and their Corresponding Tags

## What is a Visualforce Page?

Developers can use Visualforce to create a Visualforce page definition. A page definition consists of two primary elements:

- Visualforce markup
- A Visualforce controller

### Visualforce Markup

Visualforce markup consists of Visualforce tags, HTML, JavaScript, or any other Web-enabled code embedded within a single `<apex:page>` tag. The markup defines the user interface components that should be included on the page, and the way they should appear.

### Visualforce Controllers

A Visualforce controller is a set of instructions that specify what happens when a user interacts with the components specified in associated Visualforce markup, such as when a user clicks a button or link. Controllers also provide access to the data that should be displayed in a page, and can modify component behavior.

A developer can either use a standard controller provided by the Force.com platform, or add custom controller logic with a class written in Apex.:

- A standard controller consists of the same functionality and logic that is used for a standard Salesforce page. For example, if you use the standard Accounts controller, clicking a **Save** button in a Visualforce page results in the same behavior as clicking **Save** on a standard Account detail page.

- A custom controller is a class written in Apex that implements all of a page's logic, without leveraging a standard controller. If you use a custom controller, you can define new navigation elements or behaviors, but you must also reimplement any functionality that was already provided in a standard controller.

Like other Apex classes, custom controllers execute entirely in system mode, in which the profile-based permissions and field-level security of the current user are ignored.

- A controller extension is a class written in Apex that adds to or overrides behavior in a standard or custom controller. Extensions allow you to leverage the functionality of another controller while adding your own custom logic.

Because standard controllers execute in user mode, in which the profile-based permissions, field-level security, and sharing rules of the current user are enforced, extending a standard controller allows you to build a Visualforce page that respects user permissions. Although the extension class executes in system mode, the standard controller executes in user mode.



**Note:** Although custom controllers and controller extension classes execute in system mode and thereby ignore profile-based permissions and field-level security, you can choose whether they respect a user's organization-wide defaults, role hierarchy, and sharing rules by using the `with sharing` keywords in the class definition. For information, see "Using the `with sharing` Keywords" in the *Apex Developer's Guide* at [www.salesforce.com/us/developer/docs/apexcode/salesforce\\_apex\\_language\\_reference.pdf](http://www.salesforce.com/us/developer/docs/apexcode/salesforce_apex_language_reference.pdf).

## Where Can Visualforce Pages Be Used?

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

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

## Which Editions Support Visualforce?

Visualforce is currently available as a developer preview for Developer Edition users only. To sign up for a Developer Edition account and the Visualforce developer preview, go to the Apex Developer Network at [www.salesforce.com/developer/](http://www.salesforce.com/developer/) and follow the instructions. A Developer Edition account gives you access to a free Developer Edition organization.

## Enabling Development Mode

User Permissions Needed	
To enable development mode:	"Customize Application"

Although you can view and edit Visualforce page definitions from the setup area by clicking **Setup ► Build ► Pages**, enabling Visualforce developer mode is the best way to build Visualforce pages. Development mode provides you with:

- A special development footer on every Visualforce page that you define

The footer includes an editor for the page markup and, if applicable, the associated controller. The page markup editor offers highlighting and auto-suggest for component tag names, and the footer also includes a link to the component reference documentation.

- The ability to define new Visualforce pages just by entering a particular URL
- Error messages that include more detailed stack traces than what standard users receive

To enable Visualforce developer mode:

1. Click **Setup** ► **My Personal Information** ► **Personal Information**, and click **Edit**.
2. Select the `Development Mode` checkbox.
3. Click **Save**.

## Defining Visualforce Pages

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

You can create Visualforce pages either by using [Visualforce development mode](#), or by creating pages in Setup.

To create a page using Visualforce developer mode:

1. In your browser, enter a URL in the following form:

```
http://<mySalesforceInstance>/apex/<nameOfNewPage>
```

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

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

To create pages in Setup:

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



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

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

```
http://<mySalesforceInstance>/apex/<nameOfNewPage>
```

## Managing Visualforce Pages

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

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

- Click **New** to [define a new Visualforce page](#).
- Click a page name to [display detailed information about the page](#), including its label and Visualforce markup.
- Click **Edit** next to a page name to modify the page's name, label, or Visualforce markup.
- Click **Del** to remove a page.

## Viewing and Editing Visualforce Pages

User Permissions Needed	
To clone, edit, or delete Visualforce markup:	"Customize Application"
To edit custom Visualforce controllers	"Author Apex"

Click **Setup** ► **Build** ► **Pages** and click the name of a Visualforce page to view its details, including when it was created, when it was last modified, and the Visualforce markup associated with the page.

From the detail page, you can do any of the following:

- Click **Edit** to edit the page markup.
- Click **Delete** to delete the page.
- Click **Clone** to create a copy of the page. You must specify a new name for the new page.
- Click **Where is this used?** to view a list of all references to the page in your organization.

### Viewing and Editing Visualforce Pages with Development Mode Enabled

With [development mode enabled](#), you can also view and edit the content of a page by navigating to the URL of the page. For example, if a page is named `HelloWorld`, and your `salesforce.com` instance is `na3.salesforce.com`, enter `https://na3.salesforce.com/apex/HelloWorld`.

The rendered page is displayed with the development mode footer at the bottom of the window:

- Click **Page Editor** to view and edit the associated Visualforce markup without having to return to the Setup area. All changes you make to the page markup immediately display when you save the page.
- If the page uses a custom controller, click **Controller** to edit the associated Apex class.
- Click **Save** (just above the edit pane) to save your changes and refresh the content of the page.
- Click **Component Reference** to view the online documentation for all supported Visualforce components.
- Click **Where is this used?** to view a list of all items in Salesforce that reference the page, such as custom tabs, controllers, or other pages.

## What is a Static Resource?

Static resources allow you to upload content that you can reference in a Visualforce page, including archives (such as .zip and .jar files), images, stylesheets, JavaScript, and other files.

Using a static resource is preferable to uploading a file to the Documents tab because:

- You can package a collection of related files into a directory hierarchy and upload that hierarchy as a .zip or .jar archive.
- You can reference a static resource in page markup by name using the `$Resource` global variable instead of hard-coding document IDs:

- To reference a stand-alone file, use `$Resource.<resource_name>` as a merge field, where `<resource_name>` is the name you specified when you uploaded the resource. For example:

```
<apex:image url="{!$Resource.TestImage}" width="50" height="50" />
```

- To reference a file in an archive, use the `URLFOR` function. Specify the static resource name that you provided when you uploaded the archive with the first parameter, and the path to the desired file within the archive with the second. For example:

```
<apex:image url="{!URLFOR($Resource.TestZip, 'images/Bluehills.jpg')}" width="50" height="50" />
```

A single static resource can be up to 5 MB in size, and an organization can have up to 250 MB of static resources, total.

Defining Static Resources

User Permissions Needed	
To create static resources:	"Customize Application"

To create a static resource:

1. Click **Setup** ► **Build** ► **Static Resources**.
2. Click **New Static Resource**.
3. In the **Name** text box, enter the text that should be used to identify the resource in Visualforce markup. This name can only contain alphanumeric characters, must begin with a letter, and must be unique in your organization.



**Note:** If you reference a static resource in Visualforce markup and then change the name of the resource, the Visualforce markup is updated to reflect that change.

4. In the **Description** text area, specify an optional description of the resource.
5. Next to the **File** text box, click **Browse** to navigate to a local copy of the resource that you want to upload.

A single static resource can be up to 5 MB in size, and an organization can have up to 250 MB of static resources, total.

6. Click **Save**.

Managing Static Resources

User Permissions Needed	
To create and edit static resources:	"Customize Application"

After creating static resources, you can customize, edit, and delete them. Click **Setup** ► **Build** ► **Static Resources** to display the Static Resources list page, which shows the list of resources defined for your organization. From this page you can:

- Click **New Static Resource** to define a new static resource.
- Click a resource name to display detailed information about the page, including its MIME type and size.
- Click **Edit** next to a resource to modify the resource's name or to upload a new version of the resource.
- Click **Del** to remove a resource.

## Viewing and Editing Static Resources

User Permissions Needed	
To clone, edit, or delete static resources:	"Customize Application"

Click **Setup** ► **Build** ► **Static Resources** and click the name of a resource to view its details, including its MIME type, the size of the resource in bytes, when it was created, and when it was last modified.

From the detail page, you can do any of the following:

- Click **Edit** to edit the resource.
- Click **Delete** to delete the resource.
- Click **Clone** to create a copy of the resource. You must specify a new name for the new resource.

## Additional Information

To learn more about Visualforce:

- Review the *Visualforce Developer's Guide* available at [www.salesforce.com/us/developer/docs/pages/index.htm](http://www.salesforce.com/us/developer/docs/pages/index.htm)
- Visit the Apex and Visualforce page on the Apex Developer Network at [wiki.apexdevnet.com/index.php/Apex\\_and\\_Visualforce](http://wiki.apexdevnet.com/index.php/Apex_and_Visualforce)

## Inline Editing

Available in: **All Editions**

With Winter '08, you can now edit data with greater ease and speed using inline editing. Inline editing allows users to quickly change field values on a record's detail page, saving the user from having to access the record's edit page first. When users hover over a field's value, Salesforce displays a pencil (✎) if the field is editable or a lock (🔒) if the field is not.

### Implementation Tips

- If you have made changes to a record but have not yet saved it, you can undo individual changes without losing the rest of your changes on the page. To undo a single edit, click the undo icon (↶) to the right of the desired field's changed value. This reverts the field back to its previous value.
- You can use inline editing to change the values of fields on records for which you have read-only access, either via field-level security or your organization's sharing model; however, Salesforce does not let you save your changes, and displays an insufficient privileges error message when you try to save the record.
- Pressing **Enter** while your cursor is in a field's edit box confirms the change for that field only. Pressing **Enter** when no fields are in edit mode saves all edits made to the record.
- Pressing **Esc** while your cursor is in a field's edit box reverts the change for that field only.
- Inline editing is available on detail pages for all fields that are editable on edit pages, with the exception of some fields on tasks, events, opportunities, pricebooks, and documents. Inline editing is not supported in the console or Customer Portal.
- Inline editing is disabled on record detail pages if an administrator overrides the **Edit** button for that object with an s-control or a Visualforce page. For information on overriding buttons with s-controls, see "Overriding Standard Buttons and Tab Home Pages" in the Salesforce online help. For information on Visualforce pages, see [What is Visualforce?](#) on page 23.



- Removing the **Edit** button from a page layout does not prevent users from modifying the record using inline editing. To prevent users from editing data altogether, administrators should use any combination of sharing rules, field-level security, page layout field properties, validation rules, profile permissions, s-controls or Visualforce pages.
- Inline editing is unavailable for users with accessibility mode enabled.
- You cannot use inline editing on setup pages.
- Solution descriptions cannot be modified using inline editing if HTML solutions are enabled.

**Best Practices**

- Notify your users when you activate inline editing.

# About Inline Editing

## Enabling Inline Editing

To enable inline editing:

1. Click **Setup** ► **Customize** ► **User Interface**.
2. Select the `Enable Inline Editing` checkbox.



**Note:** The `Enable Inline Editing` checkbox is not selected by default, but you can enable it for every user in your organization by selecting the checkbox. You cannot enable inline editing for a subset of users.

3. Click **Save**.

## Editing Data Using Inline Editing

User Permissions Needed	
To enable inline editing:	"Customize Application"

Inline editing allows users to quickly change field values on a record's detail page, saving the user from having to access the record's edit page first.

To enable inline editing for your organization, see "Customizing User Interface Settings" in the Salesforce online help.

To edit a record using inline editing once it has been enabled for your organization:

1. Navigate to the detail page of the record you want to edit.
2. Mouse-over the field you want to change. One of the following occurs:
  - If inline editing can be used to edit the field, Salesforce displays a pencil icon (✎).
  - If inline editing cannot be used to edit the field but the field is editable by other means, no icon appears.
  - If the field cannot be edited by any means (such as the `Last Modified By` field), Salesforce displays a lock icon (🔒).
3. Double-click inside the highlighted region next to the field you want to change. The field changes to edit mode. Salesforce displays compound fields (such as addresses, first and last names, and dependent picklists) in a dialog box so that all portions of the field can be edited.
4. Enter the new value.



5. Click away from the field to confirm your change and continue making additional edits. If you are editing a field that is not a text area field, you can also press **Enter** to confirm your change. Confirmed changes display in bold orange text.
6. Press **Enter** again or click **Save** to commit all confirmed changes.



**Important:** Salesforce does not save confirmed changes to field values until you commit them by pressing the **Enter** key a second time or clicking **Save**. Navigating away from the page without committing changes cancels all edits made to the record.

Note the following:

- If you have made changes to a record but have not yet saved it, you can undo individual changes without losing the rest of your changes on the page. To undo a single edit, click the undo icon (↶) to the right of the desired field's changed value. This reverts the field back to its previous value.
- You can use inline editing to change the values of fields on records for which you have read-only access, either via field-level security or your organization's sharing model; however, Salesforce does not let you save your changes, and displays an insufficient privileges error message when you try to save the record.
- Pressing **Enter** while your cursor is in a field's edit box confirms the change for that field only. Pressing **Enter** when no fields are in edit mode saves all edits made to the record.
- Pressing **Esc** while your cursor is in a field's edit box reverts the change for that field only.
- Inline editing is available on detail pages for all fields that are editable on edit pages, with the exception of some fields on tasks, events, opportunities, pricebooks, and documents. Inline editing is not supported in the console or Customer Portal.
- Inline editing is disabled on record detail pages if an administrator overrides the **Edit** button for that object with an s-control or a Visualforce page. For information on overriding buttons with s-controls, see "Overriding Standard Buttons and Tab Home Pages" in the Salesforce online help. For information on Visualforce pages, see [What is Visualforce?](#) on page 23.
- Removing the **Edit** button from a page layout does not prevent users from modifying the record using inline editing. To prevent users from editing data altogether, administrators should use any combination of sharing rules, field-level security, page layout field properties, validation rules, profile permissions, s-controls or Visualforce pages.
- Inline editing is unavailable for users with accessibility mode enabled.
- You cannot use inline editing on setup pages.
- Solution descriptions cannot be modified using inline editing if HTML solutions are enabled.

## Tagging

Available in: **All Editions**

Tagging is now available with Winter '08, allowing users to describe and organize their data in a personalized way by associating words or short phrases with Salesforce records. Tags allow users to group records from various objects by a common topic or use, and then search on those tags to make finding information fast and intuitive.

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

### Implementation Tips

- Administrators can enable tags on accounts, activities, assets, campaigns, cases, contacts, contracts, documents, events, leads, notes, opportunities, reports, solutions, tasks, and any custom objects.
- Tags are private for every user. That is, any tag that a user adds to a record can only be viewed by that user.
- A user is limited to a maximum of 500 unique tags, and 5,000 instances of tags applied to records. Across all users, an organization is limited to 5,000,000 instances of tags applied to records.

- Once you have enabled tags for your organization, add the View Personal Tags component to your users' sidebar by clicking **Setup ► Customize ► Home ► Home Page Layouts** and editing the appropriate home page layouts.
- If you want the View Personal Tags component to appear on all pages and not just the Home tab, click **Setup ► Customize ► User Interface**, and select `Show Custom Sidebar Components on All Pages`.

### Best Practices

- Tags can only contain alphanumeric characters, spaces, dashes, and underscores, and must contain at least one letter or number.
- As you enter new tags, up to ten tags that have already been defined are displayed as auto-complete suggestions. As you type, the list of suggestions changes to show only those tags that match the prefix you have entered. To choose one of the suggestions, click on it or press the Tab key.
- You can view a list of records that have a particular tag by clicking the tag in any detail page, the View Personal Tags sidebar component, or in the Personal Tags page. The list of matching records appears on the Personal Tags page, organized by object. You can narrow your results further by clicking additional tags.
- If you remove the last instance of a tag from a record, the tag is deleted completely from the Personal Tags page. If other records use the tag, the tag still appears in the Personal Tags page.
- If you have multiple tags that are similar (for example, "biking", "cycling", and "bicycle"), you can consolidate them in the Personal Tags area by selecting them, clicking **Rename Personal Tags**, and then entering a new tag name. All instances of each selected tag are changed to the value you specified.

## Setting Up and Using Tags

### About Tagging

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

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

Administrators can enable tags for accounts, activities, assets, campaigns, cases, contacts, contracts, documents, events, leads, notes, opportunities, reports, solutions, tasks, and any custom objects ("except relationship group members" in the Salesforce online help), which allows users to:

- Add tags to any record the user can view, either by creating a new tag with free-form text entry, or by selecting from tags the user has already created
- Remove tags from a record
- View tags on an individual record

See [Tagging Records](#) on page 33 for information.

Once tags are assigned to records, users can:

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

See [Browsing, Searching, and Managing Tags](#) on page 34 for information.

Tags are private for every user. That is, any tag that a user adds to a record can only be viewed by that user. A user is limited to a maximum of 500 unique tags, and 5,000 instances of tags applied to records. Across all users, an organization is limited to 5,000,000 instances of tags applied to records.

## Enabling Tags

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

To change your organization's tag settings:

1. Click **Setup** ► **Customize** ► **Tags**.
2. Select **Enable Personal Tags** if you want to allow users to add personal tags to records. Deselect this option if you want to disable tagging.
3. If you are enabling tags, specify which objects and page layouts should display a tag section. The tag section is the only way that a user can add tags to a record.

For example, if you only select one or more account page layouts, users in your organization can only tag account records.



### Note:

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

4. Click **Save**.

### Adding the View Personal Tags Component to the Sidebar

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

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



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

## Tagging Records

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

To tag a record:

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

As you enter new tags, up to ten tags that have already been defined are displayed as auto-complete suggestions. As you type, the list of suggestions changes to show only those tags that match the prefix you have entered. To choose one of the suggestions, click on it or press the Tab key.

3. Click **Save**.

To remove a tag from a record:

1. On the record detail page, click **Edit Personal Tags** in the Personal Tags area just under the colored title bar.
2. In the Personal Tags text box, delete the tag that you want to remove from the record.
3. Click **Save**.

If the tag that you removed is the last instance of the tag, the tag is deleted completely. If other records use the tag, the tag still appears in the Personal Tags page.

A user is limited to a maximum of 500 unique tags. If you attempt to tag a record with a new tag that exceeds this limit, the tag is not saved. You can delete tags from the Personal Tags page. See [Browsing, Searching, and Managing Tags](#) on page 34.

## Browsing, Searching, and Managing Tags

You can browse, search, and manage tags in the Personal Tags page. To access this page, click **View Personal Tags** in the sidebar, or click the name of any tag on a detail page.

The Personal Tags page displays a list of all tags that you have defined in your organization. Each tag includes a number in parentheses that indicates how many records are associated with that tag. Because tags are private, you can only see the tags that you have defined; you cannot see the tags of other users.



**Note:** The number of records associated with a tag can sometimes be greater than the number of records displayed when you click that tag in the Personal Tags page. This situation occurs if you tagged a record and then lost permission to view it because of a change in permissions.

### Finding Records with Tags

You can view a list of records that have a particular tag by clicking the tag. The list of records appears below the tag browsing area, organized by object. You can narrow your results further by clicking additional tags. Click **Clear Selected Tag(s)** to deselect all tags and start over.

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

### Browsing Tags

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

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

### Searching Tags

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

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

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

## Managing Tags

The Personal Tags page also allows you to rename and delete your tags.

To rename one or more tags:

1. Click **Rename Personal Tags**.
2. Select one or more tags in the tag browsing area that you want to rename. If you already had tags selected before clicking **Rename Personal Tags**, the tags are prepopulated in the Rename Personal Tags area. You can deselect a tag by clicking it again, or by clicking **Clear**.
3. Enter a new name for the tag in the `New Tag Name` text box.
4. Click **Save**. If you are renaming more than one tag, confirm the change by clicking **OK** in the dialog that appears. All instances of each selected tag are changed to the value you specified.
5. Click **Hide** to hide the Rename Personal Tags area.

To delete one or more tags:

1. Click **Delete Personal Tags**.
2. Select the tags in the tag browsing area that you want to delete. If you already had tags selected before clicking **Delete Personal Tags**, the tags are prepopulated in the Delete Personal Tags area. You can deselect a tag by clicking it again, or click **Clear** to deselect all selected tags at once.
3. Click **Delete**. All selected tags are removed from every record in your organization and are placed in the Recycle Bin.
4. Click **Hide** to hide the Delete Personal Tags area.

## Using the View Personal Tags Sidebar Component

The View Personal Tags drop-down list, available in the sidebar, allows you to browse tags and access your most recently used tags:

- Select **View All Personal Tags** to browse, search, and manage your entire tag collection.
- Select an individual tag to view all records that have been marked with that tag. The tags that appear in the **View Personal Tags** drop-down list are those you have most recently used to tag records.

## Mobile Administration Console

Available in: **Unlimited** Edition

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

Salesforce Mobile allows users to access their Salesforce data from mobile devices running the mobile client application. With Winter '08, administration of Salesforce Mobile is now even easier. You can use the Mobile Administration Console within the Salesforce setup pages to manage the full life-cycle of your mobile deployment, including configuration, customization, and installation. This solution lets you maintain devices on different platforms and make changes to mobile configurations completely over-the-air.

## Implementation Tips

- Current mobile customers should contact salesforce.com to find out how to migrate from the legacy Apex Mobile console to the new Mobile Administration Console.
- For organizations using Unlimited Edition, salesforce.com provides one mobile license for each Salesforce license. Organizations using Professional or Enterprise Editions must purchase mobile licenses separately.
- The mobile version of Salesforce requires some additional setup in order to define what data is sent to users' devices. See "Defining Data Sets" in the Salesforce online help.
- You can mobilize accounts, contacts, opportunities, leads, tasks, events, price books, products, cases, solutions, and custom objects. You cannot mobilize s-controls, formula fields, merge fields, or custom links.
- User permissions are inherited from Salesforce.
- The mobile application uses the default page layouts set up in Salesforce. You can exclude fields from the mobile data set to make pages easier to navigate and reduce the amount of data sent to users' devices. See "Customizing Mobile Page Layouts" in the Salesforce online help.
- Each user can have only one assigned mobile device in Salesforce. See "Managing Mobile Devices" in the Salesforce online help.
- After you complete the mobile setup, users must download and install the Salesforce Mobile client application on their devices.
- The mobile application can run on BlackBerry, Palm, and Windows Mobile operating systems. For a list of the supported devices on each platform, see "Salesforce Mobile Supported Devices" in the Salesforce online help.
- Administrators deploying to BlackBerry users must consider several technical factors, including the corporate network infrastructure, device model and memory requirements, and hosted server restrictions. For detailed information, see the *Salesforce Mobile Implementation Guide*.

## Best Practices

- Define the mobile objectives of your users so that you do not mobilize unnecessary data. Some users might only need access to cases and solutions, while others might need access to contacts and opportunities.
- For ease of administration, we recommend that you use assign mobile configurations to profiles; however, you may have situations in which you need to assign a configuration directly to individual users.
- To reduce the amount of data delivered to users' devices, limit the scope of your mobile configurations. When possible, set the filtering option to **Search Only** so that users can search and download the records they want without automatically receiving records on the device.
- After setting up the Mobile Administration Console, deploy the mobile application on a limited basis with a select group of users. Adjust the mobile setup based on their feedback, and then deploy to all of your users.

# About the Mobile Administration Console

## Administration Overview

To deploy Salesforce Mobile to your organization, first create one or more mobile configurations. Mobile configurations are sets of parameters that determine the data Salesforce transmits to users' mobile devices, and which users receive that data on their mobile devices. Organizations can create multiple mobile configurations to simultaneously suit the needs of different types of mobile users. For example, one mobile configuration might send leads and opportunities to the sales division, while another mobile configuration sends cases to customer support representatives.

After you add users to a mobile configuration, send them a mass email with a link to install the correct mobile client application on their mobile devices. After installing the client application, users can use the client interface to easily register their devices with Salesforce. Administrators can view information about registered devices and manage mobile users. For more information, see "Managing Mobile Devices" in the Salesforce online help.

## Managing Mobile Configurations

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

To manage your Salesforce Mobile configurations, click **Setup ► Mobile Administration ► Mobile Configurations**.

- To define a mobile configuration, click **New Mobile Configuration**. See "Creating Mobile Configurations" in the Salesforce online help.
- To define data sets for a mobile configuration, click the name of the mobile configuration, then click **Edit** in the Data Sets related list. See "Defining Data Sets" in the Salesforce online help.
- To exclude fields from the mobile page layouts for a mobile configuration, click the name of the mobile configuration, then click **Edit** next to an object name in the Fields Excluded Per Object related list. See "Customizing Mobile Page Layouts" in the Salesforce online help.
- To make changes to a mobile configuration, click **Edit**.
- To delete a mobile configuration, click **Del**.
- To view details about a mobile configuration, click its name.
- To clone a mobile configuration, select the mobile configuration you want to clone and click **Clone**.
- To activate a mobile configuration, click **Edit** next to the mobile configuration you want to activate, select **Active**, and click **Save**. Deselect **Active** to deactivate the mobile configuration.

## Creating Mobile Configurations

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

To create a mobile configuration:

1. Enable Users for Salesforce Mobile
2. Enter Basic Information
3. Assign Users and Profiles
4. Set Total Data Size Limit
5. Complete Your Mobile Configuration

### Enable Users for Salesforce Mobile

Before creating your mobile configurations, plan which profiles and users you want to assign to each configuration. Each mobile configuration only affects the mobile devices of users assigned to it. Users who are not assigned to a mobile configuration cannot access Salesforce from a mobile device.

You can assign individual users and profiles to each mobile configuration. If you assign a profile to a mobile configuration, the mobile configuration applies to all Salesforce Mobile users with that profile unless a specific user is assigned to another mobile configuration.





**Tip:** For ease of administration, we recommend that you use assign mobile configurations to profiles; however, you may have situations in which you need to assign a configuration directly to individual users.

For each user you want to assign to a mobile configuration:

1. Edit the user's record. For information, see "Editing Users" in the Salesforce online help.
2. Select the **Mobile User** checkbox. Users must have this checkbox selected to use Salesforce on a mobile device. This checkbox is enabled by default for Unlimited Edition users. To prevent users from activating Salesforce on their mobile devices before you are ready to deploy mobile in your organization, disable the checkbox for all your users.

If you deselect this checkbox for a user who is already assigned to a mobile configuration, Salesforce removes that user from the mobile configuration. For information on the **Mobile User** checkbox, see "User Fields" in the Salesforce online help.

### Enter Basic Information

1. Click **Setup ► Mobile Administration ► Mobile Configurations** to access the mobile configurations list page.
2. Click **New Mobile Configuration**.
3. Enter a name for the mobile configuration.
4. Select the **Active** checkbox if you want to activate the mobile configuration immediately after creating it. The mobile configuration does not work until you select this checkbox.

If you deactivate an active mobile configuration, Salesforce saves all requests from devices of the users assigned to the mobile configuration for up to one week. If you reactivate the mobile configuration, Salesforce executes those requests in the order received.

5. Optionally, enter a description for the mobile configuration.

### Assign Users and Profiles

To assign users and profiles to a mobile configuration:

1. In the Search drop-down list, select the type of member to add: users or profiles. This drop-down list is not available if you have not enabled the **Mobile User** checkbox on any user records, or if all users are already assigned to a mobile configuration; in that case, you can only assign profiles to this mobile configuration.
2. If you do not immediately see the member you want to add, enter keywords in the search box and click **Find**.
3. Select users and profiles from the Available Members box, and click the **Add** arrow to add them to the mobile configuration.

You can assign each user and profile to only one mobile configuration. Once you assign a user or profile to a mobile configuration, the Available Members boxes in other mobile configurations do not list that user.

The Available Members box only displays users who have the **Mobile User** checkbox enabled. For information on this checkbox, see "User Fields" in the Salesforce online help.

4. If there are users or profiles in the Assigned Members box you do not want to assign to this mobile configuration, select those users and click the **Remove** arrow.



**Caution:** Removing a user from an active mobile configuration deletes the Salesforce-related data on the user's mobile device but does not delete the client application.

### Set Total Data Size Limit

Different types of mobile devices offer different memory capacities, and some devices experience serious problems if all of the flash memory is used. To avoid overloading mobile devices, optionally specify a total data size limit for each mobile configuration.



The total data size limit prevents Salesforce from sending too much data to the mobile devices of users assigned to the mobile configuration.

To set the total data size limit, use the `Don't sync if data size exceeds` drop-down list to specify the amount of memory that is consistently available on the mobile devices of users who are assigned to this mobile configuration. If the combined size of all the data sets exceeds this limit, users assigned to this profile receive an error message on their mobile devices, and Salesforce will not synchronize any data sets in this mobile configuration. Test your mobile configuration to make sure the data sets do not exceed the total data size limit.



**Tip:** To reduce the size of your data, do one or more of the following:

- Delete a data set.
- Reduce the scope of your data sets.
- Refine the filter criteria of your data sets.

## Complete Your Mobile Configuration

Click **Save** when you are done. Note that your mobile configuration is not active until you select the `Active` checkbox.

Next, define the data sets for this mobile configuration to determine the data that members of the mobile configuration receive on their mobile devices and test the configuration to verify that the data size limit for a user's device will not be exceeded.

After creating mobile configurations and defining the data sets, send a mass email to mobile users explaining how to register their mobile devices. The registration process creates device records in Salesforce, which allows you to manage your organization's mobile devices.

## Defining Data Sets

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

Accessing Salesforce from a mobile device is very different than accessing it from your computer. This is because mobile devices generally have less memory and screen size than computers, and do not maintain a constant network connection. To work with these limitations, each Salesforce mobile configuration only transfers data sets, which are subsets of the records users access in the Salesforce online user interface. Mobile devices store data sets in on-board databases, allowing users to access their most important records and work offline when no network connection is available. Salesforce automatically synchronizes the on-board databases when the mobile device reestablishes a network connection.

Each data set can contain records related to a single object, and is classified by the name of that object. For example, the Accounts data set only includes account records.

Data sets can have child data sets, which are data sets that contain records associated with a top-level (parent) data set. For example, if the first level of your hierarchy has an Accounts data set, you can add a Contacts child data set that includes all contact records related to the account records. Child data sets appear as related lists on mobile devices.

A single mobile configuration can have multiple data sets for the same object, and at different levels. For example, you can have an Events parent data set and an Events child data set under Leads.

After creating a mobile configuration, you must define its data sets. To access the data sets for a mobile configuration:

1. Click **Setup** ► **Mobile Administration** ► **Mobile Configurations**, and click the name of the mobile configuration you want to modify.
2. In the Data Sets related list, click **Edit**.

3. From the Data Sets page, you can:

- Add a data set.
- Remove a data set by selecting the data set you want to remove and clicking **Remove**.
- Edit a data set by selecting the data set you want to edit in the hierarchy. The right pane displays the filters for that data set.
- Test your mobile configuration.

As you define and modify the data sets, Salesforce automatically saves your changes.

4. Click **Done** when you are finished.

### Adding Data Sets

To add a data set:

1. In the hierarchy, select **Data Sets** to create a parent data set, or select an existing data set to create a child data set.
2. Click **Add....**
3. In the popup window, select the object for the records you want the data set to include. Salesforce lets you create parent data sets for all custom objects and the following standard objects:
  - Accounts
  - Cases
  - Contacts
  - Events
  - Leads
  - Opportunities
  - Products
  - Solutions
  - Tasks

For child data sets, the popup window only lists objects that relate to the selected parent data set.



**Note:** Salesforce automatically transfers parent records of objects if that type of parent record is anywhere in the data set, even if the parent object is not connected to the child object in the hierarchy.

4. Click **OK**. The data set you created appears in the hierarchy.
5. Optionally, use filters to restrict the records that a parent or child data set includes:
  - a. Use the Filter by Record Ownership options to configure Salesforce to automatically synchronize records based on the owner of the record. The possible options are:
    - **All Records:** Salesforce automatically synchronizes all records the user can access.
    - **User's Records:** Salesforce automatically synchronizes all records the user owns.
    - **User's Team's Records:** Salesforce automatically synchronizes all records owned by the user and the user's subordinates in the role hierarchy.
    - **User's Account Team's Records:** Salesforce automatically synchronizes all records owned by the other members of the user's account team, but does not include the user's records.
    - **User's Sales Team's Records:** Salesforce automatically synchronizes all records owned by the other members of the user's sales team, but does not include the user's records.
    - **None (Search Only):** Salesforce does not automatically synchronize any records for this data set; however, users can use their mobile devices to search all of the records they can access.

Salesforce only displays options that relate to the selected data set. For example, selecting an account data set displays the **User's Account Team's Records** option, while selecting an opportunity data set displays the **User's Sales Team's Records** option.

- b. Set the filter criteria to automatically synchronize only records that meet specific criteria in addition to the Filter by Record Ownership option you selected. For example, you can set the filter to only include opportunity records with amounts greater than \$50,000, or contact records with the title "Buyer." Click **Advanced Options** to change the default AND relationship between each filter. For tips on entering advanced filter conditions, see "Working with Advanced Filter Conditions" in the Salesforce online help.

If you selected the **None (Search Only)** Filter by Record Ownership option, the filter criteria you select does not apply because no records are automatically synchronized.

- c. To prevent a single data set from consuming all the memory on a mobile device, select the second radio button under **Set Max Record Limit** and enter the maximum number of records this data set 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.

If the limit is reached, Salesforce updates the records currently on the mobile device approximately every 20 minutes, and replaces the records approximately every 24 hours in accordance with the **Order By** and **Sort** settings. For example, if the settings are **Last Modified Date** and **Descending**, Salesforce transfers the most recently modified records to mobile devices and removes the same number of records that were least recently modified.

If you selected the **None (Search Only)** Filter by Record Ownership option, the limit you set does not apply because no records are automatically synchronized.



**Tip:** Do not use **Set Max Record Limit** in place of filters. Only use **Set Max Record Limit** as a safety mechanism, and use filters as the primary means of limiting the number of records on a mobile device. This ensures that your mobile users receive the correct records on their devices.

6. Be sure to test your mobile configuration to make sure the data does not exceed the total data size limit.
7. Click **Done** when you are finished.
8. After creating mobile configurations and defining the data sets, send a mass email to mobile users explaining how to register their mobile devices. The registration process creates device records in Salesforce, which allows you to manage your organization's mobile devices.



**Tip:** You can specify which fields the mobile client application displays. For more information, see "Customizing Mobile Page Layouts" in the Salesforce online help.

## Customizing Mobile Page Layouts

User Permissions Needed	
To view mobile configurations:	"View Setup and Configuration"
To exclude fields from mobile page layouts:	"Manage Mobile Configurations"

The mobile client application inherits the user's page layouts from Salesforce. Administrators may want to exclude some fields from each object's mobile page layout because unnecessary fields consume memory and make it harder for users to scroll through pages on the mobile device.

Mobile page layouts are set up per mobile configuration. To exclude fields from the mobile page layout for a mobile configuration:

1. Click **Setup** ► **Mobile Administration** ► **Mobile Configurations**.
2. Click the name of the mobile configuration you want to modify.

3. In the Fields Excluded Per Object related list, click **Edit** next to an object name.

Only objects you mobilized in the configuration's data set appear in the related list.

4. Select which fields to display on the mobile device for this object. To add or remove fields, select a field name, and click the **Add** or **Remove** arrow.
  - Mobile administrators can view all available fields per object, regardless of field-level security.
  - Certain fields are required in order for the mobile client application to communicate with Salesforce. Those fields do not display in the Available Fields box because they are mandatory and cannot be excluded from mobile page layouts.
5. Click **Save** when finished.

## Testing Mobile Configurations

User Permissions Needed	
To view mobile data sets:	"View Setup and Configuration"
To test mobile configurations:	"Manage Mobile Configurations"

When you create a mobile configuration, you specify a total data size limit for the configuration. The total data size limit prevents Salesforce from sending too much data to the mobile devices of users assigned to the mobile configuration. After defining the data sets, it is important to test the mobile configuration to make sure the total data size limit is not exceeded.

To estimate the size of the data set that the mobile configuration will deliver to a user's device:

1. Click **Setup ► Mobile Administration ► Mobile Configurations**, and click the name of the mobile configuration you want to test.
2. In the Data Sets related list, click **Edit**.
3. In the Test Data Size section, click the lookup icon next to the `Select a user` field to choose the user you want to test. While users must be mobile-enabled in order to assign them to mobile configurations, you can test the configuration's data size against any user account.

The `Select a user` field defaults to the name of the user currently logged in; however, it is important to test a mobile configuration with the accounts of users who will actually be assigned to the configuration, particularly users who own a large number of records.

4. Click **Estimate Data Size**.

The size of each data set is calculated. Results display in the hierarchy, which is the left pane of the data set region at the top of the page. Additional results appears in the Test Data Size section below the hierarchy.

- In the hierarchy, two numbers appear next to each data set. The first represents the number of records generated by the data set, and the second represents the total size of the data set. This breakdown is useful for identifying which data sets might require additional filtering criteria to reduce the size.
- The Test Data Size section provides an estimate of the total data that would be delivered to the selected user's device with the current mobile configuration. Separate totals are listed for each mobilized object. The results also include the number of marked records associated with the user's account. A marked record is a record that is not part of a user's mobile configuration; the user downloaded the record to his or her device through an online search, and the record was flagged so that it gets sent to the user's device every time the device synchronizes with Salesforce.
- Reports are not included in the data size estimate.
- The data size estimate does not include metadata, which consists of page layout and schema information. The actual size of the data delivered to the device will be slightly larger than the estimate, but the metadata does not count toward the data size limit.

5. Compare the test results to the total data size limit that was set for the configuration; the limit is located in the top of the Test Data Size section. Click the size limit to increase or decrease the value on the Edit Mobile Configuration page.
  - If the total data size is below the limit, the selected user can safely be assigned to the mobile configuration. However, keep in mind that the test results are an estimate because different devices have different storage algorithms.
  - If the total data size exceeds the limit, reduce the size of the data by reducing the scope of your data set, refining the filter criteria of your data sets, deleting a data set, or removing fields from the page layout. Repeat the testing process until the data is below the total limit. For instructions, see "Adding Data Sets" in the Salesforce online help and "Customizing Page Layouts" in the Salesforce online help.



**Note:** The data size estimate in the Test Data Size section does not automatically refresh if you edit the data sets. Click **Refresh Data Size** to update the test results.

## Sending Emails to Mobile Users

After creating mobile configurations and defining data sets, mobile-enabled users in your organization can download the Salesforce Mobile client application to their devices and begin using Salesforce wirelessly. The most effective way to notify users about the availability of the mobile application and provide installation instructions is by sending mass email. Here is a brief description of the steps:

1. Create an email template informing users about the initial installation. Optionally, create a separate email template for upgrade notifications. In both templates, be sure to include the URL that launches the download: <http://mobile.salesforce.com/setup>. The link is the same for the initial download and for subsequent upgrades. Users can click the link in the email on their device, or they can open their phone's Web browser and navigate to the URL. For more information about email templates, see "Managing Email Templates" in the Salesforce online help.
2. Create a custom view on the Mass Email page showing only mobile users.
3. Send mass email to your mobile users using the custom view that you created.



**Important:** It is essential for the success of your mobile deployment to set up the email templates and email your mobile users. If you skip this step, users will not know about the mobile product and therefore will not be able to use it.

## Managing Mobile Devices

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

After you assign users to mobile configurations, they can download and install the Salesforce Mobile client application on their wireless devices. When a user logs in to the mobile application the first time, Salesforce collects the device information and associates the device with his or her user record. The device information is read only. While the device entry is created automatically, you can still view and manage all the mobile users and devices in your organization by clicking **Setup ► Mobile Administration ► Mobile Users and Devices**.

From the All Mobile Users and Devices page:

- You can view the list of users in your organization who have been enabled to use Salesforce Mobile.

- You can create custom list views to see different subsets of your mobile users (see "Creating Custom List Views" in the Salesforce online help). For example, create a view that shows the mobile users who have never logged in to Salesforce from their devices to evaluate your organization's mobile deployment efforts.
- To view details about a mobile device, click the device address. See "Viewing Mobile Device Information" in the Salesforce online help to find out more about device details.
- To view details about a specific user, click the username.
- To view details about a mobile configuration, click the mobile configuration name.
- The buttons on the All Mobile Users and Devices page let you perform actions on multiple mobile users at one time. You can adjust the mobile session timeout value and erase the Salesforce data from users' devices.
- You cannot delete a device from the All Mobile Users and Devices page. A device is removed from a user's record only when it is activated by another Salesforce user.



**Note:** You can also manage mobile users from the Assigned Mobile Devices related list on the user detail page.

## Viewing Mobile Device Information

Salesforce collects information about a mobile user's device the first time the user logs in to the mobile application. There are two ways to access the device details:

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

From the Mobile Device page, you can review device information, adjust the mobile session timeout value, and erase the Salesforce data from users' devices. Below is a description of the fields in alphabetical order that are stored for each mobile device in your organization.

Field	Description
Brand	The brand of the mobile device, if available.
Carrier	The name of the carrier providing service for the mobile device, if available.
Connected Since	The date and time the device established a connection to the mobile server. The device loses a connection when the battery dies or when the session is closed because the server has not received data from the device for a long period of time.
Connection Status	The state of the device connection. Possible values for this field are Connected, Not Connected, and Not Available.
Created By	The name of the first user who registered the mobile device and the time and date the registration occurred.
Device Address	The unique PIN of the user's mobile device.
Device Model	The model of the mobile device.
Salesforce Mobile Version	The version number and build number of the mobile client application installed on the device.
Is Simulator?	A flag indicating whether the device is a simulator or a mobile device. A simulator is a software application that emulates the behavior of a mobile device.

Field	Description
Last Activated	The last time a full data set was downloaded to the mobile device. If a user's data set exceeds the limit defined in the assigned mobile configuration, the device can be registered but not activated.
Last Data Received	The last time data was received from the device. This information is helpful for troubleshooting connection issues.
Last Registration	The last time a user registered the mobile device. The registration process creates the device record in Salesforce and associates it with the user who registered it.
Manufacturer	The manufacturer of the mobile device.
Modified By	The name of the last user who registered the mobile device and the time and date the registration occurred.
Number of Incoming Messages	The number of messages queued on the device waiting to be sent to the mobile server. Because the server processes messages almost instantaneously, this value is usually 0.
Number of Outgoing Messages	The number of messages queued on the mobile server waiting to be sent to the device.
Operating System	The name and version number of the operating system installed on the mobile device.
Phone Number	The phone number associated with the mobile device.
Size of Incoming Messages (Bytes)	The total data size of the messages queued on the device waiting to be sent to the mobile server. Because the server processes messages almost instantaneously, this value is usually 0.
Size of Outgoing Messages (Bytes)	The total data size of the outbound message queue on the mobile server.
Username	The Salesforce username of the user who is associated with the mobile device.

## Setting Mobile Session Timeout Values

User Permissions Needed	
To set mobile session timeout values:	"Manage Mobile Configurations"

For security reasons, the mobile client application is set to lock out users after ten minutes of inactivity. Administrators can adjust or disable this setting on a device-by-device basis. You might disable the timeout setting if the mobile device's operating system has its own locking mechanism.

To change the mobile session timeout value:

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



- Click **Setup** ► **Manage Users** ► **Users**. Click **Edit** next to a user's name, and then click the device address in the Assigned Mobile Devices related list.
2. Click **Set Mobile Session Timeout**.
  3. Choose the new timeout value in minutes. You also have the option to choose **Never Expire** if users should not be locked out of the mobile application.
  4. Click **Save**.

Salesforce attempts to send a message containing the new session timeout setting to the selected mobile devices.

5. A confirmation page summarizes the results for each mobile device you selected. See "Mobile Session Timeout Results" in the Salesforce online help.

### Mobile Session Timeout Results

After Salesforce sends the new session timeout session to the selected mobile devices, a results page provides information about the status of each message. The table below describes the three possible outcomes:

Result	Description
Message successfully queued	The mobile server has sent the message to the device. Salesforce cannot detect if the message was received by the device.
Unable to send message	A temporary communication problem between Salesforce and the mobile server prevented the message from being sent. Try again later.
No device to send message to	The selected mobile user never registered a device, so therefore the message could not be sent.

## Erasing Mobile Data

User Permissions Needed	
To delete the mobile data on a device:	"Manage Mobile Configurations"

A mobile device activated by a Salesforce user contains both the mobile client application and a set of the user's Salesforce data. An administrator can remove the data from a device without uninstalling the mobile application. This is an effective security tool when a user misplaces his or her device. You also must erase a device's data if you plan to give it to another user.

To erase the Salesforce data on one or more mobile devices:

1. Navigate to the Mobile Devices and Users page or the Mobile Devices page:
  - Click **Setup** ► **Mobile Administration** ► **Mobile Users and Devices**. From the list view, you can select multiple devices at one time.
  - Click **Setup** ► **Manage Users** ► **Users**. Click **Edit** next to a user's name, and then click the device address in the Assigned Mobile Devices related list.
2. Click **Erase Data**, and then click **OK**.

Salesforce attempts to send a message to the mobile devices to erase the data.



## Erase Data Results

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

Result	Description
Message successfully queued	The mobile server has sent the message to the device. Salesforce cannot detect if the message was received by the device.
Unable to send message	A temporary communication problem between Salesforce and the mobile server prevented the message from being sent. Try again later.
No device to send message to	The selected mobile user never registered a device, so therefore the message could not be sent.

## Apex

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

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

With Winter '08, Apex is now available as an add-on for Enterprise Edition. Apex also includes the following enhancements in Winter '08:

### Additions to Classes

*Enums*, which are a typed list of values, are now available as a type of class in Apex. You can specify it as an outer class.

You can now specify an interface as an outer class.

### Approval Processes

You can programmatically initiate and manage approval processes using the following method and classes:

- `Process` method
- `ProcessRequest` class
- `ProcessResult` class
- `ProcessSubmitRequest` class
- `ProcessWorkitemRequest` class

### Database Methods for Partial DML Operations

Prior to Winter '08, all DML operations, such as `insert` or `update`, were only available as special statements in Apex. In addition, there was no method for executing a partial DML operation. If a single record failed, the entire operation failed.

Now, all DML operations can be executed using the `Database.<dmlOperation>()` system method form. Executing DML operations with their system method form corresponds more closely to the way DML statements are executed by the Force.com Web Services API.

The DML operations executed with their system method form accept a single parameter named `allOrNothing`. If you specify `false` for this parameter and a record fails, the remainder of the DML

operation can still succeed. In addition, the system method returns more information about the operation, such as which records were inserted, which were updated, and so on.

### Email

You can now send email using the `sendEmail` method. You can also use the Apex Email Service to process inbound email with an Apex class.

The Apex Email Service is available in Developer Preview only.

### Embedded System Methods

Prior to Winter '08, you could call embedded system methods, for example, `System.System.Exception`. As of Winter '08, embedded system method calls generate an error when you try to save an Apex script. For the example above, use `System.Exception` instead.

### Enhanced Debugging

In addition to information about Apex script errors and the resources used by an Apex script, the debug log now contains information about:

- Workflow rules
- Validation rules
- Assignment rules
- Escalation rules
- Auto-response rules
- Approval processes

### Exception Syntax Change

Prior to Winter '08, all system exceptions had to be qualified with the `system` prefix. For example:

```
try {  
    // your code here  
} catch (system.QueryException e) {  
    // your code here  
}
```

In Winter '08, the `system` prefix is no longer required for exceptions. For example:

```
try {  
    // your code here  
} catch (QueryException e) {  
    // your code here  
}
```

### Governor Limits by Namespace

Prior to Winter '08, all governor limits applied to your entire organization, including any managed packages. In Winter '08, governor limits are specific to a namespace. For example, an app that is in a managed package that you have installed from the AppExchange has access to 20 DML statements while executing, and any Apex script that is native to your organization also has access to 20 DML statements.

### HTTP Request and Response

You can now use Apex to programmatically create HTTP requests like GET, POST, PUT, and so on. You can also use Apex to handle the HTTP response returned by the request.

### New Data Types and Objects

You can now use blob, long, and decimal as data types for Apex.

You can now declare variables as the generic `SObject` type. These variables can be assigned any specific `SObject` type value, such as an Account, Lead, or a custom object.

Apex includes new data types to match the Force.com Web Services API input and result objects, such as the new database methods, the approval processing methods, and the email messaging methods.

### New DML Statements

`Undelete` is a new DML statement.

Top level `SOQL` statements can now use the `ALL ROWS` parameter. Using this parameter effectively queries all rows for both top level and aggregate relationships, including deleted records and archived activities.

### New Methods

The exception class now includes the `setCause` and `getCause` methods.

The database class also now includes the `convertLead` and `undelete` methods.

### Operations That Fire Triggers

The following operations now fire triggers:

- Mass updates to cases, including mass closing of cases
- Mass updates to leads

In addition, validation formulas now run when triggers execute due to a change in record owner.

### System Test Execution

Customer-deployed code can be executed by `salesforce.com` for support and management purposes. `Salesforce.com` will use this ability to verify that future upgrades do not cause regressions.

### XMLStreamReader Class

Methods in the new `XmlStreamReader` class enable you to read an XML document from Apex.

Methods in the new `EncodingUtil` class enable you to encode and decode URL strings, and convert strings to hexadecimal format.

Methods in the new `Crypto` class enable you to create a digest, message authentication code, or a signature to be sent with an authorization header to external services that require encryption, such as Google's AuthSub interface named `gdata`, or Amazon WebServices (AWS).

## Apex Email Service

Available in: <b>Developer Edition</b>
--

Winter '08 delivers unprecedented email capabilities. The Apex email service lets you use Apex classes to process the contents, headers, and attachments of email received by a user-specific email service address. For example, using the Apex email service, a developer can write an Apex class that automatically creates contact records by processing emails with contact information. When an email with contact information is sent to the email service address associated with the Apex class, Salesforce uses the class to process the email and create a new contact.

### Implementation Tips

- The Apex email service is enabled by default for organizations using Developer Edition.
- Developers who are creating Apex classes for processing email must have the "Author Apex" permission.
- Each user is allowed a unique email service domain. The domain is used in the email service addresses to ensure that only authorized users submit email to the email service.
- Users can optionally regenerate their email service domain if an unauthorized person obtains the email service address.

### Best Practices

- Request that your users keep their email service domains confidential.

## About the Apex Email Service

### What is the Apex Email Service?

User Permissions Needed	
To generate Apex email service domains:	"Modify All Data"
To create Apex classes:	"Author Apex"

The Apex email service lets you use Apex classes to process the contents, headers, and attachments of email received by a user-specific email service address. For example, using the Apex email service, a developer can write an Apex class that automatically creates contact records by processing emails with contact information. When an email with contact information is sent to the email service address associated with the Apex class, Salesforce uses the class to process the email and create a new contact.

To get started:

1. Click **Setup** ► **Build** ► **Email Services**, then click **Generate Domain** to generate an Apex email service domain in Salesforce.

An Apex email service domain is a Salesforce email domain that can receive email for processing by Apex. Each user can have one Apex email service domain and can optionally regenerate the Apex email service domain at any time.



**Caution:** If you click **Generate Domain** to regenerate an existing domain, you permanently delete your existing Apex email service domain and replace it with a new one. Email addresses using the old Apex email service domain will be invalidated. You must update the invalid email addresses with the regenerated domain.

2. Click **New Apex Class** to create Apex classes that utilize the `InboundEmail` object.

The Apex Email Service page lists any Apex class that has at least one method with a signature of the format:

```
WebService static Messaging.InboundEmailResult
    your_method_name(Messaging.InboundEmail email)
```



**Note:** Replace `your_method_name` with the name of the method.

For information on the `InboundEmail` object, see "Using the InboundEmail Object" in the Salesforce online help.

3. Click the **Email Address** link next to an existing Apex class on the Apex Email Service page to send an email to the email address for that class. You can also right click the **Email Address** link and copy the email address. When you send email to this address, Salesforce uses the associated Apex class to process the email.

To disable the Apex email service functionality after generating an Apex email service domain, click the **Disable Domain** button. This permanently deletes your current Apex email service domain, and invalidates any email address using that domain. It does not delete any of the Apex classes you have created. If you decide to use the Apex email service again after disabling your Apex email service domain, you must generate a new domain.

## Using the InboundEmail Object

For every email the Apex email service domain receives, Salesforce creates a separate InboundEmail object that contains the contents and attachments of that email. You can write Apex classes that access an InboundEmail object to retrieve the contents, headers, and attachments of inbound email messages, as well as perform many functions.



**Note:** For information on the Apex email service, see "What is the Apex Email Service?" in the Salesforce online help.

### Example

The following is an example of how you can look up a contact based on the inbound email address and create a new task.

```
global class emailExample {

    Webservice static Messaging.InboundEmailResult createTask(Messaging.inboundEmail email){
        // Create an inboundEmailResult object for returning the result of the Apex Email Service
        Messaging.InboundEmailResult result = new Messaging.InboundEmailResult();

        String myPlainText= '';
        // Add the email plain text into the local variable
        myPlainText = email.plainTextBody;

        // New Task object to be created
        Task[] newTask = new Task[0];

        // Try to lookup any contacts based on the email from address
        // If there is more than 1 contact with the same email address,
        // an exception will be thrown and the catch statement will be called.
        try {
            Contact vCon = [Select Id, Name, Email
                            From Contact
                            Where Email = :email.fromAddress
                            Limit 1];

            // Add a new Task to the contact record we just found above.
            newTask.add(new Task(Description = myPlainText,
                                Priority = 'Normal',
                                Status = 'Inbound Email',
                                Subject = email.subject,
                                IsReminderSet = true,
                                ReminderDateTime = System.now()+1,
                                WhoId = vCon.Id));

            // Insert the new Task and it will be created and appended to the contact record.
            insert newTask;

            System.debug('New Task Object: ' + newTask );

        }
        // If there is an exception with the query looking up
        // the contact, this QueryException will be called.
        // and the exception will be written to the Apex debug log.
        catch (QueryException e) {
            System.debug('Query Issue: ' + e);
        }
    }
}
```

```
// Set the result to true. No need to send an email back to the user
// with an error message

    result.success = true;

// Return the result for the Apex Email Service
    return result;

}
}
```

## InboundEmail Object

An InboundEmail object has the following fields.

Name	Type	Description
binaryAttachments	InboundEmail.BinaryAttachment[]	A list of binary attachments received with the email, if any  Examples of binary attachments include image, audio, application, and video files.
ccAddresses	String[]	A list of carbon copy (CC) addresses, if any
fromAddress	String	The email address that appears in the From field
fromName	String	The name that appears in the From field, if any
headers	InboundEmail.Header[]	A list of the RFC 2822 headers in the email, including: <ul style="list-style-type: none"> <li>• Recieved from</li> <li>• Custom headers</li> <li>• Message-ID</li> <li>• Date</li> </ul>
htmlBody	String	The HTML version of the email, if specified by the sender
plainTextBody	String	The plain text version of the email, if specified by the sender
replyTo	String	The email address that appears in the reply-to header  If there is no reply-to header, this field is identical to the fromAddress field.
subject	String	The subject line of the email, if any
textAttachments	InboundEmail.TextAttachment	A list of text attachments received with the email, if any  The text attachments can be any of the following: <ul style="list-style-type: none"> <li>• Attachments with a Multipurpose Internet Mail Extension (MIME) type of text</li> <li>• Attachments with a MIME type of application/octet-stream and a filename that ends with either a .vcf or .vcs extension. These are saved as text/x-vcard and text/calendar MIME types, respectively.</li> </ul>
toAddresses	String[]	The email address that appears in the To field

**InboundEmail.Header Object**

An InboundEmail object stores RFC 2822 email header information in an InboundEmail.Header object with the following fields.

Name	Type	Description
name	String	The name of the header parameter, such as "Date" or "Message-ID"
value	String	The value of the header

**InboundEmail.BinaryAttachment Object**

An InboundEmail object stores binary attachments in an InboundEmail.BinaryAttachment object.

Examples of binary attachments include image, audio, application, and video files.

An InboundEmail.BinaryAttachment object has the following fields.

Name	Type	Description
body	Blob	The body of the attachment
fileName	String	The name of the attached file
mimeTypeSubType	String	The primary and sub MIME-type

**InboundEmail.TextAttachment Object**

An InboundEmail object stores text attachments in an InboundEmail.TextAttachment object.

The text attachments can be any of the following:

- Attachments with a Multipurpose Internet Mail Extension (MIME) type of `text`
- Attachments with a MIME type of `application/octet-stream` and a filename that ends with either a `.vcf` or `.vcs` extension. These are saved as `text/x-vcard` and `text/calendar` MIME types, respectively.

An InboundEmail.TextAttachment object has the following fields.

Name	Type	Description
body	String	The body of the attachment
charset	String	The original character set of the body field. The body is re-encoded as UTF-8 as input to the Apex method
fileName	String	The name of the attached file
mimeTypeSubType	String	The primary and sub MIME-type

**InboundEmailResult Object**

The InboundEmailResult object is used to return the result of the email service. If this object is null, the result is assumed to be successful.

The InboundEmailResult object has the following fields.

Name	Type	Description
success	Boolean	A value that indicates whether the email was successfully processed.  If false, Salesforce rejects the inbound email and sends a reply email to the original sender containing the message specified in the <code>Message</code> field.
message	String	A message that Salesforce returns in the body of a reply email if the <code>Success</code> field is false.  For example, this message could inform the sender that the request could not be processed and provide an explanation.  If the <code>InboundEmailResult</code> object is null or the <code>Success</code> field is true, no message is returned to the sender.

## Force.com Web Services API 11.0

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

The Force.com Web Services API and related toolkits have been improved for Winter '08:

- Developers of AppExchange packages can specify whether or not to restrict the API access of components in the package for greater security. Installers of AppExchange packages can view the API access given to components of a package they are installing, and after installation can modify that access.
- In SOSL you can now set the `LIMIT` clause on individual objects. Setting individual object limits allows you to prevent results from a single object using up the maximum query limit before other objects are returned.
- In SOSL you can now search solutions, products, and documents with other objects in a single query. Prior to this release you could only search those objects separately.
- The `sendEmail` call includes the following new arguments:
  - `documentAttachments`: An array listing the ID of each Document you want to attach to the email. You can attach multiple documents as long as the total size of all attachments does not exceed 10 MB. (For single email messages only.)
  - `fileAttachments`: An array listing the filenames of the binary and text files you want to attach to the email. You can attach multiple files as long as the total size of all attachments does not exceed 10 MB. (For single email messages only.)
  - `senderDisplayName`: The name that appears on the From line of the email. (For single and mass email messages.)

For complete details about Force.com Web Services API 11.0 enhancements, visit the detailed "API 11.0 Release Notes" on the Apex Developer Network at [wiki.apexdevnet.com/index.php/Apex\\_Wiki](http://wiki.apexdevnet.com/index.php/Apex_Wiki).

## Additional Force.com Platform Enhancements

### AppExchange

Based on your feedback, the AppExchange simplifies the process of developing your AppExchange apps in iterations before publishing them. To develop your app in cycles and publish when you are finished, we have moved some steps in the publishing process to the AppExchange directory. For example, you still create a package and upload it from within Salesforce. After the



upload is finished, you will receive a link that you can share privately with installers. To create a test drive, choose a License Management Organization, or register your upload, go to [www.salesforce.com/appexchange/](http://www.salesforce.com/appexchange/).

### Email Relaying Available in Professional Edition

The email relaying feature introduced in Winter '07 for Enterprise, Unlimited, and Developer Edition organizations is now available in Professional Edition as well. For more information on email relaying, see "Setting Up Email Relaying" in the Salesforce online help.

### Email Signature from Salesforce.com Removed

In previous releases, a salesforce.com email signature was automatically included in all email sent by customers from within Salesforce. In Winter '08, this email signature is no longer included unless the email is sent from a trial organization or Developer Edition.

### Expanded Debugging Capabilities

The System Log has been expanded to include debugging info about the following features:

- Validation rules
- Workflow rules
- Assignment rules
- Auto-response rules
- Escalation rules
- Approval processes

For more information, see "Using the System Log Console" in the Salesforce online help.

### Salesforce Mobile for BlackBerry: Related Items Search

BlackBerry users can now quickly search for a record's related items using an option on the menu. To retrieve related items:

1. Open a record, then open the menu and select a related list.
2. If the related list is empty, open the menu and select **Get Related Items**.

The mobile application retrieves any related records from Salesforce and displays the search results on the appropriate tab. For example, if you initiate the search from an account's related contacts list, the results display on the Contacts tab.

3. To download a related item to your device, simply open the item. From the Search Results view, highlight the item and press ENTER or select **Open** from menu.
4. Press the physical BlackBerry back button to return to the search results and download additional related items.

The mobile application cannot automatically download all the related items because a large amount of records could force the device to exceed the total data limit set by your Salesforce administrator.

### Formula Enhancements

#### Related Object Fields in Formulas

When working with formulas, you may want to reference merge fields for related records. For example, you may want to build an opportunity validation rule that uses the value of the `AnnualRevenue` merge field from the account related to the opportunity. Merge fields for related objects are now available when you use formulas for approvals and rules such as:

- Approval process entry criteria (Jump Start Wizard and Standard Setup Wizard)
- Approval step criteria
- Case and lead assignment rules
- Case and lead auto-response rules

- Case escalation rules
- Validation rules
- Workflow rules
- Workflow field updates

**Note:**

- Merge fields are available from objects related through a lookup or master-detail relationship. However, the merge fields for objects related to the related objects are not available. For example, you can reference an opportunity merge field from an opportunity product formula but no account merge fields. In addition, merge fields are not available through a self relationship, an object that has a lookup relationship with itself.
- Custom formula fields for an object can still only reference fields for that object.
- Fields referenced in formulas cannot be deleted. Remove the field from the formula before deleting it.
- You cannot reference merge fields for objects related to activities. For example, merge fields for contacts and accounts are not available from task and event formulas.
- You cannot reference record owner merge fields for any object. For example, the opportunity owner's role merge field is not available from opportunity-related formulas.

**Functions Added - LPAD, RPAD, LOWER, UPPER**

The following new text functions are available for use everywhere formulas are available:

- LPAD: Inserts spaces or characters you specify to the left-side of a text string.
- RPAD: Inserts blank spaces or characters that you specify to the right-side of a text string.
- LOWER: Converts all letters in the specified text string to lowercase. Any characters that are not letters are unaffected by this function.
- UPPER: Converts all letters in the specified text string to uppercase. Any characters that are not letters are unaffected by this function.

**Login IP Range Restrictions**

You can now restrict the login IP range for Professional Edition, Group Edition, and Personal Edition via **Setup ► Security Controls ► Session Settings**. Prior to this release, only those Editions that supported user profiles allowed this restriction. For more information, see "Setting Login Restrictions" in the Salesforce online help.

**Product Name Changes**

The Salesforce client applications have new product names:

- Outlook Edition is now Force.com Connect for Outlook
- Lotus Notes Edition is now Force.com Connect for Lotus Notes
- Office Edition is now Force.com Connect for Office
- Offline Edition is now Force.com Connect Offline

**Restricted Login User**

The number of restricted login users who have logged in during the current month is now available in the Company Information page. For more information, see "Company Information Fields" in the Salesforce online help.

**Roll-Up Summary Fields Expanded to Opportunities**

The custom field type introduced in the Summer '07 release, roll-up summary field, has been extended to include support for a standard relationship: opportunity to opportunity products. This provides easier access to aggregated opportunity information

directly from an opportunity record without running a report. All existing roll-up summary field behavior remains the same. For information on roll-up summary field behavior, see "About Roll-Up Summary Fields" in the Salesforce online help.

## Search Settings Page

You can now modify settings related to Search by clicking **Setup** ► **Customize** ► **Search**. This page includes the following options:

### Enable Object Drop-Down List for Sidebar Search

The object drop-down list for sidebar search allows you to limit users' sidebar searches by object. When you select **Enable Object Drop-Down List for Sidebar Search**, a drop-down list appears in the Search section. From this list users can select to search within a specific object or across all objects.

### Enable "Limit to Items I Own" Sidebar Search Checkbox

The **Limit to Items I Own** checkbox allows your users to include only records for which they are the record owner when entering search queries in the sidebar.



**Note:** The **Limit to Items I Own** checkbox that appears in Advanced Search is always available to users, regardless of this setting.

### Number of Search Results Displayed Per Object

The **Number of Search Results Displayed Per Object** area allows you to configure the number of items that are returned for each object in the Search Results page. The current setting is listed next to each object in parentheses. To make changes, select one or more objects, enter the new number of results per page, and click **Save**. The new value must be between 5 and 50.

## User Records: New Standard Manager Field

The new **Manager** lookup field on user records simplifies creating approval processes that route requests to managers. In previous releases, administrators needed to create a custom field to store the name of the user's manager. Now, user records have a standard **Manager** lookup field that establishes a hierarchical relationship between the user and the user's manager, preventing you from selecting a user that directly or indirectly reports to itself.

The standard **Manager** lookup field appears as an option when you select the approver for approval requests in both the standard and jump start approval process wizards. If your organization already has a custom **Manager** field, that field also appears, but is denoted as a custom field. salesforce.com recommends changing the name of any existing custom **Manager** fields.

## Merge Fields: Contact ID on Users

The **Contact ID** field on users is now available as a merge field. This enables organizations with a Customer Portal to create s-controls that apply filters to portal users' contact IDs. For example, you could build an s-control that finds cases created by portal users:

```
var caseQuery = "Select c.Id, c.LastModifiedDate, c.Priority, c.Status, c.Subject from Case c Where c.ContactId='{!User.ContactId}'";
```

## Workflow Rules and Approval Processes Visible with "View Setup and Configuration" Permission

Users with the "View Setup and Configuration" permission now have read-only access to workflow rule and approval process configurations. In previous releases, only users with the "Customize Application" permission could view workflow rule and approval process configurations.

## Workflow Rules for Mass Actions on Cases

Now, workflow rules are triggered when users select multiple cases from a list view and click **Close**, **Change Owner**, or **Change Status**.

## Specify the Sending Address on Email

If the email address in your email settings is different from the email address on your user record, you can now specify the sending address on email from the **From** drop-down list. To alter email settings that apply to all outbound emails you send from within Salesforce, click **Setup ► Email ► My Email Settings**.

## Zero-Admin Mobile Deployment

In Winter '08, users can easily access their Salesforce data from a mobile device. A default mobile configuration is now provided for Professional, Enterprise, and Unlimited Edition organizations. This allows users with an assigned mobile license to install and activate Salesforce on their mobile device without any administrator assistance. Users who register a device with the default mobile configuration can search for and download native object records to which they have access in Salesforce. To install the mobile client application:

1. Verify that your device can support the mobile client application. See "Salesforce Mobile Supported Devices" in the Salesforce online help.
2. Open the web browser on your mobile device and navigate to <http://mobile.salesforce.com/setup> to display the Web page for the Salesforce Mobile installer.
3. Select the **Click here to download the installer** link and follow the instructions to download the latest version of Salesforce Mobile to your device.
4. After the application downloads, open Salesforce Mobile.
  - On a BlackBerry smartphone, click the Salesforce Mobile icon on the home page of your device or in your Applications folder.
  - On a Windows Mobile 5 Pocket PC, tap **Start ► Programs**, and then tap the Salesforce Mobile icon.
  - On a Palm Treo, tap the **InstallAXM** icon on the device home page.
5. Accept the license agreement, and then enter your Salesforce username and password on the activation page. Select **Activate** to register your mobile device with Salesforce.
6. When the login page appears, enter your password to begin working with your Salesforce data wirelessly.

The default configuration does not automatically deliver any records to your device. Search for the records you want to access with Salesforce Mobile. Contact your administrator to be added to a configuration that better suits your mobile requirements.



**Note:** Administrators cannot view or edit the default configuration. To prevent users from activating Salesforce on their mobile devices before you are ready to deploy mobile in your organization, remove the mobile license from your user accounts by editing the user records and deselecting the **Mobile User** checkbox. For more information, see "User Fields" in the Salesforce online help.

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