Sugar Serve 12.2 Administration Guide

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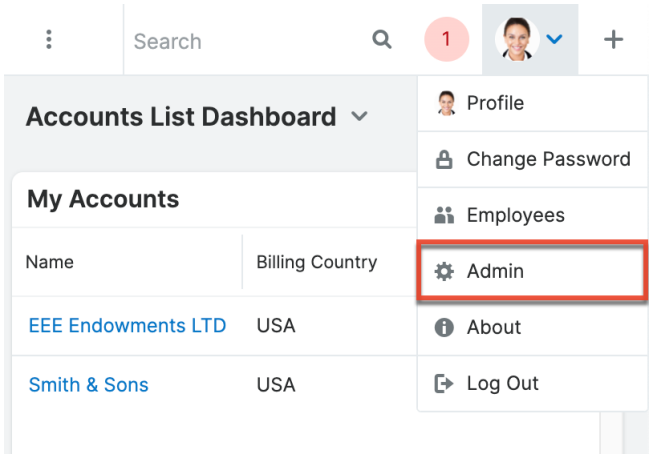
The Sugar Administration Guide helps system administrator users configure and customize their CRM application.

Introduction to Sugar Administration

Overview

The Administration Guide is the CRM admin's guide to configuring and administering their Sugar instance. Admins have access to everything in this guide but regular users with developer-level role access to at least one module can also access certain admin functionality. To understand the difference between an admin user and a regular user with developer-level role access, see the Understanding Admin and Developer Access in Roles article. Also, refer to the Role Management documentation for details on configuring roles in your instance.

The majority of admin functionality in Sugar can be found on the Admin page, accessible by opening the user menu in the top right corner of Sugar and selecting "Admin":



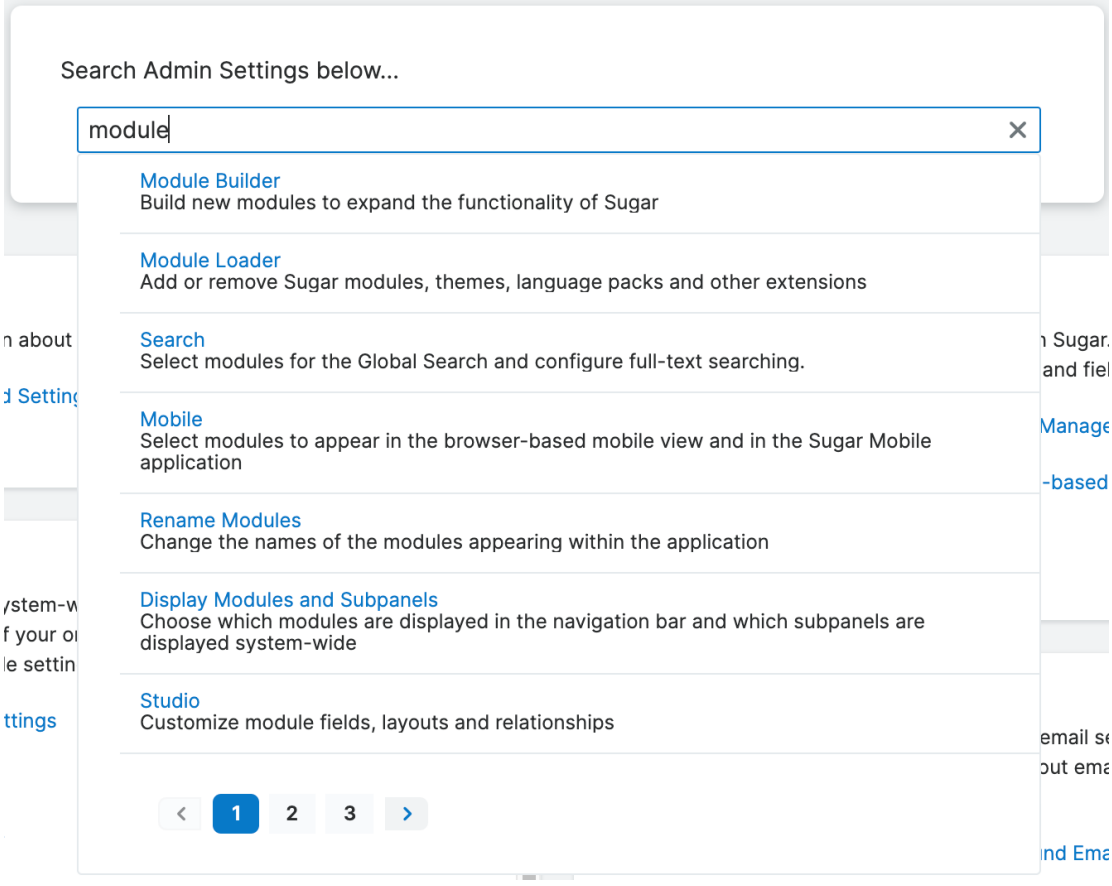
The Admin page contains links to a wide variety of settings and tools for configuring your Sugar instance, grouped by topic and also searchable using the search bar. Hover over any link to see a quick summary of what the linked page includes. The following are some examples of admin functionality that most Sugar administrators will likely have to work with closely:

- User, Password, Team, and Role management to manipulate user access
- SugarIdentity for user management if your instance is SugarIdentity-enabled

- Email management to configure incoming and outgoing system email accounts and behaviors
- System management to control functional aspects and system-wide preferences within Sugar
- Module Builder to create new, custom modules as needed to fully match your organization's processes
- Studio to tailor existing modules to your organization's needs by adding or modifying fields, relationships, and layouts
- SugarBPM to design workflow processes to automate many actions in your system

Admin Page Search

At the top of the Admin page, use the search bar to quickly find specific links within the Admin page. When you start entering a search term, a list of matching results is displayed and is updated as you type. If there are more than seven matching results, use the page numbers and arrow buttons at the bottom to navigate between the pages of results. Click any result to open the specific link.



Admin Wizard

Overview

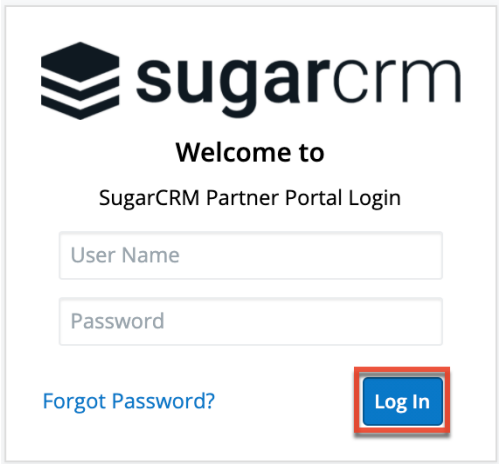
Sugar offers administrators a wide range of configuration options to set up their account. Upon your initial log into Sugar, you will go through configuring some basic settings (i.e., Your Information, Your Locale, etc.) for your user profile. You may skip these steps and configure these settings in your user preferences at a later time. Once your user profile set up is complete, you will be able to navigate to a specific area of Sugar to perform various administrative functions (e.g., importing data, creating users, configuring the application via Studio, etc.) as well. Please note that system administrators can also set up each user's basic settings when creating a user in Sugar. This documentation will cover the various options available when first accessing your Sugar account.

Note: For instances that use SugarIdentity, the administrator will need to access SugarIdentity to create and manage user records as well as configure password requirements and set up LDAP/SAML authentication.

Login Screen

The Sugar login screen is where you enter your login credentials (User Name, Password) to access your instance. Please note that this applies to instances that do not use SugarIdentity as well as instances that use SugarIdentity. To access Sugar's login screen, enter in your Sugar instance URL (e.g., https://example.sugarondemand.com) in your web browser. If you do not know your instance URL or login credentials, please reach out to another system administrator in your organization for assistance. Sugar's Admin Wizard will launch upon your first successful login allowing you to configure various system-wide settings as well as some personal settings. For more information on logging in to Sugar, refer to the Getting Started documentation.

Note: If your organization uses multiple SugarIdentity-enabled instances (e.g., production, sandboxes) and you have accessed different user accounts in the tenant(s) (e.g., ABC Production, ABC Test Sandbox), the login screen will display an account selector with the list of users you have logged in as for the current instance you are accessing.



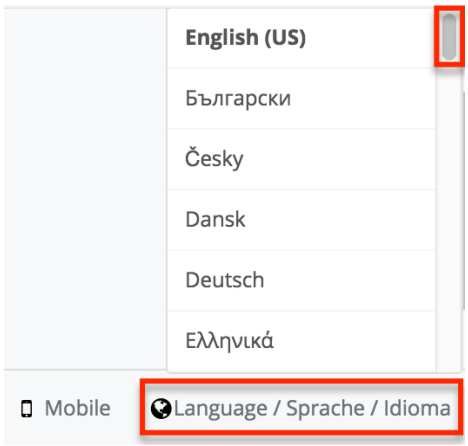
Note: If your instance has more active users than is allowed by your Sugar license, a warning is displayed on the login screen and regular users will not be able to log in. Admin users will be able to log in but will be redirected to the Users module. For more information, see the Understanding User Types, License Types, and Sugar Licenses article.

Language

Users have the option to choose the primary language they want to be displayed in Sugar by clicking the Language icon on the bottom right of the Login screen. The Language dropdown list will appear allowing you to select the appropriate language you want to be displayed in your Sugar account. The out-of-the-box default language in Sugar is English (US), but administrators can change the default language globally via Admin > Locale. For more information on configuring the default language in Sugar, please refer to the Locale section of the System documentation. Once the default language is changed, it will display as the default selection on the login screen for all users.

Please note that you must select the language that you want to be displayed each time you log in, otherwise the default language will display in Sugar.

Administrators can also configure what languages are available to select in the Language dropdown list via Admin > Languages. For more information on managing the available languages, please refer to the Languages section of the System documentation.



The following languages are available to display in Sugar:

Albanian	Hungarian
Arabic	Italian
Brazilian Portuguese	Japanese
Bulgarian	Korean
Catalan	Latvian
Chinese (Simplified)	Lithuanian
Chinese (Traditional)	Norwegian
Croatian	Polish
Czech	Portuguese
Danish	Romanian
Dutch	Russian
English (UK)	Serbian
English (US)	Slovak
Estonian	Spanish
Finnish	Spanish (Latin)
French	Swedish
German	Thai
Greek	Turkish
Hebrew	Ukrainian

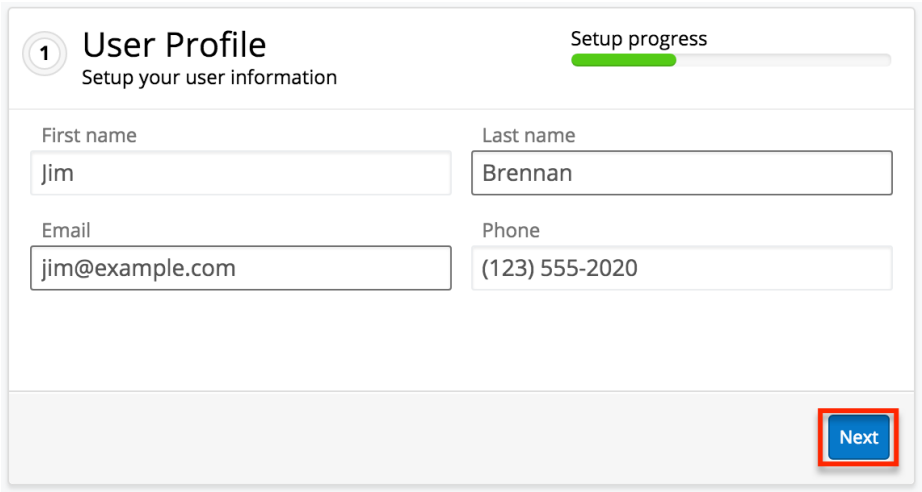
Your Information

Once the Admin Wizard is completed, you will have the option to configure some of your personal settings via the User Wizard. The User Profile step is where you can enter key information (i.e. name, email address, and phone) about yourself to be stored in your user profile. Please note that the information you provide on this step can be updated in your user preferences at a later time if desired. For more information on configuring your personal information under user preferences, refer to the Getting Started documentation.

Note: For instances that use SugarIdentity, the User Profile step of the User Wizard is read-only and the displayed fields (e.g., First Name, Last Name) can only be edited in SugarIdentity.

The following options are available to configure your user profile:

- **First Name**: Enter your first name.
- **Last Name**: Enter your last name.
- **Email**: Enter your email address.
- **Office Phone**: Enter your office number.



Please note that all required fields will indicate "Required" in the field and must be completed prior to moving to the next step of the wizard. Once your personal information is entered, click "Next".

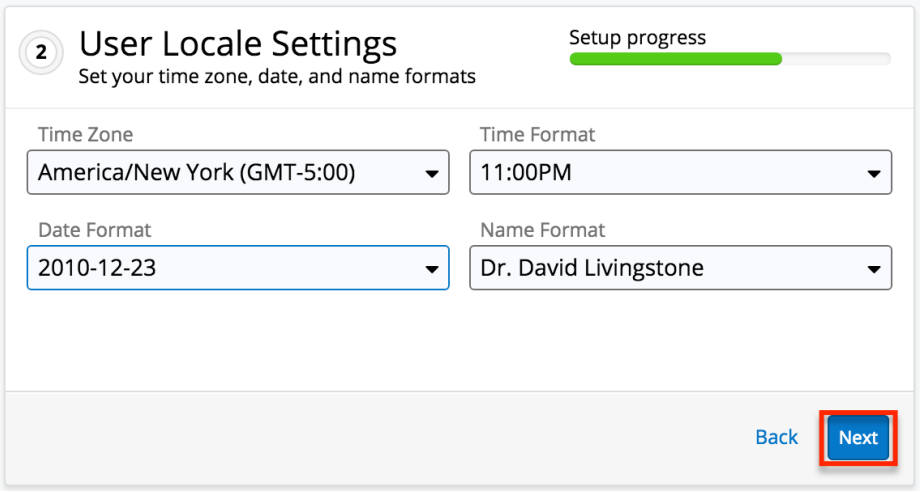
Your Locale

The Your Locale step is where you can configure the date, time, and name format you want to be displayed in Sugar based on your current geographical location. Please note that the information you provide on this page will override the system locale settings and can be updated in your user preferences at a later time if desired. For more information on configuring your locale settings, please refer to the Locale Settings section of the Getting Started documentation.

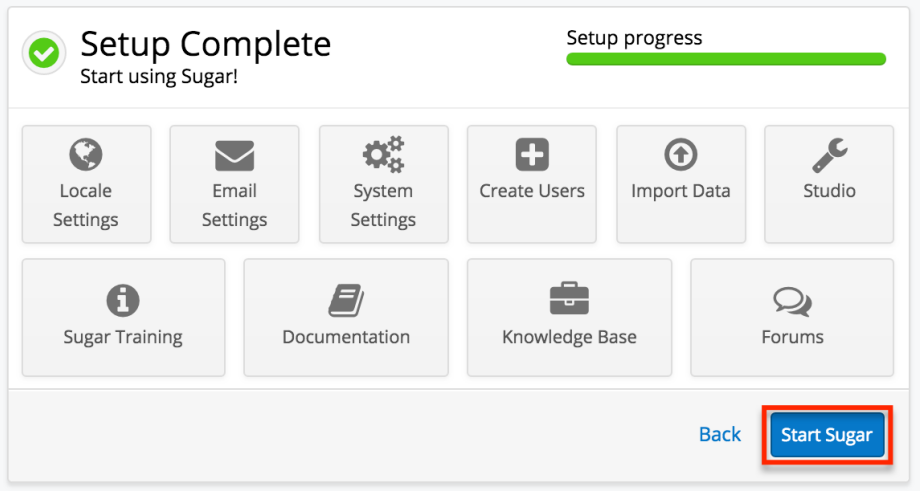
The following options are available to configure your locale settings:

- **Time Zone**: Select the time zone based on your current location.
- **Date Format**: Select the format you want the date stamps displayed in Sugar.
- **Time Format**: Select the format you want the time stamps displayed in Sugar.
- **Name Format**: Select the format you want the concatenated name fields displayed in Sugar's list view and record view.

Once your locale information is entered, click "Next".



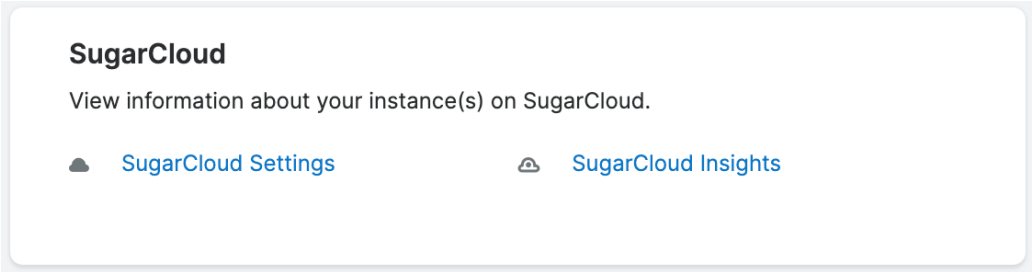
The following page confirms that you are ready to use Sugar and allows you to perform various administrative functions (e.g., importing data, creating users, configuring the application via Studio, etc.). Selecting the action item(s) will take you directly to the specific area of the Admin page to create new users, import data from external sources, etc. Please note that you can click "Start Sugar" to go directly to your Sugar account if you wish to configure these settings at a later time.



SugarCloud Management

Overview

The SugarCloud section of Sugar's Admin page allows administrators to view, access, and manage key information and data pertaining to their Sugar cloud instance.



The SugarCloud section contains the following menus:

Menu	Description
SugarCloud Settings	Create and manage user records, manage password requirements, set up LDAP, SAML, or OIDC authentication, etc. in SugarIdentity.
SugarCloud Insights	Monitor your instance's database and file system storage usage, license usage, and gain access to PHP error logs and access logs.

SugarCloud Settings

SugarIdentity, which can be accessed via Admin > SugarCloud Settings, allows customers to securely manage user identities as well as access applications and services in the SugarCRM ecosystem. SugarIdentity provides a federated identity solution based on industry standards and supports comprehensive single sign-on for the Sugar application, Sugar Plug-in for Outlook, Sugar Connect, SugarCRM mobile app, and the Sugar Plug-in for Microsoft Excel. For instances that use SugarIdentity, the administrator will access SugarIdentity to perform actions such as creating and managing user records, managing password requirements, and setting up LDAP, SAML, or OIDC authentication. For more information, refer to the SugarIdentity Guide.

SugarCloud Insights

The SugarCloud Insights page, which can be accessed via Admin > SugarCloud Insights, allows administrators of instances hosted on Sugar's cloud servers (i.e., sugarondemand.com) to access and manage the following information:

- View the total amount of file system and database storage being used across your cloud instances along with a breakdown of the current database and file system storage usage for each cloud instance.
- Monitor the total number of active users counting against your Sugar license.
- Download your instance's backup files.
- Generate PHP error and access logs which can help provide useful information when troubleshooting certain issues.
- Manage the email list for important SugarCloud service notifications.

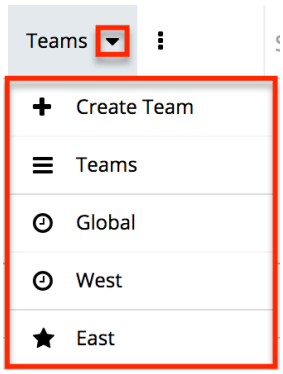
Team Management

Overview

Team Management is used in Sugar to define permissions and groupings for users. These permissions cover what records a user is and is not able to access. Teams are used in conjunction with Roles to form a robust security model for non-admin users in Sugar. Users can use team settings on specific records to allow different users within Sugar the option to view these given records. Team settings can also be used as a form of organization, thereby separating records to be associated with specific teams for better tracking. Teams can be based on departments, geographic regions, or whatever else works best in a given organization.

Teams Module Tab

The Teams module tab can be accessed by navigating to the Administration page and clicking "Team Management" in the Users section. Once in the Teams list view, you can click the triangle in the Teams module tab to display the Actions and Recently Viewed menus. The Actions menu allows you to perform important actions within the module. The Recently Viewed menu displays the list of teams you last viewed in the module. Please note that clicking the module tab allows you to access the Teams list view.



The Actions menu allows you to perform the following operations:

Menu Item	Description
Create Team	Opens the edit view to create a new team.
Teams	Opens the list view layout to search and display teams.

Team Types

From an administrative standpoint, teams will be handled differently based on their types. From a user standpoint, all teams will be treated pretty much the same. Each team type has their own special set of characteristics that aid in defining it. The team types defined as:

- The Global Team
- Standard Teams
- Private Teams

The Global Team

The Global team is created automatically when a Sugar instance is created. Global is the default team for all new users, and every user is a member of the team by default. Global is a universal team, so any records associated to the global team will be viewable by the users on this team. The global team is intended to be available for all users and a shared team for all users in Sugar.

Note: You cannot delete the Global team.

Standard Teams

Standard Teams can be created by administrators via Team Management. These are to be used throughout Sugar to organize and grant access on organizational

specifics to your organization. Standard teams are often broken out into groups by departments, geographical regions, or duties. For example, you may have an East and West team, and also a Sales and Support team.

Private Teams

For every user that is created in Sugar, a corresponding private team is automatically created in the Teams module. By default, the private team name is the user's first and last name. A private team name will be updated any time the corresponding user's profile is edited and re-saved, even if the change was not made to the user's first or last name. For example, the private team for Jane Smith will be automatically named "Jane Smith". If the administrator edits private team "Jane Smith" to "Jane Smith-HR", and then user Jane Smith later updates the phone number on her user profile, Sugar will revert the private team name back to the user's first and last name, "Jane Smith".

If your organization plans to edit private team names, you must disable the automatic update feature. Navigate to Admin > System Settings and select the checkbox next to "Prevent private team names from inheriting the user's name fields". For more information on this setting, please refer to the System documentation.

Note: Private teams are not deleted in the same method as other teams. For more information on deleting private teams, please review the Deleting Teams section of this guide.

Team Membership Types

Team memberships are given to users in one of two ways, either by an explicit or implicit membership. Regardless of the type, membership will control what records regular users are able to see. Each membership can be granted in different ways and can constitute different functionality. Team membership is represented in the team's detail view, as well as the user's detail view.

Note: Administrators do not adhere to team security and therefore can see all records.

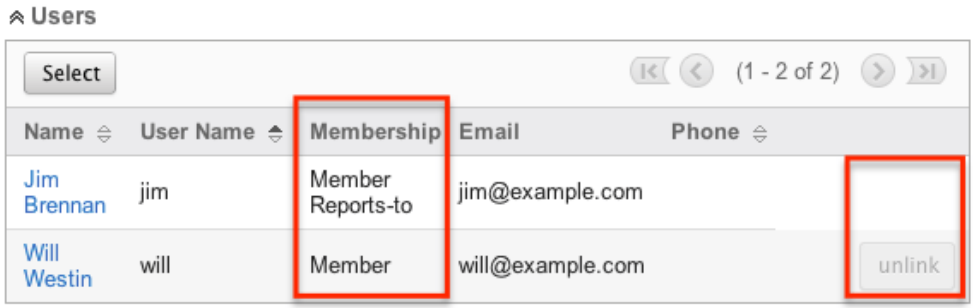
Explicit team membership is forged when the relationship is defined from either the team's or user's detail view. In addition, explicit relationships are also represented with private team memberships. Explicit memberships, other than private teams, can be removed as necessary from the team's or user's detail view. Explicit memberships will also include membership functionality for actions such as workflows, SugarBPM processes, and inbound email.

Implicit team membership is used for record visibility. Implicit membership relies

on the "Reports To" field in the User Profile. When one user reports to another, the hierarchy of the "Reports To" field is kept intact. The user being reported to will inherit the team membership of the subordinate user and be able to see any records on both his or her own team, and the teams of which the subordinate user is a member. The subordinate's teams can either be explicit or implicit teams in this scenario.

Note: Implicit relationships cannot be removed, but the cause for their relationship can be broken by changing the reporting hierarchy.

In the Team's detail view, the user's subpanel will showcase which relationships are explicit and which are implicit. In the "Membership" column of the Users subpanel, the user will either be marked as a "Member", meaning that they are an explicit member, or "Member Reports-to", meaning they are an implicit member. In addition, the users marked with the "Member Reports-to" will not include an "Unlink" button, as they have another user (or users) reporting to them on this team.



Creating Teams

There are two methods that can be used to create teams in Sugar. These are via the Teams module tab's action list or by duplicating an existing team and then editing it. After initially creating the team, the administrator will need to associate users to the newly created team. For information on creating Private Teams, please review the Repairing Teams section of this documentation.

Note: For instances that use SugarIdentity, administrators have the ability to log in as other users in their organization using the "Impersonate (Log in as)" option in SugarIdentity. So, after associating users to the appropriate teams, you can preview the user's account via impersonation to ensure that the proper permissions are in place. For more information on impersonating a user, refer to the SugarIdentity Guide.

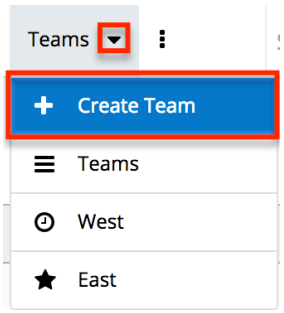
Creating Via Teams Module

The most common way to create a new team is via the Create Team option in

the Teams module tab. This opens up the edit view layout which allows you to enter in all the relevant information for the team.

Use the following steps to create a team via the Teams module:

1. Navigate to Admin > Team Management.
   Note: The Teams list view will open displaying all existing teams that are currently available.
2. Click the triangle in the Teams module tab and select "Create Team".



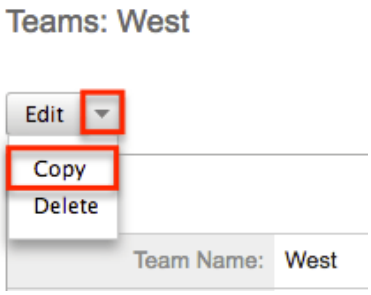
3. Enter a name and description of the team on the edit view screen that you are now presented with. Enter the appropriate values for fields in the edit view layout. All required fields are marked with a red asterisk and must be completed prior to saving.
4. On the team's detail view, add users that are members of this team.

Creating Via Duplication

You can also create a new team by duplicating an existing team. The Copy option is useful if the team you are creating has a similar set of members or a similar description to an existing team

Use the following steps to create a team by duplicating an existing record:

1. Navigate to a team record's detail view.
2. Click the Actions menu and select "Copy".



3. The displayed edit view is pre-populated with the original team's values. Update the name field, and description if need be, then click "Save".
4. On the team's detail view, add any users that are members of this team that

are not on the original team, and remove any unwanted users.

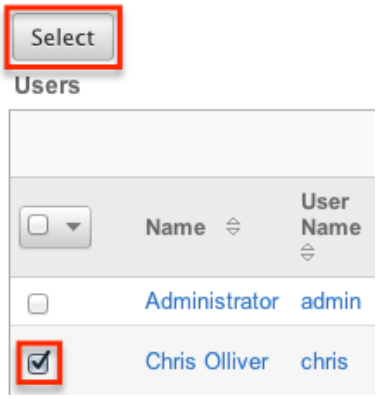
Adding Users to Teams Via Teams Module

A user has to be associated to a team to be able to view records that are associated to the specific team. Assigning a team is much like any other many-to-many relationship in Sugar, where many users can be associated to one particular team, and one user can also be assigned to multiple teams. From Team Management, a user can be associated to a team via the Users subpanel at the bottom of the detail view. To associate users to a team, follow the following steps:

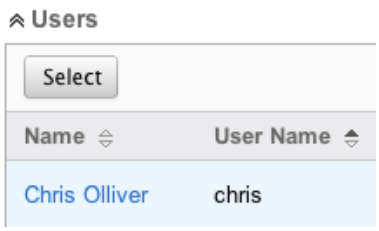
1. Navigate to Admin > Team Management
2. From the Teams list view, select the team that you are working with
3. At the bottom of the page, click "Select User" from the Users subpanel



4. Use the popup search menu to search for and select the user(s) you would like to add to this team where you can either click on the user's name or, if selecting multiple users, click their corresponding checkboxes and then click "Select"



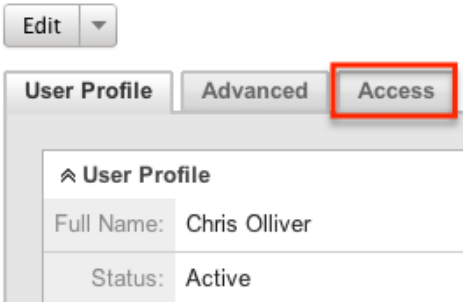
5. After selecting the user(s) the popup search box will close and the user(s) will now be displayed in the Users subpanel for the team to complete the relationship



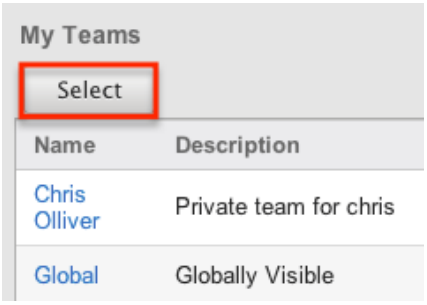
Adding Users to Teams Via Users Module

A regular user must be associated to a team to be able to view records that are associated to that team. Assigning a team is much like any other many-to-many relationship in Sugar, where many users can be associated to one particular team, and one user can also be assigned to multiple teams. From User Management, a user can be associated to a team via the user's detail view. For more information on User Management, please refer to the User Management documentation. To associate a team to a user via User Management, follow the following steps:

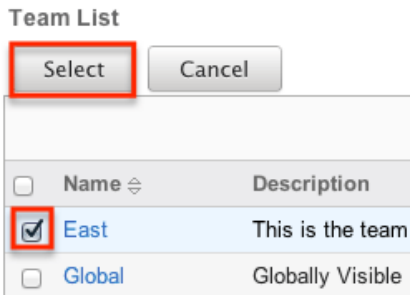
1. Navigate to Admin > User Management
2. From the Users list view, open the user record that you would like to edit
3. From the user's detail view, click on the "Access" tab



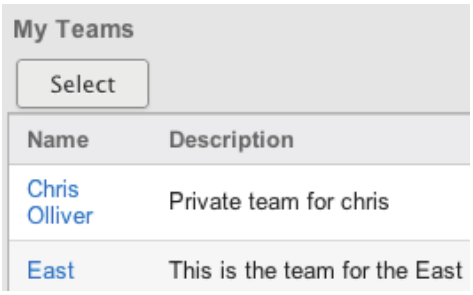
4. Scroll past the role chart to the "My Teams" subpanel and click "Select"



5. Use the popup search menu to search for and select the team(s) you would like to add to this user where you can either click on the team's name or, if selecting multiple teams, click their corresponding checkboxes and then click "Select"



6. After selecting the team(s) the popup search box will close and the team(s) will now be displayed in the My Teams subpanel for the user to complete the relationship



Viewing Teams

There are various options available for viewing team records in Sugar including via the Teams list view, Teams detail view, Teams Last Viewed menu, from dashlets, and from reports.

Viewing Via List View

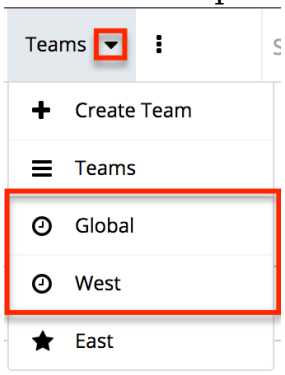
The Teams list view displays all team records meeting the current search criteria. To access the list view, simply navigate to Admin > Team Management. Alternately, if you are looking at a team's detail view, you can click the Teams module tab to return to the list view. You can click the team's name to open the record in detail view. For more information on viewing teams via list view, please refer to the Teams List View section of this documentation.

Viewing Via Detail View

The Teams detail view displays thorough team information showing the name and description of the team, followed by a subpanel of the users associated to the team. The detail view can be reached by clicking a team's link from anywhere in the application including from the Teams list view. For more information on viewing teams via detail view, please refer to the Teams Detail View section.

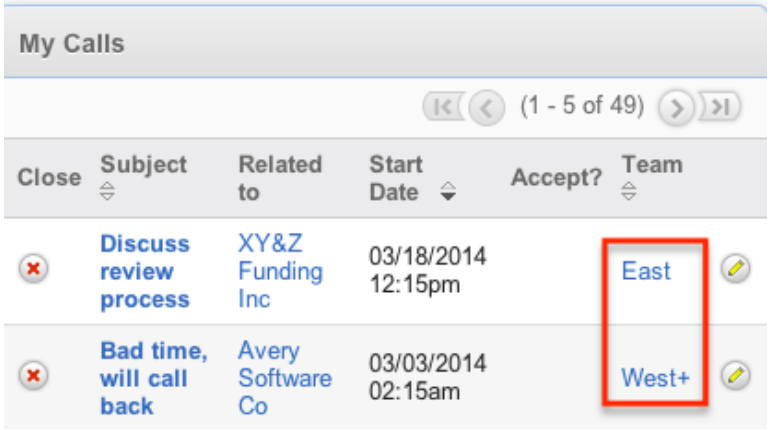
Viewing Via Recently Viewed

As you access different teams, Sugar will keep track of which teams you have recently viewed. Click the triangle in the Teams module tab to see a list of the 3 records you most recently viewed in the module. Clicking the record's name within the list will open it in detail view.



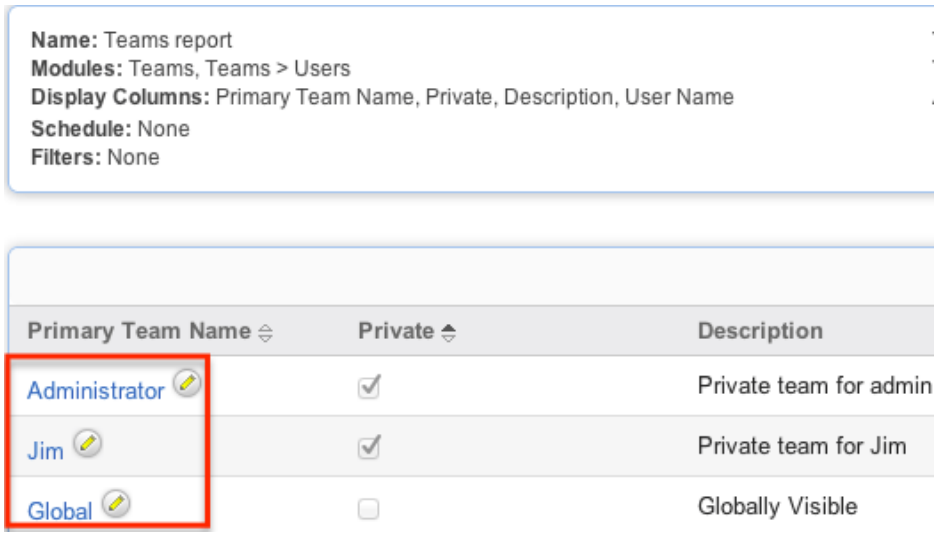
Viewing Via Dashlets

The Home page displays a collection of Sugar Dashlets which allow users to get a quick view of various records, activities, reports, etc. You can view team information in most module-specific dashlets. Clicking a team's name from any dashlet will open the team in detail view. For more information on using dashlets, please refer to the Dashlets section of the Home documentation.



Viewing Via Reports

Administrators have the option to build, run, and manage reports to gather key data from records within Sugar. When building a report, there are options to either run the report from the Teams module or add links to teams related to the records that are being reported on. Once the report is run, you will be able to view the team record's detail view by clicking the team's name in the report results. Please note that you can only directly access team detail views with Rows and Columns and Summation with Details-type reports as Summation and Matrix-type reports do not include hyperlinks in their display columns. For more information on using reports, please refer to the Reports documentation.



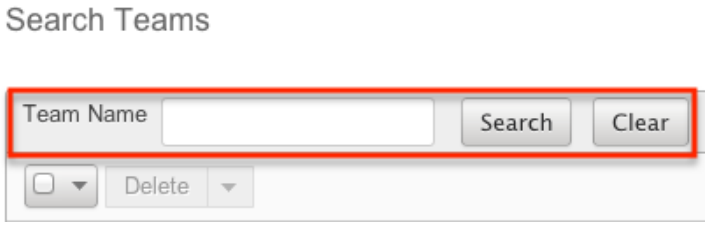
Searching Teams

The Teams list view search function searches for the name of the team to help you locate records easily and effectively. Once the search is performed, the relevant results will be displayed in the Teams list view below.

The buttons in the search panel have the following functions:

- **Search:** Click the Search button or press your Return/Enter key to perform the search.
- **Clear:** Click the Clear button to clear all criteria from the searchable fields.

To see all Team records, simply click "Clear" and then "Search" to perform a blank search with no name filter.



Please note that Sugar automatically appends the wildcard character (%) to the end of your search phrase. This allows the system to retrieve all records that start with the keyword entered in the search. If you would like to broaden the search, you can use the wildcard at the beginning of your text as well (e.g., %Administrator). This will pull up any record that has the word "administrator" in the name, regardless of how it starts or ends.

For more information on using the various search methods as well as how wildcards are used, please refer to the Search documentation.

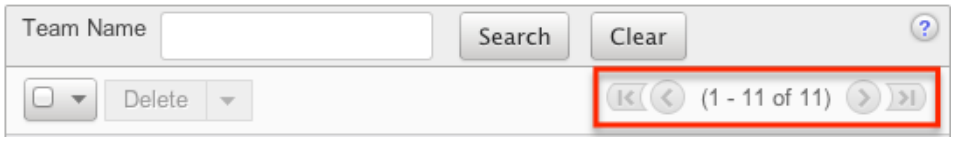
Teams List View

The Teams list view displays all teams meeting the current search criteria, if any. You can view the name and description of each team within the field columns. Click on the name of the team to access the detail view for the team and review the settings further.

Pagination

List view displays the current search results broken into pages that you can scroll through rather than displaying potentially thousands of rows at once. To the right just below the search panel you can see which records of the total results set are currently being displayed. The two single-arrow Next and Previous buttons can be used to scroll through the records page-by-page. The two double-arrow First Page and Last Page buttons allow you to skip to the beginning or the end of your current results.

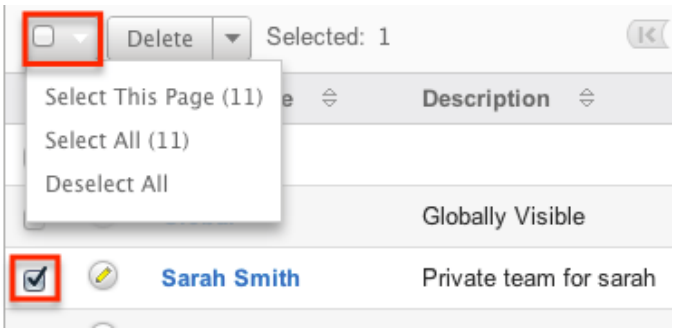
By default, Sugar displays 20 records per list view page, but administrators can change the number of records displayed via Admin > System Settings. For more information on changing the number of displayed records, please refer to the System documentation in the Administration guide.



Checkbox Selection

Teams can be deleted in a mass-delete fashion via the list view by selecting all of the team records. To select individual team records on the Teams list view, mark the checkbox on the left of each row. To select or deselect multiple teams on the list view, use the options in the checkbox dropdown menu:

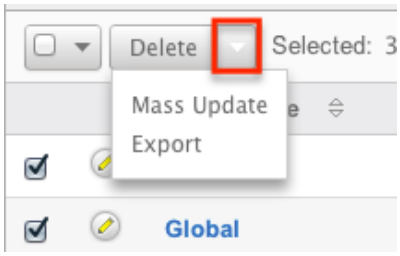
- **Select This Page**: Selects all records shown on the current page of results
- **Select All**: Selects all records in the current search results across all pages of results
- **Deselect All**: Deselects all records that are currently selected



For more information on deleting teams, please refer to the Deleting Teams section of this documentation.

Actions Menu

The Actions menu to the right of the checkbox dropdown allows you to perform various actions on the currently selected records.



The options in the Actions menu allow you to perform the following operations:

Menu Item	Description
Delete	Delete one or more teams at a time.
Mass Update	Mass update one or more teams at a time.
Export	Export one or more teams to a CSV file.

Column Sorting

List view provides the ability to sort all of the current search results by a field column in either ascending or descending order. To sort by a field or switch the sort direction, click the column header for either "Name" or "Description". The list view may be sorted by only one column at a time.

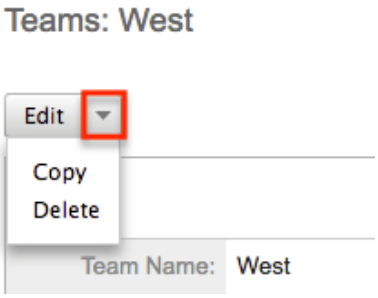


Teams Detail View

The Teams detail view displays thorough information about the team, as well as the ability to perform most actions related to team management. The detail view also includes a Users subpanel where users can be associated to the team and will therefore take on the team's properties.

Actions Menu

The Actions menu on the top left of each team's detail view allows you to perform various actions on the current record. Administrator users can change the action items to be displayed as separate buttons instead of a dropdown menu via Admin > System Settings. For more information on configuring the actions menu, please refer to the System documentation in the Administration Guide.



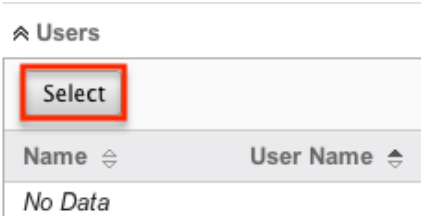
The options in the Actions menu allow you to perform the following operations:

Menu Item	Description
Edit	Edit the name and description of this team.
Copy	Duplicate this team to create a new team.
Delete	Delete this team.

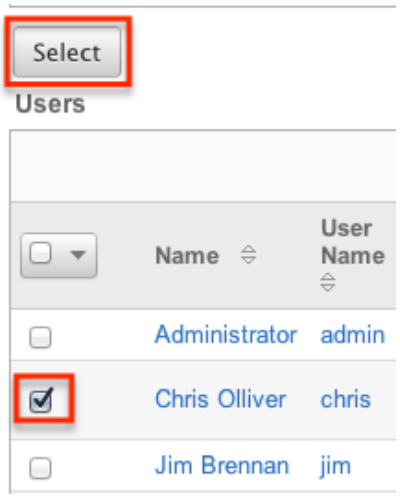
Users Subpanel

A user has to be associated to a team to be able to take on the team's membership settings. Assigning a user is much like any other many-to-many relationship in Sugar, where many users can be associated to one particular team, and one user can also be assigned to multiple teams. From Team Management, a user can be associated to a team via the Users subpanel at the bottom of the page. To associate uses to a team, follow the following steps:

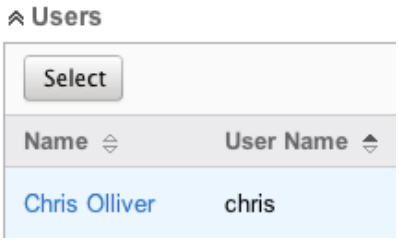
1. Navigate to the detail view of the team that you would like to edit.
2. At the bottom of the page, click "Select User" from the Users subpanel



3. Use the popup search menu to search for and select the user(s) you would like to add to this team. You can either click on the user's name or, if selecting multiple users, click their corresponding checkbox and then click "Select"

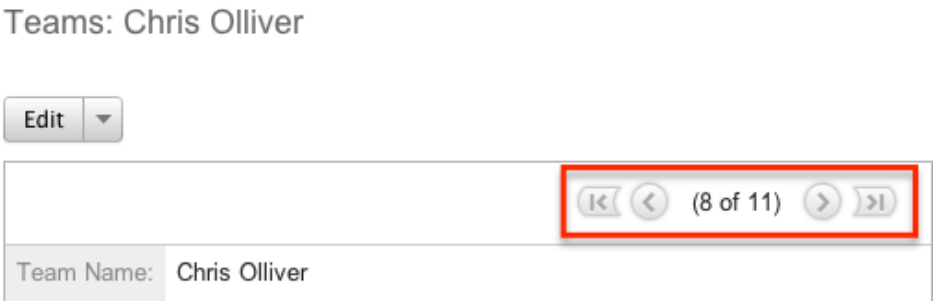


4. After selecting the user(s) the popup search box will close and the user(s) will now be displayed in the Users subpanel for the team to complete the relationship



Next or Previous Record

On the upper right of the Teams detail view, there are two buttons that allow you to page through each team in the Teams list view's current search results. Clicking the Previous button displays the previous team of the current search results while clicking the Next button displays the next team of the current search results. The text in between shows which team result you are currently viewing within the total number of current results.

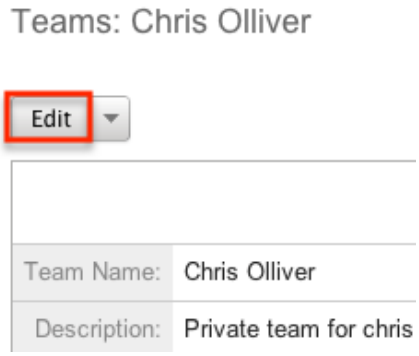


Editing Teams

Teams may be edited at any time to update or add information to the record or to edit existing information. You can make changes to existing team records via the Teams detail view and edit view, or from the Users module. Edit view is available within the Teams module and includes the Name and Detail fields.

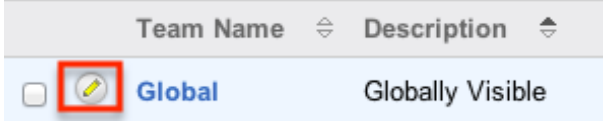
Editing Via Detail View

You can edit teams via the detail view by clicking the Edit button on the upper left of the page. Once the edit view layout is open, update either the Name or Description fields, then click "Save" to preserve the changes made.



Editing Via List View

You can edit teams via the list view by clicking the Pencil icon to the left of each team's name. After clicking the pencil, the window will move to the edit view. Update the necessary fields, then click "Save" to preserve the changes. After saving from the edit view, you will be returned to the detail view for the record that you just updated. Because this method brings you to the edit view, the Name and Description fields can be updated.



Editing Via Users Module

The Users module allows you to see all of the teams associated with a specific user in one place under the "Access" tab. The page will show the "My Teams" subpanel with a list of all of the teams associated with the user. For more information about viewing the teams from the Users module, please review the User Management documentation.

On the "My Teams" subpanel, there is an option to edit the team. After clicking the "Edit" button, the window will move to the edit view. Update the necessary fields, then click "Save" to preserve the changes. After saving from the edit view, you will be returned to the detail view for the record that you just updated. Because this method brings you to the edit view, only the Name and Description fields can be updated.



Deleting Teams

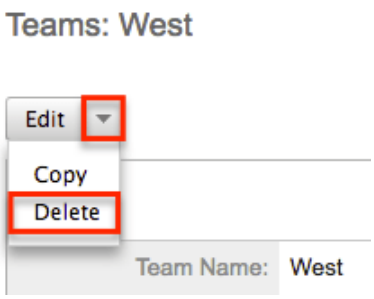
If a team record is invalid or is no longer being used in your organization's Sugar instance, it may be deleted from either the Teams detail view or list view. Deleting via the detail view allows you to delete a single record while the list view allows for mass deleting multiple records at once. Deleting team records will not delete any related user records and will only remove the relationship.

The exception to this is found when trying to delete any private teams. Private teams are only able to be deleted when the user that the team is for has been deleted. To delete a private team, first delete the user via the user's detail view, following the steps from User Management.

Deleting Via Detail View

Use the following steps to delete a team via the detail view:

1. Navigate to the team record's detail view.
2. Select "Delete" from the Actions menu.

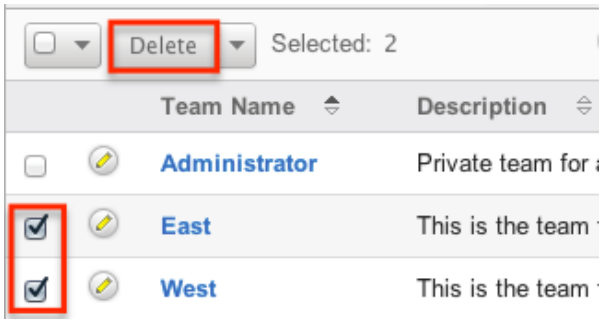


3. A pop-up message will display asking for confirmation. Click "Ok" to proceed.

Deleting Via List View

Use the following steps to delete one or more teams via the list view:

1. Navigate to the Teams list view by navigating to Admin > Team Management.
2. Use the Search functionality to search to find the Team records you wish to delete.
3. Select the desired team records individually or using the checkbox dropdown's options.
4. Choose "Delete" from the Actions menu.



5. A pop-up message will display asking for confirmation. Click "Ok" to proceed.

Due to PHP memory limitations on the server, there may be occasions when the application times out while deleting a large number of team records. If you encounter an error when performing this action, we recommend selecting the records in smaller batches.

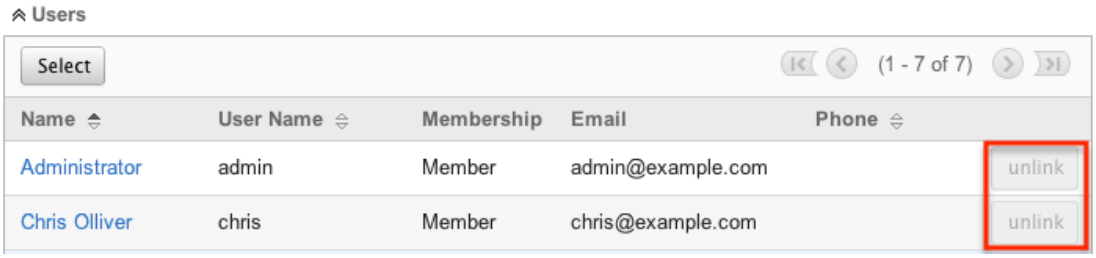
Removing Users From Teams

Users can be associated to multiple teams, and one team can also be associated to many users. As changes occur within an organization, there may be times that users need to be removed from specific teams. Breaking the relationship between

a team and a user can be done both from the Teams detail view and from the Users detail view. Both modules include a subpanel to represent the relationship to the other module.

To remove a user from a team, use the following steps:

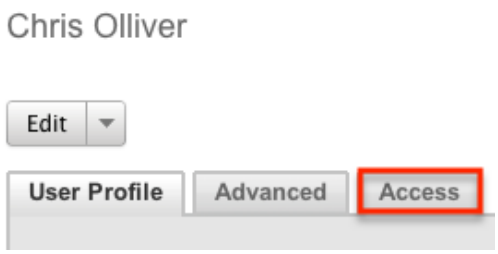
1. Navigate to the team record's detail view
2. Click "unlink" to the right of the user's row



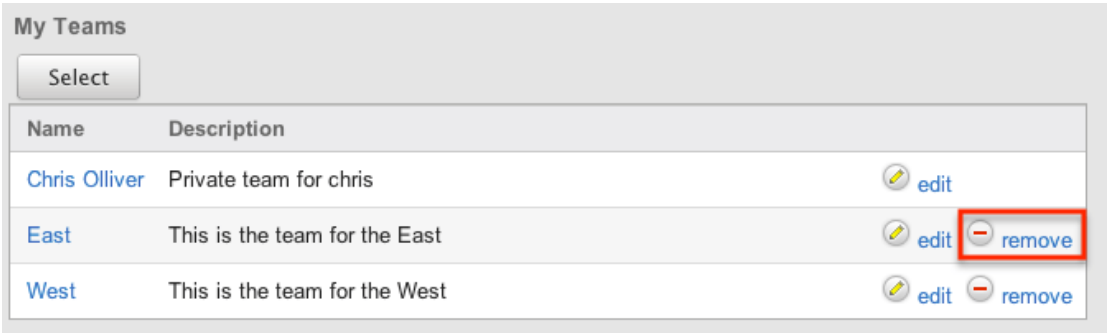
3. A pop-up message will display asking for confirmation. Click "Ok" to proceed.

To remove a team from a user, use the following steps:

1. Navigate to the user's detail view
2. From the user's detail view, click on the "Access" tab



3. Scroll past the role chart to the "My Teams" subpanel and click "Remove" on the row of the team you would like to remove



4. A pop-up message will display asking for confirmation. Click "Ok" to

proceed

Repairing Teams

Sugar's Repair menu includes two options for administrators to improve team structures and functionality. These processes should not be needed often, and are only used when the necessary changes are to be made. The repair options are as follows:

Type	Description
Upgrade Teams	Checks to make sure that all users have associated private teams.
Repair Teams	A combination of four different repair functions to rebuild team accesses.

Role Management

Overview

Roles in Sugar® determine which users can access modules as well as which operations the users are allowed to perform within those modules. When configuring role settings in Sugar, an administrator may choose to enforce restrictions for entire modules or for selected fields on the records in a module, as explained in the following sections. To fully leverage Sugar's security model, both permission types can be used together for a given role and should be considered in conjunction with the Team Management settings used by your organization.

Administrators have the ability to create different roles and assign regular users to the roles. A user can be related to any number of roles, and when multiple roles or role settings are applied, Sugar adheres to a most-restrictive policy to determine the user's appropriate access levels. Administrators cannot be related to roles, as their administrative rights supersede any restrictions imposed by Role Management. For more information on System Administrator users, please review the User Management documentation.

Roles control multiple layers of actions and access for users within Sugar:

- Module-Level Permissions
- Record-Level Permissions (i.e., Team-Based Permissions)
- Field-Level Permissions

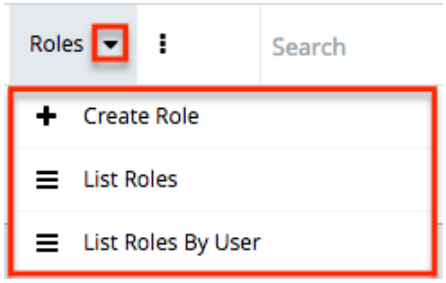
Exceptions

The following modules respond uniquely to role settings in Sugar:

- **Forecasts Module**: For the Forecasts module, roles will allow or deny access at the module level with no further layers of access. Because the Forecasts module uses data from the Opportunities, Products, Quotas, Worksheet and Time Period modules, the Forecasts module does not respect the module- or field-level ACLs for those modules. For example, the opportunity data that is shown in the Forecasts module worksheets will be displayed and editable regardless of whether or not the user has access to the Opportunities module or has field-level restrictions in that module.
- **Reports Module**: Sugar's Reports module does not respect certain field-level role restrictions, meaning that generated reports may display field data for which a user's role is set to restrict visibility.

Roles Module Tab

The Roles module tab can be accessed by navigating to the Administration page and clicking "Role Management" in the Users section. Once in the Roles list view, you can click the triangle in the Roles module tab to display the Actions and Recently Viewed menus. The Actions menu allows you to perform important actions within the module. The Recently Viewed menu displays the list of roles you last viewed in the module. Please note that clicking the module tab allows you to access the Roles list view.



The Actions menu allows you to perform the following operations:

Menu Item	Description
Create Role	Opens the edit view to create a new role.
List Roles	Opens the list view layout to search and display roles.
List Roles By User	Opens a page for viewing each user's access according to their combined roles.

Creating Roles

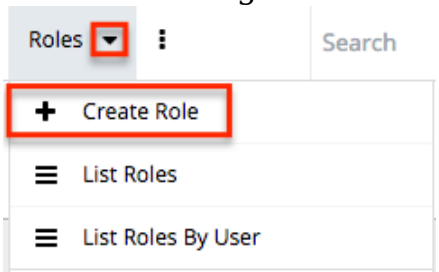
Sugar's roles specify which users can access modules, as well as which operations the users are allowed to perform within those modules. When configuring role settings in Sugar, an administrator may choose to enforce restrictions for entire modules or for selected fields on the records in a module, as explained in the following sections. To fully leverage Sugar's security model, both permission types can be used together for a given role and should be considered in conjunction with the team access settings used by your organization.

Creating Roles via Role Management

The most common way to create a role is via the Create Role option in the Role Management module tab. This opens up the edit view layout which allows you to enter in all the relevant information for the role.

Use the following steps to create a role via Role Management:

1. Navigate to Admin > Role Management.
    - **Note**: The Roles list view will open displaying all existing roles that are currently available.
2. Click the triangle in the Roles module tab and select "Create Role".



3. Enter the appropriate values for fields in the edit view layout. All required fields will indicate "Required" in the field and must be completed prior to saving.
4. On the Role Chart screen, configure the module and field permissions, and assign users to the role.

Creating Roles via Duplication

You can also create a new role by duplicating an existing role. The duplicate option is useful if the role you are creating has similar information to an existing role.

Use the following steps to create a role by duplicating an existing record:

1. Navigate to a role record's detail view.
2. Click the Actions menu and select "Duplicate".



3. The displayed edit view is pre-populated with the original role's values. Update the necessary fields, then click "Save".
4. On the Role Chart screen, update the module and field permissions, and assign users to the role.

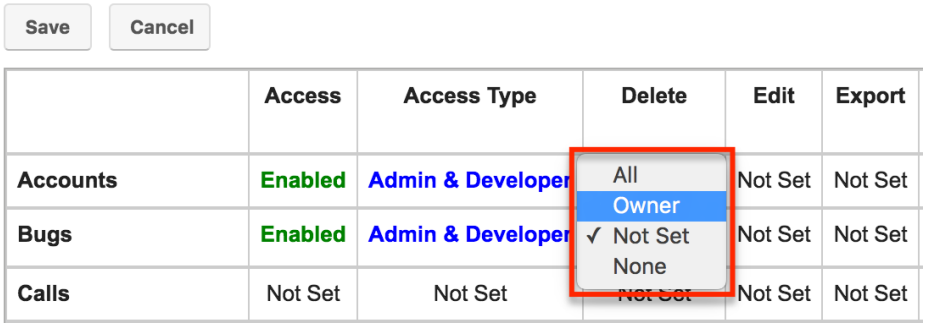
Setting Module-Level Permissions

Sugar's Role Chart contains ten columns and has a row for each module down the left-hand side. The columns represent an access level or a type of operation within Sugar, and the corresponding points between the columns and module rows define the role's permission setting for the operation within the given module.

	Access	Access Type	Delete	Edit	Export	Import	List	Mass Update	Record View
Accounts	**Enabled**	**Admin & Developer**	Not Set	Not Set	Not Set	Not Set	Not Set	Not Set	Not Set
Bugs	**Enabled**	**Admin & Developer**	Not Set	Not Set	Not Set	Not Set	Not Set	Not Set	Not Set
Business Centers	Not Set	Not Set	Not Set	Not Set	Not Set	Not Set	Not Set	Not Set	Not Set

To configure or make changes to a role, follow the steps below:

1. On the Role Chart, find the intersection of the operation and the module that you would like to adjust and click inside the corresponding table cell.
2. A dropdown list displays the options available for that configuration. Select the appropriate security option based on the access and operation definitions explained later on this page.



3. Repeat steps 1 and 2 for any other fields you would like to change in this module for the current role.
4. When complete, click "Save" to secure the changes.

Note: The most restrictive role setting always takes precedence when Sugar has to

choose between two or more settings.

The following table explains the Role Chart's components in detail. Please scroll beyond this table for descriptions of each configuration option.

Role Chart Column Header	Configuration Options	Description	Additional Comments
Module (blank header row)	N/A	Identifies which module the row's settings will affect.	
Access	• Enabled • Not Set • Disabled	Controls access to the entire module for users in this role.	When access to a module is disabled, the user is prohibited from viewing any records in this module. They cannot see a tab for the module in the navigation bar, and other module records do not reveal this module's subpanel to the user. For more information, please refer to the Module Access definitions below this table.
Access Type	• Normal • Not Set • Admin • Developer • Admin & Developer	For enabled modules, Access Type determines how much control users in this role have over the module.	Please refer to the Module Access Type definitions below this table.
Delete	• All • Owner • Owner & Selected Teams* • Not Set • None	Restricts users from deleting or merging records in this module.	Restricting a user's ability to delete records also restricts a user's ability to merge records in the module since

			merging results in deleting one or more records.
Edit	• All • Owner • Owner & Selected Teams* • Not Set • None	Restricts users from editing, creating, or merging records in this module.	Although it is labeled "Edit", this role setting also affects the Create functionality because the process of creating a record functions the same way as editing. It also restricts the merge functionality in Sugar, which modifies existing records.
Export	• All • Owner • Owner & Selected Teams* • Not Set • None	Restricts users from exporting data from this module to their local computers.	This role setting affects usage of the Sugar API, which is the framework used for external connections, such as the Outlook Plug-in. For more information on exporting, please refer to the Export documentation in the Application Guide.
Import	• All • Not Set • None	Restricts users from importing data into this module.	This role setting affects usage of the Sugar API, which is the framework used for external connections, such as the Outlook Plug-in. For more information on importing, please refer to the Import documentation in the Application

			Guide.
List	• All • Owner • Owner & Selected Teams* • Not Set • None	Restricts a user's ability to see records in a list view or subpanel.	A module's list view is not visible to users where "List" is set to "None".
Mass Update	• All • Not Set • None	Restricts users from using the Mass Update functionality in this module's list view.	The Mass Update option is not visible on the list view's Actions menu when "Mass Update" is set to "None". If "List" is set to "None", the Mass Update configuration is inconsequential. To entirely prohibit users in a role from updating many records at once, set "Import" to "None" as well to prevent mass updates via import.
Record View	• All • Owner • Owner & Selected Teams* • Not Set • None	Restrict access to the record view which displays an individual record's details.	When "Record View" is set to "None", the module's list view displays record's names, but the names are not hyperlinked to their corresponding record views like they are for users with the View permission enabled. When a module's Record View setting is "None" or "Owner", the

			access level for "Edit" and "List" must be set to the same value to ensure desired functionality for the SugarCRM mobile app and other API-based applications.

*The Owner & Selected Teams option only appears for modules using team-based permissions. For more information, please refer to the Enabling Team-Based Permissions section of this page.

The following sections explain the various configuration options available in the Role Chart.

Module Access Definitions

The Access column provides the following options:

- **Enabled**: The user can access this module in Sugar.
- **Not Set**: The user is neither restricted nor granted access to this module. When permission is "Not Set", the users within this role default to "Enabled" access.
- **Disabled**: The user cannot access this module, view any of its records, or see any trace of its existence in Sugar.

Module Access Type Definitions

The Access Type column provides the following options:

- **Normal**: The user can perform standard functions in this module barring restrictions from other roles or team settings. The user cannot access the Administration functions for this module.
- **Not Set**: The user is neither restricted nor granted access to this module. When permission is "Not Set", users within this role default to "Normal" access.
- **Admin**: The user is not subject to any Teams restrictions for this module and can view all records, barring other role restrictions. Admin access also forces "All" access for that module's action-related columns (e.g., Edit, Delete, etc.) if the row's operation-related columns remain "Not Set". However, any more restrictive options you may choose will supersede the Admin access. Please note that the module-level Admin access type does not grant access to the Administration functions for this module.

- **Developer**: The user has access to the module-specific sections of Studio, Workflow Management, Dropdown Editor, and any other Administration functions that are specific to the module. The user's access to Sugar records is not affected; access remains subject to Teams restrictions and action-related role restrictions for this module. For more information on developer tools, please refer to the Developer Tools documentation.
- **Admin & Developer**: The user is not subject to any Teams restrictions for this module and can access Administration functions for this module. For more information, please refer to the descriptions for the "Admin" and the "Developer" access types above.

For more information on Admin, Developer, and Admin & Developer roles, please refer to the article Understanding Admin and Developer Access in Roles.

Record Operation Definitions

The operation columns (e.g., Edit, Delete, etc.) provide the following configuration options:

- **All**: The user can perform this action on any and all records that they can access in Sugar per their team memberships.
- **Owner**: The user can perform this action only if they are the "Assigned To" user on the record.
- **Owner & Selected Teams**: The user can perform this action if they are the "Assigned To" user on the record or if they belong to a team that is designated as having extra access on the record. This option is only visible if an administrator has enabled team-based permissions for the module.
- **Not Set**: The user is neither restricted nor granted access to this function. When permission is "Not Set", users within this role default to "All" access.
- **None**: The user cannot perform this action on any records within this Sugar module.

Note: When using the Owner & Selected Teams setting, any user with permission to edit the Teams field can extend role permissions to other users. To maintain a tighter security model, we recommend using this setting in conjunction with field-level access control on the Teams field to regulate who can edit the teams on a record.

Setting Record-Level Permissions

In Sugar, teams are typically used to control which groups of users can access a record. Using the record-level, team-based permissions, however, an administrator may choose to extend the purpose of teams to control who can perform certain operations on the record (e.g., edit, delete, etc.). When enabled, regular users can use a record's Teams field to grant access such as viewing, editing, exporting,

importing, and deleting permission to specific users or user groups.

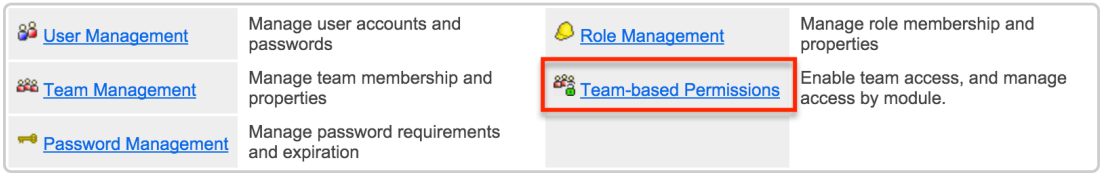
For more information on teams, please refer to the Team Management documentation.

Enabling Team-Based Permissions

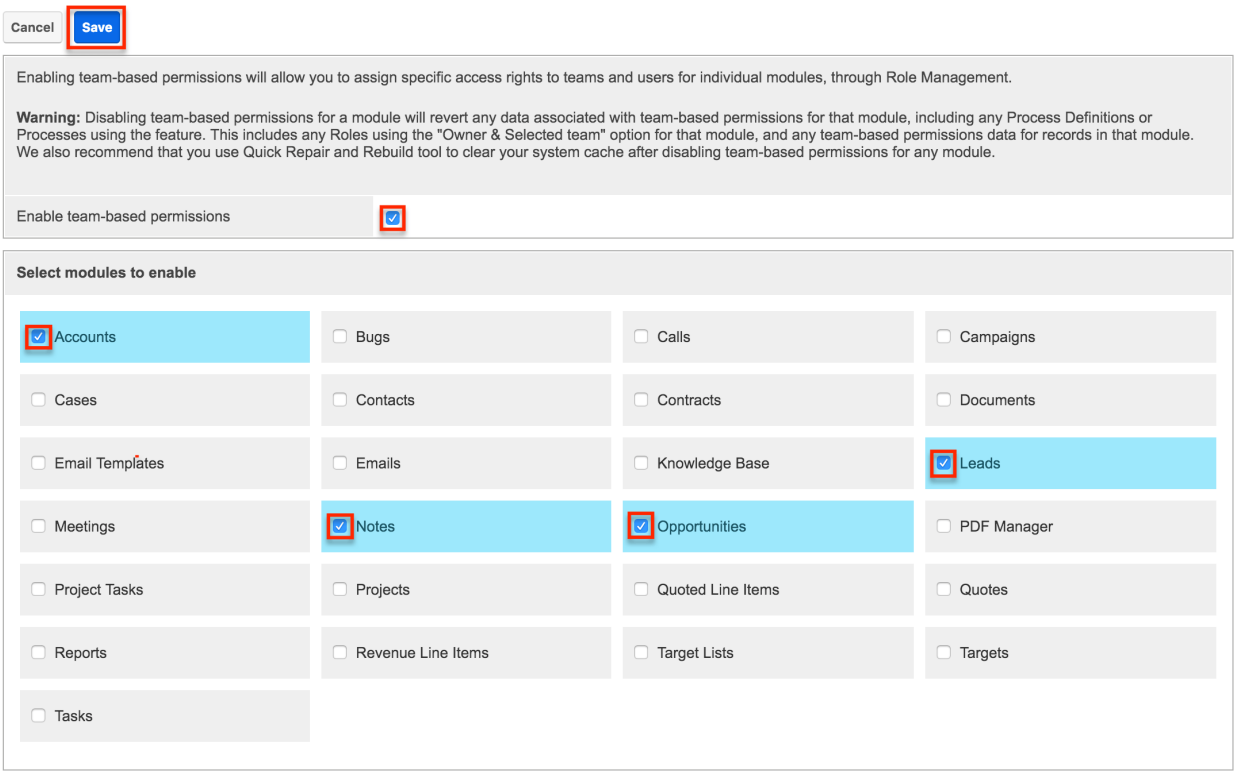
An administrator may decide to enable record-level, team-based permissions for none, some, or all of the modules in a Sugar instance. Once enabled, the administrator can build roles that utilize the new access option (Owner & Selected Teams).

Follow these steps to enable the team-based permission capability:

1. Navigate to Admin > Team-based Permissions.



2. If an administrator has never enabled team-based permissions for this instance, the configuration page will open and display a warning message above a disabled checkbox. Click on the checkbox labeled "Enable team-based permissions" to select the modules you want to enable. If the checkbox is already selected, you will see the modules listed prominently on the configuration page.
3. Place a checkmark in the boxes next to modules that should support team-based permissions. The square behind the module name changes from gray (disabled) to blue (enabled) upon selecting the checkbox. Once you are satisfied with your selections, click "Save" to preserve the changes.



After saving, you can confirm that a module has been enabled for team-based permissions by clicking "Edit" on any record within the module and viewing the Teams field. Each team's name in the widget should include a Lock button, defaulted to a disabled (white) state.



If the Teams widget does not show the Lock buttons, confirm that you properly saved the admin settings in step 3, perform a Quick Repair and Rebuild, and try refreshing your browser's cache.

You may now create roles that utilize the "Owner & Selected Teams" access type for actions in the enabled modules. Please note that team-based permissions have no effect on Sugar until users have been assigned to roles that are configured with "Owner & Selected Teams" access. For more information, please refer to the Record Operation Definitions section of this page. For information on using team-based permissions on a record, please refer to the User Interface documentation.

Disabling Team-Based Permissions

Disabling team-based permissions for a module permanently removes any data associated with team-based permissions for that module. Any role definitions using

the "Owner & Selected Team" option for field-access settings or operations in that module revert to the more restrictive setting, "Owner". All record-level, team-based permissions data for that module are also permanently deleted. Sugar will not remember a record's role-related team settings if you ever wish to re-enable the module for team-based permissions.

To disable team-based permissions for a module, navigate to Admin > Team-based Permissions, uncheck the box next to the appropriate module's name, and click "Save". To disable the functionality for the entire instance, simply uncheck the box labeled "Enable team-based permissions" and click "Save". After disabling team-based permissions for any module, please use the Quick Repair and Rebuild tool to clear your system's cache.

Setting Field-Level Permissions

Role Management also provides the option to set permissions and restrictions on specific fields within modules. To change the field-level permissions for a role, follow these steps:

1. Navigate to Admin > Role Management.
2. Create and save a new role or select an existing role to edit.
3. On the left side of the screen, click on the name of the module that contains the field(s) you would like to restrict.



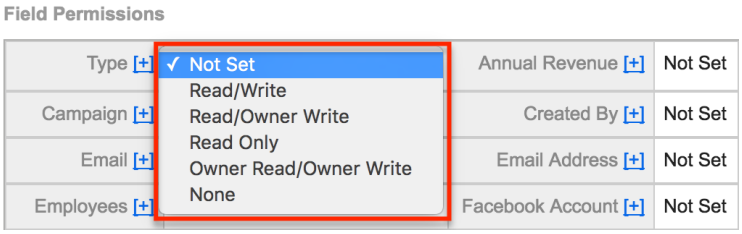
4. On the next screen, find the field that you would like to restrict and then click inside the table cell to the right of that field name. In this example, click on the words "Not Set" next to the word "Type" to edit access to the Type field.



Note: Some fields may be part of a group and the access setting will affect all of the fields in the group. To see which fields, if any, are in a group with the field you are editing, click the Plus (+) sign next to the field's name. Any fields listed as part of a group will also be restricted at the level you choose. Grouped fields cannot be controlled independently. If you cannot

find the field that you would like to restrict in the fields table, it may be grouped within another field. Try expanding fields that are likely to be grouped with the field you are looking for (e.g., the Billing City field for Accounts is grouped under the Billing Street field as part of the billing address group).

5. From the dropdown list, select a level of field access for this role's members based on the field-access definitions explained below.



6. Repeat steps 4 and 5 for any other fields you would like to change in this module for the current role.
7. When complete, click "Save" to secure the changes.

Field Access Definitions

- **Not Set**: The user is neither restricted nor granted access to this field. When permission is "Not Set", users within this role default to "Read/Write" access.
- **Read/Write**: The user can see the value of this field and can edit it.
- **Read/Owner Write**: The user can see the value of this field but can only edit the field's value if they are the "Assigned To" user on the record.
- **Read/(Owner & Selected Teams) Write**: The user can see the value of this field but can only edit the field's value if they are the "Assigned To" user on the record or if they belong to a team that is designated as having extra access on the record. This option is only visible if an administrator has enabled team-based permissions for the module.
- **Read Only**: The user can see the value of this field but cannot change its value.
- **Owner Read/Owner Write**: The user can only see and edit this field if they are the "Assigned To" user on the record.
- **(Owner & Selected Teams) Read/Owner Write**: The user can only see the value of this field if they are the "Assigned To" user on the record or if they belong to a team that is designated as having extra access on the record, but they can edit the field only if they are the "Assigned To" user on the record. This option is only visible if an administrator has enabled team-based permissions for the module.
- **(Owner & Selected Teams) Read/(Owner & Selected Teams) Write**: The user can only see the field and edit the field's value if they are the "Assigned To" user on the record or if they belong to a team that is designated as having extra access on the record. This option is only visible if an administrator has enabled team-based permissions for the module.

- **None**: For Sidecar modules, the user can see this field on layouts (e.g., Record View) but cannot see its value. Instead, Sugar displays "No Access" as the field's value. For Legacy modules (e.g., Documents), the user cannot see the field on any layout. Instead, Sugar displays a blank space on the edit and detail views.

Assigning Users to Roles

A user must be associated with a role to take on the role's permission settings. Assigning a role is much like any other many-to-many relationship in Sugar, where many users can be associated with any particular role, and one user can also be assigned to multiple roles.

If a user is assigned to multiple roles, the most restrictive option for each setting is respected. For example, if a user is assigned to two roles, one which restricts Edit access for the Accounts module to "Owner" and the second which restricts it to "Owner & Selected Teams", the "Owner" setting will be respected. View the Access tab on each user's profile to see the cumulative effect of all of their assigned roles.

Note: For instances that use SugarIdentity, administrators have the ability to log in as other users in their organization using the "Impersonate (Log in as)" option in SugarIdentity. So, once you assign users to roles, you can preview the user's account via impersonation to ensure that the proper permissions and restrictions are in place. For more information on impersonating a user, refer to the SugarIdentity Guide.

Assigning Roles via Role Management

From Role Management, a user can be related to a role via the Users subpanel at the bottom of the detail view. To relate users to a role, use the following steps:

1. Navigate to Admin > Role Management.
2. From the Roles list view, select the desired role.
3. At the bottom of the page, click "Select User" from the Users subpanel.



4. Use the pop-up search menu to search for and select the user(s) you would like to add to this role where you can either click on the user's name or, if selecting multiple users, click their corresponding checkbox and then click "Select".

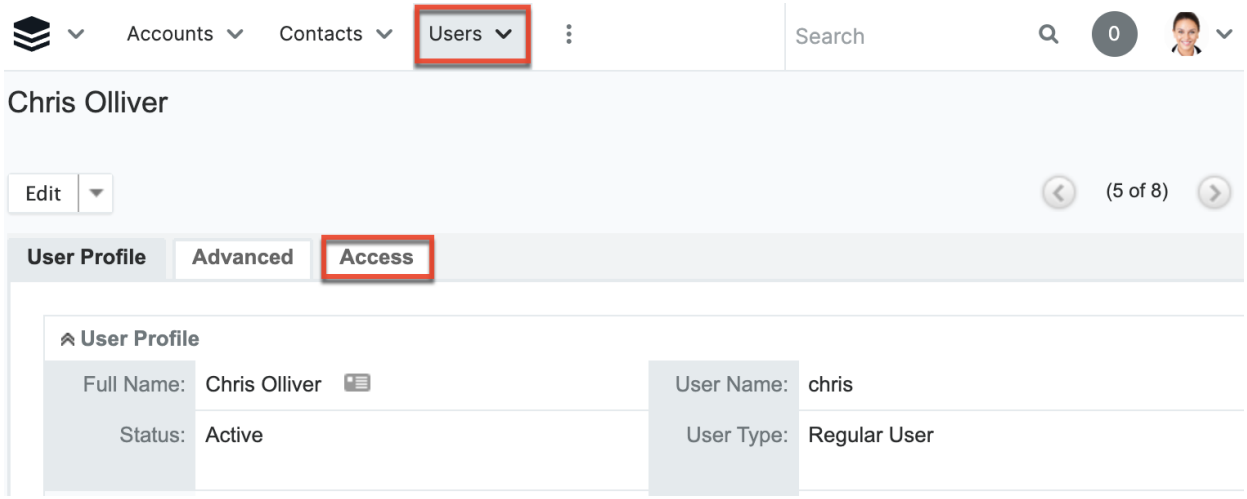


After selecting the user(s), the pop-up search box will close and the user(s) will now be displayed in the Users subpanel for the role to complete the relationship.

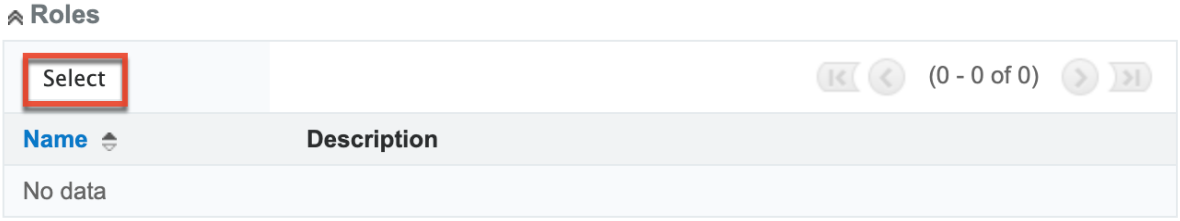
Assigning Roles via User Management

From User Management, a user can be related to a role via the user's detail view. For more information on User Management, please refer to the User Management documentation. To relate a role to a user via User Management, follow the following steps:

1. Navigate to Admin > User Management.
2. From the Users list view, open the user record that you would like to edit
3. From the user's detail view, click on the "Access" tab

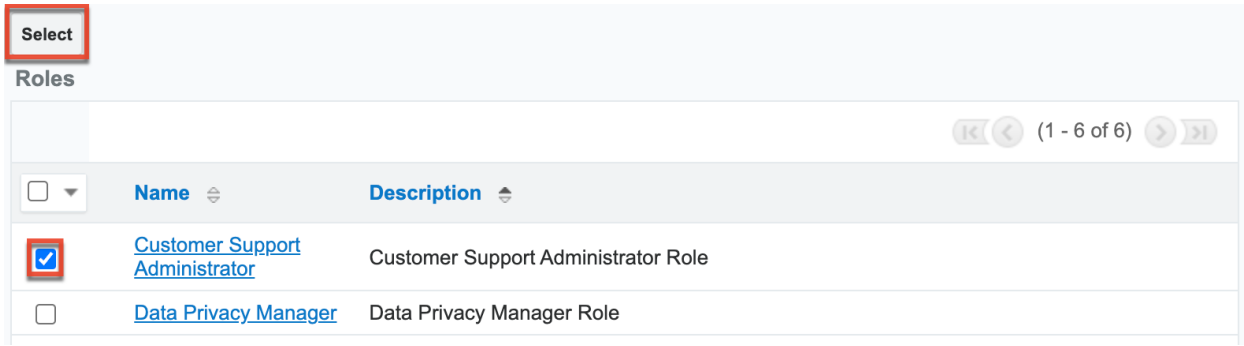


4. Scroll past the Role Chart to the subpanel for "Roles" and click "Select"



5. Use the pop-up search menu to search for and select the role(s) you would like to add to this user where you can either click on the role's name or, if selecting multiple roles, click the corresponding checkboxes and then click

"Select"



After selecting the role(s), the pop-up search box will close and the role(s) will now be displayed in the Roles subpanel for the user to complete the relationship.

Viewing Roles

There are various options available for viewing role records in Sugar including via the Roles list view, Roles detail view, Roles Recently Viewed menu, the List Roles by User function, and from the Users module.

Viewing via List View

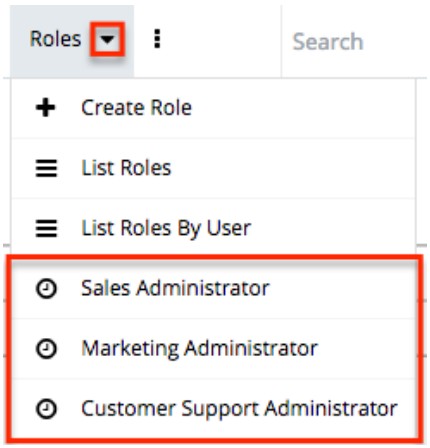
The Roles list view displays all role records meeting the current search criteria. To access the list view, simply navigate Admin > Role Management. Alternately, if you are looking at a role's detail view, you can click the Roles module tab to return to the list view. You can click the role's name to open the record in detail view. For more information on viewing roles via list view, please refer to the Roles List View section of this documentation.

Viewing via Detail View

The Roles detail view is where all of the modifications to the role settings can be made. This page includes the name and description of the role, the chart where module settings can be manipulated, links to the field-level action settings, and the Users subpanel where users can be added to the role. For more information on viewing roles via detail view, please refer to the Roles Detail View section of this documentation.

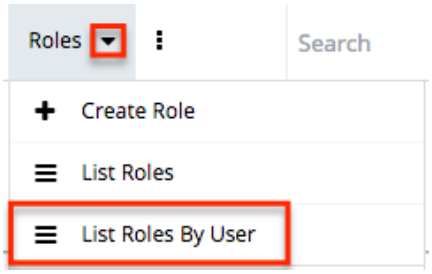
Viewing via Recently Viewed

As you access different roles, Sugar will keep track of which roles you have recently viewed. Click the triangle in the Roles module tab to see a list of the 3 roles you most recently viewed in the module. Clicking the role's name within the list will open it in detail view.

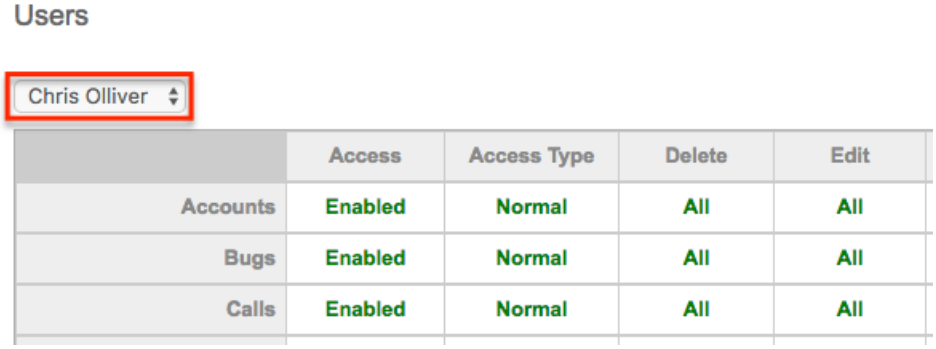


Viewing Roles by User

Role Management offers the option to view all roles assigned to specific users. Click the triangle in the Roles module tab and select "List Roles By User" to view these roles.



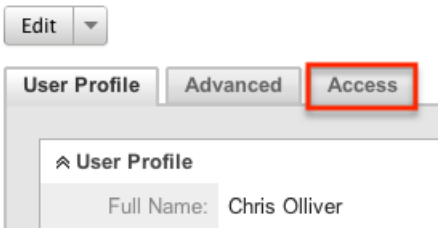
You will be redirected to the Users module and a screen will appear with a dropdown list with all users' names included. Select the user you would like to view and a chart will show which is a compilation of all of the roles listed for the user in the Roles subpanel, at the bottom of the page.



Viewing via Users Module

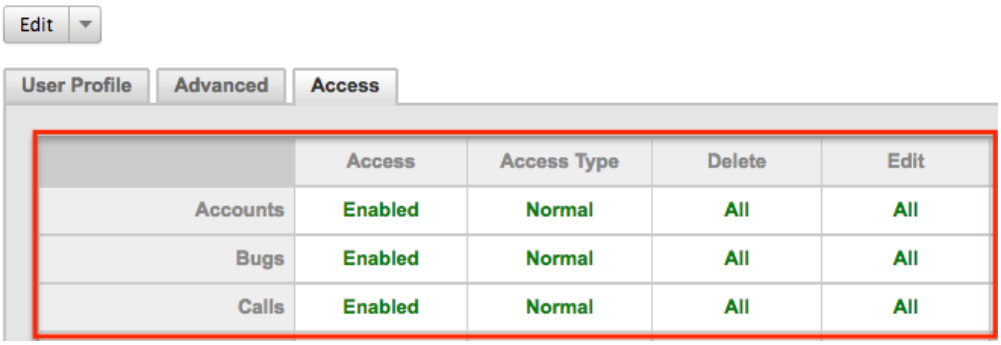
User profiles show which roles the user is related to and how the user's roles work together. When viewing a user profile, all role information can be found by

navigating to the "Access" tab. For information about accessing the Users module, please refer to the Users documentation.



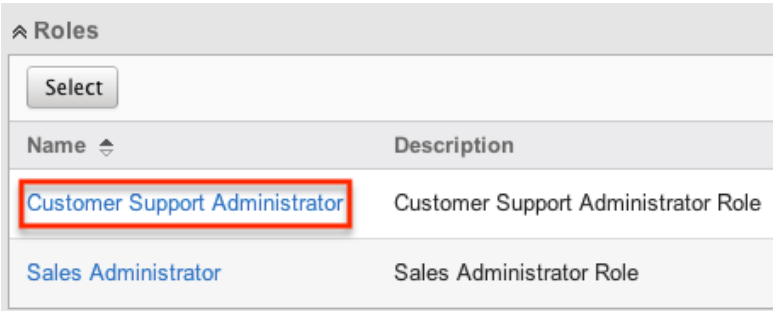
The access tab contains a chart showing all of the modules and actions available in Role Management. This chart is a compilation of all of the roles listed for the user in the Roles subpanel at the bottom of the page.

Chris Olliver



When viewing the chart, the most restrictive setting for the specific intersection will take precedence, and will represent the option for the user. Therefore, if the user has two roles assigned, one of which allows him or her to delete a record and another which does not, Sugar will enforce the option where the user cannot delete the record. The table shown in User Management cannot be edited. Instead, the role itself must be edited which will change the setting for any other users related to the role.

To view the role settings from User Management and make any necessary changes, simply click the role's name from the Roles subpanel, which will take you to the role's detail view.



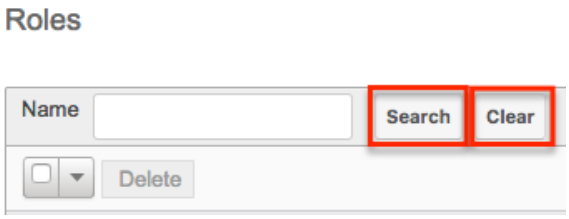
Searching Roles

The Roles list view search function allows you to search for the name of the role to help you locate records easily and effectively. Once the search is performed, the relevant results will be displayed in the Roles list view below.

The buttons in the search panel have the following functions:

- **Search**: Click the Search button or press your Return/Enter key to perform the search.
- **Clear**: Click the Clear button to clear all criteria from the searchable fields.

To see all Role records, simply click "Clear" and then "Search" to perform a blank search with no name filter.



Please note that Sugar automatically appends the wildcard character (%) to the end of your search phrase. This allows the system to retrieve all records that start with the keyword entered in the search. If you would like to broaden the search, you can use the wildcard at the beginning of your text as well (e.g., %Administrator). This will pull up any record that has the word "administrator" in the name, regardless of how it starts or ends.

For more information on using the various search methods as well as how wildcards are used, please refer to the Search documentation.

Roles List View

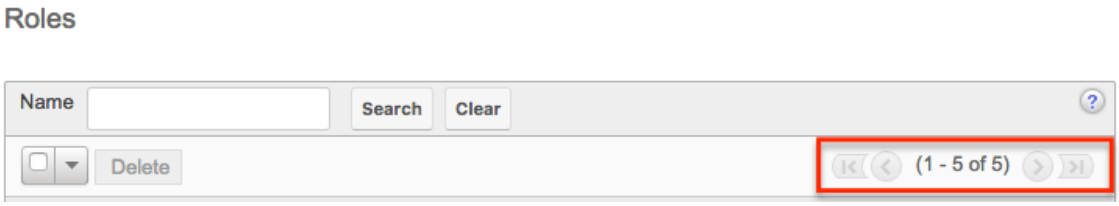
The Roles list view displays all roles that meet the current search criteria (if any). You can view the name and description of each role within the field columns. Click on the name of the role to access the detail view for the role and review the settings further.

Pagination

List view displays the current search results broken into pages that you can scroll through rather than displaying potentially thousands of rows at once. To the right just below the search panel, you can see which records of the total results set are currently being displayed. The two single-arrow Next and Previous buttons can be

used to scroll through the records page-by-page. The two double-arrow First Page and Last Page buttons allow you to skip to the beginning or the end of your current results.

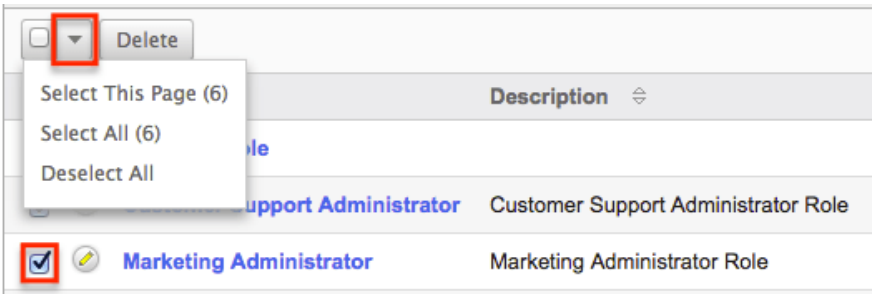
By default, Sugar displays 20 records per list view page, but administrators can change the number of records displayed via the System menu in Admin. For more information on changing the number of displayed records, please refer to the System documentation in the Administration Guide.



Checkbox Selection

Roles can be deleted in a mass-delete fashion via the list view by selecting all of the role records. To select individual role records on the Roles list view, mark the checkbox on the left of each row. To select or deselect multiple roles on the list view, use the options in the checkbox dropdown menu:

- **Select This Page**: Selects all records shown on the current page of results.
- **Select All**: Selects all records in the current search results across all pages of results.
- **Deselect All**: Deselects all records that are currently selected.

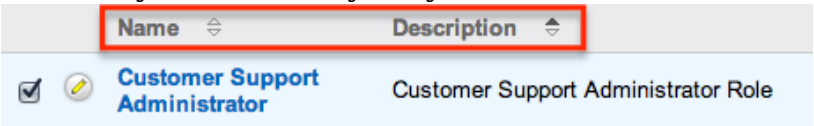


For more information on deleting roles, please refer to the Mass Deleting via List View section of this documentation.

Column Sorting

List view provides the ability to sort all of the current search results by a field column in either ascending or descending order. To sort by a field or switch the sort direction, click the column header for either "Name" or "Description". The list

view may be sorted by only one column at a time.

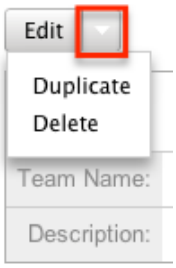


Roles Detail View

The Roles detail view displays thorough information about the role, as well as the ability to perform most actions related to role management. It comprises of a chart showing all modules in Sugar and actions that the user can have access to or be restricted from. The detail view also provides links that, when clicked, drill down into each module to make field-level permission changes. Finally, the detail view includes a Users subpanel where users can be related to the role and will, therefore, take on the role's properties.

Actions Menu

The Actions menu on the top left of each role's detail view allows you to perform various actions on the current record. Administrator users can change the action items to be displayed as separate buttons instead of a dropdown menu via Admin > System Settings. For more information on configuring the actions menu, please refer to the System documentation in the Administration Guide.



The options in the Actions menu allow you to perform the following operations:

Menu Item	Description
Edit	Edit the name and description of this role.
Duplicate	Duplicate this role to create a new role.
Delete	Delete this role.

Role Chart

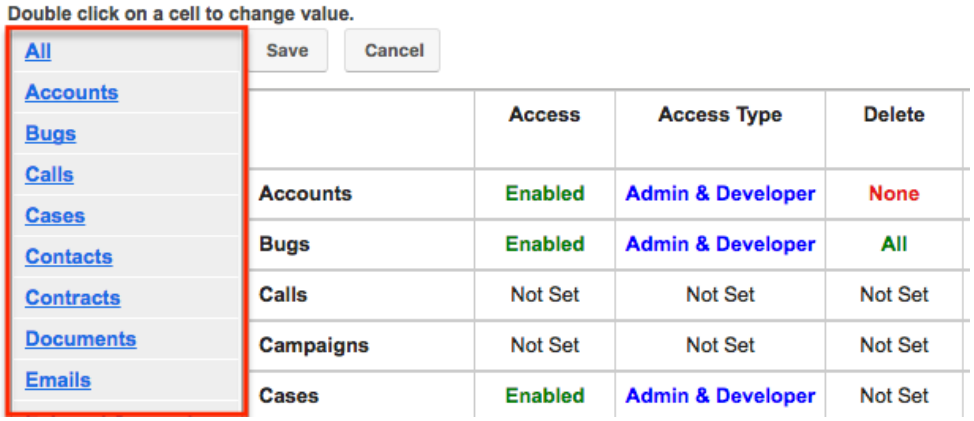
The Role Chart comprises of ten columns and a row for each module down the left-hand side. The columns each represent a type of action within Sugar, and the

corresponding point between the columns and module roles defines the role's permissions. The role permissions can be updated from the detail view of each role. For an explanation of each action and how to update roles, please review the Setting Module-Level Permissions section of this documentation.

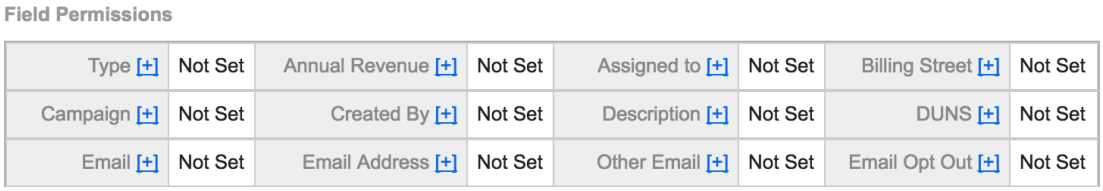
	Access	Access Type	Delete	Edit	Export	Import	List	Mass Update	Record View
Accounts	Enabled	Admin & Developer	Not Set	Not Set	Not Set	Not Set	Not Set	Not Set	Not Set
Bugs	Enabled	Admin & Developer	Not Set	Not Set	Not Set	Not Set	Not Set	Not Set	Not Set
Business Centers	Not Set	Not Set	Not Set	Not Set	Not Set	Not Set	Not Set	Not Set	Not Set

Field Permissions

To the left of the Role Chart is a list of hyperlinked Sugar module names:



Click on a module name to access the Field Permissions view for the module. For an explanation of each action and how to update field-level permissions, please review the Setting Field-Level Permissions section of this page.



Users Subpanel

Beneath the Role Chart, the Users subpanel is available for the Administrator to relate one or more users to the current role. A user must be related to a role to take on the role's permission settings. One user can be related to multiple roles. If a user is related to multiple roles, the most restrictive option for each setting is respected.

To relate users to a role, use the following steps:

1. Navigate to the detail view of the role that you would like to edit.
2. At the bottom of the page, click "Select User" from the Users subpanel.



3. Use the pop-up search menu to search for and select the user(s) you would like to add to this role. You can either click on the user's name or, if selecting multiple users, click their corresponding checkbox and then click "Select".



After selecting the user(s), the pop-up search box will close and the user(s) will now be displayed in the Users subpanel for the role to complete the relationship.

Editing Roles

Roles may be edited at any time to update or add information to the record or to edit the role restrictions. You can make changes to existing role records via the Roles detail view and edit view, depending on the change being made. Changes via the detail view are made directly on the role permission chart. Edit view is available within the Roles module and includes the Name and Detail fields.

Editing via Detail View

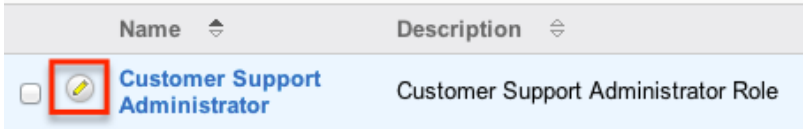
You can edit roles via the detail view by clicking the Edit button on the upper left of the page. Once the edit view layout is open, update either the Name or Description fields, then click "Save" to preserve the changes made.



Edits to the settings on the role are also performed via the detail view. Below the Name and Description fields, is where you will find the role permission chart. This chart is made up of rows representing the different modules in Sugar, and columns representing each of the action types Sugar users can perform. Edits to this table are made by clicking the box at the intersection of a row and column, which produces a dropdown list of available options. For more information on module permission changes, please review the information in the Setting Module-Level Permissions section of this documentation.

Editing via List View

You can edit roles via the list view by clicking the Pencil icon to the left of each role's name. After clicking the pencil, the window will move to the edit view. Update the necessary fields, then click "Save" to preserve the changes. After saving from the edit view, you will be returned to the detail view for the record that you just updated. Because this method brings you to the edit view, only the Name and Description fields can be updated.



Editing via Users Module

The Users module allows you to see all of the roles related to a specific user in one place under the "Access" tab. The page will show a subpanel with a list of all of the roles related to the user. For more information about viewing the roles from the Users module, please review Viewing via Users Module.

On the "Roles" subpanel, there is an option to edit the role. After clicking the "Edit" button, the window will move to the edit view. Update the necessary fields, then click "Save" to preserve the changes. After saving from the edit view, you will be returned to the detail view for the record that you just updated. Because this method brings you to the edit view, only the Name and Description fields can be updated.



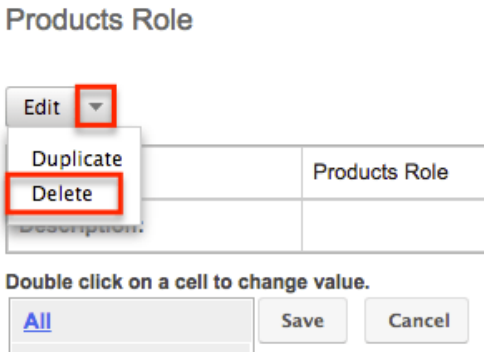
Deleting Roles

If a role record is invalid or is no longer being used in your organization's Sugar instance, it may be deleted from either the Roles detail view or list view. Deleting via the detail view allows you to delete a single record while the list view allows for mass deleting multiple records at once. Deleting role records will not delete the related user records and will only remove the relationship.

Deleting via Detail View

Use the following steps to delete a role via the detail view:

1. Navigate to the role record's detail view.
2. Select "Delete" from the Actions menu.

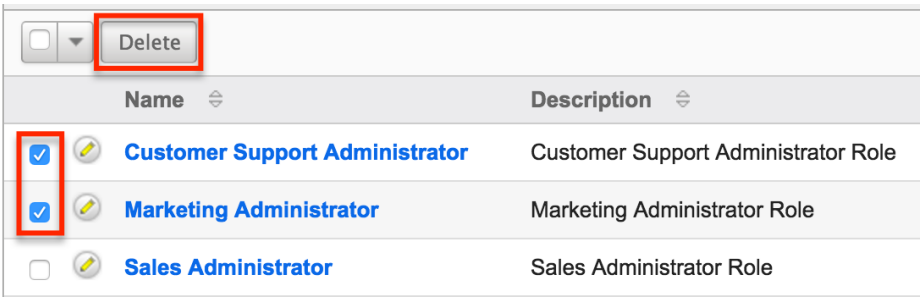


3. A pop-up message will display asking for confirmation. Click "Ok" to proceed.

Mass Deleting via List View

Use the following steps to delete one or more roles via the list view:

1. Navigate to Admin > Role Management.
2. Use the search functionality to find the Role records you wish to delete.
3. Select the desired role records individually or using the checkbox dropdown's options.
4. Choose "Delete" from the Actions menu.



5. A pop-up message will ask for confirmation. Click "Ok" to proceed.

Due to PHP memory limitations on the server, there may be occasions when the application times out while deleting a large number of role records. If you encounter an error when performing this action, we recommend selecting the records in smaller batches.

Password Management

Overview

Password Management is used to administer requirements and other policies about user passwords in Sugar. Sugar allows administrators to set up system-generated passwords versus manually created passwords for new users, failed login lockout attempts, and configure the email templates used to send password information to users. Password management is not used to change users' passwords, which can be done via their User Profile.

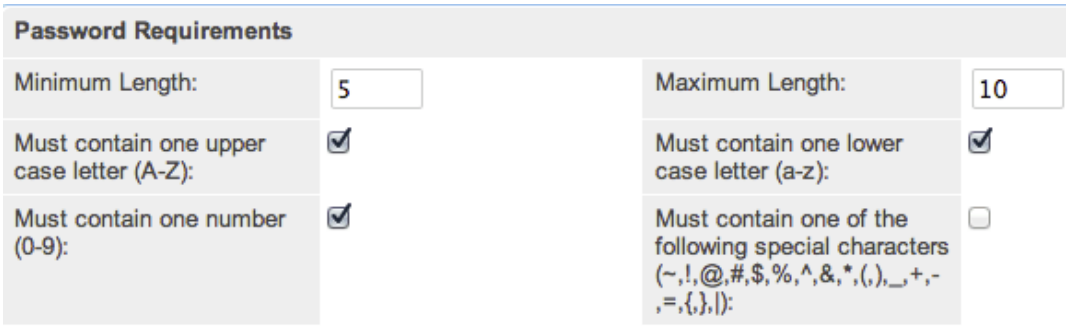
Note: For instances that use SugarIdentity, an administrator will need to access SugarIdentity to configure password requirements as well as set up LDAP or SAML authentication.

Password Requirements

The Password Requirements panel lets you configure minimum and maximum lengths of passwords, as well as what characters are required in passwords. Filling in either of the first two fields, Minimum Length and Maximum Length, will force a requirement for your users to have passwords be more than or less than a given amount of characters. Additionally, use any of the four checkboxes to force character requirements on users' passwords. This can force users to include upper case letters, lower case letters, numbers, or special characters in their passwords. Please note that the configured password requirements also apply to the Sugar Portal and must be respected when the portal user's password is created or changed.

Note: For instances that use SugarIdentity, password requirements are configured

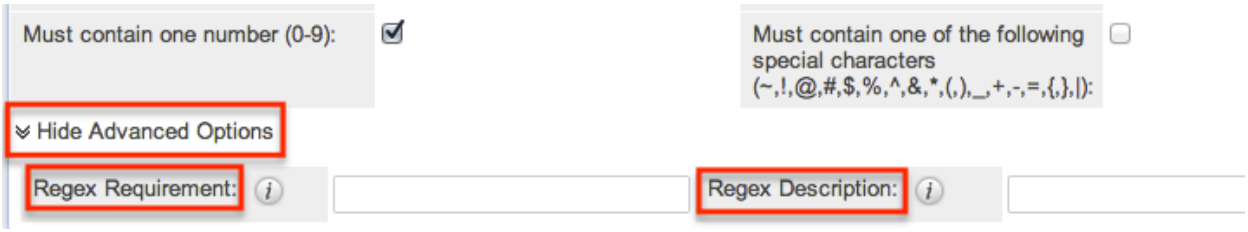
in SugarIdentity.



Advanced Options

You can also specify words or other strings that are not allowed in a password, called Regex Requirements. The configurations for Regex Requirements are found in the Advanced Options section of the Password Requirements panel.

Note: For instances that use SugarIdentity, regex password controls are not available.



To set a Regex Requirement, type in code of characters that are not allowed. In the Regex Description field, write a message to users that will show when they try to edit their passwords, explaining what strings are not allowed. For more information on Regex usage, please review the Regular Expressions website at http://www.regular-expressions.info/.

Some examples of regular expressions in password rules are listed below:

Sample Expression	Password Rule
Sugar	Password cannot contain the word Sugar.
([A-Za-z0-9])\1	Password cannot repeat a letter or number consecutively; for example, AA or 88.
([a-zA-Z]){4,}	Password cannot repeat any two consecutive letters; repeat characters or letters must be separated by a special

	character such as %.
[\t]	Password cannot contain spaces and tabs.
[@#$]	Password cannot contain @, #, or $.

System-Generated Passwords

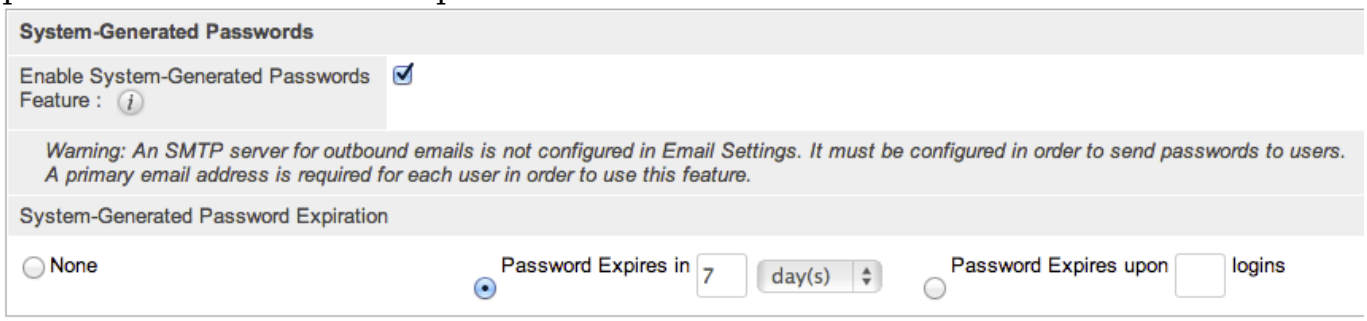
When enabled, the System-Generated Passwords feature will allow users to receive a randomly generated password via email. This functionality is utilized either when a new user is created or when an administrator activates the Reset Password button in the user's profile.

Note: For instances that use SugarIdentity, the System-Generated Passwords feature is not available.

The two requirements to utilize system-generated passwords are:

- A user has a valid primary email address configured in their User Profile.
- A system outbound email server (SMTP) is configured in Email Settings.

For security reasons, when the System-Generated Passwords feature is enabled, you also have the option to set an expiration for the system-generated password. You can specify when the temporary password expires, either after a certain amount of days, months, or weeks, or after a specified number of logins. Simply click the radio button next to the expiration you would like to use and enter the login or length of time variable as necessary, or click "None" for the password to never expire. Once the temporary password expires, users will see a message upon login, informing them that the password has expired and to create a new password. The user will need to enter the temporary password along with the new password and confirm the password as well.



User Reset Password

The forgot password feature allows administrators to enable the Forgot Password link to display in the Sugar login window. If a user does not remember their password, they can click this option, enter their user name and their primary email

address in Sugar, and a Reset Password link will be emailed, guiding them through the process to reset their forgotten password. For more information on how a user resets his or her password, please view the Getting Started documentation.

Note: For instances that use SugarIdentity, the "Forgot Password?" link is available on the Sugar login screen, but the feature cannot be configured.

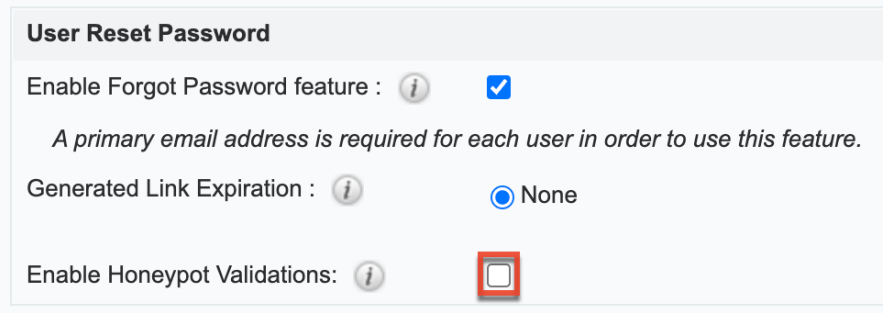
The two requirements to utilize Forgot Password feature are:

- A user has a valid primary email address configured in their User Profile.
- A system outbound email server (SMTP) is configured in Email Settings.

Honeypot Validations

Honeypots are a non-intrusive method of human form submission confirmation that is more effective than traditional CAPTCHA. Enabling the honeypot validation option will add an invisible input field to the Forgot Password form which only bots reading the HTML will be able to see. When the bots fill in the honeypot field, Sugar knows to disregard the submission since it was not created by a human, thus preventing unauthorized access to your Sugar instance.

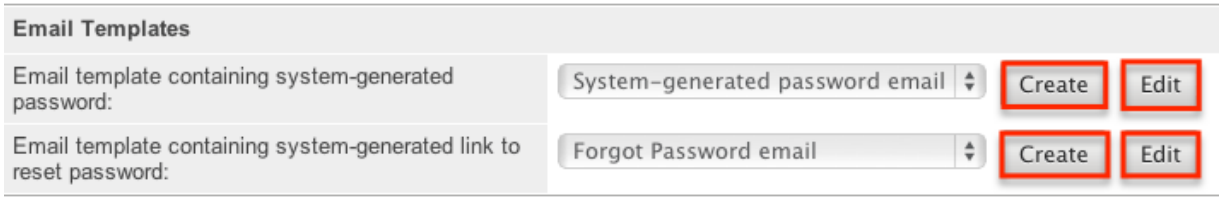
Note: For Sugar instances that use SugarIdentity, Honeypot validation is not available.



Email Templates

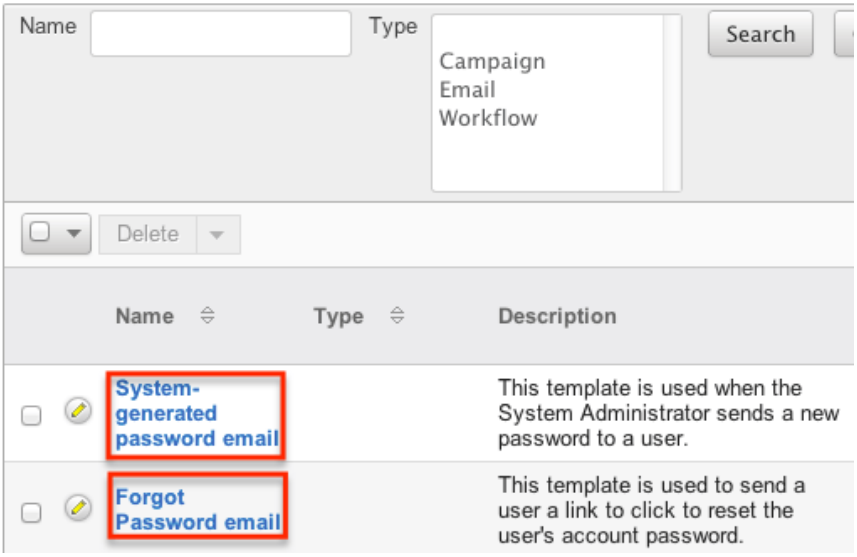
Sugar comes standard with two password templates. One is for the System-Generated Password emails that are sent out, and the other is for the Reset Password email. The templates are editable through Password Management and new ones can also be created. To create a new version of either template, click the Create button on the specific line. To edit the existing template, click the Edit button on the specific line.

Note: For instances that use SugarIdentity, email templates cannot be created or edited.



Templates can also be viewed via the Emails module by navigating to the Email Templates list view. The templates are easily found as the Type is blank, whereas any other template will be either a Campaign, Email, or Workflow template. For more information on Email Templates, please review the appropriate section of the application guide.

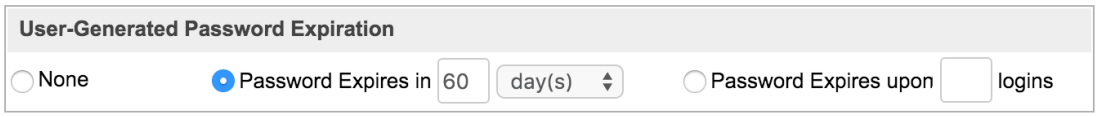
Note: If you choose to create your own templates to send passwords, copy the variables provided in the default template. The variables "$contact_user_link_guid" from the "Forgot Password Email" and the " $contact_user_user_hash" and "$config_site_url" are not available from the variable dropdowns when creating the templates.



User-Generated Password Expiration

Sugar can force users to create new passwords after a given period. Admins can configure this for either specific amounts of time in days, weeks, or months, or after a specific amount of logins. To configure a password expiration, select the radio button next to the expiration period you would like to use and enter the timeframe or amount of logins that the user will be allotted. Once the password expiration is reached, users will see a message upon login, informing them that their password has expired and to create a new password. The user will need to enter their current password along with their new password and confirm the password as well.

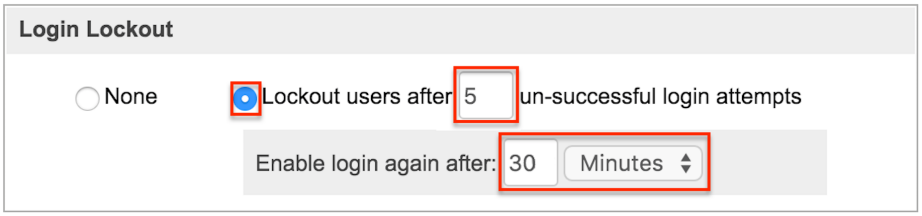
Note: For instances that use SugarIdentity, password expiration rules are configured in SugarIdentity.



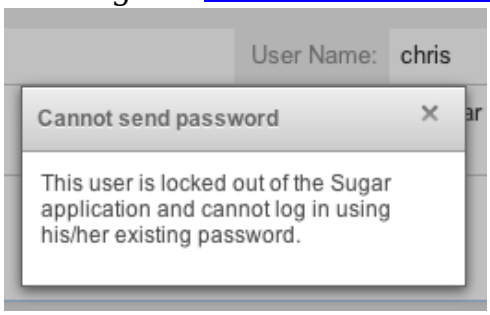
Login Lockout

To prevent unauthorized logins, Sugar includes a configurable lockout function. This means that you will define a specific amount of unsuccessful attempts that a user name can be used to log in before the user name will not be able to log in. You also configure a given amount of time before the restriction is listed in either minutes, hours, or days. To configure Login Lockout, click the radio button next to "Lockout users after {blank} unsuccessful login attempts", fill in the maximum number of attempts allowed and define the timeframe.

Note: For instances that use SugarIdentity, login lockout rules are configured in SugarIdentity.



Note: When a user has been locked out, the user must wait until the given timeframe has passed. The only way to manually allow a user to log back in is by clicking the Reset User Preferences button in the user's profile.



External Authentication

Sugar can respect external authentication protocols (i.e., LDAP and SAML) to give users a seamless login process via single sign-on (SSO) services. LDAP and SAML configuration options are located in the last two panels of the Password Management page. Click the checkbox next to the external authentication type

that you would like to enable. Upon selection, the page's contents will refresh and the chosen protocol will supersede any other Password Management settings.

Note: For instances that use SugarIdentity, LDAP and SAML authentication are configured in SugarIdentity via the SugarCloud Settings console.

Note: If a user logs out of their single sign-on account from outside of Sugar, they will continue to be logged into Sugar.



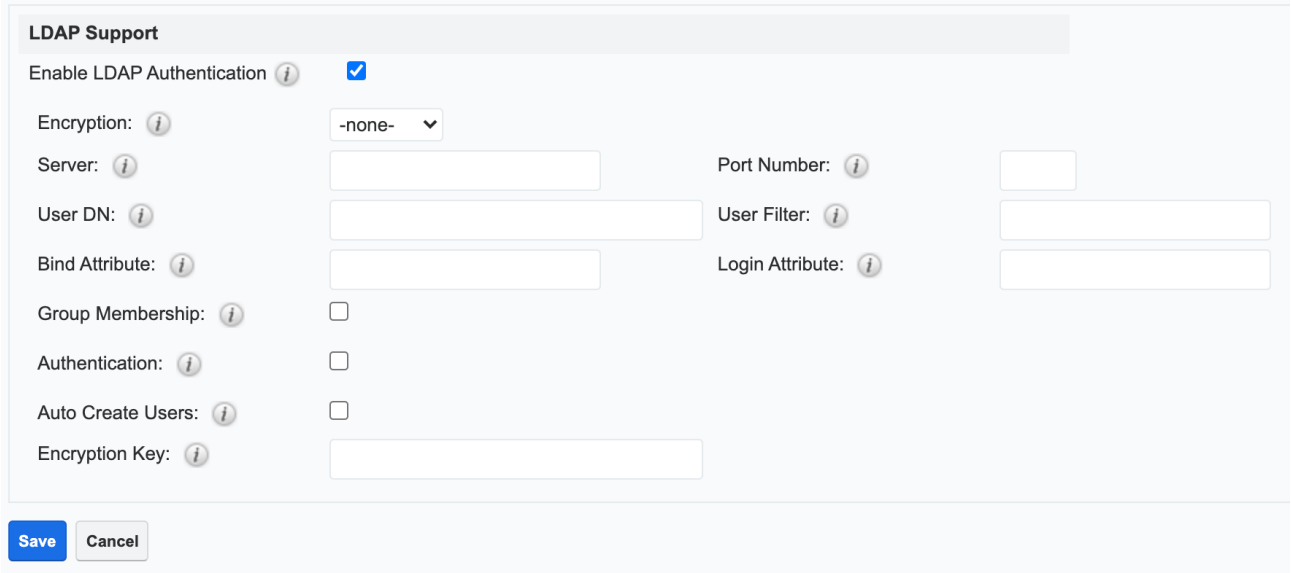
The following sections explain LDAP and SAML options in more detail.

Note: Team Management and Role Management are still taken into account when External Authentication is active.

LDAP

Sugar can be configured to accept Lightweight Directory Access Protocol (LDAP) authentication if your organization has implemented LDAP or Active Directory authentication. When users in your system attempt to log into Sugar, the application will authenticate their credentials against your LDAP directory or Active Directory. If authentication is successful, the user is granted access to Sugar. If the authentication is unsuccessful, Sugar will then attempt to verify the provided credentials against its own database of valid user names and passwords. Please note that for instances that use SugarIdentity, LDAP is configured in SugarIdentity.

To configure LDAP, navigate to Admin > Password Management, and enable the "Enable LDAP Authentication" checkbox in the LDAP Support panel. Sugar will then display some additional fields where you can enter information specific to your LDAP or Active Directory account.



Once you have completed the form, you will then need to enable LDAP for users by navigating to Admin > User Management, selecting the desired user, then clicking the Advanced tab in their user profile. Enable the "LDAP Authentication Only" checkbox then click "Save". Sugar will then synchronize the user's Active Directory user name and present the password on the LDAP port. When the user next logs into Sugar, they will enter their Active Directory username and password.

LDAP Fields

Fill in the appropriate options in the following fields, and then click "Save" to commit the changes. The following are suggested values for each field, but these may vary depending on your LDAP configuration.

Field	Suggested Values	Description
Authentication	Enter "username@MYSERVER.MYDOMAIN.com" or "domain\\userfirstname.userlastname" for the User Name, and the corresponding Password. **Note**: The latter username format requires double backslashes after the domain. Sugar will automatically remove one backslash upon Save.	Check this box to enable the User Name and Password fields. **Note**: You must add a service account user (read-only access) to your Active Directory to authenticate via Sugar.

Auto Create Users	Typically, this box remains disabled.	Select this checkbox to create the username in the Sugar database if it does not already exist. **Note**: When enabled, a Sugar user is created for every LDAP user logging into the application. This will occupy an active Sugar license for each created user.
Bind Attribute	For Active Directory, enter userPrincipalName.	A case-sensitive value.
Enable LDAP Authentication		Uncheck this box if you would like to disable LDAP in your instance.
Encryption	• Select "StartTLS" or "LDAPS" if the LDAP server supports it. • Select "none" for no encryption.	Select the appropriate option from the dropdown to use StartTLS, LDAPS, or no encryption when connecting to the LDAP server.
Encryption Key		If you are using LDAP with SOAP, enter the encryption key to encrypt user passwords in the Sugar Plug-in for Microsoft Outlook. **Note**: The "php_mcrypt" extension must be enabled in the php.ini file.
Group Membership	**Group DN:** Enter the group DN name. • ou=groups • dc=example • dc=com **Group Name:** Enter the group name. • cn=sugarcrm	Select this checkbox if you wish to specify that the user is a member of a specific group.

	User Attribute: A unique identifier used to check if the user is a member of the group. • uid **Group Attribute:** The attribute of the group that will be used to filter against the User Attribute. • MemberUid	
Login Attribute	For Active Directory, enter sAMAccountName.	A case-sensitive value.
Port Number	• Enter "636" if using LDAPS encryption. • Enter "389" if using "StartTLS" or no encryption.	Enter the default port number.
Server	Enter MYSERVER.MYDOMAIN.com.	Enter the FQDN of your Active Directory Server which should be your Domain Controller.
User DN	Enter ou=people, dc=example, dc=com.	Enter the user DN name.
User Filter	Enter is_user_id=1.	Enter any additional parameters to apply when authenticating users.

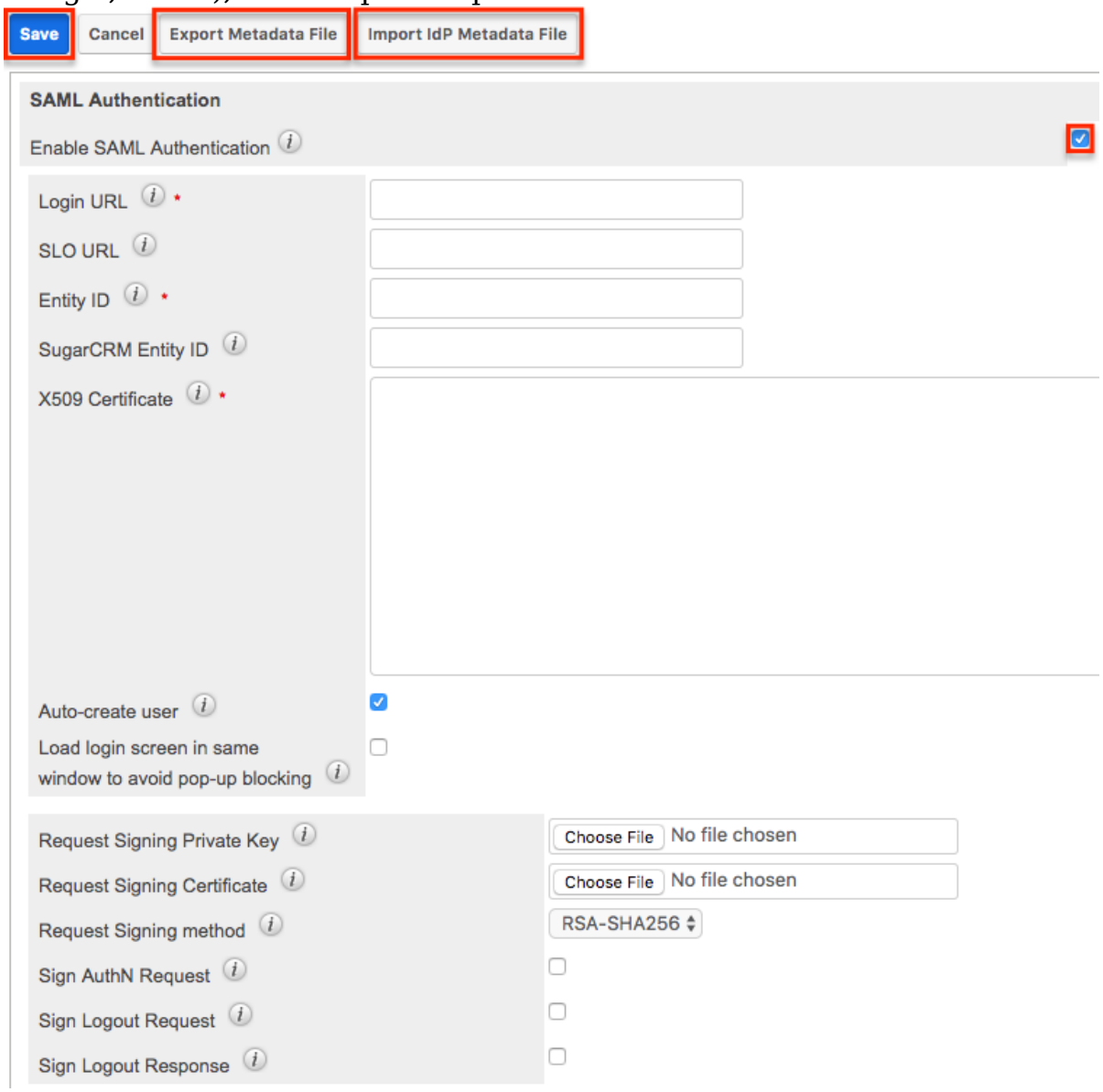
SAML

Sugar can be configured to accept Security Assertion Markup Language (SAML) for single sign-on if it is implemented at your organization. When users in your system attempt to log into Sugar, the application will authenticate them against SAML. If authentication is successful, the user is granted access to Sugar. If the authentication is unsuccessful, Sugar will then attempt to verify the provided credentials against its own database of valid user names and passwords. Sugar supports the use of SAML version 2.0.

Note: For instances that use SugarIdentity, SAML is configured in SugarIdentity.

Use the following steps to configure SAML authentication in Sugar:

1. Navigate to Admin > Password Management and place a check in the "Enable SAML Authentication" box in the SAML Authentication panel.
2. Enter appropriate values in the fields on the SAML Authentication page. If you have downloaded a metadata file from the identity provider (e.g., Okta, Google, ADFS), then skip to step 3.



3. If you have obtained a metadata file from the identity provider (e.g., Okta, Google, ADFS), then you can import the file by clicking the "Import IdP Metadata File" button. Locate the metadata file you saved then click "Open". Certain fields (e.g., Login URL, SLO URL, Entity ID, X509 Certificate) on the page will be auto-populated with data from the file. Optionally, complete any other desired fields on the configuration page based on your needs.

Note: If you are using Okta with single logout enabled, then you will need to complete the "Sign Logout Request", Request Signing Private Key", and "Request Signing Certificate" fields in order to digitally sign the logout request.

4. Once the necessary fields have been completed, click "Save" to preserve the settings.

When using ADFS, you will need to export an XML metadata file containing the SAML settings which you will need in order to configure a new trust relationship between Sugar and ADFS to allow communication between the two services. Simply click the "Export Metadata File" button to download the necessary file. Please note that you will only be able to export a file if the required fields have been completed and saved. Once you have the metadata file, follow the steps in the Configuring SSO With Active Directory's ADFS article to configure a new ADFS trust relationship.

Please refer to the SAML-Toolkits example for more information on how to configure advanced SAML connections.

SAML Fields

The available fields to configure on the SAML Authentication page are as follows:

Field	Description
Enable SAML Authentication	Uncheck this box if you would like to disable SAML Authentication in your instance.
Login URL	Enter the SAML URL for authentication. **Note**: This is the path to the SAML server to which you are authenticating.
SLO URL	Enter the single logout endpoint to which Sugar will send logout requests. When Sugar sends a logout request to the identity provider (e.g., Okta), it will extend that request and terminate active sessions for all other service providers that are sharing the session established via SAML. **Note**: Single logout requests can be initiated from either the identity provider or Sugar.
Entity ID	Enter a valid URI for the IdP (identity provider) entity. **Note**: Sugar will only accept SAML

	assertions from this ID.
SugarCRM Entity ID	Enter a valid URI for the service provider entity.
X509 Certificate	Enter the SAML X509 certificate public key.
Auto-create user	Check this box to automatically create a new username in the Sugar database if it does not already exist. When enabled, a new Sugar user is created for every SAML user logging into the application. **Note**: This will occupy an active Sugar license for each created user.
Load login screen in same window to avoid pop-up blocking	Enable this option to load the SAML login screen in the current window to prevent pop-up blockers from preventing single sign-on.
Request Signing Private Key	Upload the PEM file containing the private key to be used to sign the AuthN and Logout requests. **Note**: The private key must be uploaded in order to sign the logout request, logout response, and/or AuthN request.
Request Signing Certificate	Upload the CRT file containing the X.509 certificate to be used to sign the AuthN and Logout requests. **Note**: The certificate should match the uploaded private key.
Request Signing method	Select the digital signing method for the logout request, logout response, and/or AuthN request. The recommended options are either "RSA-SHA256" or "RSA-SHA512".
Sign AuthN Request	Check the box to sign the AuthN request using the private key and certificate. **Note**: The "Request Signing Private Key", "Request Signing Certificate", and "Request Signing method" fields must be completed in order to sign the AuthN request.
Sign Logout Request	Check this box to sign the logout request using the private key and

	certificate. **Note**: The "Request Signing Private Key", "Request Signing Certificate", and "Request Signing method" fields must be completed in order to sign the logout request.
Sign Logout Response	Check this box to sign the logout response using the private key and certificate. **Note**: The "Request Signing Private Key", "Request Signing Certificate", and "Request Signing method" fields must be completed in order to sign the logout response.

If you are using OneLogin, please ensure that only the email address user field is mapped to Sugar's email address field in OneLogin's parameters configuration. Mapping to other fields such as user name is not supported and may prevent authentication.

Note: You must disable the Forgot Password option if you are using SAML authentication.

Setting User Passwords

Administrators have the option to manually set or reset user's passwords as need be. Setting a regular user's password is done simply through the Users module via Admin > User Management. This method will vary depending on the System-Generated Passwords option. For more information on changing a user's password from the Users module, please review the Resetting User Passwords section of the Users documentation.

Note: For instances that use SugarIdentity, administrators will not be able to manually change a user's password via the user's profile. But administrators can send password reset emails to users via SugarIdentity.

User Management

Overview

The User Management module provides administrators access to create, edit, activate, and deactivate the profiles of all the users in their Sugar instance. This module and underlying settings control each individual's login credentials as well

as some personalized settings. During the installation process, Sugar creates one system administrator by default. The system administrator can log in and create additional users, in a variety of capacities, to be able to access Sugar and utilize all of the other CRM functionality. In combination with the role and team security, administrators can fully establish a profile for each user in Sugar.

Notice: For instances that use SugarIdentity, the administrator will need to access SugarIdentity to create and manage user records.

User Types

There are four types of users in Sugar: Regular User, System Administrator, Group User, and Portal API User. Each user type has different functions in Sugar which will vary for each instance. Depending on an organization's use of Sugar, not all of these user types will be necessary. Only regular users and system administrators in an Active status count towards licensed user limits. The purpose of each user type is explained in the following sections.

Regular User

A regular user is the most common of the user types. A majority of employees of an organization will be regular users. This user can access most Sugar modules and perform most standard functions by default. Regular users are subject to be restricted in their abilities and what records they can access by an administrator using the Teams and Roles functionalities in Sugar.

Regular Users will appear in the Employees module. To create a Regular User, please review the Regular and Admin Users section of this page.

System Administrator

System Administrator users, or "admins," have all of the abilities and functionality of a regular user, but also have administrative privileges as well. Admins can perform functions such as creating and editing users, editing system-wide settings, and have access to diagnostic and troubleshooting tools. In addition, admins can access all modules and records and are not subject to team or role restrictions. All instances of Sugar require at least one administrator, but it is also recommended to have more than one in case the original admin is unavailable or is no longer with the company.

System Administrators will appear in the Employees module. To create a System Administrator, please review the Regular and Admin Users section of this page.

Note: All administrators where the user status is active count as a licensed user.

Group User

A Group User is a bucket that is used for assigning records to a non-specific user (e.g., Sales, Support) in the organization. Unlike a Regular or System Administrator user, a Group user does not have access to log in to Sugar. Due to this, they do not have the same profile settings available, including the option to set a password. Since Group users cannot log in to Sugar, they do not count against an organization's license count.

Examples of uses for a Group user would be to assign all new leads to a group user named "Sales" or assign all newly-created support cases to "Support" before they are delegated to specific users (e.g., John Smith) in the organization.

Please note that Group users will not appear in the Employees module. For more information on how to create a Group user, please review the Group Users section of this page.

Portal API User

A Portal API User is similar to a Group User except that it is created specifically to communicate with the Sugar server using the Sugar Portal API functionality. It is intended only for use with Sugar Portal; the user with user name "SugarCustomerSupportPortalUser" is automatically enabled when the Sugar Portal is enabled via Admin > Sugar Portal. It must remain enabled in order for portal users to authenticate. This user can only be used to authenticate contact credentials against portal API methods and determine portal account permissions based on the Customer Self-Service Portal role. To create a Portal API user, please review the Portal API Users section of this page.

Portal API Users will not appear in the Employees module and are not counted in the user license agreement. More information about the Sugar Portal can be found in the Sugar Portal documentation. Sugar's API documentation can be found in the Web Services section of the Developer Guide.

Note: The Portal API user is not intended to be a free API user for external integrations and has very limited functionality through the API.

License Types

Users are given access to specific capabilities in the product by assigning them one or more licenses (e.g., Sugar Sell Premier, Sugar Serve) in the License Type field on the user record. See the License Management page for details on working with user licenses and license limits.

To compare which functionality each license type has access to, refer to the

License Types Matrix page.

User Fields

The Users module contains a number of stock fields, which are included out-of-the-box with Sugar. The below definitions are suggested meanings for the fields, but many of the fields can be leveraged differently to best meet your organization's needs. System Administrators have the ability to alter, remove, or add fields in the User Profile tab via Admin > Studio, minus a few noted exceptions. For more information on adding or modifying fields, please refer to the Studio documentation.

For instances that use SugarIdentity, the following user fields are read-only and can only be edited in SugarIdentity:

- Username
- Status
- User Type
- First Name
- Last Name
- License Type
  Note: For certain SugarIdentity-enabled instances, this field is only available to manage in SugarIdentity.
- Title
- Department
- Work Phone
- Address Street
- Address City
- Address State
- Address Postal Code
- Address Country
- Primary Email Address

The User Profile tab contains the contact information for the user and other important user-specific settings. The User fields are as follows:

Field	Description
Address City	The city of the user's address.
Address Country	The country of the user's address.
Address Postal Code	The postal code of the user's address.
Address State	The state of the user's address.
Address Street	The street name and number of the user's address.

Avatar	Upload an image to this field to represent the user that will be shown on the Activity Stream and next to the user's name on the navigation bar.
Business Center Name [1]	The business center this user belongs to.
Department	The department where this user works.
Description	A description or other information about this user.
Display Employee Record	Check this box if the user should have an employee record show in the Employees module.
Email Address	The user's email addresses, where a primary address is selected to receive email notifications and if this should be a reply to address when using Sugar's outbound email (SMTP) functionality. **Note**: This field is not editable in Studio.
Email Client	When clicking on an email address in Sugar, this will determine if Sugar's email composer will open or if the user's primary email program on this computer (e.g., Microsoft Outlook, Apple Mail, etc.) will open. **Note**: This field is not editable in Studio.
Employee Status	The user's employment status in the organization (Active, Terminated, or Leave of Absence). **Note**: The Employee Status and Status fields are managed separately, so consider choosing a new employee status when the Status field changes.
Fax	The user's fax number.
First Name	The user's first name.
Home Phone	The user's home phone number.
IM Name	The user's instant message screen name.
IM Type	The user's instant message service type.
Last Name	The user's last name.
License Type	Determines what Sugar functionality the user may access. For more information,

	refer to the License Types section above. **Note**: For certain SugarIdentity-enabled instances, the License Type field is managed in SugarIdentity.
Mobile	The user's mobile phone number.
Other Phone	An additional phone number for the user.
Reports to	The user's manager. The user that this user reports to will become an implicit member of this user's Teams. The "Reports To" field is also leveraged by several features in Sugar. For more information, refer to the Understanding the Reports To Field section of this page. **Note**: This field is not editable in Studio.
SMTP Password	If an outgoing email server is defined in Admin > System Email Settings, the user's SMTP password can be input here to send mail through Sugar. **Note**: This field is not editable in Studio.
SMTP Username	If an outgoing email server is defined in Admin > System Email Settings, the user's SMTP user name can be input here to send mail through Sugar. **Note**: This field is not editable in Studio.
Status	Making a user inactive will make it so this user cannot log in to Sugar. This will also remove the user from taking a license seat, without having to delete the user. When making a user inactive, the admin is prompted to use the Reassign Records function. **Note**: The Employee Status and Status fields are managed separately, so consider choosing a new employee status when the Status field changes.
Title	The user's job title.
User Name	The user name will be what the user logs in to Sugar with on the login page. It will also show for other users when they view fields such as "Assigned to"

	and "Created By". This is the name that will define the specific user in Sugar and should be unique for every user.
User Type	Specifies what type of user this is which, a system administrator, regular user, etc as described in the User Types section above. **Note**: This field is not editable in Studio.
Work Phone	The user's work phone number.

[1] This field is only accessible to Sugar Serve and Sugar Sell users; users without a supported license type cannot update the value of this field. See the License Types section for more details.

The Advanced tab in the user's profile includes settings to configure how Sugar will function for that specific user. The fields in the Advanced tab cannot be edited in Studio.

Field	**Description**
1000s Separator	Select a character to use as a 1000's separator, with an example showing in the "Example" box.
Create Revenue Line Items in Preferred Currency	Mark the checkbox to use your preferred currency when creating revenue line items based on a product catalog item, rather than the default behavior of using the product catalog item's currency.
Data Font Size	The default font size of the PDF body when generated by this user.
Date Format	How date fields will appear for the user, with the ability to control month, day, and year formatting.
Decimal Symbol	Select a character to use as a decimal symbol, with an example showing in the "Example" box.
Default Teams	A default team defines the team set when this user creates a record. Whenever this user creates a record, the team is set as the user's default team, similar to how the "Assigned To" field is set to be the created user.

	Note: Users can be assigned any number of default teams.
Export Delimiter	Character or characters used to delimit exported data by this user.
Field Name Placement	Choose whether field names are displayed above or beside field values in record view; by default, field names are displayed beside the field value. This option does not apply to the Record View dashlet.
First Day of Week	Which day of the week will show as the first day when the user views the Sugar legacy calendar.
Font for Footer	Select a font for the footer in PDF documents when generated by this user.
Font for Header and Body	Select a font for the header and body of PDF documents when generated by this user.
iCal integration URL	URL in which someone can subscribe to the user's Sugar legacy calendar within iCal or other programs that support iCal integrations.
Import/Export Character Set	The default character set used for imports, exports, and vCard generation for this user.
Main Font Size	The default font size in the PDF header when generated by this user.
Name Display Format	How concatenated name fields will appear for the user, with the ability to control first name, last name, and salutation formatting.
Notify on Assignment	When this box is checked, the user will receive an email notification when a record is assigned to them by another user. **Note**: A system outbound mail account must be enabled in Admin > System Email Settings.
Preferred Currency	Select the user's default currency to be used when creating new records. Additional currencies can be defined in Admin > Currencies.

Publish at my Location	Used to share free/busy information between Sugar legacy calendar and Microsoft Outlook calendar.
Publish Key	Alphanumeric code entered by the user to uniquely identify his or her legacy calendar and populate the iCal integration URL, Publish at my location site, and Search Location.
Reminders	This field sets the default reminder settings for calls and meetings created by this user so that when the user creates a call or meeting, the reminder settings will be pre-populated to the configuration defined in this field. **Popup**: Users that are invited to a call or meeting created by this user to receive a browser popup notification for the call or meeting at a given time interval before the activity. **Email all invitees**: Invitees invited to a call or meeting created by this user to receive an email notification for the call or meeting at a given time interval before the activity.
Search Location	Used to share free/busy information between Sugar legacy calendar and Microsoft Outlook calendar.
Select Modules for Navigation Bar	The order of the module navigation bar is defined by the order in the Display Modules column and modules listed in the Hide Modules column will not appear in the bar.
Show Full Names	When this box is checked, the user will see users' full names ("John Smith") instead of user names ("jsmith") when using Sugar.
Show Preferred Currency	Mark the checkbox to convert the base currency to user-preferred currency in list views and record views. **Note**: User-preferred currency is not used in the Quotes record view or for quoted line items. For more information,

	refer to the Quotes and Quoted Line Items documentation in the Application Guide.
System Significant Digits	Define how many digits will appear after the decimal point when the user views a currency field, with an example showing in the "Example" box.
Time Format	How time fields will appear for the user, with the ability to control hour, minute, and 12 versus 24-hour clock formatting.
Time Zone	Select the local time zone for this user based on geographical location. **Note**: This Time Zone setting only applies to modules using the Legacy user interface. Modules using the Sidecar user interface will utilize the browser's time zone.
User Wizard Prompt	Mark the checkbox to have users go through the New User Wizard upon their first login.

Note: The Quotes and Revenue Line Items modules are not available for Sugar Serve users. For more information on license types and the functionality available for each type, refer to the License Types section.

Understanding the Reports To Field

The Reports To field on the User record is used by various parts of Sugar to determine who a user's manager (i.e., supervisor) is. Some examples of how Sugar uses this relationship are described below:

- **Workflow Management**: Alerts and actions in Sugar's Workflows module allow you to send an alert to or assign a record to a user's manager. For example, you may wish to notify a user's manager when that user creates a new high-priority case. Refer to the Workflow Management documentation for more information.
- **SugarBPM**: Users' managers can be used in activity assignments, email recipients, and evaluations when designing a process definition. For example, you may wish to assign an approval activity to the manager of the owner of a quote before the quote is ready to be sent to the customer. Refer to the Process Definitions documentation for more information.
- **Teams**: Managers are an implicit member of all of their reportees' teams, which gives them access to all of their reportees' records. Refer to the Team Management documentation for more details on implicit and explicit

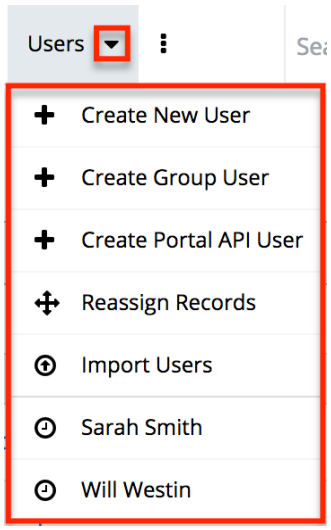
team membership.

- **Organization Chart Dashlet**: This dashlet visually outlines the hierarchy of Sugar users under the current user according to the Reports To field. The dashlet includes reportees that are two or more levels below them.

Note: Only administrators can edit the Reports To field.

Users Module Tab

Administrators can access the Users module tab via Admin > User Management. Click the triangle in the Users module tab to open the Actions menu and Recently Viewed menu. You can also click the Users tab to access the Users list view. The Actions menu allows you to perform important actions within the module. The Recently Viewed menu displays the list of users you last viewed in the module. For more information on records last viewed, please refer to the Viewing Via Recently Viewed section of this page.



The options in the Actions menu allow you to perform the following types of action:

Option	Description
Create New User	Opens the edit view layout to create a new user. **Note**: For instances that use SugarIdentity, the SugarIdentity console opens in a new browser tab to create a new user.
Create Group User	Opens the edit view layout to create a new Group User.
Create Portal API User	Opens the edit view layout to create a

	new Portal API User.
Copy Content	Copy user preferences and content from one user to individual users or all users in a team or role.
Copy User Settings	Copy the current user's locale settings to individual users or all users in a team or role.
Reassign Records	Opens the Reassign Records tool.
Import Users	Opens the import wizard to create or update users using external data. **Note**: For instances that use SugarIdentity, the import option can only be used to update existing user records. Administrators can access SugarIdentity to import a list of new users using a CSV file.

Creating Users

There are various methods for creating new users in Sugar. These are via the Users module, duplication, or import. Creating users is an imperative function in Sugar as it allows for other members of your organization to log in and work in Sugar. Please note that you will not be able to add more users of a particular license type than is allowed by your Sugar license. For more information on how Sugar's licensed user limits work, refer to the Understanding User Types, License Types, and Sugar Licenses article.

Notice: For instances that use SugarIdentity, the administrator will need to access SugarIdentity to create new users.

Creating via Module Tab

The most common method for creating users in Sugar is via the Users module. The edit view layout opens when creating the user directly from the Users menu and includes all of the relevant fields to create a new user. The fields and options on the Create page will vary depending on the type of user you are creating.

Regular and Admin Users

Regular and Admin users are the most common users that will be created in a Sugar instance and contain the most detail and fields compared to the other user types. For more information about the use of Regular and Admin users, please review the Regular User and System Administrator sections of this page.

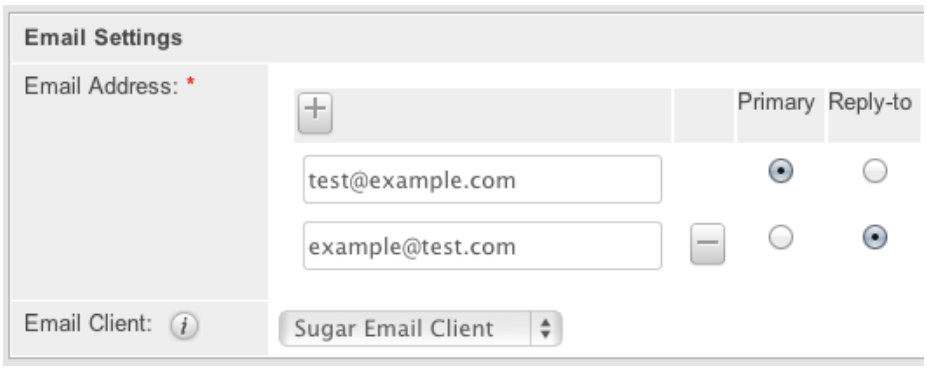
Notice: For instances that use SugarIdentity, the administrator will need to access SugarIdentity to create new users. For certain SugarIdentity-enabled instances, the users' license type (e.g., Sugar Serve) is managed in SugarIdentity, and the License Type field will be read-only in the Sugar application.

Use the following steps to create a new user:

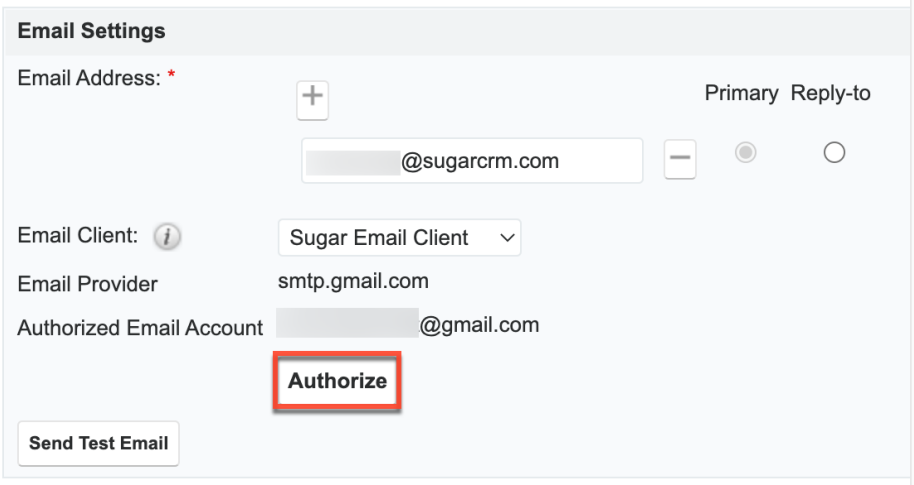
1. Navigate to Admin > User Management.
2. Click the triangle in the Users module tab to open the Actions menu and select "Create New User".



3. Enter appropriate values for the fields in the edit view layout. All required fields are marked with a red asterisk and must be completed prior to saving.
    - Enter the following information under the User Profile tab:
        - In "User Profile" enter a user name for this user which will define the specific user in Sugar and should be unique for every user. Sugar will default the user to being Active and a Regular User, which can be updated if the user is going to be an administrator.
        - In "Employee Information", contact information and other specific information about the user can be added. This will include phone numbers, contact address, the user's department and job title, and any description information.
        - In "Email Settings" the user's email address or addresses can be added. The email addresses can also be marked as "Primary", meaning that this will be the first email address that shows for the user, and "Reply-to", where automatic notifications from Sugar will be sent. In this section, the user's outbound email client will be selected to default to Sugar or an external program, such as Microsoft Outlook. If a mail server is configured in Admin > System Email Settings, additional options will display here for SMTP Username and SMTP Password.

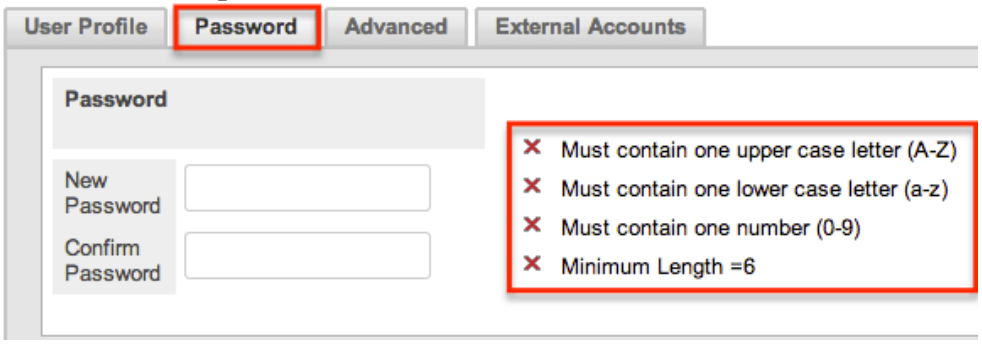


If the administrator has set up an OAuth2-based email account, there will be an Authorize button that will initiate a pop-up to authenticate the email account.



- The Advanced tab includes preference-type settings (User Settings, Layout Options, Locale Settings, PDF Settings, Calendar Options) for the user. These are all specific to the user's account and will not affect system-wide settings or other users. Options such as assignment notifications, date and time formats, time zone, preferred currency, etc. are available to configure under this tab.

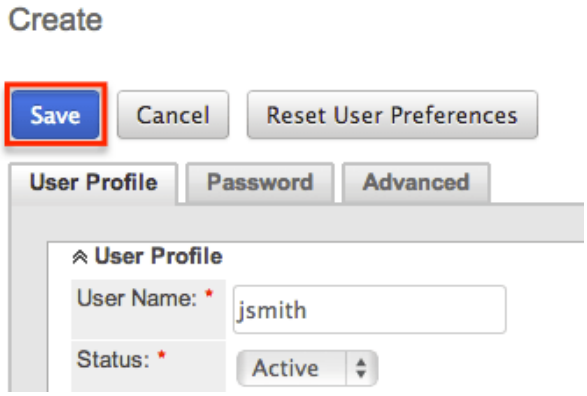
4. If the system-generated password feature is not enabled in Password Management, a Password tab will appear to the right of the User Profile tab. The administrator can manually enter a password for the user under this tab and provide it to the user. Please note that the password requirements listed on the right will be checked off as the new password meets the required conditions.



Note: If the system-generated password feature is enabled, this tab will not

be available. Instead, a system-generated password will be sent to the user upon completion of the creation process.

5. After entering the necessary information click the Save button.



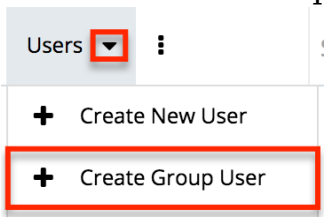
Upon saving, an email will be sent to the user with the user's system-generated password (if applicable) and a corresponding Employee record will be created for the user. Once the user is created, the administrator can assign Teams and Roles to the user via the Access tab.

Group Users

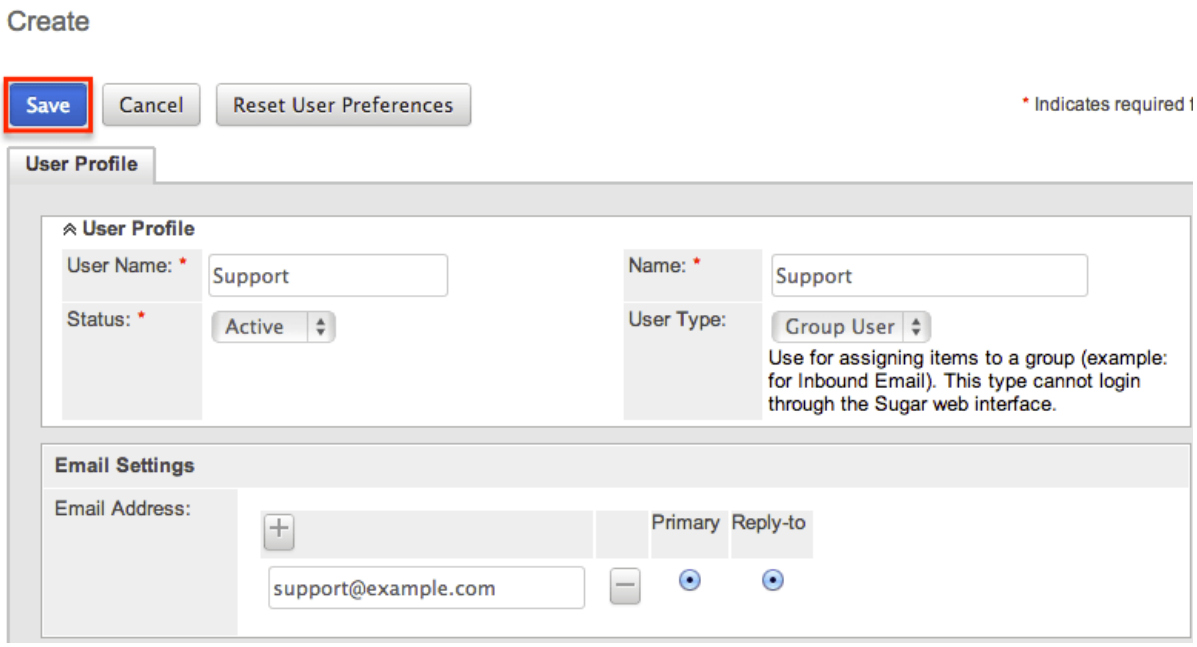
A Group user cannot log in to Sugar, but new and existing records can be assigned to the Group user. The Create page for the Group user consists of the User Name, Status, Name, User Type, and Email Address fields. For more information on how to use Group users in Sugar, please review the Group User section of this page.

Use the following steps to create a Group user:

1. Click the triangle in the Users module tab to open the Actions menu and select "Create Group User".



2. Enter a name and user name (e.g., Support) for this user.
3. In the Email Settings section, enter an email address or addresses for the Group user. The group user's primary email address will be marked as "Primary" and you can also mark "Reply-to" if any automatic notifications from Sugar will be sent to this address.
    - **Note**: If your organization has a group inbox or alias for a team represented by the group inbox, the email address can be added here for all notifications to be sent to the entire team.
4. Click "Save" to create the user.

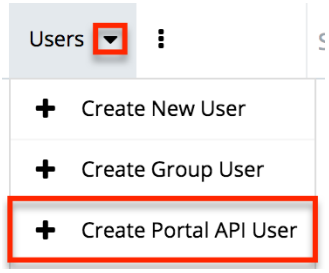


Portal API Users

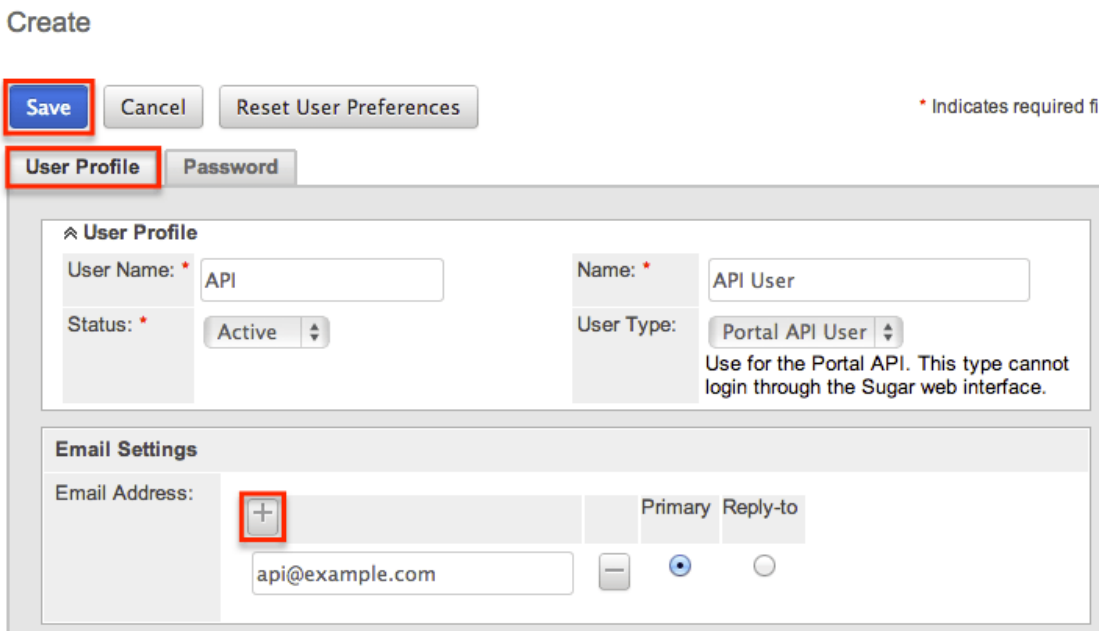
A Portal API user cannot log into Sugar via the web interface, but the name and user name will appear for other users as they view records assigned to the group user or assign records to this user. The Portal API user creation screen only contains five fields. For more information on the use of the Portal API user, please review the Portal API User section of this page.

Use the following steps to create a Portal API user:

1. Click the triangle in the Users module tab to open the Actions menu and select "Create Portal API User".



2. Enter a name and user name for the user.
3. In the Email Settings section, enter an email address or addresses for the API user. The group user's primary email address will be marked as "Primary" and you can also mark "Reply-to" if any automatic notifications from Sugar will be sent to this address.
4. On the Password tab, enter and confirm a password for the user following the password requirements set in Admin > Password Management. This password will be used to log in to the API for this user.
5. Click "Save" to create the user.



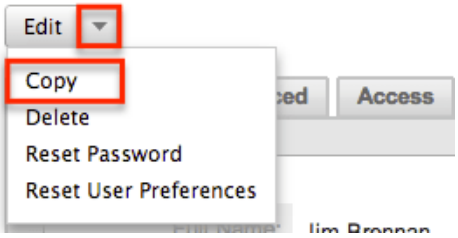
Creating via Duplication

Often, administrators will find themselves in situations where multiple users must be created at once, whether it be when they are first setting up Sugar, a new group of employees is going to be using Sugar, etc. For situations such as these, one user can be configured and additional users can be quickly set up using the Copy option available on the record's detail view. When duplicating a user, all fields are populated from the original record to the duplicated one, except for the User Name field and password fields.

Note: The Copy option is not available for instances that use SugarIdentity.

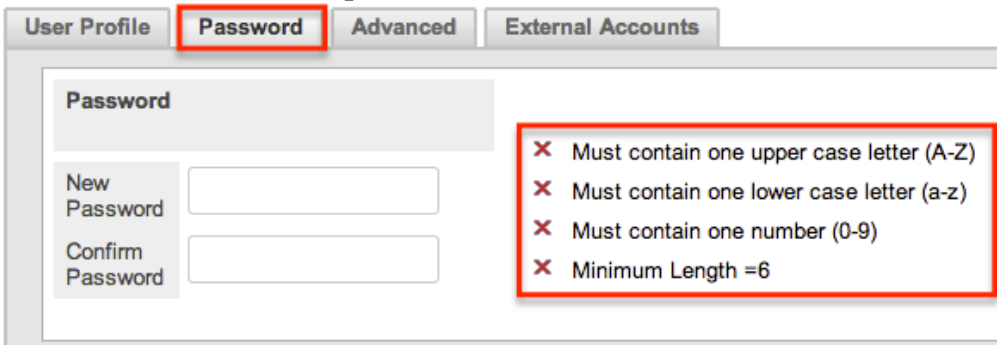
Use the following steps to create a user by duplicating an existing user:

1. Navigate to the detail view of the user you would like to duplicate.
2. Click the Actions menu and select "Copy".



3. The displayed edit view is pre-populated with the original user's values, except for the user name and password.
4. Populate the "User Name" for the new user and edit any other fields or preferences to be specific to the new user. Fill in any information for the new user that did not exist on the original user.
5. If the system-generated password feature is not enabled in Password

Management, a Password tab will appear to the right of the User Profile tab where administrators can manually create a password for the user. Please note that the password requirements listed on the right will be checked off as the new password meets the required conditions.
Note: For instances that use SugarIdentity, administrators will not be able to manually change or reset the user's password via the user's profile. Users can instead click the "Forgot Password?" link on the Sugar login screen to reset their passwords.



Note: If the system-generated password feature is enabled, this tab will not be available. Instead, a system-generated password will be sent to the user upon completion of the creation process.

6. Click "Save".

The new user is now created and available for use. This process is applicable to all user types.

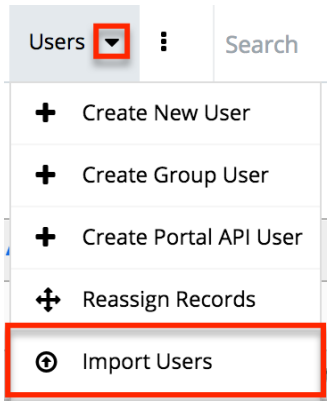
Creating via Import

The import function in Sugar allows you to push multiple user records into Sugar using a comma (or another character) delimited file instead of creating them one-by-one. Use the following steps to import users via the Import Users option. For more information on importing records to Sugar, please refer to the Import documentation.

Note: For instances that use SugarIdentity, the import option can only be used to update existing user records. Administrators can access SugarIdentity to import a list of new users using a CSV file.

The following steps cover importing new user records as an example:

1. Click the triangle in the Users module tab to access the Actions menu and select "Import Users".



2. In Step 1, select the source of the data you are importing. Click "Next".
3. In Step 2, select the import file and choose "Create new records only". Click "Next".
4. In Step 3, confirm the import file properties. Click "Next".
5. In Step 4, confirm the field mappings for the import. Click "Next".
6. In Step 5, configure any fields you would like to use for duplicate checking.
7. In Step 6, view the import results.
    - The Created Records tab will show all of the new user records.
    - The Duplicates tab will show any records in the file that were detected as a duplicate and thus not imported from the duplicate check in Step 5 of the Import Wizard.
    - The Errors tab will show records that were not imported due to errors detected during import.

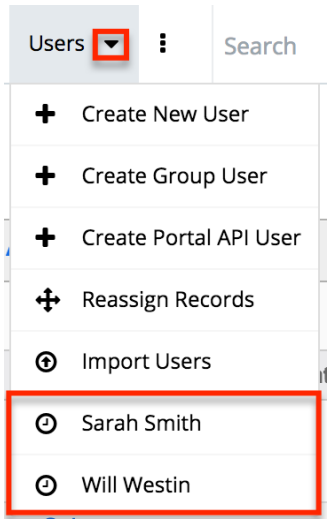
Viewing Users

There are various options available for viewing user records in Sugar including via Users recently viewed, Users list view, Users detail view, dashlets, and reports.

Note: If your instance uses SugarIdentity, then you can also view the user's basic and employment-related information in SugarIdentity.

Viewing via Recently Viewed

As you work, Sugar will keep track of which users you have recently viewed. Click the Actions menu in the Users module tab to see a list of your most recently viewed users, and click each name to open the user in detail view.



Viewing via List View

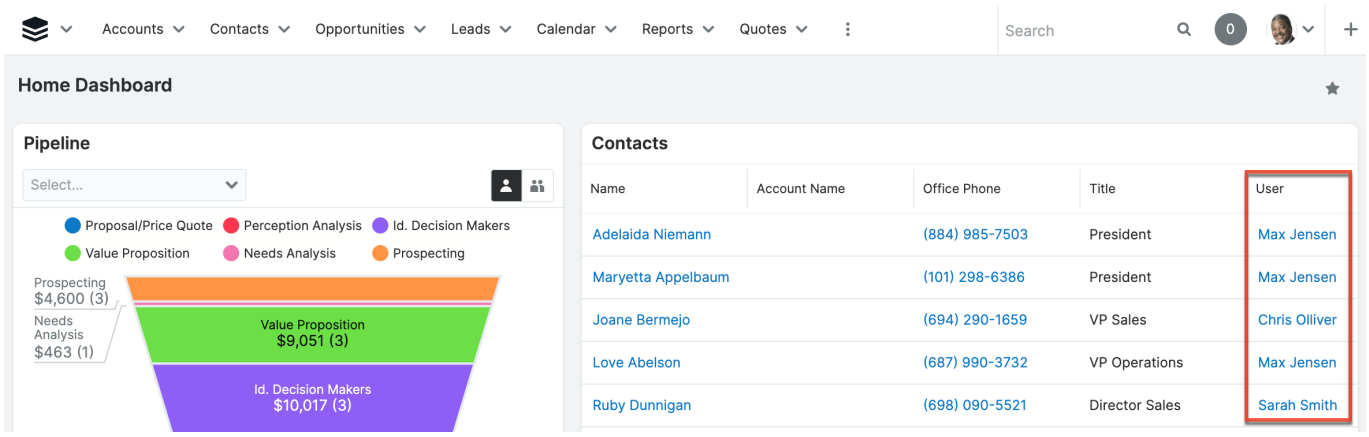
The Users list view displays all user records meeting the current search criteria. To access the list view, navigate to Admin > User Management. While the list view shows key user fields, you can click the user's name to open the record in detail view. For more information on viewing users via list view, please refer to the Users List View section of this page.

Viewing via Detail View

The Users detail view displays thorough user information including all user fields followed by subpanels of the user's related records belonging to various modules. The detail view also provides the Access tab, which allows Teams and Roles to be related to the user. Any admin user can click a user record's link from anywhere in the application, including from the Users list view to access the user's detail view. For more information on viewing the user's detail view, please refer to the Users Detail View section of this page.

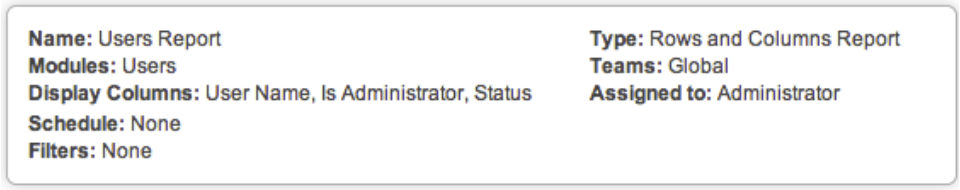
Viewing via Dashlets

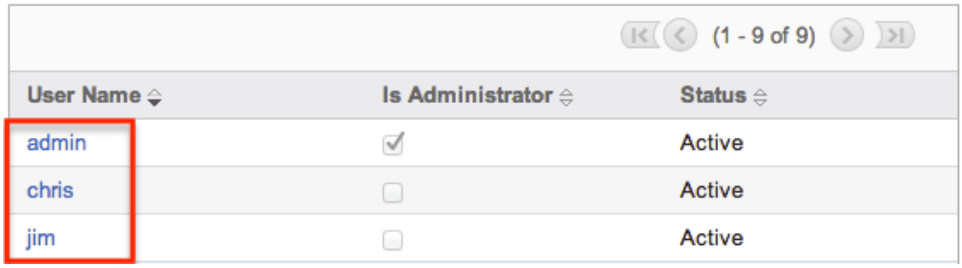
The Home page displays a collection of Sugar dashlets that allow users to get a quick view of various records, activities, reports, etc. Clicking a user's name from any dashlet will open the user in detail view and administrators can make changes to the user's profile as necessary. For more information on using dashlets, please refer to the Dashboards and Dashlets documentation.



Viewing via Reports

Administrators have the option to build, run, and manage reports to gather key data from records within Sugar. When building a report, you may either create a report based on the Users module or add links to the Users module in a report based on a module related to Users. Once the report is run, you can view the user record's detail view simply by clicking the user's name in the report results. Please note that you can only access user detail views via the Rows and Columns and Summation with Details-type reports as Summation and Matrix-type reports do not include hyperlinks in their display columns. For more information on using reports, please refer to the Reports documentation.





Impersonating Users

If your instance uses SugarIdentity, you have the ability to log in as other users in your organization using the "Impersonate (Log in as)" option in SugarIdentity. When impersonating a user in Sugar, you will be able to access and view the same modules and settings as the user's actual account without having to obtain their login credentials. For more information on impersonating a user, refer to

the SugarIdentity Guide.

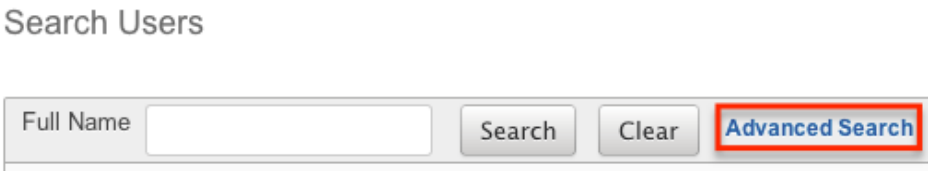
Searching Users

The Users module's list view includes Basic and Advanced Search functionality to help you locate users easily and effectively. Once the search is performed, the relevant search results will be displayed in the Users list view below. Please note that Sugar automatically appends the wildcard character (%) to the end of your search phrase. This allows the system to pull up all records that include the keyword entered in the search. If you would like to broaden the search, you can use the "Wildcard" (%) at the beginning of your text as well (e.g., %manager). This will pull up any record that has the word "manager" in the name, regardless of how it starts or ends (e.g., "Department Manager", "Product Manager" or "Project Manager").

For more information on using the various search methods as well as how wildcards are used, please refer to the Search documentation.

Basic Search

Basic search offers only Full Name as a searchable field. From the Basic search panel, you can click "Advanced Search" to access additional search functionality.



The buttons available in the Basic Search panel are also available in Advanced Search.

- **Search**: Click the Search button or press your Return/Enter key to perform the search.
- **Clear**: Click the Clear button to clear all criteria from the searchable fields.

When you run a search, Sugar will return records matching the criteria you typed in the Full Name search box. Once the search is complete, the relevant results will populate in the list view below the search panel. To see all user records, simply click "Clear" and then "Search" to perform a blank search with no filters.

Administrators can also configure what fields appear on the Users Basic Search via Admin > Studio. For more information on editing the Basic Search layout, please refer to the Studio documentation.

Advanced Search

Advanced Search offers a more in-depth search experience than Basic Search including additional fields, layout options, and saved search capability. From the Advanced search panel, you can click "Basic Search" for simplified searching.

The buttons, checkboxes, and dropdowns available in Advanced Search have the following functions:

- **Search**: Click the Search button or press your Return/Enter key to perform the search.
- **Clear**: Click the Clear button to clear all criteria from the searchable fields.
- **Layout Options**: Use the expandable Layout Options section to configure your list view. For more information, please refer to the Layout Options section of the Search documentation.
- **Saved Searches**: Save, recall, update, and delete searches that you use often. For more information, please refer to the Saved Search section of the Saved Search documentation.

When you run a search, Sugar will return records matching all (as opposed to any) of the fields and checkboxes for which you have given values. For example, if you select "Is Administrator" as "Yes" and enter in a "First Name" to search, Sugar will only return the user records that have a matching first name and are admins. Once the search completes, the relevant results will populate in the list view below the search panel. To see all user records, simply click "Clear" and then "Search" to perform a blank search with no filters.

Administrators can configure what fields appear on the Users Advanced Search via Admin > Studio. For more information on editing the Advanced Search layout, please refer to the Studio documentation.

Users List View

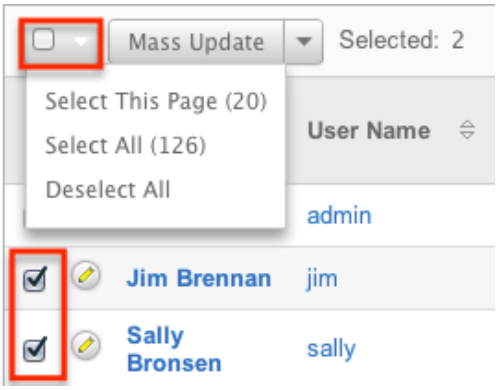
The Users list view displays all user records meeting the current search criteria. You can view the basic details of each user within the columns of fields.

You have the option to change what fields are displayed in list view by configuring your layout options available in Users Advanced Search. For more information on configuring your list view, please refer to the Layout Options section of the Search documentation. You can also change what fields are visible in the list view via Studio. For more information on editing list view layouts, please refer to the Studio documentation.

Checkbox Selection

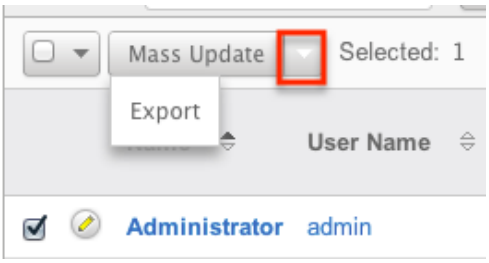
You can perform actions on user records directly from the list view by first selecting the desired records. To select individual user records on the Users list view, mark the checkbox on the left of each row. To select or de-select multiple user records on the list view, use the options in the checkbox dropdown menu.

- **Select This Page**: Selects all records shown on the current page of user results.
- **Select All**: Selects all records in the current search results including all pages of user results.
- **Deselect All**: De-selects all records that are currently selected.



Actions Menu

The Actions menu to the right of the checkbox dropdown allows you to perform various actions on the currently selected records.

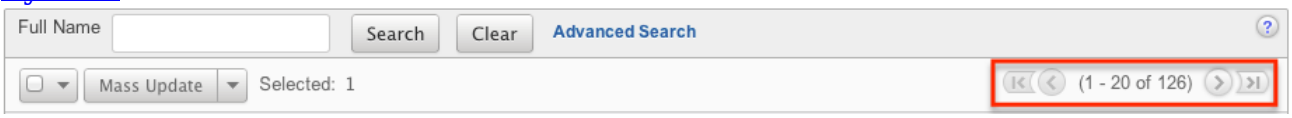


The options in the Actions menu allow you to perform the following operations:

Menu Item	Description
Mass Update	Mass update one or more users at a time. **Note**: For instances that use SugarIdentity, the administrator will need to access SugarIdentity to mass update the Status and User Type fields.
Export	Export one or more users to a CSV file.

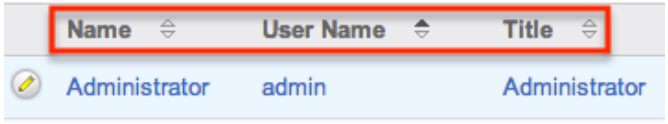
Pagination

List view displays the current search results broken into pages that you can scroll through rather than potentially displaying thousands of rows at once. To the right just below the search panel you can see which records of the total results set are currently being displayed. The two single-arrow next and previous buttons can be used to scroll through the records page-by-page. The two double-arrow first and last page buttons allow you to skip to the beginning or the end of your current results.
By default, Sugar displays 20 records per list view page, but administrators can change the number of records displayed via Admin > System Settings. For more information on changing the number of displayed records, please refer to the System documentation.



Column Sorting

List view provides the ability to sort all of the current search results by a field column in either ascending or descending order. To sort by a field or switch the sort direction, click the column header noting that the fields which allow sorting will have a pair of arrows in the column header. The list view may be sorted by only one column at a time. You can also set a default order-by column using the layout options in Advanced Search to specify which field to automatically sort results by in the list view. For more information on setting a default column sort, please refer to the Layout Options section of the Search documentation.



Users Detail View

The Users detail view displays thorough user information including all user fields which are grouped by default into the User Profile, Advanced, and Access panels. You can also view information from records related to the Users module as subpanels below the detail view. For more detailed information about adding relationships, please refer to the Studio documentation. The detail view can be reached by clicking a user record's link from anywhere in the application including from the Users list view.

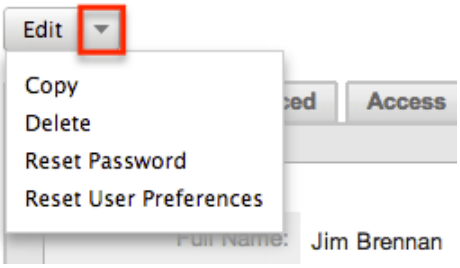
Note: If your instance uses SugarIdentity, then you can also view the user's basic and employment-related information in SugarIdentity.

Administrators have the ability to change what fields are visible in the detail view by configuring the field groupings via Admin > Studio. For more information on editing detail view layouts, please refer to the Studio documentation.

Actions Menu

The Actions menu on the top left of each user's detail view allows you to perform various actions on the current record. Please note that administrators in Sugar can change the action items to be displayed as separate buttons instead of a dropdown menu via Admin > System Settings. For more information on how to configure the actions menu, please refer to the System documentation.

Note: The Copy and Delete options are not available for instances that use SugarIdentity.



The options in the Actions menu allow you to perform the following operations:

Menu Item	Description
Edit	Edit this user. **Note**: For instances that use SugarIdentity, certain user fields (e.g., First Name, Last Name, Title, Work Phone) can only be edited in SugarIdentity.
Copy	Duplicate this user. **Note**: The Copy option is not available for instances that are SugarIdentity-enabled.
Delete	Delete this user. **Note**: The Delete option is not available for instances that are SugarIdentity-enabled. Administrators can access SugarIdentity to delete a user from Sugar.
Reset Password	Remove the user's current password and email a new one.

	Note: For instances that are SugarIdentity-enabled, administrators can send password reset emails to users via SugarIdentity.
Reset User Preferences	Revert all user preferences back to system-wide settings.

Tabs

The detail view for a user is broken up into multiple tabs to better organize the different fields available in the Users module. Some of the available tabs in the user's profile are "User Profile", "Advanced", and "Access". A Downloads tab is also available when viewing your own profile. For more information on viewing your personal user profile, please review the User Preferences documentation.

User Profile

The User Profile tab displays information specific to the user such as the user's name, user type, employment status, contact information, etc. Administrators have the ability to configure the User Profile layout via Admin > Studio. For more information on editing the user's profile in the Users module, please refer to the Editing Via Detail View section of this page.

Note: For instances that use SugarIdentity, certain fields (e.g., First Name, Last Name, Title, Work Phone) in the user's profile are read-only and can only be edited in SugarIdentity.

Advanced

The Advanced tab shows information specific to the user's preferences in Sugar. Information such as the user settings, locale settings, PDF settings, etc. can be easily viewed under this tab. Please note that the layout of this tab cannot be edited in Studio. However, you can edit the information under the tab by clicking the Edit button on the user's detail view. For more information on editing the user's profile, please refer to the Editing Via Detail View section of this page.

Access

The Access tab summarizes the user's Team and Role settings so that it can easily be viewed in one place. The Access table, Roles subpanel, and My Teams subpanel will appear under the tab.

- **Access Table**: The Access table summarizes the set of permissions assigned to the user and allows you to view the type of access they have along with the actions (e.g., View, Edit, Delete, etc.) they can perform in

Sugar. This table is very similar to what appears in Admin > Role Management, but this table is not editable in the Users module.
Note: Users with more than one role assigned will have the more restrictive role setting prevail on the access table. For example, if one role allows the user to delete records in the Contacts module, but the other role does not allow record deletion, the user will not be able to delete records in the Contacts module.
The table will list the modules in rows on the far left with column headers representing the type of action (e.g., Delete, Edit, Export, etc.) users can perform in each module. For more information on role settings, please refer to the Roles documentation.

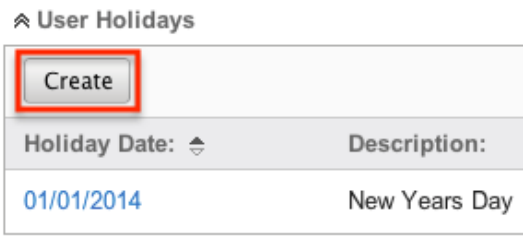


- **Roles Subpanel**: The Roles subpanel will list all of the roles assigned to the user along with the description of each role. Roles work in conjunction with teams to form a robust security model for non-admin users in Sugar. Roles control three different layers of access for users within Sugar: module, field, and action-level access. System administrators can easily assign roles to the user as well as remove roles via the Roles subpanel.
- **Teams Subpanel**: The Teams subpanel will list all of the teams assigned to the user along with the description of each team. The defined permissions determine what records a user is and is not able to access. Teams are used in conjunction with roles to form a robust security model for non-admin users in Sugar. System administrators can easily assign teams to the user as well as remove teams via the My Teams subpanel. For more information on team settings, please refer to the Teams documentation.

Subpanels

Subpanels can be added to the Users module by creating relationships via Admin > Studio. All available subpanels will appear at the bottom of the user's detail view. For more information on adding relationships, please refer to the Relationships section of the Studio documentation.

The User Holidays, Shifts, and Shift Exceptions subpanels are available for the Users module out of the box. The User Holidays subpanel allows administrators to select specific days that the user will not be working, which is used when calculating project timelines in the Projects module and user availability for record assignment in SugarBPM. Holidays can be added using the Create button and inputting a date and description of the holiday.

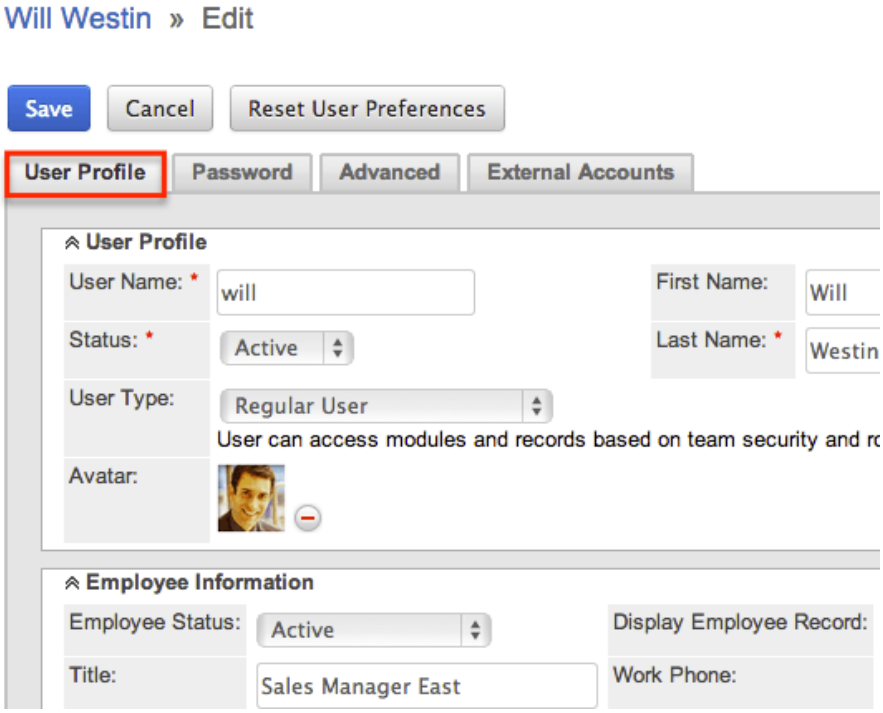


The Shifts and Shifts Exceptions subpanels show the shifts and shift exceptions to which the user is related. This allows you to view the shifts and the exceptions to these shifts that a user has so that you can understand their work schedule and their availability to be round-robin assigned records in SugarBPM. To update an employee's work schedule, click the relevant shift or shift exception to open its record view and add or remove the user in the Users subpanel. See the Shifts and the SugarBPM documentation for more details.

Editing Users

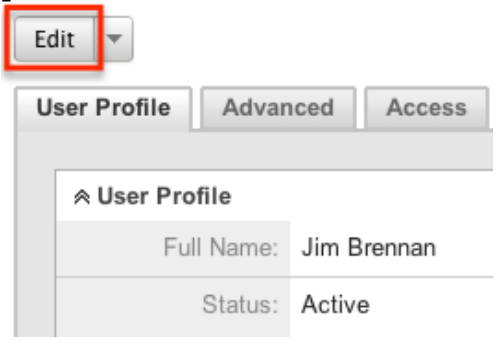
The user's profile can be easily edited by the user or the administrator by clicking the Edit button on the user's detail view. In addition, changes to the user's profile can be made via the Users list view as well by clicking the Pencil icon to the left of the user's name. Editing the user's profile from the detail view and list view opens the full edit view layout which includes all of the relevant fields that can be updated as necessary.

Note: If your instance uses SugarIdentity, then you will need to access SugarIdentity to update certain user fields.



Editing via Detail View

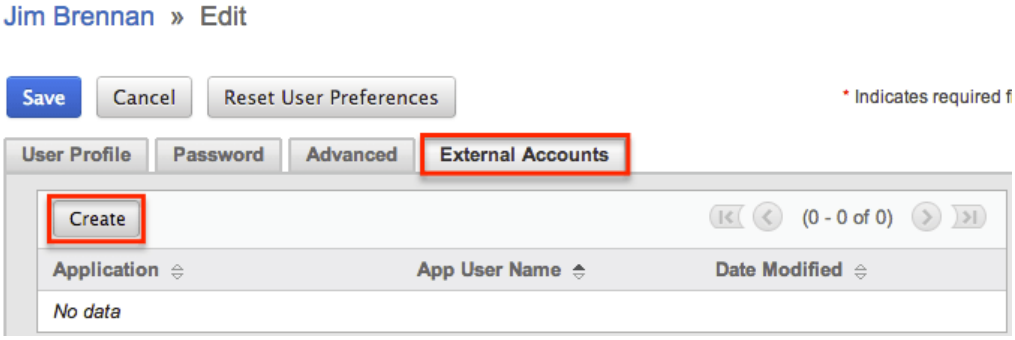
You can edit users by clicking the Edit button on the upper left of the user's detail view. Once the edit view layout is open, update the necessary fields, then click "Save" to preserve the changes made. For more information on the detail view, please refer to the Users Detail View section of this page.



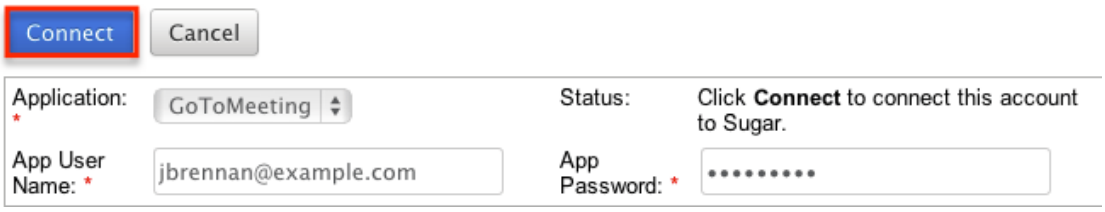
External Accounts

When viewing the edit view of a user, the External Accounts tab appears to the right of the Advanced tab. The External Accounts functionality allows you to connect external applications to Sugar, such as GoToMeeting, Google, and WebEx. To create an external account record, follow the following steps:

1. Navigate to the detail view of the user to whom you would like to add the account.
2. Click on the External Accounts tab then click "Create".



3. Select the application you will be connecting to from the Application dropdown field. The fields available to complete will vary depending on the application (GoToMeeting, Google, WebEx) selected. If no fields are present, click "Connect" and a pop-up window will open for you to grant permission or input your credentials, depending on the application. Your pop-up blocker must be disabled for the pop-up to appear. Please note that additional external applications will appear on the list if they are enabled via Admin > Connectors.
4. Enter the necessary information for the external application and click "Connect".



Should you wish to prevent users from creating external accounts, you can remove the Create button for users in the External Accounts tab of their profiles by disabling the External Accounts module via a role assigned to those users. Please note the "Access Type" setting will not affect this module. Furthermore, editing or deleting the external account can be done by clicking the account's name on the External Account list view. This brings you back to the edit view with the necessary options and available fields.

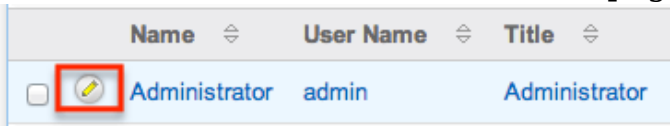
The out of the box connectors perform the following functions:

- DocuSign: The DocuSign connector allows you to send documents to DocuSign for electronic signature from within Sugar.
- **Dropbox**: The Dropbox connector allows you to access your Dropbox via the Cloud Drive dashlet on dashboards throughout Sugar.
- **GoToMeeting**: The GoToMeeting connector allows you to create meetings in Sugar that are tied to your GoToMeeting account and will show as such on your GoToMeeting account. This allows the user to, after creating the Sugar meeting record, start the GoToMeeting directly from within Sugar's Meetings module.
- **Google**: The Google connector allows you to create documents within Sugar that, instead of uploading a file to the server hosting Sugar, allows the user to link to an existing Google document from Google Drive or to upload a file to that account. When clicking on a document name in the Documents module or any Documents subpanels, the user will be brought to Google Drive instead of the download being initiated. The Google connector also allows you to use access your Google Drive via the Cloud Drive dashlet on dashboards throughout Sugar.
- **Microsoft**: The Microsoft connector allows you to access your Microsoft OneDrive via the Cloud Drive dashlet on dashboards throughout Sugar.
- **WebEx**: The WebEx connector allows you to create meetings in Sugar that are tied to your WebEx account and will show as such on your WebEx account. This allows the user to, after creating the Sugar meeting record, start the WebEx meeting directly from within Sugar's Meetings module.

Editing via List View

You can edit users via the list view by clicking the Pencil icon to the left of each user's name. The full edit view layout will open allowing you to make any changes to the user's profile as necessary. Once the user's profile has been updated, click

"Save" to preserve the changes. For more information on the list view, please refer to the Users List View section of this page.



Editing via Import

You can also update existing user records via import using a CSV file. To update existing records, simply select the "Import Users" option under the Users module tab. Please note that the import process will vary between instances that use SugarIdentity and instances that do not use SugarIdentity. For instances that do not use SugarIdentity, refer to the Import documentation for more information on updating existing records via import. For instances that use SugarIdentity, refer to the Importing Updates to Existing User Records section of this page for more information.

Deactivating Users

When a user is no longer a member of your organization, it is best practice to deactivate them instead of deleting them. This ensures that the user will no longer be able to log in to Sugar, but any historical information tied to the user will still be available. While deactivating user records will not update any related records, the Reassign Records tool will be presented and can be used to reassign all of the user's records. If needed, you can filter list views to show records that are assigned to or created/modified by inactive users by filtering the user list on the Status field.

Note: Users that have been deactivated do not count towards your licensed user count.

Note: If your instance uses SugarIdentity, you will need to access SugarIdentity to deactivate a user from Sugar.

Use the following steps to deactivate a user and reassign their records:

1. Navigate to Admin > User Management and click the user you wish to deactivate.
2. Edit the user record and change the Status field to "Inactive". Click "Save".
3. A pop-up message will display asking if you would like to reassign all of the user's records. Click "Yes" if you wish to proceed.

4. You will then be presented with the Reassign Records tool. Follow the steps on this page to complete the deactivation. For more information, please

review the Reassigning Records section.

5. Once the reassignment is complete, the user will be deactivated and no longer able to log in to Sugar.

Please note that you can also filter list views to show records that are assigned to inactive users by filtering the user list on the Status field and then mass updating the records to be assigned to an active user.

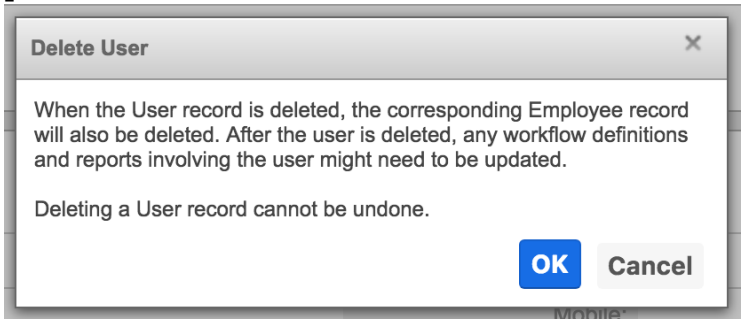
Deleting Users

If a user record is invalid or should no longer appear in your organization's Sugar instance, it may be deleted from the Users detail view. Please note that deleting user records will not delete any related records and will only prevent the user from being selected (e.g., Assigned to). When a user is no longer a member of your organization, it is best to deactivate them by changing the Status field to "Inactive" instead of deleting them. This way, any historical information tied to the user will still be available, but the user will no longer be able to log in to Sugar.

Note: If your instance uses SugarIdentity, you will need to access SugarIdentity to delete a user from Sugar.

Use the following steps to delete a user and reassign their records:

1. Navigate to Admin > User Management and click the user you wish to delete.
2. Select "Delete" from the Actions Menu.
3. A pop-up message will display asking for confirmation. Click "OK" to proceed.

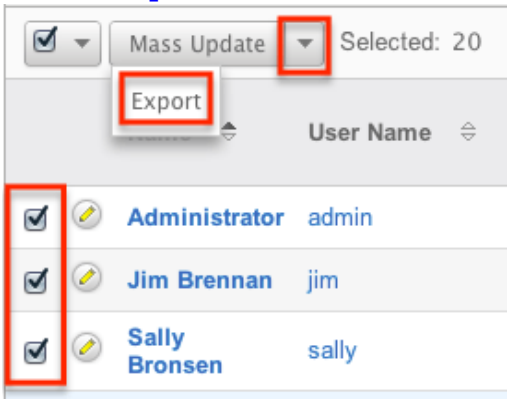


4. You will then be presented with the Reassign Records tool. Follow the steps on this page to complete the deletion. For more information, please review the Reassigning Records section.
5. Once your reassignment is complete, the user will be deleted, and you can freely navigate around Sugar.

Exporting Users

Sugar's Export option allows users to download all fields for the selected users to their computers as a .CSV (comma-separated values) file. This may be useful when needing to use User data with other software such as Microsoft Excel or to update existing records by exporting, making changes, and then importing the altered users back into Sugar. For more information on updating existing records via import, refer to the Import documentation.

Users may be exported from the Users list view by selecting "Export" from the Actions menu. User data can also be exported via the Reports module by creating or accessing reports containing specifically chosen fields for users and their related record(s). For more information on exporting records in Sugar, please refer to the Export documentation.



Due to PHP memory limitations on the server, there may be occasions when the application times out while exporting a large number of user records. If you encounter an error when performing this action, we recommend selecting the records in smaller batches.

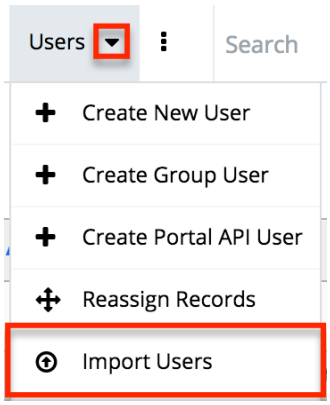
Importing Updates to Existing User Records

In addition to importing new user records via Sugar's Import Wizard, you can also import updates to existing user records in Sugar using a CSV file. Please note that the import process will vary between instances that use SugarIdentity and instances that do not use SugarIdentity.

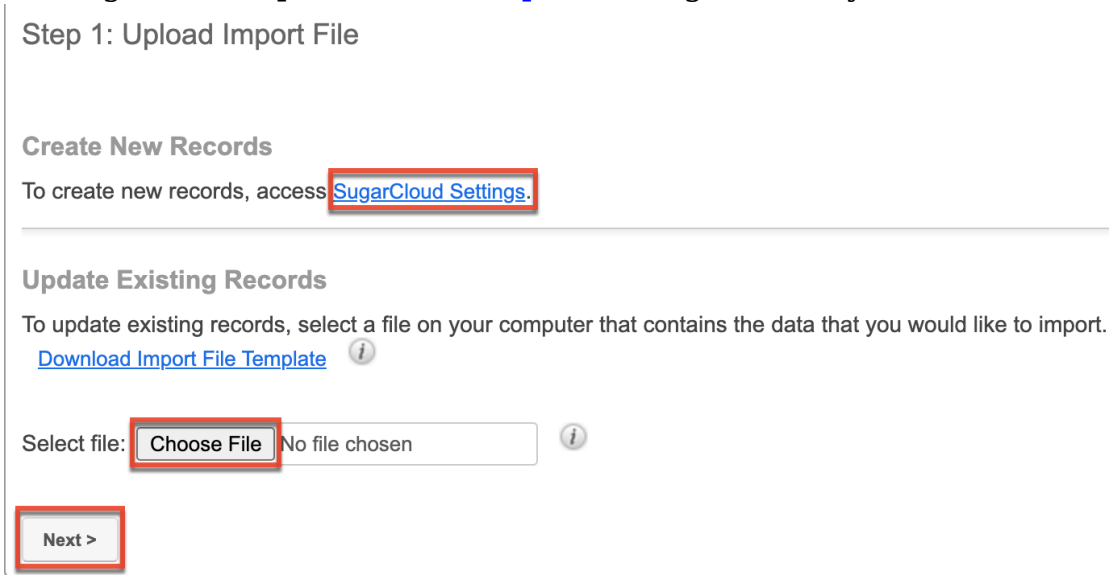
For instances that **do not use SugarIdentity**, refer to the Import documentation for more information on updating existing records via import.

For instances that **use SugarIdentity**, use the following steps to update existing user records via import:
Note: Fields that are only editable in SugarIdentity cannot be updated via import in Sugar.

1. Click the triangle in the Users module tab to access the Actions menu and select "Import Users".



2. In Step 1, select the import file and click "Next".
   Note: To create new user records via import, click the "SugarCloud Settings" link to perform the import in SugarIdentity.



3. In Step 2, confirm the import file properties. Click "Next".
   Note: Configuring the import file properties (e.g., Name Display Format) for fields (e.g., First Name, Last Name) that are not editable in Sugar will not apply to the data in the import file.
4. In Step 3, confirm the field mappings for the import then click "Import Now".
   Note: Fields that are only editable in SugarIdentity will not be available to map.
5. In Step 4, view the import results. The Errors tab will show records that were not imported due to errors detected during import.
   Note: If the import file includes any changes to fields that are only editable in SugarIdentity, it will not get updated in the record.

Mass Updating Users

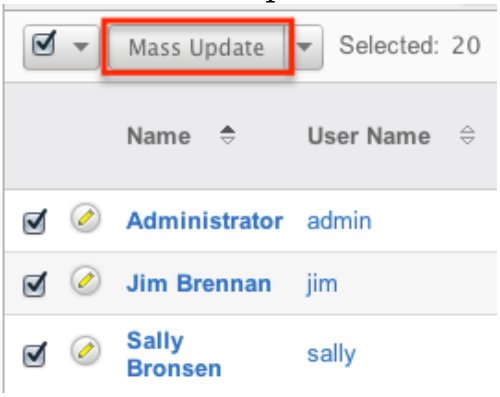
Mass Updating allows users to make the same change to multiple user records at once from the Users list view. Users with administrator or developer-level access can control which fields are available to change during mass update via Admin >

Studio. Currently, only fields with the data type of date, datetime, dropdown, multiselect, and radio may be altered during a mass update. Due to PHP memory limitations on the server, there may be occasions when the application times out while updating a large number of user records. If you encounter an error when performing this action, we recommend selecting the records in smaller batches. For more information on configuring mass update, please refer to the Studio documentation in the Administration Guide.

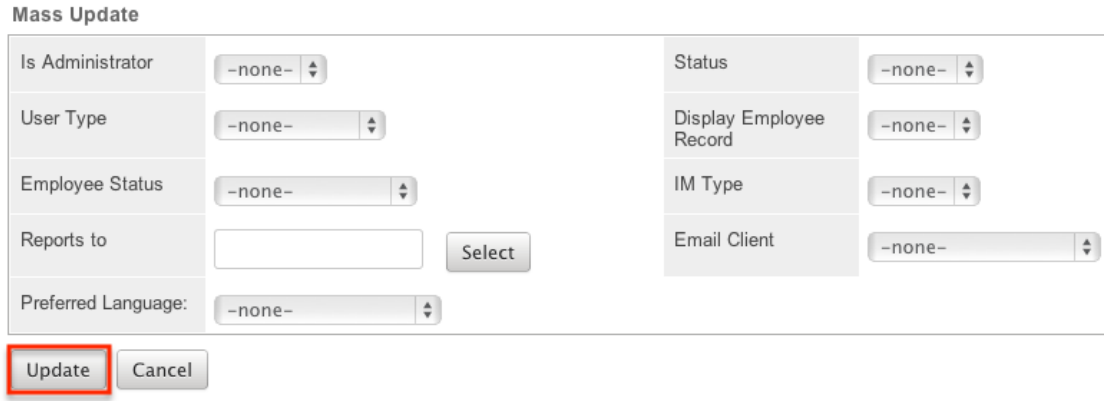
Note: For instances that use SugarIdentity, the administrator will need to access SugarIdentity to mass update the Status and User Type fields.

Use the following steps to mass update user records from the list view:

1. Navigate to the Users list view via Admin > User Management.
2. Use the list view's Basic or Advanced Search to identify users you wish to modify.
3. Select the desired users individually or using the checkbox dropdown's options.
4. Choose "Mass Update" from the Actions menu.



5. Scroll to the Mass Update panel and set values for the fields you wish to alter.
6. Click "Update" to save the changes to all of the currently selected user records.



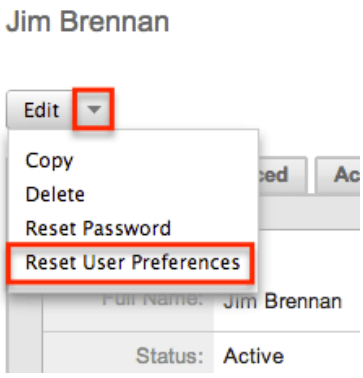
Resetting User Preferences

As users make changes while navigating around Sugar, their preferences are stored in the Sugar database. This includes preferences such as sort orders on list view, previous searches on both basic and advanced searches, and settings in the Advanced tab of the user profile. Users can reset their preferences back to the default out-of-the-box settings, which will revert the user's changes made in Sugar. Please note that this action cannot be undone. If the user is currently logged in, the changes will not take effect until the user is logged out and then back in.

Note: Resetting a user's preferences is the only way to allow a user access to Sugar if they have been locked out using the Login Lockout feature in Password Management.

Use the following steps to reset a user's preferences:

1. Navigate to the user's detail view via Admin > User Management and select the user (e.g., Jim Brennan) from the list view.
2. Select "Reset User Preferences" from the Actions menu.

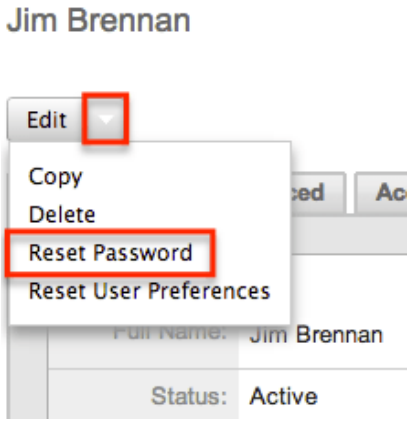
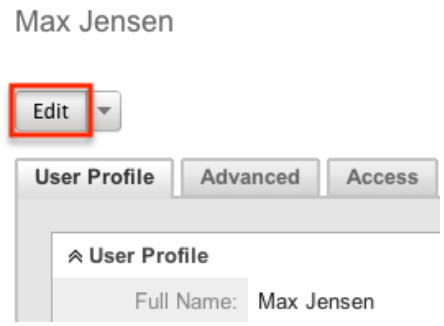
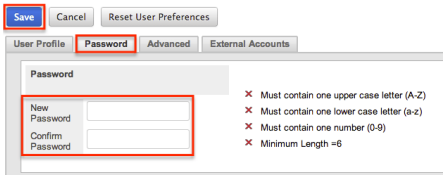


3. A pop-up box will appear confirming the reset. Click "OK" to proceed.

Resetting User Passwords

Administrators have the option to manually set or reset users' passwords as necessary. First, determine the state of the system-generated password feature in Admin > Password Management, and then choose one of the following methods:

System-generated password feature enabled	**System-generated password feature disabled**	SugarIdentity **enabled**
1. Navigate to the user's detail view via Admin > User Management. 2. Select "Reset Password"	1. Navigate to the user's detail view via Admin > User Management. 2. Click the Edit button on	Administrators can click the lock icon in the Users list view of SugarIdentity to send password reset emails to users. For more

from the Actions menu.  3. Click "OK" in the confirmation pop-up.	the upper left of the detail view.  3. On the Password tab, enter the new password.  4. Click "Save" to confirm your change.	information, refer to the SugarIdentity Guide.

Note: The user needs to log out and then back in for the change to take effect.

Copying User Preferences, Dashboards, and Filters to Other Users

Administrators can reduce the learning curve for new users by broadcasting the setup of an existing user to individual users or users on a given team or role via the Copy Content (preferences, dashboards, and filters) and Copy User Settings (locale settings) options in the Users menu.

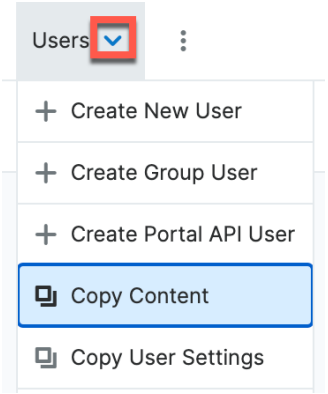
Copying Content

Administrators can save time setting up users with the Copy Content tool, which copies select user preferences, dashboards, and filters from one user to other users, teams, or roles. Content can be copied to individual or multiple users, teams, or roles. Copying user preferences will overwrite the recipient users' existing preferences.

To copy content such as dashboards, filters, and user preferences from one user to other users, follow these steps:

1. Navigate to the Users module via Admin > User Management.
2. Click the triangle in the Users module tab to open the Actions menu and

select "Copy Content".



3. From the "Copy item" dropdown, select the type of content to be copied. Refer to the Content Types section for descriptions of each type of content.
4. In the "From User" list, select the name of the user from which to copy the identified content.
5. Click into any of the "To" fields to open a Search and Select drawer to locate the users, teams, or roles, to which the content should be copied.
6. Click the Copy button at the top right-hand corner of the page. A confirmation message displays when the copy has been completed.

Note: When content is copied to user accounts, the users are not notified of the change.

Content Types

The following lists contain the types of content that can be copied from a user.

User Preferences

- **Default Teams**: The teams set as default teams in the source user's profile user settings.
- **Favorite Reports**: The reports identified as favorites.
- **Navigation Bar Module Selection**: The modules and the order in which they are displayed in the navigation bar as defined in the source user's layout options.
- **Notify on Assignment**: Copies the "Email on Assignment" option as defined in the source user's profile user settings.
- **Reminder Options**: Copies the reminders as defined in the source user's profile user settings.
- **Scheduled Reporting**: Copies the source user's scheduled report settings.
- **Sugar Email Client**: Copies the email client as defined in the source user's profile email settings.

Dashboards

- **From Modules**: Select this option to copy all of the source user's dashboards from a designated module.

- **Existing Dashboards**: Select this option to locate specific dashboards to copy from the source user.

Note: When a dashboard is selected as a favorite by the source user, it will be identified as a favorite in all user accounts to which the dashboard is copied.

Filters

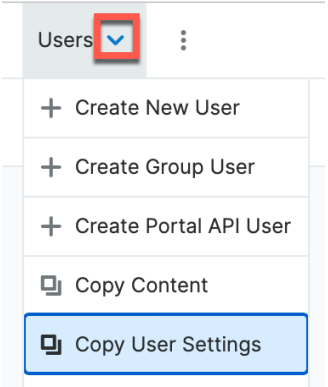
- **From Modules**: Select this option to copy all of the source user's filters from a designated module.
- **Existing Filters**: Select this option to locate specific filters to copy from the source user.

Copying User Settings

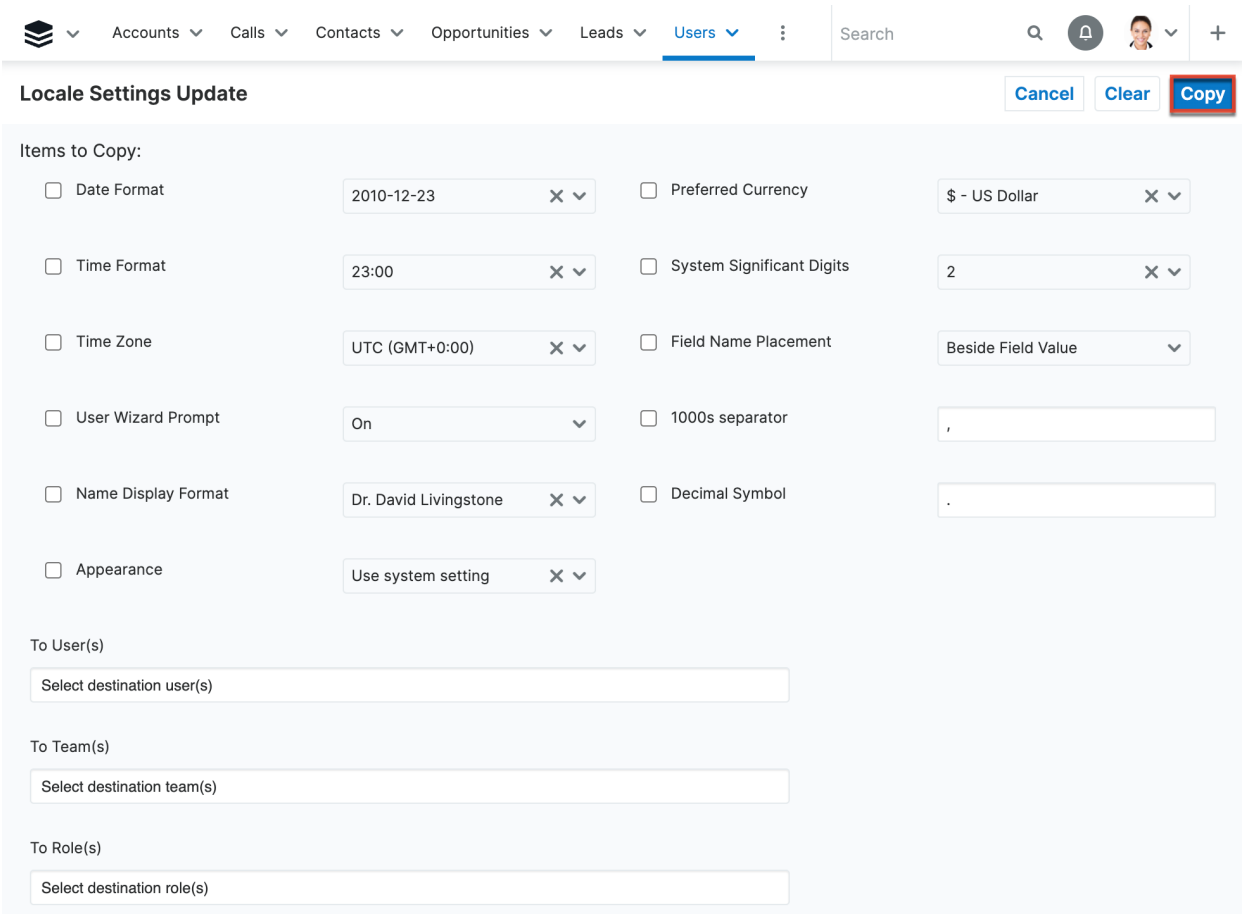
The Copy User Settings tool allows administrators to easily set the locale settings for individual users or users in a given team or role.

To copy user locale settings to other users, follow these steps:

1. Navigate to the Users module via Admin > User Management.
2. Click the triangle in the Users module tab to open the Actions menu and select "Copy User Settings".



3. Select the checkbox next to the settings to be copied. Refer to the Getting Started documentation in the Sugar Application Guide for more information on these settings.
4. Click into any of the "To" fields to open a Search and Select drawer to locate the users, teams, or roles to whom the settings should be applied.
5. Click the Copy button at the top right-hand corner of the page. A confirmation message displays when the assignment has been completed.



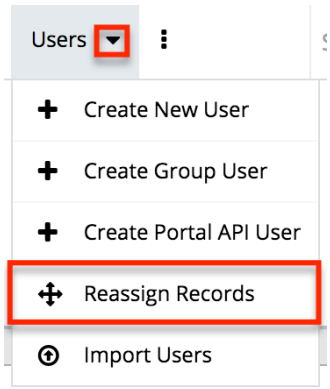
Reassigning Records

Reassign Records is a tool available in the Users module for administrators to change the Assigned To and Team fields for a specific user's records. This is best used when a user is changing departments, teams, or roles within the organization, or if the user is no longer an employee or using Sugar. The Reassign Records tool is automatically presented when deleting or deactivating a user. Please note that reassigning records cannot be undone in Sugar.

Note: You can locate records assigned to Inactive users by filtering the module's list view.

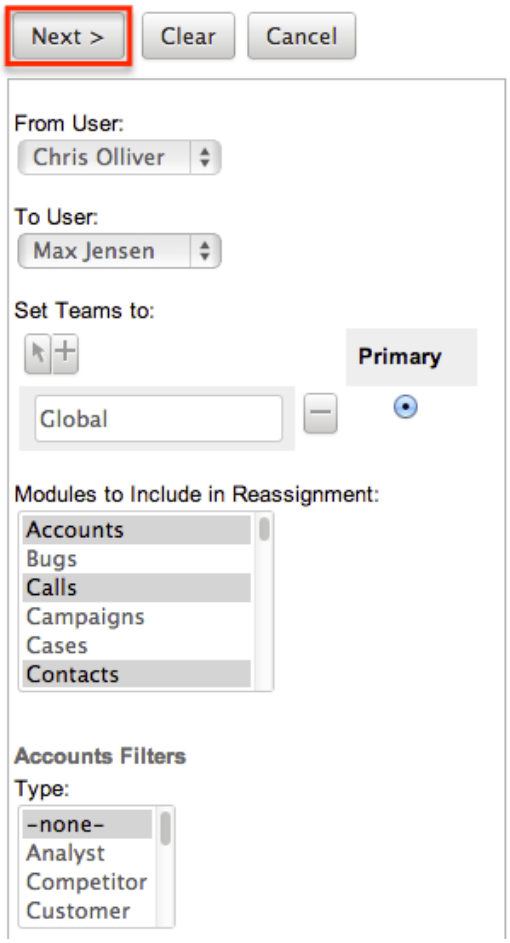
Use the following steps to reassign records:

1. Navigate to the Users module via Admin > User Management.
2. Click the triangle in the Users module tab to open the Actions menu and select "Reassign Records".



The Reassigning Records tool can also be accessed during the process of deleting or deactivating a user, where it is used to reassign a user's records before deleting or deactivating them.

3. Select the user to whom the records are already assigned in the From User field.
4. Select the user to whom the records will be assigned to in the To User field.
   Note: You can select the same user in both fields if you are just changing the team for all of the user's records.
5. Select which team(s) the records will be assigned to in the Set Teams to field.
6. Select the module(s) you wish to include in the record reassignment. Multiple modules can be selected by holding down the Control key when using a PC or the Command key when using a Mac.



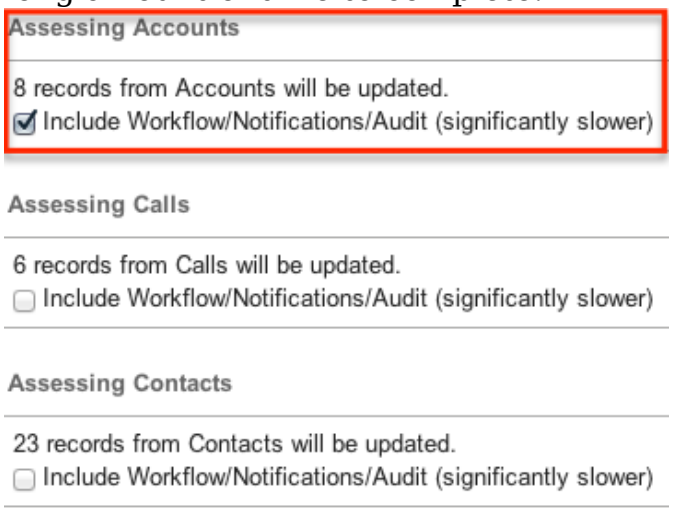
7. Selecting certain modules will display specific filters (e.g., Type) which can be applied to the module. Use these filters if you do not want to include all records assigned to the user. The list of modules and their filter fields are as follows:

Module	**Filter Field**
Accounts	Type
Bugs	Status
Calls	Status
Cases	Priority Status
Dashboards	Default Dashboard
Opportunities	Sales Stage Type
Tasks	Status

8. After selecting any filters, click "Next" to access the reassignment summary.
9. If you would like to see a detailed list of the changes that were made, click "Verbose Output". This list will include a link to the changed records and a

summary of changes that were made.

10. If you would like the changes to show in the Change Log for the changed record, have any relevant workflows fire, or have assignment notifications sent out, please click the Include Workflow/Notifications/Audit checkbox. **Note**: This process performs a large set of actions at once and may take a long amount of time to complete.



11. Click "Next" to complete the reassignment.
12. The final summary page will show how many records were affected and if any errors occurred during the reassignment. Click "Return" to return to the main screen of the Reassigning Records tool.



Due to PHP memory limitations on the server, there may be occasions when the application times out while reassigning a large number of user records. If you encounter an error when performing this action, we recommend reassigning records in smaller batches via each module's mass update option.

External Users

The External Users module is an admin-only and read-only module that is used to store the attributes of users in external systems that integrate with Sugar. The external user records can then be related to other records in Sugar (i.e., accounts and cases). The module is visible in Studio and admin users can also see the External Users subpanel in the Accounts and Cases modules. Records are read-only and cannot be created or edited within Sugar.

Note: The External Users module is not available for Sugar Sell or Enterprise users. For more information on license types and the functionality available for

each type, refer to the License Types Matrix documentation.

License Management

Overview

There are two license concepts that are important to understand when administering a Sugar instance: system licenses and user licenses. System licenses are the actual license key you receive when you purchase Sugar; they must be entered into the License Management page and indicate how many seats of Sugar you are entitled to. In particular, they dictate how many of each license type you have, so if you have more than one (e.g., Sugar Sell and Sugar Serve), you can assign the different license types to different users according to your organization's needs. In contrast, user licenses are the specific license types that are assigned to a given user. For example, you may purchase a license key that includes 50 Sugar Sell users and 25 Sugar Serve users and then assign those licenses to users according to which capabilities they need to access (i.e., Sell, Serve, or both).

When managing a new Sugar instance, you must first set up your system license followed by your user licenses, based on how many seats are included with your license key. The sections below cover topics on both license concepts.

System Licenses

The License Management section of the Admin page allows administrators to edit and revalidate their Sugar license as well as view information such as the download key, expiration date, number of users, etc. Sugar is purchased with a set number of user seats for each Sugar product (e.g., Sugar Enterprise, Sell, or Serve). Sugar users, including administrators, are then assigned to one or more products via the License Type field on each user record. If an instance has more active regular and administrator users than have been purchased for each license type, regular users will not be able to log in. Admin users will be able to log in but will be redirected to the Users module in order to correct the issue. Once enough users have been deactivated or additional seats have been purchased, regular users will be able to log in again. For more information, refer to the Understanding User Types, License Types, and Sugar Licenses article. SugarCloud customers can monitor the number of users counting against their license via the SugarCloud Insights page.

Download Key

The download key is a 32-digit alphanumeric key that is unique to your Sugar

account. The number of user licenses your organization purchased and the subscription expiration date are tied to your download key. Upon purchasing Sugar, you will receive a welcome email containing your download key information, which will need to be entered during installation of the Sugar application. Once the download key is entered into the system, the corresponding information such as the expiration date, number of users, number of offline client licenses, and number of concurrent self-service portal users will automatically populate and be displayed in Admin > License Management.

Editing the License Key

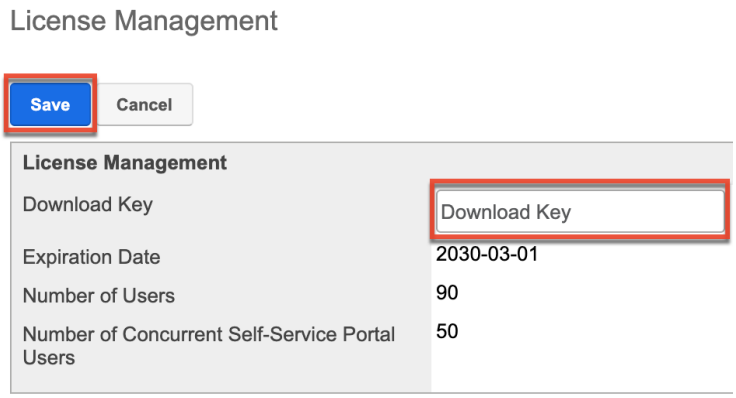
For Sugar instances hosted in SugarCloud, admins cannot edit the license key in the application because it is managed by SugarCRM. However, although rare, there may be times when system administrators of on-premises instances will need to edit their license key via Admin > License Management. For example, some product changes (e.g., Sugar Enterprise to Sugar Serve) may result in a new license key being provided by SugarCRM. You will need to update the License Management page with the new license key to associate your account with the new Sugar product.

The fields in the License Management panel are as follows:

- **Download Key**: The download key associated with your Sugar subscription.
- **Expiration Date**: The date your Sugar license expires.
- **Number of Users**: The number of users allowed to access Sugar based on the number of purchased licenses.
- **Number of Offline Client Licenses**: The number of offline clients associated with your license key.
- **Number of Concurrent Self-Service Portal Users**: The number of self-service portal users associated with your license key.

The following steps cover editing the license key for your account when changing Sugar products as an example:

1. Navigate to Admin > License Management.
2. Click the Edit button and enter the download key associated with your new Sugar product.
3. Once the download key is entered, click "Save".
   Note: The expiration date, number of users, etc. will automatically be updated based on the new download key.



Please note that when you save the new license key information, the system automatically checks it against the information in the SugarCRM database to make sure it is valid.

License Validation

The License Validation panel of the License Management page allows administrators to re-validate their license as necessary. Sugar automatically re-validates your license once every 90 days as long as a system administrator logs into Sugar within the 90 day period. However, if your system fails to communicate with the License Validation server through the internet or you are behind a firewall, you will have to re-validate the license via Admin > License Management. If the re-validation is successful, the Status field in the License Validation panel will display the timestamp of the successful validation. The validation key expiration date will be 90 days from the date of the last successful validation date.

License Expiration

Typically, Sugar licenses are purchased for a one-year period (e.g., 01/03/2022 to 01/03/2023). Please note that you will be notified of your upcoming subscription renewal via email or call and a notification will appear in the Sugar cube on the upper left of your Sugar account regarding your license expiration. If the subscription is renewed past the expiration date, then administrators must re-validate their license via Admin > License Management in order to update the account with the new subscription. If the administrator does not re-validate the license, regular users will be prohibited from logging in to Sugar until the license is successfully validated by the administrator.

Re-validating the License

Although Sugar automatically re-validates your license once every 90 days, there may be special circumstances where administrators must re-validate the license via License Management. For example, if you renew your subscription after the expiration date or if you purchase additional users or license types mid-term, you

will have to re-validate the license via Admin > License Management in order to update your Sugar account with the new subscription.

The fields in the License Validation panel are as follows:

- **Validation Key**: System-generated validation key associated with your Sugar subscription.
- **Validation Key Expiration**: The date the validation key expires. The expiration date is typically 90 days from the last successful validation date.
- **Status**: The status displaying the timestamp of the last failed or successful validation.

Use the following steps to re-validate the license in Sugar:

1. Navigate to Admin > License Management.
2. Click the Re-validate button.



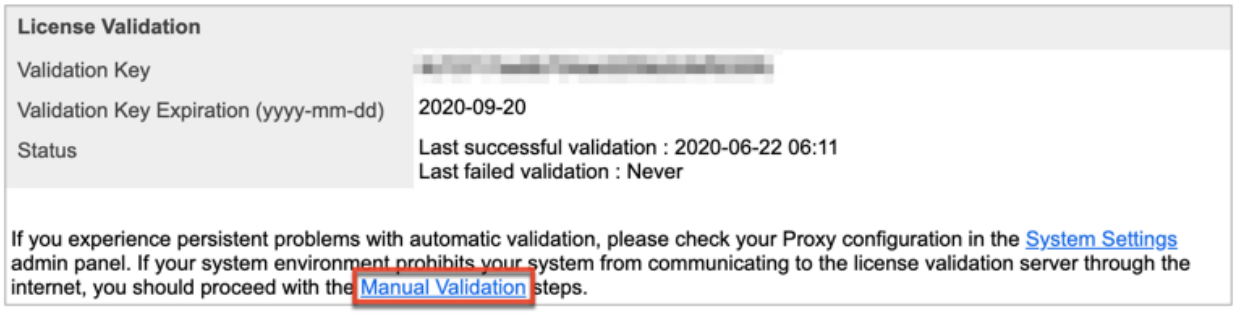
The system will communicate with the License Validation server to validate your license based on your Sugar subscription. If the re-validation is successful, then the status will reflect the date and time of the successful validation. If the system fails to connect successfully with the License Validation server and you cannot re-validate your license, use the Manual Validation option at the bottom of the License Validation panel.

Manual Validation

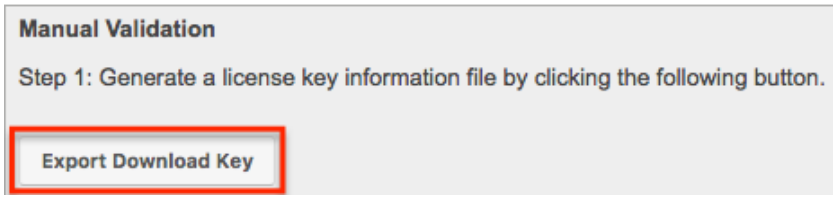
If your system fails to communicate successfully with the License Validation server through the internet, you have the option to perform a manual validation via Admin > License Management.

Use the following steps to perform a manual validation in Sugar:

1. Navigate to Admin > License Management.
2. Click the Manual Validation link located at the bottom of the License Validation panel.



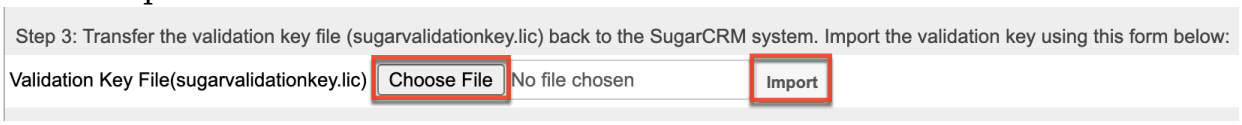
3. Click the Export Download Key button to export the sugarkey.lic file. Click "Save" in the pop-up window to save the file to your local machine.



4. Go to http://updates.sugarcrm.com/license and submit the sugarkey.lic file for validation.
   Note: If the validation is successful, the validation key file (sugarvalidationkey.lic) will be generated, and the system will prompt you to save the file.



5. Log back in to your instance and navigate to the Manual Validation page (Admin > License Management > Manual Validation).
6. On Step 3, choose the sugarvalidationkey.lic file on your local machine and click "Import".



Once the validation key is imported successfully, you have completed the manual validation process. Sugar will update the validation status along with the Validation Key Expiration date for the license key.

User Licenses

Regular users and system administrators both count towards your license limits and have a field called "License Type" on their user record. This field determines which functionality the user may access. The options that appear in this field are determined by the product(s) that an organization has purchased from SugarCRM.

When an organization has purchased more than one product, such as Sugar Sell Premier and Sugar Serve, both will appear as options in the License Type field. Each user must have at least one license type selected, and selecting multiple products enables the user to access the combined functionality of all selected options. Select multiple options by clicking while holding the control or command key. Please note that for certain SugarIdentity-enabled instances, the License Type field is managed in SugarIdentity.

Note: Licensed user limits are calculated per each license type, and an active user assigned to multiple license types will be counted against each.

If a user has license access to a module but not to a specific field on the module, the field value is replaced with a pill containing the text "License Required".

License Types

Each license type that a user has set in the License Type field in their profile gives them access to different capabilities within Sugar. For example, only users with the Sugar Serve license assigned to them can access certain Serve-only features, such as the Service Console. For a complete overview of which features each Sugar product gives you access to, see the License Types Matrix page.

Licensed User Limits

If an instance has more active users of a particular license type than is allowed by its Sugar license, regular users will not be able to log in. Admins will be able to log in but will be redirected to the Users module. Once they have deactivated enough users, reduced the users assigned to over-limit license types, or purchased additional seats, regular users will be able to log in again. Users with an inactive status, Group users, and Portal API users do not count toward these limits. User types are described in more detail in the User Management documentation.

If your instance uses SugarIdentity, please be aware of the following:

- You will need to access SugarIdentity to deactivate users from Sugar.
- For certain SugarIdentity-enabled instances, the users' license type (e.g., Sugar Serve) is managed in SugarIdentity. So, the admin must access SugarIdentity to remove any license assignments.

For more information on how Sugar's licensed user limits work, refer to the Understanding User Types, License Types, and Sugar Licenses article. SugarCloud customers can monitor the number of active users counting against their license via the SugarCloud Insights page.

License Types Matrix

License Types Matrix

The following table describes what functionality is available for each license type in Sugar 12.2.x. For more information on working with licenses in your Sugar instance, refer to the License Management page.

Capability (Sugar 12.2.x)	Sell Premier	Sell Advanced	Sell Essentials	Serve	Enterprise
Guided Selling [1] Data Enrichment and News Feed [2,8] Geo Mapping [3,8] Mail and Calendar Integration [4]	□	**$**		**$**	**$**
Enhanced [5]	□				
Common Modules and Capabilities	□	□	□	□	□
Module Loader [11]	□	□	*	□	□
Campaigns Forecasts Leads Opportunities [6] Quotes & Quoted Line	□	□	□		□

Items [6] Renewals Console Revenue Line Items [6] Shipping Providers Targets & Target Lists Tax Rates Web-to-Lead Forms Forecast Bar Chart Dashlet In Forecast Dashlet Opportunity Metrics Dashlet Product Catalog Quick Picks Dashlet Sales Pipeline Chart Dashlet Stock Sales and Marketing Reports Top 10 Sales Dashlet					
SugarLive Sentiment Analysis for Calls [12] Console List View Dashlet for	□	□	□	□	

SugarLive					
Sales SugarBPM Templates	☐	☐	☐		
Intelligent Lead Prioritization [9] Intelligent Opportunity Prioritization [9]	☐	☐			
Change Timers Customer Service SugarBPM Templates External Users Service Console Stock Customer Service Reports [10]				☐	

List of Common Modules and Capabilities

The following table lists the modules and major capabilities that are common among all of Sugar's CRM license types.

Common Modules	Administration	User-Facing Capabilities

Accounts [6] Bugs Calendar Calls Cases [7] Contacts Contracts Documents Emails Employees Escalations Holidays Knowledge Base Meetings Messages Metrics Notes Notifications Product Catalog [6] Projects Purchases and Purchased Line Items Releases Reports Shifts and Shift Exceptions Tags Tasks	Action Buttons Business Centers Copy Content Copy User Settings Data Privacy Dropdown-Field-Based Record Views Legacy Workflows Role-Based Dropdown Lists Role-Based Record Views SugarBPM	Activity Streams Advanced Reports Cloud Drive Integration Dark Mode Doc Merge DocuSign Integration Focus Drawers Sugar Portal [7] Tile View **Specialty Dashlets:** Active Subscriptions Dashlet Cases Summary Dashlet Comment Log Dashlet Knowledge Base Search Dashlet Product Catalog Dashlet Purchase History Dashlet Record View Dashlet Timeline Dashlet

Enhanced Module Functionality for Sugar Sell License Types

The following functionality is included on top of base module functionality for users with a Sugar Sell license type in Sugar 12.2.x.

- **Sugar Portal functionality:**
    - Sugar Portal Chat: Embed a chat window in the portal so portal users can start a chat session with agents using SugarLive.
    - **Chatbot for Sugar Portal Chat**: A chatbot provided in the collection of assets that are included in Sugar Sell allows portal users to create a case, check the status of a case, or speak with an agent from the portal chat window.

Enhanced Module Functionality for Sugar Serve License Types

The following functionality is included on top of base module functionality for users with a Sugar Serve license type in Sugar 12.2.x.

- **Sugar Portal functionality**:
  - Sugar Portal Chat: Embed a chat window in the portal so portal users can start a chat session with agents using SugarLive.
  - **Chatbot for Sugar Portal Chat**: A chatbot provided in the collection of assets that are included in Sugar Serve allows portal users to create a case, check the status of a case, or speak with an agent from the portal chat window.
  - Case deflection: Knowledge base article search from Sugar Portal's Home page allows portal users better access to self-service issue resolution prior to creating cases.
  - Case and knowledge base dashlets: The All Open Cases, Recently Resolved Cases, and Knowledge Base Categories & Published Articles dashlets allow portal users to view their company's current and recent cases and search for knowledge base articles.
  - Request to close case: The Request To Close button on cases in the portal allows customers to easily communicate that it is safe to close their case. In Sugar, the List of Cases Requested For Close dashlet informs you of all cases awaiting closure.
  - Record visibility: Admins can limit which portal users can see cases as well as the emails and messages related to them to either all contacts or only those related to the specific record.
  - Expanded customization: Admins can customize more aspects of the portal and see a live preview of their changes, including configuring the Home page banner, search bar, and dashboard.
- Case SLA and resolution trends: Several fields are included on cases to track trends in first response SLAs and case resolution time, using both calendar hours and business hours.

Footnotes

[1] Guided Selling powered by Sugar Automate (formally known as Customer Journey Plug-in).
[2] Data Enrichment and News Feed powered by Sugar Hint.
[3] Geo Mapping powered by Sugar Maps.
[4] Mail and Calendar Integration powered by Sugar Connect.
[5] Enhanced forecasting is powered by Sugar Discover.

[6] This module includes enhanced functionality for some Sugar Sell license types.
[7] This module includes enhanced functionality for Sugar Serve license types.
[8] The Sugar Maps and Sugar Hint capabilities are also user license types.
[9] Intelligent Lead and Opportunity Prioritization powered by SugarPredict.

[10] Some stock customer service reports are available for all products, but a selection of them are only available for Serve, as indicated in the Stock Reports page.
[11] Sugar Sell Essentials customers do not have the ability to upload custom file packages into Sugar using Module Loader.
[12] Sentiment Analysis for Calls powered by SugarPredict for Serve and SugarPredict for Sell.

System

Overview

Sugar® comes with the ability to configure many different system settings to personalize the way Sugar works. The System section is only available to administrative users and can be accessed via the Admin screen. The following sections are available options from the System section.

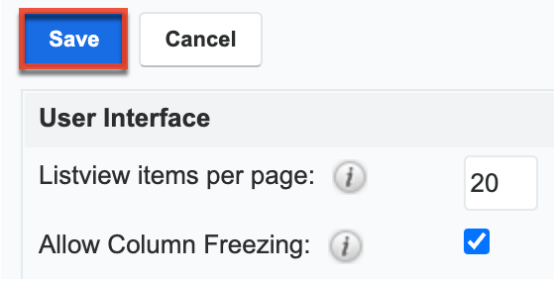
System contains the following menus:

Menu	Description
System Settings	Configure system-wide settings.
Locale	Set default localization settings for your system.
Currencies	Set up currencies and conversion rates.
Repair	Check and repair Sugar.
Diagnostic Tool	Capture system configuration for diagnostics and analysis.
Tracker	Enable/Disable tracking.
PDF Manager	Manage templates for generated PDF files.
Mobile	Select modules to appear in the Mobile applications.
OAuth Keys	OAuth key management.
Sugar Updates	Check for the latest available Sugar version.
Import Wizard	Import records easily into the system.
Upgrade Wizard	(On-site only) Upload and install Sugar upgrades.
Languages	Manage which languages are available

	for users.
Search	Select modules for the Global Search and configure full-text searching.
Connectors	Manage connector settings.
Scheduler	Set up scheduled events.
Archive Records	Archive data from active tables in the system using the Data Archiver module.
Web Logic Hooks	Configure actions to call out to code hosted outside of your Sugar instance to process specified actions.
Content Security Policy Settings	Define the allowable content for iframe fields and Web Page dashlets.
License Management	Manage license properties.

System Settings

System Settings allows administrators to configure system-wide settings to your organization's specifications. The system settings are split across a few different panes of related information. Change the values in any of the panels and click "Save" to preserve your changes.



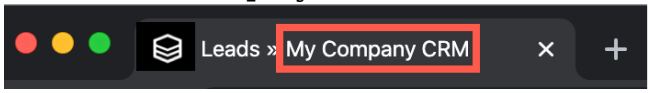
User Interface

The User Interface pane consists of a group of settings that affect the interface of Sugar. Use the following settings to configure the different aspects of the interface:

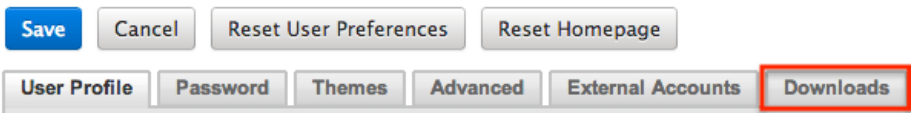
- **Listview items per page**: The maximum number of records to display per list view results set, as well as the search results set on the View All Results page for Global Search. By default, this is set to 20 records per results set. If additional related records exist, click "More <Module Name>..." (e.g., "More Accounts...") at the bottom of the list view.
    - **Note**: The recommended setting is below 50 for acceptable performance levels. As additional fields are added to the list view, this number should be at the lower end of the recommended

setting.

- **Subpanel items per page**: The maximum number of records to display on a page in subpanels. By default, this is set to 5. If additional related records exist, click "More <Module Name>..." (e.g., "More Accounts...") at the bottom of the subpanel to load the next set.
    - **Note**: The recommended setting is no more than 25 with lower values recommended when subpanels include many fields.
- **Allow Column Freezing**: Enable this checkbox to allow users to freeze the first column in list views, consoles, and dashlets so that the first column remains visible when scrolling horizontally in the list of results. If disabled, the option to freeze the first column is hidden from all views.
- **System Name**: The name of this instance of Sugar (e.g., "My Company CRM") that displays in the browser's title bar after the current page's title.



- **Show Full Names**: Select this option to set the default value for new users to display the full name of users instead of login names throughout Sugar. **Note**: For instances that use SugarIdentity, when the OpenID Connect authentication is configured, the User Name field will be populated with a unique alphanumeric ID (e.g., User ID). So, it is recommended that the Show Full Names option be enabled to avoid having the alphanumeric IDs display in Sugar.
- **Current Logo**: The logo used in the bottom left-hand corner of the footer bar when viewing Sugar in light mode.
- **Select Logo**: Click "Choose File" to navigate to and select a new logo for your system to show when users are viewing Sugar in light mode. Logo dimensions should be 212x40 pixels, with the standard transparent background color, in PNG or JPG format.
- **Current Dark Mode Logo**: The logo used in the bottom left-hand corner of the footer bar when viewing Sugar in dark mode.
- **Select Dark Mode Logo**: Click "Choose File" to navigate to and select a new logo for your system to show when users are viewing Sugar in dark mode. Logo dimensions should be 212x40 pixels, with the standard transparent background color, in PNG or JPG format.
- **Display Downloads Tab**: Select this option to display the Download tab in the User settings and provide users with access to Sugar plug-ins and other available files.



- **Lead Conversion Options**: Select an option from the dropdown menu to determine the handling of related activity records (e.g., calls, tasks, etc.) during lead conversion. For more information, please refer to the Leads documentation in the Application Guide.
    - **Move**: This option moves all of the lead's activities to the contact

record created during conversion. For customers who are using Sugar integrated with Sugar Market, this option will also move any related records from the following Sugar Market-specific modules: Event Management, Landing Pages, and Web Activities.
    - **Do Nothing**: This option does not alter the lead's activities during conversion. The activities remain related only to the lead. This is the default setting.
- **Display actions within menus**: Select to display detail view and subpanel actions within a dropdown menu. If disabled, the actions will display as separate buttons.
    - **Note**: Only applies to legacy modules.
- **Collapse all subpanels and disable sticky feature**: Select this option to collapse all subpanels in the record view by default and disable automatically expanding previously-expanded subpanels in order to improve performance. Once enabled, users wishing to view subpanel data will need to expand the subpanel each time they return to a module.
    - **Note**: Only applies to Sidecar modules.
- **Prevent user customizable subpanel layout**: Select this option to prevent users from dragging and dropping subpanels to a different location in the detail view layout.
    - **Note**: Only applies to legacy modules.

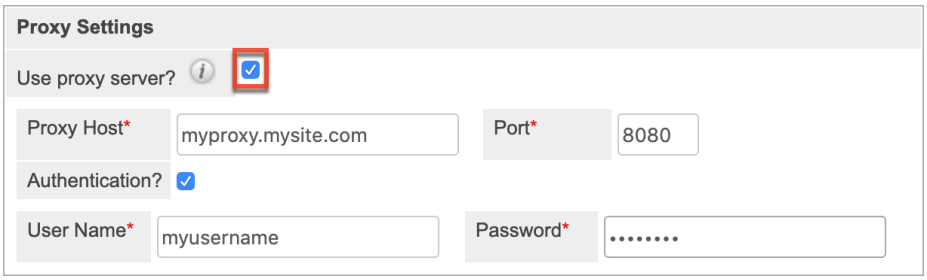
Proxy Settings

Proxy servers redirect internet traffic coming from and to the server running Sugar. If you are using a proxy server, you will need to enter proxy information into the system settings to allow the Sugar instance to communicate with the internet. This is necessary to allow the system licensing to validate and update. For more information on system licenses, please refer to the License Management section.

Note: Proxy settings are not available for instances hosted on Sugar's cloud service.

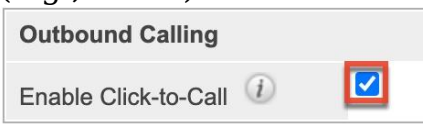
Use the following settings to configure proxy settings:

- **Use Proxy Server?**: Select this option to use a proxy server and to reveal the following fields.
- **Proxy Host**: The host name or IP address of the proxy server to use.
- **Port**: The communication port of the proxy server.
- **Authentication?**: Select this option if the proxy server requires authentication and to reveal the following fields.
- **User Name**: The user name to authenticate to the proxy server.
- **Password**: The password to authenticate to the proxy server.



Outbound Calling

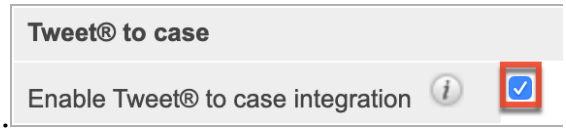
If the Enable Click-to-Call setting is enabled, Sugar displays all stock and custom fields that have a type of "Phone" as a link in Sidecar modules. Click the link to dial the phone number using your default computer telephony integration software (e.g., Zoom).



In Sugar Sell and Serve, if your instance is configured to use SugarLive and you are logged in to Amazon Connect, clicking a phone number link dials it in SugarLive instead.

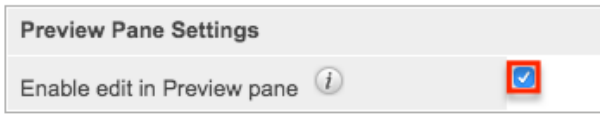
Tweet to case

Tweet to case allows a user to convert a customer tweet shown in the Twitter Dashlet into a case record. Select "Enable Tweet® to case integration" to enable this feature.



Preview Pane Settings

The preview edit feature allows users to edit records directly from the intelligence pane on list views. Please note that the "Enable edit in Preview pane" setting is enabled by default, but administrators can disable the preview edit feature based on their organization's needs by removing the checkmark from the box. For more information on using this feature, please refer to the User Interface page in the Application Guide.



Activity Streams

Sugar's activity streams are disabled by default, but administrators can globally enable the functionality based on their organization's needs. To enable the activity stream in Sugar, simply place a check in the Enable Activity Streams box. When the feature is enabled, record posts will be generated in the system when performing actions such as creating records, updating records, linking records, unlinking records, etc. In addition, users will be able to access activity streams from anywhere within Sugar including via the home page, My Activity Stream dashlet, module's list view, etc. Please note that when the activity stream is disabled, Sugar will display a message in each of these locations indicating that the activity stream is not enabled. For the intelligence pane, the record's related activity stream posts will not appear.



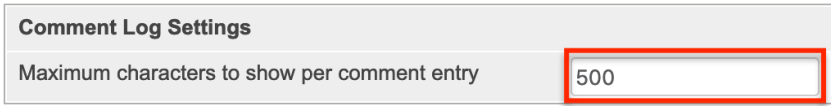
SugarBPM™

The SugarBPM™ panel contains the following configurations for the visual process designer and the SugarBPM engine:

- **Auto-save process definitions**: In the visual designer, process definitions are auto-saved every 30 seconds by default. This setting allows you to adjust the time interval in 30-second increments up to 5 minutes. To disable the auto-save feature, select "Never".
- **Auto-validate process definitions on auto-save**: Enabled by default, this option lets you decide whether Sugar should validate the open process definition's design each time the auto-save function runs. If auto-save is disabled, then enabling this feature will have no effect.
- **Auto-validate process definitions on import**: Enabled by default, this option lets you decide whether Sugar should automatically validate process definition designs when they are imported as .bpm files.
- **Error Number of Cycles**: Specify how many times a process can loop before the system stops the process definition. By default, this is set to 10. Please note that increasing the number of cycles could negatively affect performance.

Comment Log Settings

The Comment Log Settings panel contains a field that allows admins to configure the maximum number of characters shown per comment log entry. If an entry is longer than this value, it is truncated with a "Show more..." link to display the full text. Once the entry is expanded, a "Show less..." link is displayed to collapse the text so that only the configured number of characters is shown again. The default value is 500 characters.



Advanced

The Advanced panel consists of the following group of settings for advanced configuration of Sugar:

- **Validate user IP address**: Select this option to validate the user's IP address while accessing Sugar. If the IP address of a user changes in mid-session, Sugar will log them out and force them to log back in for security reasons. Please note that this setting is disabled by default out-of-the-box.
    - **Note**: Some high-availability systems, VPNs, and switching Wi-Fi and wired connections may change IP addresses and thus cause your users to be logged out when they have not changed their configuration.
- **Log slow queries**: Select this option to log queries that take longer than the slow query time threshold. This is useful for performance debugging.
    - **Note**: There is an inherent overhead to logging slow queries. If the threshold is set too low, it may cause performance issues.
- **Maximum upload size**: Specifies the maximum file size in bytes that is allowed to be uploaded to Sugar. This setting affects images, import files, and module uploads.
    - **Note**: The file upload size is also dependent on the php.ini upload_max_filesize and post_max_size directives. This admin setting will not affect the maximum cumulative file size for email attachments, which is set to 10MB per message via the max_aggregate_email_attachments_bytes configuration attribute.
- **Portal Session Timeout**: The maximum time in seconds of inactivity for a Sugar Portal session. The session will timeout and the customer will be logged out when the time limit is reached with no activity.
  Note: This value is only used for legacy versions of Sugar Portal available in 6.5 and older.
- **vCal Updates Time Period**: Determines the number of months the Free/Busy data is published to vCal. Specify the number of months in advance of the current date that Free/Busy information for calls and

meetings to be published. To turn Free/Busy publishing off, enter "0". The maximum is 12 months.

- **Log memory usage**: Select this option to log memory usage per action performed in Sugar. The data will be stored in the ./memory_usage.log file.
- **Slow query time threshold (msec)**: Specify a threshold in milliseconds to begin logging slow queries at. If "Log slow queries" is selected, queries that take longer than the threshold to process will be logged. If you have enabled the Tracker Queries option on the Tracker page, you can run the pre-defined Slow Queries report to view slow queries.
- **Display stack trace of errors**: Select this option to display where errors occur in the application's stack trace. This option is for debugging purposes and should not be left on in a production instance.
- **Developer Mode**: Available for on-site instances only, enabling this option will disable caching to immediately view changes made to language, vardefs, and template files. This option is for debugging purposes and should not be left on in a production instance.
- **Import - Maximum Number of Rows**: Specify how many rows are allowed within import files. If the number of rows in an import file exceeds this number, the user will be alerted. If no number or zero is entered, an unlimited number of rows are allowed.
    - **Note**: Header rows count towards the total number of rows in the import file.
- **Prevent private team names from inheriting the user's name fields**: Select this option if private team names may be different from the user's first and last name. By default, Sugar will update a private team name to [Firstname Lastname] any time the corresponding user's profile is edited and re-saved, even if the change was not made to the user's first or last name. Enable this option to ensure that edited private team names do not revert to the system default.

Logger Settings

Sugar comes with a built-in logging system to log information or errors that occur in the application. By default, the logs are written to sugarcrm.log in the Sugar root directory. If a problem arises, you can refer to the log file for information that may help in troubleshooting the issue. The Logger Settings panel consists of a group of settings that affect the Sugar logs. Please note that SugarCloud customers can generate PHP error logs and access logs via the SugarCloud Insights page.

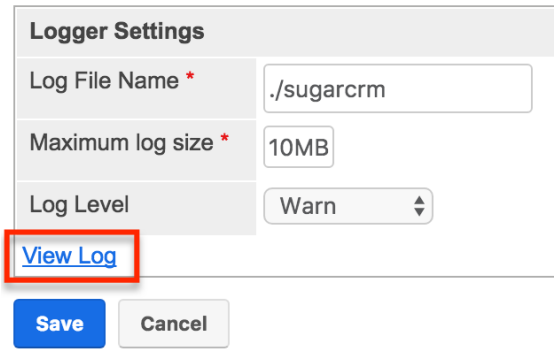
Note: The Logger Settings panel is hidden for instances on Sugar's cloud service. Should you require a log level to be temporarily changed on a SugarCloud production environment, you must open a support case. For more information about default configuration settings for Sugar's cloud environments, please refer to the SugarCloud Policy Guide.

Use the following settings to configure the different aspects of Sugar logging:

- **Log File Name**: Specify a name for the log file. Defaults to sugarcrm.
- **Maximum log size**: Specify the maximum size of the log file in megabytes (MB). The default is 10MB. Once a log file reaches the specified size it is renamed to have an incrementing number and a new file will be created to contain new logs.
- **Log Level**: Select the event level that you want to capture in the log file. The levels are listed below in order of the most log records to the least. The default level is fatal. When specifying a logging level, the system will create log files for the specified level as well as higher levels. For example, if you select "error", the system creates log files for "error", "fatal", and "security". Please note that there is an inherent overhead to logging. If the log level is set too high, it may cause performance issues. The "info" and "debug" settings are not recommended for continuous use in a production environment.
    - **debug**: Logs events that help debug the application
    - **info**: Logs informational messages
    - **warn**: Logs potentially harmful events
    - **deprecated**: Logs a function in the application that will be removed in an upcoming release
    - **error**: Logs error events in the application
    - **fatal**: Logs severe error events that cause the application to abort
    - **security**: Logs events that may compromise the security of the application
    - **off**: The logger will not log any events
- **Append after filename**: Select a time period from the dropdown list to append to the file name (None, Month_Year, Day_Month, Month_Day_Year). This makes it easier to identify the log that you want to view.
- **Default date format**: The date format for the log file. This format must be supported by strftime. Defaults to %c.
- **Maximum number of logs (before rolling)**: The maximum number of log files to save. When the number of log files exceeds this limit, Sugar deletes the log file that was created first. Defaults to 10.

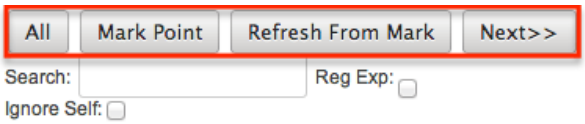
View Log

The Sugar log is stored in the root directory of Sugar and is accessible from the operating system. Administrators who do not have access to the operating system running Sugar do have the ability to view the log through Sugar. Navigate to Admin > System Settings and find the "View Log" link at the bottom of the screen:



This opens the log viewer for the current log file. You have the following options for navigating the log file:

- **All**: Select this option to view the entire log.
- **Mark Point**: Select this option to mark a starting point in the current log file.
- **Refresh From Mark**: Select this option to view any entries made in the log after the most recent mark.
- **Next**: Select this option to view new entries in the current log file.



A common method for utilizing these options to debug a problem would be to click "Mark Point", perform the action causing problems, and then select "Refresh From Mark" to see any log entries caused by the action being debugged.

You also have the ability to search within the log file for keywords. To perform a search, simply enter a keyword into the search box and press Enter on your keyboard to execute the search.

Locale

Locale allows administrators to configure localization settings to your organization's specifications. Some of the settings specified here can be overridden by user-level personalizations such as date and time formats on the User Preferences page. The locale settings are split across a few different panels of related information. Change the values in any of the panels and click "Save" to preserve your changes.



User Interface

The User Interface panel consists of a group of locale settings that affect the interface of Sugar. Use the following settings to configure the different aspects of the interface:

- **Date Format**: Select a format from the dropdown for displaying the date throughout the application.
- **Language**: Select a default language from the dropdown for use throughout the application. Users can select a different language from the login page. For more information regarding enabling or disabling languages, please refer to the Languages section.
- **Name Format**: Select a format from the dropdown for displaying people names throughout the application. You can specify any combination of salutation, first name, and last name.
- **Time Format**: Select a format from the dropdown for displaying the time throughout the application.

Users have the ability to override the default date, time, and name formats through their user profiles. For more information on how to set locale settings per user, please refer to the Locale Settings section of the Getting Started documentation in the Application Guide.

System Currency

The System Currency panel consists of a group of currency settings that affect the interface of Sugar. The system currency is displayed in addition to a record's original currency in most places across Sugar. The value is displayed in the system currency with a grey box containing the value in the record's currency next to it. However, the system currency can be overridden by the user's preferred currency if "Show Preferred Currency" is enabled in their Locale Settings and the user's preferred currency is different from the system currency. Use the following settings to configure the different currency options:

- **Currency**: The name of the default currency your organization uses to conduct business.
- **ISO 4217 Currency Code**: The ISO code for the currency.
    - **Note**: This setting must be populated in order for the currency (e.g., EUR) to display in the Quotes detail view.
- **Decimal Symbol**: The default decimal symbol.
- **Currency Symbol**: The default symbol for the currency.
- **1000s Separator**: The default delimiter to separate thousands.

Users have the ability to override the currency defaults through their user profiles. For more information on how to set currency settings per user, please refer to the Locale Settings section of the Getting Started documentation in the Application Guide.

Export Settings

The Export Settings panel consists of a group of export settings that affect different aspects of exporting in Sugar. Use the following settings to configure the different export options:

- **Export Delimiter**: The delimiter used to separate fields while exporting data. Defaults to a comma.
- **Disable export**: Select this option to disable the export option for all users, including administrators.
- **Default Character Set for Import and Export**: Select a default character set from the dropdown that handles the expected characters in an import and export. Defaults to ISO-8859-1.
- **Admin export only**: Select this option to disable the export option for standard users, administrators will be allowed to export.

Users have the ability to override the default export delimiter and character set through their user profiles. For more information on how to set export settings per user, please refer to the User Preferences section of the Getting Started documentation in the Application Guide.

Note: Locales that use character encoding other than ISO-8859-1 must specify the appropriate character set.

Database Collation

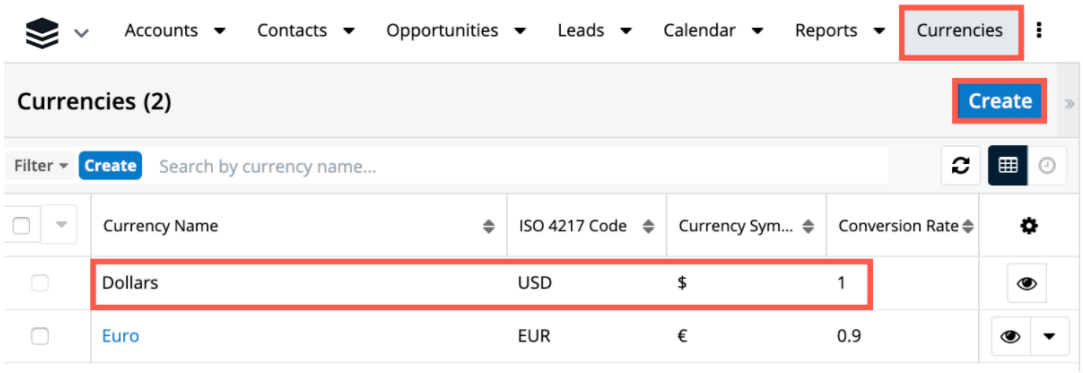
The Database Collation panel only shows if running on a MySQL database and contains an option to change the collation of the connection Sugar makes to the database. Select the desired collation from the dropdown. Defaults to utf8_general_ci.

Note: Changing this setting will not change existing tables, but only new tables going forward. If this setting does not match the collation of the current tables in the database then the database will return errors when accessing those tables.

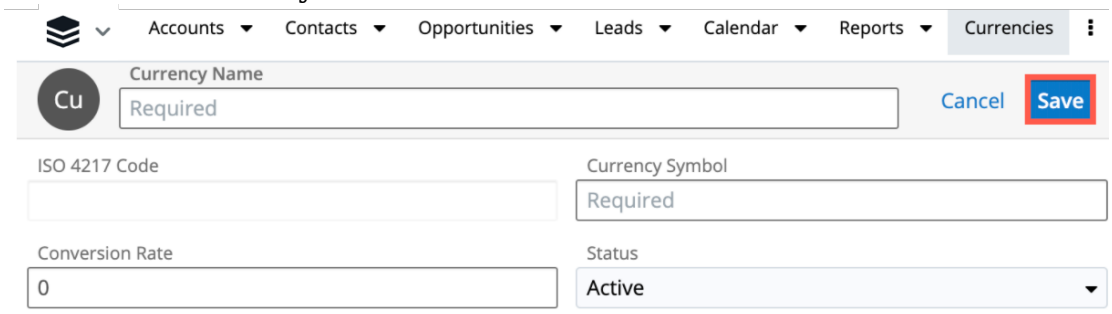
Currencies

Currencies allow administrators to create and manage currencies and exchange rates in Sugar. The defined currencies in the system can be viewed in the Currencies list view which can be accessed by selecting "Currencies" under the System panel of the Admin page. Please note that the default system currency (e.g., USD) will always display first in the Currencies list view. The default system currency cannot be edited via the Currencies module and will need to be edited via Admin > Locale. For more information on configuring the default currency, please refer to the System Currency section.

Note: For additional information regarding the basics of performing common tasks or operations (e.g., creating records, editing records, deleting records) in the application, please refer to the User Interface documentation in the Application Guide.



To create a new currency in the system, simply click the Create button on the upper right of the Currencies list view. Enter appropriate values for the fields in the record view layout then click "Save".



Field	Description

Currency Name	The name or designation of the currency. **Note**: The currency name auto-populates based on the value entered in the ISO 4217 Code field.
ISO 4217 Code	The ISO code for the currency. **Note**: This setting must be populated in order for the currency (e.g., EUR) to display in the Quotes module.
Currency Symbol	The default symbol for the currency. **Note**: The currency symbol auto-populates based on the value entered in the ISO 4217 Code field.
Conversion Rate	The conversion rate to get to this currency from the system's default currency.
Status	The current status of the currency (e.g., Active, Inactive). **Note**: Selecting "Inactive" will remove this currency from currency fields throughout the application.

Updating Conversion Rates

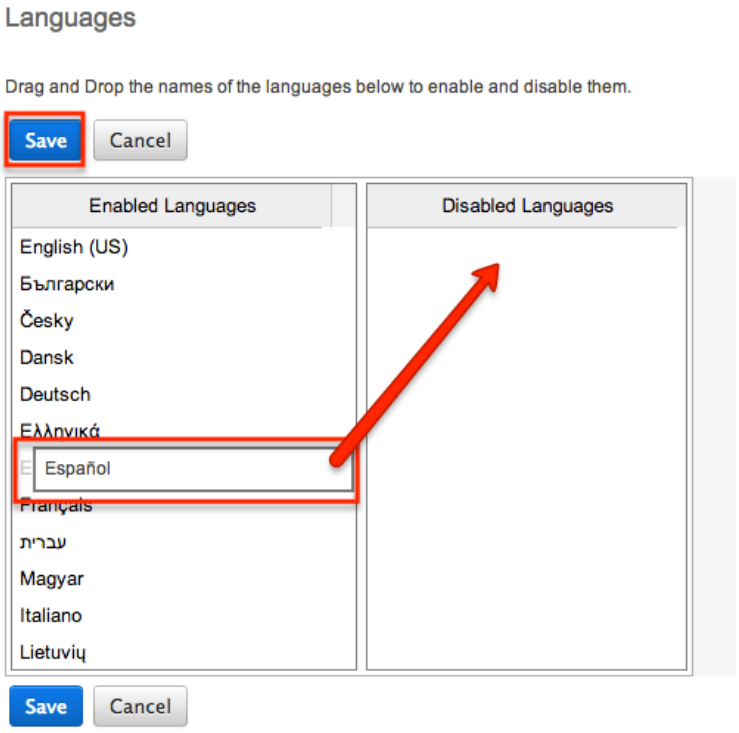
Users may use the currencies defined in Admin > Currencies when populating any currency amount field in stock or custom modules. When doing so, the exchange rate for the selected currency is stored on the record itself. The conversion rate stored on each record will update to match the current rate specified in Admin > Currencies under the following scenarios:

- The record undergoes a save event (e.g., mass update, manual save, etc.) and the record's currency has a different conversion rate defined in Admin > Currencies than is currently saved in the opportunity.
- An administrator updates the currency exchange rate under Admin > Currencies. This will trigger a scheduled job that updates all records saved with that currency to the new rate.

To keep closed-business amounts historically accurate, opportunity and quote records will not update if they are in a closed status. For more information about updating opportunity currency rates, please refer to the Opportunities documentation in the Application Guide. For more information about updating quote currency rates, please refer to the Quotes documentation in the Application Guide.

Languages

The Languages section allows administrators to configure which languages are available for users to log in with. To disable a language, simply drag the language from the Enabled Languages panel to the Disabled Languages panel and click "Save".



Any languages in the Disabled Languages section will not be in the Languages dropdown while logging in.

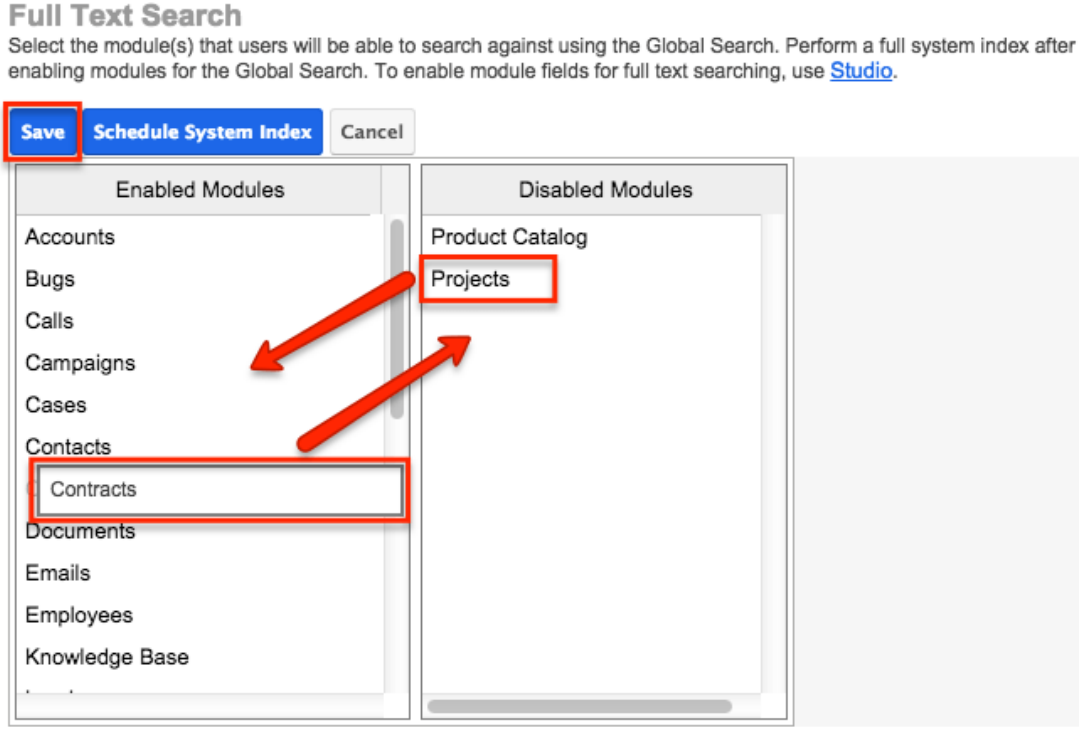
Search

Global search allows users to search for information across their entire Sugar database as opposed to restricting search within a specific module. For more information on how to use global search, please refer to the Global Search section of the Search documentation in the Application Guide. The Search administration settings allow administrators to configure, enable, and index full-text search. Global searches in the desktop application and the SugarCRM mobile app will be returned by full-text search.

Configuring Full-Text Search

Sugar's global search is enabled with full-text searching abilities that use the ElasticSearch engine. Full-text search allows users to search throughout various fields and modules for an enhanced search experience. In order for results to return for a particular module, the module must be enabled on the Full-Text

Search Configuration page. To enable or disable a stock or custom module for global search, simply drag and drop the module between the Enabled Modules or Disabled Modules column and click "Save".



Disabled modules will not be included in the global search results nor available to select in the Modules list on the Global Search bar in the desktop application. For more information on filtering the global search by modules, please refer to the Filtering by Module section of the Search documentation in the Application Guide.

After enabling modules for Global Search, a full system index must be performed in order for the module to appear in the search results. For more information on performing a system index, please refer to the Indexing Full-Text Search section of this documentation.

Individual module fields must be enabled for full-text search in the field attributes via Studio > {Module Name} > Fields > {Field Name}. For more information, please refer to the Studio documentation.

Note: Only modules enabled for Full-Text Search can be referenced in user posts on the activity stream. For more information on referencing record's in posts, please refer to the Activity Stream documentation in the Application Guide.

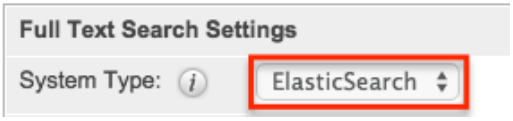
Activating Full-Text Search

Sugar's global search is enabled with full-text searching abilities using the ElasticSearch engine. Full-text search (FTS) allows users to search throughout various fields and modules for an enhanced search experience. Please note that ElasticSearch is required to be set up when installing Sugar for on-site instances

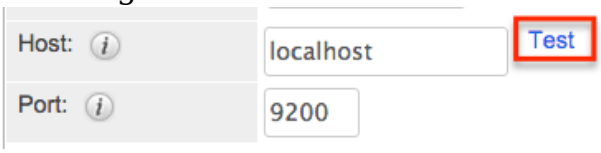
and it is automatically enabled by default for instances on Sugar's cloud service.

Use the following steps to configure full-text search:

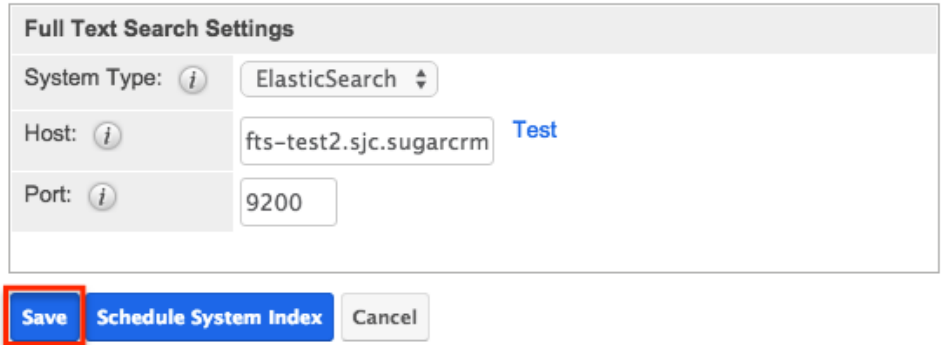
1. The ElasticSearch server is selected by default for the System Type field.
    - **Note**: For more information on ElasticSearch, please refer to



2. Enter the host name or IP address of the full-text search engine.
    - **Note**: Defaults to "localhost" assuming you are running the search engine on the same server as Sugar.
3. Enter the port number for Sugar to connect to the search engine.
    - **Note**: Defaults to "9200", which is ElasticSearch's default port number.
4. Click "Test" to verify that the settings are entered correctly and confirm that Sugar connects to the search engine successfully.



   A pop-up message will confirm if the connection was successful or not.
5. If the connection was successful, click "Save" to preserve your changes.



Each enabled module has a set of fields that are enabled for full-text searching by default. Administrators can enable or disable specific fields for full-text search via Admin > Studio. For more information on how to enable or disable fields for full-text search, please refer to the Studio documentation.

Note: Once a new module or field is added to full-text search, you must perform a system index in order for that field or module to be included in the full-text search results.

Indexing Full-Text Search

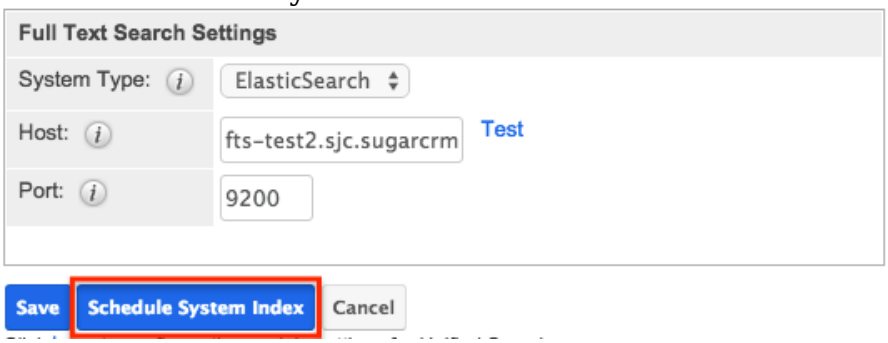
Full-text search relies on an index of the records and data to be able to quickly locate results. After enabling full-text search, or enabling a module or field, you

should perform a full index of your system.

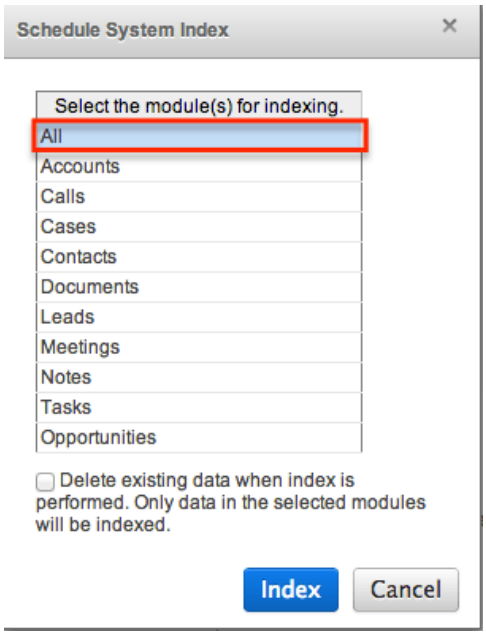
Note: System performance can be affected while the index is being performed. It is recommended to run a system index during low usage or off-hours.

Use the following steps to perform a full system index:

1. Click "Schedule System Index".



2. A pop-up message will display warning of potential performance issues during the index. Click "OK" to proceed.
3. The list of available full-text search modules will display. Simply select one or more module(s) to perform the index. You may also select "All" to index all full-text search enabled modules.



4. Select the checkbox to delete the current index data before the index operation runs. If this is the first index being performed on the system, you do not need to select this option. If you have added fields to a module's index, then this checkbox should be selected or the new field may not show in the results.
5. Click the Index button to schedule the index.
6. The next time the scheduler runs, it will rebuild the index based on the selected options. For more information on schedulers, please refer to the

Schedulers documentation.

Note: The time and resources required to perform an index are directly proportional to the number of modules selected for the indexing. It is recommended that you choose only the modules that require indexing and perform the index during low usage or off-hours.

Configuring Legacy Global Search

Legacy global search has been deprecated and is no longer applicable to any parts of Sugar. To enable modules for global search in the desktop application or Sugar Mobile, use the Full-Text Search Configuration instead.

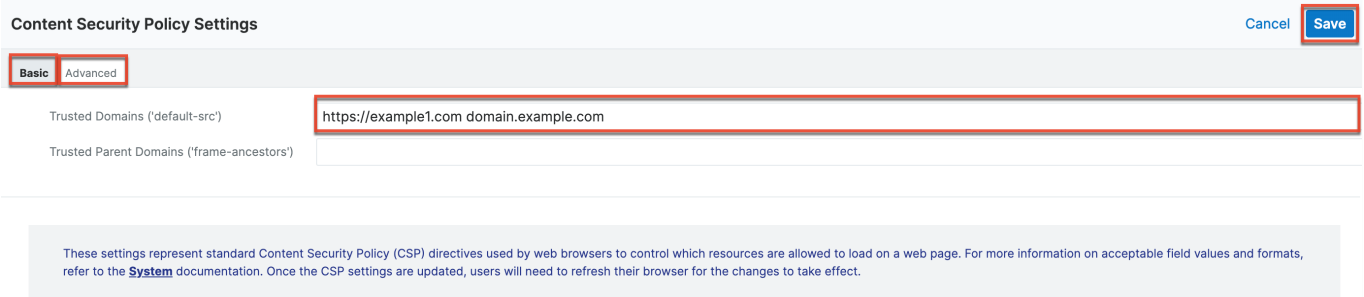
Content Security Policy Settings

Content Security Policy (CSP) directives are used by web browsers to control which content (e.g., images, scripts) can be loaded on a web page. For more information on CSP directives, refer to the Content Security Policy (CSP) guide on the MDN Web Docs - Mozilla website. Sugar prevents any external web content from loading in elements such as iframes and Web Page dashlets in your Sugar instance until the system administrator adds the web domain (e.g., https://example.com) as a trusted site on the Content Security Policy Settings page. Once added, users can then enter in the appropriate URL (e.g., https://example.com) in iframe fields and/or Web Page dashlets to load the content in Sugar. For additional information on CSP settings and how to configure the default-src in Sugar, refer to this SugarClub dev blog post.

Please note that the following CSP directives are defined in Sugar by default:

- img-src: This directive has pre-defined source values of data:, http:, https:, and blob: in Sugar.
- object-src: This directive has a pre-defined source value of 'self' in Sugar.

The Content Security Policy Settings page is broken into two tabs containing the basic and advanced CSP directives.



The Basic tab contains the following CSP fields:

- **Trusted Domains ('default-src')**: Enter the external domains or source values that will be allowed to load in iframes and/or Web Page dashlets in Sugar.
  Note: The values defined for default-src will apply to the following directives if the corresponding field is empty under the Advanced tab: connect-src, font-src, frame-src, script-src, and style-src.
- **Trusted Parent Domains ('frame-ancestors')**: Enter the parent website domains or source values that will be allowed to load Sugar using an <iframe>, <object>, or <embed> HTML element. For a list of the allowed source values, refer to the CSP: frame-ancestors guide on the MDN Web Docs - Mozilla website.
    - If this field is empty, then Sugar will only load in your parent website domains and not in any other external website domains.
    - The values defined for frame-ancestors do not apply to any other CSP directives.

The Advanced tab contains the connect-src, font-src, form-action, frame-src, script-src, and style-src fields. These settings are intended for administrators with an advanced understanding of the individual CSP directives and are familiar with how to configure them for their business needs. For more information about these directives, refer to the Content-Security-Policy guide on the MDN Web Docs - Mozilla website.

Please note that there are some commonly used source values and domains that are pre-defined by default in the system for the CSP directives such as:

- 'self'
- 'unsafe-inline'
- 'unsafe-eval'
- https://*.pendo.io
- *.sugarcrm.com
- *.salesfusion.com
- *.salesfusion360.com
- *.sugarapps.com
- *.sugarapps.eu

Note: Any new value(s) added to the CSP Settings page will be appended to this list as long as it does not already exist in the system.

CSP Guidelines

To add new domains or source values, simply enter the appropriate value(s) in the CSP fields (e.g., Trusted Domains ('default-src')), keeping in mind the following guidelines:

- Enter values in the CSP fields in Sugar using an acceptable format (e.g.,

https://www.example.com, http:, https:), as covered in the section below.
- Separate multiple values in the CSP field in Sugar using whitespace.
- Enter non-latin domain names in punycode format for CSP fields in Sugar. For more information on punycode, refer to the Punycode article on the Ionos website.
- If you enter a value (e.g., 'self') that is already defined as a trusted domain or source value in Sugar, the value will be disregarded as it already exists in the system.
- The values defined for default-src will apply to the following CSP directives if the CSP field (e.g., frame-src) is empty in Sugar: connect-src, font-src, frame-src, script-src, and style-src.
  Note: The default-src values do not apply to the form-action and frame-ancestors directives.
- If you define a value in the advanced CSP directives (e.g., font-src, frame-src) in Sugar, then this value will supersede any value(s) entered in the Trusted Domains ('default-src') field.
- If the form-action field is empty in Sugar then any supported source value will be allowed for this directive.
- The values defined for frame-ancestors do not apply to any other CSP directives in Sugar.

Once the appropriate values have been entered, click "Save" to preserve your settings. Please note that users who are logged in to Sugar at the time of the CSP change will need to refresh their browser for the changes to take effect in their session.

Supported Source Values

The table below covers the source values that are supported in Sugar for CSP. When entering values such as 'unsafe-hashes', http:, and https: please make sure to enter the value as-is in the CSP directive fields. Some examples of acceptable formats for URLs are: https://www.example.com, *.example.io, *.example.gov, *.com, and https://*.example.com. Entering a URL such as https://example will result in an error as it is missing the top-level domain (e.g., .com, .io, .org).

Note: The information in this table has been adapted from the CSP Quick Reference Guide on the Content Security Policy website.

Source Value	Description
*	Wildcard, allows any URL except data: blob: filesystem: schemes
'self'	Allows loading resources from the same origin (same scheme, host and port)
data:	Allows loading resources via the data

	scheme (e.g., Base64 encoded images)
domain.example.com	Allows loading resources from the specified domain name
*.example.com	Allows loading resources from any subdomain under "example.com"
https://example.com	Allows loading resources only over HTTPS matching the given domain
https:	Allows loading resources only over HTTPS on any domain
http:	Allows loading resources only over HTTP on any domain
'unsafe-inline'	Allows use of inline source elements such as style attribute, onclick, or script tag bodies (depends on the context of the source it is applied to) and javascript: URIs **Note**: Not supported for frame-ancestors directive.
'unsafe-eval'	Allows unsafe dynamic code evaluation such as JavaScript eval() **Note**: Not supported for frame-ancestors directive.
'unsafe-hashes'	Allows you to enable scripts in event handlers (e.g., onclick). Does not apply to javascript: or inline <script>.

Please note that the following source values are not supported in Sugar and will result in an error if entered on the CSP Settings page:

- 'none'
- 'nonce-'
- 'sha256-'
- 'strict-dynamic'

License Management

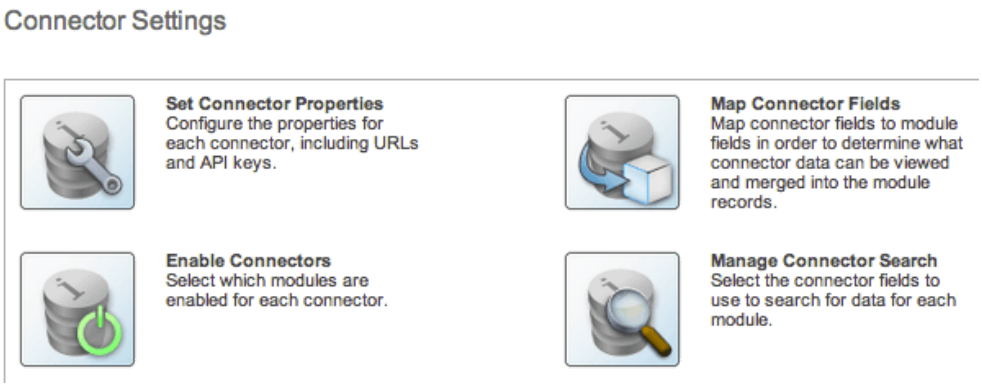
The License Management section allows administrators to edit and revalidate their Sugar license as well as view information such as the download key, expiration date, number of users, etc. Refer to the License Management page for more details on working with license keys and license types.

Connectors

The connector settings page allows administrators to configure and manage the various types of connectors to external data sources that integrate with Sugar. A number of different connectors (e.g., Citrix GoToMeeting) come out-of-the-box with Sugar and are enabled by default to allow users to easily view external data via their instance.

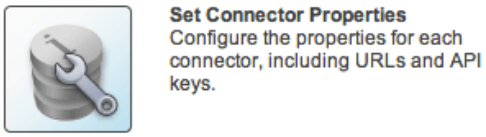
Please note that connectors can be disabled and configured accordingly via Admin > Connectors. Developers in your organization can also create connectors to other data sources, which can be uploaded via Module Loader. For more information on how to upload and install packages in Sugar, please refer to the Module Loader documentation. You can also search for other available connectors via Sugar Exchange (https://sugarexchange.sugarcrm.com).

Note: Sugar Sell Essentials customers do not have the ability to upload custom file packages to Sugar using Module Loader.



Setting Connector Properties

Many connectors use web services and require certain connector properties (e.g., API Key, API Secret) to be configured prior to use. To configure the connector properties, simply click the Set Connector Properties button on the Connector Settings page.



The Set Connector Properties page displays a tab for each connector that must be configured in order to use in Sugar. The tabs will include the necessary steps or a link for you to obtain the information (e.g., API Key, API Secret) needed to set up the connector. Once the necessary information has been entered, click "Save" to preserve your settings.

The following connectors and their properties are available to configure:

Connector	Property	Description
Twitter	API Key	The API Key provided by Twitter
	API Secret	The API Secret provided by Twitter
Microsoft	Client ID	The Client ID provided by Microsoft
	Client Secret	The Client Secret provided by Microsoft
Google	Client ID	The Client ID provided by Google
	Client Secret	The Client Secret provided by Google
Dropbox	Client ID	The Client ID provided by Dropbox
	Client Secret	The Client Secret provided by Dropbox
GoToMeeting	Consumer Key	The Consumer Key provided by GoToMeeting
IBM SmartCloud	OAuth Consumer Key	The OAuth Consumer Key provided by IBM
	OAuth Consumer Secret	The OAuth Consumer Secret provided by IBM
DocuSign	Environment	Set to demo when testing the app in DocuSign's demo environment and set to production once the app has gone through DocuSign's go-live process.
	Integration Key	The Integration Key provided by DocuSign
	Client Secret	The Secret Key provided by DocuSign

Please note that Sugar's WebEx integration is configured via the External Accounts tab of the user's profile. Since WebEx does not have global properties to configure, it will not appear on the Set Connector Properties page.

For more information on configuring the WebEx application, please refer to the

Getting Started documentation in the Application Guide.

Enabling Connectors

In order to utilize the connectors in Sugar, administrators should ensure that they are enabled properly. Please note that certain connectors are enabled for the entire application while some allow you to enable specific modules for the connector. Simply click the Enable Connectors button on the Connector Settings page to configure the modules that should be enabled for certain connectors.



Enable Connectors
Select which modules are enabled for each connector.

The Enable Connectors page will display a tab for each connector that is available in your Sugar instance. Connectors, where you can enable specific modules for, will display the Enabled and Disabled columns where you can drag and drop the desired module from the Disabled column to the Enabled column. Please note that you can enable the connector for any modules (e.g., Accounts, Contacts) that have a standard record view (for Sidecar modules) or detail view (for legacy modules) layout in Sugar.

Mapping Connector Fields

Some connectors query external services based on fields in Sugar. These mappings can be customized to use different fields based on your organization's needs. To configure the field mappings, simply click the Map Connector Fields button on the Connector Settings page.



Map Connector Fields
Map connector fields to module fields in order to determine what connector data can be viewed and merged into the module records.

The Map Connector Fields page has a tab for each connector that has field mappings available. Each of the enabled module(s) will display the connector fields and will need to have the corresponding Sugar field selected from the dropdown list. If the connector is enabled for multiple modules, be sure to select the proper fields for each module. Once the field mapping is set up properly, click "Save" to preserve your changes.

Please note that the connector fields may not always match up with a stock field in Sugar. If you wish to capture and map certain fields from the connector to Sugar, you will need to create new fields via Admin > Studio. For more information on how to create fields in Studio, please refer to the Studio documentation.

Managing Connector Search

Connectors that have multiple fields for mapping need to specify which fields are to be used when searching for data in the module. To designate the connector fields for search, click the Manage Connector Search button on the Connector Settings page. Please note that there are no connectors that come out-of-the-box with Sugar that have search fields defined, so no connectors will be available to configure on this page.



Manage Connector Search
Select the connector fields to use to search for data for each module.

The Manage Connector Search page will normally display a tab for every connector that needs connector fields defined for search. The available search fields are limited to the input parameters of the connector being used. To enable a field for search, simply drag and drop the desired field from the Available column to the Default column. Once the necessary field(s) have been selected, click "Save" to preserve your changes.

OAuth Keys

OAuth is an open standard for authorization that enables users to share private resources stored on one site with another site without divulging personal credentials such as user name and password. OAuth works with a public consumer key and a private consumer key. Together, these keys identify which application connects to the service. It is the choice of the Sugar administrator to decide how many different keys to have and whom to give them to. Please refer to the User Interface documentation for more information on working with the OAuth Keys module and performing actions such as searching, editing, and deleting records.

Note: The system generated OAuth Support Portal Key cannot be modified and should not be deleted.

OAuth Keys Fields

The OAuth Keys module contains a number of stock fields that come out-of-the-box with Sugar. The following definitions are suggested meanings for the fields, but the fields can be leveraged differently to best meet your organization's needs.

Field	Description
Consumer Key Name	The name or designation of the OAuth Key.
Consumer Key	Public key. A user name is a suitable consumer key value.
Consumer Secret	Private key. A password is a suitable consumer secret value.

	Note: The private key is not sent when making a connection.
OAuth Version	The version of the OAuth protocol/framework to use. (OAuth 1.0, OAuth 2.0)
Description	A description or other information about the OAuth key.

Creating OAuth Keys

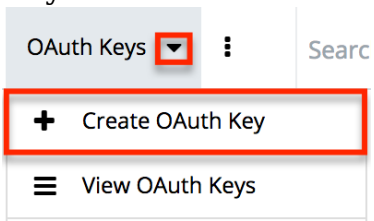
There are various methods for creating OAuth keys in Sugar including via the OAuth Keys module and via duplication. The full edit view layout opens when creating the OAuth keys directly from the OAuth menu and includes all of the relevant fields for your organization's OAuth keys. The quick-create form is a shortened version of the OAuth Keys edit view and typically contains fewer fields.

Creating via OAuth Keys Module

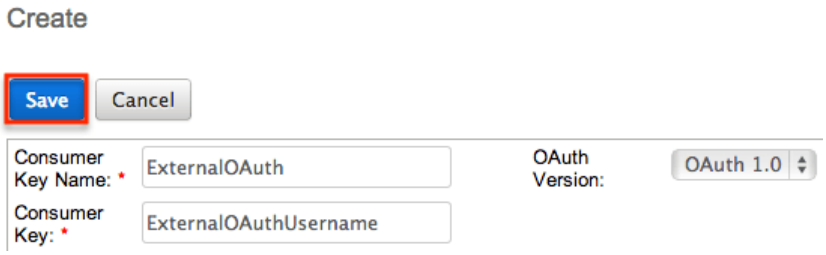
One of the most common methods of OAuth key creation is via the Create OAuth Key option in the OAuth Keys module tab. This opens up the edit view layout which allows you to enter all the relevant information for the OAuth key.

Use the following steps to create an OAuth key via the OAuth Keys module:

1. Navigate to Admin > OAuth Keys.
2. Click the triangle in the OAuth Keys module tab and select "Create OAuth Key".



3. Enter appropriate values for the Fields in the edit view layout. All required fields are marked with a red asterisk and must be completed prior to saving.
4. Once the necessary information is entered, click "Save".



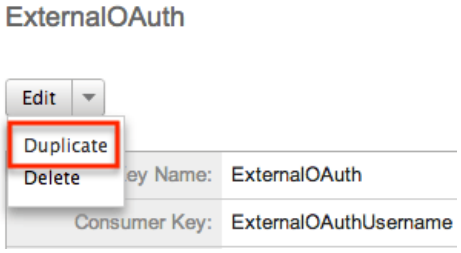
Creating via Duplication

You can also create a new OAuth key by duplicating an existing record. The duplicate option is useful if the key you are creating has similar information to an existing OAuth key.

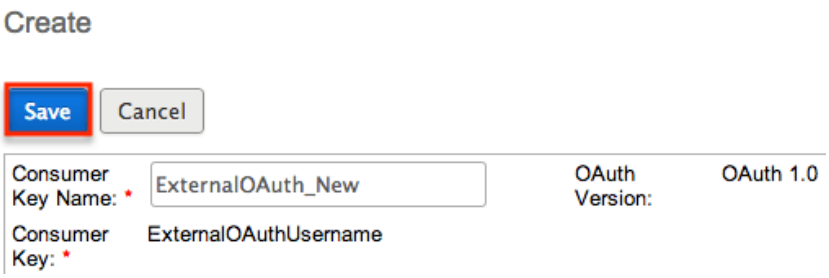
Note: The system-generated OAuth Support Portal Key cannot be duplicated.

Use the following steps to create an OAuth key by duplicating an existing record:

1. Navigate to an OAuth key record's detail view.
2. Select "Duplicate" from the Actions menu.



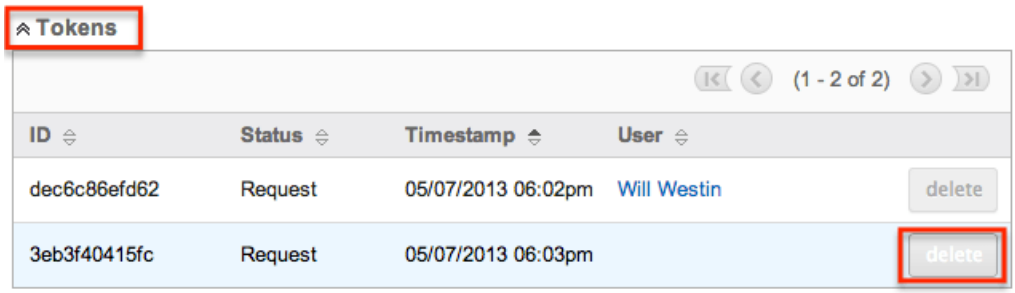
3. The displayed edit view is pre-populated with the original key's values. Update the necessary fields, then click "Save".



Note: Consumer Key and OAuth Version fields cannot be edited after creation. If either of these fields needs to be changed, you must create a new OAuth key.

Tokens

Beneath an OAuth key record's fields is a subpanel containing related token records. Tokens are created when the user establishes an OAuth connection with the OAuth key pair. These are connections between the Sugar user, the OAuth keys, and the permissions to enable the external application to access data. Tokens created for each OAuth connection are listed in the Tokens subpanel of the corresponding OAuth Keys detail view page. The Tokens subpanel can be collapsed or expanded by clicking the double arrow to the left of the subpanel's name.



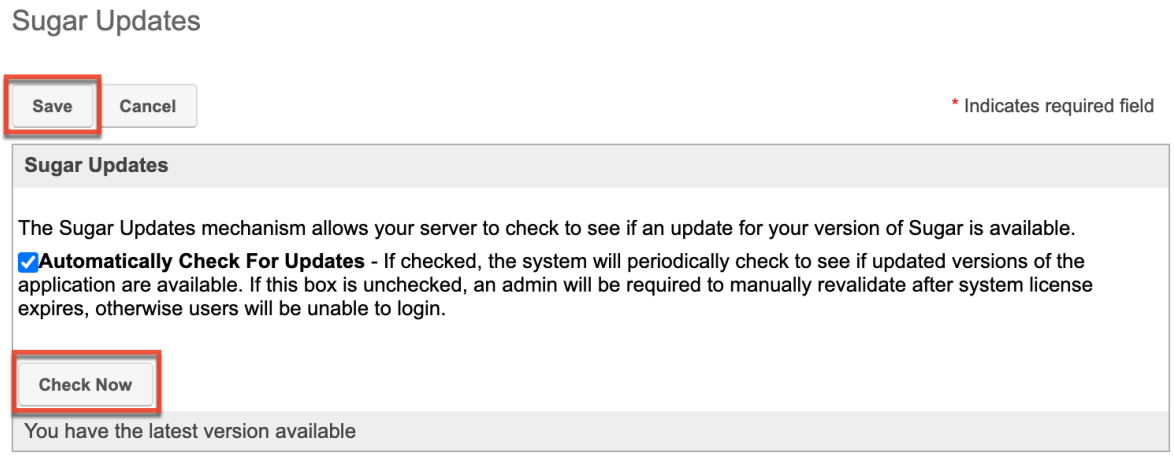
To delete a token from an OAuth key, choose "Delete" from the far right of the record's row.

Sugar Updates

The Sugar Updates page allows administrators to check for the latest available Sugar versions. By default, Sugar automatically checks for updates on a periodic basis to see if any version updates are available for your instance. If a new version update is available, the Sugar Updates link in the Administration page will appear red and display the latest Sugar version next to it. Administrators can uncheck the automatic updates option in the Sugar Updates page if they do not wish to have the system automatically check for updated version releases.

Use the following steps to perform a manual check for Sugar updates:

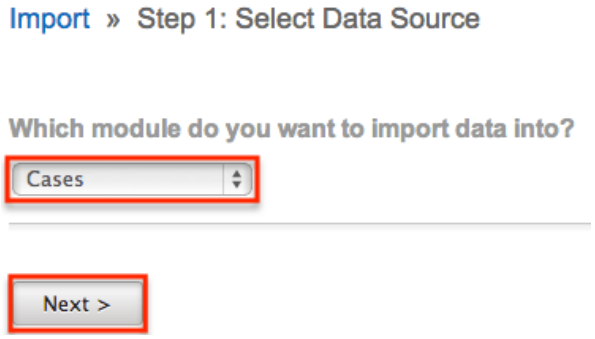
1. Navigate to Admin > Sugar Updates.
2. Click the Check Now button to see if a new update of Sugar is available.



If there is an available version update, a message will appear below the Check Now button with the latest version along with a message to visit store.sugarcrm.com/download to retrieve and download the latest version. Please note that clients hosted on Sugar's cloud service are normally upgraded by the SugarCRM team on a predetermined schedule as releases are made available. On-Site clients will need to perform the upgrade themselves as Sugar is hosted on their servers. If the system detects that you have the latest version of Sugar, then the message will inform you that you have the latest version available.

Import Wizard

Import Wizard allows administrators to launch an import for any import enabled module without navigating to the module itself. After selecting "Import Wizard" from the Admin menu, you can select a module to perform an import on.



After selecting the module, click "Next" to continue the import. The steps to complete the import are identical to performing an import from the module. For more information on how to perform an import, please refer to the Import documentation in the Application Guide.

Upgrade Wizard

The Upgrade Wizard allows on-site customers to upgrade their Sugar instance to the latest software version. The Upgrade Wizard is only available for administrators of on-site installations. For steps to complete an on-site upgrade using the wizard, please refer to the Installation and Upgrade Guide for your on-site version of Sugar.

Repair

Repair allows administrators to perform common maintenance routines on their instance of Sugar. The repair menu is available to only administrative users and can be accessed through Admin > Repair.

For more information on the different repair options available, please refer to the Repair documentation in the Administration Guide.

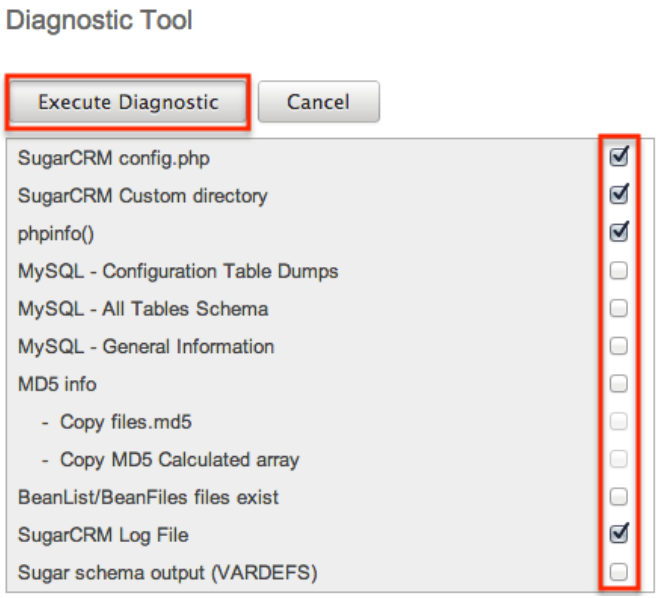
Diagnostic Tool

Diagnostic Tool allows administrators to create a file with many diagnostic and configuration details. This tool will collect basic system information regarding Sugar and server configuration and place it all into a zip file to help debug or diagnose issues. For more information on the diagnostic tool in Sugar, refer to the Introduction to the Diagnostic Tool article. The Diagnostic Tool has options that you can turn on and off to include only specific configuration data. Select one or more of the following available options:

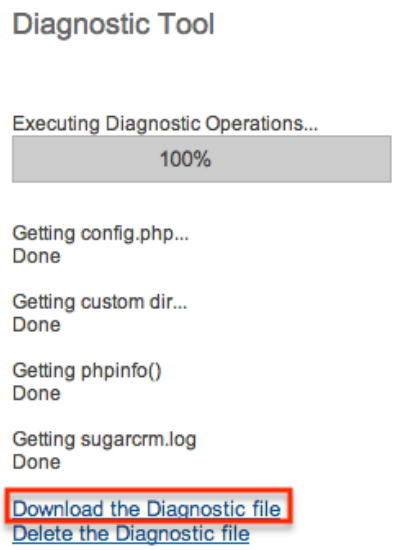
Option	Description
SugarCRM config.php	Includes a copy of the config.php file from the root directory of Sugar. This file contains many useful system settings options in Sugar. **Note**: The database password contained in this file is replaced with asterisks before sending for security purposes.
SugarCRM Custom directory	Includes a copy of the entire custom directory in Sugar
Phpinfo()	Includes the output of the PHP function phpinfo() saved to an HTML file. The phpinfo() function returns information about how PHP is configured on the server running Sugar including the version of PHP, the loaded Extensions, and more.
MySQL - Configuration Table Dumps	Includes an HTML file for each configuration table in Sugar. The file has three sections: field definitions, indexes, and data.
MySQL - All Tables Schema	Includes an HTML file titled MySQLTablesSchema.html which has two sections for each table in Sugar: field definitions and indexes.
MySQL - General Information	Includes an HTML file titled MySQL-General-info.html. This file contains some basic information about the MySQL database Sugar is running on such as version number and character sets.
MD5 info	Includes a PHP file that shows any file in your instance of Sugar that has a different hash than the stock file. This can indicate which files are customized and where they are located in your file system.
Copy files.md5	Includes the list of all files and their original MD5 hash in a file titled files.md5 **Note**: Only available when the MD5 info option above is selected.

Copy MD5 Calculated array	Includes the list of all files and their current hash in a PHP file titled md5_array_calculated.php **Note**: Only available when the MD5 info option above is selected.
BeanList/BeanFiles files exist	Includes an HTML file titled beanFiles.html. This file contains a list of the modules in Sugar and checks all the references for that module to make sure they are correct.
SugarCRM Log File	Includes a copy of the current log file for Sugar.
Sugar schema output (VARDEFS)	Includes an HTML file titled vardefschema.html which contains detailed metadata on each table in Sugar.

The more options selected, the bigger the resulting zip file will be. Select the desired options and click "Execute Diagnostic".



Once the diagnostic tool is finished, select "Download the diagnostic file" to download the zip file containing the results to your computer.



Optionally, you can then select "Delete the Diagnostic file" to remove it from the server. Large diagnostic files should be deleted from the server as they can pile up and take necessary disk space.

Tracker

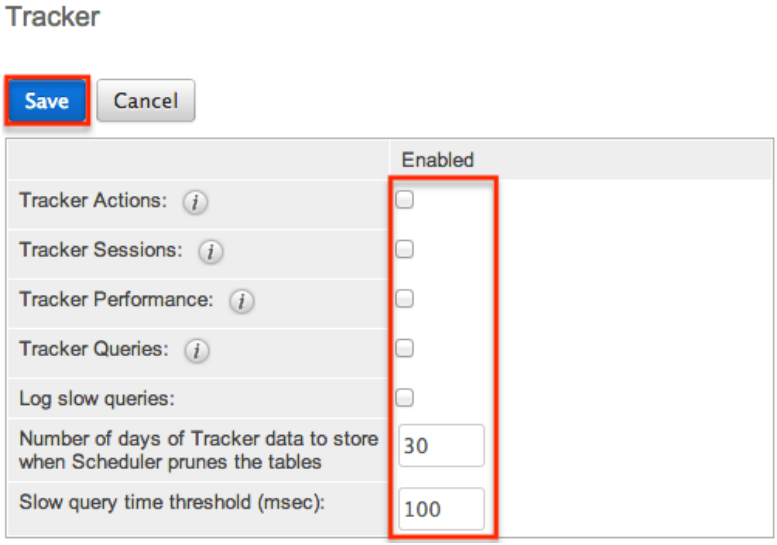
Tracker allows administrators to configure the system to track certain user actions and information for Sugar modules. This information is used in tracker reports and dashlets. By default the tracker options are disabled.
Use the following options to record tracker data:

- **Tracker Actions**: Tracks user actions such as modules accessed and records saved.
- **Tracker Sessions**: Tracks active users' session data such as session length.
- **Tracker Performance**: Tracks system performance such as database round trips, number of files accessed, server response time, and memory usage.
  Note: This option can cause performance issues and should not be enabled in a production environment.
- **Tracker Queries**: Tracks any query that takes longer than the specified slow query time threshold and saves the data to the database. Tracker queries logs the query, how many times it has been run, the last time ran, and the average seconds the query took. "Log slow queries" also needs to be selected before this option tracks data.
  Note: This option can cause performance issues and should not be enabled in a production environment.
- **Log slow queries**: Select this option to log queries that take longer than the slow query time threshold to the sugar log. This is useful for performance debugging.
  Note: This option can cause performance issues and should not be enabled

in a production environment.

- **Number of days of Tracker data to store when Scheduler prunes the tables**: Specify the number of days of data to be retained. The Prune Tracker Tables scheduler will remove any tracker records older than the specified number of days. For more information on the Prune Tracker Tables scheduler, please refer to the Prune Tracker Tables section of the Scheduler documentation in the Administration Guide.
- **Slow query time threshold (msec)**: Specify a threshold in milliseconds to begin logging slow queries. If "Log slow queries" is selected, queries that take longer to process than the threshold duration will be recorded in the Sugar Log. If "Tracker Queries" is selected, queries will be logged to the database.

Select the desired settings and click "Save" to preserve your changes.



Note: Changing the Log slow queries and Slow query time threshold values will also change them in Admin > System Settings.

Scheduler

Scheduler provides administrators with a method to automate the execution of custom and system processes. The Scheduler menu is available to only administrative users and can be accessed through Admin > Scheduler.

For more information on the different schedulers available, please refer to the Schedulers documentation in the Administration Guide.

PDF Manager

PDF Manager allows administrators to create and manage templates for generated PDF files for any deployed module, custom or standard. The PDF Manager is available to only administrative users and can be accessed through Admin > PDF

Manager.

For more information on the PDF Manager, please refer to the PDF Manager documentation in the Administration Guide.

Mobile

The Mobile settings on the Administration page allow administrators to configure what modules they want enabled or disabled for Sugar Mobile and the browser-based Sugar mobile application. In addition, you can enable the mobile offline capability for your instance for Sugar Mobile.

The browser-based Sugar mobile application allows users to access various Sugar modules (stock and custom modules) via a web browser on a smartphone or PDA. Sugar Mobile is a native mobile application that enables users to access Sugar from mobile devices. For a list of supported devices for Sugar Mobile, please refer to the Mobile Supported Platforms page.

You can add, edit, and remove fields, including Calculated Value fields, to customize the mobile layouts via Admin > Studio. For more information on configuring fields, please refer to the Fields section of the Developer Tools documentation. For more information on configuring the mobile layouts, please refer to the Mobile Layouts section of the Developer Tools documentation.

Note: Calculated Value fields will not be updated in real-time for mobile edit view layouts.

Configuring Sugar Mobile

You can configure what modules are available for use in Sugar Mobile via Admin > Mobile. Please note that the Bug Tracker, Campaigns, Products, and Targets modules are not available for Sugar Mobile. For more information on enabling modules for Sugar Mobile, please refer to the Enabling Modules for Mobile Access section of this documentation.

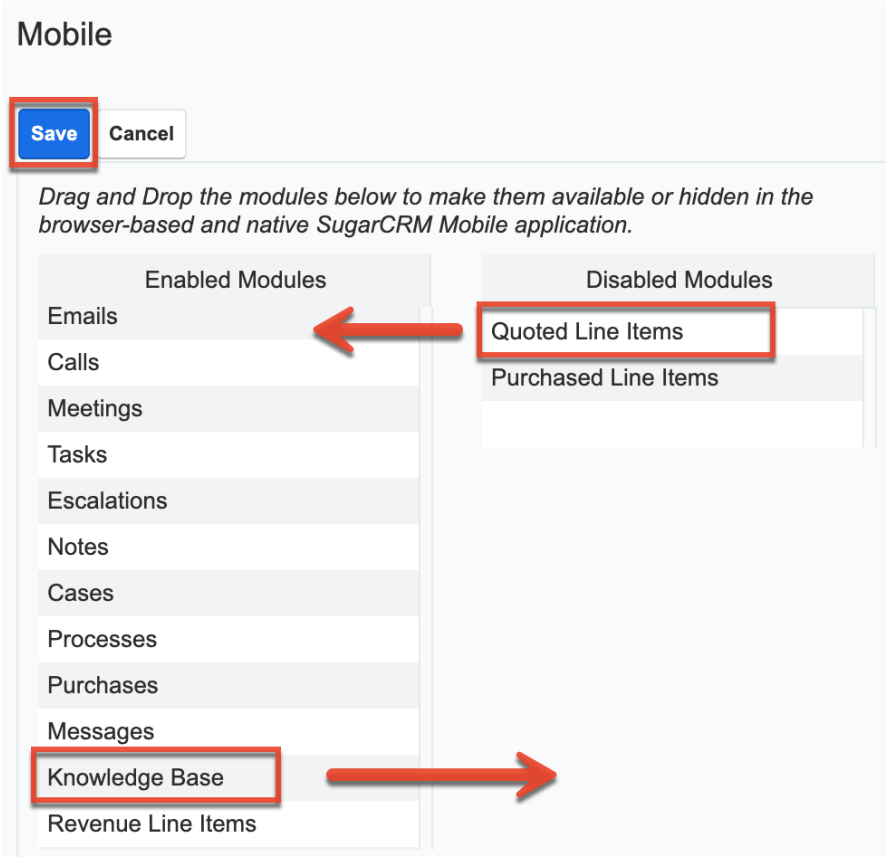
Configuring Mobile Browser Access

The modules enabled for use via Admin > Mobile will also apply to the browser-based Sugar mobile application. For more information on enabling modules for the browser-based Sugar mobile application, please refer to the Enabling Modules for Mobile Access section of this documentation. Please note that the Reports module is not available for the browser-based Sugar mobile application.

Enabling Modules for Mobile Access

Use the following steps to enable modules for mobile access:

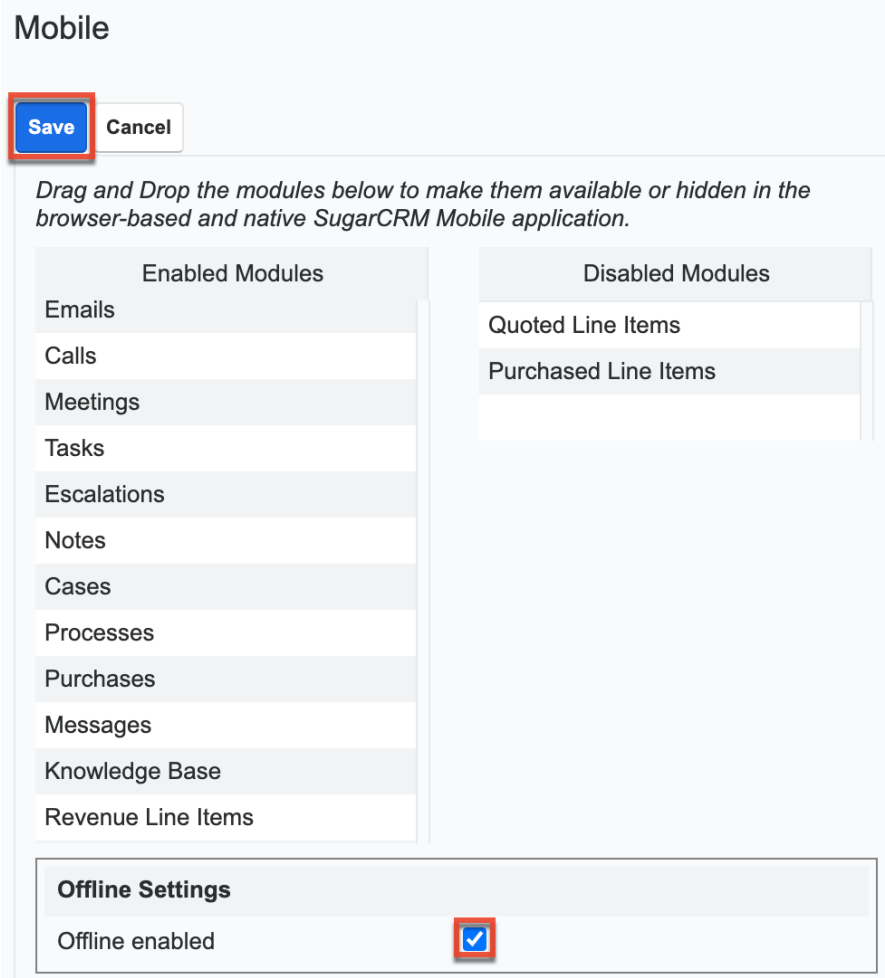
1. Navigate to Admin > Mobile.
2. To enable a module for the browser-based and native Sugar mobile application, drag and drop the module from the Disabled Modules column to the Enabled Modules column.
3. To disable a module, drag and drop the module from the Enabled Modules column to the Disabled Modules column.



4. Click "Save" to apply the changes made to Sugar Mobile and the browser-based Sugar mobile application.

Enabling Offline Mobile Access

You can also allow mobile offline capabilities for your instance in Sugar Mobile by marking the "Offline enabled" checkbox in Admin > Mobile. Enabling offline access allows the user's mobile device to cache records for offline viewing as well as buffer changes they make to records while offline. The changes made will be synced once they are reconnected. Please note that the offline option must be enabled in Sugar first before users can enable the offline capabilities on their devices. For more information on enabling offline access for mobile devices, please refer to the Sugar Mobile User Guide for your specific mobile device type (i.e., iOS, Android).



Repair

Overview

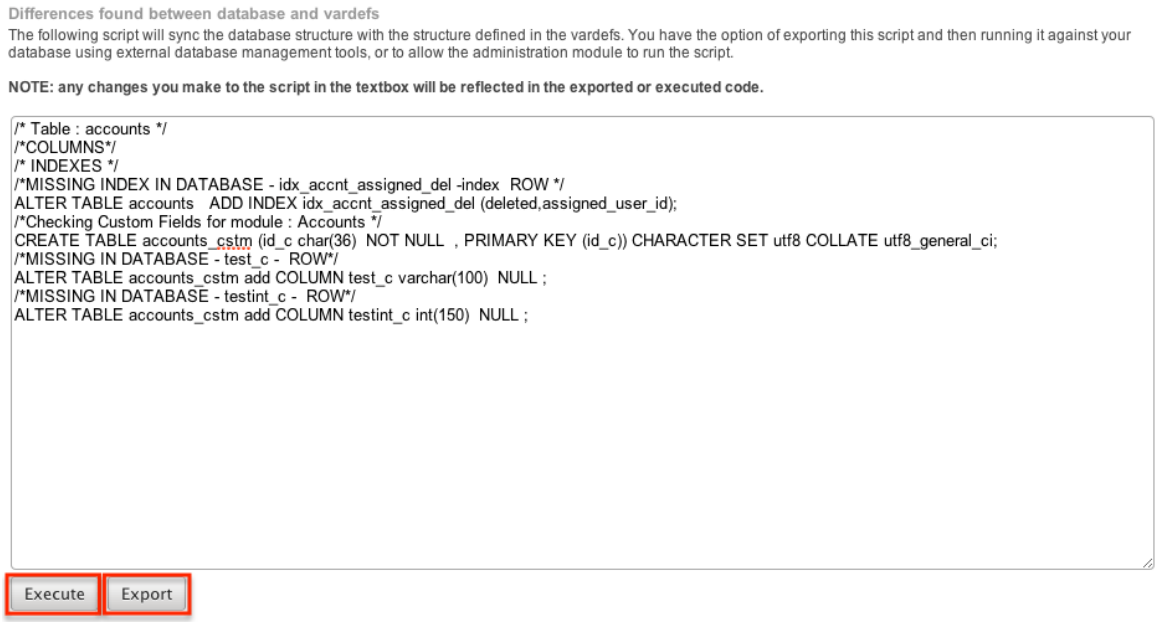
The repair functions in Sugar allow administrators to perform common maintenance routines on their instance of Sugar. The repair menu is available to only administrative users and can be accessed through Admin > Repair. The following sections are available options from the repair menu.

Quick Repair and Rebuild

The quick repair and rebuild is the most commonly used repair option and should be performed after significant changes have been made to your instance of Sugar. If you notice inconsistencies with module layouts or fields as you have customized them via Studio, this option is normally the best first course of action to try and correct the issue. Sugar caches files to help access necessary files quickly. This option clears out many of the cached files in Sugar which allows new versions of

the files to be loaded. The quick repair and rebuild option performs the following actions:

- **Clear Vardefs From Cache**: Deletes any *vardefs.php file in the cached modules folder
- **Clear Language Files From Cache**: Deletes any {Module Name}.lang.php file in the cached modules folder
- **Clear Template Files From Cache**: Deletes any *.tpl files in the cached modules folder
- **Clear JavaScript Files From Cache**: Deletes any *.js files in the cached modules folder
- **Clear JavaScript Language Files From Cache**: Deletes any *.js files in the cached jsLanguage folder
- **Clear Dashlet Files From Cache**: Deletes any *.php files in the cached dashlets folder
- **Clear Sugar Feed Files From Cache**: Deletes the Sugar Feed files in cached modules folder
- **Clear Smarty Template Files From Cache**: Deletes any *.tpl.php files in the cached smarty templates folder
- **Clear Theme Files From Cache**: Deletes theme files in the cached theme folder for all themes in Sugar
- **Clear XML Files From Cache**: Deletes any *.xml files in the cached xml folder
- **Clear Search Files From Cache**: Deletes the unified_search_modules.php file in the cached module folder
- **Clear External API Cache Files**: Deletes the external API cache PHP and JavaScript files in the cached include folder
- **Clear Additional Cache Files**: Loops through the cached API folders and deletes any *.php files as well as the cached clients folder
- **Clear PDF Font Cache Files**: Deletes the cached PDF font list file
- **Rebuild Extension Files**: Rebuilds language files, extensions, dashlet containers, relationships, and the table dictionary; this step also clears any cached files by APC or WinCache, resets the Zend accelerator, clears eAccelerator's cache, and clears XCache cached files
  Note: These functions will only run if the associated systems are installed and running.
- **Rebuild Audit Tables**: Creates audit tables for any module that has audit enabled and where the audit table does not already exist; the results for each table are printed on the page
- **Repair Database Tables**: Checks to make sure the database is in sync with the table dictionary and vardef files; any missing tables, columns, and indexes will be scripted to be recreated as well as any column properties that are incorrectly set in the database. The screen will display any database changes that should be made. Click "Execute" to execute the script to apply the changes to the Sugar database or click "Export" to save the script to a SQL file.



Upgrade Teams

The Upgrade Teams option performs some cleanup regarding team records in Sugar. This can be useful to restore the private teams for all users in the event they become corrupted or are removed for any reason. The upgrade teams option performs the following actions:

- **Global Team**: Creates or restores the global team if it does not exist or has been deleted. All users are then assigned to the global team if not already.
- **Private Teams**: Creates a private team for every user in the system that does not already have a private team and assigns the user to their private team.

The results are printed on the screen as to what teams already existed and what teams were created.

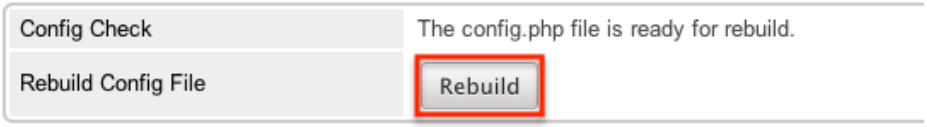
Rebuild .htaccess File

Rebuild .htaccess File option creates or updates the .htaccess file in the root of the Sugar directory. The .htaccess file contains specific commands to prevent unauthorized access to certain files and directories on your webserver. File permissions need to be configured correctly in order for Sugar to write to the .htaccess file. If writing to the file fails, the expected contents for the file will be printed on the page.

Note: If you have additional lines to add to the .htaccess file, place them outside of the "# BEGIN SUGARCRM RESTRICTIONS" and "# END SUGARCRM RESTRICTIONS" lines or they will be removed when running this repair function.

Rebuild Config File

The Rebuild Config File option takes the config.php file in the root directory of Sugar and rebuilds it to have all default values for any options not specified directly. It first runs a check to make sure Sugar can write to the config.php file and will return to you if it can or not. When ready to rebuild the config file select "Rebuild".



The default values for the config will be merged with any custom values currently set and will be loaded into the config.php file.

Rebuild Sugar Logic Functions

The Rebuild Sugar Logic Functions rebuilds the cache files for all Sugar logic functions in the system. The Sugar logic functions are primarily used as formulas in field definitions. The results of the repair are shown on the screen.

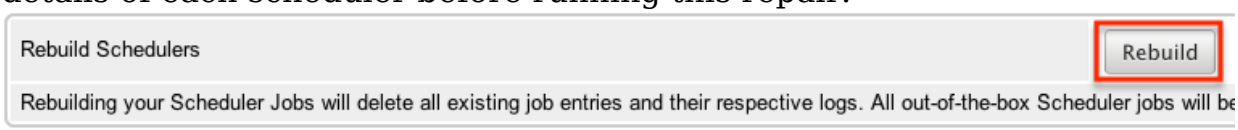
Rebuild Relationships

Rebuild Relationships clears out the relationship cache and data and rebuilds it from the vardef files. Custom and stock relationships are all rebuilt. This repair option is good to run after an upgrade or when installing or uninstalling custom modules. The results of the repair are shown on the screen.

Rebuild Schedulers

The Rebuild Schedulers option removes all schedulers and recreates scheduled jobs that come with Sugar by default. If you have customized the Active/Inactive flag, the frequency the job runs, or even deleted a job, this repair option will restore all settings back to their original default value and recreate any deleted default schedulers. For more information on schedulers and their default settings, please refer to the Schedulers documentation.

Note: This also deletes any custom schedulers added to Sugar. If you have made changes to the default schedulers or created custom schedulers, please backup the details of each scheduler before running this repair.



Rebuild WorkFlow

Rebuild Workflow deletes files in the custom workflows folder for each module and then rebuilds the files from the workflow data in the database. This repair also verifies the proper logic hooks are in place to properly fire the workflows and rebuilds any plug-ins that are installed.

Rebuild Javascript Languages

The Rebuild Javascript Languages function deletes all files in the cached jsLanguage folder and deletes any {Module Name}.lang.php file in the cached modules folder. The cached files will be rebuilt when they are needed.

Rebuild JS Grouping Files

Rebuild JS Grouping Files takes the many different JavaScript files that are required with Sugar and concatenates them together into the cache directory.

Note: The process will continue working if you navigate away from this page, but if you wait you will see a notification on the page when it is complete.

Rebuild Sprites

Rebuild Sprites takes images in the following directories:

- ./include/images
- ./themes
- ./custom/themes

Creates the sprites and metadata files in the ./cache/sprites/ folder.

Note: The process will continue working if you navigate away from this page, but if you wait you will see a notification on the page when it is complete.

Repair Non-Lowercase Fields

The Repair Non-Lowercase Fields option takes any custom field defined in Sugar and, if the field contains an upper case letter, it will change the field to be lowercase. The database, vardef files, and views are all searched through and corrected for and uppercase fields. This option also clears any vardef files from the cache when finished.

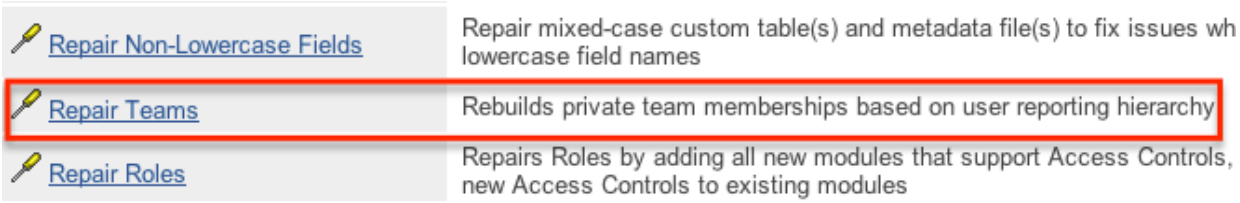
Repair Teams

The Repair Teams option runs a quick check against the database for every user. It performs the following checks:

- Users not in the global team
- Users who do not have a private team
- Users who are not a member of a team that a user who reports to them is a member of

If any of the checks return true, the page will indicate that records were found and the associated action will be selected by default. Select the options you wish to perform and click "Rebuild".

The selected options will perform the following:



- **Rebuild access to global team**: Create a global team if one does not exist and loops through every user and adds them to the global team.
- **Rebuild access to private team**: Loops through every user and creates a private team if one does not exist, and then adds the user to their private team.
- **Rebuild team hierarchy**: Loops through every user and makes sure every manager is included in their employees' teams. This ensures that if Sally reports to Jim, that Jim can see all of Sally's records.
  Note: Sugar prevents a loop from being created via the Reports To field. For more information on setting the Reports To field, please refer to the User Management documentation.
- **Clean up unused combinations of teams**: Searches the database for unused combinations of teams and deletes the records from the database.

The users looped through are displayed on the screen when complete.

Repair Roles

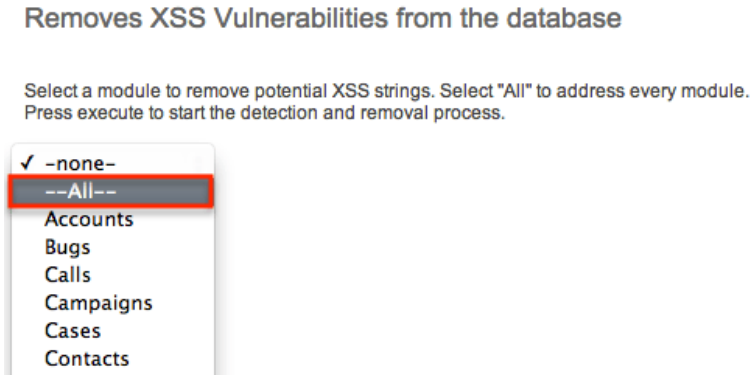
Repair Roles goes through every ACL enabled module and ensures that there are appropriate database records to allow roles to be used on the specified module. This repair is important to run after adding new modules via Module Loader or Module Builder to make sure all of the role options are available for the new module. If there is a module that has ACL enabled for it, but the module does not show in the Roles section, then this repair option will add the module. The results of the modules accessed are printed on the screen.

Repair Inbound Email Accounts

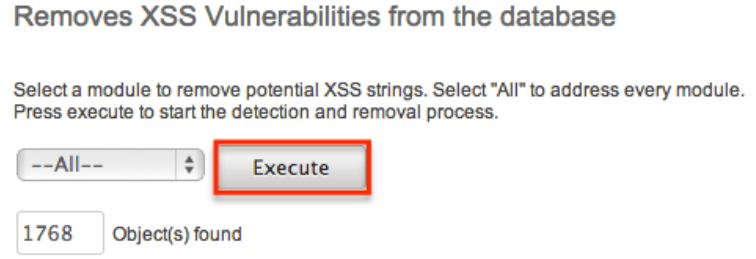
Repair Inbound Email Accounts loops through every active inbound email account in Sugar and verifies the settings configured. Any Inbound email account that fails to successfully repair will be listed on the page and will require someone to manually repair them by reentering a valid user name and password.

Remove XSS

The Remove XSS repair loops through the database and removes any malicious scripts from specified field types. Select a module from the dropdown, or select "All" to run for all modules.



The page will then display the count of records that will be scanned, and repaired if necessary. Click "Execute" to being the repair.



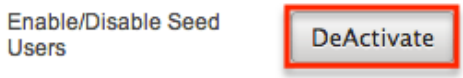
You will see the count of Object(s) Repaired incrementing as it is running. Once the repair is complete you will get a popup message saying "Done." and the count repaired should match the count of objects found.

Repair Activities

Repair Activities takes Call or Meeting records where the status field does not equal "Held" and updates the end date based on the duration of the activity. If the status equals "Held" or the record is marked as deleted, this repair will skip it. The screen will show "Done" when complete.

Enable/Disable Seed Users

The Enable/Disable Seed Users option will either enable or disable the default users that are installed with Sugar when selecting a demo installation. If the first seed user retrieved from the database is set to "Active" then this option will give you the option to "Deactivate" the seed users, otherwise, you have the option to "Activate" the seed users.



This option will set the status based on the option presented for all users that have an id that starts with "seed".

Note: If you did not populate Sugar with demo data when installing, this repair will return "No seed users" and will not do anything.

Clear Additional Cache

The Clear Additional Cache option loops through the cached API folders and deletes any *.php files as well as the cached clients folder. This option is also performed by the Quick Repair and Rebuild option. The screen will show "Done" when complete.

Schedulers

Overview

Schedulers in Sugar provide users with a method to automate the execution of custom and system processes. Sugar comes with many default schedulers to perform jobs such as monitoring inbound emails, executing workflows, running reports and dispatching campaign emails. Schedulers are available only to administrative users and can be accessed through Admin > Schedulers.

Schedulers Fields

The Schedulers module contains a number of stock fields that come out of the box with Sugar. The following definitions are suggested meanings for the fields, but the fields may be leveraged differently to best meet your organization's needs.

Field	Description

Active From	Time the scheduler begins to be active per day.
Active To	Time the scheduler stops being active per day.
Date & Time End	Date and Time the scheduler will stop running on the specified interval.
Date & Time Start	Date and Time the scheduler will begin running on the specified interval.
Execute If Missed	Specifies if a scheduler should be executed during the next cron run in the event that cron did not run at the exact time a job is scheduled for.
Interval	How often and when the schedule will run, defaults to every day, every minute.
Job	The job to execute on the defined schedule.
Job Name	The name or designation of the scheduler.
Status	The current status of the scheduler (i.e., Active, Inactive).

Note: Any times configured for schedulers will be based on the admin user's time zone (user id = '1').

Default Schedulers

The default schedulers that packaged with Sugar are required for different activities throughout the application. The following lists the default schedulers and their default settings:

Name	Interval	Status
Activity Stream Purger	On the hour; 04:00; Sunday	Inactive
Check Inbound Mailboxes	As often as possible.	Active
Clean Jobs Queue	On the hour; 05:00am	Active
Create Future TimePeriods	On the hour; 11:00pm	Active
Elasticsearch Queue Scheduler	As often as possible.	Active
Process Time-Aware	On the hour	Active

Schedules		
Process Workflow Tasks	As often as possible.	Active
Prune Database on 1st of Month	On the hour; 04:00am; 1st	Inactive
Prune Old Record Lists	As often as possible	Active
Prune Tracker Tables	On the hour; 02:00am	Active
Publish approved articles & Expire KB Articles	On the hour; 05:00am	Active
Rebuild Denormalized Team Security Data	Every 15 minutes	Inactive
Remove diagnostic tool files	On the hour; 04:00am; Sunday	Active
Remove temporary files	On the hour; 04:00am	Active
Remove temporary PDF files	On the hour; 04:00am	Active
Run Active Data Archives/Deletions	On the hour; 10:00PM; Saturday	Active
Run Email Reminder Notifications	As often as possible.	Active
Run Nightly Mass Email Campaigns	On the hour; From 02:00am to 06:00am	Active
Run Nightly Process Bounced Campaign Emails	On the hour; From 02:00am to 06:00am	Active
Run Report Generation Scheduled Tasks	On the hour; 06:00am	Inactive
Sugar Heartbeat	On the hour; 04:00am	Active
SugarBPM™ Scheduled Job	As often as possible.	Active
Update tracker_sessions Table	As often as possible.	Active

SugarBPM Scheduled Job

The SugarBPM Scheduled Job is responsible for processes associated with the SugarBPM automation suite. It is active and runs as often as possible by default. The SugarBPM Scheduled Job will check for any active time-based process events in a pending state. If any processes meet this criterion, the scheduler will ensure the process flow continues. For more information about SugarBPM, please refer to the SugarBPM documentation.

Note: SugarBPM events processed by this scheduler will be run by the admin user (user id = '1') in Process History unless the admin user is disabled.

Activity Stream Purger

The Activity Stream Purger scheduler can help manage the number of activity stream records in the database. The scheduler is inactive by default with an interval set to run weekly on Sundays at 4:00 AM when enabled. As your company uses Sugar, the number of activity records will grow considerably over time which can result in performance degradation. For this reason, it is strongly recommended to enable the scheduler and set it to run during off-peak hours or at least once a week to prune older records from the activities table. By default, the scheduler will remove records that are older than 6 months as of the current date from the activities table, and 25,000 records will be removed per scheduler job run. Please note that user posts, comments, and attachments are preserved but all other activity stream records generated from field updates, new record creation, linking/unlinking records will be removed by the scheduler.

You can modify the following Sugar configuration settings if you wish to change the values:

- $sugar_config['activitystreamcleaner']['months_to_keep']: Modify the value of this config if you wish to change the number of months to keep activity records.
- $sugar_config['activitystreamcleaner']['keep_all_relationships_activities']: Modify the value of this config if you wish to keep link/unlink-type activity records in the table.
- $sugar_config['activitystreamcleaner']['limit_scheduler_run']: Modify the value of this config if you wish to change the number of records to delete per scheduler job run.

Check Inbound Mailboxes

The Check Inbound Mailboxes scheduler is active and runs as often as possible by default. This scheduler will retrieve any unread email from active group inbound email accounts configured in the system. Personal and bounce mail accounts are not checked by this scheduler. If the group email account is configured to create cases or to send auto-reply emails, then this scheduler will handle those tasks as well. For more information on how to set up and configure a group inbound email account, please refer to the Email documentation.

Clean Jobs Queue

The Clean Jobs Queue scheduler is active and runs every day at 5:00 AM by default. The jobs queue is essentially a log of when each scheduler has run. This

scheduler will go through the job queues and either soft or hard delete old records in the jobs queue. A soft delete is simply hiding the record from Sugar, but keeping it in the database for recovery if necessary. A hard delete is permanently deleting it from the database. Job queue records will be soft and hard deleted by this scheduler with the following criteria:

- **Soft Delete**: Completed more than 7 days ago.
- **Hard Delete**: Completed more than 21 days ago.

Note: The number of days for a soft and hard delete are configurable through the sugar config files by modifying the values of $sugar_config['jobs']['soft_lifetime'] and $sugar_config['jobs']['hard_lifetime'].

Create Future TimePeriods

The Create Future TimePeriods scheduler is active and runs every day at 11:00 PM by default. When setting up the Forecasts module for the first time, you are prompted with what type of time period (Yearly or Quarterly) and how many future and past time periods you would like. This scheduler runs based off of those settings and creates new time period records as needed for forecast data entry.

Elasticsearch Queue Scheduler

The Elasticsearch Queue Scheduler job is active and runs as often as possible by default. New records, revised records, and deleted records are queued to be processed by this scheduler and added to the full-text search index. Though this scheduler is set to run as often as possible, it can take a few moments before changes are available in global search results. For more information about Search, please refer to the Search documentation.

Process Time-Aware Schedules

The Process Time-Aware Schedules job is active and runs hourly. This scheduler processes entries in the time_aware_schedules table, which monitors and regulates time-based functions (e.g., the Status field on purchased line Item records).

Process Workflow Tasks

The Process Workflow Tasks scheduler is active and runs as often as possible by default. This scheduler processes and runs any time elapsed workflows are due to run. If you utilize time-elapsed workflows, it is highly recommended to run this scheduler as often as possible to ensure the workflows are executed quickly.

For more information on creating workflows, please refer to the Workflow Management documentation.

Note: Workflows processed by this scheduler will be run by the admin user (user id = '1') unless the admin user is disabled.

Prune Database on 1st of Month

The Prune Database on 1st of Month scheduler is configured to run at 4:00 AM on the first day of every month but is inactive by default. Sugar implements a soft delete feature when deleting records through the application. Instead of deleting the record right away, the system marks a field called deleted in the database for the record. This scheduler runs through every table in the Sugar database and deletes any record that has this deleted flag. This is beneficial to keep the database small and efficient but will remove the ability to recover accidentally deleted records. If you have a large database, we recommend activating this scheduler and running it once a month for performance.

Prune Old Record Lists

The Prune Old Record Lists scheduler is active and runs as often as possible by default. This scheduler job will clean up backend database entries Sugar uses when generating export files. Such entries that are older than 1 hour from the current date and time will be removed from the record_list database table.

Keeping this scheduler active will help prevent exports from failing due to size limitations.

Prune Tracker Tables

The Prune Tracker Tables scheduler is active and runs daily at 2:00 AM by default. This scheduler will delete data in the tracker tables based on the tracker prune interval. This interval can be set from Admin > Trackers and defaults to 30 days if not set. Any record older than the specified amount of days will be deleted from the following tables:

- tracker
- tracker_sessions
- tracker_perf
- tracker_queries
- tracker_tracker_queries

Keeping this scheduler active helps ensure overall system performance is kept at optimum levels, as these tables are continually updated via common actions in the application. For more information on trackers and setting this interval, please refer to the Tracker documentation.

Publish Approved Articles & Expire KB Articles

The Publish Approved Articles & Expire KB Articles scheduler is active and is set to run daily at 5:00 AM by default. This scheduler publishes any Knowledge Base articles that have a status of "Approved" and were scheduled for a later publish date. It also checks for any articles that have reached their expiration date and changes their statuses to "Expired".

Rebuild Denormalized Team Security Data

The Rebuild Denormalized Team Security Data scheduler is inactive by default with an interval set to run every 15 minutes when activated. Team Security denormalization can significantly improve SQL query performance when there are a large number of Teams in an on-site Sugar instance. This feature relies on a separate Team security denormalization table that needs to be updated as records change to ensure Sugar's team security visibility rules are applied properly. When denormalization is enabled via the perfProfile.TeamSecurity.default.use_denorm configuration and inline updates are disabled via perfProfile.TeamSecurity.inline_update, then the Rebuild Denormalized Team Security Data scheduler must be turned on to make sure the table is regularly updated.

Remove Diagnostic Tool Files

The Remove Diagnostic Tool Files scheduler is active and runs Sundays at 4:00 AM by default. The ./cache/diagnostic directory serves as a temporary directory for data generated by Sugar's Diagnostic Tool, which allows administrators and developers to capture basic system and server configuration details in order to diagnose problems in a Sugar instance. The tool places this data into a zip file on the server. The Remove Diagnostic Tool Files scheduler will remove any of these temporary files from the directory once a week during off-peak hours. For more information about the Diagnostic Tool, please refer to the Diagnostic Tool documentation.

Remove Temporary Files

The Remove Temporary Files scheduler is active and runs daily at 4:00 AM by default. Sugar uses a cache directory to store files such as images, documents, and installable modules uploaded by users. Some of these documents may be large in size and can cause performance issues. This scheduler will remove any unused files that are found in the ./uploads/tmp directory or in most user-configured upload directories. For more information about temporary file storage, please refer to the Advanced Configuration Options documentation.

Remove Temporary PDF Files

The Remove Temporary PDF Files scheduler is active and runs daily at 4:00 AM by

default. The ./cache/pdf/ directory serves as a temporary directory for in-progress PDF files generated from reports, quotes, and other parts of Sugar. Upon successful completion of the PDF operation, the file is typically removed from the directory, but there may be circumstances where orphaned PDF files could remain in the directory. This scheduler will remove any PDF files from the directory during off-peak hours.

Run Active Data Archives/Deletions

The Run Active Data Archives/Deletions scheduler is active and runs weekly on Saturdays at 10:00 PM by default. This scheduler will look at the current list of data archive records configured from the Data Archiver module and, for each one that is marked as active, it will perform the specified archive or deletion. The completed jobs will be registered as records in the Archive Runs module and can be viewed from the subpanel of their parent data archiver records.

Note: It is recommended to run this scheduler during low usage or off-hours as it can affect system performance.

Run Email Reminder Notifications

The Run Email Reminder Notifications scheduler is active and runs as often as possible by default. This scheduler will send out email reminders for meetings and calls that have met or passed the reminder time. Meetings and calls need to have a status that does not equal "Held" in order for the email reminder to be sent to invitees.

Run Nightly Mass Email Campaigns

The Run Nightly Mass Email Campaigns scheduler is active and runs on the hour, every hour from 2:00 AM to 6:00 AM by default. This scheduler will process any campaign emails waiting to be sent from the email queue up to the configured batch amount. If the number of emails to send per batch is set to 500, and this scheduler is set to run once an hour, then you will be sending 500 emails per hour. Please configure this scheduler and the number of emails to send per batch to allow the proper amount of email to be sent.

Note: Many email providers place limitations on email send rates such as emails per hour, emails per day, unique recipients, etc. Please check with your email provider to ensure that they will be able to process the volume of emails you desire to send through campaigns.

For more information on setting the number of emails sent per batch, please refer to the Email documentation.

Run Nightly Process Bounced Campaign Emails

The Run Nightly Process Bounced Campaign Emails scheduler is active and runs on the hour, every hour from 2:00 AM to 6:00 AM by default. This scheduler will retrieve any unread email from active bounce inbound mail accounts configured in the system. Bounce email accounts are important for receiving any bounced emails from a campaign. Emails in the bounce mail account must match all of the following criteria to be classified as a bounced email:

- 'From' email address must contain MAILER-DAEMON or POSTMASTER.
- 'Remove me' link from the original email must be in the email body.
- The originating email does not have a campaign activity log type of invalid email or send error.

We recommend setting this scheduler to run at the same time and interval as the Run Nightly Mass Email Campaigns scheduler. For more information on how to set up and configure a bounce inbound email account, please refer to the Email documentation.

Run Report Generation Scheduled Tasks

The Run Report Generation Scheduled Tasks scheduler is inactive by default with an interval set to run daily at 6:00 AM when activated. This scheduler executes any scheduled reports and emails the results to the designated user. If you want to utilize scheduled reports, please enable this scheduler, otherwise, the reports will not be emailed. We recommend running this scheduler as often as possible, this way if someone schedules a report for 6:15 AM, they will not have to wait until 7:00 to receive the report. For more information on scheduling reports, please refer to the Scheduled Reports documentation.

Sugar Heartbeat

The Sugar Heartbeat scheduler is active with an interval set to run daily at 4:00 AM by default. This scheduler ensures that Sugar continues to receive heartbeat information even if no users have logged into your instance in the last three days. When this occurs, the Sugar heartbeat information will be sent automatically when cron runs.

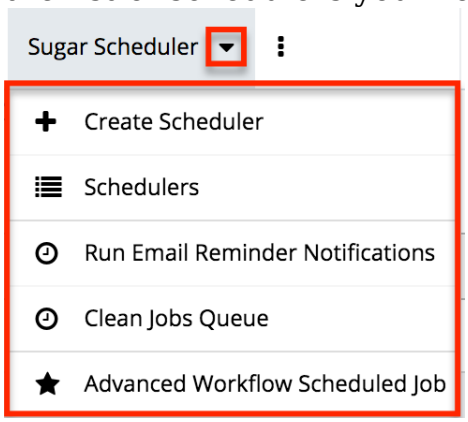
Update tracker_sessions Table

The Update tracker_sessions Table scheduler is active and runs as often as possible by default. This scheduler updates the tracker_sessions table, setting all records that have a date older than six hours to not active. This ensures any user that is inactive for six hours or more will be logged out and their sessions will no longer be active. Please keep in mind that PHP settings on the server may be more

restrictive than the six-hour limitation on inactivity this scheduler imposes.

Schedulers Module Tab

The Schedulers module tab can be accessed by navigating to the Administration page and clicking "Scheduler" in the System section. Once in the Schedulers list view, you can click the triangle in the Sugar Scheduler module tab to display the Actions, Recently Viewed, and Favorites menus. The Actions menu allows you to perform important actions within the module. The Recently Viewed menu displays the list of schedulers you last viewed in the module. The Favorites menu displays the list of schedulers you most recently marked as favorites in the module.



The Actions menu allows you to perform the following operations:

Menu Item	Description
Create Scheduler	Opens the edit view layout to create a new scheduler.
Schedulers	Opens the list view layout to search and display schedulers.

Creating Schedulers

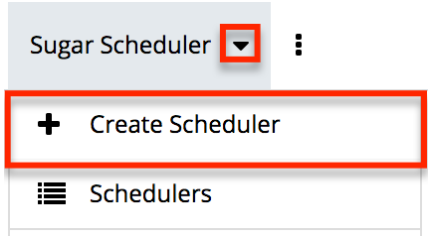
There are various methods for creating schedulers in Sugar including via the Schedulers module and via duplication. The full edit view layout opens when creating the scheduler directly from the Schedulers menu and includes all of the relevant fields for your organization's schedulers. Schedulers can be created for built-in jobs within the application or they can be created to call a URL outside of Sugar.

Creating via Schedulers Module

One of the most common methods of scheduler creation is via the Create Scheduler option in the Sugar Scheduler module tab. This opens up the edit view layout which allows you to enter all the relevant information for the scheduler.

Use the following steps to create a scheduler via the Scheduler module:

1. Navigate to Admin > Scheduler.
2. Click the triangle in the Sugar Scheduler module tab and select "Create Scheduler".



3. Enter appropriate values for the fields in the edit view layout. All required fields are marked with a red asterisk and must be completed prior to saving.
   Note: For more information on setting the advanced options for the interval, please refer to the Advanced Options section.
4. Once the necessary information is entered, click "Save".



Creating via Duplication

You can also create a new scheduler by duplicating an existing scheduler record. The Copy option is useful if the scheduler you are creating has similar information to an existing scheduler.

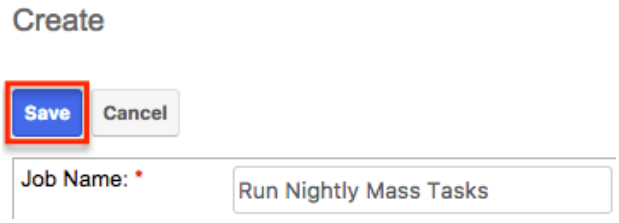
Use the following steps to create a scheduler by duplicating an existing record:

1. Navigate to a scheduler record's detail view.
2. Select "Copy" from the Actions menu.



3. The displayed edit view is pre-populated with the original scheduler's values. Update the necessary fields, then click "Save". For more information on setting the advanced options for the interval, please refer to

the Advanced Options section.



Viewing Schedulers

There are various options available for viewing scheduler records in Sugar including via Schedulers list view, Schedulers detail view, and Schedulers Recently Viewed menu.

Viewing via List View

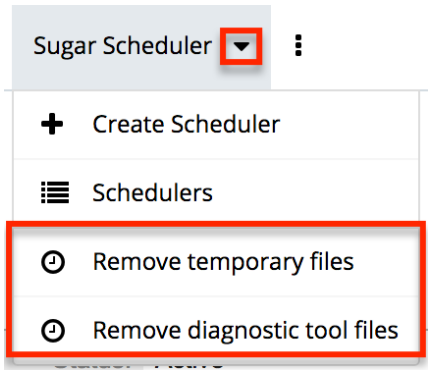
The Schedulers list view displays all scheduler records meeting the current search criteria. To access the list view, simply click the Schedulers module tab. While list view shows key scheduler fields, you can click the scheduler's name to open the record in detail view. For more information on viewing scheduler via list view, please refer to the Schedulers List View section.

Viewing via Detail View

The Schedulers detail view displays thorough scheduler information including all scheduler fields followed by the log records of when this scheduler has run. The detail view can be reached by clicking a scheduler record's link from anywhere in the application including from the Schedulers list view. For more information on viewing scheduler via detail view, please refer to the Schedulers Detail View section.

Viewing via Recently Viewed

As you work, Sugar will keep track of which scheduler you have recently viewed. Click the triangle in the Sugar Scheduler module tab to see a list of the three schedulers you most recently viewed. Clicking the scheduler name will open the scheduler in detail view.



Searching Schedulers

The Schedulers list view includes a Basic Search to help you locate records easily and effectively in a module-specific manner. Once the search is performed, the relevant results will be displayed in the Schedulers list view below. Please note that Sugar automatically appends the wildcard character (%) to the end of your search phrase. This allows the system to retrieve all records that start with the keyword entered in the search. If you would like to broaden the search, you can use the wildcard at the beginning of your text as well (e.g., %services). This will pull up any record that has the word "services" in the name, regardless of how it starts or ends.

For more information on using the various search methods as well as how wildcards are used in the different methods, please refer to the Search documentation.

Basic Search offers a few, commonly used fields for a simplified search experience. The buttons in Basic Search panel have the following functions:

- **Search**: Click the Search button or press your Return/Enter key to perform the search.
- **Clear**: Click the Clear button to clear all criteria from the searchable fields.



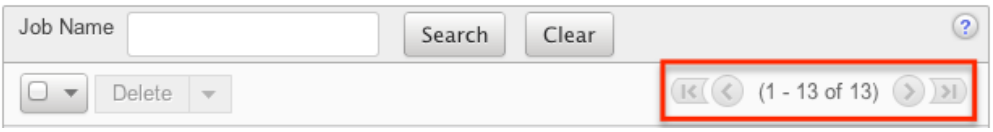
Once the search is complete, the relevant results will populate in the list view below the search panel. To see all scheduler records, simply click "Clear" and then "Search" to perform a blank search with no filters.

Schedulers List View

The Schedulers list view displays all scheduler records meeting the current search criteria. You can view the basic details of each scheduler within the field columns.

Pagination

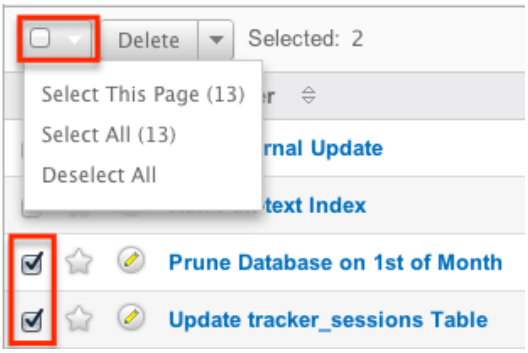
List view displays the current search results broken into pages that you can scroll through rather than displaying potentially thousands of rows at once. To the right just below the search panel, you can see which records of the total results set are currently being displayed. The two single-arrow Next and Previous buttons can be used to scroll through the records page-by-page. The two double-arrow First Page and Last Page buttons allow you to skip to the beginning or the end of your current results.
By default, Sugar displays 20 records per list view page, but administrators can change the number of records displayed via Admin > System Settings. For more information on changing the number of displayed records, please refer to the System documentation.



Checkbox Selection

You can perform several actions on scheduler records directly from the list view by first selecting the desired records. To select individual scheduler records on the Schedulers list view, mark the checkbox on the left of each row. To select or deselect multiple scheduler records in the list view, use the options in the checkbox dropdown menu:

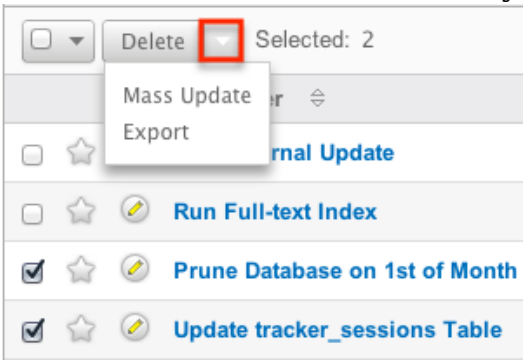
- **Select This Page**: Selects all records shown on the current page of scheduler results.
- **Select All**: Selects all records in the current search results across all pages of scheduler results.
- **Deselect All**: Deselects all records that are currently selected.



Actions Menu

The Actions menu to the right of the checkbox dropdown allows you to perform

various actions on the currently selected records.

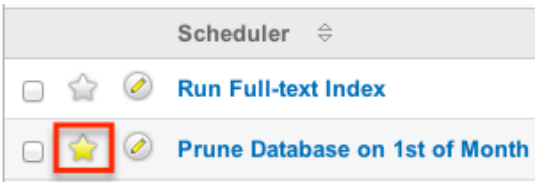


The options in the Actions menu allow you to perform the following operations:

Menu Item	Description
Delete	Delete one or more schedulers at a time.
Mass Update	Mass update one or more schedulers at a time.
Export	Export one or more schedulers to a CSV file.

Favorite Designation

Users have the option to mark scheduler records as favorites via the list view as well as the detail view. This allows users to designate records that are important or will be viewed often so that they can easily be accessed via search or from the Schedulers module tab. In the Schedulers list view, the star on the left of each schedule's row is yellow once marked to indicate a favorite schedule. For more information on marking records as favorites, please refer to the Favoriting Schedulers section of this documentation.



Column Sorting

List view provides the ability to sort all of the current search results by a field column in either ascending or descending order. To sort by a field or switch the sort direction, click the column header noting that the fields which allow sorting will have a pair of arrows. The list view may be sorted by only one column at a time.

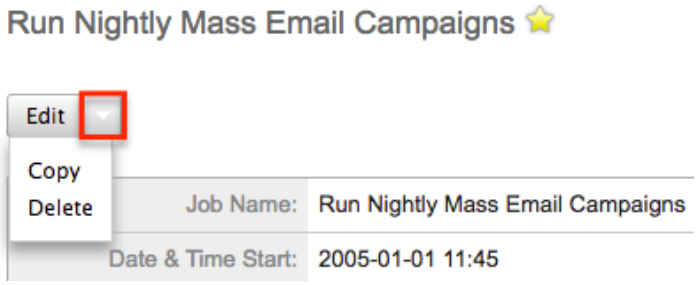


Schedulers Detail View

The Schedulers detail view displays thorough scheduler information including all scheduler fields which are grouped by default into the Overview, More Information, and Other panels. You can also view a scheduler's log which appears in beneath the scheduler fields. The detail view can be reached by clicking a scheduler record's link from anywhere in the application including from the Schedulers list view.

Actions Menu

The Actions menu on the top left of each scheduler's detail view allows you to perform various actions on the current record. Administrator users can change the action items to be displayed as separate buttons instead of a dropdown menu via Admin > System Settings. For more information on configuring the actions menu, please refer to the System documentation.

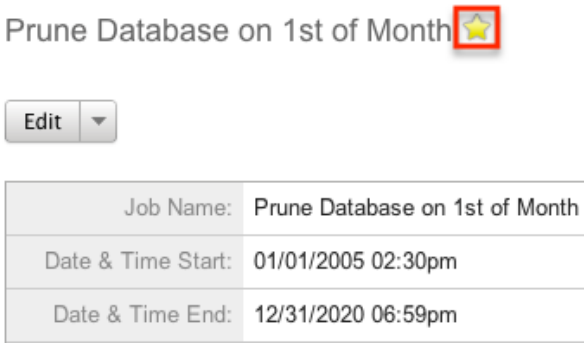


The options in the Actions menu allow you to perform the following operations:

Menu Item	Description
Edit	Edit this scheduler.
Copy	Duplicate this scheduler.
Delete	Delete this scheduler.

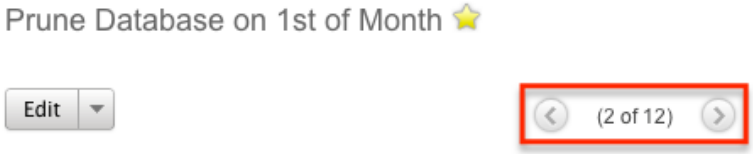
Favorite Designation

Users have the option to mark scheduler records as a favorite via the detail view as well as the list view. This allows users to designate records that are important or will be viewed often so that they can easily be accessed via search or from the Schedulers module tab. In the Schedulers detail view, the star on the right of the scheduler's name is yellow once marked to indicate a favorite scheduler. For more information on how to mark records as favorites, please refer to the Favoriting Schedulers section of this documentation.



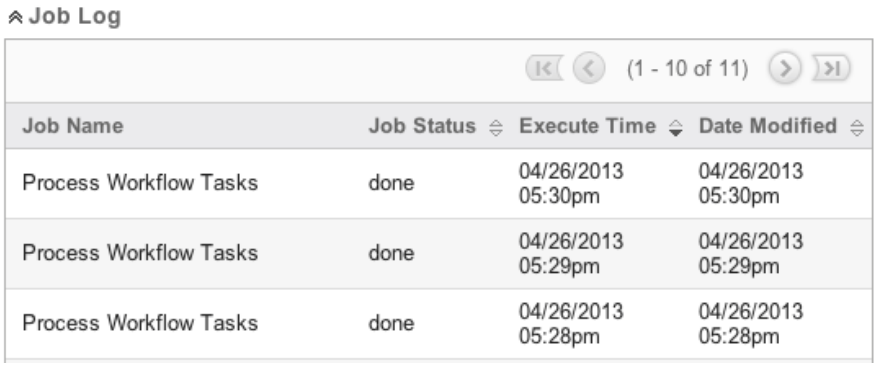
Next or Previous Record

On the upper right of the Schedulers detail view, there are two buttons that allow you to page through each scheduler in the Schedulers list view's current search results. Clicking the Previous button displays the previous scheduler of the current search results while clicking the Next button displays the next scheduler of the current search results. The text in between shows which scheduler result you are currently viewing within the total number of current results.



Job Log

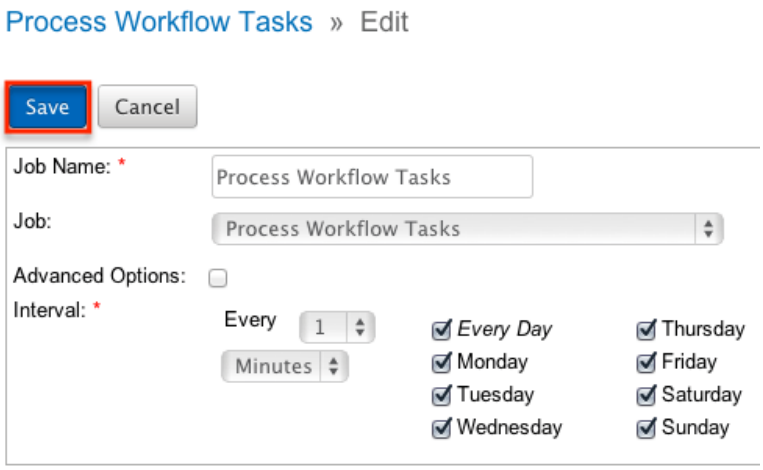
Beneath a schedule record's fields is a subpanel containing the logs of when the scheduler has run. Each record will contain a Job Status field indicating the outcome of the job and an Execute Time field to show when the job started.



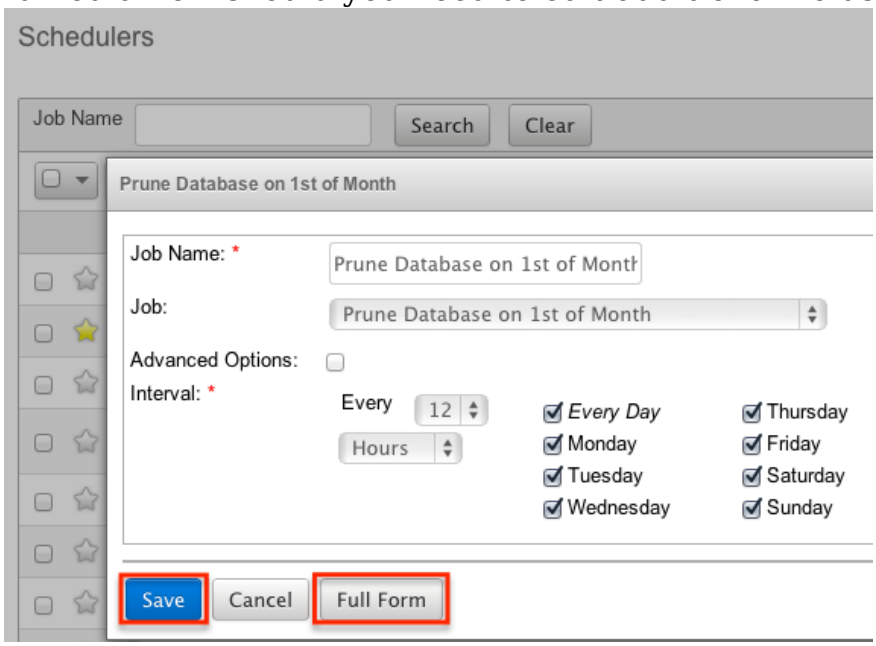
Editing Schedulers

Schedulers may be edited at any time to update or add information to the record. You can make changes to existing scheduler records via the Schedulers edit view

and quick-create forms. Edit view is available within the Schedulers module and includes all of the Scheduler fields you should need.



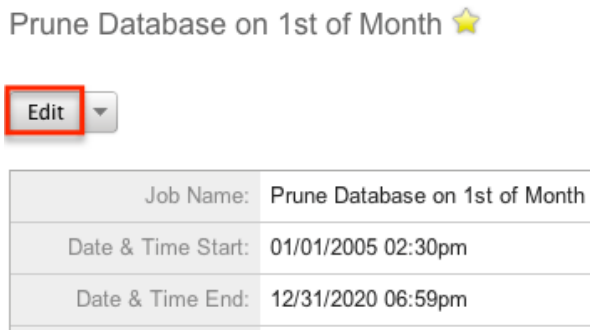
Quick Create is available for editing schedulers from outside the Schedulers module and opens as a pop-up without navigating away from your current page. It generally contains fewer fields, but the Full Form button may be used to access the full edit view should you need to edit additional fields.



For more information on setting the advanced options for the interval, please refer to the Advanced Options section.

Editing via Detail View

You can edit schedulers via the detail view by clicking the Edit button on the upper left of the page. Once the edit view layout is open, update the necessary fields, then click "Save" to preserve your changes.



Editing via List View

You can edit schedulers via the list view by clicking the Pencil icon to the left of each scheduler's name. A pop-up window will open with the quick create form which is a shortened version of the edit view layout. Update the necessary fields, then click "Save" to preserve your changes.



Deleting Schedulers

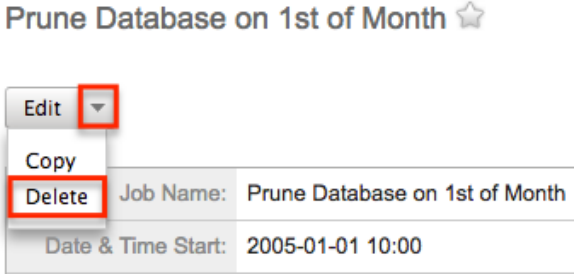
If a scheduler record is invalid and should no longer appear in your organization's Sugar instance, it may be deleted from either the Schedulers detail view or list view. Deleting via the detail view allows you to delete a single record while the list view allows for mass deleting multiple records at once.

Note: If you wish to disable a scheduler but do not want to delete it, you can set the status to Inactive and it will not run.

Deleting via Detail View

Use the following steps to delete a scheduler record via the detail view:

1. Navigate to a scheduler record's detail view.
2. Select "Delete" from the Actions menu.



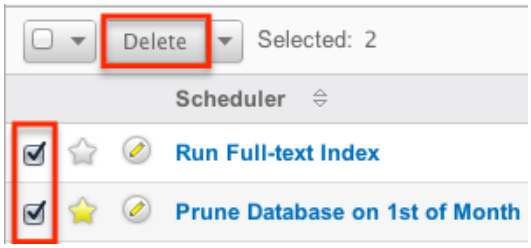
3. A pop-up message will display asking for confirmation. Click "Ok" to

proceed.

Mass Deleting via List View

Use the following steps to delete one or more scheduler records via the list view:

1. Navigate to the Schedulers list view by clicking the Schedulers module tab.
2. Use the Search to find the scheduler records you wish to delete.
3. Select the desired scheduler records individually or using the checkbox dropdown's options.
4. Choose "Delete" from the Actions menu.



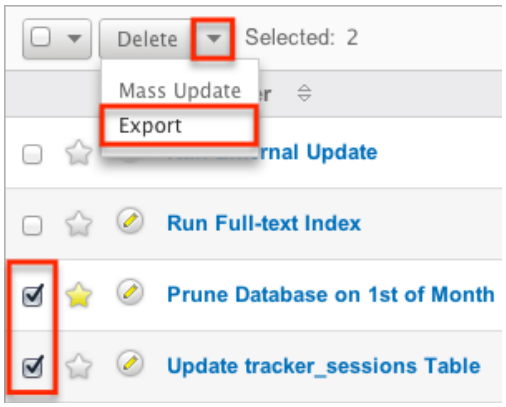
5. A pop-up message will display asking for confirmation. Click "Ok" to proceed.

Due to PHP memory limitations on the server, there may be occasions when the application times out while deleting a large number of scheduler records. If you encounter an error when performing this action, we recommend selecting the records in smaller batches.

Exporting Schedulers

Sugar's Export option allows users to download all fields for the selected schedulers to their computers as a CSV (comma-separated values) file. This may be useful when needing to use Scheduler data with other software such as Microsoft Excel. Due to PHP memory limitations on the server, there may be occasions when the application times out while exporting a large number of scheduler records. If you encounter an error when performing this action, we recommend selecting the records in smaller batches.

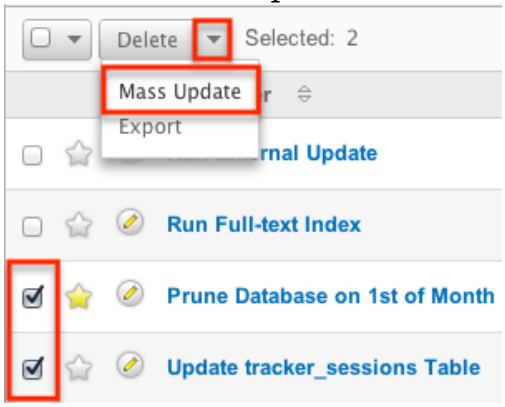
Schedulers may be exported from the Schedulers list view by selecting "Export" from the Actions menu.



Mass Updating Schedulers

Mass updating allows users to make the same change to multiple scheduler records at once from the Schedulers list view. Currently, only fields with the data type of date, datetime, dropdown, multiselect, and radio may be altered during a mass update. Due to the PHP memory limitations on the server, there may be occasions when the application times out while mass updating a large number of scheduler records. If you encounter an error when performing this action, we recommend selecting the records in smaller batches.
Use the following steps to mass update scheduler records from the list view:

1. Navigate to the Schedulers list view by clicking the Schedulers module tab.
2. Use the list view's Search to find schedulers you wish to modify.
3. Select the desired schedulers individually or using the checkbox dropdown's options.
4. Choose "Mass Update" from the Actions menu.



5. Scroll to the Mass Update panel and set values for the fields you wish to alter.



6. Click "Update" to save the changes to all of the currently selected scheduler records.

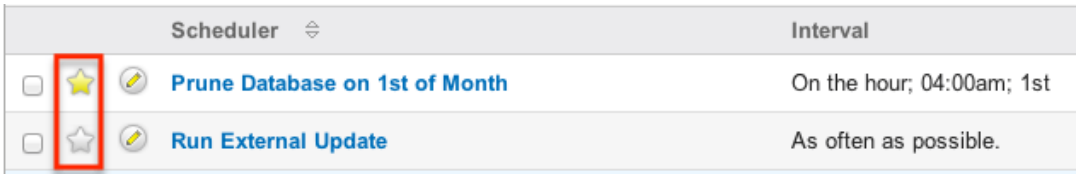
Favoriting Schedulers

Each Sugar administrator has the option to designate their own favorite schedulers that are important or will be viewed often. Once records are marked as favorites, you can select your most recent favorites directly from the Sugar Scheduler module tab.

Favoriting via List View

Use the following steps to mark records as favorites via the Schedulers list view:

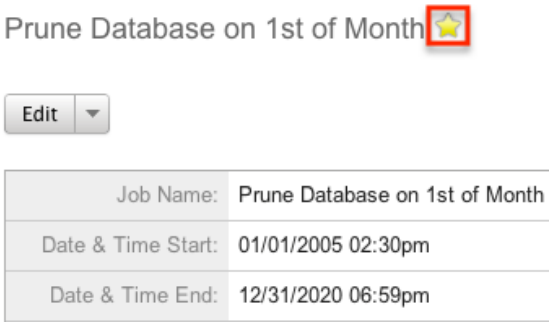
1. Navigate to the Schedulers list view by clicking the Schedulers module tab.
2. Use Search to find the scheduler records you wish to mark as favorites.
3. Click the star icon on the left of each desired scheduler's row.
4. To remove the scheduler as a favorite, click the star again to revert it to white.



Favoriting via Detail View

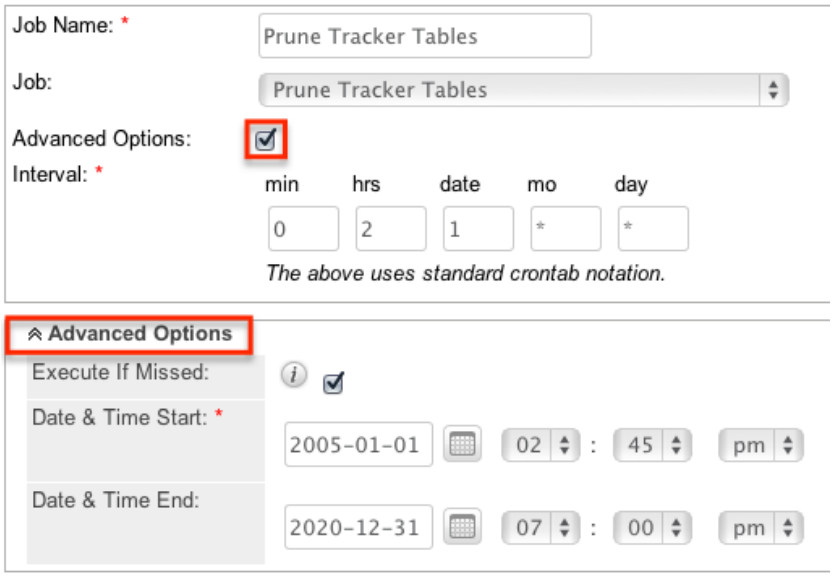
Use the following steps to mark records as favorites via the Schedulers detail view:

1. Navigate to a scheduler record's detail view.
2. Click the star icon to the right of the scheduler's name in the upper left of the detail view to designate it as a favorite.
3. To remove the scheduler as a favorite, click the star again to revert it to white.



Advanced Options

From the edit view of a scheduler, you can select the Advanced Options checkbox to refine the interval of the scheduler as well as configure the Advanced Options panel.



This opens up the crontab notation for the interval field. Crontab notation gives administrators more flexibility to define when and how often the scheduler runs. Crontab notation allows you to enter a value for each time part for the job to run on. You can specify complex values by using the following notations:

Character	Description
*	Asterisk is used to represent every value for the specified time part. For example, * in the mins field will run every minute.
/	Forward slash is used to represent increments. For example, */15 in the mins field will run every 15 minutes. 30/5 in the mins field will run starting at the 30th minute of the hour and every 5 minutes after.

,	Comma is used to specify multiple values. For example, 18,20 in the hrs field will run at 6:00 PM and 8:00 PM.
-	Hyphen is used to specify a range of values. For example, 1-6 in the mo field will run from January through June.

Specify the values to run in the following interval fields using cron tab notation:

- **min**: Specify the minute of the hour to run on (0-59).
- **hrs**: Specify the hour of the day to run on (0-23).
- **date**: Specify the day of the month to run on (1-31).
- **mo**: Specify the month of the year to run on (1-12).
- **day**: Specify the day of the week to run on (0-6).

You may specify any combination of the fields to create the schedule needed to run the job.

Setting up Cron Scheduler

In order for the schedulers to run at the designated times, there needs to be a process running on the server to initiate the schedulers. This backend process will call the cron.php file in Sugar with some specific parameters, and the cron.php file will execute the schedulers as necessary.

Sugar instances hosted on Sugar's cloud service have the cron scheduler set up automatically, but it must be configured for on-site instances. In UNIX systems (MAC and Linux) you can configure crontab to run the schedulers. Navigate to Admin > Scheduler to get the system information necessary to set up the crontab.



Note: The scheduler is throttled by default to prevent it from running more often than every 30 seconds. This value is configurable by setting the $sugar_config['cron']['min_cron_interval'] value in the config_override.php file.

Setting Up in Unix/Linux

Use the following steps to set up crontab to run the Sugar schedulers:

1. From a command prompt, execute the following command:

```
crontab -u apache -e
```

2. The text editor will launch as the user "apache". If your web server is running under a different user, please adjust the line accordingly.
3. Add the commands displayed on the Admin > Schedulers page of your Sugar application into the crontab file:

   ```
   * * * * * cd /var/www/sugar123; php -f cron.php > /dev/null 2>&1
   ```

   Note: Make sure that the path to the root directory of Sugar and to PHP is correct.
4. Save the changes to the file. This will run the cron job every minute.

You can check crontab to see what commands are being run by executing the following command:

```
crontab -u apache -l
```

PDF Manager

Overview

The PDF Manager is used to create and manage templates for generated PDF files for any deployed module, custom or standard. Sugar comes with two PDF templates out of the box (Quote and Invoice).

Note: Legacy Quote PDF Templates (custom Quote templates created through code customizations) are not displayed in the PDF Manager but are still available in the Quotes module provided the templates were built off the TCPDF engine.

PDF Manager Fields

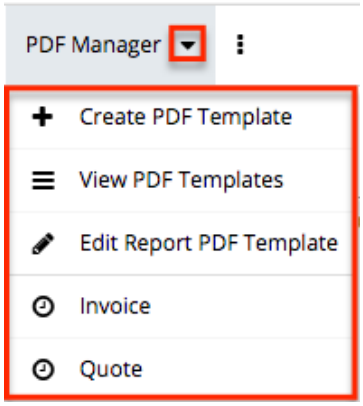
The PDF Manager module contains a number of stock fields that come out-of-the-box with Sugar. The below definitions are suggested meanings for the fields, but the fields can be leveraged differently to best meet your organization's needs.

Field	Description
Author	The author name to be placed in the PDF properties.
Description	A description or other information about the template.

Footer Text	The text to be placed in the template's footer.
Header Logo File	Click "Choose File" to upload a header image to the template. **Note**: The image will display as 454 pixels wide by 45 pixels high; the uploaded image should be sized relative to these dimensions.
Header Text	The text to be placed in the template's header.
Header Title	The title of the template header.
Keyword(s)	The keywords to be placed in the PDF properties.
Module	The module this template will work in. **Note**: Once a template is created, the module cannot be changed.
Name	The name or designation of the template.
Published	Determines if a template is available to users or not.
Subject	The subject to be placed in the PDF properties.
Teams	The Sugar team(s) assigned to the template record.
Template	The content of the template.
Title	The title to be placed in the PDF properties.

PDF Manager Module Tab

The PDF Manager module tab can be accessed by navigating to the Administration page and clicking "PDF Manager" in the System section. Once in the PDF Manager list view, you can click the triangle in the PDF Manager module tab to display the Actions and Recently Viewed menus. The Actions menu allows you to perform important actions within the module. The Recently Viewed menu displays the list of templates you last viewed in the module. Please note that clicking the module tab allows you to access the PDF Manager list view.



The Actions menu allows you to perform the following operations:

Menu Item	Description
Create PDF Template	Opens the edit view layout to create a new template.
View PDF Templates	Opens the list view layout to search and display templates.
Edit Report PDF Template	Opens the edit view layout to modify the report template.

Creating PDF Templates

There are various methods for creating PDF templates in Sugar including via the PDF Manager module and duplication. The full edit view layout opens when creating the template directly from the PDF Manager menu and includes all of the relevant fields for your organization's templates.

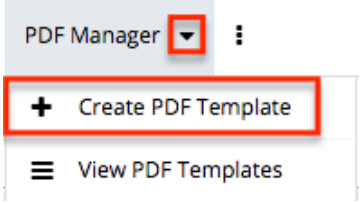
Note: It is generally recommended to create a new template via duplication and then modify the copy to suit your needs.

Creating Via PDF Manager Module

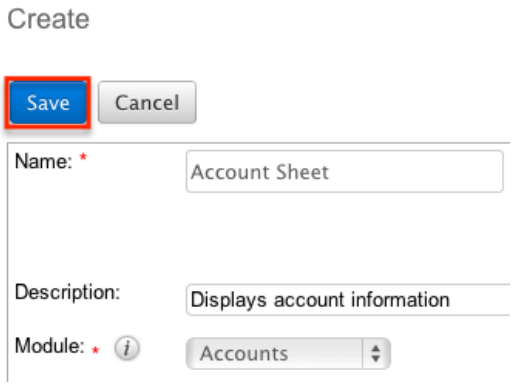
You can create a new template via the Create PDF Templates option in the PDF Manager module tab. This opens up the edit view layout which allows you to enter all the relevant information for the template.

Use the following steps to create a template via the PDF Manager module:

1. Navigate to Admin > PDF Manager.
2. Click the triangle in the PDF Manager module tab and select "Create PDF Template".



3. Enter appropriate values for the fields in the edit view layout. All required fields are marked with a red asterisk and must be completed prior to saving.
4. Once the necessary information is entered, click "Save".

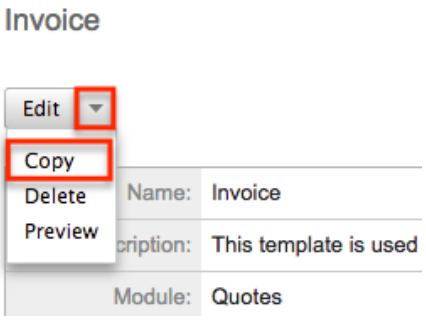


Creating Via Duplication

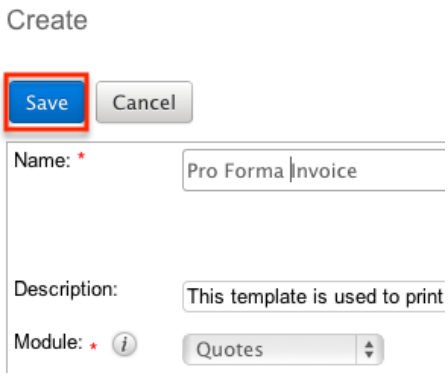
You can also create a new template by duplicating an existing template record. The Copy option is useful if the template you are creating has a similar layout to an existing template.

Use the following steps to create a template by duplicating an existing record:

1. Navigate to a template record's detail view.
2. Click "Copy" from the Actions menu.



3. The displayed edit view is pre-populated with the original template's values. Update the necessary fields, then click "Save".

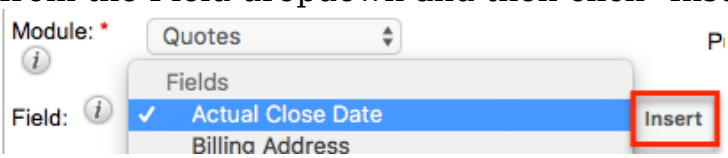


Note: If you change the module field during duplication, you will have to remove all variable references to the old module in the layout before saving.

Creating Content

The PDF template can contain images and HTML formatting as well as variable fields from the assigned module. TincyMCE is the rich text editor for formatting your template using HTML. For more information on using TinyMCE, please refer to the TinyMCE section in the User Interface in the Application guide.

To add variable fields from the assigned module, simply select the desired field from the Field dropdown and then click "Insert".



The variable will be placed wherever your computer's cursor is located in the template and can be moved around as necessary.

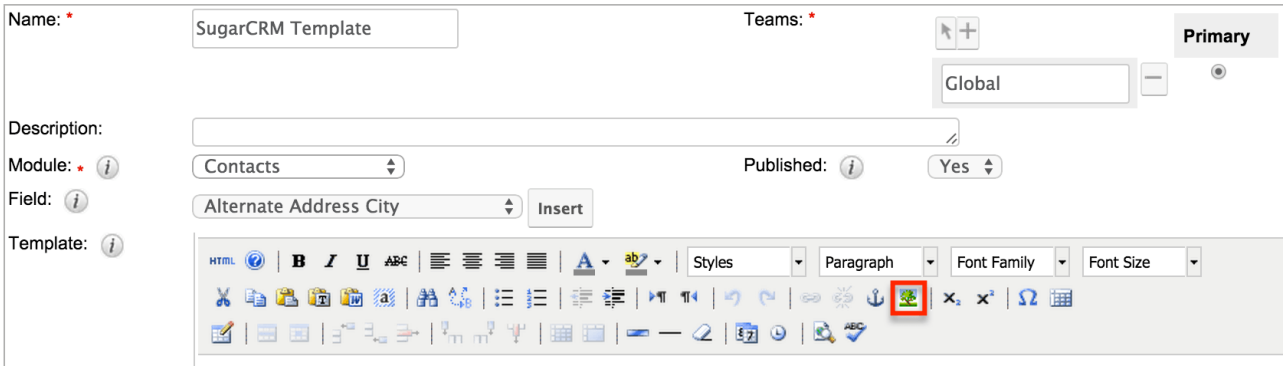
Note: The Link section provides all one-to-one and one-to-many relationships to provide linked data in the template.

For modules that have a subset of data in the template (e.g., Product line items in Quotes), there are special containers in the template that indicate where the repeating areas start and stop. These containers are designated by the following commands:

- **Start**: {foreach from=$product_bundles item="bundle"}
- **End**: {/foreach}

Note: These lines are important and if removed can cause errors when generating a PDF. If you encounter an error when generating a PDF, we recommend checking the template for these start and end placeholders.

To add images to a PDF template, simply select the image icon in the toolbar. Fill out the image details (Image URL, Alignment, Dimensions, Border, etc.) in the Insert/Edit Image dialog then click "Insert".



Note: Images cannot be copied and pasted or dragged and dropped into a PDF template. The image icon must be used to insert an image.

Viewing PDF Templates

There are various options available for viewing template records in Sugar including via PDF Manager list view, PDF Manager detail view, and PDF Manager Recently Viewed menu.

Viewing Via List View

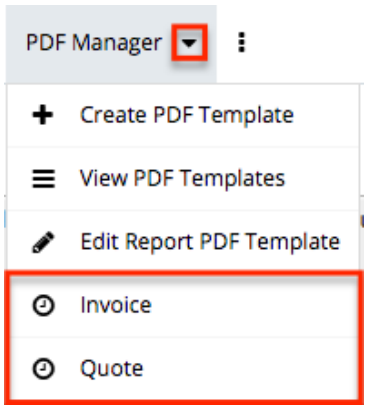
The PDF Manager list view displays all template records meeting the current search criteria. To access the list view, simply click the PDF Manager module tab. While list view shows key template fields, you can click the template's name to open the record in detail view. For more information on viewing templates via list view, please refer to the PDF Manager List View section.

Viewing Via Detail View

The PDF Manager detail view displays thorough template information including all template fields. The detail view can be reached by clicking a template record's link from anywhere in the application including from the PDF Manager list view. For more information on viewing templates via detail view, please refer to the PDF Manager Detail View section.

Viewing Via Recently Viewed

As you work, Sugar will keep track of which templates you have recently viewed. Click the triangle in the PDF Manager module tab to see a list of the 3 templates you most recently viewed. Click the template's name from the list to open it in detail view.



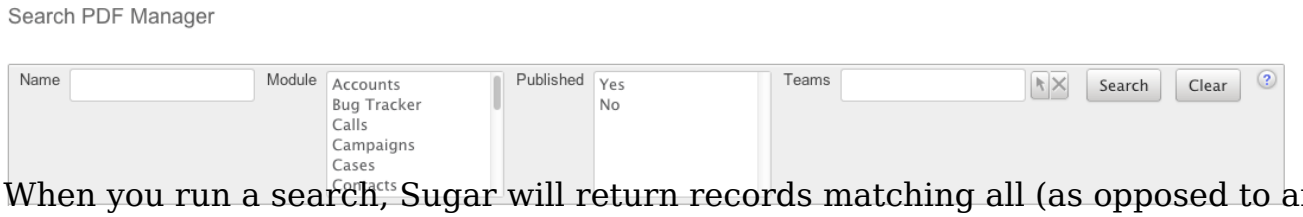
Searching PDF Templates

The PDF Manager list view includes a Basic Search to help you locate records easily and effectively in a module-specific manner. Once the search is performed, the relevant results will be displayed in the PDF Manager list view below. Please note that Sugar automatically appends the wildcard character (%) to the end of your search phrase. This allows the system to retrieve all records that start with the keyword entered in the search. If you would like to broaden the search, you can use the wildcard at the beginning of your text as well (e.g., %services). This will pull up any record that has the word "services" in the name, regardless of how it starts or ends.

For more information on using the various search methods as well as how wildcards are used in the different methods, please refer to the Search documentation.

Basic search offers a few, commonly used fields for a simplified search experience. The buttons and checkboxes available in Basic Search panel have the following functions:

- **Search**: Click the Search button or press your Return/Enter key to perform the search.
- **Clear**: Click the Clear button to clear all criteria from the searchable fields.



When you run a search, Sugar will return records matching all (as opposed to any) of the fields and checkboxes for which you have given a value. For example, if you select a module and enter a template name, Sugar will only return template records with a matching name that are assigned to that module. Once the search is complete, the relevant results will populate in the list view below the search panel.

To see all template records, simply click "Clear" and then "Search" to perform a blank search with no filters.

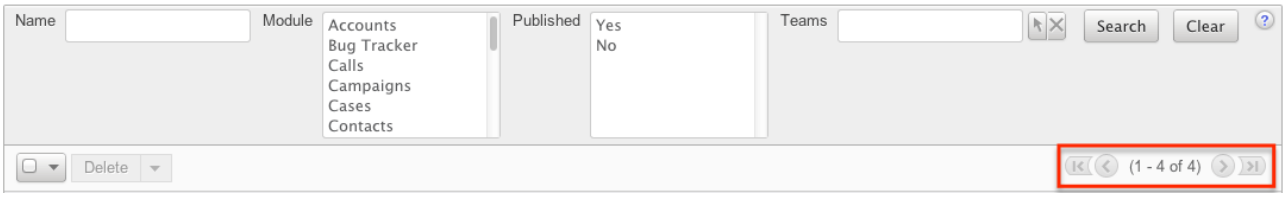
PDF Manager List View

The PDF Manager list view displays all template records meeting the current search criteria. You can view the basic details of each template within the field columns.

Pagination

List view displays the current search results broken into pages that you can scroll through rather than displaying potentially thousands of rows at once. To the right just below the search panel you can see which records of the total results set are currently being displayed. The two single-arrow Next and Previous buttons can be used to scroll through the records page-by-page. The two double-arrow First Page and Last Page buttons allow you to skip to the beginning or the end of your current results.

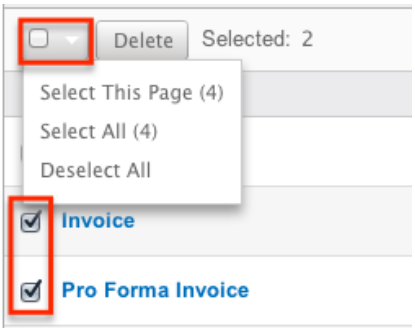
By default, Sugar displays 20 records per list view page, but administrators can change the number of records displayed via Admin > System Settings. For more information on changing the number of displayed records, please refer to the System documentation in the Administration Guide.



Checkbox Selection

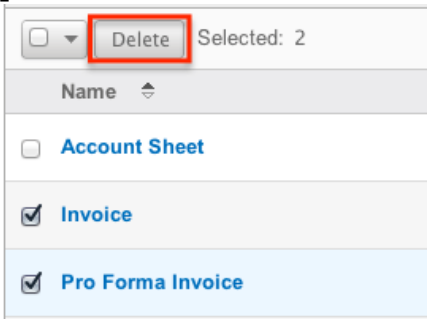
You can perform several actions on template records directly from the list view by first selecting the desired records. To select individual template records on the PDF Manager list view, mark the checkbox on the left of each row. To select or deselect multiple template records on the list view, use the options in the checkbox dropdown menu:

- **Select This Page**: Selects all records shown on the current page of PDF template results.
- **Select All**: Selects all records in the current search results across all pages of PDF template results.
- **Deselect All**: Deselects all records that are currently selected.



Actions Menu

The Actions menu to the right of the checkbox dropdown typically allows you to perform various actions on the currently selected records.



The only action available from the PDF Manager list view is the following operation:

Menu Item	Description
Delete	Delete one or more templates at a time.

Column Sorting

List view provides the ability to sort all of the current search results by a field column in either ascending or descending order. To sort by a field or switch the sort direction, click the column header noting that the fields which allow sorting will have a pair of arrows. The list view may be sorted by only one column at a time.



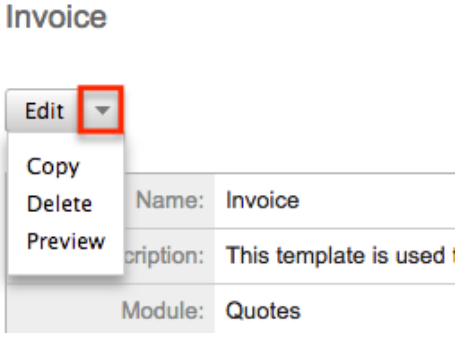
PDF Manager Detail View

The PDF Manager detail view displays thorough template information including all template fields which are grouped by default into the Overview and PDF Document Properties panels. The detail view can be reached by clicking a template record's

link from anywhere in the application including from the PDF Manager list view.

Actions Menu

The Actions menu on the top left of each template's detail view allows you to perform various actions on the current record. Administrator users can change the action items to be displayed as separate buttons instead of a dropdown menu via Admin > System Settings. For more information on configuring the actions menu, please refer to the System documentation in the Administration Guide.

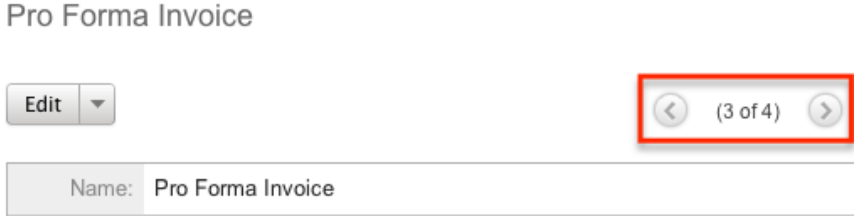


The options in the Actions menu allow you to perform the following operations:

Menu Item	Description
Edit	Edit this template.
Copy	Duplicate this template.
Delete	Delete this template.
Preview	Preview this template.

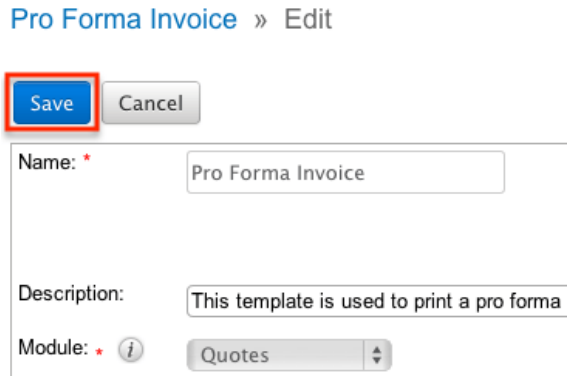
Next or Previous Record

On the upper right of the PDF Manager detail view, there are two buttons that allow you to page through each template in the PDF Manager list view's current search results. Clicking the Previous button displays the previous template of the current search results while clicking the Next button displays the next template of the current search results. The text in between shows which template result you are currently viewing within the total number of current results.



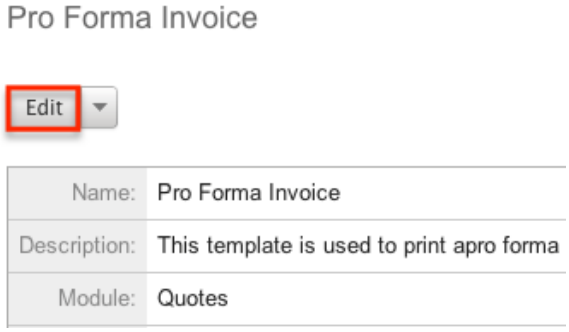
Editing PDF Templates

Templates may be edited at any time to update or add information to the record. You can make changes to existing template records via the PDF Manager edit view. Edit view is available within the PDF Manager module and includes all of the template fields you should need.



Editing Via Detail View

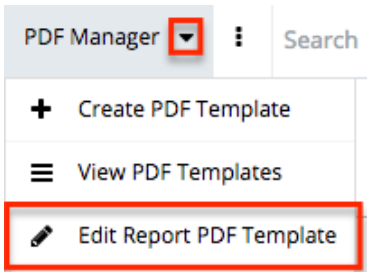
You can edit templates via the detail view by clicking the Edit button on the upper left of the page. Once the edit view layout is open, update the necessary fields, then click "Save" to preserve your changes.



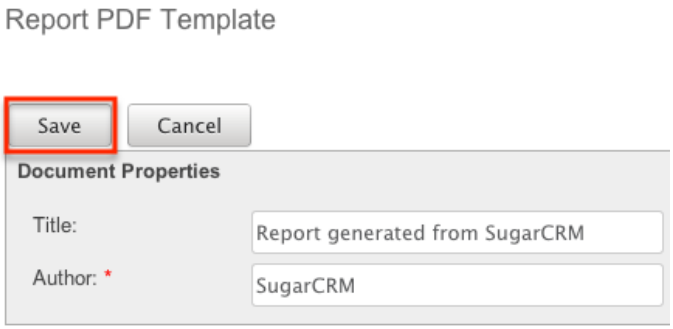
Editing Report PDF Template

The Report PDF Template is used when generating a report as a PDF. The report template may be edited at any time to include your company's logo. This logo displays in the header for all Report PDF files. The image will display as 454 pixels wide by 45 pixels high; the uploaded image should be sized relative to these dimensions.

You can edit the report template via the detail view by selecting the Edit Report PDF Template option from the PDF Manager module tab.



Once the edit view layout opens, update the necessary fields, then click "Save" to preserve your changes.



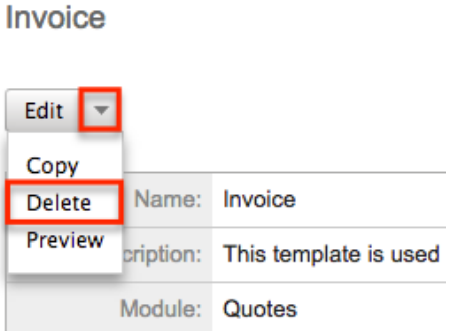
Deleting PDF Templates

If a template record is invalid or should no longer appear in your organization's Sugar instance, it may be deleted from either the PDF Manager detail view or list view. Deleting via the detail view allows you to delete a single record while the list view allows for mass deleting multiple records at once.

Deleting Via Detail View

Use the following steps to delete a template record via the detail view:

1. Navigate to a template record's detail view.
2. Select "Delete" from the Actions menu.

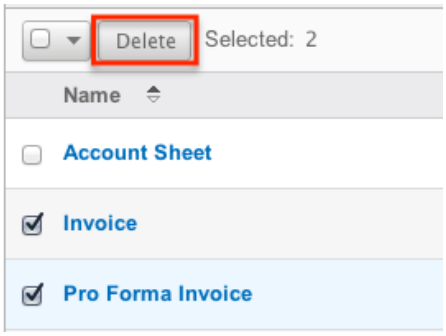


3. A pop-up message will display asking for confirmation. Click "Ok" to proceed.

Mass Deleting Via List View

Use the following steps to delete one or more template records via the list view:

1. Navigate to the PDF Manager list view by clicking the PDF Manager module tab.
2. Use the Basic Search to find the template records you wish to delete.
3. Select the desired template records individually or using the checkbox dropdown's options.
4. Choose "Delete" from the Actions menu.



5. A pop-up message will display asking for confirmation. Click "Ok" to proceed.

Due to PHP memory limitations on the server, there may be occasions when the application times out while deleting a large number of template records. If you encounter an error when performing this action, we recommend selecting the records in smaller batches.

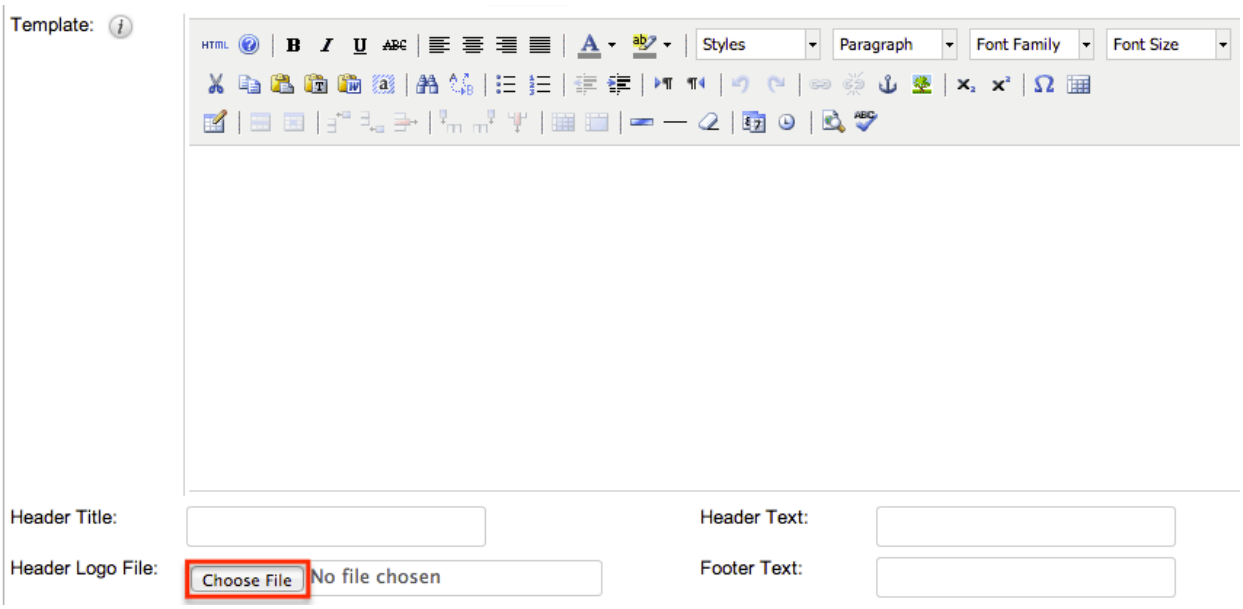
Adding a Header Image to PDF Template

Image files can easily be uploaded from your local machine to be used as a header image on a PDF template. After uploading and saving the image to the template's Header Logo File field, it will be shown on the PDF generated by users in Sugar.

Header images will display as 454 pixels wide by 45 pixels high, so the uploaded image should be sized relative to these dimensions (e.g., 908x90 or 1816x80).

After saving an appropriately sized image file to your computer, use the following steps to add the header image to the PDF template:

1. Create a new PDF template or open up an existing template via Admin > PDF Manager.
2. Click the "Choose File" button in the Header Logo File field to open a file selection window from your browser.



3. Select the image file from your local machine then click "Open" to add the image.

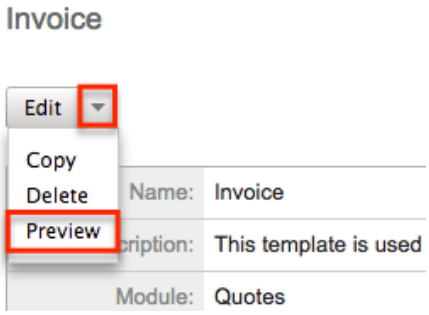
Please note that you must save then preview the PDF template in order to view the inserted header image.

Previewing PDF Templates

Previewing PDF templates allows you to see what the template will look like before publishing it in Sugar. The preview option displays the PDF template with the database field names and not actual data values and is accessible from the detail view.

Use the following steps to preview a template via the detail view:

1. Navigate to a template record's detail view.
2. Select "Preview" from the Actions menu.



3. The PDF will download to your computer for viewing.

Web Logic Hooks

Overview

Web logic hooks allow you to establish events on a per-module basis for Sugar to send data from the record in focus to an external URL so that additional processing can be completed outside the Sugar application. When a Web Logic Hook is triggered, the data is not sent instantaneously. Rather, the data is queued and processed under the Dispatch Web Logic Hook scheduled job. Once the job is processed through a regular scheduler run, the data for the record that triggered the hook is transmitted to the designated URL in a JSON format for further processing. This can allow you to send this data to other applications within your organization or to manipulate the data and transmit it back to Sugar via the REST API.

Web Logic Hook Fields

The Web Logic Hooks module contains a number of stock fields that come out-of-the-box with Sugar. For information on using and editing various field types, refer to the User Interface documentation. The below definitions are suggested meanings for the fields, but the fields can be leveraged differently to best meet your organization's needs.

Field	Description
Module Name	The module that the web logic hook will trigger off when the trigger event occurs in that module.
Name	The name of the web logic hook.
Request Method	The HTTP request method that the web logic will utilize to call out to the specified URL.
Trigger Event	The event that must occur in order for the web logic hook to process.
URL	The URL that will receive the data transmitted by the web logic hook. **Note**: This URL should be a URL outside of your SugarCRM instance. If you have an instance on Sugar's cloud service, it is your responsibility to host the URL that will process the web logic hook.

Working With Sugar Modules

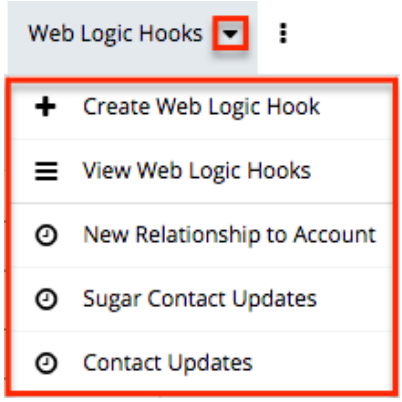
While the Web Logic Hooks module has some features that only apply to web logic hooks, it also uses the Sidecar user interface that most Sugar modules are based on. The following sections detail menus, views, and actions common to Sidecar modules and contain links to additional information within the page or links to the User Interface documentation.

Web Logic Hooks Menus

The Web Logic Hooks module contains various options and functionality which are available via menus in the module tab, list view, and record view. The following sections present each menu and its options with links to more information about each option in the User Interface documentation.

Module Tab Menus

The Web Logic Hooks module tab is typically located on the navigation bar at the top of any Sugar screen after selecting "Web Logic Hooks" from the admin screen. Click the tab to access the Web Logic Hooks list view. You may also click the triangle in the Web Logic Hooks tab to display the Actions and Recently Viewed menus. The Actions menu allows you to perform important operations within the module. The Recently Viewed menu displays the list of web logic hooks you most recently viewed.



The module tab's Actions menu allows you to perform the following operations:

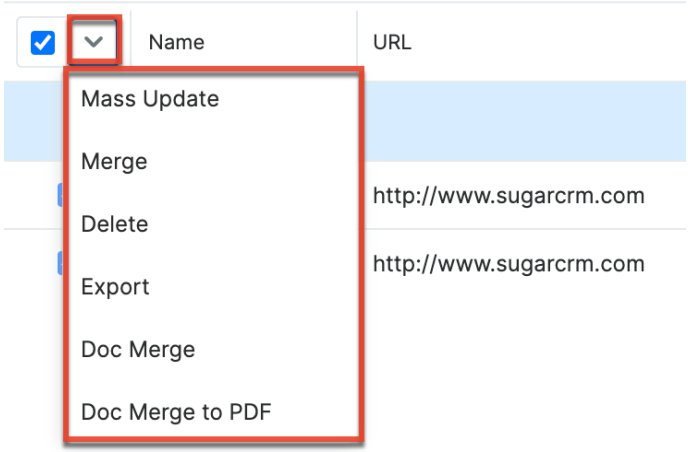
Menu Item	Description
Create Web Logic Hook	Opens the record view layout to create a new web logic hook.
View Web Logic Hooks	Opens the list view layout to search and display web logic hooks.

List View Menus

The Web Logic Hooks list view displays all web logic hook records and allows for searching and filtering to locate specific web logic hooks. You can view the basic details of each record within the field columns of the list view or click a web logic hook's name to open the record view. To access a module's list view, simply click the module's tab in the navigation bar at the top of any Sugar page.

List View Mass Actions Menu

The Mass Actions menu to the right of the checkbox option in the list header allows you to perform mass actions on all currently selected records. You can use the checkbox on each record's row to select individual web logic hook records or click the checkbox in the list header to select all records displayed on the current set of list view results.



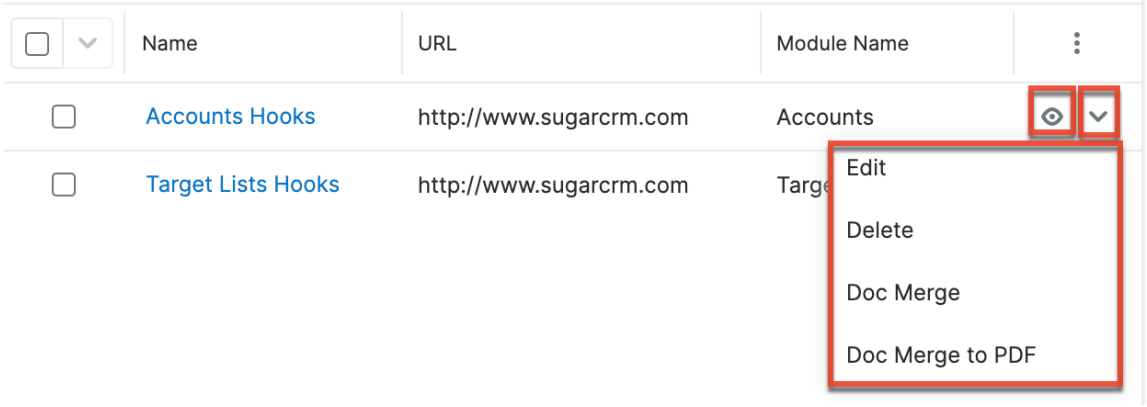
The Mass Actions menu allows you to perform the following operations:

Menu Item	Description
Mass Update	Mass update one or more web logic hooks at a time.
Merge	Merge two or more duplicate web logic hooks.
Delete	Delete one or more web logic hooks at a time.
Export	Export one or more web logic hooks to a CSV file.
Doc Merge	Select or create a DOCX template to merge record data into documents that

	will be accessible in the Doc Merge widget.
Doc Merge to PDF	Select or create a DOCX, XLSX, or PPTX template to merge record data into PDF documents that will be accessible in the Doc Merge widget.

List View Record Actions Menu

The Record Actions menu to the far right of each record's row allows you to perform actions on the individual web logic hook directly from the list view.



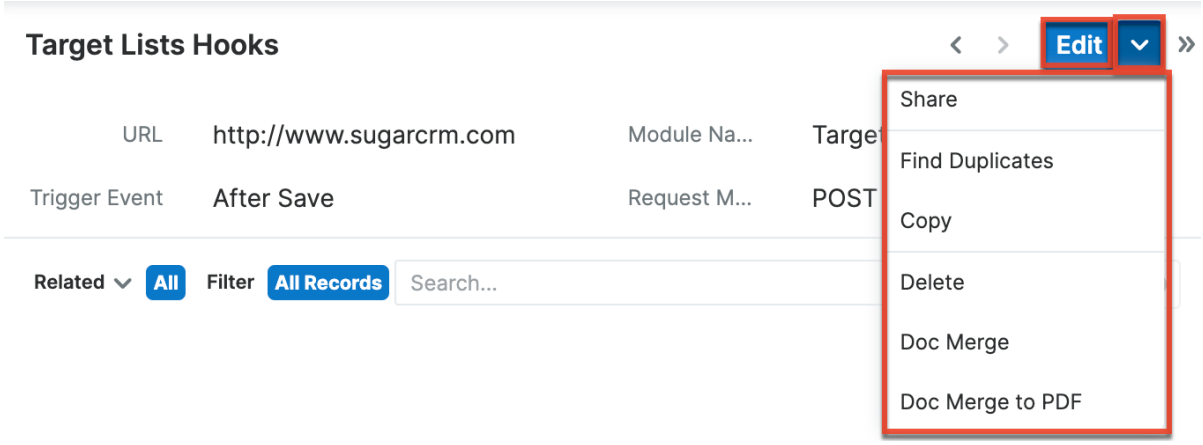
The list view's Record Actions menu allows you to perform the following operations:

Menu Item	Description
Preview (Eye icon)	Preview this web logic hook in the intelligence pane.
Edit	Edit this web logic hook.
Delete	Delete this web logic hook.
Doc Merge	Select or create a DOCX, XLSX, or PPTX template to merge record data into documents that will be accessible in the Doc Merge widget.
Doc Merge to PDF	Select or create a DOCX, XLSX, or PPTX template to merge record data into PDF documents that will be accessible in the Doc Merge widget.

Record View Actions Menu

The Web Logic Hooks record view displays a single web logic hook in full detail including its fields. To access a web logic hook's record view, simply click a

hyperlinked web logic hook name from the Web Logic Hooks list view. The record view's Actions menu appears on the top right of the page and allows you to perform various operations on the current record.



The Actions menu allows you to perform the following operations:

Menu Item	Description
Edit	Edit this web logic hook.
Share	Share a link to this web logic hook via email.
Find Duplicates	Locate potential duplicates of this web logic hook.
Copy	Duplicate this web logic hook to create a new web logic hook.
Delete	Delete this web logic hook.
Doc Merge	Select or create a DOCX, XLSX, or PPTX template to merge record data into documents that will be accessible in the Doc Merge widget.
Doc Merge to PDF	Select or create a DOCX, XLSX, or PPTX template to merge record data into PDF documents that will be accessible in the Doc Merge widget.

Common Views and Actions

In the table below, the left column contains links to the User Interface page covering topics that are applicable to all Sidecar modules. The right column has links to sections of the current page that cover topics specific to web logic hooks.

General Instructions for Working	Web-Logic-Hooks-Specific

With Sugar Modules	Instructions
Use the links below to navigate to the User Interface page which covers topics generic to many Sugar modules.	When Web-Logic-Hooks-specific help exists for each topic, use the links below to navigate to sections of the current page.
Creating Records	
Viewing Records	
Searching for Records	
List View	List View Mass Actions Menu List View Record Actions Menu
Record View	Record View Actions Menu
Intelligence Pane	
Editing Records	
Deleting Records	
Exporting Records	
Finding Duplicate Records	
Merging Records	
Sharing Records	

Data Archiver

Overview

The Data Archiver in Sugar lets an administrator archive or delete Sugar records from their database either on demand by manually triggering a job or at regular intervals via the Run Active Data Archives/Deletions scheduler. While archiving records simply moves the data to a hidden table, deleting records via Data Archiver frees up space in your database by allowing administrators to selectively and permanently prune records.

In addition to the Data Archiver module, the Archive Runs module is displayed as a subpanel under the record view of any data archiver record. The Archive Runs subpanel displays a history of runs that have occurred for the parent data archiver record, giving the administrator a clear history of what has occurred in the system and access to the affected record IDs.

Data Archiver Fields

The Data Archiver module contains the following fields. For information on using and editing various field types, refer to the User Interface documentation.

Field	Description
Active	The enabled or disabled state of the job for scheduled runs; only active records will be processed by the Run Active Data Archives/Deletions scheduler. An administrator will still be able to click on "Perform Now" to run the job manually even if the Active field is set to false.
Filter	The filter(s) that should be applied to the module records in order to identify the subset of records to archive or delete.
Module	The module that contains records you want to archive or delete; all modules are available in the Data Archiver module list.
Name	A unique and descriptive name for the job.
Process Type	Select whether you want to archive or hard delete the records identified by this job.

Note: Fields, layouts, and columns for the Data Archiver module and related Archive Runs module are not available for customization in Studio.

Archive vs Hard Delete

Jobs created in the Data Archiver module can have one of two process types: Archive or Hard Delete. Please note that it is recommended to run the Archive or Hard Delete jobs during low usage or off-hours as it can affect system performance.

An archive process type will remove specified records from the active table of the chosen module and transfer them to a newly created archive table. The archive table is a clone of the active table. Because archiving simply moves records from one part of your database to another, it does not free up any room in your database, but it does remove old or non-essential data from the view of users. Once archived, the data can no longer be accessed via the Sugar user interface. SugarCloud customers can access their archived data by making and downloading a database backup to access their archive tables.

A hard-delete process type will permanently remove specified records from the

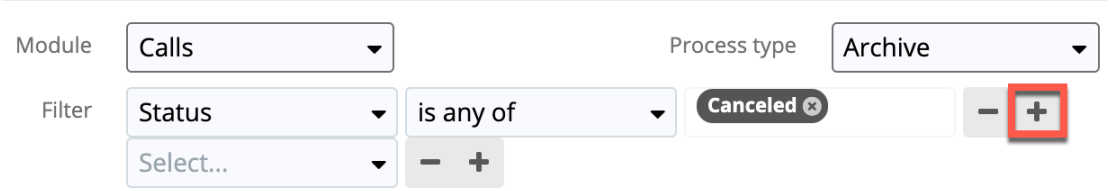
active table of the chosen module, freeing space on your database. This gives administrators the ability to selectively prune their databases and not just mark entries as deleted as the standard "soft delete" does when users delete records via the application's interface. As an added benefit, you can filter jobs in the Data Archiver on the "Deleted" database field, which is hidden from standard filters in Sugar, letting you manually prune user-deleted records as needed if you prefer not to enable the automated Prune Database on 1st of Month scheduler. Hard deleting is not reversible, so this information can never be retrieved again. For that reason, we recommend performing regular backups and storing them locally before performing hard-delete actions.

Creating and Running a Data Archiver Job

Data Archiver jobs will run automatically on regularly set intervals when the Run Active Data Archives/Deletions scheduler is active. Whether the scheduler is active or not, an administrator may also run Data Archiver jobs manually as needed by clicking the "Perform Now" button on a data archiver record.

Use the following steps to clean up your database by creating an archive or hard-delete job in the Data Archiver module:

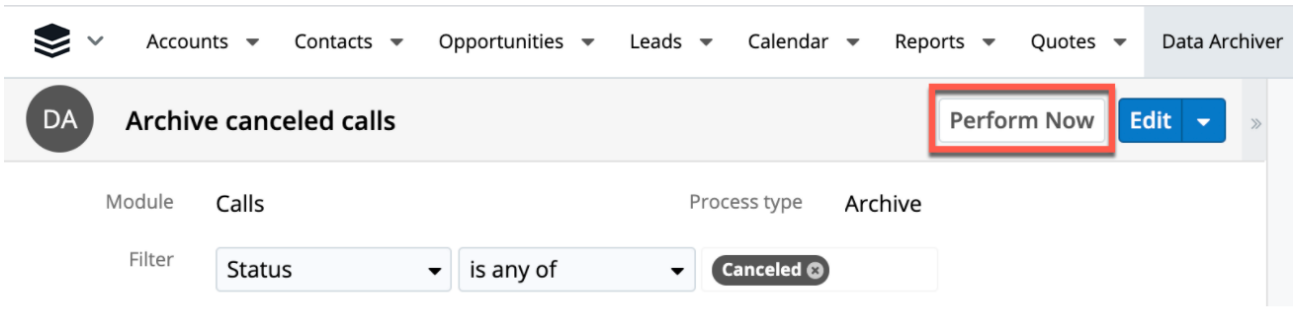
1. Navigate to Admin > Archive Records.
2. Click "Create" to define a new set of records to archive or delete.
3. Complete the form fields, using the field descriptions above as guidance. Use the Add button at the end of the filter row to create additional filter criteria if needed.



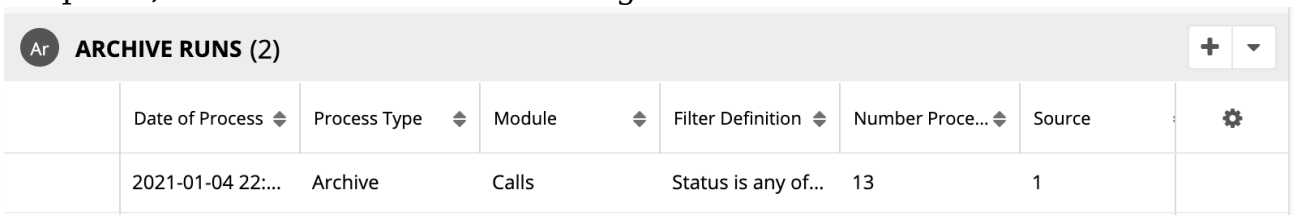
4. Click "Save".

After saving an active Data Archiver record, the archive or deletion will automatically process the next time the Run Active Data Archives/Deletions scheduler runs. Alternatively, you may click on "Perform Now" in the data archiver job's record view to run the job immediately without activating or waiting for the scheduler.

Note: It is recommended to run the data archiver job during low usage or off-hours as it can affect system performance.



Each time a Data Archiver record runs, a new entry will appear in its Archive Runs subpanel, which includes the following information:



- **Date of Process**: The date and time that the Data Archiver job ran.
- **Process Type**: Whether the job archived or hard-deleted records.
- **Module**: The module which contained the processed records.
- **Filter Definition**: The filters that were applied to identify the processed records.
- **Number Processed**: The number of records that were identified and processed by the job.
- **Source**: The ID of the user who initiated the run.

Retrieving Archived Records and Deleted Record IDs

When you hard-delete data via the Data Archiver, Sugar will preserve the IDs (and only the IDs) of the records that are deleted in a database table called archive_runs. All other data related to the hard-deleted records will be gone and not recoverable from any means other than a local backup. Therefore, we recommend backing up your database before performing hard-delete actions. Customers with access to their database can retrieve the list of IDs that were hard deleted in the row of the archive_runs table that is associated with the job that ran from the parent data_archivers record. SugarCloud customers can make and download a database backup to access the archive_runs table or create a report in the Advanced Reports module if they are using Sugar Sell or Serve. Once you have the deleted IDs, you may be able to restore hard-deleted records by comparing the IDs with your backup.

Records that are archived via the Data Archiver are stored in the database in a table cloned from the originating module table. The clone will have

_archive appended to the end of its table name (e.g., accounts_archive). Customers with access to their database can find their archived data in these archive tables. SugarCloud customers can make and download a database backup to access their archive tables or create an Advanced Report if they are using Sugar Sell or Serve.

Email Administration

Overview

Sugar comes with many different email-related capabilities, many of which require an administrator to set up or configure. Email administration covers the system email settings, campaign email settings, email archiving, inbound email, and managing the email queue.

Email Accounts

Outgoing Email Accounts

There are three types of outgoing email accounts used in Sugar:

- System Email Account: The administrator sets up the system email account by configuring the System Email Settings. Sugar uses this account to send campaigns and email notifications such as password reset emails, record assignment notifications, and workflow alerts.
- **Default User Email Account**: A default email account is automatically created by Sugar for each user in Sugar. The default user account will use the primary email address stored in the user's profile. To use their default email accounts for sending email through Sugar, users must edit their profile and select "Sugar Email Client" as their outgoing email client. For more information on how users configure their user accounts, refer to the Emails documentation in the Application Guide.
  Note: The users' default email accounts may be affected by the "Allow users to use this account for outgoing email" option in Admin > System Email Settings. If the administrator has enabled the option, users will not be able to configure their default email account and must instead utilize the system email account or create a new user email account. Users will see the system email account in the Outgoing Email Accounts list view with an asterisk to indicate that it is a system account.
- **User Email Accounts**: User email accounts can be created by all users and can consist of the user's personal email accounts (e.g., jane@example.com) as well as any shared email accounts. Shared email accounts allow a group of users to send outbound email messages using the same email account (e.g., support@example.com). If you have existing group email accounts that should be available to select when composing

emails, it is recommended that you create a shared email account via Emails > Email Settings, making sure that it is assigned to the specific team(s) who can use the account to send emails. For more information on creating outgoing email accounts, refer to the Emails documentation in the Application Guide.
Note: The "Allow users to configure email accounts" option must be enabled in order for users to see the Create button to create new outgoing email accounts when they navigate to Emails > Email Settings.

Incoming Email Accounts

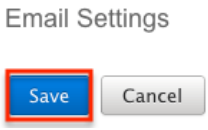
There are two types of incoming email accounts used in Sugar:

- Group Mail Accounts: Group inbound email accounts allow multiple users, such as team members, to view emails from an external mail account. When emails are addressed to your organization but not to any particular user, you can route them to a Group mail account such as support@example.com or sales@example.com. Users can subsequently distribute emails in the Group mail account to other team members. Emails received to a Group mail account will have no assigned user unless "Create Case from Email" has been enabled for the account.
  Note: Group Mail Accounts will only import unread messages from the mail server.
- Bounce Handling Mail Accounts: Bounce handling email accounts are configured to store campaign emails that are returned to the server, or "bounced" back to you due to incorrect email addresses or incompatible server settings on the receiving end. You can create a bounce handling inbox separately for each campaign, or you can create one that is common to all campaigns. The system tags every bounced campaign email with a unique identifier that enables you to identify the campaign.

Note: The Campaigns module is not available for Sugar Serve users. For more information on license types and the functionality available for each, refer to the License Types Matrix documentation.

System Email Settings

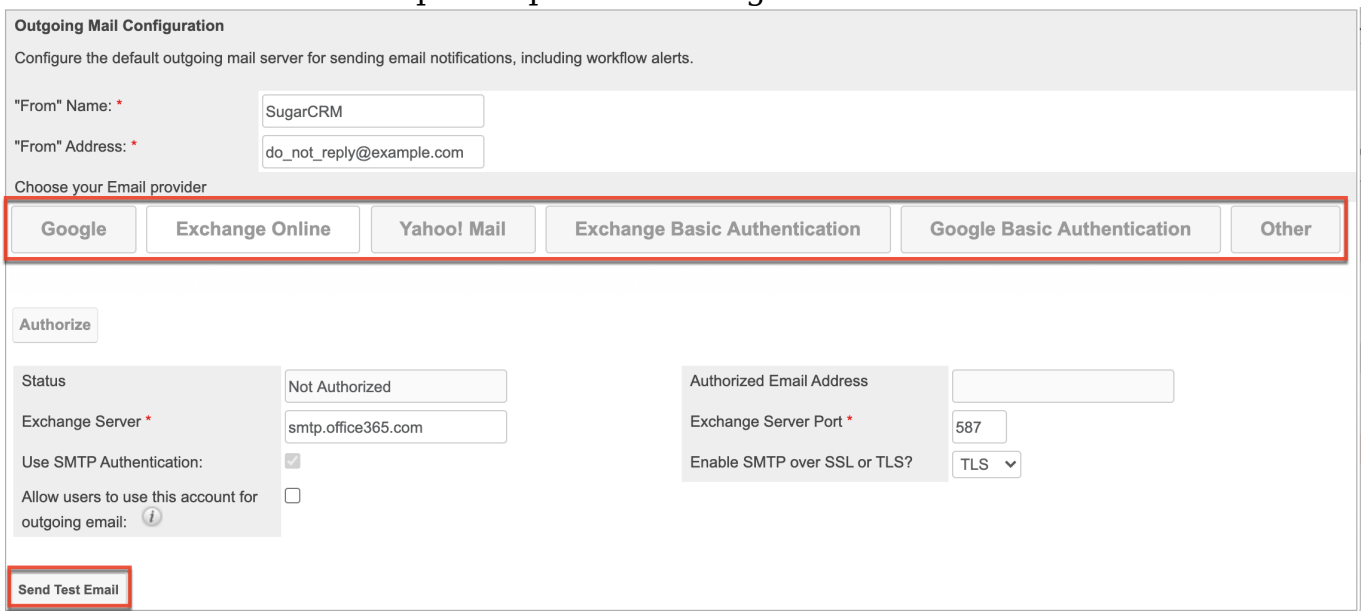
The System Email Settings section allows Sugar administrators to configure the system's outbound email settings as well as additional email and security options. Make any necessary changes in the sections below and click "Save" to commit the changes.



Outgoing Mail Configuration

This section applies to the system email settings. For help setting up the email accounts for individual users, please refer to the Emails documentation in the Application Guide.

The Outgoing Mail Configuration section contains details for sending email notifications, scheduled reports, workflow alerts, etc. Enter appropriate values for the following fields, keeping in mind that all required fields are marked with a red asterisk and must be completed prior to saving:



- **"From" Name**: The name the outgoing email will come from; for example, the name of your organization. Defaults to "SugarCRM".
- **"From" Address**: The email address the outgoing email will come from. Defaults to "do_not_reply@example.com".
    - If specifying a different address than the email address associated with the account you are authenticating, the email server being utilized may need to be configured to allow the email account to send email as the entered From Address.
    - For more information on configuring "Send As" permissions with Gmail, refer to Gmail's Help documentation.
    - For Exchange Online, enter only the authorized email address, as it cannot send emails using a different email address unless the

organization's Exchange admin has configured the account to allow this.

- **Choose your Email provider**: Click on the tile that corresponds with your mail provider (e.g., Google, Exchange Online) to populate provider-specific values. Refer to the table below this list for details about the fields shown for each provider.
- **Allow users to use this account for outgoing email**: Check this box if you would like users to be able to send emails using the same outbound mail account. If the option is not selected, users will still be able to use the outbound mail server to send emails by entering their personal mail account information in their user preferences. For more information on setting up the email settings in user preferences, please refer to the Email Settings section of the Getting Started documentation.

Once the appropriate mail server information is entered, you can send a test email to make sure it is configured properly. Click "Send Test Email", enter your email address, and send the test. If you do not receive the test email, re-enter the account information including the password to ensure it is all correct.

Email Provider	Fields	Description
Google	Authorize	Click this button to authorize the Google mail account to be the system email account. The Google connector must be configured via Admin > Connectors before you can authorize and set up the mail account. **Note**: A "This app isn't verified" warning may appear after selecting your Gmail account to authorize. You can click the Advanced link then click the "Go to..." link at the bottom of the window to proceed and grant permission for the connection to occur. For more information on this warning, refer to the Unverified apps article on the Google Cloud

		Platform Console Help page.
	Status	The status will display "Authorized" once the mail account is authorized.
	Authorized Email Address	The email address of the authorized Google mail account.
	SMTP Mail Server	The web address of the external email server Sugar will connect to.
	SMTP Port	The communication port number used for connecting to the mail server.
	Use SMTP Authentication	This option is automatically enabled to require server authentication for the account. Most email servers require authentication for security purposes. By default, authentication is required for Google.
	Enable SMTP over SSL or TLS	Select the appropriate option from the dropdown to use Secure Socket Layer, Transport Layer Security, or no encryption when connecting to the mail server.
Exchange Online	Authorize	Click this button to authorize the Microsoft Exchange mail account to be the system email account. The Microsoft connector must be configured via Admin > Connectors before you can authorize and set up the mail account.
	Status	The status will display

		"Authorized" once the mail account is authorized.
	Authorized Email Address	The email address of the authorized Microsoft Exchange mail account.
	Exchange Server	The web address of the external email server Sugar will connect to.
	Exchange Server Port	The communication port number used for connecting to the mail server.
	Use SMTP Authentication	This option is automatically enabled to require server authentication for the account. Most email servers require authentication for security purposes. By default, authentication is required for Exchange.
	Enable SMTP over SSL or TLS	Select the appropriate option from the dropdown to use Secure Socket Layer, Transport Layer Security, or no encryption when connecting to the mail server.
Yahoo! Mail	Yahoo! Mail ID	Enter the email address or user name to connect to the SMTP server.
	Yahoo! Mail Password	Enter the password associated with the entered email address or user name.
Exchange Basic Authentication	Exchange Server	The web address of the external email server Sugar will connect to.
	Exchange Server Port	The communication port number used for connecting to the mail

		server.
	Use SMTP Authentication	Check this box to require server authentication for the account. Most email servers require authentication for security purposes. By default, authentication is required for Exchange. If left unchecked, the SMTP server must accept anonymous connections, which is not recommended.
	Enable SMTP over SSL or TLS	Select the appropriate option from the dropdown to use Secure Socket Layer, Transport Layer Security, or no encryption when connecting to the mail server.
	Exchange Username	Enter the user name to connect to the SMTP server.
	Exchange Password	Enter the password associated with the entered user name.
Google Basic Authentication	SMTP Mail Server	The web address of the external email server Sugar will connect to.
	SMTP Port	The communication port number used for connecting to the mail server.
	Use SMTP Authentication	Check this box to require server authentication for the account. Most email servers require authentication for security purposes. By default, authentication is required for Google. If left unchecked, the SMTP

		server must accept anonymous connections, which is not recommended.
	Enable SMTP over SSL or TLS	Select the appropriate option from the dropdown to use Secure Socket Layer, Transport Layer Security, or no encryption when connecting to the mail server.
	Gmail Email Address	Enter the email address to connect to the SMTP server.
	Gmail Password	Enter the password associated with the entered email address.
Other	SMTP Mail Server	The web address of the external email server Sugar will connect to.
	SMTP Port	The communication port number used for connecting to the mail server.
	Use SMTP Authentication	Check this box to require server authentication for the account. Most email servers require authentication for security purposes. By default, authentication is required for email providers such as Outlook. If left unchecked, the SMTP server must accept anonymous connections, which is not recommended.
	Enable SMTP over SSL or TLS	Select the appropriate option from the dropdown to use Secure Socket Layer, Transport Layer Security, or no encryption

		when connecting to the mail server.
	Username	Enter the user name to connect to the SMTP server.
	Password	Enter the password associated with the entered user name.

Email Options

The Email Options section provides some global options for email configuration. Check the box next to the desired options:

Note: Logged-in users must log out and back in for changes to the following settings to take effect.

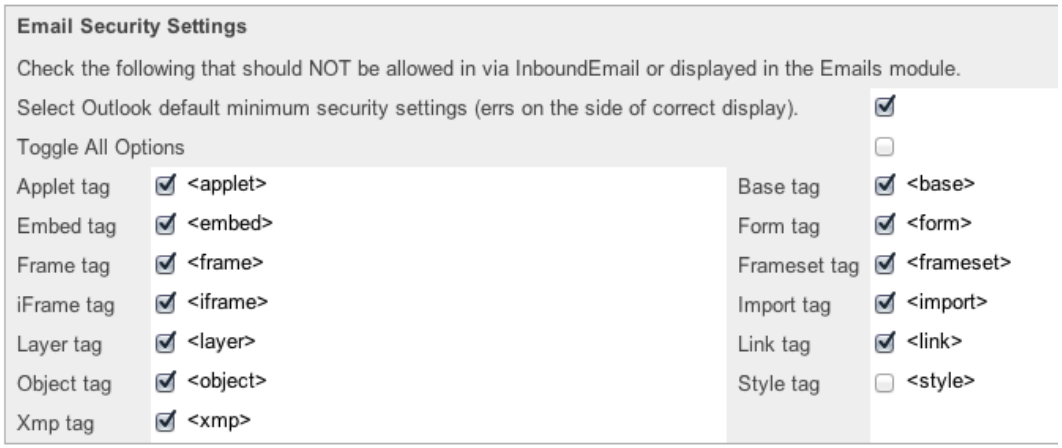
- **Assignment Notifications**: When enabled (default), Sugar will send email notifications to users automatically when records are assigned to them. When assigning a record to yourself, you will not receive a notification of the assignment.
  Note: To receive notifications, users must also have "Notify on Assignment" checked in their user profile.
- **Send notification from assigning user's e-mail address**: Enable this option to have Sugar send notifications from the email address and name of the user who is assigning a record to another user. This option is disabled by default.
  Note: The SMTP server being used must allow sending from a different email address than the authenticated account and the email account may need to be configured to allow the Send As permission. For more information, please refer to the following articles:
  - Configuring "Send As" Permissions With Exchange
  - Configuring "Send As" Permissions With Office 365
  - Configuring "Send As" Permissions With Gmail
- **Allow users to configure email accounts**: Determines whether users can create new outgoing email accounts. When enabled (default), users will see a Create button when they navigate to Emails > Email Settings.
- **Opt-out new email addresses by default**: Enable this option to mark new email addresses added to Sugar records as opted-out by default. Email addresses that are marked as opted-out cannot receive campaign emails from Sugar. Please note that changing this setting will not affect email addresses already existing in Sugar. For more information on opted-out email addresses, please refer to the Emails documentation in the Application Guide.

Email Security Settings

The Email Security Settings section allows Sugar administrators to decide which HTML tags are allowed to be displayed in Sugar. The selected tags will not be allowed for viewing within Sugar. There are two options to mass set the tag selection:

- **Select Outlook default minimum security settings**: Select this option to automatically select every tag that Outlook also restricts. This will not strip the style tag which is used by default in Outlook. This option is selected by default.
- **Toggle All Options**: Select this option to either select all tags or deselect all tags.

After selecting one of those options you can individually select or deselect additional tags to restrict or allow the tags respectively.



Related Contacts Emails

The Related Contacts Emails section allows administrators to enable or disable related contact's emails from appearing in the Emails subpanel and History dashlet for certain modules (Cases, Accounts, Opportunities). In order to have emails from related contacts appear in the Emails subpanel, simply mark the checkbox to the right of the module name (e.g., Opportunities). To disable related contact's emails from appearing in the Emails subpanel, uncheck the box for the specific module as necessary. Click "Save" to preserve the change.

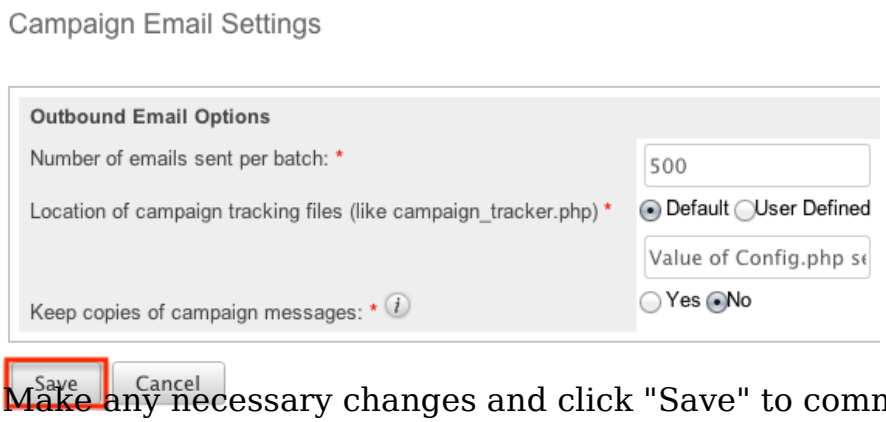


Campaign Email Settings

Note: The Campaigns module is not available for Sugar Serve users. For more information on license types and the functionality available for each, refer to the License Types Matrix documentation.

The Campaign Email Settings section allows Sugar administrators to configure some backend settings for sending campaign emails. Select the appropriate values for the following fields:

- **Number of emails sent per batch**: When the "Run Nightly Mass Email Campaigns" scheduler runs, it will send out the specified number of emails for a single run. The default is set to 500. Some email servers have one or more of the following restrictions for a specific timeframe (e.g., hour, day, etc.): the number of unique recipients, how many times the same email can be sent to individual recipients, and the most common, how many emails can be delivered. This setting helps control the outgoing email to conform to these restrictions. For example, if your scheduler is set to run every hour, the number of emails to send per batch is set to 500, and you have 1600 emails to send out, starting at 2:00 AM the last batch of emails will be sent at 5:00 AM. Please check with your email provider to determine the proper level.
- **Location of campaign tracking files**: Campaign tracking files log responses from campaign targets. If you are running Sugar on an external network, select "Default" to accept the default location. However, if your Sugar instance is behind a firewall, then choose "User Defined" and specify the path to your external web server in the field below. The external web server must have the ability to connect to your Sugar instance behind the firewall. Ensure that you create a file named index.php to handle requests for three different types of entry points: campaign_trackerv2, removeme, and image, and place the index.php file in the path to your external web server. This index.php file must make the appropriate calls to the index.php file located in the root of your Sugar instance in order to properly record the activities in Sugar. For more information on how to set up a custom campaign tracker page, please refer to the Using a Custom Page For Campaign Trackers section of the Advanced Config Options documentation in the Administration Guide.
- **Keep copies of campaign messages**: Set this option to "Yes" to keep a copy of every email sent during a campaign. If "No" is selected, the template is saved and one copy of the email is stored in the Emails module. The email record will have an empty To field but the recipients will be visible in the email's related records subpanels. The default is set to "No". **Note**: Storing every email sent does take up space in the database and can reduce performance. We recommend setting this value to "No".



Make any necessary changes and click "Save" to commit the changes.

Email Queue

The Email Queue option in Admin is where Sugar administrators can monitor and perform actions on queued email. When sending a campaign, the emails are not sent immediately but are instead queued to be sent. Each queued email has a "Send On" date and time set by the campaign they are sent from. The scheduler "Run Nightly Mass Email Campaigns" takes the queued emails that are ready to be sent based on this date and time and sends them in batches. If an email fails to send from the queue for any reason it will be flagged as a send attempt and, by default, Sugar will not attempt to send that email for another 24 hours. Once Sugar reaches six failed attempts to send an email it will be deleted from the queue. In order to send a failed email sooner than the default 24 hours, you can perform a mass update to reset the In Process field. For more troubleshooting information, refer to the Troubleshooting Campaigns Failing to Send From Email Queue article. This section will cover how to use the email queue as well as the various actions and options available from within the email queue.

Note: The Campaigns module is not available for Sugar Serve users. For more information on license types and the functionality available for each, refer to the License Types Matrix documentation.

Viewing via List View

The email queue list view displays all queued email records meeting the current search criteria. To access the list view, simply click the Email Queue link on the Admin page. List view shows key email fields including links to the Campaign, Recipient, and Marketing Message records. For more information on viewing queued email via list view, please refer to the Email Queue List View section.

Searching Queued Email

The email queue list view includes a Basic and Advanced Search to help you locate records easily and effectively in a module-specific manner. Once the search is performed, the relevant results will be displayed in the Email Queue list view below. Please note that Sugar automatically appends the wildcard character (%) to the end of your search phrase. This allows the system to retrieve all records that start with the keyword entered in the search. If you would like to broaden the search, you can use the wildcard at the beginning of your text as well (e.g., %services). This will pull up any record that has the word "services" in the name, regardless of how it starts or ends.

For more information on using the various search methods as well as how wildcards are used in the different methods, please refer to the Search documentation.

Basic Search

Basic search offers a few, commonly used fields for a simplified search experience. From the Basic Search panel, you can click "Advanced Search" to access additional search functionality as needed.
The buttons and checkboxes available in Basic Search panel have the following functions:

- **Search**: Click the Search button or press your Return/Enter key to perform the search.
- **Clear**: Click the Clear button to clear all criteria from the searchable fields.



Once the search is complete, the relevant results will populate in the list view below the search panel. To see all queued email records to which you have access, simply click "Clear" and then "Search" to perform a blank search with no filters.

Advanced Search

Advanced Search offers a more in-depth search experience than Basic Search including additional fields, layout options, and saved search capability. From the Advanced search panel, you can click "Basic Search" for simplified searching.

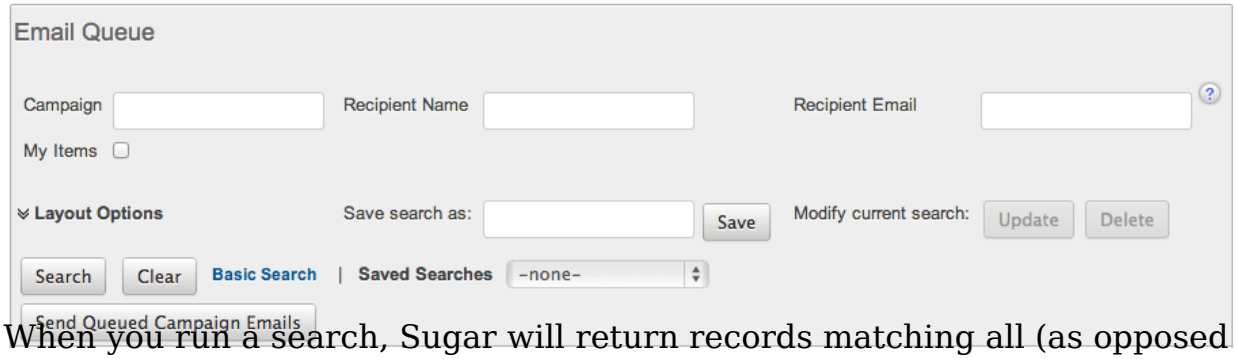
The buttons, checkboxes, and dropdowns available in Advanced Search have the following functions:

- **Search**: Click the Search button or press your Return/Enter key to perform the search.
- **Clear**: Click the Clear button to clear all criteria from the searchable fields.
- **Layout Options**: Use the expandable Layout Options section to configure

your list view. For more information, please refer to the Layout Options section of the Search documentation.

- **Saved Searches**: Save, recall, update, and delete searches that you use often. For more information, please refer to the Saved Search section of the Search documentation.

Email Queue



When you run a search, Sugar will return records matching all (as opposed to any) of the fields for which you have given a value. For example, if you enter a campaign name to search and a recipient name, Sugar will only return queued email records with matching both fields. Once the search completes, the relevant results will populate in the list view below the search panel. To see all queued email records to which you have access, simply click "Clear" and then "Search" to perform a blank search with no filters.

Email Queue List View

The Email Queue list view displays all queued email records meeting the current search criteria and to which your user has access. You can view the basic details of each email within the field columns.

You have the option to change what fields are displayed in list view by configuring your layout options in the Advanced Search. For more information on configuring your list view, please refer to the Layout Options section of the Search documentation.

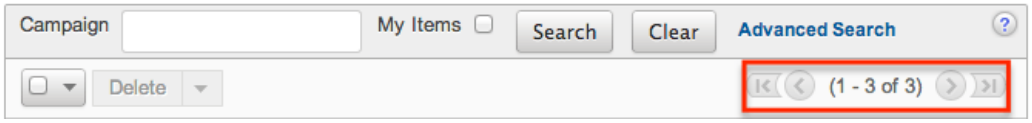
Pagination

List view displays the current search results broken into pages that you can scroll through rather than displaying potentially thousands of rows at once. To the right just below the search panel, you can see which records of the total results set are currently being displayed. The two single-arrow Next and Previous buttons can be used to scroll through the records page-by-page. The two double-arrow First Page and Last Page buttons allow you to skip to the beginning or the end of your current results.

By default, Sugar displays 20 records per list view page, but administrators can

change the number of records displayed via Admin > System Settings. For more information on changing the number of displayed records, please refer to the System documentation in the Administration Guide.

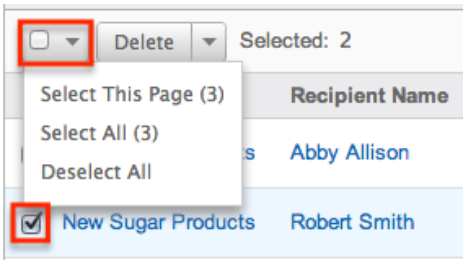
Email Queue



Checkbox Selection

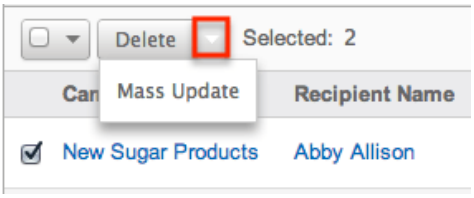
You can perform several actions on queued email records directly from the list view by first selecting the desired records. To select individual queued email records on the Email Queue list view, mark the checkbox on the left of each row. To select or deselect multiple queued email records on the list view, use the options in the checkbox dropdown menu:

- **Select This Page**: Selects all records shown on the current page of results.
- **Select All**: Selects all records in the current search results across all pages of results.
- **Deselect All**: Deselects all records that are currently selected.



Actions Menu

The Actions menu to the right of the checkbox dropdown allows you to perform various actions on the currently selected records.



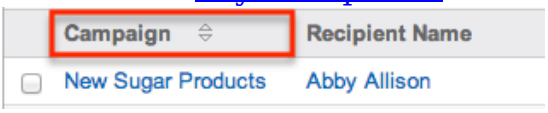
The options in the Actions menu allow you to perform the following operations:

Menu Item	Description
Delete	Delete one or more queued emails at a

	time.
Mass Update	Mass update one or more queued emails at a time.

Column Sorting

List view provides the ability to sort all of the current search results by a field column in either ascending or descending order. To sort by a field or switch the sort direction, click the column header noting that the fields which allow sorting will have a pair of arrows. The list view may be sorted by only one column at a time. You can also set a default order-by column using the layout options in Advanced Search. For more information on setting a default column sort, please refer to the Layout Options section of the Search documentation.



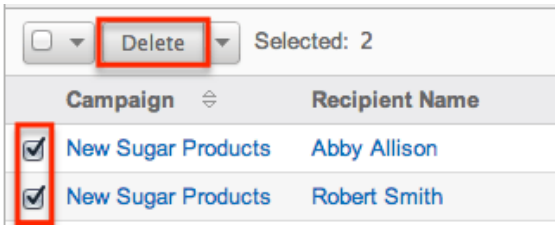
Deleting Queued Email

If a queued email is invalid or should no longer be sent, it may be deleted from the list view. The list view allows for mass deleting multiple records at once. Deleting queued emails will not delete the campaign or target, but will remove the instance of this email so it will not be sent.

Mass Deleting via List View

Use the following steps to delete one or more queued email records via the list view:

1. Navigate to the Email Queue list view by clicking the Email Queue link on the Admin page.
2. Use the Basic or Advanced Search to find the queued email records you wish to delete.
3. Select the desired records individually or using the checkbox dropdown's options.
4. Choose "Delete" from the Actions menu.



5. A pop-up message will display asking for confirmation. Click "Ok" to proceed.

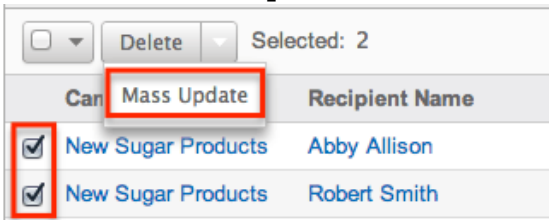
Due to PHP memory limitations on the server, there may be occasions when the application times out while deleting a large number of queued email records. If you encounter an error when performing this action, we recommend selecting the records in smaller batches.

Mass Updating Queued Email

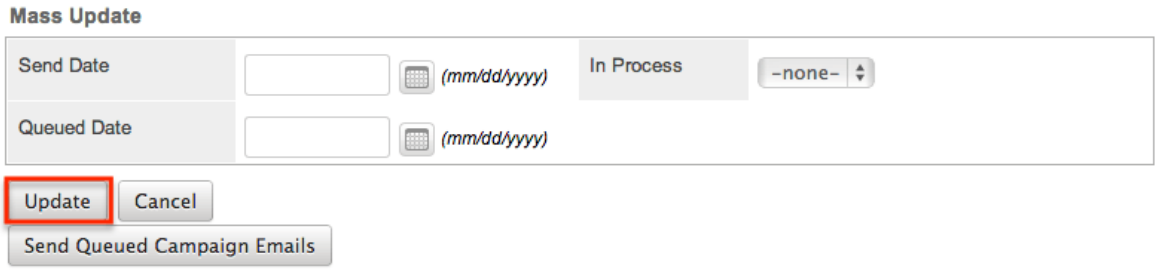
Mass Updating allows users to make the same change to multiple queued email records at once from the Email Queue list view. Currently, only fields with the data type of date, datetime, dropdown, multiselect, and radio may be altered during a mass update. Due to the PHP memory limitations on the server, there may be occasions when the application times out while mass updating a large number of queued email records. If you encounter an error when performing this action, we recommend selecting the records in smaller batches.

Use the following steps to mass update queued email records from the list view:

1. Navigate to the Email Queue list view by clicking the Email Queue link on the Admin page.
2. Use the list view's Basic or Advanced Search to find the queued email you wish to modify.
3. Select the desired records individually or using the checkbox dropdown's options.
4. Choose "Mass Update" from the Actions menu.



5. Scroll to the Mass Update panel and set values for the fields you wish to alter.



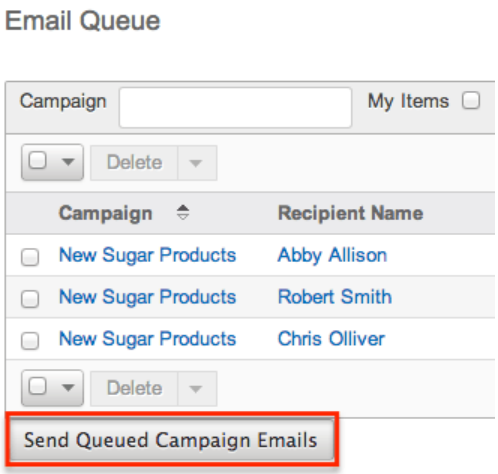
   Note: After an email has failed to send, setting In Process to "No" will flag the email to attempt to send again. Otherwise, the email will not attempt to be sent again until 24 hours have passed. Optionally set the Send Date to configure when the email should be attempted again.
6. Click "Update" to save the changes to all of the currently selected queued email records.

Sending Queued Email

Email in the queue will be automatically be sent out in batches by the "Run Nightly Mass Email Campaigns" scheduler. For more information on setting up and configuring scheduler, please refer to the Schedulers documentation in the Administration Guide. Alternatively, you can manually send a batch of emails in the queue. The amount of queued email that will be sent is equal to the "Number of emails sent per batch" value specified in the Campaign Email Settings.

Use the following steps to manually send a batch of queued emails from the list view:

1. Navigate to the Email Queue list view by clicking the Email Queue link on the Admin page.
2. Choose "Send Queued Campaign Emails" from below the list view.



3. Sugar will then send a batch of queued email whose Send On date and time is equal to now or in the past.
   Note: If an email fails to send it will not be tried again for 24 hours.

Selecting specific records and searching for specific records will not determine which queued emails will be sent. This process will send a batch of emails that are queued to be sent in order by the Send On field. For more information on setting the batch amount, please refer to the Campaign Email Settings section.

Note: If your batch size is set high and you have a lot of queued email, this process can take a while to run through a single batch.

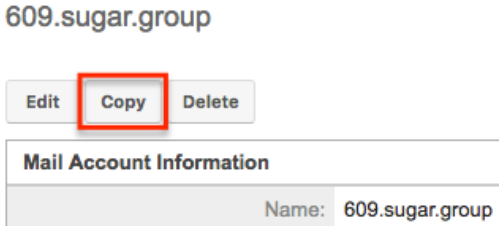
Note: The Campaigns module is not available for Sugar Serve users. For more information on license types and the functionality available for each, refer to the License Types Matrix documentation.

Creating via Duplication

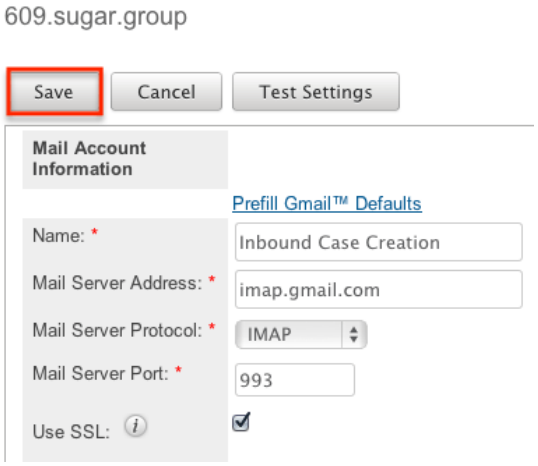
You can also create a new group mail or bounce handling account by duplicating an existing inbound email account record. The copy option is useful if the inbound email account you are creating has similar information to an existing inbound email account.

Use the following steps to create an inbound email account by duplicating an existing record:

1. Navigate to an inbound email account record's detail view.
2. Click "Copy".



3. The displayed edit view is pre-populated with the original account's values. Update the necessary fields, then click "Save".



Email Archiving

The Sugar Email Archiving service allows users to easily archive email to Sugar records simply by sending the email to a special email address. The email archiving service monitors the email address and imports the email into your instance of sugar and links related records without the use of a plug-in or other syncing process.

This section explains how the administrator can enable the Sugar Email Archiving service. For complete steps to use Sugar Email Archiving once it is enabled, please refer to the Emails documentation in the Application Guide.

Enabling Email Archiving

Before you can use Sugar Email Archiving, you need to enable the service for your instance. Email Archiving can be enabled for multiple instances per license key, but each instance must be registered independently and receive its own, unique email address. If you clone an instance that has Email Archiving enabled, the clone will show as having Email Archiving enabled, but must have the service disabled and re-enabled in order to receive its own email address and start using the service. For further troubleshooting information, refer to the Troubleshooting the Sugar Email Archiving Service article.

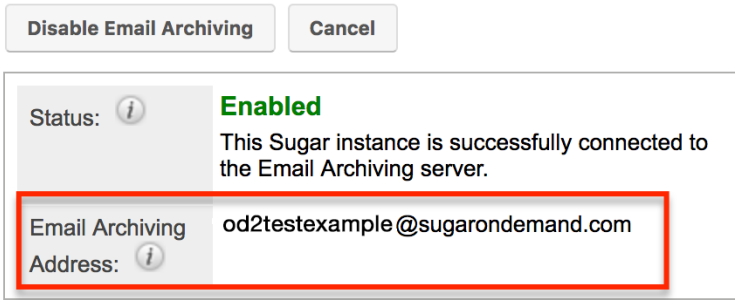
Use the following steps to enable email archiving via the Administration page:

1. In the Email section of the administration page, Select "Email Archiving".
2. Read the Email Archiving feature description, Master Subscription Agreement, and privacy policy.
3. Select the checkbox to agree to the teams and click "Enable Email Archiving".



Note: Your instance needs to be reachable over the internet from SugarCRM's Email Archiving server. For more information, refer to the Troubleshooting Sugar Email Archiving (SNIP) Activation article.

4. The next screen displays the unique email address assigned to your instance for Email Archiving. Forward emails to this email address to automatically archive the messages to Sugar.



To begin using the email archiving service, please refer to the Emails documentation in the Application Guide. To turn off this feature, navigate to Admin > Email Archiving and click "Disable Email Archiving".

Note: If you disable and then re-enable Email Archiving, you will be assigned an archiving email address that is different than the one you were using before.

Inbound Email

Inbound Email allows external email to be pulled into Sugar. Inbound accounts can

be configured as either group email accounts or bounce email accounts . Group inbound accounts can be configured to create case records in Sugar or send automatic replies to imported email. Prior to Sugar 7.10.x, you could enable the "Allow users to send emails using the "From" Name and Address as the reply-to address" option to allow users on teams who had access to the group email account to be able to select the "From" name and email address associated with the group email account when composing emails in Sugar. As of Sugar 9.0.x, you can instead create shared email accounts directly via Emails > Email Settings which allows groups of users belonging to the assigned team(s) to send outbound email messages using the same email account (e.g., support@example.com). For more information on creating shared email accounts, please refer to the Emails documentation. The following sections will cover how to use the Inbound Email module as well as the various actions and options available from within the module.

Note: The Check Inbound Mailboxes scheduler must be configured and running in order to retrieve inbound email messages in Sugar. For more information on setting up and configuring the inbound email scheduler, please refer to the Schedulers documentation.

Inbound Email Fields

The Inbound Email module contains a number of stock fields that come out-of-the-box with Sugar in order to configure inbound email accounts. The below definitions are the meanings for the available fields.

Field	Description
Assign To Teams	The Sugar team(s) assigned to the email record. **Note**: Users will only be able to see emails in group accounts as allowed by their team memberships.
Auto-Reply Template	Select an existing template or click "Create" to create a new one to send an automated response notifying email senders that you received their email. **Note**: If both Auto-Reply and Case Reply templates are selected, Sugar will respond to the sender with the Case Reply template only.
Create Case from Email	Select this option to create cases automatically from inbound emails. Only available for Group Accounts and defaults to not checked.

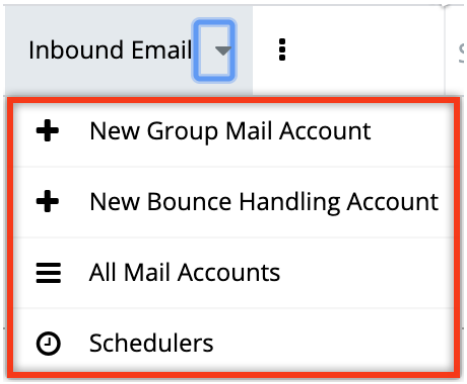
	For more information on creating cases via email, the distribution method, and case auto-reply, please refer to the Creating Cases From Email section.
Distribution Method	Only available if Create Case from Email is checked for a Group Account and allows you to select Round-Robin or Least-Busy for assigning the new cases.
Email Provider	Select the email provider for the inbound email account. **Note**: The "Google Mail" and "Exchange Online" options allow you to connect your Sugar instance to these email services via OAuth2. The "Other" option covers all other email account configurations (e.g., Yahoo) that are supported in Sugar.
From Address	Enter the email address (e.g., serviceinfo@example.com) that will appear as the "From" email address for automatic responses to imported email. Defaults to the email address from your user profile.
From Name	Enter the name (e.g., Service Info) that will appear as the "From" name for automatic responses to imported email. Defaults to your first and last name from your user profile.
Import Emails Automatically	Select this option to create email records automatically in Sugar for all incoming emails. Only available for Group Accounts and defaults to checked.
Leave Messages On Server	Select this option if you do not want to remove emails from the server when they are opened in Sugar. This will allow the messages to remain visible and appear unread in other email clients. Only available for Group Accounts and defaults to Yes.
Mail Server Address	The web address of the external email server from which emails will be

	imported in Sugar.
Mail Server Port	The communication port number used for connecting to the mail server.
Mail Server Protocol	The mail protocol used to communicate with the mail server. IMAP is the default selection and provides the best functionality with Sugar.
Monitored Folders	The folders in your external account that Sugar will monitor. Inbox is selected by default. To select one or more folders to monitor click "Select" and then pick the folders in your external account for Sugar to monitor.
Name	The name or designation of the account.
New Case Auto-Reply Template	Only available if Create Case from Email is checked for a Group Account and allows you to select or create an automated response template notifying email senders that a case has been created to resolve their issue. For more information on creating cases via email, the distribution method, and case auto-reply, please refer to the Creating Cases From Email section.
No Auto-Reply to this Domain	Enter the domain name to exclude a domain from receiving the automatic email response. It is common to specify your organization's domain to prevent auto-replies from being sent to your organization's members.
Number of Auto-responses	Set the maximum number of auto-responses to be sent to a unique email address during a period of 24 hours.
Password	Enter the password associated with the email address or username.
Reply-to Address	Enter the email address that will receive any replies to the auto-reply template. If left blank, replies will be sent to the From Address.
Reply-to Name	Enter the name that will be used to receive any replies to the auto-reply template. If left blank, replies will be

	sent to the From Name.
Sent Folder	Select a folder from your external account to store any email being sent from that account through Sugar.
Status	The current status of the account (i.e., Active, Inactive).
Trash Folder	Select a folder from your external account to be designated as the trash folder. Sugar will place deleted emails into this folder on your external account.
Use SSL	Check this box to force the connection and communication between Sugar and the mail server to use a secure socket layer of encryption.
Username	Enter the email address or username used to connect to the SMTP server.

Inbound Email Module Tab

The Inbound Email module tab is typically located on the navigation bar at the top of any Sugar screen after selecting "Inbound Email" from the Admin page. Once in the Inbound Email list view, click the triangle in the Inbound Email module tab to display the Actions and Recently Viewed menus. The Actions menu allows you to perform important actions within the module. The Recently Viewed menu displays the list of inbound email accounts you last viewed in the module.



The Actions menu allows you to perform the following operations:

Menu Item	Description
New Group Mail Account	Opens the edit view layout to create a new Group Mail Account.
New Bounce Handling Account	Opens the edit view layout to create a new Bounce Handling Account.

All Mail Accounts	Opens the list view layout to display all inbound mail accounts.
Schedulers	Opens the list view layout to search and display schedulers.

Creating Inbound Email Accounts

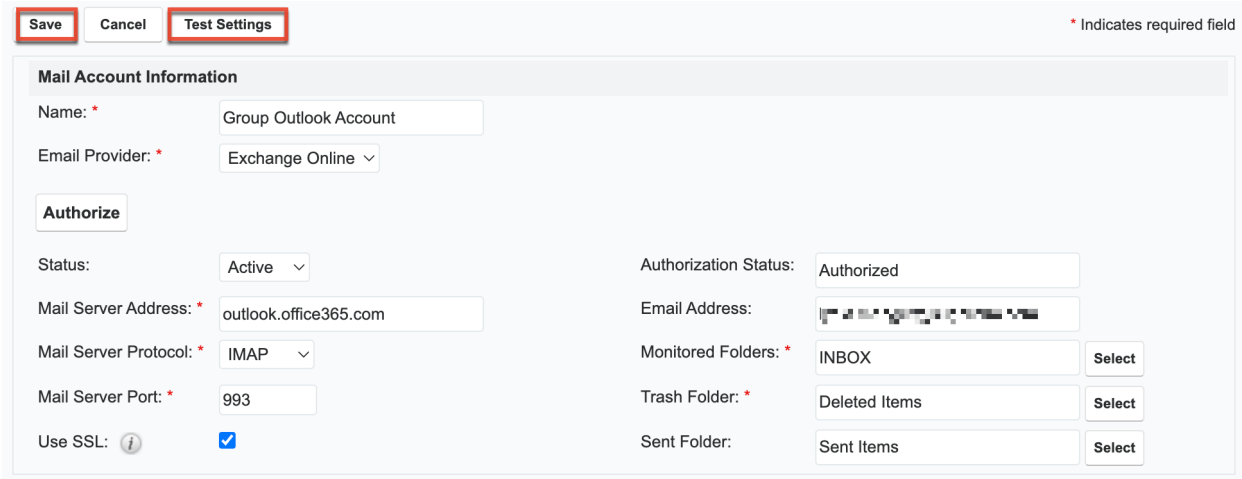
There are various methods for creating inbound email accounts in Sugar. The full edit view layout opens when creating the inbound account directly from the Inbound Email menu and includes all of the relevant fields for your organization's accounts.

Creating Group Mail Accounts

One of the most common methods of Group Mail Account creation is via the New Group Mail Account option in the Inbound Email module tab (visible when you navigate to Admin > Inbound Email). This opens up the edit view layout which allows you to enter all the relevant information for the group mail account. Please note that Group Mail Accounts will only import unread messages from the mail server.

Use the following steps to create a group mail account via the Inbound Email module:

1. Navigate to Admin > Inbound Email.
2. Click the triangle in the Inbound Email module tab and select "New Group Mail Account".
3. Enter appropriate values for the fields in the edit view layout.
   Note: If your mail account is using Gmail, click "Prefill Gmail™ Defaults" to populate many fields with defaults to connect to Gmail.
4. Once the necessary information is entered, click "Save". Optionally, click "Test Settings" to verify your entries.

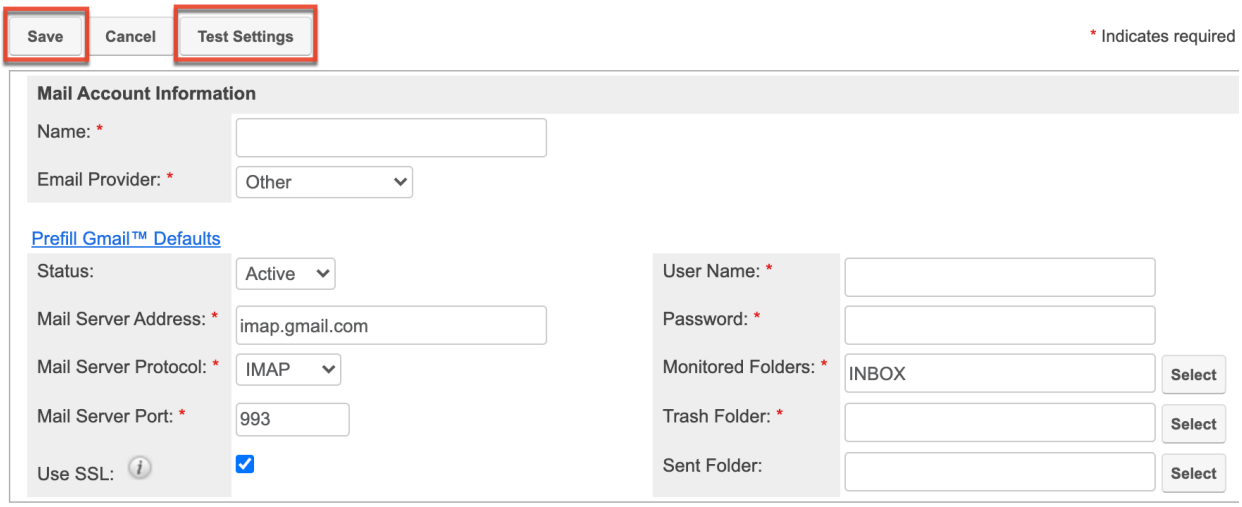


Creating Bounce Handling Accounts

One of the most common methods of Bounce Handling Account creation is via the New Bounce Handling Account option in the Inbound Email module tab. This opens up the edit view layout which allows you to enter in all the relevant information for the bounce handling mail account.

Use the following steps to create a bounce handling account via the Inbound Email module:

1. Navigate to Admin > Inbound Email.
2. Click the triangle in the Inbound Email module tab and select "New Bounce Handling Account".
3. Enter appropriate values for the fields in the edit view layout.
   Note: If your mail account is using Gmail, click "Prefill Gmail™ Defaults" to populate many fields with defaults to connect to Gmail.
4. Once the necessary information is entered, click "Save". Optionally, click "Test Settings" to verify your entries.



Note: The Campaigns module is not available for Sugar Serve users. For more information on license types and the functionality available for each, refer to the License Types Matrix documentation.

Viewing Inbound Email Accounts

There are various options available for viewing inbound account records in Sugar including via Inbound Email list view, detail view, and Last Viewed menu.

Viewing via List View

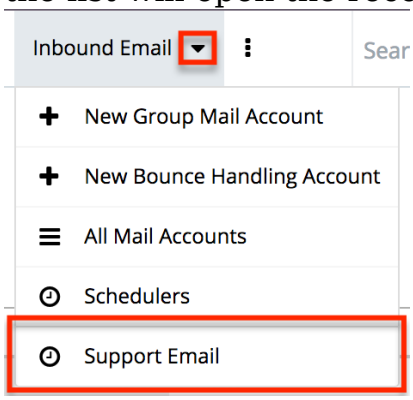
The Inbound Email list view displays all inbound account records. To access the list view, simply click the Inbound Email module tab. While list view shows key inbound account fields, you can click the account's name to open the record in detail view. For more information on viewing inbound accounts via list view, please refer to the Inbound Email List View section.

Viewing via Detail View

The Inbound Email detail view displays thorough inbound account information including all fields. The detail view can be reached by clicking an account record's link from anywhere in the application including from the Inbound Email list view. For more information on viewing inbound accounts via detail view, please refer to the Inbound Email Detail View section.

Viewing via Recently Viewed

As you work, Sugar will keep track of which inbound accounts you have recently viewed. Click the triangle in the Inbound Email module tab to see a list of the 3 records you most recently viewed in the module. Clicking the record's name within the list will open the record in detail view.



Inbound Email List View

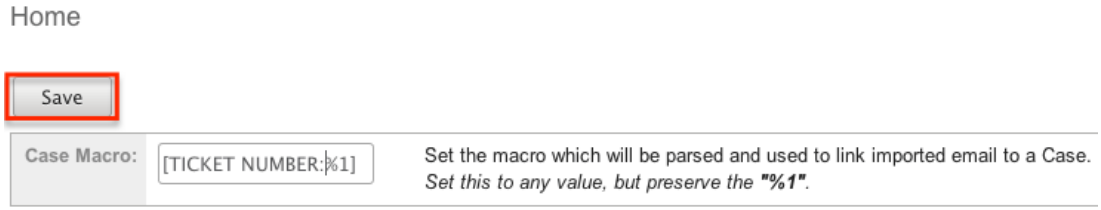
The Inbound Email list view displays all inbound account records meeting the current search criteria and to which your user has access. You can view the basic details of each account within the field columns.

Modifying the Case Macro

The Case Macro field determines what distinct string Sugar will use to match emails to the Cases module. The case macro string can be added anywhere within the email subject and does not need to be at the beginning for it to match. The Case Macro is on the Inbound Email list view and displays the current case macro string. By default, this string is set to [CASE:%1]. To customize it, you can change CASE to a different word, but you must preserve the rest of the string; for

example, [TICKET NUMBER:%1].

Note that the macro is case-sensitive and also takes spaces into consideration. As a result, capitalization and spacing must match the case macro to ensure that the email is related to the case. For example, using the default case macro of "[CASE:%1]", incoming emails must have no space before the case number and the text must use the same capitalization in order to be related to the existing case. That is, an email with the subject "[CASE:1234]" will automatically be related to case number 1234 while an email with the subject "[CASE: 1234]" or "[Case:1234]" will not.

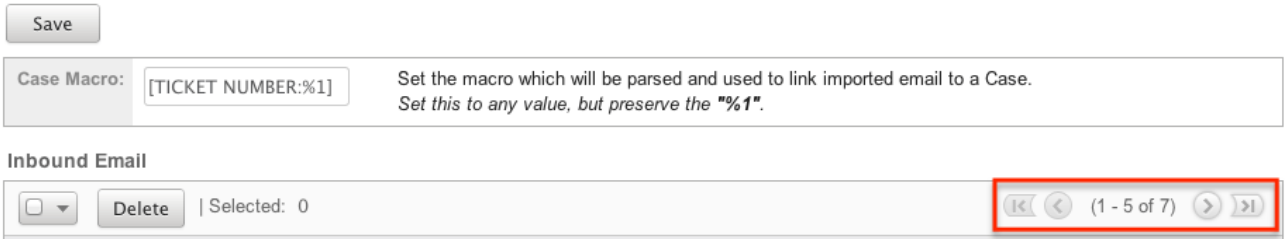


Click "Save" to preserve your changes.

Pagination

List view displays the current results broken into pages that you can scroll through rather than displaying potentially thousands of rows at once. To the right just below the case macro you can see which records of the total results set are currently being displayed. The two single-arrow Next and Previous buttons can be used to scroll through the records page-by-page. The two double-arrow First Page and Last Page buttons allow you to skip to the beginning or the end of your current results.

By default, Sugar displays 20 records per list view page, but administrators can change the number of records displayed via Admin > System Settings. For more information on changing the number of displayed records, please refer to the System documentation in the Administration Guide.

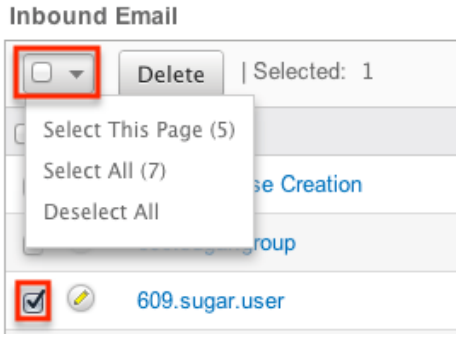


Checkbox Selection

You can perform several actions on inbound account records directly from the list view by first selecting the desired records. To select individual inbound account records on the Inbound Email list view, mark the checkbox on the left of each row. To select or deselect multiple inbound account records on the list view, use the

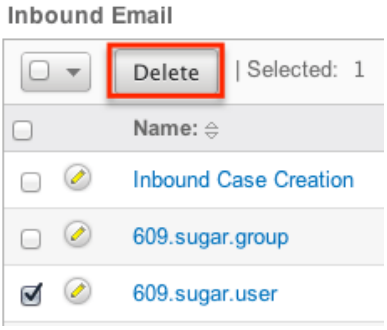
options in the checkbox dropdown menu:

- **Select This Page**: Selects all records shown on the current page of inbound account results.
- **Select All**: Selects all records across all pages of inbound account results.
- **Deselect All**: Deselects all records that are currently selected.



Actions Menu

The Actions menu to the right of the checkbox dropdown typically allows you to perform various actions on the currently selected records.

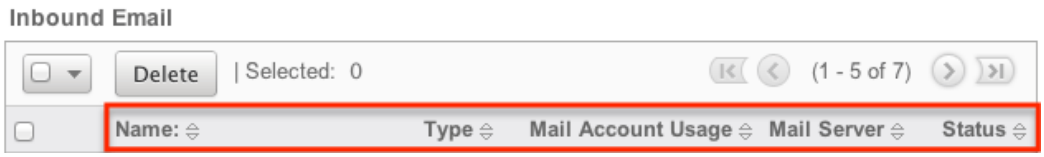


The only action available from the Inbound Email list view is the following operation:

Menu Item	Description
Delete	Delete one or more inbound accounts at a time.

Column Sorting

List view provides the ability to sort all of the current results by a field column in either ascending or descending order. To sort by a field or switch the sort direction, click the column header noting that the fields which allow sorting will have a pair of arrows. The list view may be sorted by only one column at a time.

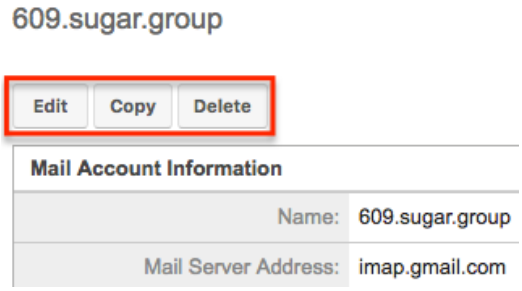


Inbound Email Detail View

The Inbound Email detail view displays thorough inbound account information including all inbound account fields which are grouped by default into the Mail Account Information and Advanced Setup panels. The detail view can be reached by clicking an inbound account record's link from anywhere in the application including from the Inbound Email list view.

Action Buttons

The Action Buttons on the top left of each inbound account's detail view allow you to perform various actions on the current record.



The action buttons allow you to perform the following operations:

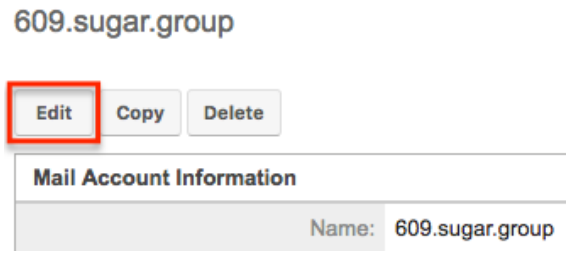
Menu Item	Description
Edit	Edit this inbound account.
Copy	Duplicate this inbound email account.
Delete	Delete this inbound account.

Editing Inbound Email Accounts

Inbound accounts may be edited at any time to update or add information to the record. You can make changes to existing inbound account records via the Inbound Email edit view. Edit view is available within the Inbound Email module and includes all of the Inbound Email fields you should need.

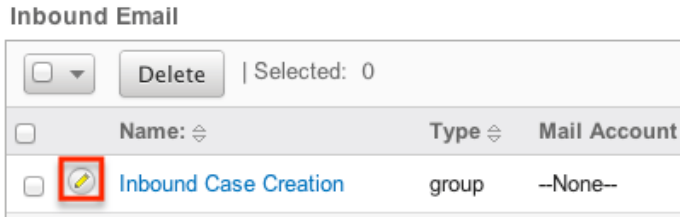
Editing via Detail View

You can edit inbound accounts via the detail view by clicking the Edit button on the upper left of the page. Once the edit view layout is open, update the necessary fields, then click "Save" to preserve your changes.



Editing via List View

You can edit inbound accounts via the list view by clicking the Pencil icon to the left of each inbound account's name. Once the edit view layout is open, update the necessary fields, then click "Save" to preserve your changes.



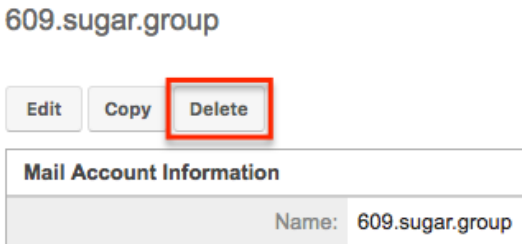
Deleting Inbound Email Accounts

If an inbound account record is invalid or should no longer appear in your organization's Sugar instance, it may be deleted from either the Inbound Email detail view or list view. Deleting via the detail view allows you to delete a single record while the list view allows for mass deleting multiple records at once. Deleting inbound account records will not delete the email imported from this account.

Deleting via Detail View

Use the following steps to delete an inbound account record via the detail view:

1. Navigate to an inbound email account record's detail view.
2. Click "Delete".

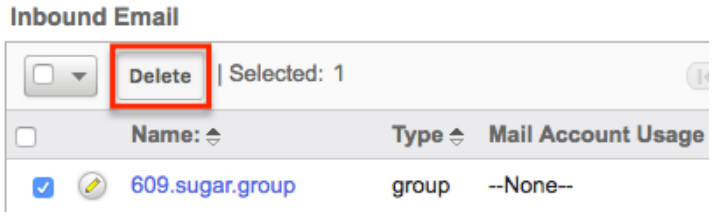
   

3. A pop-up message will display asking for confirmation. Click "Ok" to proceed.

Mass Deleting via List View

Use the following steps to delete one or more inbound email account records via the list view:

1. Navigate to the Inbound Email list view by clicking the Inbound Email module tab.
2. Select the desired inbound email account records individually or by using the checkbox dropdown's options.
3. Click "Delete".



4. A pop-up message will display asking for confirmation. Click "Ok" to proceed.

Due to PHP memory limitations on the server, there may be occasions when the application times out while deleting a large number of inbound account records. If you encounter an error when performing this action, we recommend selecting the records in smaller batches.

Creating Cases From Email

To create a case via email, simply send an email to a group inbound email account that has the case creation option selected. The subject and description of the case are populated with the subject and body of the email respectively. The new case is assigned to the team defined in the inbound email account record and the case can be assigned to a specific user in that team based on two rules:

- **Round-Robin**: Sugar distributes cases evenly among all users within the team.
- **Least-Busy**: Sugar distributes cases to the least busy user within the team. Least busy is defined by the person with the least number of unread emails assigned to them.

Note: Case assignment is distributed to all members of the specified team, but excludes any inherited members of the team due to the "Reports To" structure. For more information on teams and the Reports To structure, please refer to the Team Management and User Management documentation in the Administration Guide.

Cases created from email are automatically related to contact and account records that match the email address in the From field of the email. If a case auto-reply template is specified, the sender of the email will receive an email based on the

template selected. The response contains the system-generated case number formatted according to the case macro as a subject line. The body of the email displays below the template text. The case auto-reply also ignores the "No Auto-Reply to this Domain" setting.

Note: If both the Auto-Reply and Case Auto-Reply templates are selected, Sugar will respond to the sender with the Case Auto-Reply template only.

Developer Tools

Overview

The Developer Tools section of Sugar's Admin page contains various configuration menus that help you customize your instance to best suit your organization's needs. Developer Tools allow you to edit the look, feel, and functionality of your instance, including adding fields, changing layouts, adding automated processes, and creating entirely new modules.

The Developer Tools section contains the following menus:

Menu	Description
Studio	Modify fields, relationships, and layouts for existing modules
Module Builder	Create new modules to be deployed into this instance or exported to other Sugar instances
Module Loader	Upload and manage customization packages to your instance, such as additional modules or third-party integrations
Sugar Portal	Configure your Sugar Portal
Workflow Management	Manage automated processes in Sugar to optimize and streamline your company's business process
Rename Modules	Update the name of each module within Sugar
Display Modules and Subpanels	Hide or display modules and subpanels across the application
Configure Navigation Bar Quick Create	Configure which modules appear in the

	Quick Create menu on the navigation bar
Configure API Platforms	Manage platform identifiers for custom API integrations
Dropdown Editor	Manage dropdown lists to add new lists or edit existing lists

Studio

Studio enables administrators to customize stock or custom modules by modifying fields, page layouts, and more. This allows Sugar to be modified to ideally fit your organization's needs and terminology. Please note that only users with administrator or developer access have the ability to make changes via Admin > Studio. For more information on how to utilize Studio, please refer to the Studio documentation.

Module Builder

Module Builder enables administrators to create, deploy, and maintain custom modules in Sugar. For your convenience, the custom modules are based on templates such as Basic, Person, Company, etc. Modules can then be deployed within your instance of Sugar so that users can utilize the new module in their daily process. In addition, modules can be exported for additional development or published and then imported to other Sugar instances. For more information on using Module Builder, please refer to the Module Builder documentation.

Module Loader

Module Loader is used to import packages into Sugar that make changes to core files. Examples of module-loadable packages include Sugar custom modules that were created in Module Builder, language packs, third-party integrations, or any other type of file that would make changes to Sugar's core file system. Module Loader provides a portal within the application where zip files can be easily uploaded and then installed. For more information on how to use Module Loader, please refer to the Module Loader documentation.

Sugar Portal

The Sugar Portal is a powerful tool that allows Sugar users to share published knowledge base articles with customers and interact with them via notes. Your customers can log into the portal and review knowledge base articles covering a variety of topics such as common troubleshooting tips, frequently asked questions, etc. The information allowed and viewable in the portal can be updated and restricted by Sugar users as allowed by team membership, user access type, and

assigned roles. Administrators can configure portal settings, the look and feel of the theme, and the layout configurations via Admin > Sugar Portal. For more information on configuring the portal, please refer to the Sugar Portal documentation.

Workflow Management

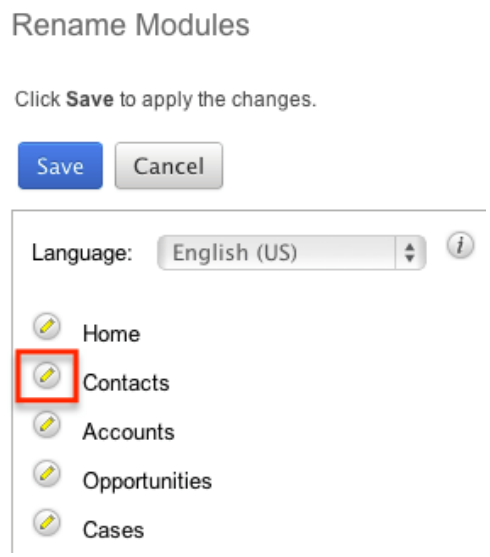
Sugar's Workflow functionality allows administrators to configure cause and effect type actions throughout Sugar and across multiple modules. Workflows can be used to update fields, send emails, or create records once certain sets of conditions are met. Workflows are a great way to configure automated processes within Sugar so that users do not need to remember manual steps and instead can focus on their primary tasks and job responsibilities. Administrators can create and manage workflows via Admin > Workflow Management. For more information on workflows, please review the Workflow Management documentation.

Rename Modules

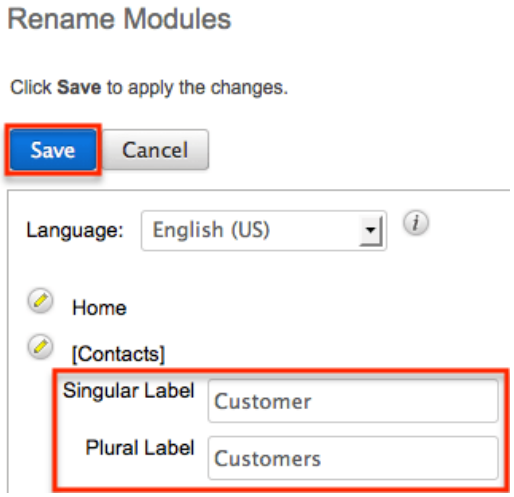
Depending on your business needs, it may be necessary to alter the display label to make the module's name (e.g., Contacts, Accounts, etc.) align with your various business components. Administrators can easily rename modules via Admin > Rename Modules. When editing a name, you are given the option to update both the singular and plural versions of the word. This change will be reflected globally across Sugar so that every use of the given module name is updated to your preference, seamlessly to all users. You can also use the language dropdown list at the top of the page to rename the modules to a language other than English.

The following steps cover renaming the Contacts module as an example:

1. Navigate to Admin > Rename Modules.
2. Locate the module you wish to change and click the Pencil icon to the left of the module's name.



3. Enter a new singular and plural name for the module then click the Pencil icon again to close the text boxes.



4. Click "Save" to deploy your changes across your instance.

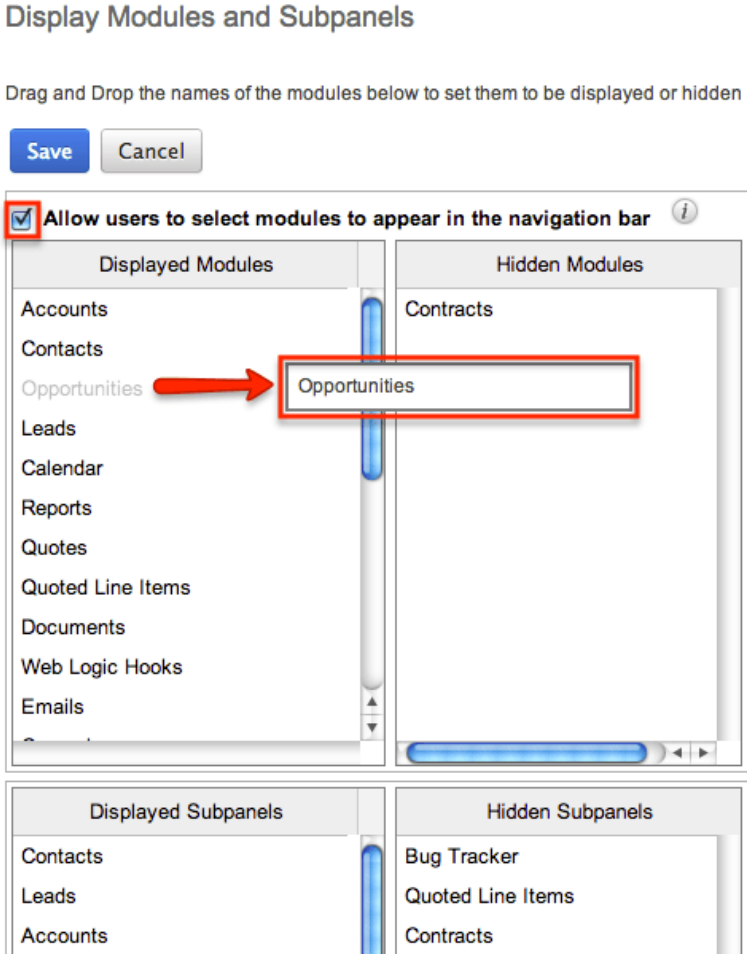
Display Modules and Subpanels

Administrators have the ability to control which modules and subpanels will appear in their instance via Admin > Display Modules and Subpanels. This option is useful as any unnecessary module(s) and subpanel(s) can be hidden to prevent users from accessing it. Please note that not every module and subpanel in Sugar is enabled by default when initially installed.

Once the "Display Modules and Subpanels" page is open, you will see the Displayed Modules, Hidden Modules, Displayed Subpanels, and Hidden Subpanels columns. To configure which modules are displayed on the navigation bar, drag and drop the module from the Hidden Modules column to the Displayed Modules column. To hide a module, simply drag and drop the module from the Displayed Modules column to the Hidden Modules column. To configure which subpanels appear in modules, drag and drop the module from the Hidden Subpanels column

to the Displayed Subpanels column. To hide a subpanel, simply drag and drop the module from the Displayed Subpanels column to the Hidden Subpanels column. After making the necessary changes, click "Save" at the top of the page to deploy your changes or "Cancel" to revert back to your previous settings.

Please note that if a hidden module is related to a module that is visible in Sugar, it will display as a subpanel in the record view (for Sidecar modules) or detail view (for Legacy modules) of the related module. In addition, hidden modules continue to be available to users when viewing, creating, and managing reports via the Reports module. When a subpanel is hidden, users cannot view any related records from the record view (for Sidecar modules) or detail view (for Legacy modules) of the related module.



Users have the option to hide and display modules per their viewing preference via the User Profile. The list of available modules to display and hide in a user's account is based on the modules in the Displayed Modules column of the Display Modules and Subpanels page. To disable the users' ability to modify which modules are hidden or displayed on their navigation bar, uncheck the Allow users to select modules to appear in the navigation bar checkbox above the Displayed and Hidden Modules columns.

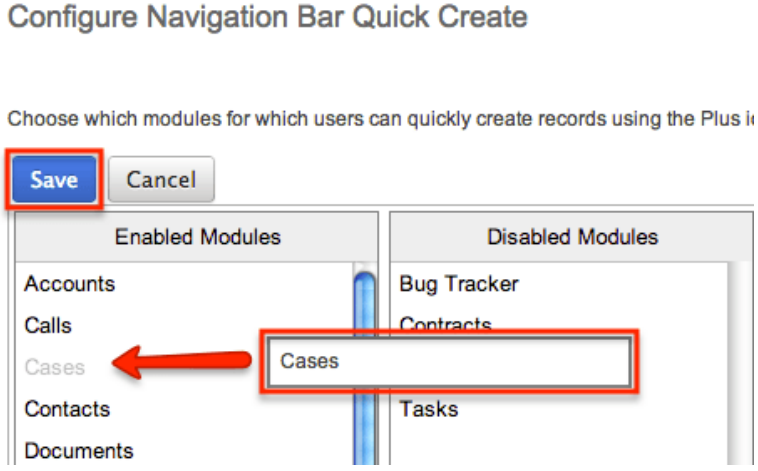
If you wish to prevent certain users from accessing specific modules in Sugar, you can keep the module enabled globally but assign a role to the user. For more information on creating and assigning roles, please refer to the Role Management documentation.

Configure Navigation Bar Quick Create

The Quick Create menu allows users to easily create new records from anywhere in Sugar. Simply click the quick-create button on the upper right of any Sugar page to access the menu. Administrators can easily configure the Quick Create menu via Admin > Configure Navigation Bar Quick Create menu to control which modules are enabled/disabled, as well as the order the modules will appear in the menu.

Once the "Configure Navigation Bar Quick Create" page is open, you will see the Enabled Modules and Disabled Modules columns. Modules that appear within the Enabled Modules column will display in the Quick Create menu. To enable a module to be displayed in the Quick Create menu, drag and drop the module from the Disabled Modules column to the Enabled Modules column. To disable a module, simply drag and drop the module from the Enabled Modules column to the Disabled Modules column. You can also change the order of the modules as they appear in the Quick Create menu by dragging and dropping the modules up-and-down within the Enabled Modules list. After making the necessary changes, click "Save" at the top of the page to deploy your changes or "Cancel" to revert back to your previous settings.

Note: The Quick Create menu can display a maximum of 10 modules at one time.



Configure API Platforms

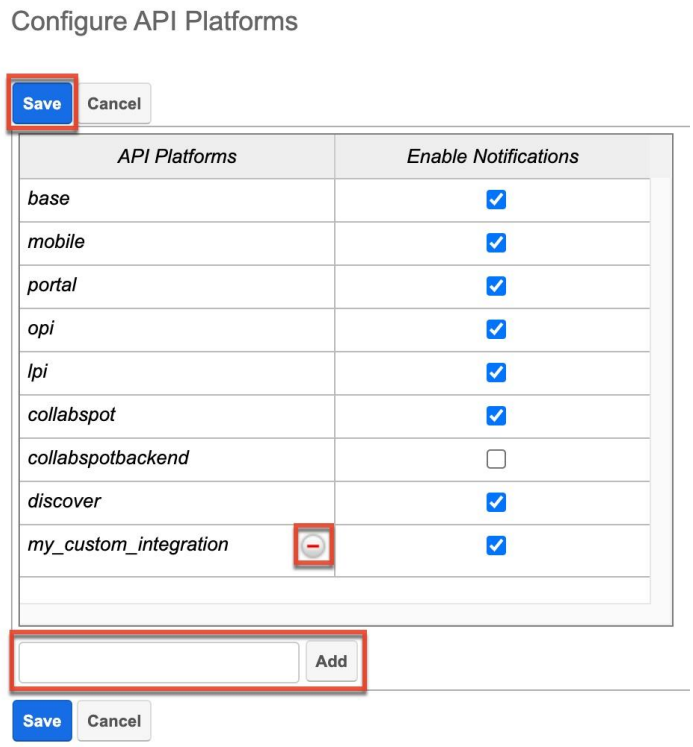
Developers use the platform parameter to distinguish their custom platform from other clients when using the Sugar API. For example, when a user accesses Sugar

via the desktop client and the mobile client simultaneously without being logged out of either, it is because the API recognizes that they are different platforms due to their unique platform identifiers. The platform identifier makes it easy for a Sugar administrator to configure which API platforms are allowed to access their instance via Admin > Configure API Platforms. In addition, you can enable or disable the "Enable Notifications" checkbox next to each platform to specify whether notifications should be sent to users for record changes applied by that platform. See the Getting Started page for details on receiving notifications for record assignments. To learn more about platform identifiers, please refer to the Dev Blog in SugarClub.

The API Platforms panel is a list of client IDs that have been given permission to interact with your Sugar instance and the checkbox indicating whether or not notifications will be sent to users for the platform's actions. The panel automatically displays some standard platform identifiers required by every Sugar instance. The stock API platforms listed in the following table cannot be removed and must not be reused as platform identifiers for a custom integration:

API Platform Identifier	**Platform/Client**
base	Sugar desktop client (default platform)
mobile	Sugar Mobile app
portal	Sugar Portal (Sell, Serve)
opi	Sugar Plug-in for Microsoft Outlook 2.x
lpi	Sugar Plug-in for IBM Notes
collabspot	Sugar Connect
collabspotbackend	Sugar Connect
discover	Sugar Discover
sugarlambda	SugarLive
kiosk	Sugar Self-Service Center

To allow a new integration for your Sugar instance, find the package's platform parameter, enter it in the text box below the API Platforms panel, and then click "Add". You may need to ask your developer to check the .custom/clients/platforms.php file for this information. Once added, "Enable Notifications" is turned on by default but can be disabled using the checkbox if you do not want users to receive assignment notifications triggered by that platform. To remove any custom API platforms from the list, click the Remove icon next to the API platform identifier that you wish to remove. Upon removing the platform, all integrations that relied upon it will stop working.



Alternatively, developers may choose to create a module loadable package to add custom identifier(s) via Sugar's Module Loader tool. To remove platform identifiers that were added via Module Loader, simply uninstall the package. More information on adding platform identifiers via Module Loader can be found on the Dev Blog in SugarClub and the Platforms documentation in the Developer Guide.

Dropdown Editor

The Dropdown Editor allows administrators to view, modify, and create dropdown lists which can be added as fields in Sugar. Since dropdown lists are not module-specific, they are stored and managed through the Dropdown Editor. Dropdown lists can only be associated with dropdown, multiselect, and radio-type fields via Admin > Studio. For more information on associating dropdown lists to the different field types, please refer to the Studio documentation.

Some dropdown fields (e.g., Status) are used to group tile views in Sugar, and the columns displayed in the tile view's header are determined by the values of that field. So, modifying the values in a dropdown list, such as changing the display label, will automatically update the column header values in tile view as well. But please note that adding a new value in the dropdown list will not automatically add it as a new column header in tile view. Once the new dropdown value has been added, you will need to navigate to Tile View Settings and click "Save" in order to push the new value as a column header in tile view. If you do not wish to add the

new dropdown value as a column header, you can move the value from the Available Values column to the Hidden Values column in Tile View Settings.

You can restrict which dropdown values are available to users based on their roles. For more information about role-based visibility, please refer to the Editing Role-Based Availability section of this page.

Certain dropdown lists cannot be edited via the Dropdown editor as they are controlled by a separate area (e.g., Contract Types, Releases, etc.) of the Admin page. These include dropdown lists for the Forecasting, Bug Tracker, Contracts, and Products and Quotes modules. Please refer to the appropriate sections of the Administration Guide for more information regarding the fields and how they can be edited.

Adding Dropdown Lists

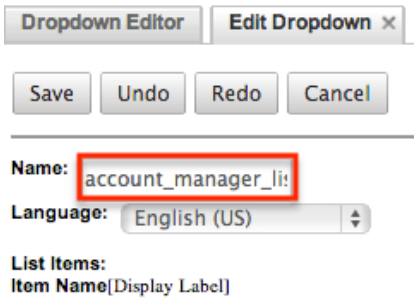
Dropdown lists can be created at any time and added to a Dropdown type field via Studio. When creating a list, please keep in mind that this list is not module-specific, so be sure to properly name your list and any dropdown options to avoid any confusion in the future.

If desired, you can restrict which dropdown values are available to users based on their roles. For more information about role-based visibility, please refer to the Editing Role-Based Availability section of this page.

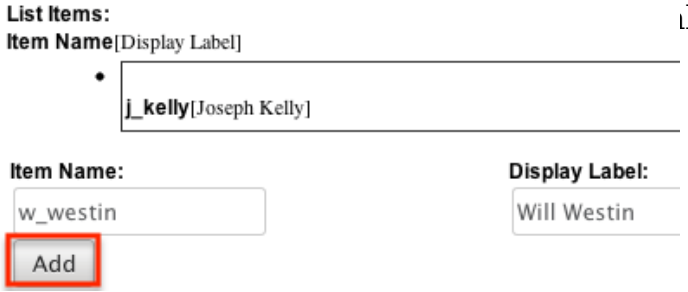
Use the following steps to create a dropdown list via Dropdown Editor:

1. Navigate to Admin > Dropdown Editor.
2. Click the Add Dropdown button, which is located above the list of existing dropdown lists.


3. Enter a name for your dropdown list in the Name field (e.g., "account_manager_list").
    - **Note:** The name must be alphanumeric and use the underscore character for spaces.

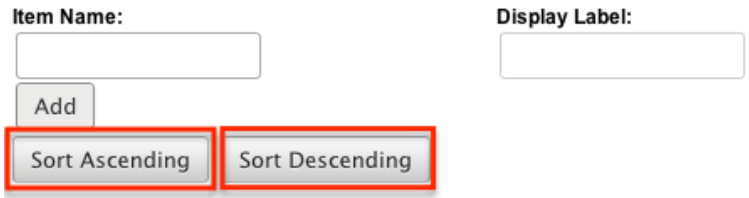


4. To create the items that will appear in your dropdown list, enter an "Item Name" and a "Display Label". Click "Add" once you have populated both fields to add the value to the dropdown list.
    - The item name is the backend system name for the list item and must be alphanumeric. An underscore or a period can be used for the item name.
    - The display label defines what will be displayed in the actual dropdown. Please note that there are no character restrictions when entering the display label. Click "Add" once you have

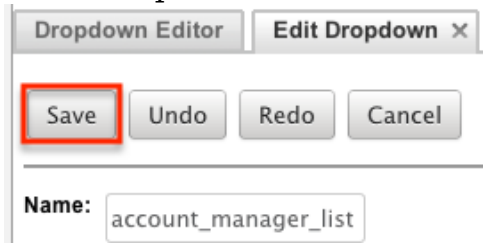


lue to the dropdown list.

5. Once all values have been added to your dropdown list, you can click one of the sort options to rearrange the values as desired. Lists can be sorted alphabetically in ascending or descending order based on the display label. You can also sort the list manually by dragging and dropping the values up-and-down the list.

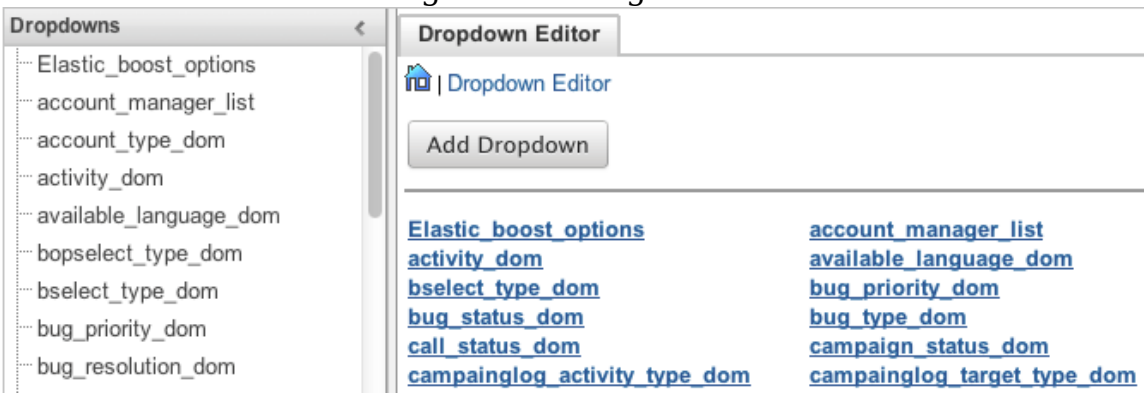


6. Click "Save" at the top of the screen to complete and add your dropdown list. You will be directed back to the main dropdown editor page once the save completes.

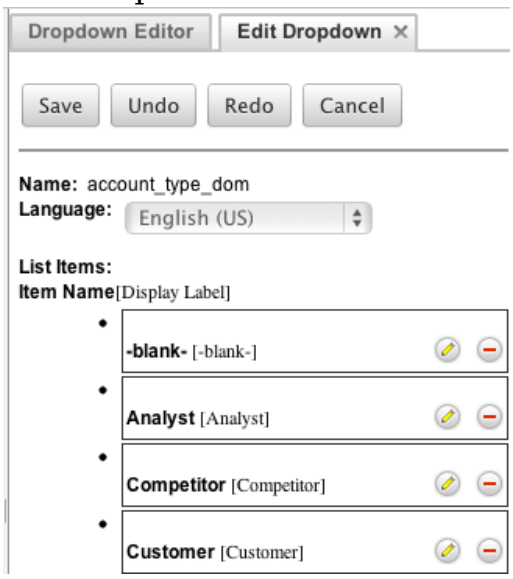


Viewing Dropdown Lists

The Dropdown Editor displays all existing dropdown lists in two separate sections (Dropdowns list, Dropdown Editor) on the page. The Dropdowns list to the left of the page displays the dropdown lists in alphabetical order. The Dropdown Editor tab displays the dropdown lists in columns and allows you to view more of the lists at once instead of scrolling down a single list.



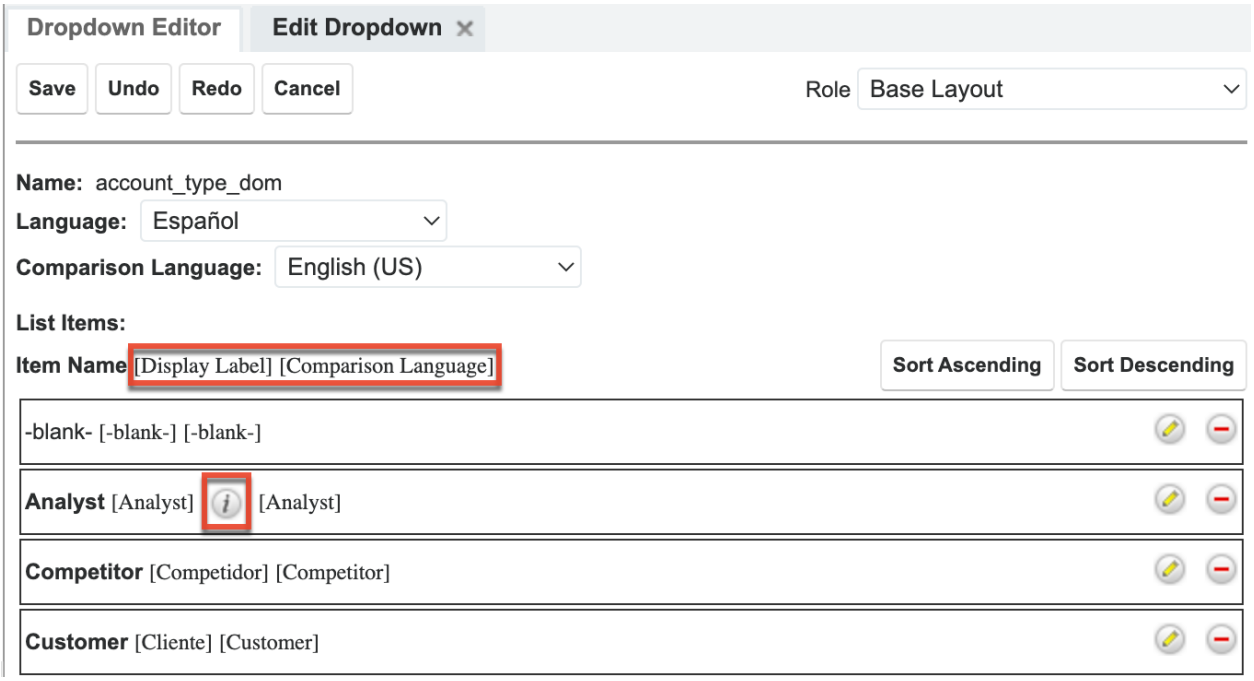
Once you locate the dropdown list you are looking for, click the list's name to open the Edit Dropdown tab to view and edit the list. The Edit Dropdown tab displays the name, the set language for the list, list values, and the item name. The list will be ordered as they appear in the dropdown list when added as a field to a layout. You can reorder the list if you wish by dragging and dropping the items into the desired positions.



Localizing Dropdown List Values

If your organization uses Sugar in languages other than English, Sugar can display translated dropdown lists to localize the language. For example, Sugar will display

Spanish dropdown items when a user is logged into Sugar in Spanish. You must provide the translations for each language by specifying display labels for each dropdown item. First, finalize your list's items by adding or removing items; the item names (a.k.a. database values) and order of items will be consistent across all languages. Choose the desired language to edit in the Language dropdown above the list. If the chosen language is different than the system default language, a Comparison Language dropdown will appear below the Language dropdown. Select a comparison language to easily compare labels in two different languages (e.g., Spanish and the system default language of English). The display label is displayed on the left and the comparison language label is displayed on the right. Items that are the same in both languages will have an i icon (highlighted in red in the image below), indicating that there may be an error in translation since the label is the same for both languages. Click the pencil icon for each item and enter a translated display label. You can only edit the display label, not the comparison language label in this edit mode. When all labels have been translated, click "Save" to preserve your changes. After saving, you will be redirected to the Dropdown Editor screen.



Editing Dropdown Lists

Dropdown lists can easily be modified via the Dropdown Editor by selecting the specific dropdown list which opens the edit layout. You can reorder the items in the list, add new values, remove unnecessary values, change the display label for a value, or change the display label language.

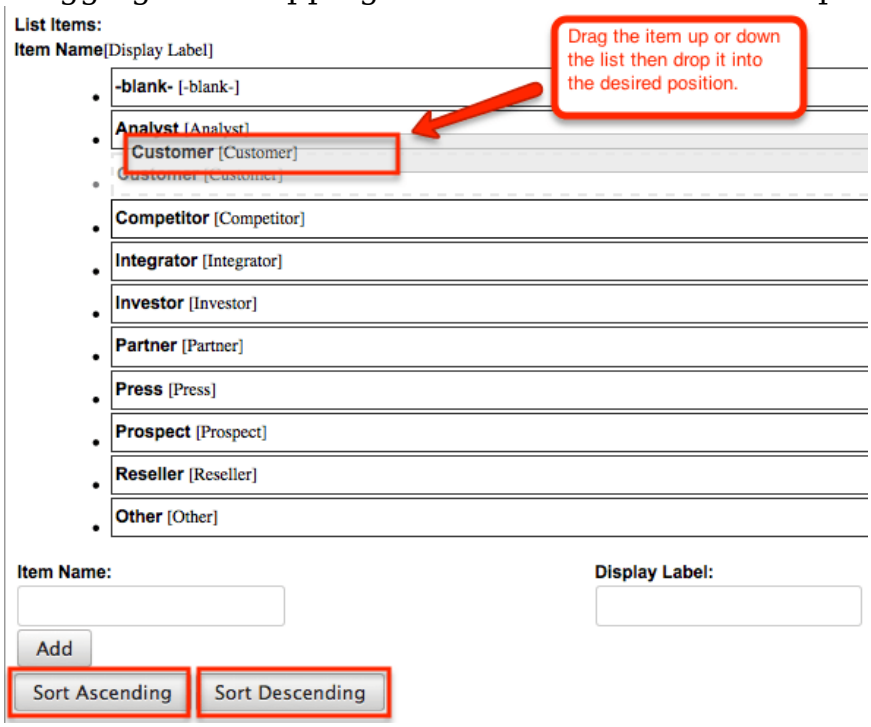
Some dropdown fields (e.g., Status) are used to group tile views in Sugar, and the columns displayed in the tile view's header are determined by the values of that field. So, modifying the values in a dropdown list, such as changing the display

label, will automatically update the column header values in tile view as well. But please note that adding a new value in the dropdown list will not automatically add it as a new column header in tile view. Once the new dropdown value has been added, you will need to navigate to Tile View Settings and click "Save" in order to push the new value as a column header in tile view. If you do not wish to add the new dropdown value as a column header, you can move the value from the Available Values column to the Hidden Values column in Tile View Settings.

If desired, you can restrict which dropdown values are available to users based on their roles. For more information about role-based visibility, please refer to the Editing Role-Based Availability section of this page.

Please note that the name of the dropdown list cannot be changed once created. Also, dropdown lists cannot be deleted since they can span multiple modules in Sugar and cause important data to be lost if removed in error. Once the necessary modifications have been made, click "Save" on the upper right to preserve the changes made.

To sort the list alphabetically, you can simply click the Sort Ascending or Sort Descending button on the bottom left of the tab view. Please note that the sorting is based on the display label. You can also reorder the items in your list, by dragging and dropping the items into the desired position.

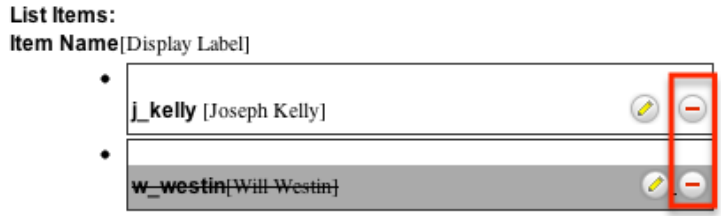


To add a new value, enter an item name and corresponding display label below the list of existing values then click "Add". Please note that the item name is the back-end system name and must be alphanumeric without any special characters other than an underscore or a period. The text in the display label defines how the value

will be displayed in the dropdown list when viewed in the user interface. Please note that there is no character restriction for the display label.



To remove a value from the list, click the Minus icon to the far right of the item row. Once deleted, the item will show a strikethrough and will be removed from the list once saved.



The item name of a dropdown value cannot be edited, but you can update the display label via the Dropdown Editor. Simply locate the value in the list then click the Pencil icon to the far right of the item row. Enter the new value into the open text box then click anywhere on the page to close the edit.

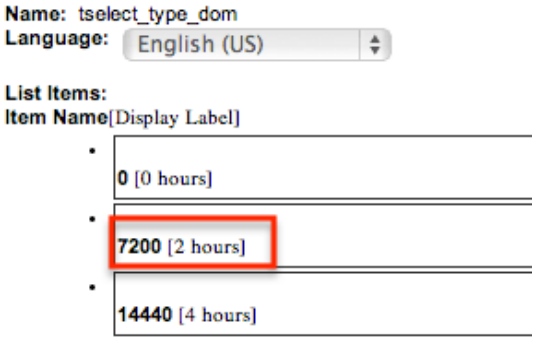


Editing Time Intervals

The "After Time Elapsed" workflow triggers after a specified period of time has elapsed from when a record save occurs in Sugar. For more information on "After Time Elapsed" workflows, please refer to the Workflow Management documentation. When creating the conditions for the workflow, you have the option to specify the time interval (e.g., 0 hours, 4 hours, 1 day, 1 week, etc.) used by the system to execute the workflow. The available time interval values can easily be modified via the Dropdown Editor.

The Dropdown Editor contains the "tselect_time_dom" list, which allows administrators to configure the time intervals used for time elapsed workflows. To

add new time intervals to the dropdown list, simply enter the "Item Name" and "Display Label", keeping in mind that the item name must display the number of seconds corresponding to the new time interval. The display label value should have the time as it relates to minutes, hours, days, etc. For example, if you are adding 2 hours to the time interval list, the item name value will be "7200" and the display label will show "2 hours".

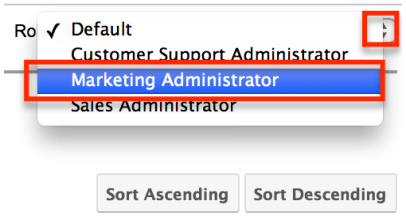


Editing Role-Based Availability

You can restrict which options are available for a user to select when he or she is editing records based on the user's role. When editing a particular dropdown list, the Roles dropdown appearing on the top right contains all existing roles in the Sugar application. The Default role-list allows admins to add, remove, or reorder options within a dropdown list. By default, none of the other Sugar roles have customized lists, so changes made to the Default role-list will automatically be copied to the other role-lists upon save. This means that as long as no role-lists are customized here, all users will continue to see the dropdown options and order matching the Default role-list.

Note: It is recommended to assign each user to a maximum of one role. Users belonging to multiple roles which each have customized role-views may experience unexpected behavior when using record views. For more information about roles, please refer to the Role Management documentation.

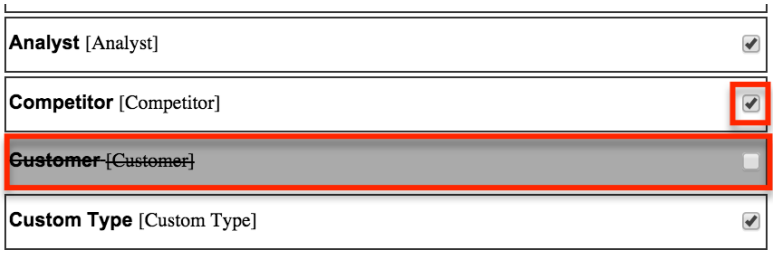
If you wish to restrict certain roles to use a modified list of options when editing records, select the desired role from the Roles dropdown to make changes specific to that role (e.g., Marketing Administrator).



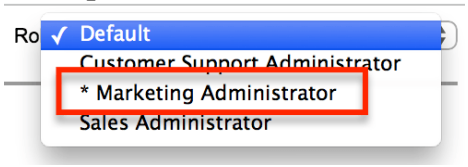
When viewing a Sugar role's role-list (e.g., Marketing Administrator), you have the

option to disable, enable, or reorder the existing options. Options cannot be added or deleted via any role-list except "Default". Drag and drop an option in order to change its position in the role-list's options list. To disable an option, deselect the checkbox in the option's row. Doing so will prevent the option from appearing in the dropdown when a user belonging to this role is editing or creating a record. Once an option is disabled, it will appear greyed out with a strike-through. When the desired changes have been made, click "Save & Deploy".

Note: Each role's role-list must have at least one enabled option.



Once you have saved and deployed a modification to a role-list, it is considered customized and will display an asterisk (*) next to the role's name in the Roles dropdown. Reordering options on the Default role-list will no longer have any effect on customized role-lists. However, adding an option, deleting an option, or changing an option's display label on the Default role-list will add, remove, or alter the option for all role-lists including customized role-lists.



Note: A user who is restricted by their role from a value in a list will not be able to select that value when editing a record, but they will see the value on the record view if a different user has set it.

Note: Role-based customizations to dropdown lists are included when exporting customizations from Studio. For more information, please refer to the Studio and Module Loader documentation.

Relate Fields Denormalization

Relate Fields Denormalization is a Sugar administration tool that can be used by customers with very large database tables to optimize the database structure for faster sorting and data load of relate-type field values on list view pages. The denormalization process will copy the values of stock Sugar relate fields from their own tables into a text field (e.g., denorm_field_name) in the table of the related module (i.e., the parent table) via cron job. The new text field is then used for

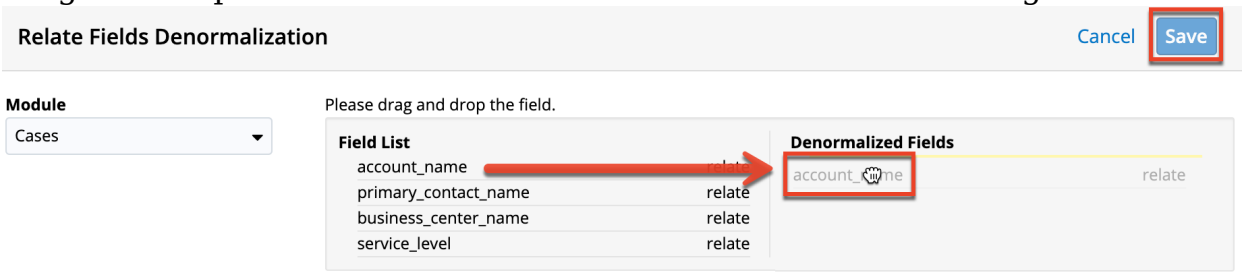
sorting in list views. Then, a logic hook will continue to monitor any value changes made to the relate field, the source field that the relate field points to, and to the linked record ID. The logic hook will also react to changes made to the relationship.

As an example, you may want to denormalize the Account Name relate field for the Opportunities module so that when you sort by Account Name in the Opportunities list view, Sugar will query its search against the field value in the Opportunities table instead of against the JOIN table for accounts_opportunities.

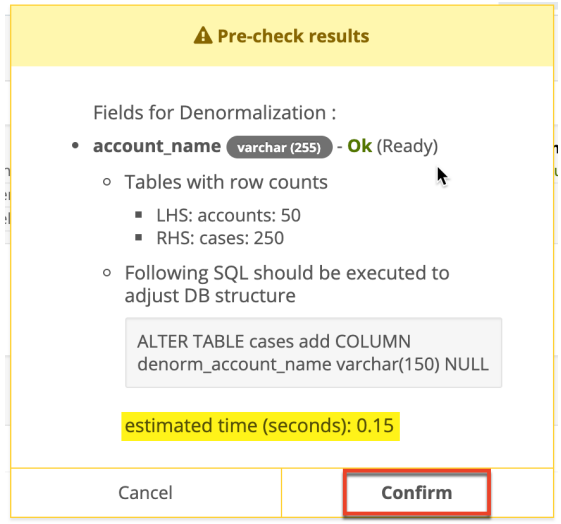
Note: While denormalizing the data will speed up sorting in list views, it may increase the time it takes to update records in the denormalized module (1-5% degradation in the worst case).

To denormalize a relate field in your instance, use the following steps:

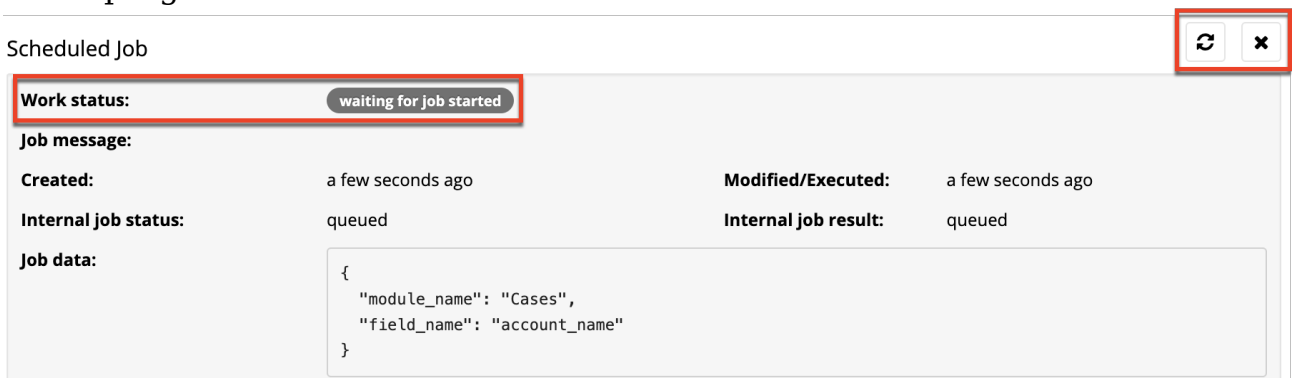
1. Navigate to Admin > Relate Fields Denormalization, located in the Developer Tools section of the page.
2. Choose the module that contains the relate field you would like to denormalize. Each module's name will display a number that indicates how many relate fields are eligible for denormalization in that module. The following criteria must be met in order for a field to be eligible for field denormalization:
    - The field must be a stock relate-type field. Custom fields cannot be denormalized.
    - The field must be configured as "Available" in the list view layout for the module. For more information on list view layouts, refer to the Studio documentation.
    - The relate field must be sortable in the list view. This is not an admin configurable option, so we recommend confirming this before continuing.
3. Click on the field name that you want to denormalize under "Field List" and drag and drop it to the "Denormalized Fields" section on the right.



4. Click Save.
5. Review the Pre-check Results window and take note of the estimated time to complete, which could take up to an hour depending on the table sizes. Click "Confirm" to continue. Alternatively, you may choose to copy the SQL shown in the window, click "Cancel", and execute the command manually if you would prefer not to initiate the cron job.



After confirming, the process will continue in the background and show its progress in the Work Status field. You may click on the refresh icon to update the latest progress until it is "Done".



You may click on the Remove (x) icon to remove your scheduled denormalization job from the job queue, but as best practice, it is recommended to allow an in-process job to fully complete without stopping it. Denormalization changes that have been applied to a field can be reversed by moving it from the "Denormalized Fields" side back to "Field List" and clicking "Save". Reversing a denormalization action will remove the related logic hook and Sugar will resume using the regular field, but the denormalized field will still exist in the database.

Studio

Overview

Studio enables administrators to modify Sugar's fields, page layouts, and more to fit your organization's needs and terminology. Only users with administrator or developer access can make changes via Admin > Studio.

Scope

This documentation covers how to use Studio, including the various actions and options available within Studio. The Studio documentation contains the following pages:

- Studio (current page)
- Fields
- Action Buttons
- Relationships
- Layouts
- Mobile Layouts
- Subpanels
- Sugar Logic

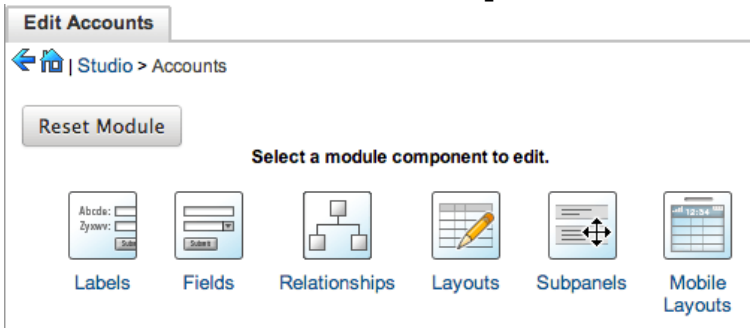
Additionally, the User Interface page in the Application Guide contains documentation for the user-facing elements that are configured in Studio, and the Knowledge Base contains several business use-case tutorials and best practices to employ when using Studio.

Navigation

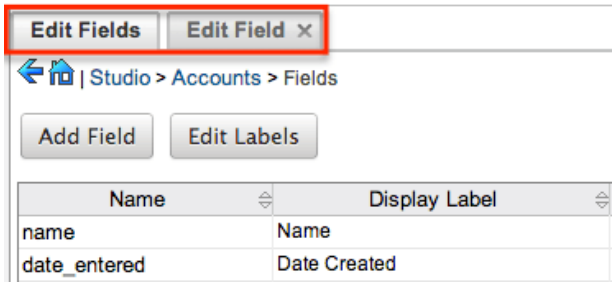
Studio's navigation is different than other modules within Sugar. Studio is divided into three main sections: the main panel, the Modules panel, and a footer.

Main Panel

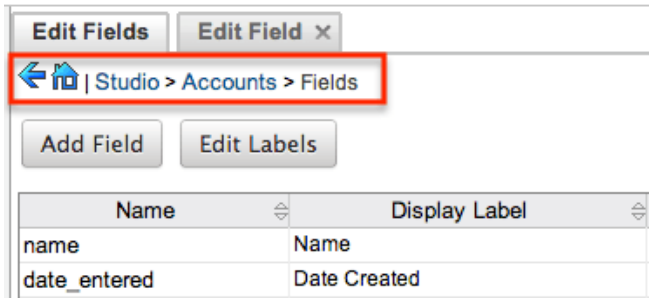
The main panel in Studio is where you can access the modules, add fields, configure layouts, and perform other in-app customizations. It displays to the right of the Modules panel and houses the various components (e.g., fields, layouts, subpanels, etc.) of the module. As you select the different components, they will load in new tabs on the main panel.



For example, if you select "Fields" on the main panel, the list of available fields along with the options to configure will appear under the Edit Fields tab. Additional tabs that appear as you configure the module can be closed by clicking the "X" within the tab.



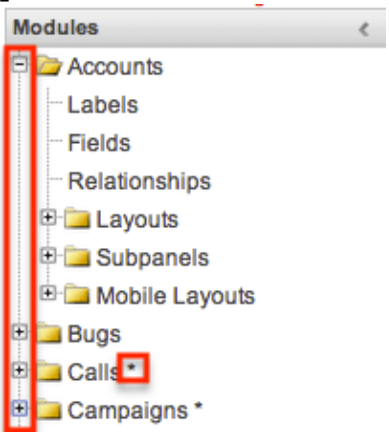
The main panel also includes a breadcrumb bar showing your current location in Studio. You can navigate to a specific section by clicking the link within the breadcrumb bar.



To go back to the previous page that you were viewing, click the Left arrow on the breadcrumb bar. Clicking the Home icon to the right of the arrow will navigate you back to the Developer Tools home page.

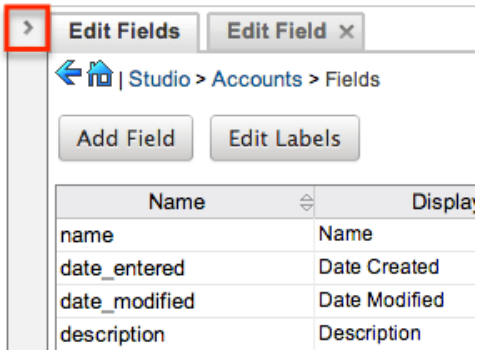
Modules Panel

The Modules panel is located to the left of the page and displays a list of existing stock and custom modules that are editable through Studio. Please note that all modules (e.g., Campaigns, etc.) using the Legacy user interface will display an asterisk (*) to the right of the module's name in Studio. The associated fields, labels, layouts, subpanels, etc. are grouped within each module. Click the plus sign (+) preceding the module name to expand the module tree and display the associated items (e.g., fields, layouts, etc.). Simply select an item in the Modules panel to load the view in the main panel to the right.



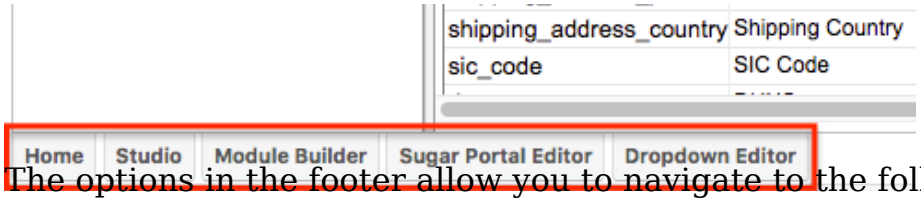
Please note that if you do not see the Modules panel, it may be collapsed. Locate

the gray bar to the left of the main panel and click the Right arrow to expand the Modules panel.



Footer

The footer is located at the bottom of Studio pages and displays buttons that enable you to navigate to the different areas (e.g., Dropdown Editor) of Developer Tools.

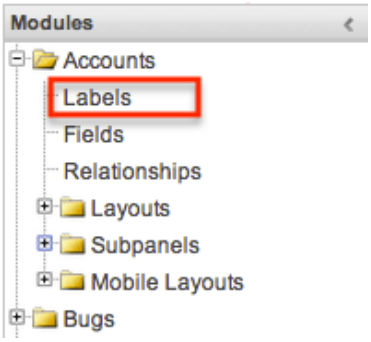


The options in the footer allow you to navigate to the following locations:

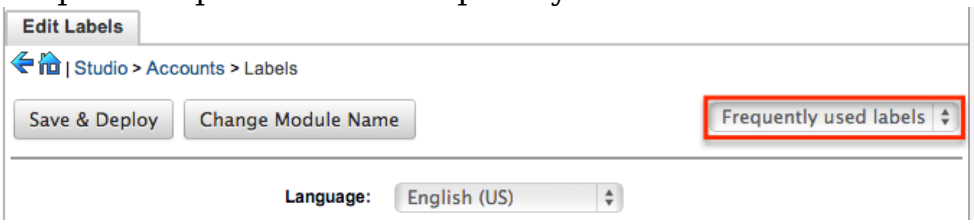
Menu Item	Description
Home	Navigates to the home page of the Developer Tools
Studio	Navigates to the home page of Studio
Module Builder	Opens Module Builder to create or edit modules
Sugar Portal Editor	Opens the Sugar Portal Editor to configure the Portal
Dropdown Editor	Opens the Dropdown Editor to modify dropdown options

Editing Labels

Labels are used throughout Sugar to designate field headers, subpanel titles, error messages, and more. To modify the labels for a module, select "Labels" from the Modules panel under the desired module (e.g., Accounts). Please note that HTML tags are not supported in labels. If you need to define labels for more than one language profile in Sugar, refer to the Editing Labels for Localized Languages section.



The Edit Labels tab will open in the main panel displaying all the labels associated with the module. If the label you want to change cannot be found, change the filter dropdown option from "Frequently used labels" to "All Labels".

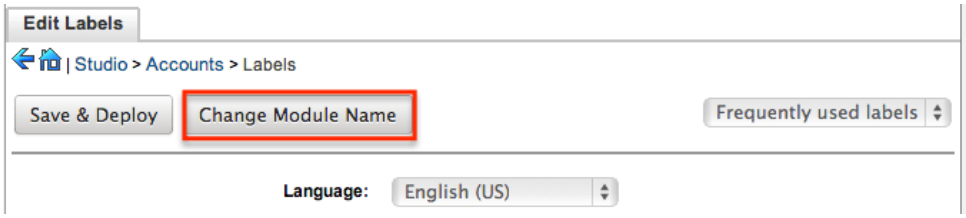


Modify the labels accordingly per the selected language and click "Save and Deploy" when complete. This will save your changes and instantly deploy them to your Sugar instance.



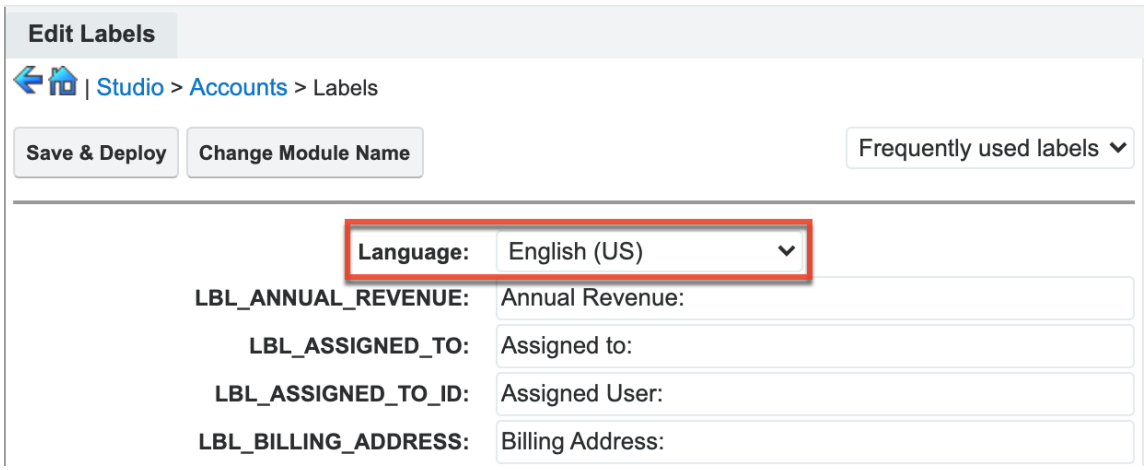
To change the name of the module, click "Change Module Name" to the right of the Save & Deploy button.

This will direct you to the Rename Modules page where you can change the labels for the module accordingly. For more information on how to rename modules, please refer to the Rename Modules section of the Developer Tools documentation.

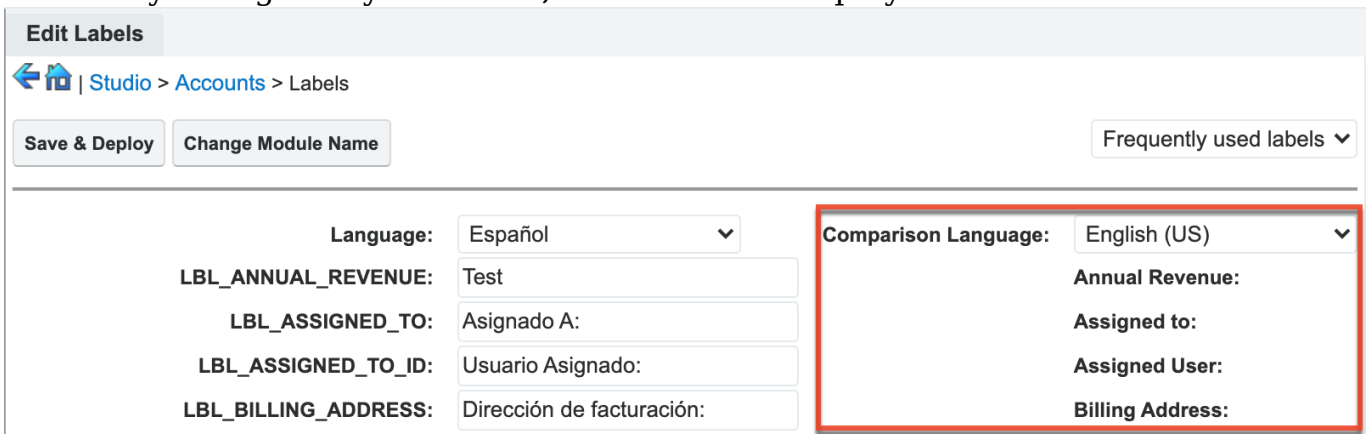


Editing Labels for Localized Languages

For instances where localization is needed, use the Language dropdown to select a language other than the system default.

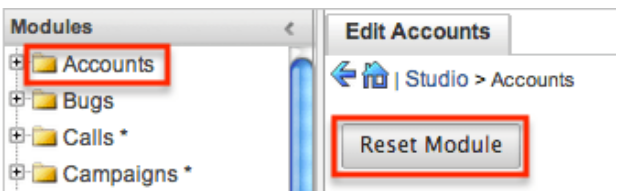


When a non-default language is selected, the system's default language and associated labels will appear on the right side of the screen in the Comparison Language column. The Comparison Language dropdown can then be changed as needed. The labels should be updated in the left column and are read-only in the right column. Please note that some labels may appear with a help button indicating that "This label may not be translated". Once you have made the necessary changes to your labels, click "Save & Deploy".



Resetting Modules

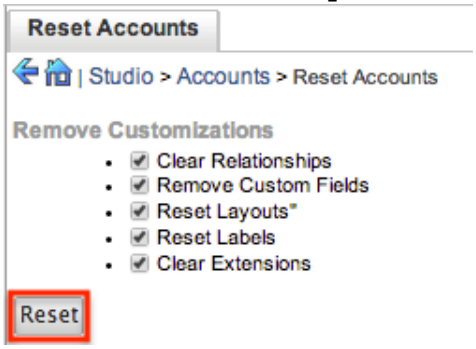
Sugar comes with the ability to reset an entire module back to the default settings. You can also pick and choose which customizations you would like to remove. To reset a module, select the module from the Modules Panel and click "Reset Module" in the Main Panel.



The next screen will give you the following options to remove specific customizations:

- **Clear Relationships**: Deletes all relationships added via Studio.
- **Remove Custom Fields**: Deletes all fields added via Studio.
- **Reset Layouts**: Resets the layouts back to the out-of-the-box configuration. You will need to click "Save & Deploy" on edit view and detail view layouts to be able to access the layouts.
- **Reset Labels**: Deletes the custom language files located in ./custom/modules/{Module Name}/language/ which sets the labels for the module.
- **Clear Extensions**: Deletes any customizations made to stock or custom fields and sets them back to the default. Deletes the module folder located in ./custom/Extension/modules/.

Select the desired options and click "Reset" to execute the reset.



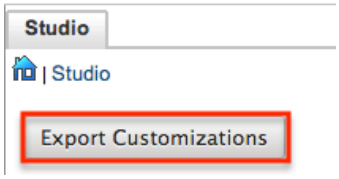
Exporting Customizations

Sugar allows you to export a module's customized layouts, fields, and field labels from one Sugar instance to import into another Sugar instance. To do this, you will need to package the customizations in Studio, export it to your local machine, and then upload it into another Sugar instance. The system applies the customizations to the appropriate layouts, fields, and field labels.

Note: Safari users will need to change the default browser setting to disable automatic unzipping of files to ensure that exported packages install properly in Sugar. Navigate to Safari > Preferences > General and uncheck "Open 'safe' files after downloading" to disable the setting.

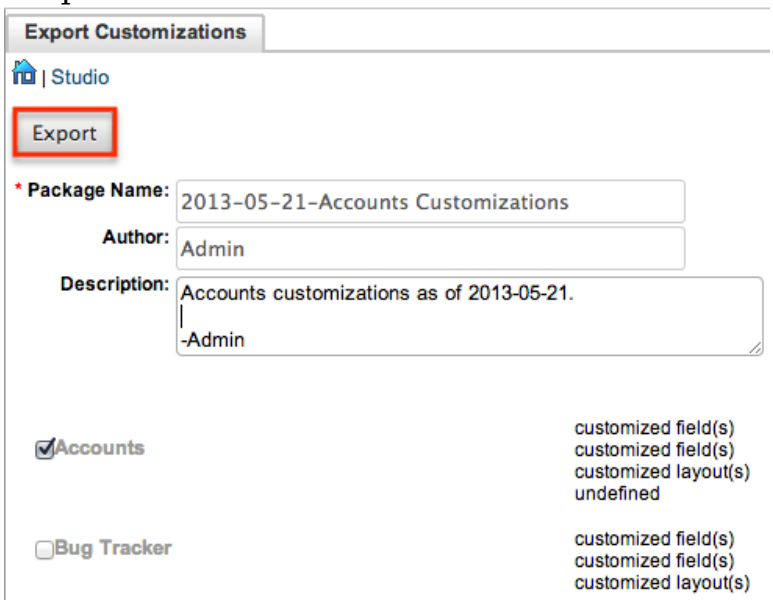
Use the following steps to export your customizations via Studio:

1. From the Studio home page, select "Export Customizations" in the main panel.



2. Enter appropriate values in the following fields. All required fields are marked with a red asterisk and must be completed prior to saving.

- **Package Name**: Enter the name of the package to be displayed during installation.
- **Author**: Enter the name of the author creating the package to be displayed during installation.
- **Description**: Enter a description of the export to be displayed during installation.
- Select at least one module to include in the customization export and click "Export".



- The customizations are saved to your computer in a zip file that can be loaded into a different instance of Sugar via the module loader. For more information regarding installing packages, please refer to the Module Loader documentation.

Note: Sugar Sell Essentials customers do not have the ability to upload custom file packages to Sugar using Module Loader.

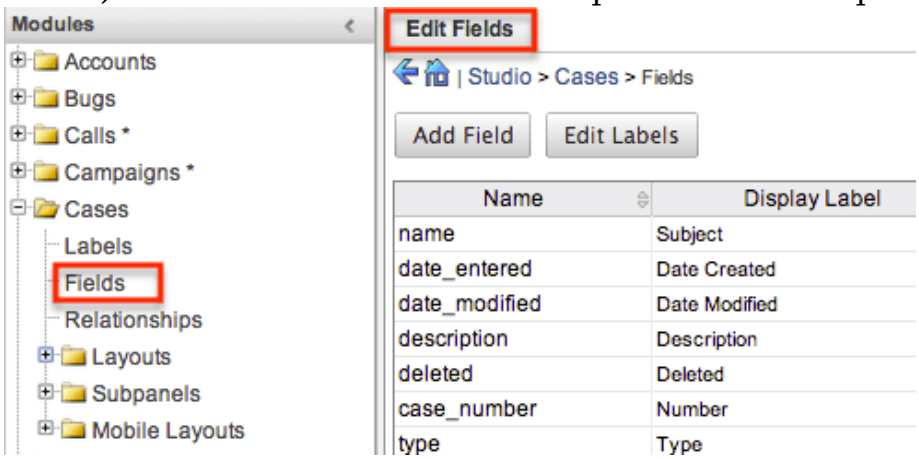
Exporting Role-Based and Dropdown-Field-Based Customizations

If you have created role-based or dropdown-field-based custom record views or custom dropdown lists, these customizations will be included in your exported package. When installing the package on another Sugar instance, you will be given the opportunity to map role-based customizations from the package's roles to the destination instance's roles. Please refer to the Module Loader documentation for more information.

Fields

Overview

The Fields section in Studio allows administrators to create new fields for stock and custom modules as well as update existing fields. To access the Fields section in Studio, select "Fields" from the Modules panel under the desired module (e.g., Cases) and the Edit Fields tab will open in the main panel.



Field Types

Studio comes out-of-the-box with many different types of fields, which can be created in Sugar. Please note that the options and properties available when configuring the field varies for each data type.

The following data types are available in Studio:

Data Type	Description
ActionButton	Creates buttons in record view for shortcuts to specific actions (e.g., create email). Please refer to the Action Buttons documentation for information on configuring Action Button fields.
Address	Creates fields for street, city, postal code, state, and country. **Note**: Custom address fields cannot be grouped together like stock address fields (e.g., billing address).
AutoIncrement	Creates a field that automatically populates a number, increasing

	subsequent records' field values by one, on the first save of a record. As an integer-type field, AutoIncrement is limited at the database level to values up through 2147483647. **Note**: This field cannot be edited.
Checkbox	Creates a checkbox for data fields with a Yes/No action.
Currency	Creates a field to enter a currency value. The system automatically creates a dropdown of the currency type if the field does not already exist in that module.
Date	Creates a field to enter a date. Includes a button for a calendar popup.
DateTime	Creates a field to enter the date and time. Includes a Calendar icon button to choose a date via the popup calendar, as well as a dropdown list to select the time.
Decimal	Creates a field to hold a number rounded to a specified decimal precision. Sugar stores the exact representation of the number in the database (e.g., For a precision of 2: 1.236 is stored as 1.24).
Dropdown	Creates a field where you can associate a dropdown list of values.
Encrypt	Creates a field for sensitive information, such as social security numbers, whose value is to be encrypted in the Sugar database. The value is encrypted using the Blowfish algorithm prior to being captured in the database. It is decrypted prior to display in the user interface to users. The first time an encrypted field is enabled, a unique key is automatically generated and stored on the filesystem in the file ./custom/blowfish/encrypt_field.php. This generated key is used for all subsequent field-level encryption and

	decryption operations.
Flex Relate	Creates a dropdown list from which you can relate a single record from a variety of modules. See the Introduction to Relationships and Relate Fields article for an explanation of the differences between relate fields, flex relate fields, and relationships. **Note**: Only one Flex Relate-type field is allowed per module. Out of the box, the Flex Relate option is not available for the Accounts, Calls, Contracts, Meetings, Notes, and Tasks modules.
Float	Creates a field to hold a number rounded to a specified decimal precision. Sugar stores the value differently based on the database platform Sugar is running on.
HTML	Creates static HTML-formatted text to display in record views.
Iframe	Creates a field to store or generate a URL to display an iframe in record views. **Note**: To load content from an external website in the iframe field, administrators will need to add the URL (e.g., https://www.example.com) as a trusted site via Admin > Content Security Policy Settings.
Image	Creates an image field to upload an image to display on a record.
Integer	Creates a field to specify positive or negative numbers with no decimal places. **Note**: Integer fields are limited at the database level to values up through 2147483647.
MultiSelect	Creates a dropdown list of values where multiple values can be selected at once.
Phone	Creates a field to enter a phone number.

	If the Enable Click-to-Call setting is turned on in Admin > System Settings, phone number fields are displayed as links that can be opened to dial them using the default computer telephony integration software on the user's computer. For Sugar Sell or Serve users logged in to Amazon Connect, calls are dialed in SugarLive.
Radio	Creates a radio button for a user to select one value from a dropdown list.
Relate	Creates a field to associate a record with another module's record as a one-way relationship. You can add multiple Relate fields to a module. **Note**: Relate fields and custom relationships are independent of each other. Changes made to either one are not reflected in the other. Relate fields can be added to a report, but any data on the related record cannot be accessed in the report. To access related record data in a report you will need to create a custom relationship. See the Introduction to Relationships and Relate Fields article for an explanation of the differences between relate fields and relationships.
Relationship	This field type cannot be used when creating a field in Studio, but it is automatically created for one-to-one and many-to-one relationships that add a field representing the relationship in the module. For example, the Account Name field on the Contacts module has a type of "Relationship" because it is based on a many-to-one relationship between contacts and accounts. See the Introduction to Relationships and Relate Fields article for an explanation of the

	differences between relate fields and relationships.
TextArea	Creates an open text area field for multiple lines of text.
TextField	Creates a field for a single line of text.
URL	Creates a field to store or generate a URL and display as a link.

Note: Name-type and ID-type fields cannot be created via Studio. Each stock module and module created via Module Builder will have a Name-type and ID-type field. The Name-type field is automatically displayed in the header of each record view (for Sidecar modules) while the ID field is not available in Studio but is a part of the unique URL for each record.

Field Options

Fields provide ways to store different data types in Sugar. While many fields come with Sugar by default, there can be instances where your organization needs to create custom fields to store additional data.

Each field, depending on the data type, will have different properties and options available when configuring the field via Studio. Please note that some properties can exist across all data types and some are unique to only a few types.

The following properties and options are available for fields in Studio:

Allow Imports

Applies to: Address, Checkbox, Currency, Date, Datetime, Decimal, Encrypt, DropDown, Float, HTML, IFrame, Integer, MultiSelect, Flex Relate, Phone, Radio, Relate, TextArea, URL, TextField

Select one of the following options to determine the field's behavior when importing records:

- **Yes**: This field is available to be mapped to when performing an import.
- **No**: This field is not available to be mapped to when performing an import. It will be omitted from the Module Field dropdown list.
- **Required**: This field is required to be mapped to when performing an import. It will have an asterisk (*) next to it in the Module Field dropdown list to indicate that it is required.

Audit

Applies to: Address, Checkbox, Currency, Date, Datetime, Decimal, Encrypt, DropDown, Float, IFrame, Image, Integer, MultiSelect, Phone, Radio, Relate, TextArea, URL, TextField

Select this checkbox to audit the field for changes made in Sugar.

- Users can view the changes made to audited fields via the View Audit Log option in the module's record view (for Sidecar modules) or detail view (for Legacy modules).
- Fields marked as "Audit" will generate update posts in the activity stream for Sidecar modules (e.g., Accounts, Contacts, etc.) whenever the field gets updated. For more information on activity streams, please refer to the Activity Streams documentation.

AutoIncrement Next Value

Applies to: AutoIncrement

This field allows you to set and view which value is the next to be applied to a record. As an integer-type field, AutoIncrement is limited at the database level to values up through 2147483647.

Boost Value

Applies to: Phone, TextArea, TextField, URL

Enter a boost value for the field to enhance the relevancy of the field for full-text search. The default boost value is 1.0 which indicates a neutral boost. To apply a positive boost, set the boost value higher than 1. To apply a negative boost, use values lower than 1. For example, a value of 1.35 will positively boost a field by 135%. But using a value of 0.60 will apply a negative boost. It is not necessary to perform a full system index when boost values are changed for fields.

Border

Applies to: Image

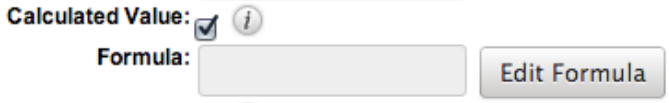
Select this checkbox to add a border around the image for this field.

Calculated Value

Applies to: Checkbox, Currency, Date, Datetime, Decimal, Encrypt, Float, Integer, Phone, TextArea, TextField

Select this checkbox to designate this field as a calculated field. This opens up the Formula option and disables the Default Value and Importable options. For more

information regarding entering a formula for a calculated value, please refer to the Formula option listed in this section. The result of the formula will be entered into the field for any new or modified records. When selecting this option, the field value cannot be modified by users.



Columns

Applies to: TextArea

Enter the number of columns to specify the width of a TextArea data type field.

Comment Text

Applies to: All data types except Flex Relate

Enter a comment or description about the field. The comment text is only viewable via Studio.

Default Value

Applies to: Address, AutoIncrement, Checkbox, Currency, Date, Datetime, Decimal, Encrypt, DropDown, Float, IFrame, Integer, MultiSelect, Phone, Radio, TextArea, URL, TextField

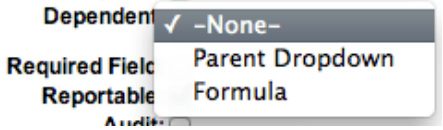
Specify or select a default value for this field when a record is created. Default values for the record are populated by default but can be modified by users.

Dependent

Applies to: All data types except ActionButton and Address

Select this option to designate this field as being dependent on a formula or a parent dropdown.

- For dropdown data type fields you can select "Parent Dropdown" or "Formula" for the dependency.



- Selecting "Parent Dropdown" will open the Parent Dropdown option as shown below. Selecting "Formula" will open the "Visible If" option to create

a dependency formula. For other field data types (e.g., Date), select the Dependent checkbox to open the Visible If option. For more information regarding entering a formula to make a dependent field visible, please refer to the Visible If option listed in this section.



Disable Format

Applies to: Integer

Select this checkbox to disable number formatting such as the thousands separator.

Display Label

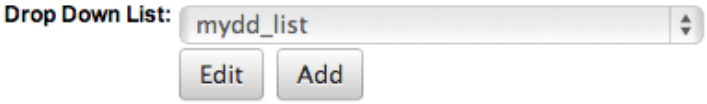
Applies to: All data type fields except Flex Relate. Flex Relate uses the Label Value option.

Enter a value to display as the field label and header in layouts. Normally defaults to the Field name entered when creating field. This value is also modifiable via the Labels section of Studio.

Drop Down List

Applies to: DropDown, MultiSelect, Radio

Select a list of values to associate to the field. Only values in the chosen list will be available for selection in the field. Click "Edit" to change the values for the currently selected list, or click "Add" to create a new list.



For more information on editing dropdown values via the Dropdown Editor, please refer to the Editing Dropdown Lists section of the Developer Tools documentation.

Duplicate Merge

Applies to: All data type fields except Image

Select one of the following options to determine the field's functionality when records are being merged:

- **Disabled**: Selected by default. The field will not appear on the Merge Duplicates screen.
- **Enabled**: The field will appear on the Merge Duplicates screen.
- **In Filter**: (Legacy/BWC modules only) The field will appear in the Merge Duplicates feature, and will also be available in the Find Duplicates feature.
- **Default Selected Filter**: (Legacy/BWC modules only) The field will be used for a filter condition by default in the Find Duplicates page, and will also appear in the Merge Duplicates feature.
- **Filter Only**: (Legacy/BWC modules only) The field will not appear in the Merge Duplicates feature but will be available in the Find Duplicates feature.

Field Name

Applies to: All data type fields

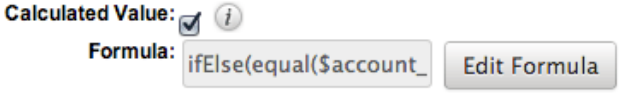
Enter the name of the field being created. Once a field has been created the field name cannot be changed.

- Field names can contain only alphanumeric characters as well as the underscore character.
- Custom fields added via Studio are automatically appended with "_c" to ensure the field does not conflict with a current or future stock field.

Formula

Applies to: Checkbox, Currency, Date, Datetime, Decimal, Encrypt, Float, Integer, Phone, TextArea, TextField when the Calculated Value option is selected.

Contains the current formula to return a calculated value. Click "Edit Formula" to launch the formula builder and change the formula. For more information on how to build a formula using the formula builder, please refer to the Using Sugar Logic documentation.



Full Text Searchable

Applies to: Phone, TextArea, TextField, URL

Specify whether or not the field should affect Global Search results.

- **Disabled**: Select "Disabled" if you do not want this field to be captured when the database is indexed for searches. Search indices collect the

values of searchable fields for evaluation by the Global Search.

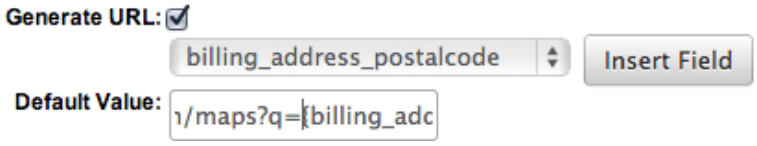
- **Searchable**: Select "Searchable" to include this field's value in search indexes.
    - Selecting "Searchable" will reveal the Boost value field, which allows you to set a relevance weight for searches.
      When a user's search query matches the value of a field with a higher boost level, the record will appear higher in the search results. For more information regarding boost values in Full-Text Search, please refer to the Search documentation in the Application Guide.

Note: For a list of searchable fields for each module for global search, please refer to the Search documentation in the Application Guide.

Generate URL

Applies to: IFrame, URL

Select this checkbox to allow variables from the current module to be placed into the Default Value option for creating dynamic URLs.



- This is useful for providing links or Iframes to internal systems such as an ERP or to external systems such as Google Maps.

- Select the desired field to add from the dropdown and click "Insert Field" to add the field to the Default Value. When selecting this option, the field value cannot be modified by users.

Height

Applies to: Image

Enter the number of pixels to vertically scale the image for this field. Enter only the Width or Height options to retain the aspect ratio of the image.

Help Text

Applies to: All data types

Enter basic instructions for populating this field. The text entered here will display below the field when creating or editing a record for modules using the Sidecar

user interface. For modules using the Legacy user interface, the help text will appear when users hover their mouse within the field in the Edit View layout.

HTML

Applies to: HTML

Enter static rich text with formatting or HTML code to display on a record. For more information on how to use the text editor please refer to the TinyMCE section of the User Interface documentation in the Application Guide.



IFrame Height

Applies to: IFrame

Enter the number of pixels for the height of the IFrame field. The width of the IFrame field is always the width of the field container.

Importable: Select one of the following options to determine the field's functionality when records are being imported:

- **Yes**: The field can be included in an import operation.
- **No**: The field cannot be included in an import.
- **Required**: A value for the field must be provided in any import.

Label Value

Applies to: Flex Relate

Enter a value to display as the field label and header in layouts. This value is also modifiable in the Modules panel under Labels. Defaults to "Flex Relate".

Make Visible for Calculations

Applies to: Checkbox, Currency, Date, Datetime, Decimal, Encrypt, DropDown, Float, Integer, MultiSelect, Phone, Radio, TextArea, URL, TextField

Select this checkbox to make the field available for use in the currentUserField() Sugar Logic function. For more information and an example use case, refer to the Calculated Field - Setting Field Conditions Based on User Attributes knowledge

base article.

Note: This field option is only available in the Users module.

Mass Update

Applies to: Checkbox, Date, Datetime, Decimal, DropDown, Encrypt, Float, IFrame, Integer, MultiSelect, Phone, Radio, Relate, Text, URL

Select this checkbox to add this field as an option to mass update.

Note: It is not possible to mass update a relate field based on a one-to-one relationship because doing so would invalidate the one-to-one relationship.

Max Size

Applies to: Address, Decimal, Float, IFrame, Integer, Phone, URL, TextField

Enter the maximum number of characters (or, for DB2 databases, the maximum number of bytes) allowed for this field. Defaults to 255.

Max Value

Applies to: Integer

Enter the highest value allowable for this field. If a user enters a higher value in the field than the specified value, a notification will appear upon save informing them of the set maximum value.

Note: Integer fields are limited at the database level to values up through 2147483647.

Min Value

Applies to: Integer

Enter the lowest value allowable for this field. If a user enters a value in the field that is lower than the specified value, a notification will appear upon save informing them of the set minimum value.

Module

Applies to: Relate

Select a module from the dropdown to relate to the current module. A module can relate back to itself, a good example of this would be a relate field on Contacts to

relate back to Contacts for a referred by field. This will allow users to select which contact record referred a different contact. The chosen module cannot be modified once the field is created.



Open Link In

Applies to: URL

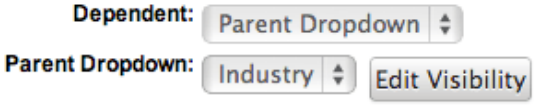
Select one of the following options to determine how a URL will open:

- **New Window**: Opens the URL in a new Tab or Window depending on your browser and settings.
- **Same Window**: Opens the URL in the same window as the record you are currently browsing.

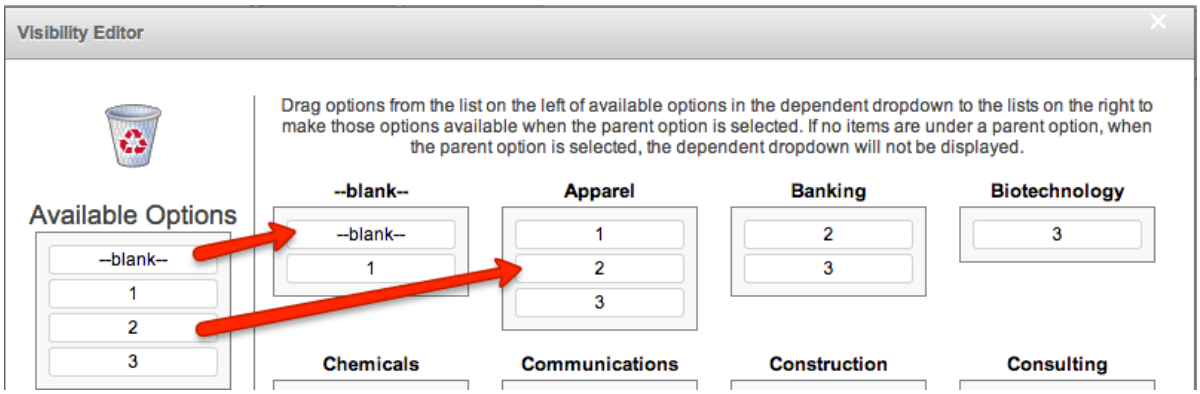
Parent Dropdown

Applies to: All data types except ActionButton and Address

When the Dependent option has "Parent Dropdown" selected, choose an option from the dropdown to specify the parent that controls the visibility of this dropdown field. The Parent Dropdown option is populated with the other dropdown data type fields in the current module.



Click "Edit Visibility" to specify which options are available from the current dropdown for each value of the parent dropdown. In the Visibility Editor window, drag values from the current dropdown list to the value sections of the parent dropdown. This will determine which options in the dropdown list are available when the parent dropdown is set to the specified value. In this example, if the parent dropdown is set to "Apparel", then the current dropdown will have options 1, 2, and 3 where if the parent dropdown is set to "Banking", then the current dropdown will only have options 2 and 3 available. If there are no available options for a parent dropdown value, then the dependent dropdown will not display. To remove an item from the list, simply click and drag the value to the Trash bin on the left. Once the values are set, click "Save" to preserve your changes.



Precision

Applies to: Decimal, Float

Enter a number to specify the number of digits to the right of the decimal point the value should be stored as in Sugar.

Read-Only Field

Applies to: HTML, TextArea

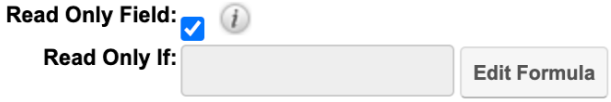
Select this checkbox to mark the field as read-only in Sugar. The user will not be able to enter a value for the field when editing the record.

Read-Only If

Applies to: HTML, TextArea when the Read-Only Field option is selected.

The "Read-Only If" option allows you to use Sugar Logic to define criteria that determine when the field should be read-only on the layout.

- If left blank, the field will always be read-only.
- To make it read-only conditionally, click "Edit Formula" to launch the formula builder. For more information on how to build a formula using the formula builder, please refer to the Using Sugar Logic documentation.



Reportable

Applies to: All data type fields except Encrypt, Flex Relate, HTML, IFrame, and Image

Select this checkbox to allow the field to be used in reports.

Required Field

Applies to: All data type fields except ActionButton, Checkbox, and HTML

Select this checkbox to mark the field as required in Sugar. The user will be required to enter a value for the field when saving the record.

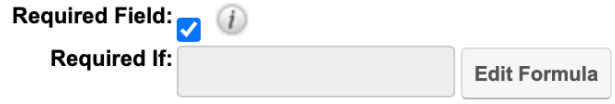
Note: This field option is not available for the out-of-the-box Account Name field on the Contacts, Opportunities, Revenue Line Items, Leads, Quotes, Quoted Line Items, Cases, and Purchases modules. Instead, this can be controlled using the require_accounts setting in the config_override.php. See the Core Settings page in the Developer Guide for more details.

Required If

Applies to: All data type fields except ActionButton, Checkbox, and HTML when the Required Field option is selected.

The Required If option defines the criteria that determine when the field is required on the layout.

- If left blank, the field will always be required.
- To make it required conditionally, click "Edit Formula" to launch the formula builder. For more information on how to build a formula using the formula builder, please refer to the Using Sugar Logic documentation.



Rows

Applies to: TextArea

Enter the number of rows to specify the height of a TextArea data type field.

System Label

Applies to: All data types

Enter the system value for storing the label of the field. This is defaulted to the name of the field preceded with "LBL_". Any lowercase characters entered will be converted to an uppercase upon saving. Once the field has been created, the system label cannot be changed. It is recommended that administrators avoid

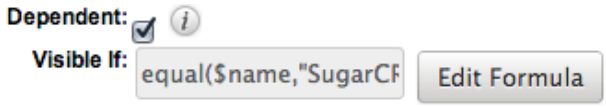
naming fields with the same system label in order to prevent the same label and header values from existing in the system.

Note: Only single-byte characters are supported for system labels for fields.

Visible If

Applies to: All data types except ActionButton and Address when the Dependent option is selected or "Formula" is selected from the Dependent option dropdown.

Contains the current formula to determine if a field is visible on the layout or not. Click "Edit Formula" to launch the formula builder to change the formula.



The formula must result in a Boolean (true/false) response. For more information on how to build a formula using the formula builder, please refer to the Using Sugar Logic documentation.

Width

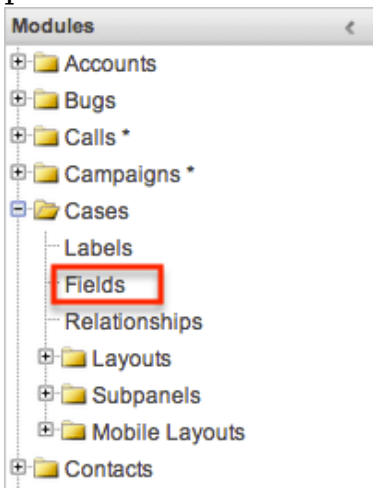
Applies to: Image

Enter the number of pixels to horizontally scale the image for this field. Enter only the Width or Height options to retain the aspect ratio of the image.

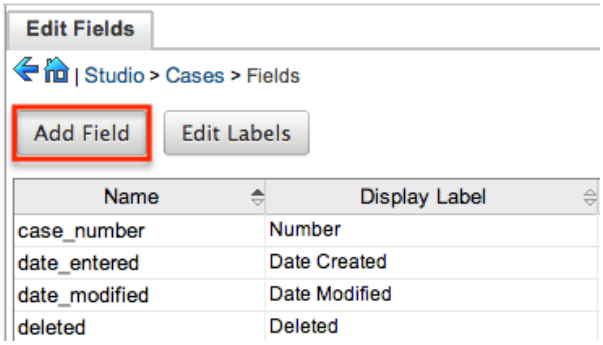
Creating Fields

Use the following steps to create a new field via Studio:

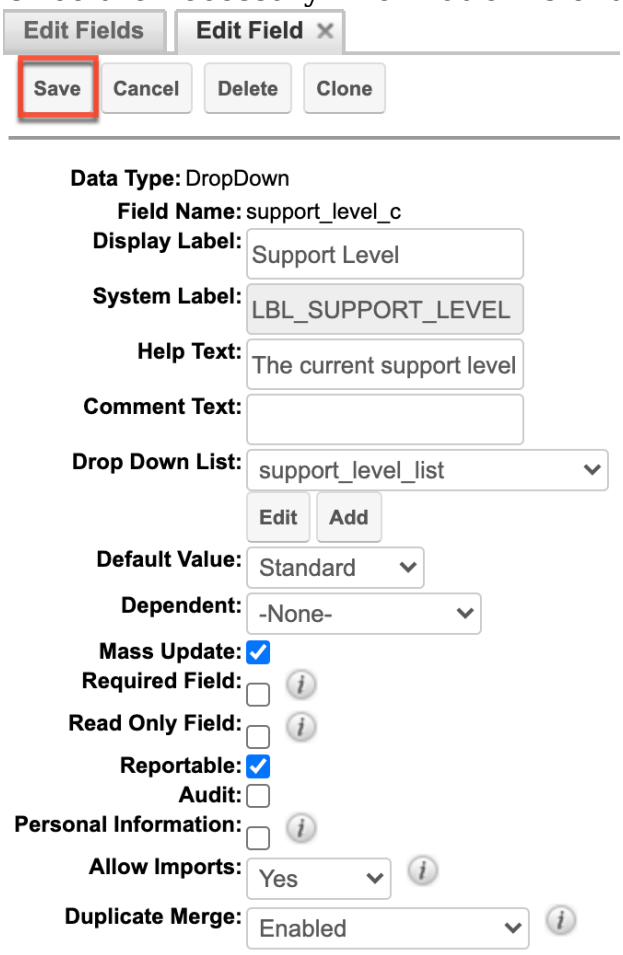
1. Expand out the tree under the desired module (e.g., Cases) in the Modules panel and select "Fields".



2. In the main panel, click "Add Field".



3. Enter appropriate values for the Field Options.
   Note: For ActionButton type fields, click "Configure Buttons" at the bottom of the field definitions, and then proceed with the configuration steps on the Action Buttons page.
4. Once the necessary information is entered, click "Save".



Please note that once a field is created, it must be placed on the record view (for Sidecar modules) or edit view (for Legacy modules) layout before users can enter data into that field. For more information on editing layouts, please refer to the Editing Layouts documentation.

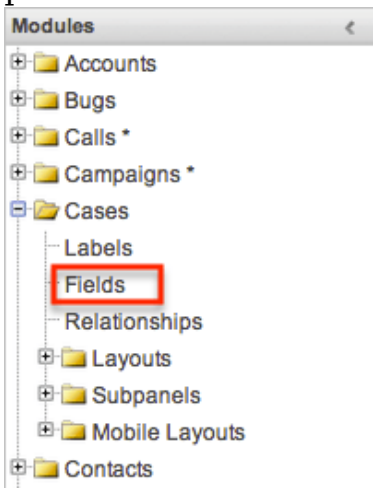
Note: New fields cannot be created if you have reached the MySQL row size limit of the table in your database. For more information, please refer to the

Troubleshooting Row Size Limit Errors in Sugar article.

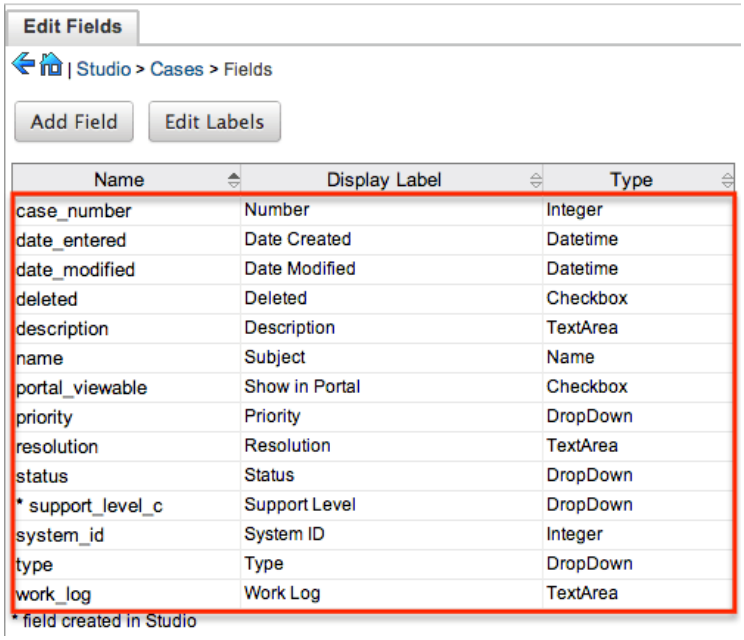
Editing Fields

Use the following steps to edit an existing field via Studio:

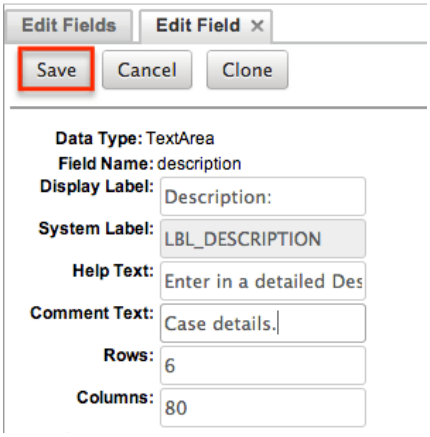
1. Expand out the tree under the desired module (e.g., Cases) in the Modules panel and select "Fields".



2. In the main panel, select a field to edit. Sorting the fields by the column header will help in locating the field faster.
    - **Note**: Fields created via Studio will display an asterisk next to their



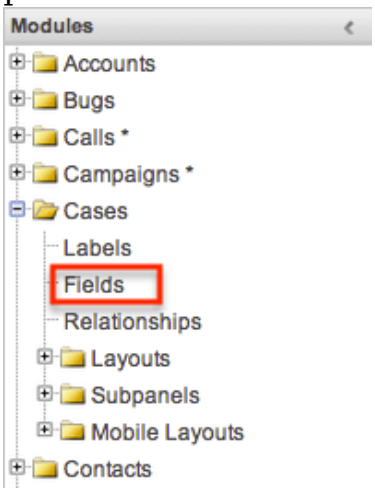
3. Enter appropriate values for the Field Options.
4. Once the necessary information is entered, click "Save".



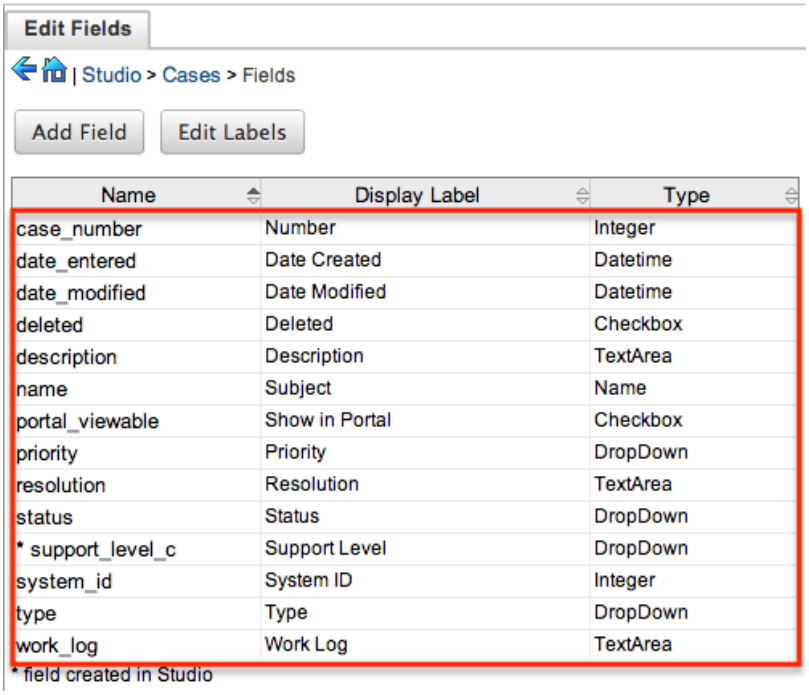
Deleting Fields

Use the following steps to delete an existing field via Studio:

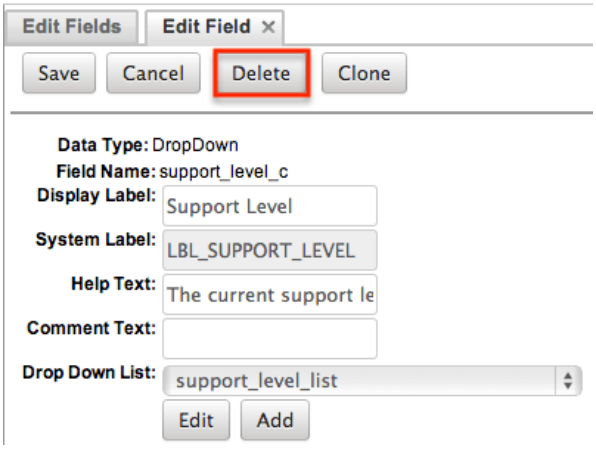
1. Expand out the tree under the desired module (e.g., Cases) in the Modules panel and select "Fields".



2. In the main panel, select a field to delete. Sorting the fields by the column header will help in locating the field faster.
    - Fields created via Studio will display an asterisk (*) next to their names.
    - **Note**: Stock fields cannot be deleted.



3. Click "Delete" to remove the field.

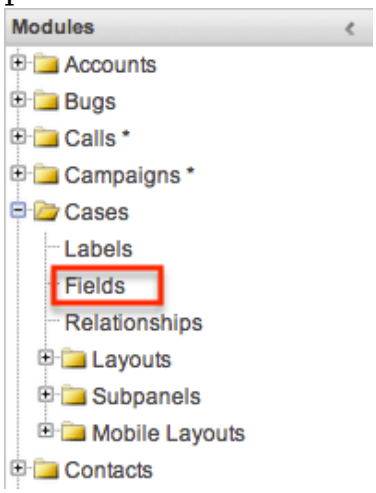


4. A pop-up message will display asking for confirmation. Click "Ok" to proceed.
    - When deleting fields, both the field and all the data related to the field in the database will be permanently removed. Before deleting a field, confirm that the field is no longer used or displayed in the following places:
        - Report filters or display columns
        - Workflows that filter by or display the field
        - Dashlets that filter by or display the field
        - Sugar Logic formulas for other fields
        - Email templates
        - Saved searches (legacy modules)
5. The field will automatically be removed from any module layouts when deleted.

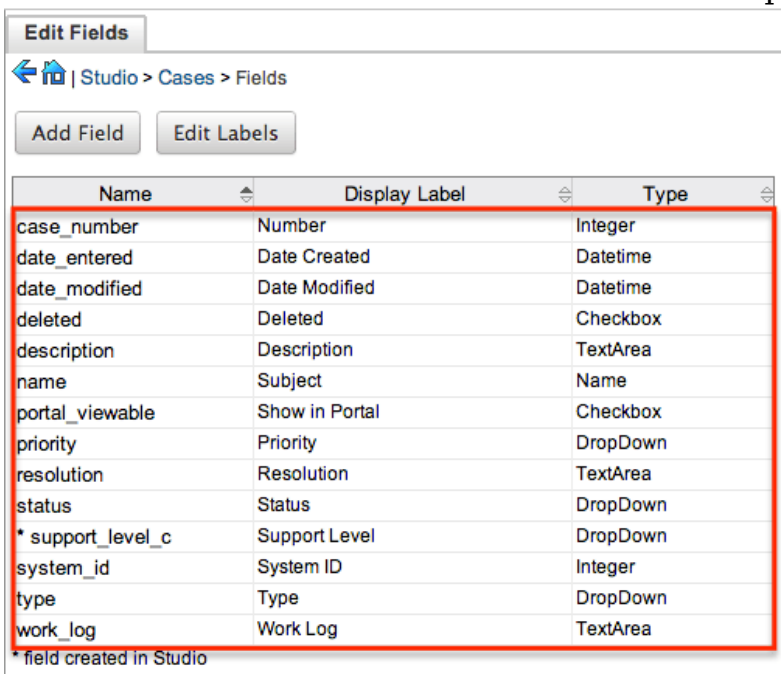
Cloning Fields

Use the following steps to clone an existing field via Studio:

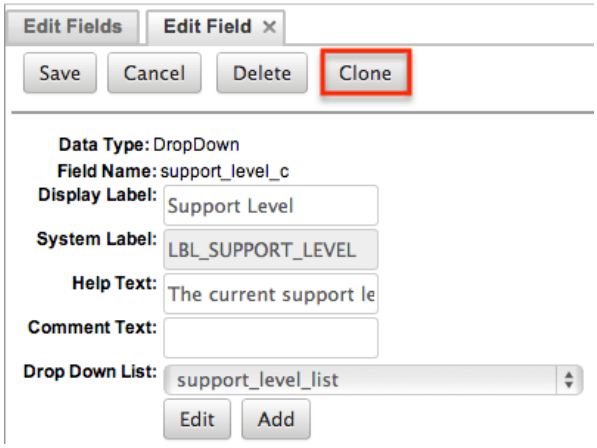
1. Expand out the tree under the desired module (e.g., Cases) in the Modules panel and select "Fields".



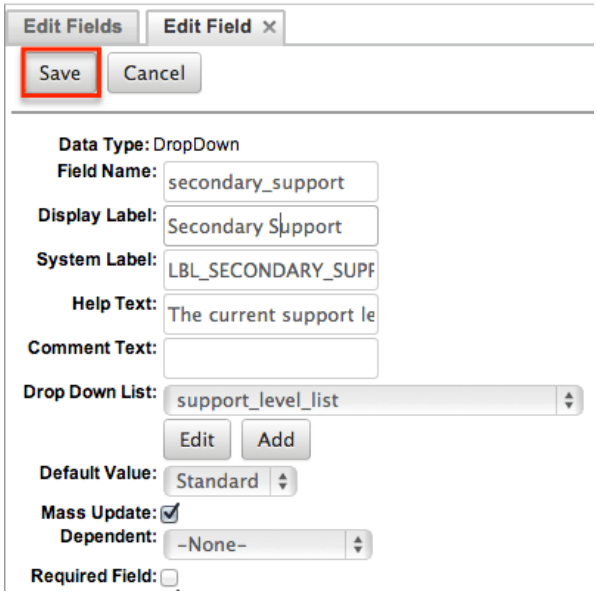
2. In the main panel, select a field to clone. Sorting the fields by the column header will help in locating the field faster.
    - **Note**: Fields created via Studio will display an asterisk (*) next to



3. Select "Clone" to duplicate the field.
    - **Note**: Some non-standard stock fields (e.g., Name) do not have the ability to clone.



4. Enter appropriate values for the Field Options.
5. Once the necessary information is entered, click "Save".



Action Buttons

Overview

Action Buttons are custom buttons that can be added to records to enable users to perform quick actions directly from records such as sending an email, creating or editing a related record, and opening an external web page. Action Buttons are implemented as a field type in Studio and are easily extended using Sugar Logic and SugarBPM.

Understanding Action Buttons

Action Buttons are powerful tools that provide your users with shortcuts to perform tasks within records that otherwise would require leaving the record. The benefit of using Action Buttons is that they support an efficient workflow, giving

users the tools they need to perform their work directly where they need it. Action Buttons look like standard Sugar action buttons in record views and can be displayed in records, their headers, or both. Buttons are easily configurable by style (color, labels, icons) and function (direct action or calculated) and their availability in records can be made dependent on specific conditions as well as role or team-based permissions.

For examples of how Action Buttons can be used in records, please refer to the Action Button Example Use Cases section.

Compatibility

Action Buttons are Sugar fields and are subject to access control rules that may be set via team membership, user type, and role restrictions. For more information on teams and roles, please refer to the Team Management and Role Management documentation in the Administration Guide.

Note: If you previously installed the Custom Buttons package included in the wTools bundle, please refer to the Understanding Action Buttons vs wTools Custom Buttons article to help you determine if you should re-create your Action Buttons directly in Studio in your Sugar instance.

Configuring Action Buttons

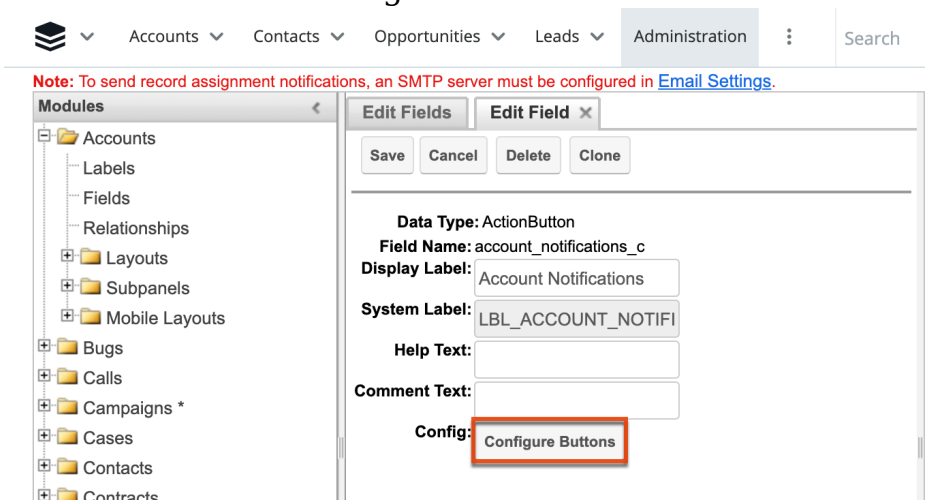
Administrators can place an Action Button on a record by creating and configuring a new field in Studio with a Data Type of "ActionButton" for the record's module and then adding that field to the desired layout. The "ActionButton" type field requires additional configuration after the field is created. This section describes the configuration options available for Action Buttons. To see how Action Buttons are displayed in records, please refer to the User Interface documentation in the Application Guide.

A single ActionButton field may be configured to show one or more buttons. When one field contains more than one button, the buttons can be shown either side-by-side in the singular field's area or as an Actions-menu style button with a dropdown list using the display settings in the Layout Configuration panel. If you would like to have more granular control over the access and placement of multiple buttons within a module, consider creating them as separate fields so that they can be managed independently. For more information, refer to the Working With Multiple Buttons section.

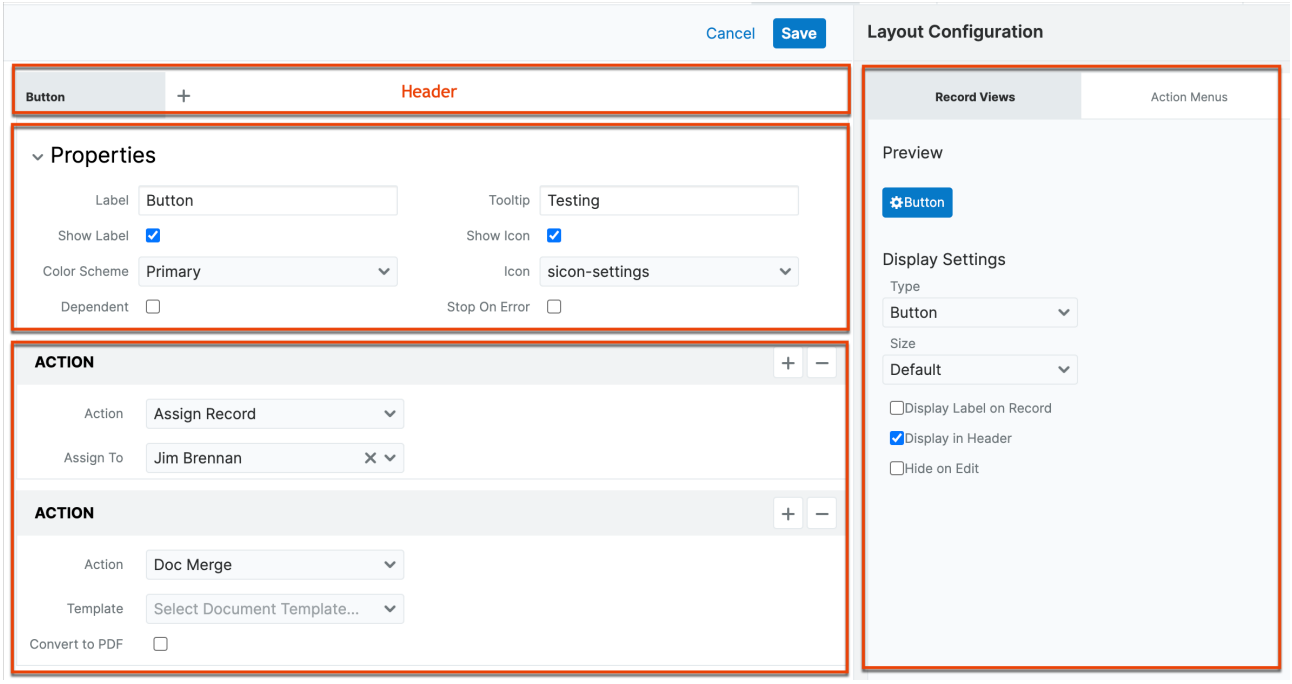
Note: You can only configure custom Action Buttons as described in this section; you cannot configure the standard Sugar action buttons or module Actions menus.

To configure Action Buttons, click "Configure Buttons" at the bottom of the field

definition when creating the field:



The button configuration drawer opens:



The configuration drawer includes the following sections:

- Header: A tabbed view of all buttons included in the current field.
- Properties: Options like the button's label, icon, color, and dependencies.
- Layout Configuration: Additional display options for record views and action menus.
- Action: The action(s) that will occur when the button is clicked by a user.

Refer to the following sections for information on configuring each of these areas.

Header

The Header section across the top of the drawer contains tabs that represent each button for the current field. The Properties and Action display for the selected tab. When there are multiple buttons for the field, display settings in the Layout Configuration panel apply to all buttons.

Properties

Define basic visual options in the Properties section of the Action Button configuration drawer. When there are multiple buttons for the field, these settings only apply to the button defined on the active tab in the header.

- **Label**: The text to be displayed on the button. You do not need to include a label; you may want to only include an icon (see "Show Icon" below).
- **Show Label**: When enabled, the text identified in the Label field will be displayed on the button. When not selected, the button will be blank or display only the icon if the "Show Icon" option is selected.
- **Color Scheme**: The button color. Select an option from the dropdown list and view the results in the Preview section of the Layout Configuration panel.
- **Dependent**: When enabled, the button will only display in records when the conditions defined in the Formula field are met.
    - **Formula**: Conditions that define the criteria for displaying the button on records. Please refer to the Sugar Logic documentation for more information.
- **Tooltip**: Text to be displayed when a user hovers over the button.
- **Show Icon**: When enabled, the icon identified in the Icon field below will display on the button. Refer to the Preview area of the Layout Configuration panel to see how the icon will appear on the button.
- **Icon**: Filename of the icon to be displayed on the button. The Show Icon field must be enabled for the icon to be displayed. Refer to the Preview area of the Layout Configuration panel to see how the icon will appear on the button.
- **Stop On Error**: When enabled, the defined action in a chain of actions will stop if an error is encountered.

Layout Configuration

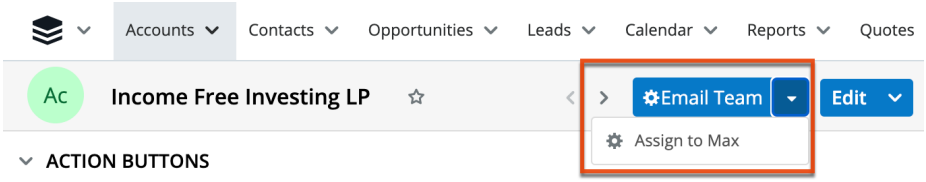
Define additional display options for the Action Button and view the button display in the Preview section of the Layout Configuration panel. This panel is divided into tabs for settings that apply to record views and those that apply to action menus. When there are multiple buttons for the field, these settings apply to the entire group of buttons.

Record Views Tab

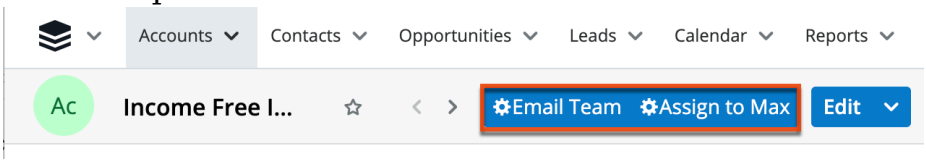
- **Preview**: View-only section that shows you the button appearance based on

the current settings.

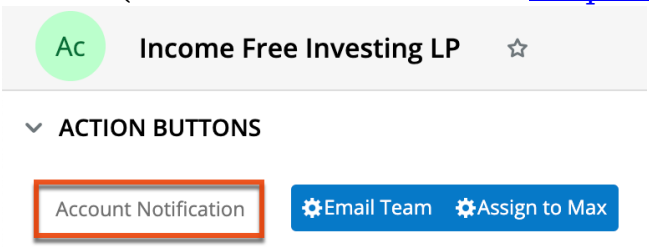
- **Display Settings:**
  - **Type**: The Action Button style
    - **Dropdown**: When multiple buttons are configured for the same field, the first button displays with a dropdown list that contains the other button labels.



    - **Button**: A single button.
    - **Button Group**: When multiple buttons are configured for the same field, they are displayed in the record together with no space between them.



  - **Display Label on Record**: When enabled, displays the text identified in the Action Button Field Label above or next to the button on records (the location is determined by the user preference setting). This is not the label that is displayed on the button (see "Show Label" in the Properties section).



  - **Display in Header**: When enabled, displays the button in the record header adjacent to the record name. If the field is also added to the record view layout, users will see the button in both places. If this option is not enabled, then the button must be added to the record view layout in Studio.
  - **Hide on Edit**: When enabled, the button will be hidden when the record is in Edit mode.
  - **Size**: Set the button's display size (Default, Small, Large). Refer to the Preview area after making a selection to compare sizes.

Action Menus Tab

- **Preview**: View-only section that shows you the button appearance based on the current settings.
- **Display Settings**:

- **List View**: Display the button as an item in list view actions menus.
- **Subpanels**: Display the button as an item in subpanel actions menus.
- **Record View**: Display the button as an item in record view actions menus.
- **Record View Dashlet**: Display the button as an item in record view dashlet actions menus.
- **Order**: When multiple action buttons exist in the same module, this number dictates the order in which this button will display in actions menus. The lowest number displays the highest in the list (e.g., "1" is higher in the actions menu list than "2").

Action

In the Action section, define the action that will occur when a user engages the Action Button.

Action	Description	Fields
Assign Record	Assigns the record to the designated user.	**Assign To**: Select the user to whom the record should be assigned.
Compose Email	Enables users to quickly compose an email using an email template. When the button is engaged, the configured email client is opened with the selected email template and designated recipients.	• **Use PMSE**: When enabled, the available SugarBPM Process Email Templates will be displayed in the Template list below. The templates available are those that were created with the target module where you are creating the field (e.g., when creating an Action Button field in the Contacts module, only the Process Email Template records with a "Target Module" set to Contacts will be displayed.)

		• **Template**: Name of the standard email template or SugarBPM Process Email Template to be used to compose the email. • **Email To**: Conditions that define the email recipients. Please refer to the Sugar Logic documentation for more information.
Create Record	Enables users to quickly create records in other modules from the current record.	• **Module**: Name of the Sugar module in which the record will be created. • **Auto Create**: When enabled, Sugar will create and save a new record in the module identified above. If this option is not enabled, then the user must manually save the newly created record after engaging the button. • **Preset**: The field for which you want to set a value in the newly created record. After selecting the field from the dropdown list, a text box displays where you can identify the

		value or set a calculated value using Sugar Logic. • **Link**: When enabled, the newly created record will be related to the record from which the Action Button was pressed (i.e., the parent record). • **Copy Parent Values**: This option populates fields in the newly created record with the values from matching fields in the parent record. • **Preset From Parent**: The field in the newly created record to be populated with the value from the parent record. After selecting the field from the dropdown list, a text box displays where you can select the field name from the parent record from which the value will be copied.
Doc Merge	Launches the Doc Merge feature to create a document using data from the current record.	• **Template**: Name of the document template on which the merge is based. • **Convert to PDF**: When selected, the

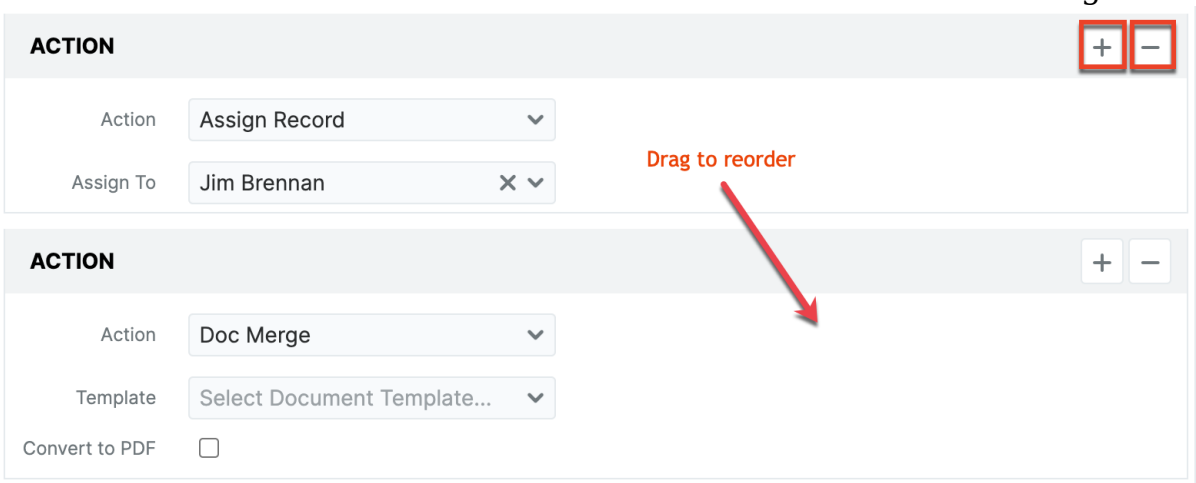
		document created by the merge will be generated in PDF format instead of the native DOCX or XLSX format.
Open URL	Opens a URL in a new browser window.	• **Calculated**: When enabled, the URL to be opened will be constructed based on the conditions identified. Please refer to the Sugar Logic documentation for more information. • **URL**: Direct URL to be opened in a new browser window.
Run Report	Provides a shortcut to run reports from a record.	**Run Report**: Name of the Sugar report to be run when the button is engaged.
Update Record	Provides a shortcut to update specific fields in the current record.	• **Fields**: Name of the field(s) in the current record to be updated. After selecting the field from the dropdown list, a text box displays where you can identify the value or set a calculated value using Sugar Logic. To update another field, select the field name from the list, which will add a new text box where you can identify the value.

		• **Auto Save**: When selected, the updated record is automatically saved after the user engages the button. If this option is not enabled, then the user must manually save the updated record after engaging the button.

Assigning Multiple Actions to One Button

To assign more than one action to the same button:

1. After defining the first action as described in the Actions table above, click the + icon at the top right corner of the Action block.
2. Define the action and repeat for any additional actions.
3. To change the order in which the actions are processed, drag and drop the Action blocks into the order that you want the actions to process, with the first action being at the top.
4. To delete an action, click the - icon at the top right corner of the Action block and then click the Confirm button in the confirmation message.



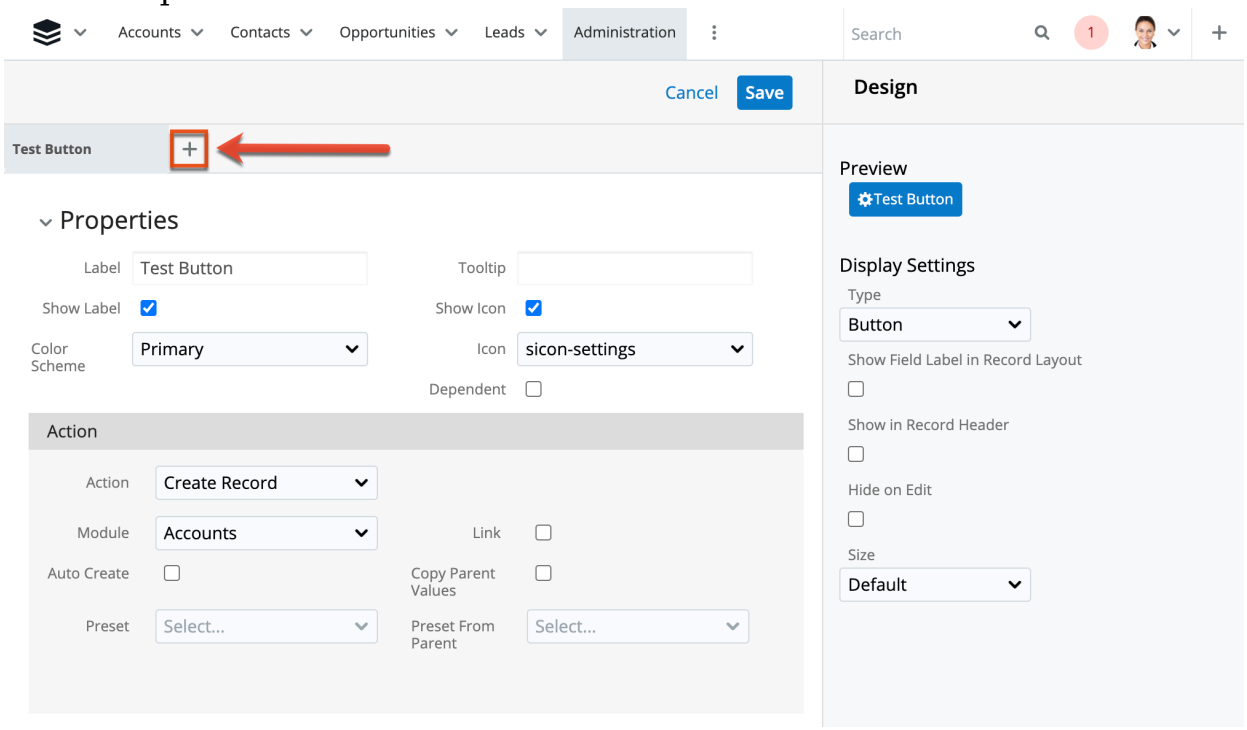
Note: To stop the chain of actions when an error is encountered, enable the Stop On Error option in the Properties section.

Working with Multiple Buttons

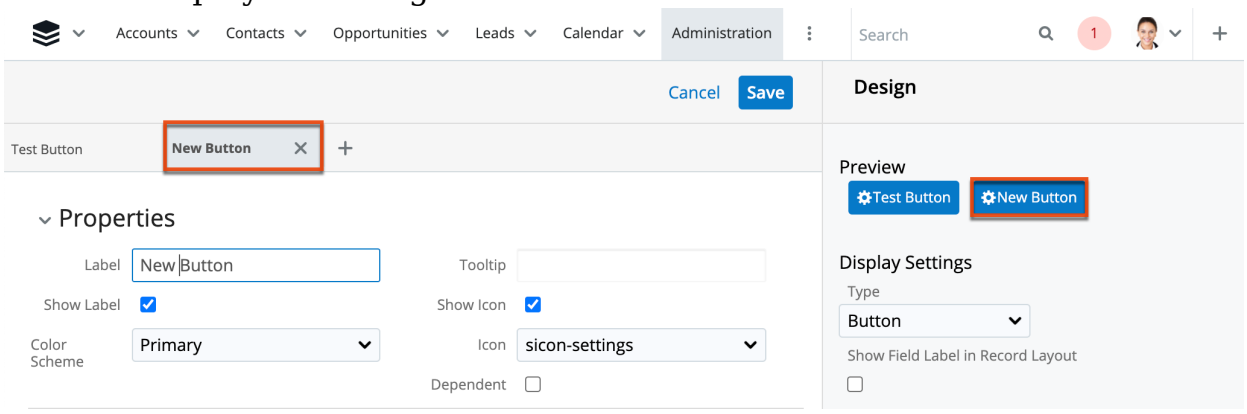
Several buttons can be shown within the same field. This is useful for grouping multiple shortcuts that are related to the same workflow within a module.

To create additional buttons for the current field:

1. Click the plus icon in the header.



A new tab opens to define the new button and the button is added to the Preview display on the right.



2. To reorder buttons, drag the tab in the header to the desired location with the button on the far left being first.



Note: If buttons exceed the horizontal space in a record header, then the button

type is automatically converted to a dropdown button.

Displaying Action Buttons in Records

As with all field types, you need to add the Action Button to a layout before it will display in records unless you only want the buttons to display in the record header, which can be configured using the display settings in the Layout Configuration panel. Action Buttons can be added to record view layouts and mobile layouts.

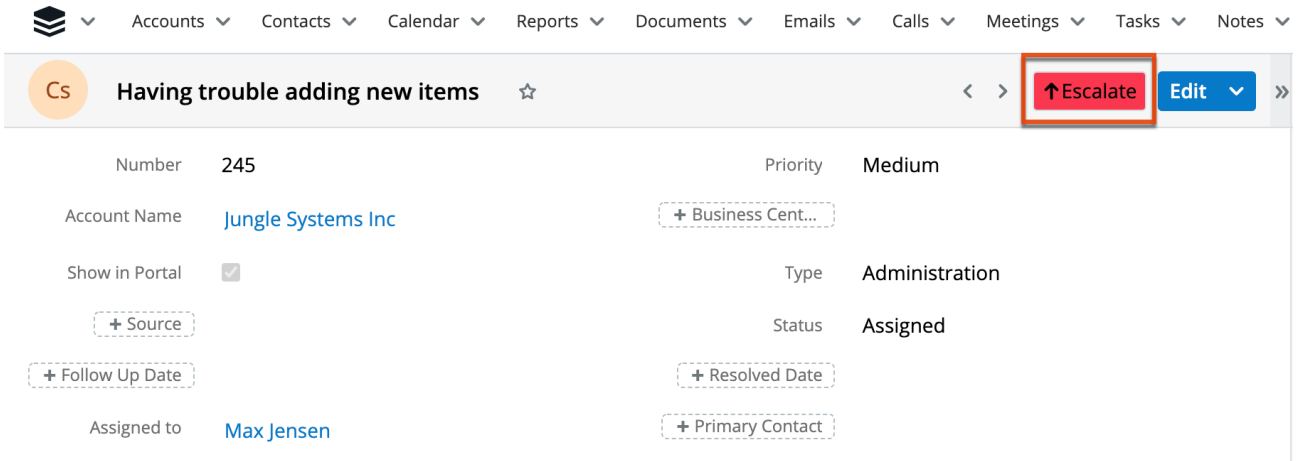
Action Button Example Use Cases

There are many use cases for Action Buttons depending on the module and your own workflows. The following are just a few examples of how Action Buttons can be utilized. For details on how to implement these examples, please refer to the Creating an Action Button article.

- Escalate a Case
- Reject a Lead
- Add a Call Note to an Opportunity
- Access Supporting Documents from a Quote
- Email a Team
- Include a Map Link to Account Location

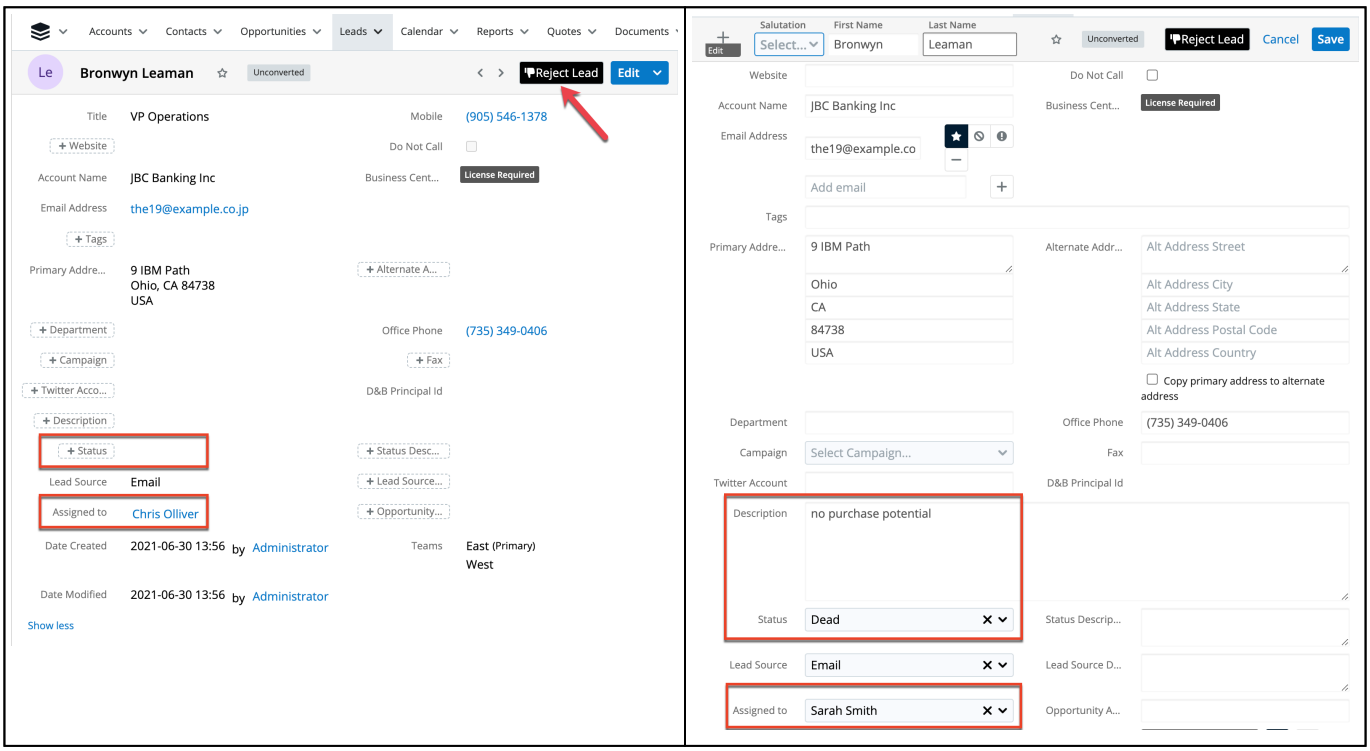
Escalate a Case

Provide your Support team with a one-step method of case escalation with an Action Button that updates the Priority field to "High" and the Assigned To field to the manager. While you can also define a Sugar BPM process for case escalation, utilizing an Action Button in this way does not require BPM knowledge and allows your Support reps to instantly escalate a case while engaged with a customer on the phone.



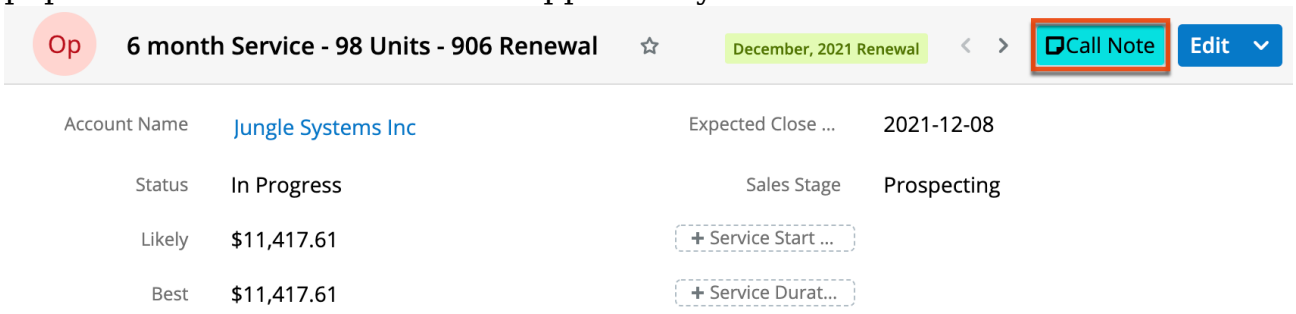
Reject a Lead

Enable your Sales team to quickly update a lead record to reject the lead, assigning the record to the regional sales manager, setting the status to "Dead", and adding "no purchase potential" to the Description field.



Add a Call Note to an Opportunity

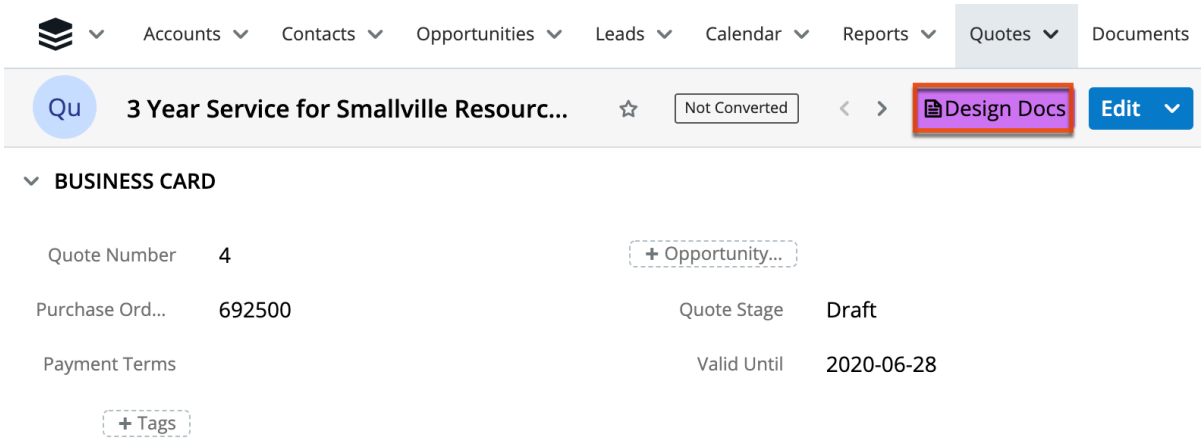
Using an Action Button in an opportunity record can provide quick creation of calls associated with the opportunity. For example, automatically create a call record with the Status field set to "Held", Direction set to "Outbound", and Description populated with the name of the opportunity.



Access Supporting Documents from a Quote

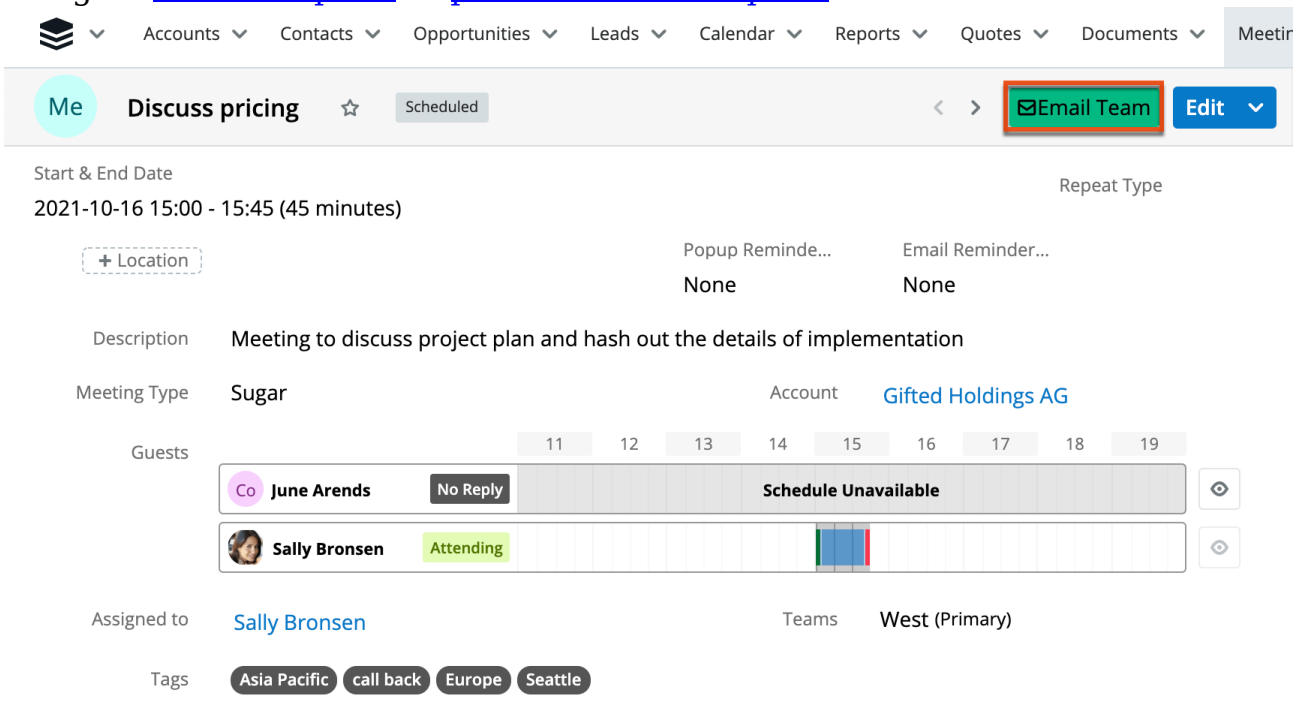
Use an Action Button to provide a link to external systems that contain supporting documentation. For example, link to design documents located in a corporate intranet from a quote record to provide user access to all information directly

where it is needed.



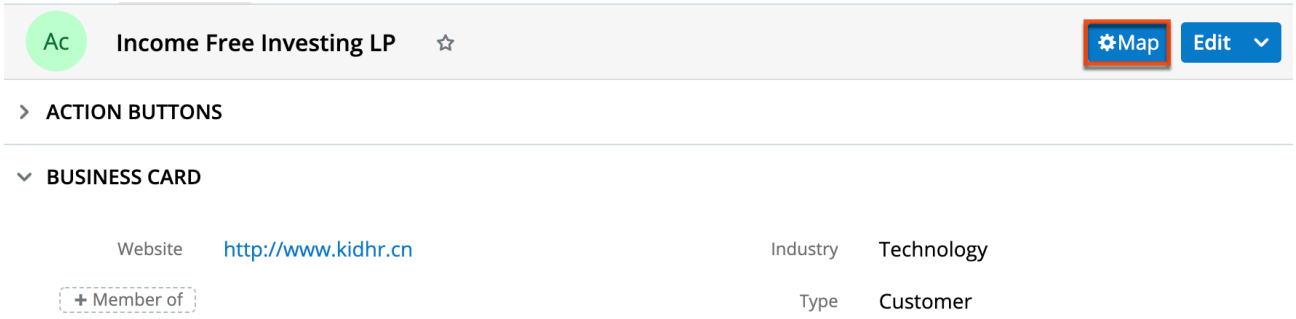
Email a Team

Including an email Action Button can be a time saver in any module. This type of Action Button enables users to quickly send email to a predetermined recipient list using an email template or process email template.



Include a Map Link to Account Location

Including an Action Button that links to a specific map location (e.g., https://google.com/maps?q={primary account address}) can provide your Sales team with directions to the account's location in one click.

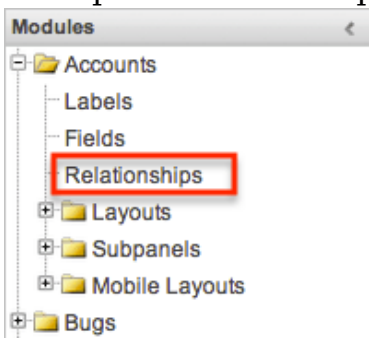


Relationships

Overview

Relationships define the links between different modules in Sugar and allow records between those modules to be related. Related records display in fields or subpanels on a module's record view (for Sidecar modules) or detail view (for Legacy modules) depending on the relationship type. When you create a new relationship between two modules, the system automatically creates the necessary subpanels, related fields, and metadata relationships. Relationships provide the added benefit in reports to allow access to a related record's fields in addition to the base module's fields.

The relationships section in Studio allows administrators to create new relationships between custom and stock modules as well as change some properties on existing relationships. To access the Relationships section in Studio, select "Relationships" from the Modules panel and the module's relationship tab will open in the main panel.



Relationship Types

Sugar contains a few different types of relationships you can create between modules. The relationship type will determine which fields or tables will be created in the database as well as what the interface will look like to the user when

managing relationships for the affected records.

When you create a relationship between modules, the module you initiate the relationship from is considered the primary module and the module that you relate it to is the related module.

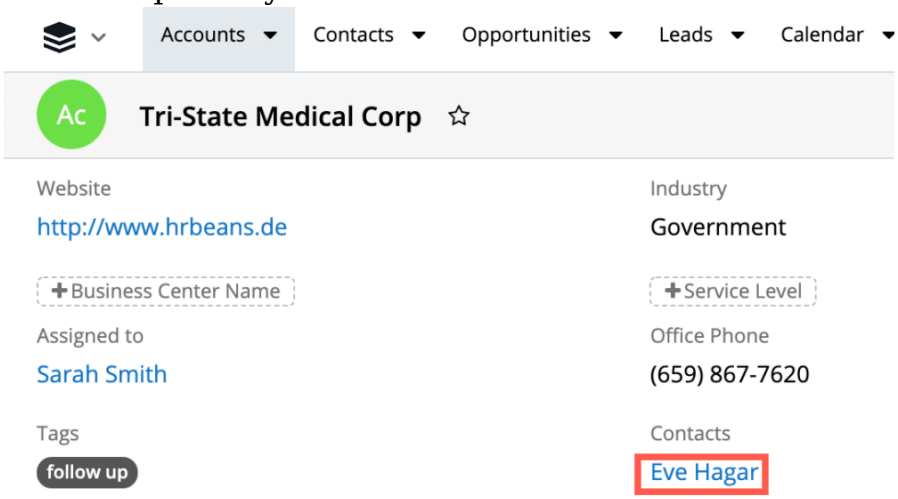
The following sections explain the relationship types available in Studio.

One-to-One Relationships

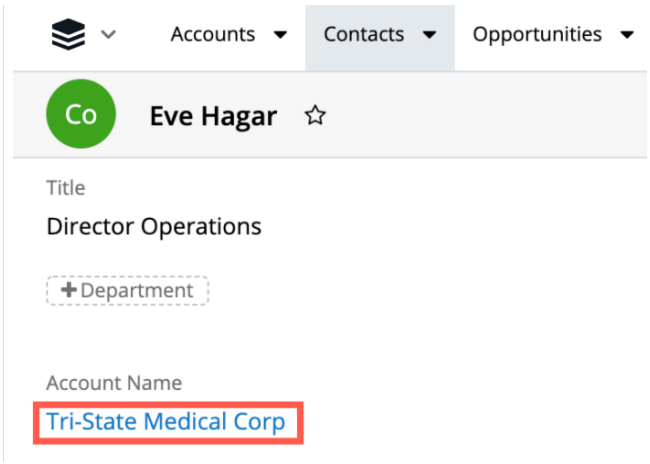
When records in the primary module and the related module are uniquely related to each other, you have a one-to-one relationship. In other words, each primary record will relate to only one related record and vice-versa.

As an example, in a one-to-one relationship between Accounts and Contacts, an account can be associated with only one contact and a contact can be associated with only one account. The relationship will show as a field in each module's record view. For this two-way relationship, changing the related record from one module's record will also change the value in the other module's record.

- From the primary Accounts module:



- From the related Contacts module:



Note: You can alternatively create a one-way relationship between modules using relate fields. For more information regarding relate fields, refer to the Field Types documentation. For an explanation of the differences between relate fields and relationships, see the Introduction to Relationships and Relate Fields article.

One-to-Many and Many-to-One Relationships

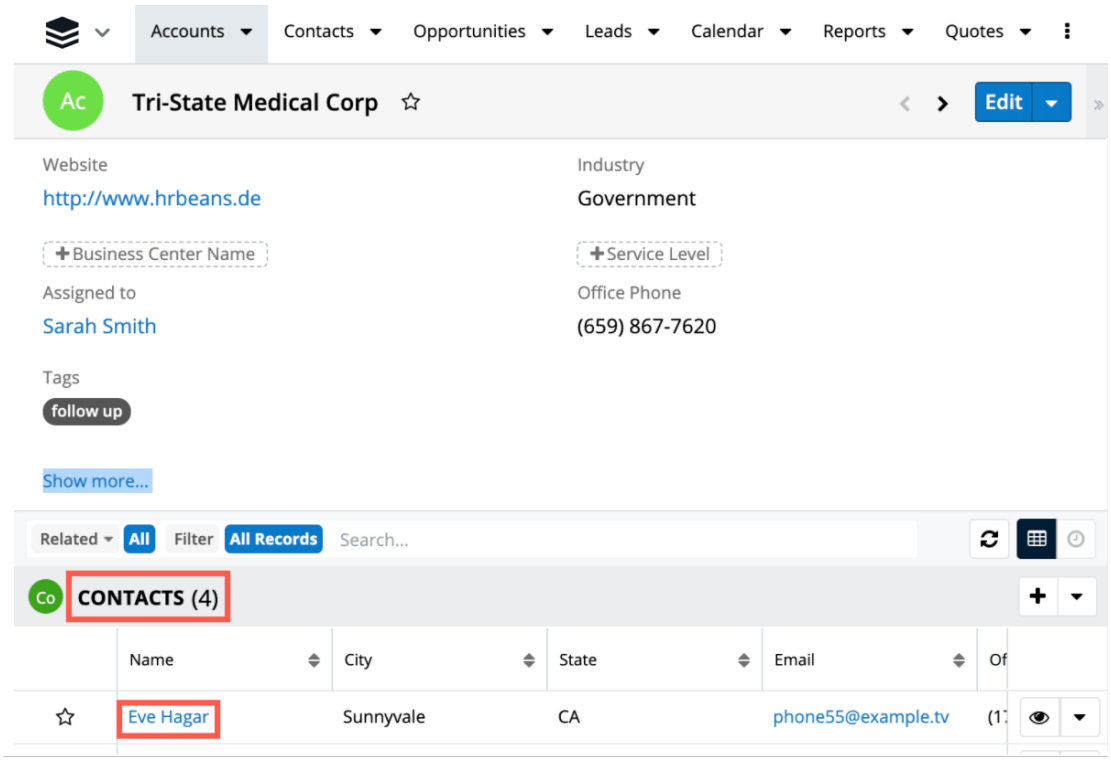
In one-to-many relationships, one primary record may relate to many records in the related module, but the related module records will only be able to relate to one primary record. This is often referred to as a parent-child(ren) relationship.

Note: Only modules with subpanels available can be on the "Many" side of a relationship. For example, the Product Catalog module lacks a subpanel; therefore, Product Catalog can only be selected on the "One" side of a relationship.

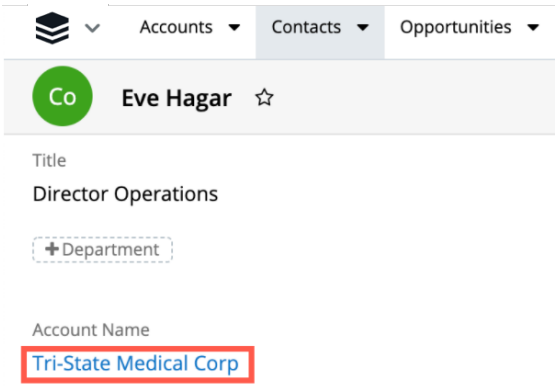
As an example, in a one-to-many relationship between Accounts and Contacts, an account can be associated with many contacts, but each contact can be associated with only one account. The record view of the primary module will display a subpanel for the related module, and the record view of the related module will display a field containing a link to the related record.

A one-to-many relationship is the same as a many-to-one relationship except the primary and related modules are reversed.

- From the primary Accounts module:



- From the related Contacts module:



You can also create a one-to-many relationship between a module and itself. For example, Sugar relates Accounts to Accounts in order to allow "Member Organization" sub-accounts within the primary "Member of" parent account.

Note: Adding a custom one-to-many relationship to "Activities" will add custom relationships to calls, meetings, messages, notes, tasks, and emails. This will also automatically add these subpanels to the record view.

Many-to-Many Relationships

In many-to-many relationships, many primary records may be related to many related records, often overlapping. For example, the contact Joe Smith may relate to many different Sugar campaign records, and each of those campaign records may relate to many contacts in addition to Joe Smith.

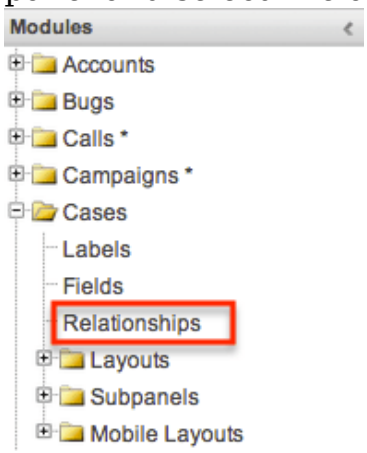
For a many-to-many relationship between Accounts and Contacts, an account could be associated with many contacts, and a contact, in turn, could be associated with many accounts. Both modules' record views would display a subpanel for the opposite module.

Note: Only modules with subpanels available can be on the "Many" side of a relationship. For example, the Product Catalog module lacks a subpanel; therefore, Product Catalog can only be selected on the "One" side of a relationship.

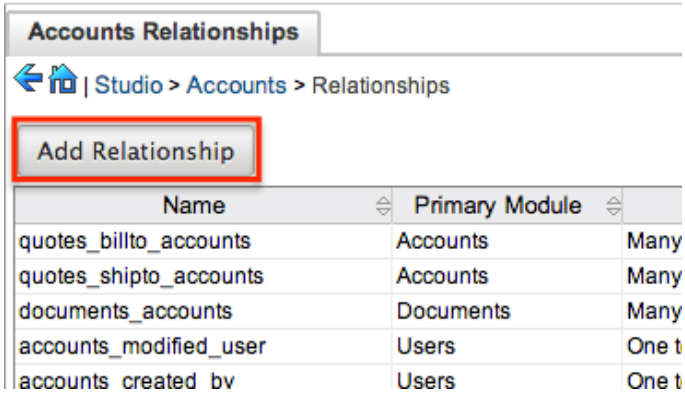
Creating Relationships

Use the following steps to create a new relationship via Studio:

1. Expand the tree under the desired module (e.g., Cases) in the Modules panel and select "Relationships".



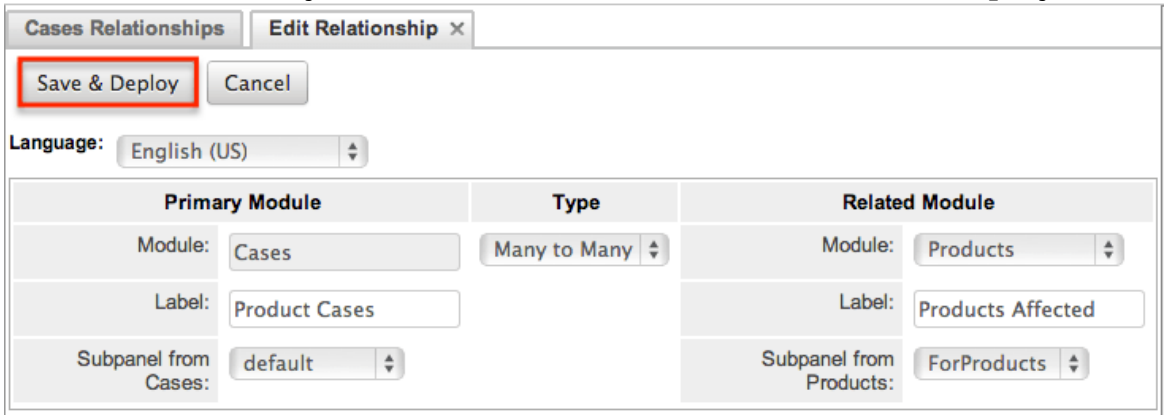
2. In the main panel, click "Add Relationship".



3. Enter appropriate values for the following options:
   Type: Select the type of relationship to create from the options in the Relationship Types section.
   Module: The Primary module is set as the module to which you are adding the relationship. Select the related module from the dropdown list to the right. The Primary and Related module can be the same in order to create a parent-child relationship.
   Label: Enter a label to reference the Primary module or Related module's

subpanels for this relationship.
    - **Note**: This option is only available for the "Many" side of a relationship.
- **Subpanel from**: Select a subpanel option to display the Primary or Related module's records in. This will determine the fields displayed in the subpanel.
    - **Note**: This option is only available for the "Many" side of a relationship.

4. Once the necessary information is entered, click "Save & Deploy".

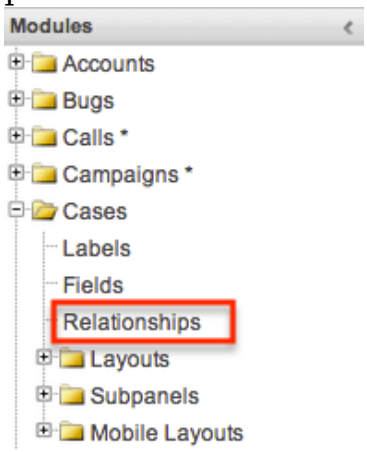


5. The required fields and subpanels are instantly created and deployed to the appropriate modules.

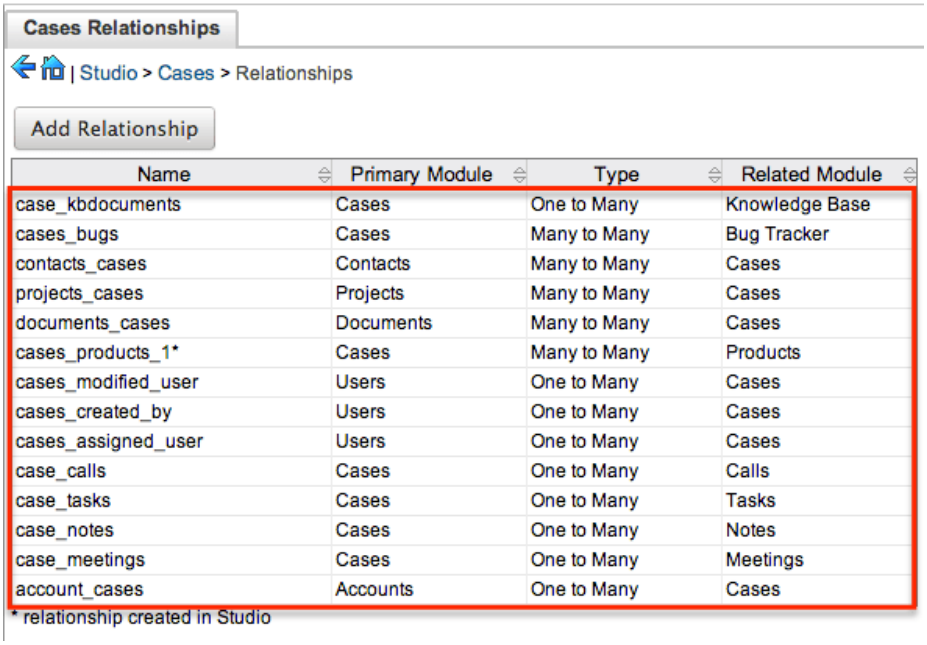
Editing Relationships

Use the following steps to edit a relationship via Studio:

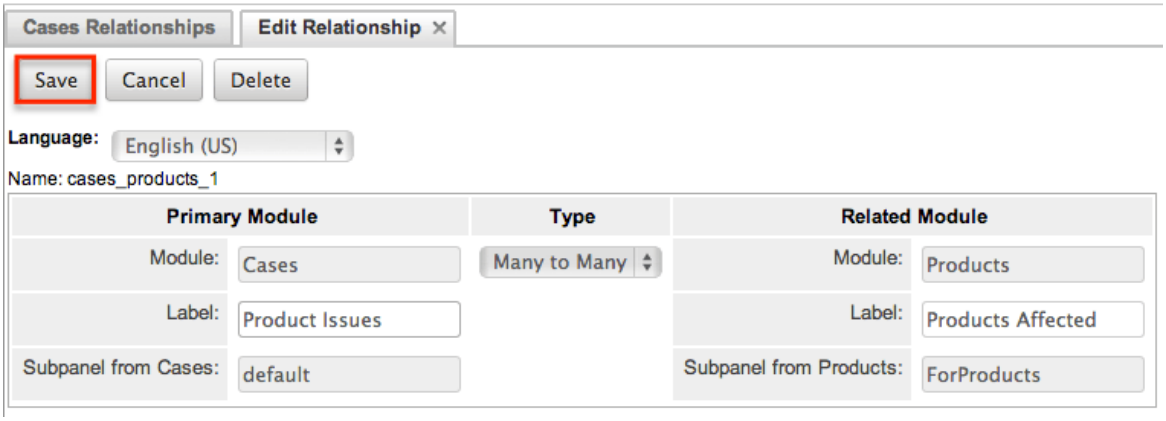
1. Expand out the tree under the desired module (e.g., Cases) in the Modules panel and select "Relationships".



2. In the main panel, select a relationship to edit.
    - Sorting the column header will help in locating the relationship faster.
    - **Note**: Relationships created via Studio will display an asterisk next to their names.



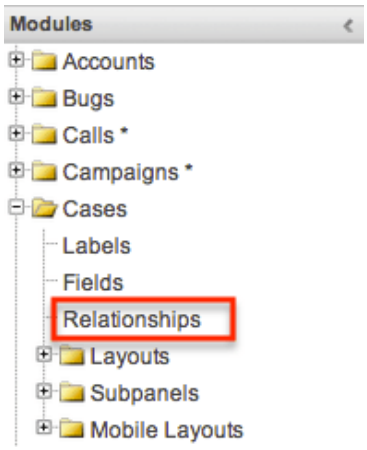
3. The only editable field on a relationship is the Label field for naming the Primary or Related modules subpanels.
    - **Note**: This option is only available for the "Many" side of a relationship.
4. Once the necessary information for the Label field is entered, click "Save".



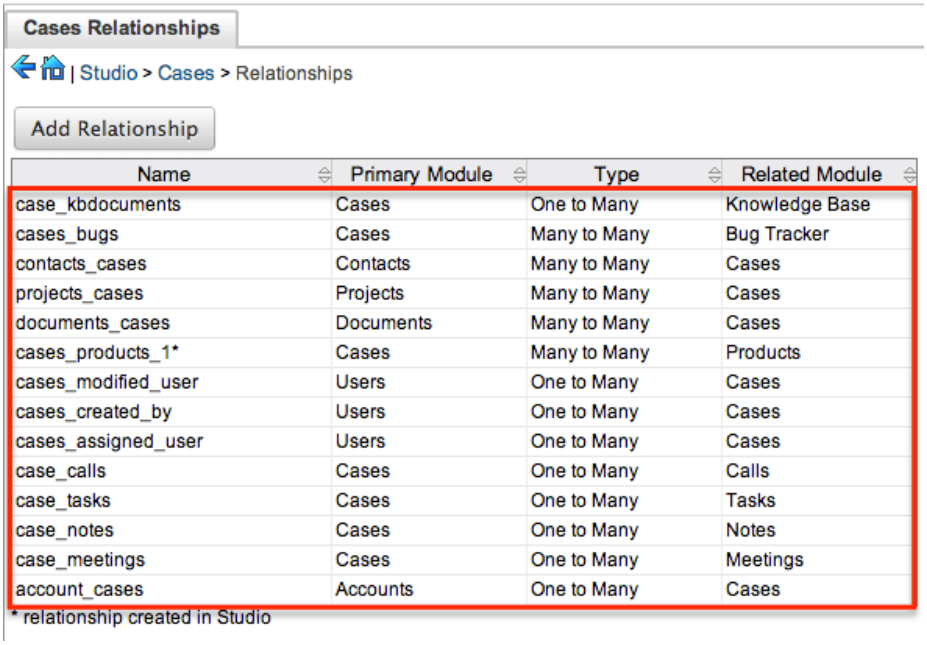
Deleting Relationships

Use the following steps to delete a relationship via Studio:

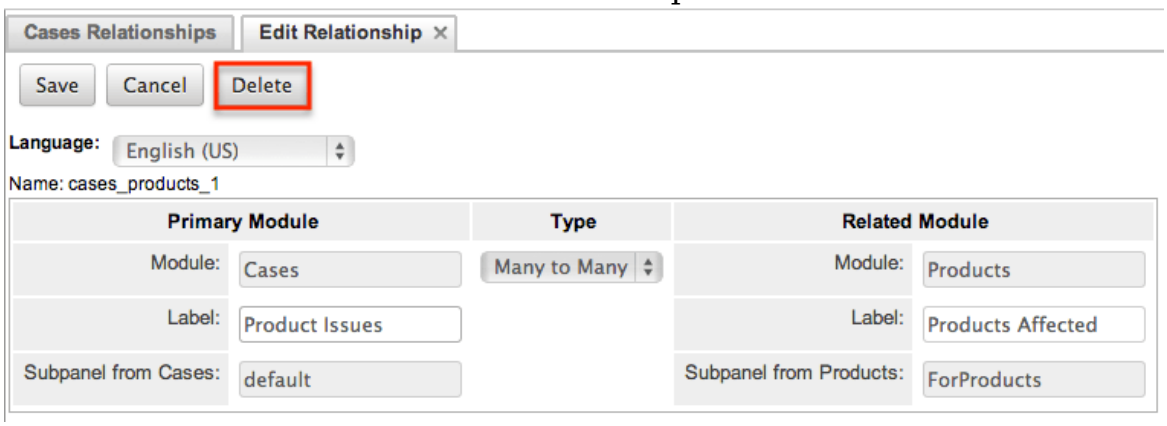
1. Expand out the tree under the desired module (e.g., Cases) in the Modules panel and select "Relationships".



2. In the main panel, select a relationship to delete.
    - Sorting the column header will help in locating the relationship faster.
    - **Note**: Relationships created via Studio will display an asterisk next to their names.

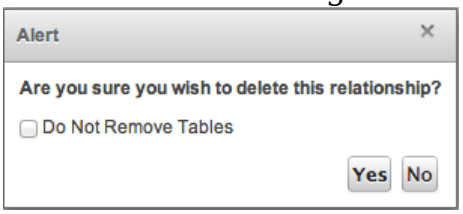


3. Select "Delete" to remove the relationship.



4. A pop-up message will display asking for confirmation. Click "Yes" to proceed.

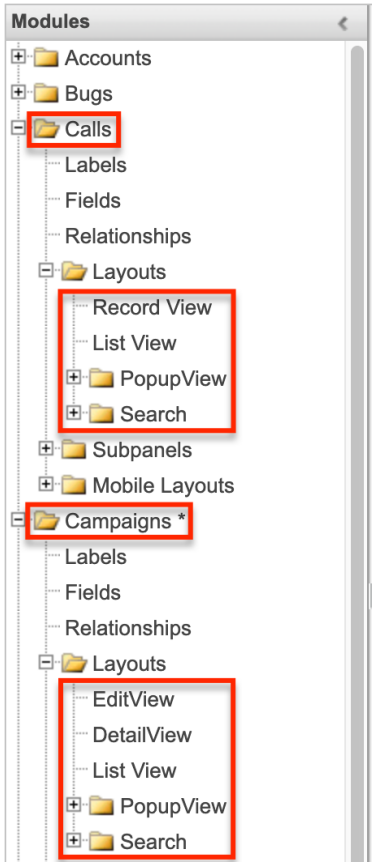
- **Note**: If you wish to retain the data and table structure that currently exists for the relationship, select the "Do Not Remove Tables" option. Leaving the "Do Not Remove Tables" unchecked will delete the relationship data and remove the tables for the relationship from the database.
- Before deleting a relationship please verify and resolve the following issues:
  - Relationship must be removed from any report filters or displays
  - Relationship must be removed from any workflows that filters or displays fields from the relationship
  - Relationship must be removed from any Sugar Logic formulas referencing the relationship



Layouts

Overview

The layouts in Studio are used to represent the various views (e.g., record view, list view, edit view, etc.) in Sugar. Users with administrator or developer access have the ability to configure these layouts via Admin > Studio. Please note that the layouts available to configure will vary based on whether the module uses the Sidecar or Legacy user interface. All modules using the Legacy user interface will display an asterisk (*) to the right of the module's name in Studio. The available layouts for the selected module will appear once you open up the Layouts option.



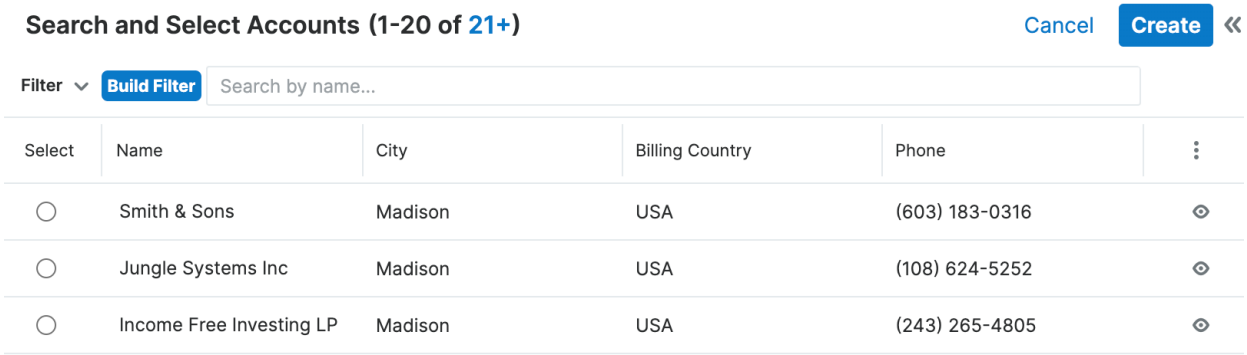
Layout Types

Sugar comes with different types of layouts to represent different sections of Sugar. Please note that not all layouts are available in every module. Mobile Layouts are not described here since they are managed in a separate location. Please refer to the Mobile Layouts page for more information.

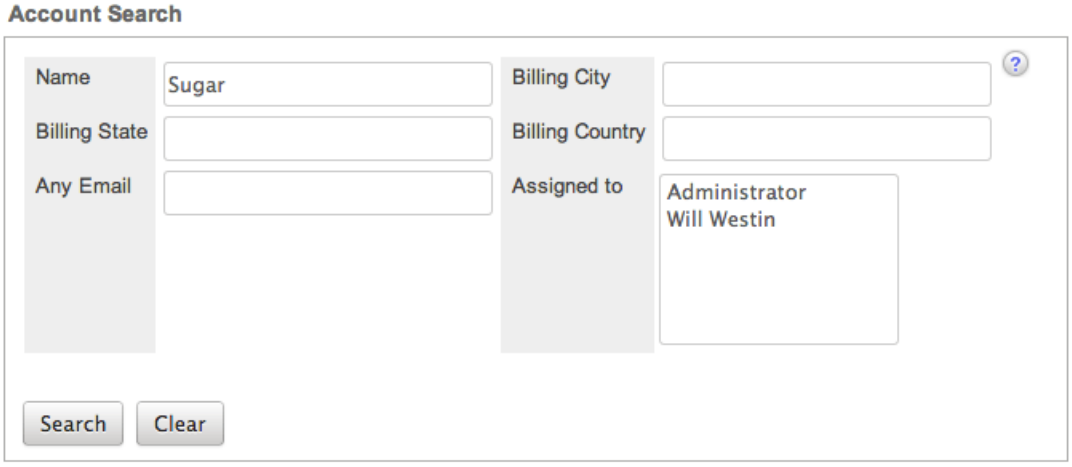
The following layout options are available in Sugar:

- **Record View (for Sidecar modules)**: Record view is used to modify, create, or view the current record's details within a specified module. This layout is specific to modules using the Sidecar user interface and controls the layout for viewing, creating, and editing a record, as well as the quick-create layout and the fields displayed when the record is viewed via the preview pane.
- **Record View Dashlet (for Sidecar modules)**: The Record View dashlet displays the record view of a module within a tab of the dashlet. This layout is used to configure the fields displayed in the tab. Note that this layout can be configured in Studio for all supported Sidecar modules as well as any custom modules.
- **Edit View (for Legacy modules)**: Edit view layout is used to modify or create records in the specified module.

- **Detail View (for Legacy modules)**: Detail view layout is used to view the current data for a record within the specified module.
- **List View**: List view layout is used to view multiple records within the specified module. The list view is also used for displaying the results from module search (for Sidecar modules), as well as Basic or Advanced search (for Legacy modules).
- **Preview View:** Preview view is used to display a read-only snapshot of records in the specified module.
- **Quick Create (for Legacy modules)**: Quick Create layout is used in Sugar to quickly view and modify records within a specified module without having to navigate away from the current page. For example, logging a call from the Quotes detail view will open up the call's quick create form.
- **Popup List View**: Pop-up list view layout is used to view a list of records in a pop-up window (i.e., a Search and Select drawer) when selecting one or more records to relate to a current record. For example, if you want to edit the Accounts list view when you click "Search and Select..." in the Account Name field on a contact record, you would edit the Accounts pop-up list view layout.



- **Popup Search (for Legacy modules)**: Pop-up search layout allows users to search for records in the pop-up window to relate to a current record and appears above the pop-up list view in the same window. Legacy modules (e.g., Quotes) use this layout for pop-up searching while Sidecar modules (e.g., Accounts) use the Search layout's configuration.



- **Search**: Search layout is used to allow users to search for records from a module's list view via module search (for Sidecar modules) or Basic and

Advanced search (for Legacy modules). This layout is also used by Sidecar modules on the pop-up search and select. In addition, changes made to the Search layout for Sidecar modules affect the list of available fields to filter for the module's list view dashlet (e.g., My Contacts) since it is controlled by the same layout.
Note: Encrypt fields cannot be added to Search layouts.

Layout Options

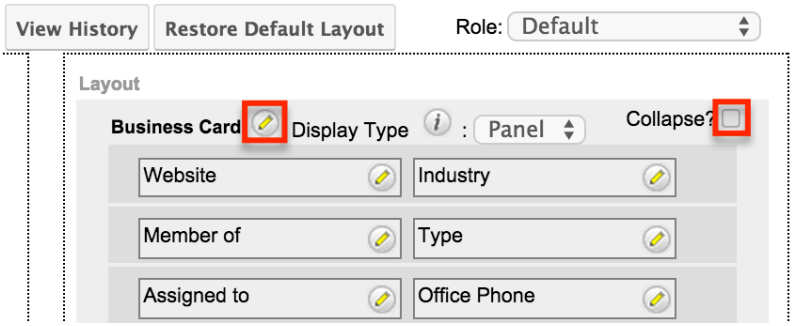
Administrators have the ability to configure the various layouts (e.g., record view, list view, etc.) available via Studio. The following are some of the options available to administrators when configuring layouts in Studio. Record views may be configured to display differently based on the viewing user's role.

Panels

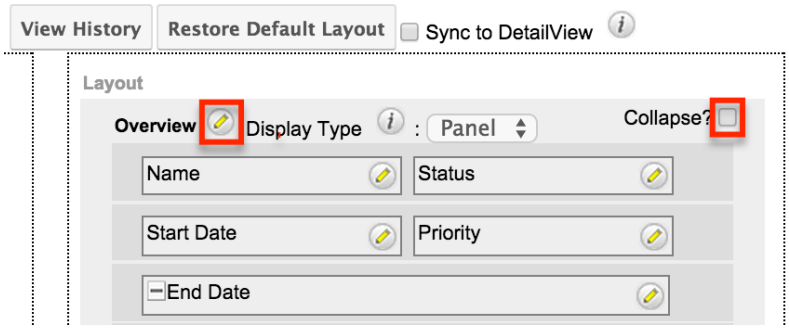
Every field on a layout is contained within a panel, which can be organized to contain groups of similar or related fields to assist in organization. Modules using the Legacy user interface will have fields grouped by default into the Overview and Other panels while modules using the Sidecar user interface will have the Business Card and Show More panels. You can change the panel header titles by clicking the Pencil icon to the right of the panel name.

Note: You can have the panel collapsed by default on the Record View, Edit View, or Detail View by marking the Collapse? checkbox to the far right of the panel header.

Record View layout (for Sidecar modules):

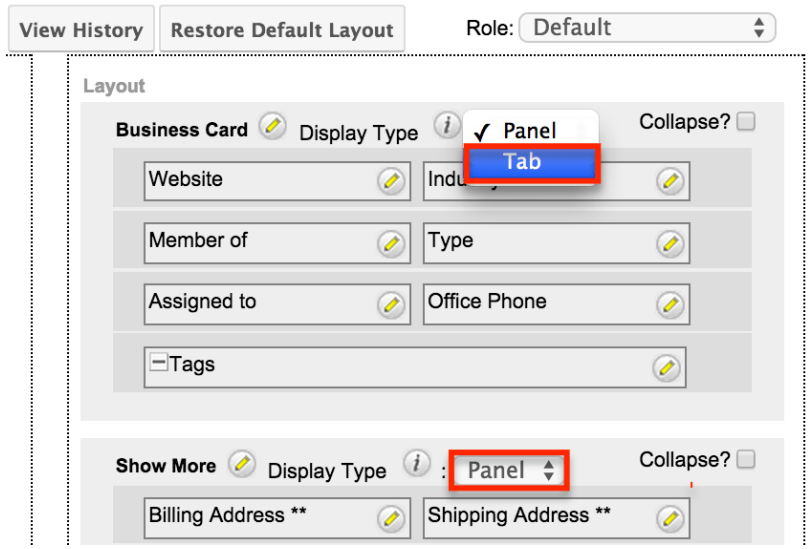


Edit View layout (for Legacy modules):



Tabs

Each of the panels (Business Card, Overview, etc.) may optionally be displayed as tabs in the layout. You can also nest panels within other panels defined as tabs. For example, if you set the Business Card panel as a "Tab" and leave "Show More" as a panel in the Record View layout, the Show More panel will appear within the Business Card tab.



Every panel listed under a Tab display type will be a panel within the tab until the next Tab display type panel is reached. So if you add a new panel below "Show More" and set both the Business Card and Show More panel as "Tabs", then the newly added panel will appear within the Show More tab.

Restoring Layouts

Sugar keeps a history of the changes made to each layout. You can preview and restore historical layouts via "View History". For more information on viewing the history of layouts, please refer to the Viewing Layout History section of this documentation.

It is also possible to restore the layouts back to the default out-of-the-box layout. For more information on how to reset a layout to default, please refer to the

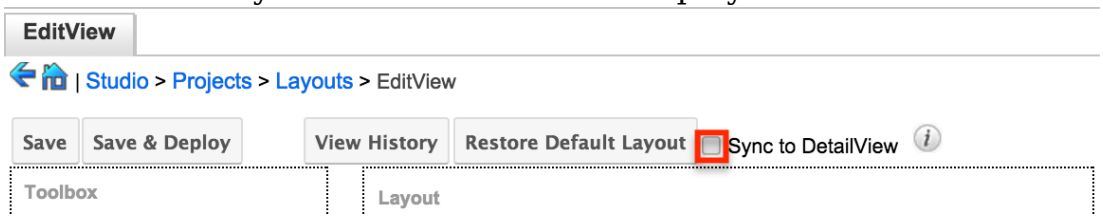
Restoring Customized Layout to the System Default Layout section in this documentation.

Note: When using role or dropdown specific record view layouts, please refer to the Restoring Customized Layout to the Base Layout section for more information.

Sync And Copy (Legacy Modules)

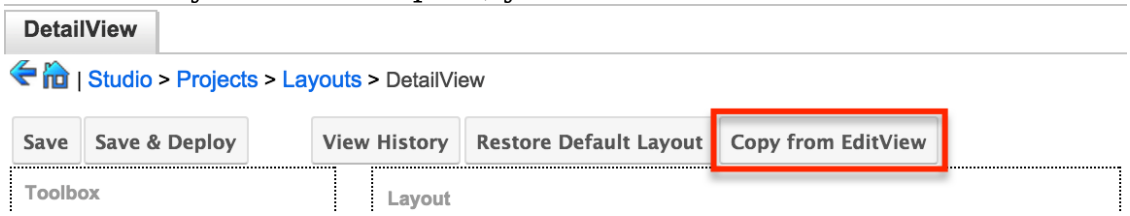
Sugar provides administrators with the ability to sync and copy certain layouts to assist in configuring layouts. Often it makes sense for a module's edit view and detail view layouts to be identical. Instead of having to duplicate any changes made to one layout, administrators can configure the detail view layout to be synced to the edit view layout.

To sync the layouts, select the Sync to DetailView checkbox on the upper right of the EditView layout and click "Save & Deploy".



The current detail view layout will be replaced with the current edit view layout. At this point, changes cannot be made to the DetailView layout in Studio, but any changes made to the EditView layout will automatically be synced to the DetailView layout when saved.

As an alternative to syncing the layouts, administrators can copy the layout from the EditView to the DetailView or QuickCreate layouts. This is especially useful if you want the layouts to be similar, but different. Make any necessary changes to the EditView layout, then navigate to either the DetailView or QuickCreate layout. Select "Copy from EditView" to replace the current layout with details from the EditView layout. Once copied, you can continue to edit the DetailView layout.



Note: The copy feature is a one-time copy of the layouts. Any future changes to the EditView layout will not be reflected on the DetailView layout without performing the copy again.

Editing Layouts

You can add, remove, hide, and reorder the fields for the available layouts in the

module by selecting the specific layout under the Modules panel to edit. Please note that the List View, PopupView, and Search layouts have columns where you can designate fields users can and cannot see.

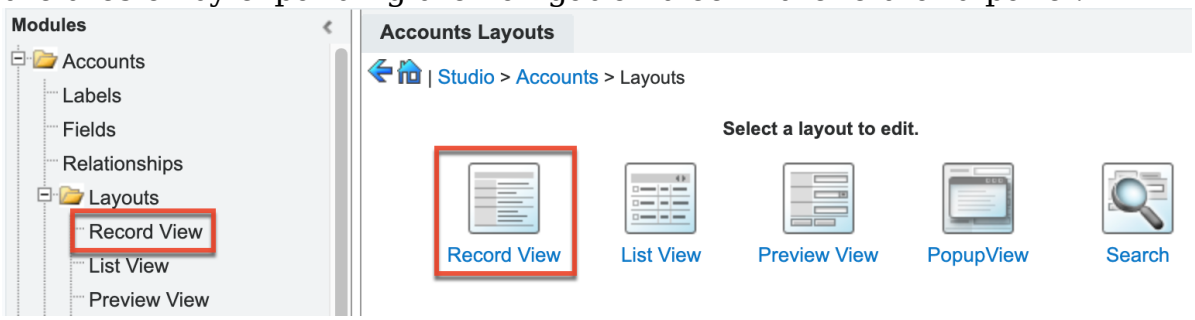
Record views may be configured to display differently based on the viewing user's role or based on a dropdown field's selected value. For more information see the Creating Role-Based Record View Layouts and Creating Dropdown-Field-Based Record View Layouts sections of this page.

Note: Fields that are restricted to specific license types (e.g., Sugar Sell or Sugar Serve) can only be added to layouts by a user with the appropriate license type. If the field is already on a layout, users without the appropriate license type can remove it from the layout, but cannot re-add it. In addition, if a user does not have license access to a specific field, the field value is replaced with a pill containing the text "License Required". See the User Management documentation for an outline of what each license type includes.

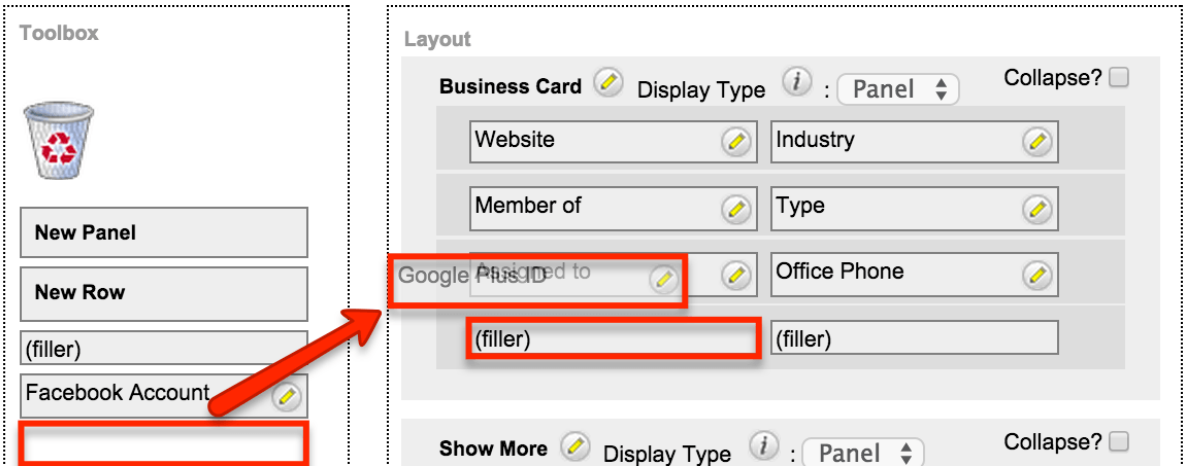
Editing Record View Layout

The following steps cover editing the Record View layout for the Accounts module as an example:

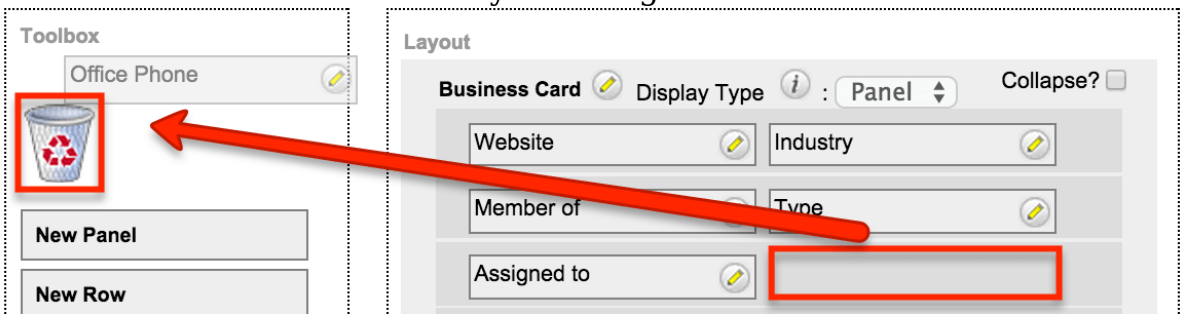
1. Navigate to Studio > Accounts > Layouts > Record View either by clicking the tiles or by expanding the navigation tree in the lefthand panel.



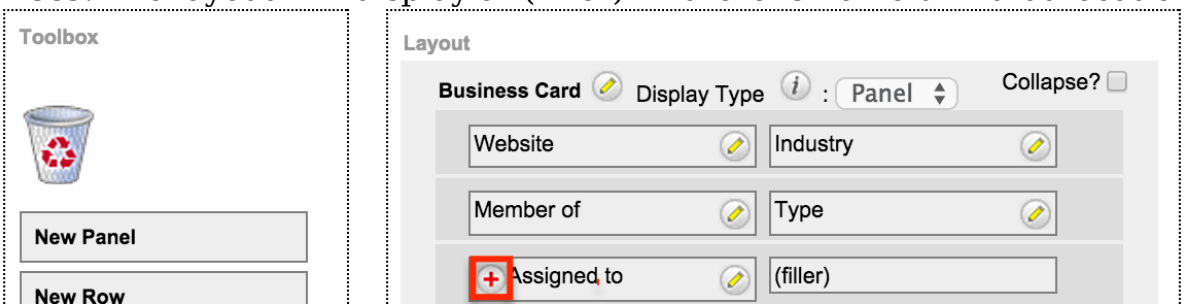
2. To add a field to the Record View layout, drag the field from the list of fields in the Toolbox to your desired "(filler)" location on the layout. You can also drag a field to a location on the layout that already has a field in place; the newly added field and the existing field on the layout will swap places.



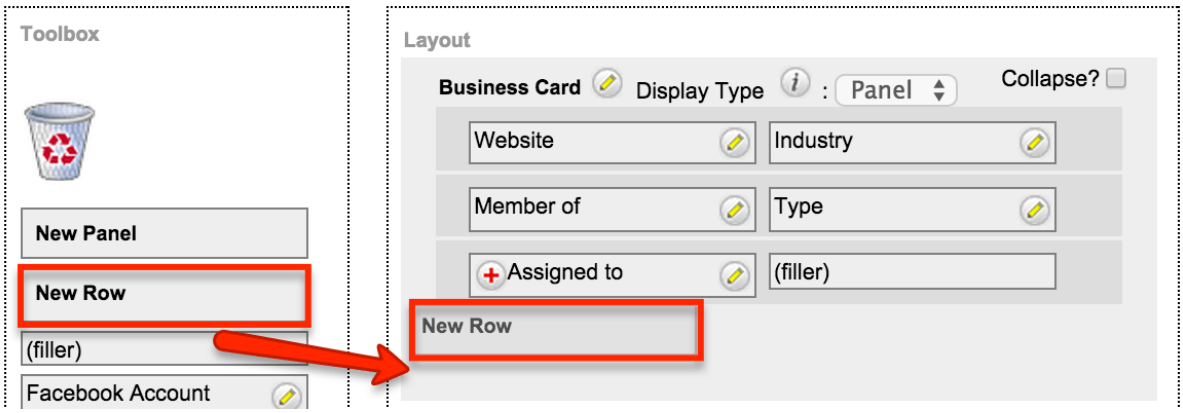
3. To remove a field from the layout, drag and drop the field from the layout to the trash bin in the toolbox to remove the field from the layout. You may remove an entire row in the layout using the same method.



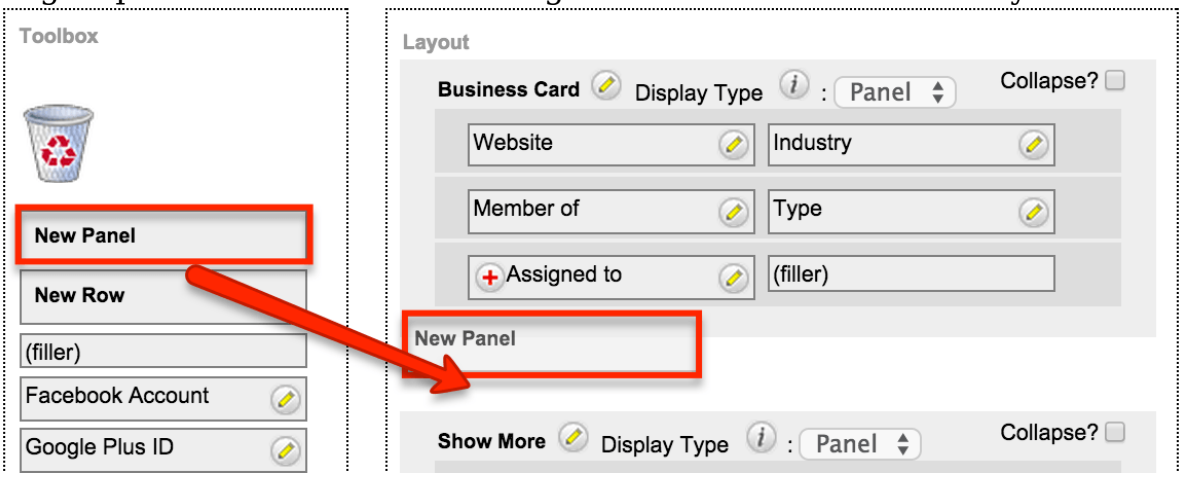
4. To expand or minimize the field column in the layout, click the Plus icon (+) to stretch the field over two columns or click the Minus icon (-) to fit the field into one column. Some fields with content that can become long (e.g., Comment Log) are better suited to being displayed across two columns. **Note**: The layout will display a "(filler)" if there is no field in that location.



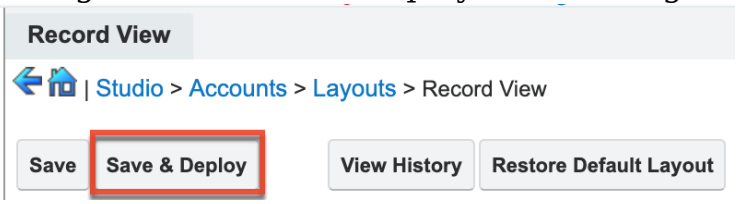
5. To add a new row, drag the "New Row" item in the Toolbox to the layout to allow additional fields or blank spaces to be added.



6. To add a new panel, drag the "New Panel" item in the Toolbox to the layout to group different sets of fields together in the Record View layout.



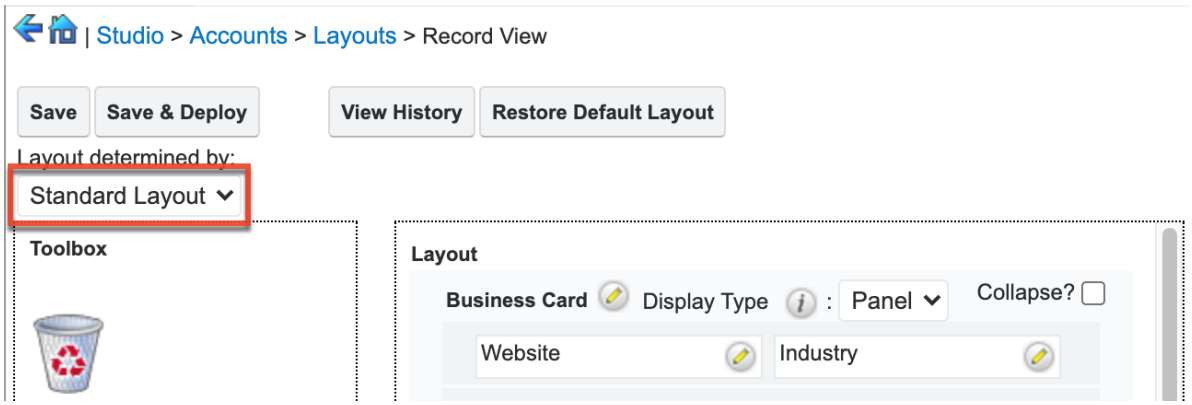
7. Once the layout is finalized, click "Save & Deploy" to preserve your changes and deploy immediately. You can click "Save" to preserve the changes made but not deploy them to Sugar's user interface.



Note: It is recommended that dependent fields be placed below and/or to the right of the independent field to preserve the correct display of fields on the layout.

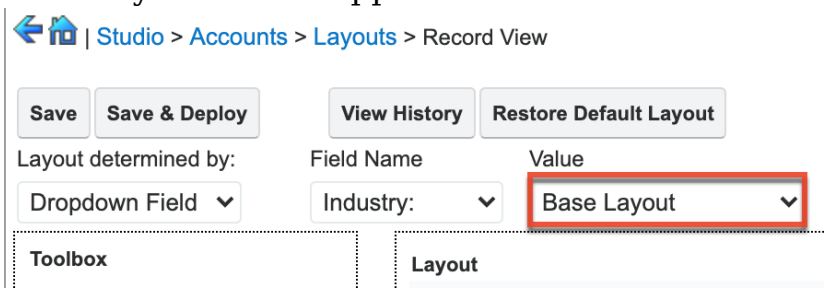
Creating Standard Record View Layouts

The Layout Determined By dropdown is set to Standard Layout by default and is the record view that all users see. The availability and organization of fields may be altered to provide only the relevant fields according to your business practices. You may manipulate the layout as described in the Editing Record View Layout section above. All users will see the customizations made to the Standard Layout upon clicking "Save and Deploy".



Creating Base Layouts

When creating role or dropdown-based layouts, you can choose to customize the Base Layout. You may manipulate the layout as described in the Editing Record View Layout section above. After clicking "Save & Deploy", changes made to the Base Layout will be applied to all non-customized role or dropdown field layouts.



Creating Role-Based Record View Layouts

Record Views can be configured to display customized layouts based on the viewing user's role. The availability and organization of fields may be altered to provide only the relevant fields for each user's role according to your business practices. When configuring layouts for role-based views, the Role dropdown appearing on the top contains all existing roles in the Sugar application as well as a "Base Layout" option. By default, none of the Sugar roles have customized views, so changes made to the Base Layout will automatically be copied to the other role-views upon save. This means that as long as no role-views are customized here, all users will see the record view layout matching the Base Layout.

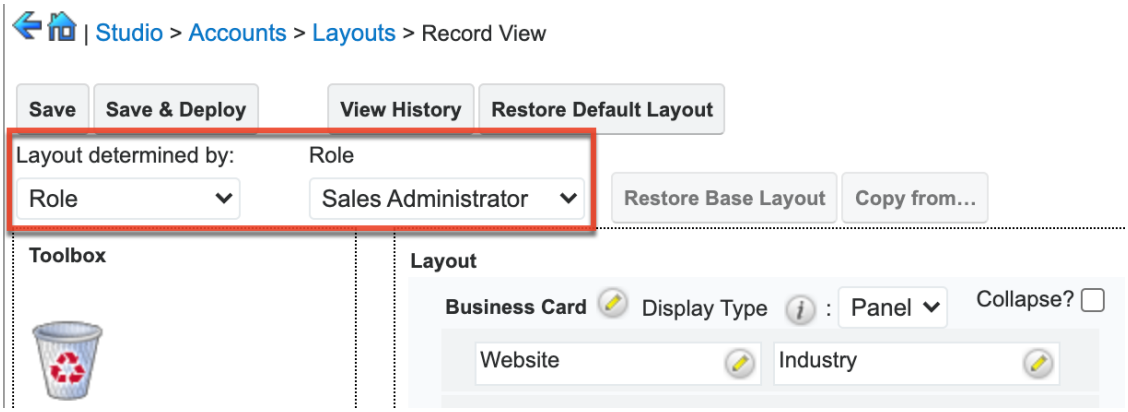
Note: It is recommended to assign each user to a maximum of one role. Users belonging to multiple roles that each have customized role-views may experience unexpected behavior when using record views. For more information about roles, please refer to the Role Management documentation.

Role-based customizations to record views are included when exporting

customizations from Studio. For more information, please refer to the Exporting Role-Based and Dropdown-Field-Based Customizations section of the Studio documentation and the Module Loader documentation.

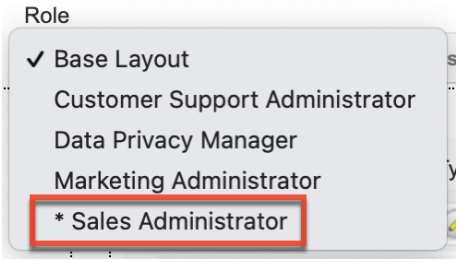
Follow the steps below to create a role-based record view for a module (e.g., Accounts).

1. Navigate to Admin > Studio > Accounts > Layouts > Record View.
2. Select "Role" from the "Layout Determined By" dropdown.
3. Select a role from the Role dropdown.



When viewing a Sugar role's role-view (e.g., Sales Administrator), you have the option to add, remove, and rearrange fields and panels. You may manipulate the layout as described in the Editing Record View Layout section of this page. The inclusion and location of fields will be specific to the role-view you are customizing. However, changes made to a field's display label from any of the role-views will update that field's display label on all role-views.

Once you have saved a modification to a role-view, it is considered customized and will display an asterisk (*) next to the role's name in the Role dropdown. Adding, removing, and rearranging fields or panels on the Base Layout will no longer have any effect on customized views.



Note: Role-based views are not available for Legacy modules' detail views or any other Sidecar layouts besides the record view. The Sidecar module must be available for editing in Studio for you to be able to create role-based record views.

Creating Dropdown-Field-Based Record View Layouts

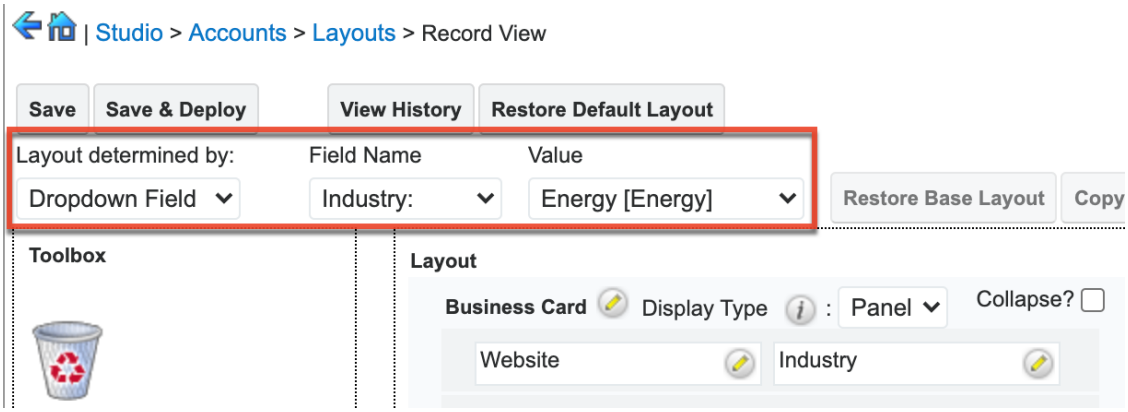
Record views can be configured to display customized layouts based on the value selected in a given dropdown field on the record. The availability and organization of fields may be altered to provide only the relevant fields for the dropdown field's value according to your business practices. For example, you may want to collect different data points about an account that is in the Energy industry than you would for an account in the Education industry; dropdown-based layouts let you swap the fields that are visible when a user sets an account to Industry = "Energy" vs. when they set Industry = "Education".

When editing a particular module's record view, the Field Name dropdown contains all available dropdown fields for the module, and the Value dropdown field contains the values for the corresponding field. By default, none of the dropdown fields' values have customized views, so changes made to the Base Layout will automatically be copied to the other views upon save. This means that, as long as no dropdown views are customized here, all users will continue to see the record view layout matching the Base Layout.

Dropdown-field-based customizations to record views are included when exporting customizations from Studio. For more information, please refer to the Exporting Role and Dropdown Field-Based Customizations documentation and the Module Loader documentation.

Follow the steps below to allow certain dropdown field values to use a modified record view for a module (e.g., Accounts).

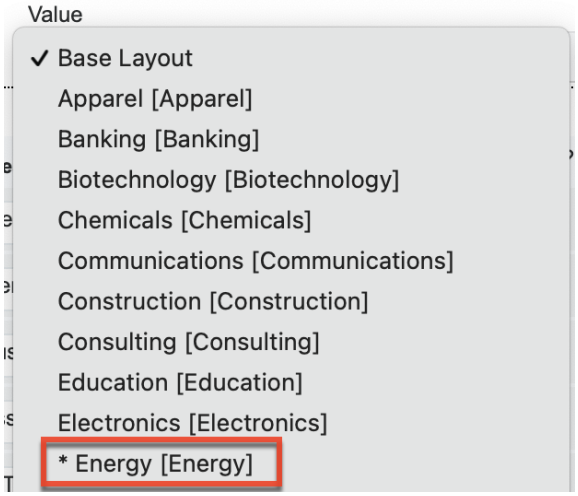
1. Navigate to Admin > Studio > Accounts > Layouts > Record View.
2. Select "Dropdown Field" from the Layout Determined By dropdown.
3. Select a field from the Field Name dropdown.
4. Select the field's value from the Value dropdown



When viewing a Sugar dropdown field's value (e.g., "Energy" from the Industry dropdown field in the Accounts module), you have the option to add, remove, and

rearrange fields and panels. You may manipulate the layout as described in the Editing Record View Layout section above. The inclusion and location of fields will be specific to the view for the dropdown field's value you are customizing. However, changes made to a field's Display Type (e.g., Panel) from any of the views will update that field's Display Type on all views.

Once you have saved a modification to a dropdown-field-based record view, it is considered customized and will display an asterisk (*) next to the field value in the Value dropdown. Adding, removing, and rearranging fields or panels on the Base Layout view will no longer have any effect on customized views.

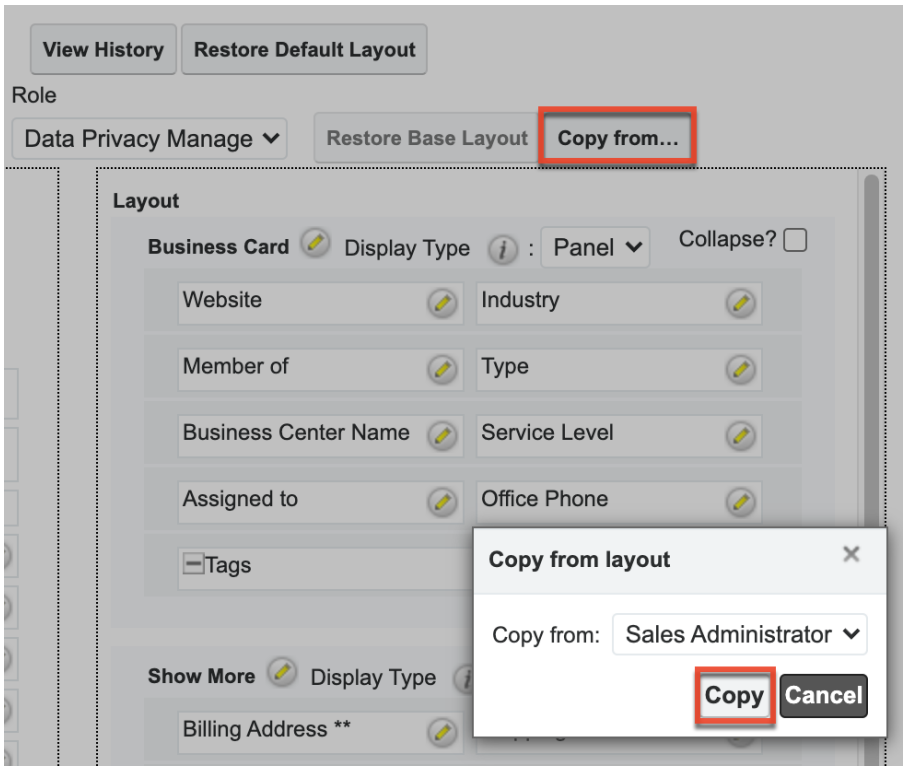


Note: Dropdown-field-based views are not available for Legacy modules' detail views or any other Sidecar layouts besides the record view. The Sidecar module must be available for editing in Studio for you to be able to create dropdown-field-based record views.

Copying From a Customized Record View Layout

Customized layouts may be copied to another role or dropdown field layout, but not to the Base Layout.

1. Select the layout to alter in either the Role or Value dropdown field.
2. Click "Copy from..." and select the customized layout to duplicate. The "Copy from..." button will only appear when a customized layout is available to be copied.
3. Click "Copy" and then "Save" or "Save & Deploy".

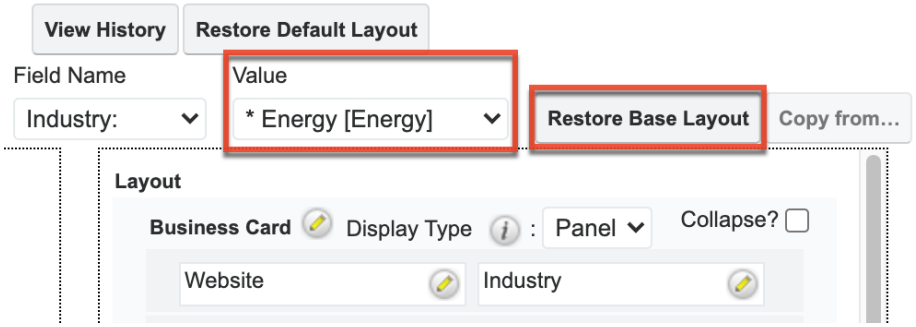


This will update the current layout to match the copied layout, and the current layout will now be considered customized and display an asterisk (*) next to the layout's name in the Role or Value dropdown.

Restoring Customized Layout to the Base Layout

The Restore Base Layout button may be used to bring a customized view back to the base layout.

1. Select the customized layout in either the Role or Value dropdown field.
2. Click "Restore Base Layout" and then "Save" or "Save & Deploy".

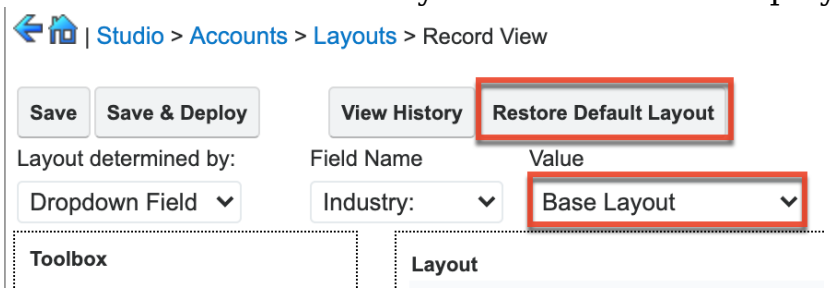


This will re-establish the link between the selected layout and the base layout so that changes to the base layout will once again be automatically applied to the selected layout. This will also remove the asterisk from the selected layout's name in the Role or Value dropdown since it is no longer considered customized.

Restoring Customized Layout to the System Default Layout

The Restore Default Layout button can also be used to bring a customized layout back to Sugar's out-of-the-box record view layout.

1. Select "Standard Layout" from the Layout Determined by dropdown or "Base Layout" in either the Role or Value dropdown field.
2. Click "Restore Default Layout" and "Save & Deploy".

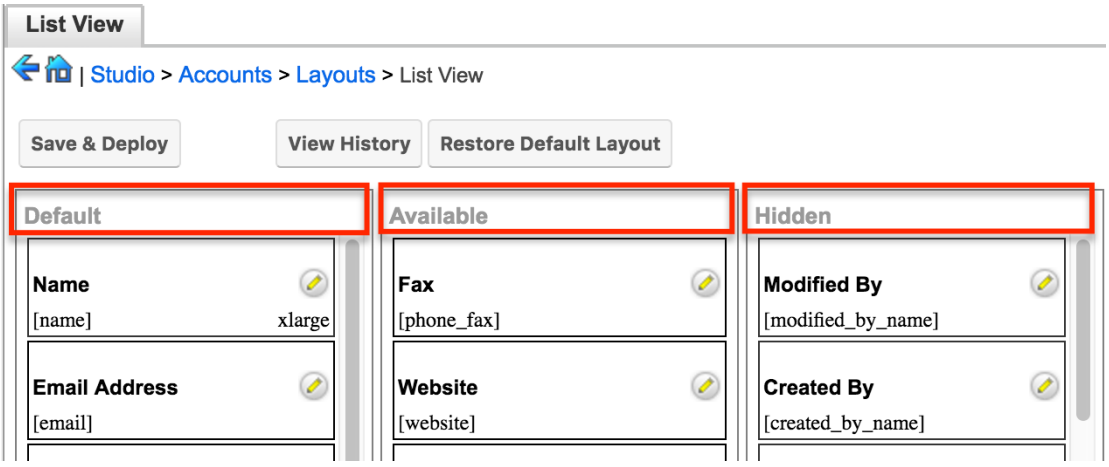


This will remove any Studio changes to the layout so that it once again matches the system's stock layout. All other, non-customized role or dropdown field layouts will also be updated to match.

Editing List View Layout

The List View layout has columns where you can define the fields that users can and cannot see. The List View layout also controls the list of available fields for the module's list view dashlet (e.g., My Contacts). Once the appropriate configurations are made in Studio, the deployed changes will be reflected in the Columns field of the corresponding module dashlet's Configuration Options page. Keep in mind that the module dashlet will not automatically reflect the Studio changes and users must edit the dashlet to view the changes, add new fields to the layout, etc.

To configure the List View layout, move the displayed fields among the Default, Available, and Hidden columns:

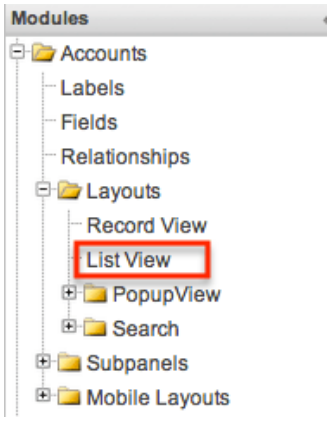


- **Default**: Drag fields into the Default column to display them on the default List view layout. The top-to-bottom order of fields corresponds with the left-to-right presentation of columns on the list view (or right-to-left for users viewing an RTL language). For example, the topmost field in the default column will be shown in the leftmost column of the list view.
- **Available**: Drag fields into the Available column to make them available for users to personalize their view of the layout without making them part of the default layout. Users will be able to click the Column Selection icon to see the list of available fields. For more information on working with columns in the list view, please refer to the User Interface documentation. **Note**: Not all list-type layouts have an Available fields section.
- **Hidden**: Drag fields into the Hidden column to hide them from users in the list view. Hidden fields will be unavailable in list view regardless of a user's team or role settings, but they may still be available to users in other places such as in reports or the record view.

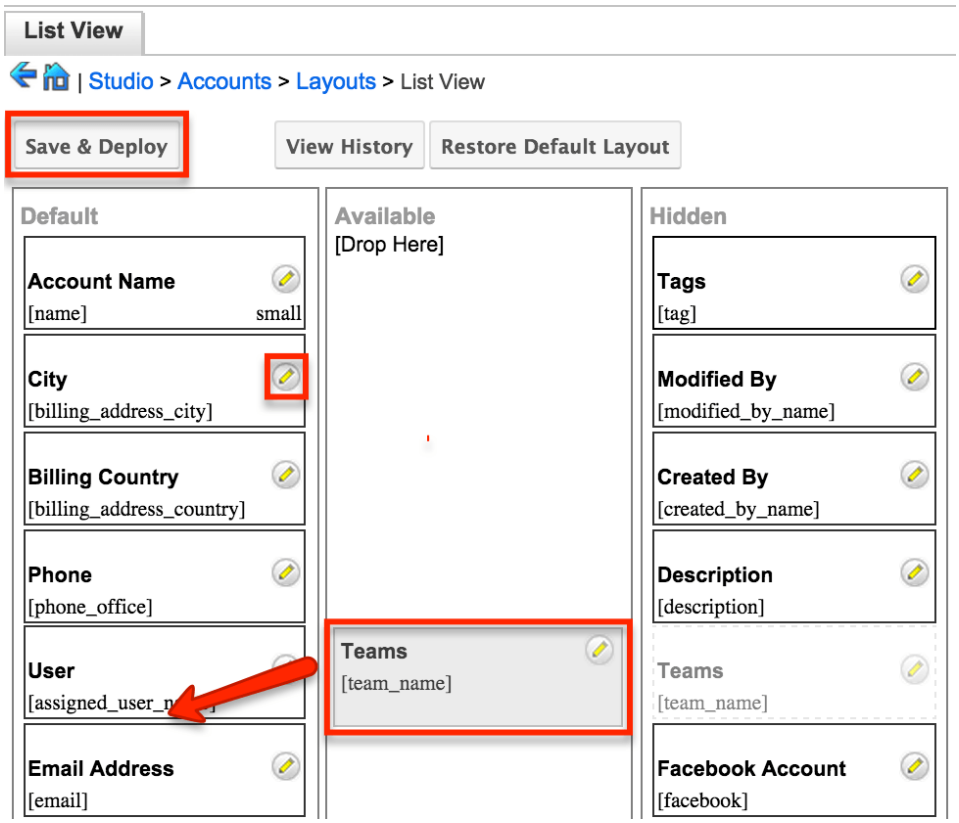
Note: To enable fields as filters in a Sidecar module's list view and list view dashlet (e.g., the "My Contacts" dashlet), please refer to the Editing Search Layout section.

The following steps cover editing the List View layout as an example:

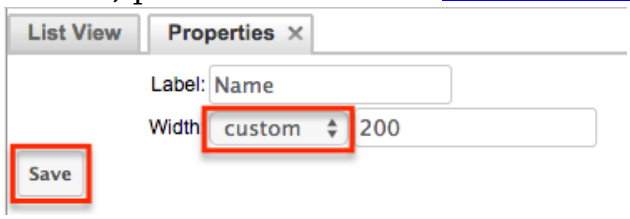
1. Expand "Layouts" from the Modules panel under the Accounts module and select "List View".



2. To add a field to the List View layout, drag and drop the fields from the Hidden column to the Default column. The fields in the Default column will be available to add as display columns in the corresponding module dashlet (e.g., My Accounts).



3. To remove a field from the layout, drag and drop the field from the Default column to the Hidden column.
4. To change the left-to-right order of the fields displayed on the list view, drag and drop fields up or down within the Default list. The order of fields designated for the List View layout also affects the order for the list of available fields in the corresponding module dashlet (e.g., My Accounts).
5. Optionally, modify the label and width for the field. Click the Pencil icon next to each field, enter the new label or select the width (e.g., small, medium, large), then click "Save". Changes to a field's label will affect all List View layouts for this module. For more information on setting column widths, please refer to the List View Column Widths section.



6. Click "Save & Deploy" to preserve your changes and deploy immediately.

List View Column Widths

Administrators can easily set the column widths for specific fields when configuring the List View layout. You can choose from a pre-defined list of width sizes (e.g., small, medium, large) that are available out-of-the-box with Sugar or enter a custom width value. The custom width value should be entered in pixels (e.g., 200) for Sidecar modules. Legacy modules should be entered as a percentage

(e.g., 40) of the total width of the list view that should be dedicated to the column.

The following table describes the available column width sizes for fields in Sugar's list-view layouts. The Approximate Characters column indicates the maximum number of characters the column will display before indicating overflow with an ellipsis. For example, a column size with an Approximate Characters value of 4 would display "University of Miami" as "Univ...". This number is an approximation due to the various widths of characters in the alphabet (e.g., a "w" character occupies more horizontal space than an "i" character). Users may expand the default column width manually or hover over the ellipses to reveal the field's entire contents.

Name	Width	Approximate Characters
xxsmall	20px	1
xsmall	40px	2
small	68px	8
medium	128px	15
large	180px	30
xlarge	280px	50
xxlarge	460px	85

Note: For currency fields, Sugar enforces a minimum 141px column width. Therefore, only the "large" setting and above will apply and custom values must be defined as 141 or wider.

Editing Search Layout

The Search layout controls which fields are available as filters in a module's list view, list view dashlet, or the Renewal or Service Console's module tab's list view. You edit the Search layout using the same method as the List View layout, but using only the Default and Hidden columns. Fields placed in the Default column will be available as filters for users in the module's list view and list view dashlet; fields placed in the Hidden column will not. For more information on dragging and dropping fields between the Default and Hidden columns, please refer to the Editing List View Layout section of this page.

Note: After an administrator edits the Search layout for a module in Studio, users must edit or re-create their list view dashlets to see the deployed changes to their available filters or columns.

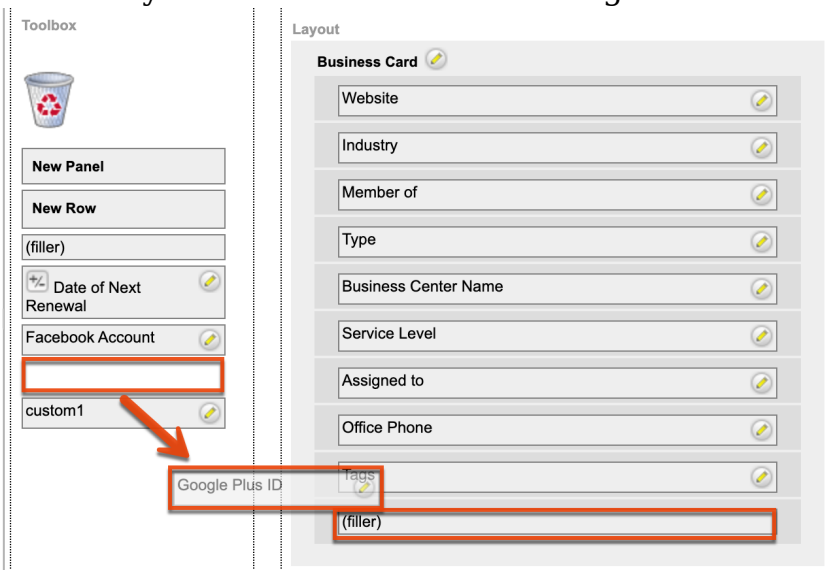
Editing Record View Dashlet Layout

The Record View dashlet layout can be configured in Studio for all supported Sidecar modules as well as any custom modules. You edit the Record View dashlet layout using the same method as the Record View layout. The only exception is that the Comment Log field cannot be added to the dashlet's layout. However, the Comment Log dashlet can be used instead to view the Comment Log on a dashboard.

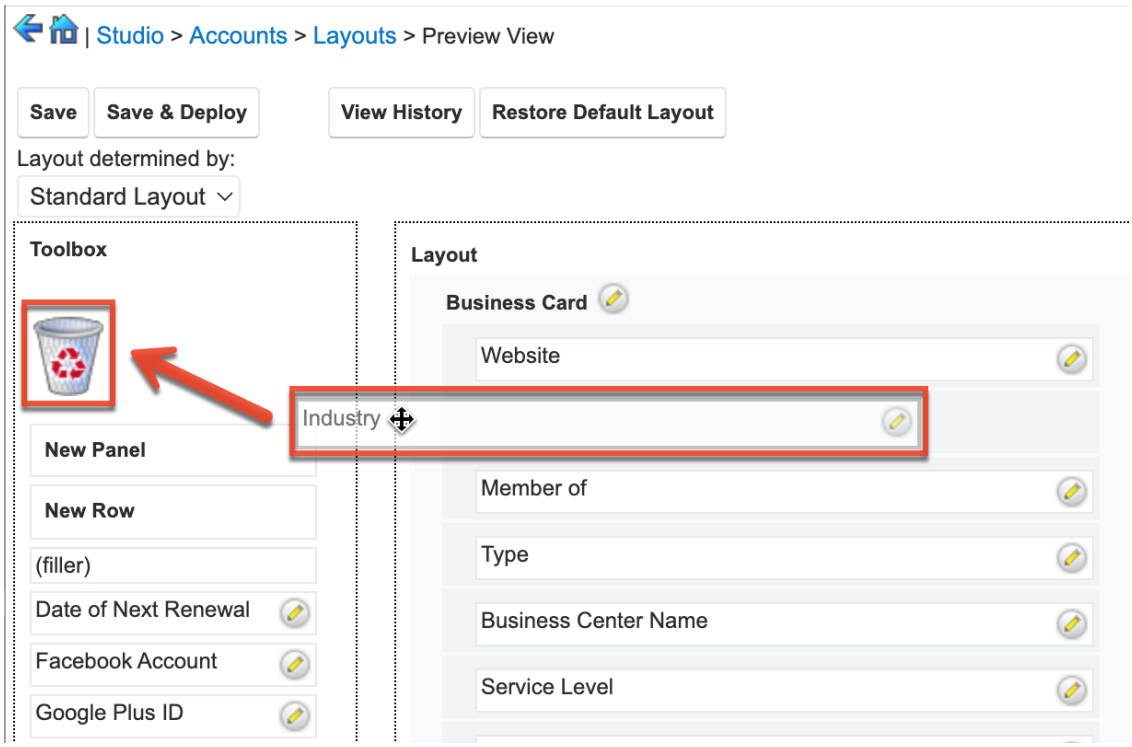
Editing Preview View Layout

The Preview View layout may be configured to display differently based on the viewing user's role or based on a dropdown field's selected value. For more information see the Creating Role-Based Record View Layouts and Creating Dropdown-Field-Based Record View Layouts sections of this page. The following steps cover editing the Preview View layout for the Accounts module as an example:

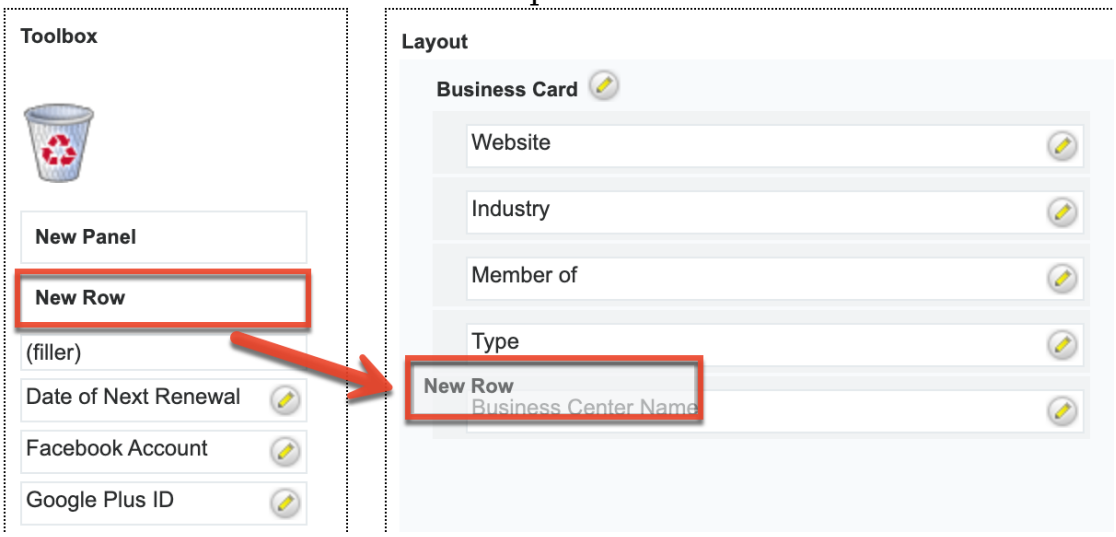
1. Expand "Layouts" from the Modules panel under the Accounts module and select "Preview View". The Preview View layout will display in the main panel to the right.
2. To add a field to the Preview View layout, drag the field from the list of fields in the Toolbox to the desired "(filler)" location on the layout. You can also drag a field to a location on the layout that already has a field in place; the newly added field and the existing field on the layout will swap places.



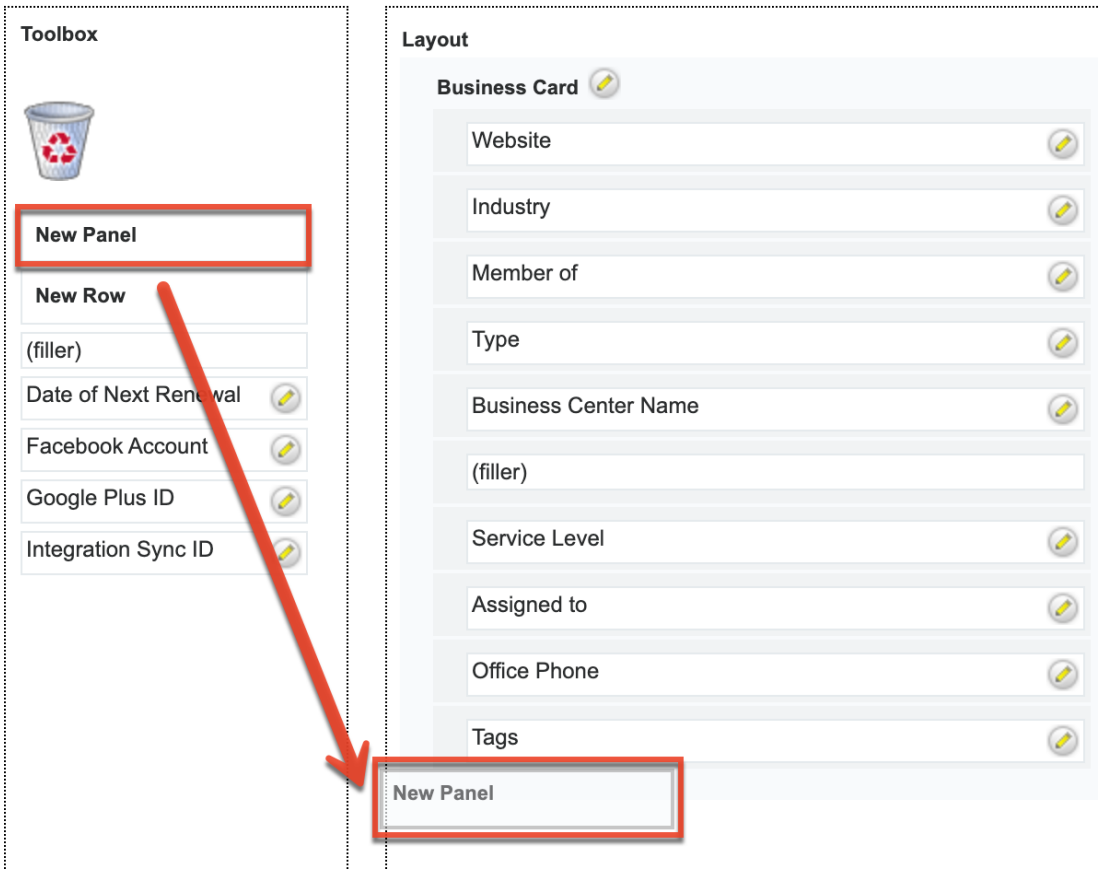
3. To remove a field from the layout, drag and drop the field from the layout to the trash bin in the toolbox to remove the field from the layout. You may remove an entire row in the layout using the same method.



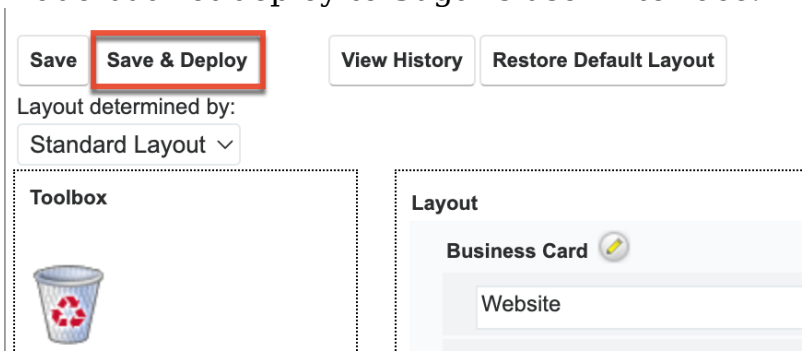
4. To add a new row, drag the "New Row" item in the Toolbox to the layout to allow additional fields or blank spaces to be added.



5. To add a new panel, drag the "New Panel" item in the Toolbox to the layout to group different sets of fields together in the Record View layout.



6. Once the layout is finalized, click "Save & Deploy" to preserve your changes and deploy immediately. Click "Save" to preserve the changes made but not deploy to Sugar's user interface.



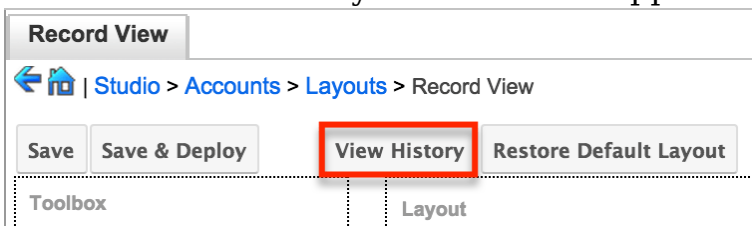
Viewing Layout History

Layouts, subpanels, and mobile layouts in Studio keep a history of the last ten changes made to the specific layout. To view the history for any of these layouts, simply select "View History" from the Record View layout for Sidecar modules, or other view layout for Legacy modules in Admin > Studio.

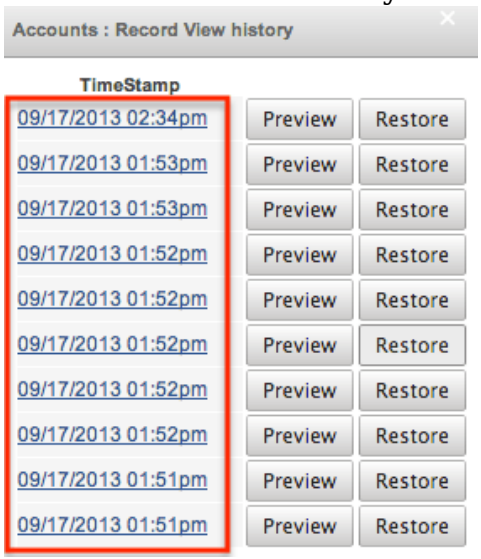
The following steps cover viewing the layout history for the Record View layout as an example:

1. Navigate to the Record View layout in Admin > Studio.

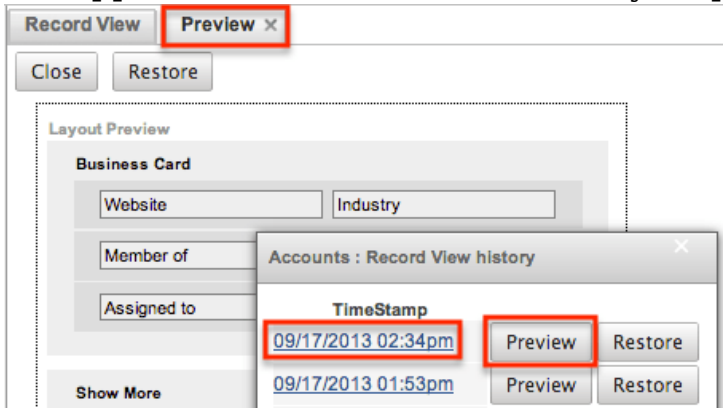
2. Click the View History button on the upper left of the layout editor.



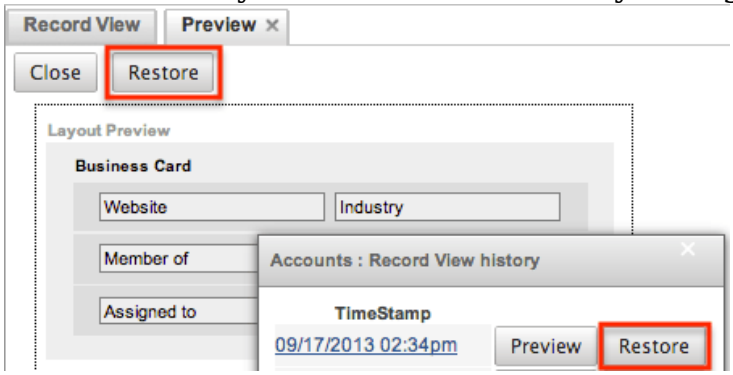
3. The History dialog box will appear showing the timestamps of the last ten saves to the selected layout.



4. Click the timestamp or Preview button and a preview of the modified layout will appear in a new tab of the main layout panel.



5. To restore a specific layout per the history, click the Restore button within the Preview layout or from the History dialog box.

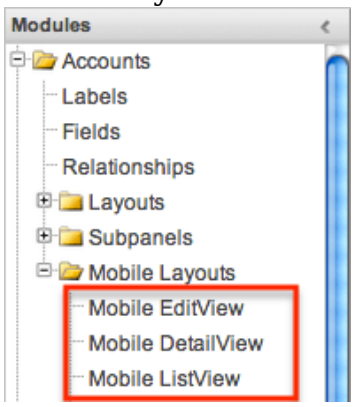


The chosen Record View layout will load into the editor where you can make the desired changes to the layout. Click "Save" to preserve your changes or "Save & Deploy" to preserve your changes and deploy immediately.

Mobile Layouts

Overview

Mobile layouts are used to represent the views in Sugar Mobile. The mobile layouts section in Studio allows administrators to add fields and configure the various mobile layouts. To access the mobile layouts section in Studio, expand "Mobile Layouts" from the Modules panel under the desired module. The available mobile layouts for the selected module will appear under "Mobile Layouts".



For all other layout types, please refer to the Layouts page.

Mobile Layout Types

There are various mobile layouts in Sugar to represent the different areas of the Sugar Mobile application. Please note that not all layouts are available in every module and the different mobile applications will use the information defined here differently.

The following mobile layouts are available in Sugar:

- **Edit View**: Edit view layout is used to modify or create records in the specified module.
- **Detail View**: Detail view layout is used to view the current data for a record within the specified module. Certain fields are translated to Sugar Mobile as buttons instead of data. For example, instead of seeing the phone number, there is a phone icon to be able to call the number on the record.
- **List View**: List view layout is used to view multiple records within the specified module. The first eleven fields in the Default column will be

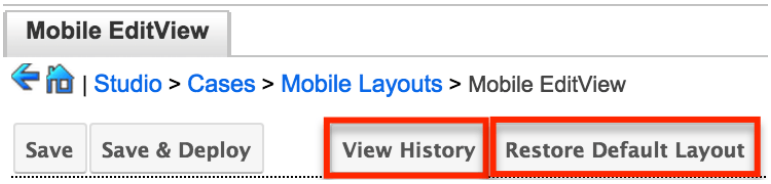
displayed in Sugar Mobile by default unless the user has customized their view.

Mobile Layout Options

Administrators have the ability to configure the various mobile layouts available via Studio.

The following options are available when configuring mobile layouts in Studio:

- **View History**: Sugar keeps a history of the changes made to each layout. You can preview and restore historical layouts via "View History". For more information on viewing the history of layouts, please refer to the Viewing Layout History documentation.
- **Restore Default Layout**: Restores the mobile layout back to the default out-of-the-box layout. For more information on how to restore the default layout, please refer to the Restoring Default Layouts documentation.
- **Role**: Record views may be configured to display differently based on the viewing user's role. For more information, please refer to the Creating Role-Based Record View Layouts documentation.



Editing Mobile Layouts

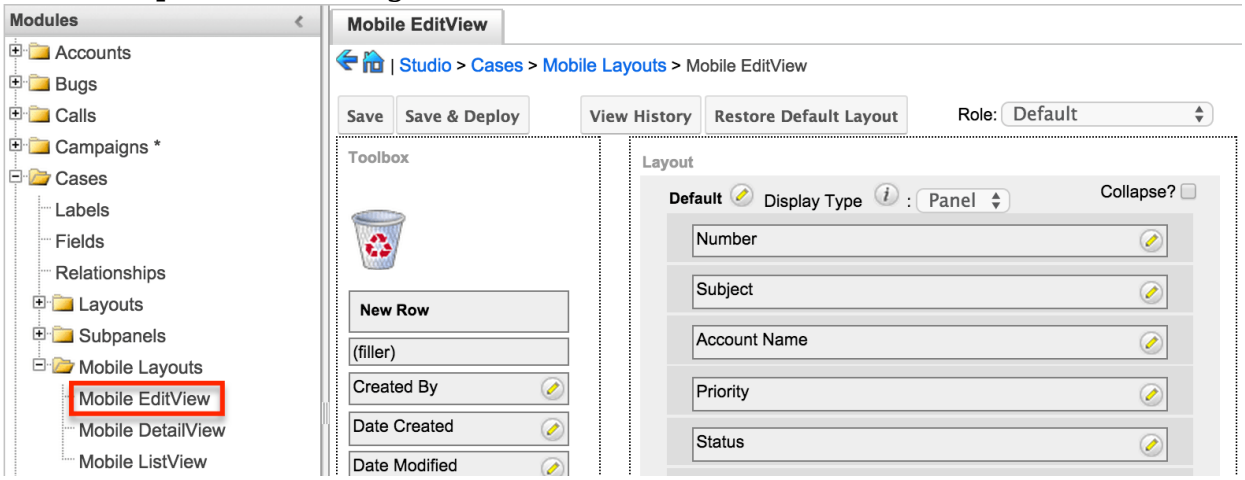
You can add, remove, hide, and reorder the fields for the available layouts in "Mobile Layouts" by selecting the specific layout under the Modules panel to edit. Please note that the method for modifying Mobile EditView and DetailView layouts are similar. The Mobile ListView layout has columns where you can designate fields users can and cannot see.

Mobile EditView and DetailView can both be configured to display customized layouts based on the viewing user's role. The availability and organization of fields may be altered to provide only the relevant fields for each user's role according to your business practices. For more information about configuring role-based layouts, please refer to the Creating Role-Based Record View Layouts documentation.

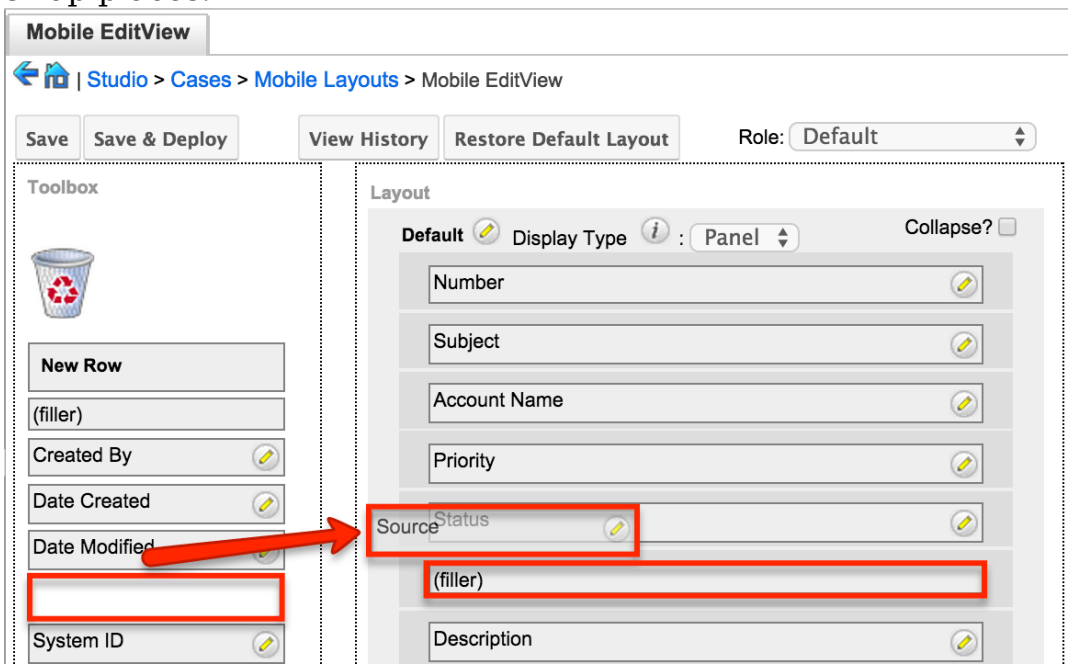
The following steps cover editing the Mobile EditView layout for the Cases module

as an example:

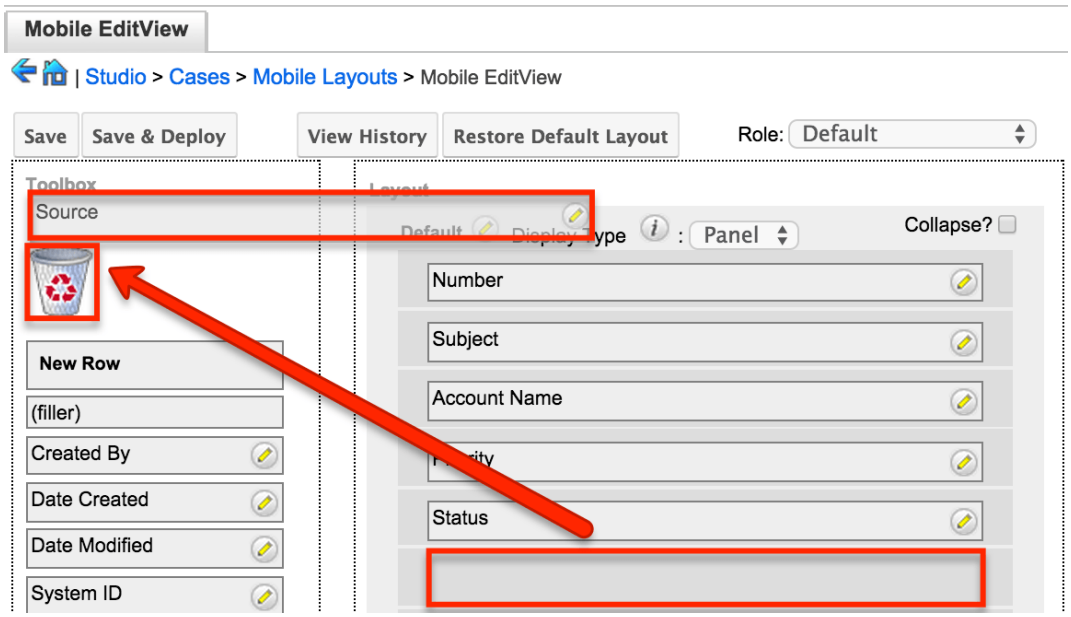
1. Expand "Mobile Layouts" from the Modules panel under the Cases module and select "Mobile EditView". The Mobile EditView layout will display in the main panel to the right.



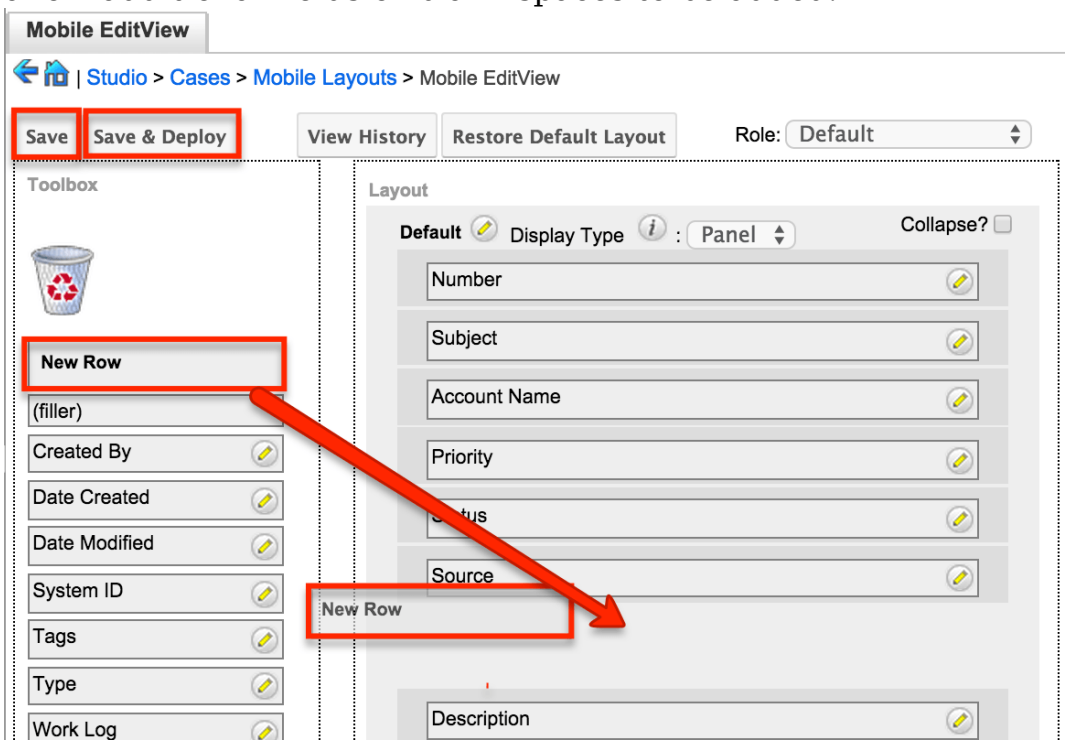
2. To add a field to the Mobile EditView layout, drag the field from the list of fields in the Toolbox to the desired "(filler)" location on the layout.
3. You can also drag a field to a location on the layout that already has a field in place. The newly added field and the existing field on the layout will swap places.



4. To remove a field from the layout, drag and drop the field from the layout to the trash bin in the Toolbox to remove the field from the layout. You may remove an entire row in the layout using the same method.



5. To add a new row, drag the "New Row" item in the Toolbox to the layout to allow additional fields or blank spaces to be added.



6. Once the layout is finalized, click "Save" to preserve your changes or "Save & Deploy" to preserve your changes and deploy them instantly.

Unlike the Mobile EditView layout, the Mobile ListView layout has columns where you can designate fields users can and cannot see. When configuring the Mobile ListView layout, you will see three columns (Default, Available, Hidden) where fields can be dragged and dropped accordingly.

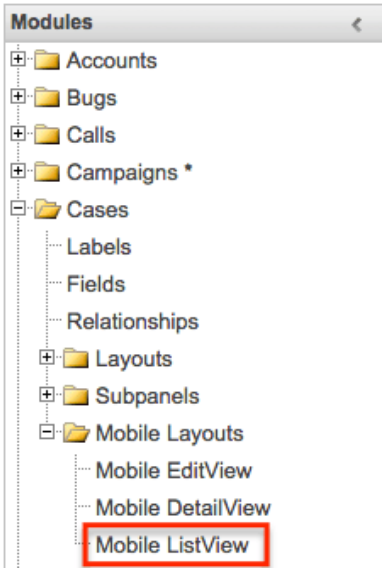
- **Default**: This column contains fields that are displayed in the list view; the first eleven fields are shown by default unless a user has customized their

list view for the module using the List View Builder in Sugar Mobile. See the SugarCRM mobile app documentation for more details on List View Builder.

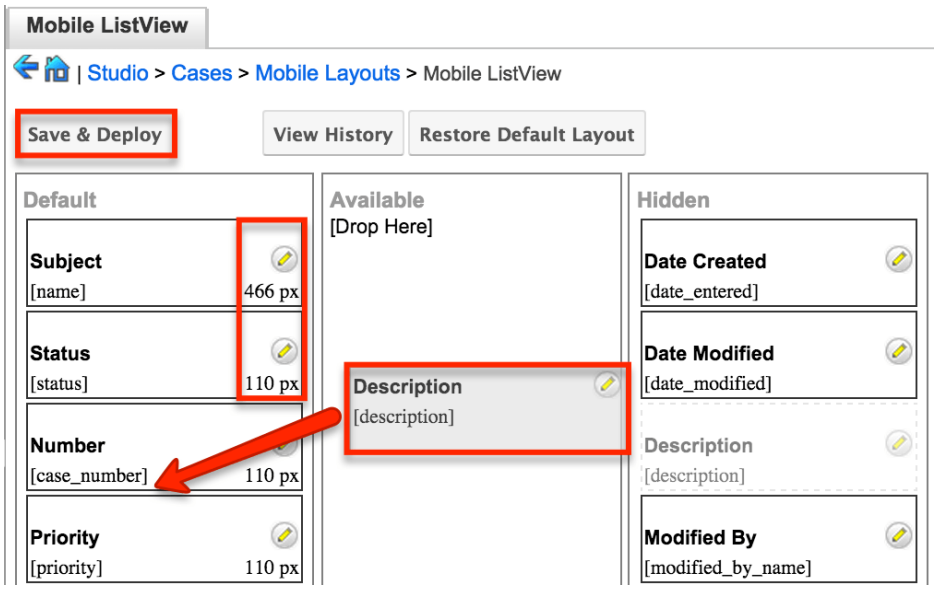
- **Available**: Available fields are fields that will not show by default in the layout, but if the layout can be personalized, users can add these fields to their view of the layout. Not all list type layouts have an available fields section.
- **Hidden**: This column contains fields that will not be displayed or available to be added to the list view by users.

The following steps cover editing the Mobile ListView layout as an example:

1. Expand "Layouts" from the Modules panel under the Cases module and select "Mobile ListView".



2. To add a field to the Mobile ListView layout, drag and drop the fields from the Hidden column to the Default column. The top eight fields will be displayed on the Cases list view if the user has not customized their list view at all using the List View Builder in Sugar Mobile. See the SugarCRM mobile app documentation for more details on List View Builder.

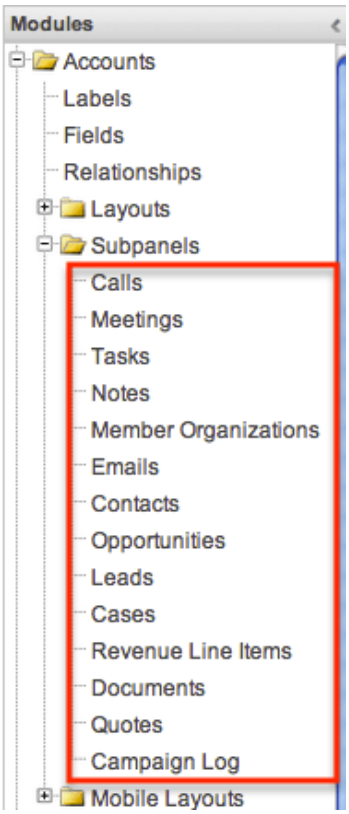


3. Click the Pencil icon to modify the label of the field as well as the width size the field will take up in the list view. Please note that the modified label will display in all ListView layouts.
4. Click "Save & Deploy" to preserve your changes and deploy immediately.

Subpanels

Overview

Related records between modules in Sugar are commonly displayed in Subpanels. Similar to list type layouts, administrators can modify the subpanel layouts to change which fields are shown in a module's subpanel. You can add or remove fields for these subpanels depending on the information you want to be displayed to users. You can also rename a subpanel if needed. To access the subpanels section in Studio, expand "Subpanels" from the Modules panel under the desired module and the available subpanels will appear. Please note that the list of available subpanels for each module will vary.

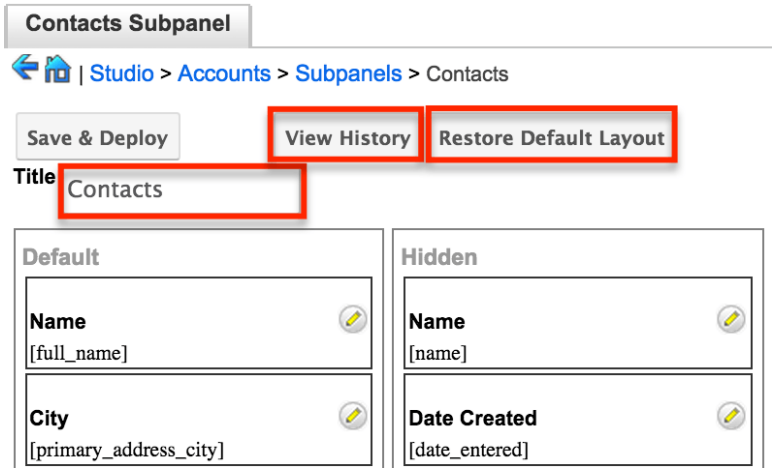


Subpanel Options

When configuring the Subpanel layout in Studio, there are options that allow you to change the subpanel title, view historical layout changes, and restore the default layout.

The following options are available when configuring subpanels in Studio:

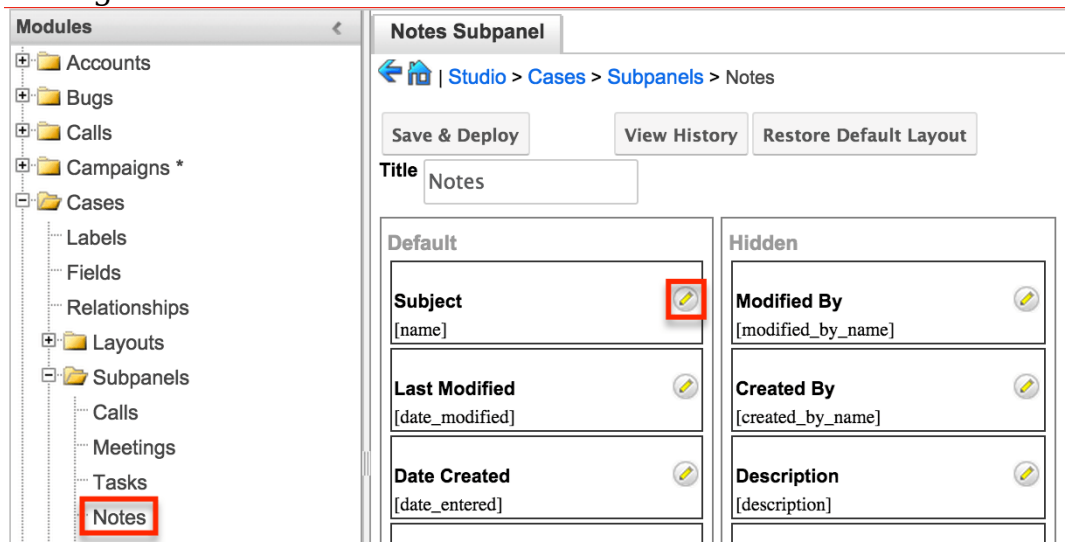
- **Subpanel Title**: Sugar administrators have the option to modify the name of the subpanel. This will change the display value of the subpanel when viewing the record view (for Sidecar modules) or detail view (for Legacy modules) of a record from the specified module.
- **View History**: Sugar keeps a history of the changes made to each subpanel. You can preview and restore historical layouts via "View History". For more information on viewing the history of subpanels, please refer to the Viewing Layout History documentation.
- **Restore Default Layout**: Restores the subpanel layout back to the default out-of-the-box layout. For more information on how to reset a subpanel to the default layout, please refer to the Restoring Default Layouts documentation.



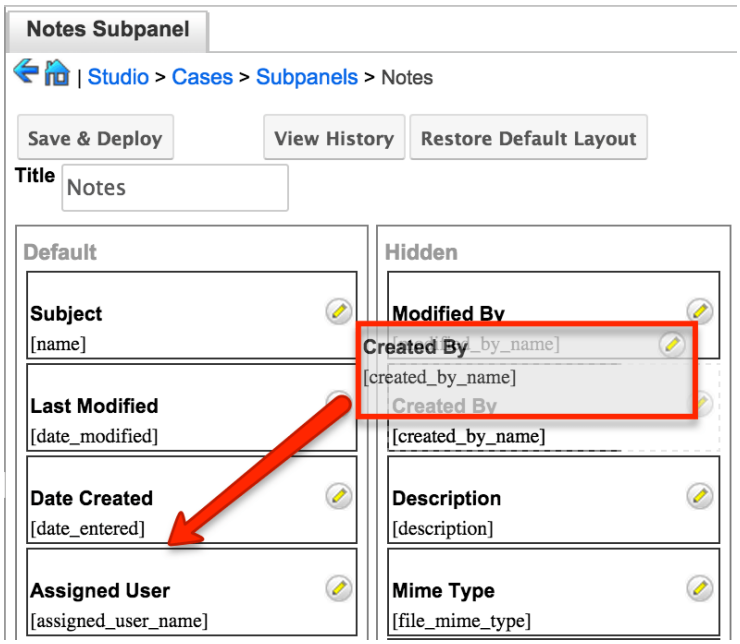
Editing Subpanels

The following steps cover editing the Notes subpanel for the Cases module as an example:

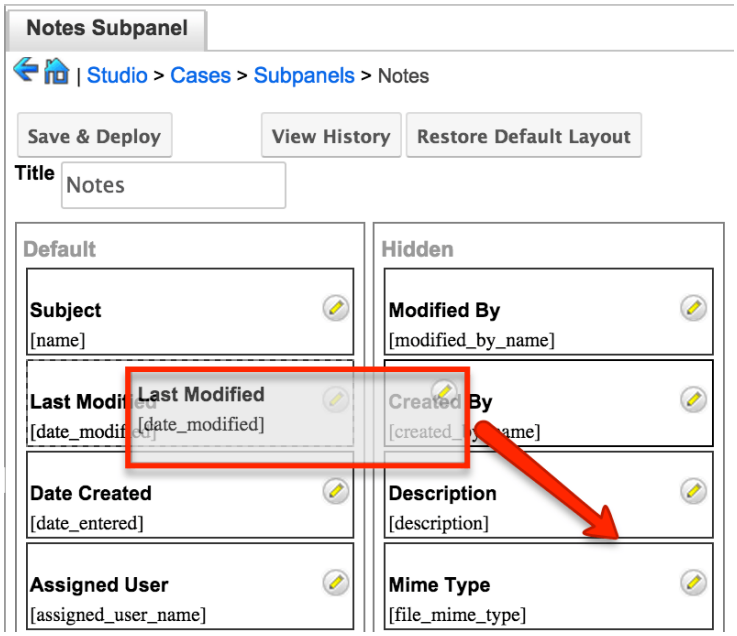
1. Expand "Subpanels" from the Modules panel under the Cases module and select "Notes". The Notes subpanel layout will display in the main panel to the right.



2. To add a field to the list of available column options within the Subpanel layout, drag and drop the fields from the Hidden column to the Default column. You can then drag the field up and down the list to change the position of the field in the subpanel.
   Note: When in a module's Record View, individual users can select which available fields to display in each subpanel by clicking the Gear icon.

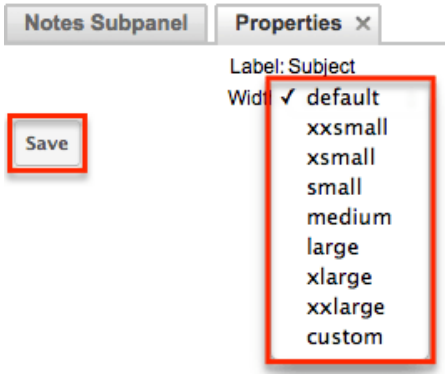


3. To remove a field, drag and drop the fields from the Default column to the Hidden column.



4. Click the Pencil icon to change the column width of the field in the subpanel. Administrators can choose from a pre-defined list of width sizes (e.g., default, small, medium, etc.). Please note that selecting the Default width will set the list view column to equal the Medium width size. Selecting "custom" from the list will allow you to enter a custom width value in the open box. The custom width value should be entered in pixels (e.g., 200) for Sidecar modules. Legacy modules should be entered as a percentage (e.g., 40) of the total width of the list view to be dedicated to the column.
   Note: When defining the column width for currency fields (e.g., Likely, Best, etc.), only "large" and above applies because there is a minimum width requirement in Sugar for this field type. In addition, when defining a

custom width for currency fields, the value must be 141px or wider.



5. Click "Save & Deploy" to preserve your changes and deploy them immediately.

Sugar Logic

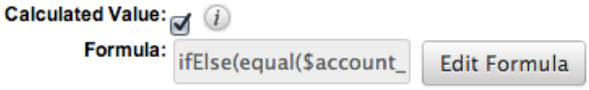
Overview

Sugar Logic allows administrators to write simple formulas and logic checks to provide a calculation for a field or to set the visibility of a field. For more information regarding the types of fields that you can use Sugar Logic with, please refer to the Field Options documentation. A calculated field uses a formula to derive its value based on the values of other fields as well as mathematical or logical operators. A dependent field uses a formula to determine whether or not the field should be displayed. These formulas are automatically recalculated when the record is updated. In addition, when a record containing a formula's input field is updated, the formula is automatically recalculated.

Note: When creating a calculated formula for a Currency field, the currency symbol should not be used for a value (e.g., $100) in the formula. The formula should only define the numeric value (e.g., 100), as including the currency symbol will result in improperly calculated values.

When a calculated or dependent field is created or its formula is modified, all existing records in the module will not use the new formula until they have undergone a save action. To update the existing records to use the new formula, the module's list view includes a Recalculate Value action. Admin users or users with developer-level access can use this feature to cause existing records to recalculate affected fields without having to perform an update on each record individually. For more information, please refer to the User Interface documentation in the Application Guide.

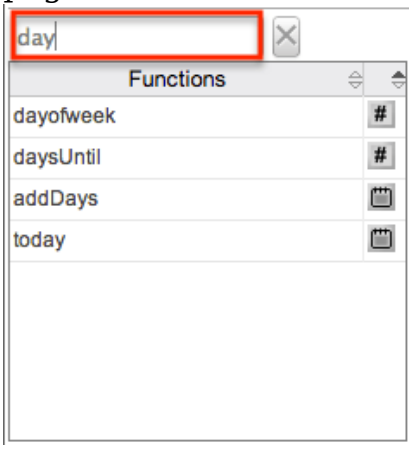
Administrators can access the formula builder for the fields and options that accept formulas by selecting "Edit Formula".



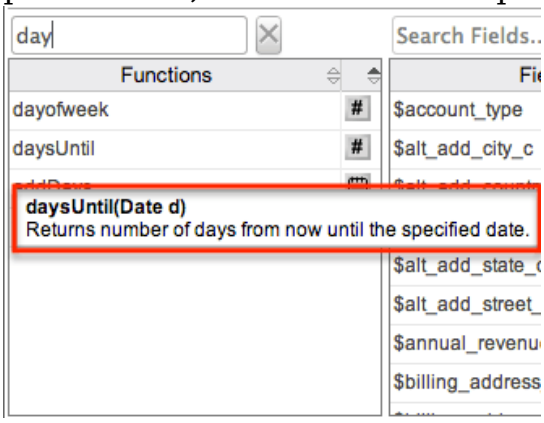
To browse all of the functions available, refer to the Complete List of Sugar Logic Functions section of this page. For more information and examples using Sugar Logic, please refer to the Sugar Logic section of the Knowledge Base, which includes articles covering the use of dependent and calculated fields. Topics range from introductory information to example Sugar Logic formulas and detailed walkthroughs of how to construct various fields and formulas in the formula builder.

Functions

Functions are listed on the lower left-hand corner of the formula builder and provide a variety of calculations, logic checks, and formatting options. To locate the function you need, simply scroll through the list or enter search criteria to narrow the list. Refer to the Complete List of Sugar Logic Functions section of this page to browse all of the available functions.

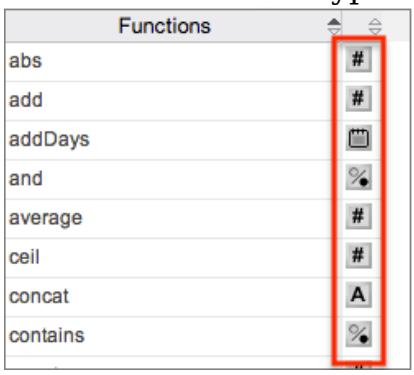


To see how to use a function, simply hover over the function to view the syntax, parameters, and a brief description of what the function does.



The function name is followed by a comma-separated list of parameters to the function. The list specifies the data type expected for each parameter. For example, the function "daysUntil" expects one parameter of Date type.

The description in the hover text will typically specify what data type is being returned, but if it does not, the symbol to the right of the function also represents the function's data type.

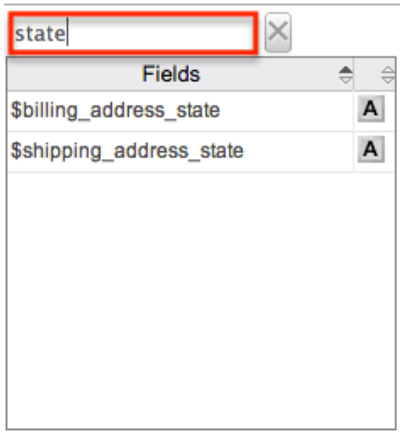


The following is a list of the possible return type symbols and the data types they return:

Symbol	Description
#	Returns a Number
Calendar	Returns a Date object with a date and time
%	Returns a Boolean (true or false) value
A	Returns Text
[ ]	Returns a List
?	Returns a variable data type that could be any of the above

Fields

Fields are listed on the lower right-hand corner of the formula builder and contain the fields for the current module. Fields can be referenced in formulas and will start with a $. To locate the field you need, simply scroll through the list or enter search criteria to narrow the list.

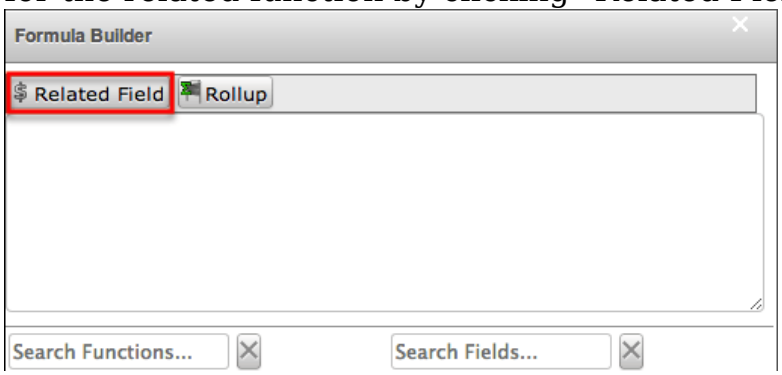


To add a field to the formula, simply click on the field to be added. The variable

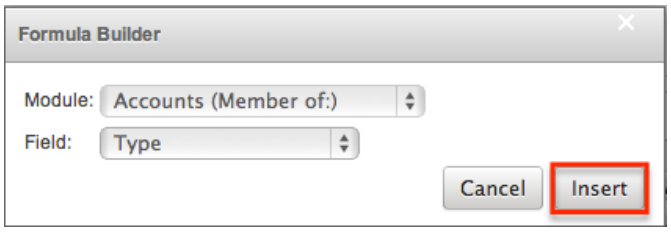
name for the field will be placed at the end of the formula. You can also type the variable names manually in the formula.

Related Field

Related fields are available to be added to formulas via the related function. You can manually add related function calls to your formula or you can build the syntax for the related function by clicking "Related Field".



This will open a dialog box that will assist in building the syntax to use the related function. Select a module and a field within that module to pull the related field from and click "Insert".

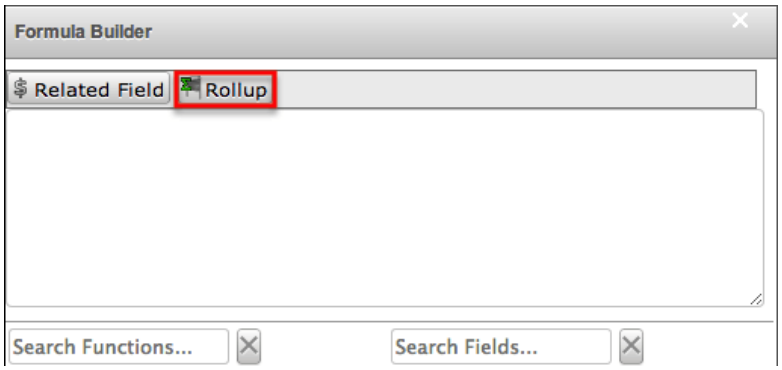


The resulting syntax for the selected options will be added to the formula.

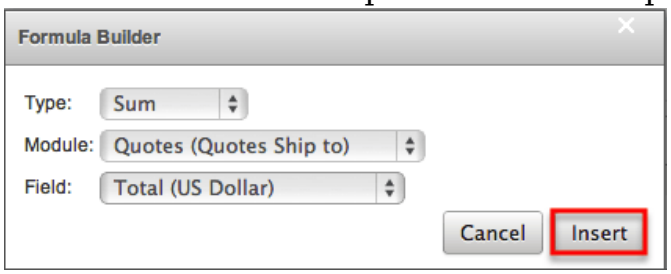
Note: If a record has multiple related records to a module, the related function will pull the field from one of the related records. It is not recommended to rely on the related function to pull the same related records for a many relationship.

Rollup

In addition to adding related fields, you can also add aggregate functions on related fields to formulas via the rollup functions. You can manually add rollup function calls to your formula or you can build the syntax for the rollup function by clicking "Rollup".



This will open a dialog box that will assist in building the syntax to use the rollup function. Select the type of rollup function (Sum, Average, Minimum, or Maximum) to perform on the module field. To perform a count of related records, please refer to the count function listed in the Functions section. Select a module and a field within that module to perform the rollup function on and click "Insert".



The resulting syntax for the selected options will be added to the formula.

Note: Rollup functions can only aggregate number type fields.

Complete List of Sugar Logic Functions

Some functions require a given number of parameters while others are more flexible. Most parameters require a specific data type to be passed in for the function to work. Functions with the same data type can be nested in a single formula.

The following functions and their parameters (multiple parameters are represented by "...") are available in Sugar:

Function	Description	Parameters	Return Type
abs	Returns the absolute value of $param1.	Number $param1	Number
add	Returns the sum of the given parameters.	Number $param1, ...	Number
addDays	Returns $date moved forward or	Date $date, Number $days	Date

	backward by $days.		
and	Returns true if and only if all given parameters are true.	Boolean $param1, …	Boolean
average	Returns the average of the given parameters.	Number $param1, …	Number
ceil	Returns $param1 rounded up to the next integer.	Number $param1	Number
concat	Returns all of the given parameters appended together in the order passed.	String $param1, …	Text
contains	Returns true if $needle is within $haystack.	String $haystack, String $needle	Boolean
count	Returns the number of records related to this record by $module	Relate $module	Number
countConditional	Returns the number of records related to this record by $link and that match the value of a specific field.	Relate $link, Field $string, Values $list	Number
createList	Returns a list of the given parameters.	Generic $param1, …	List
currentUserField	Returns the value of a field in the Users module ($field) for the currently viewing user (e.g., currentUserField("department")). **Note**: Field values that can be evaluated in the	String $field	Variable

	Users module are limited to fields that have the "Make visible for calculations" field option enabled.		
date	Returns $param1 as a Date object.	String $param1	Date
dayofweek	Returns the number of the day of the week that $param1 falls on.	Date $param1	Number
dayofmonth	Returns the number of the day of the month as extracted from a date or datetime field.	Date $param1	Number
daysUntil	Returns the number of days from now until $param1.	Date $param1	Number
divide	Returns the $numerator divided by the $denominator.	Number $numerator, Number $denominator	Number
equal	Returns true if $param1 is equal to $param2.	Generic $param1, Generic $param2	Boolean
floor	Returns $param1 rounded down to the next integer.	Number $param1	Number
forecastIncludedCommitStages	Returns all the included commit stages for the Forecast module.		List
forecastSalesStages	Returns the values of all not-closed sales stages and any included closed sales stages for the Forecast module	Boolean $includeWon, Boolean $includeLost	List

	from the sales_stage_dom dropdown list. If $includeWon is true and $includeLost is false, it will return all sales stage values that are not "Closed Lost".		
forecastOnlySalesStages	Exclusively returns the values of included sales stages for the Forecast module from the sales_stage_dom dropdown list. If $includeWon is true and the remaining parameters are false, it will return all "Closed Won" values.	Boolean $includeWon, Boolean $includeLost, Boolean $includeEverythingElse	List
getDropdownKeySet	Returns a List of the keys in the dropdown named $param1. This list must be defined in the Dropdown editor.	String $param1	List
getDropdownValue	Returns the value for the $key found in the dropdown named $list. This list must be defined in the Dropdown editor.	String $list, String $key	Text
getDropdownValueSet	Returns a List of the values in the dropdown named $param1. This list must be defined in	String $param1	List

	the Dropdown editor.		
getListWhere	Returns the matched array from lists.	String $trigger, Enum $lists	List
greaterThan	Returns true if $param1 is greater than $param2.	Number $param1, Number $param2	Boolean
hoursUntil	Returns the number of hours from now until $param1.	Date $param1	Number
ifElse	Returns $return1 if $condition is true or $return2 if $condition is false.	Boolean $condition, Generic $return1, Generic $return2	Variable
indexOf	Returns the position of $needle in $haystack or -1 if $haystack does not contain $needle. The index starts at 0.	Generic $needle, List $haystack	Number
isAfter	Returns true if $param1 is after $param2.	Date $param1, Date $param2	Boolean
isBefore	Returns true if $param1 is before $param2.	Date $param1, Date $param2	Boolean
isForecastClosed	Returns true if $status is in the forecast config for sales_stage_won or sales_stage_lost	String $status	Boolean
isForecastLost	Returns true if $status is in the forecast config for sales_stage_lost	String $status	Boolean
isForecastWon	Returns true if $status is in the forecast config for sales_stage_won	String $status	Boolean

isInList	Returns true if $item is contained within $list. $list can be a dropdown or multiselect field type.	Generic $item, List $list	Boolean
isValidDate	Returns true if $param1 is a valid date string.	String $param1	Boolean
isValidEmail	Returns true if $param1 is in a valid email address format.	String $param1	Boolean
isWithinRange	Returns true if $value is greater than or equal to $min and less than or equal to $max.	Number $value, Number $min, Number $max	Boolean
ln	Returns the natural log of $param1.	Number $param1	Number
log	Returns the $base Log of $value.	Number $value, Number $base	Number
max	Returns highest value of the given parameters.	Number $param1, …	Number
maxRelatedDate	Returns the highest value of $field in records related to $module.	Relate $module, String $field	Date
median	Returns the median of the given parameters.	Number $param1, …	Number
min	Returns lowest value of the given parameters.	Number $param1, …	Number
monthofyear	Returns the number of the month that $param1 is in.	Date $param1	Number
multiply	Returns the value of the given parameters	Number $param1, …	Number

	multiplied together.		
negate	Returns the negated value of $param1.	Number $param1	Number
not	Returns true if $param1 is false, and false if $param1 is true.	Boolean $param1	Boolean
now	Returns a Date object representing todays date and the current time.		Date
number	Returns the numeric value of $param1.	String $param1	Number
or	Returns true if any given parameters are true.	Boolean $param1, …	Boolean
pow	Returns the $value raised to the power of $exponent.	Number $value, Number $exponent	Number
prorateValue	Returns the $baseValue prorated using $dv1 and $du1 as the duration value and unit of the numerator and $dv2 and $du2 as the duration value and unit of the denominator. Supports day, month, or year as duration units.	Number $baseValue, Number $dv1, String $du1, Number $dv2, String $du2	Number
related	Returns the value of $field in the related $module.	Relate $module, String $field	Variable
rollupAve	Returns the average value of $field in records related to $module.	Relate $module, String $field	Number

rollupConditionalSum	Returns the sum of the values of $field in records related by $link where $conditionField contains something from $conditionalValues.	Relate $link, String $field, String $conditionField, List $conditionalValues	Number
rollupMax	Returns the highest value of $field in records related to $module.	Relate $module, String $field	Number
rollupMin	Returns the lowest value of $field in records related to $module.	Relate $module, String $field	Number
rollupSum	Returns the sum of the values of $field in records related to $module.	Relate $module, String $field	Number
strlen	Returns the number of characters in $param1.	String $param1	Number
strReplace	Returns modified $subject after replacing occurrences of $search within $subject string with the value specified by $replace. Include true as the fourth argument to make the search case-sensitive.	String $search, String $replace, String $subject, Boolean $case-sensitive (optional)	Text
strToLower	Returns $param1 converted to lower case.	String $param1	Text
strToUpper	Returns $param1 converted to upper case.	String $param1	Text
subStr	Returns the portion	String $value,	Text

	of $value specified by $start and $length. The position starts at 0.	Number $start, Number $length	
subtract	Returns $param1 minus $param2.	Number $param1, Number $param2	Number
timestamp	Returns the passed in datetime string as a unix timestamp.		Date
today	Returns a Date object representing todays date.		Date
toString	Returns $param1 converted to a string.	Generic $param1	Text
translateLabel	Returns the translated value of $label for $module.	String $label, String $module	Text
valueAt	Returns the value at position $index in $haystack.	Number $index, List $haystack	Variable
year	Returns the year portion of $param1 in YYYY format.	Date $param1	Number

Module Builder

Overview

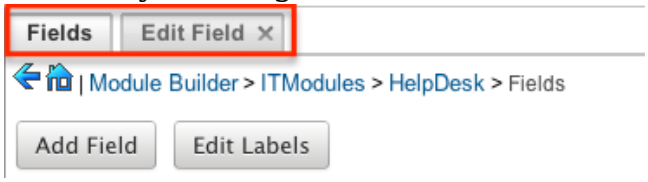
Module Builder enables administrators to create, deploy, and maintain custom modules in Sugar. Modules can be created in Module Builder and then deployed within your instance of Sugar or exported for additional development and deployment to other instances of Sugar. This is convenient for testing new modules and for distributing a module to many different instances. Please note that only users with administrator or developer access can create and manage custom modules via Admin > Module Builder. This documentation will cover how to use Module Builder as well as the various actions and options available from within Module Builder.

Navigation

Sugar's Module Builder is divided into three main sections which consist of the main panel, packages panel, and footer. You can easily create, access, and manage the custom modules via the main panel and Packages panel. The footer of Module Builder allows you to access different areas (e.g., Studio, Dropdown Editor) of the Developer Tools section by clicking the corresponding buttons at the bottom of the page.

Main Panel

The main panel in Module Builder is where you can create a new package, access existing packages, deploy a package, etc. As you create and configure the module(s) within the package, the various sections (e.g., layouts, fields, etc.) you access will open inside tabs on the main panel. Additional tabs that open up can be closed by clicking the "X" within the tab.



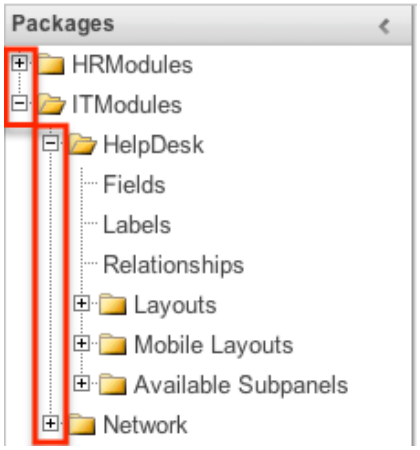
The main panel also displays the breadcrumbs bar showing your current location in Module Builder. You can navigate to a specific section by clicking the link within the breadcrumb bar.



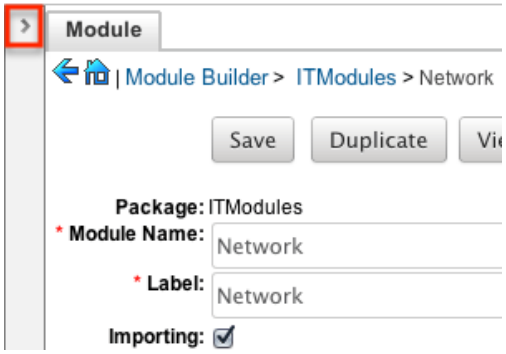
To go back to the previous page you were viewing, click the Left arrow on the breadcrumbs bar. Clicking the Home icon will navigate you back to the Developer Tools home page.

Packages Panel

The Packages panel is located to the left of the main panel and displays a list of existing packages and associated custom modules that are accessible via Module Builder. The custom modules are grouped under a package and the fields, layouts, subpanels, etc. specific to each module appear when you expand out the tree for the module.

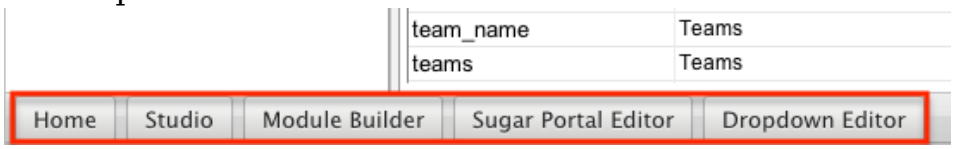


Select an item in the Packages panel to load it into the main panel. Please note that if you do not see the Packages panel, it may be collapsed. Simply locate the gray bar to the left of the main panel and click the Right arrow to expand the Packages panel.



Footer

The footer is located on the bottom left of Module Builder and displays buttons that enable you to navigate to the different areas (Studio, Dropdown Editor, etc.) of Developer Tools.



The options in the footer allow you to navigate to the following locations:

Menu Item	Description
Home	Navigates to the home page of Developer Tools.
Studio	Navigates to the home page of Studio.
Module Builder	Opens Module Builder to create and manage custom modules.
Sugar Portal Editor	Opens the Sugar Portal Editor to

	configure the Portal.
Dropdown Editor	Opens the Dropdown Editor to create and edit dropdown lists.

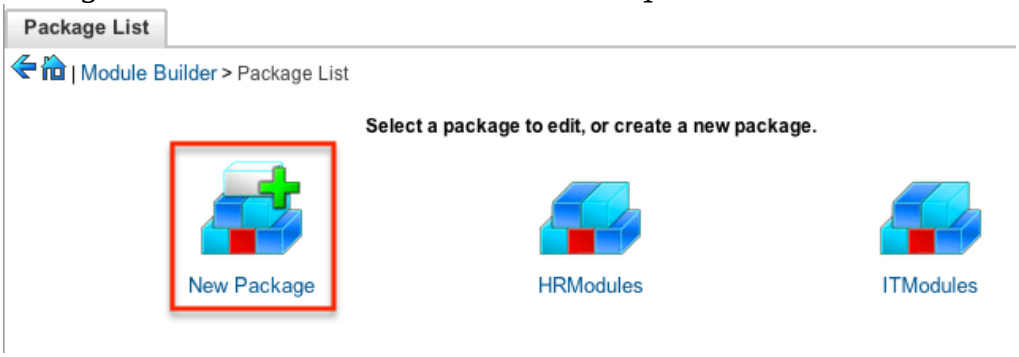
Packages

Packages in Module Builder allow you to create and house multiple modules of different types. Please note that a package must first be created in order to create a custom module via Module Builder. While packages can be useful to group similar or dependent modules together to ensure they are deployed together, it is generally recommended that a separate package be created for each module. This can help prevent potential issues down the road since if you ever need to uninstall a module and it is part of a larger package, then all modules in that package must be uninstalled. Keeping modules isolated to their own package allows greater flexibility in the future if a module is no longer needed.

Creating Packages

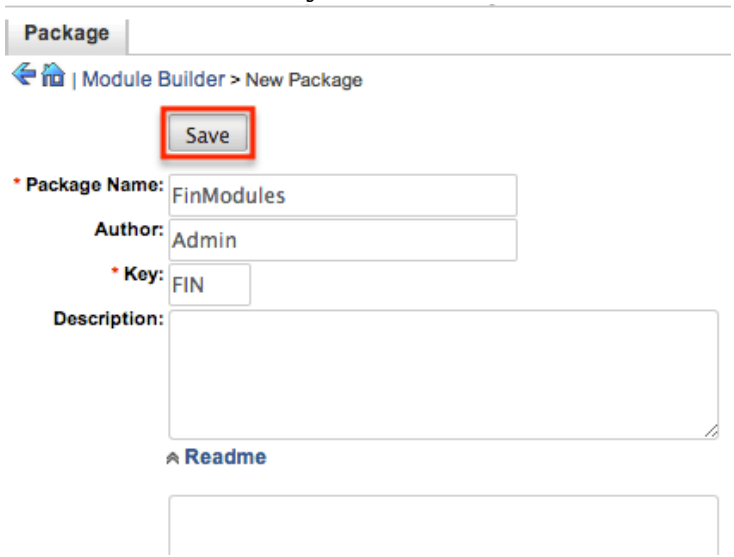
Use the following steps to create a new package via Module Builder:

1. Navigate to the Module Builder's main panel and click "New Package".



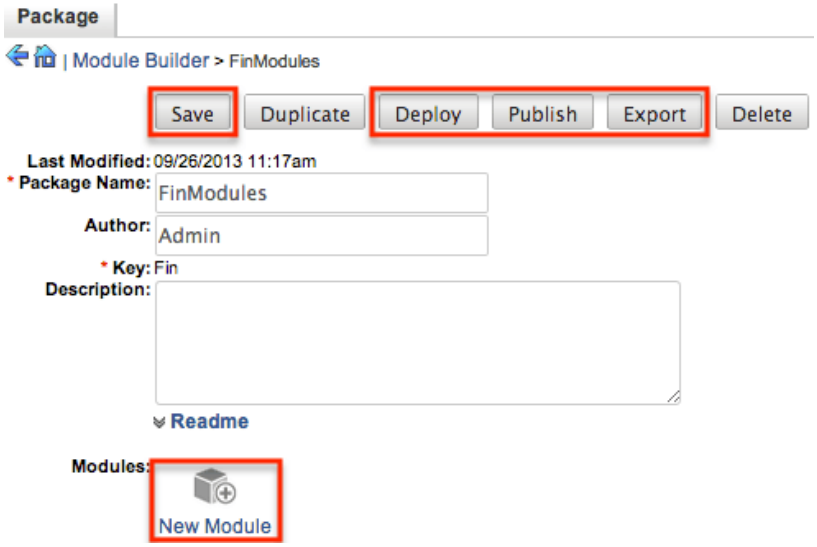
2. Enter appropriate values for the following fields:
    - **Package Name**: The name or designation of the package. The package name is what displays in the Packages panel and in Module Loader when installing packages.
    - **Author**: The author who is creating the package. The author displays in Module Loader when installing packages.
    - **Key**: The key is an alphanumeric text to distinguish modules with similar names. The system will prefix all class names, directories, and table names with this key.
    - **Description**: A description or other information about the package.
    - **Readme**: Click "Readme" to display an open text box where you can enter additional information about the package or modules contained in the package.
    - **Note**: All required fields are marked with a red asterisk and must be completed prior to saving.

3. Once the necessary information is entered, click "Save".



Deploying Packages

Once the package is created and saved, you can create custom modules by clicking the New Module icon. Please note that the package must contain at least one module in order to properly publish and deploy the package, as well as export the customizations. There are various options (e.g., deploy, publish, export, etc.) available when viewing the package which allows you to perform various actions.



The Package options allow you to perform the following operations:

Action	Description
Save	Click "Save" to preserve any changes made to the Package details (Package Name, Author, etc.).
Deploy	Installs the package into the current instance. Any modules in the package

	will be created or updated in the current instance. **Note**: Do not re-deploy a package once deployed from Module Builder as any workflows, code-level customizations, or changes made through Studio for the custom modules will be lost. It is recommended that module packages be deleted from Module Builder after a successful deploy to avoid an accidental re-deploy. Please use Studio to perform any additional configurations to your module once deployed.
Publish	Saves the package into an installable zip file containing all customizations. Upload the file via Module Loader to install the package into a different instance. **Note**: Packages developed on Sugar Serve can only be installed on instances running the same version of Sugar Serve. **Note**: Sugar Sell Essentials customers do not have the ability to upload custom file packages to Sugar using Module Loader.
Export	Saves the package into an importable zip file containing all customizations. Upload the file via Module Loader to view the package in Module Builder on a different instance where it can then be further developed and deployed. **Note**: Packages developed on Sugar Serve can only be installed on instances running the same version of Sugar Serve. **Note**: Sugar Sell Essentials customers do not have the ability to upload custom file packages to Sugar using Module Loader.

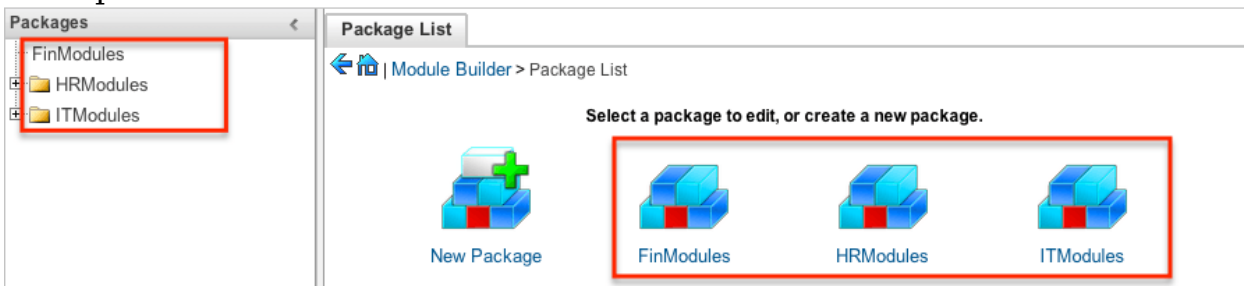
Deleting Packages

If a package is invalid or should no longer appear in your organization's Sugar instance, it may be deleted from Module Builder. Please note that deleting a package will delete all files contained in the package, but will not remove the package from any instance where the package was deployed. For more information on how to uninstall a deployed package from an instance, please refer to the Module Loader documentation in the Administration guide.

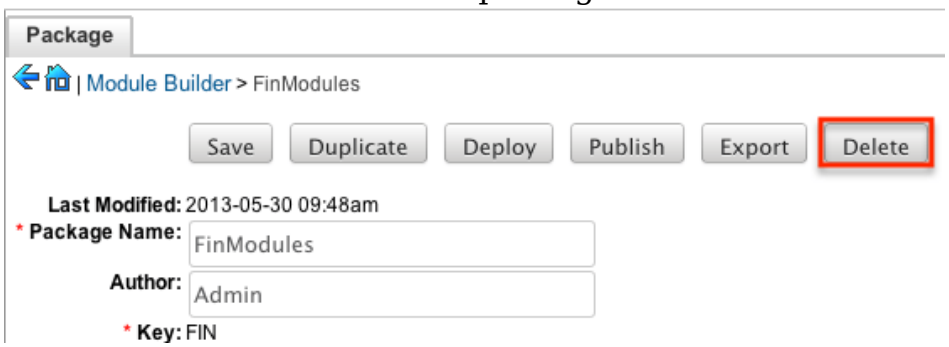
Note: We recommend deleting packages from Module Builder after they have been deployed in a production instance to prevent them from accidentally being re-deployed. The only exception to this rule is in a development environment as you may want to continue working and testing until you are ready to move the module to your production environment.

Use the following steps to delete a package via Module Builder:

1. Select the desired package from either the Packages panel or from the main panel.



2. Click "Delete" to remove the package.



3. A pop-up message will display asking for confirmation. Click "Ok" to proceed.

Modules

Various types of modules can be created and configured within the package in Module Builder. Although multiple custom modules can be created in a package, it is generally recommended that only one module be created per package. This will help prevent potential issues down the road and allow greater flexibility in the future if a module is no longer needed.

Note: Activity streams are not available for custom modules.

Module Types

Module Builder comes with a few predefined module templates for creating modules. Select the module type that best fits your organization's use of the new module and then customize the module to further fit your needs.
The following module types are available by default in Module Builder:

Type	Description
Basic	Generic module with only the most basic fields defined by default. All other module types build on top of the basic module type.
Company	Contains fields designed for company, account, or organization type records. Includes billing and shipping addresses, email address, phone numbers, industry, website, and more.
File	Contains fields designed for file upload or document records. Includes category, expiration date, status, filename, and more.
Issue	Contains fields designed for bug, issue, or case record types. Includes issue number, status, priority, work log, and more.
Person	Contains fields designed for people, contacts, or lead records. Includes first and last name, primary and alternate addresses, email addresses, phone numbers, and more.
Sale	Contains fields designed for sales, transactions, or opportunities. Includes, amount, currency, probability, sales stage, and more.

Module Options

When creating modules in Module Builder, the following configuration options are available:

- **Module Name**: The name (e.g. HelpDesk) or designation of the module. The module name is what displays in the Packages Panel as well as in Studio after deploying.

- **Plural Label**: The plural label (e.g. HelpDesks) for the module name. The label is what displays when using the module within Sugar.
- **Singular Label**: The singular label (e.g. HelpDesk) for the module name. The label is what displays when using the module within Sugar.
- **Importing**: Select this option to enable importing for the module.
- **Team Security**: Select this option to enable team security for the module. If this option is unchecked, records in this module will not be assigned to a team and will be restricted by roles only. For more information on teams and roles, please refer to the Team Management and Role Management documentation in the Administration Guide.
- **Navigation Tab**: Select this option to add the module and module actions to the navigation bar.
- **Type**: Select the module type to use as a template when building the module. Each module type includes a list of stock fields by default which can be added and removed in the layout as necessary. Please note that the module type can only be selected when initially creating the module. For more information regarding the module types, please refer to the Module Types section of this page.

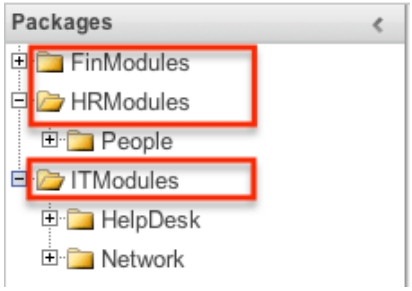
Creating Modules

While you have the option to create multiple types of modules within a package, it is generally recommended that only one module be created per package. This will help prevent potential future issues and allow greater flexibility if a module is no longer needed.

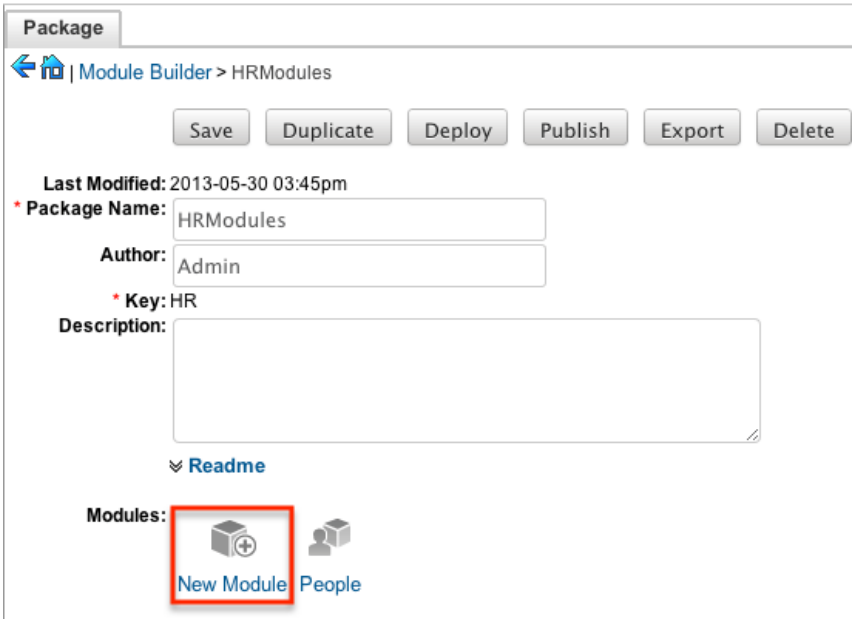
Creating Modules Via Package

One of the most common methods of module creation is via the New Module option in the package. When the New Module icon is selected, it opens up the New Module screen that allows you to enter the module's details (e.g., name, label, etc.) and to select the module type to use as a template.

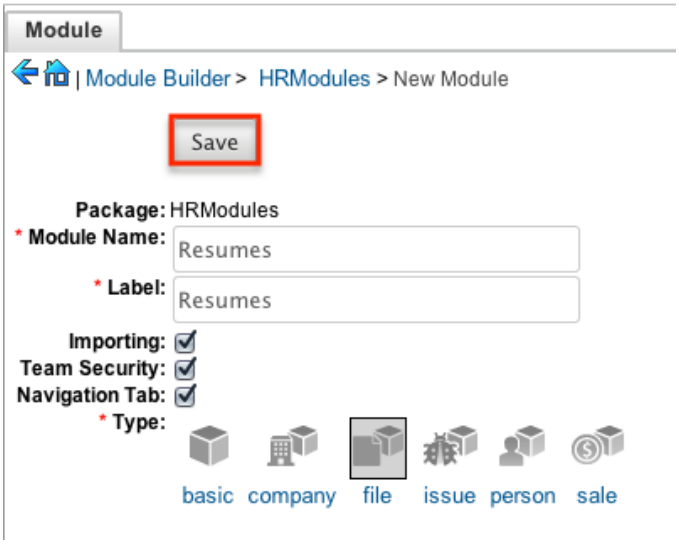
Use the following steps to create a custom module in the package:

1. Select a package from the Packages Panel to create a new module.


2. In the main panel select "New Module".



3. Enter the appropriate values for the Module options. All required fields are marked with a red asterisk and must be completed prior to saving.
4. Select a module type (e.g. file) to use as a template when configuring your module.
5. Once the necessary information is entered, click "Save".

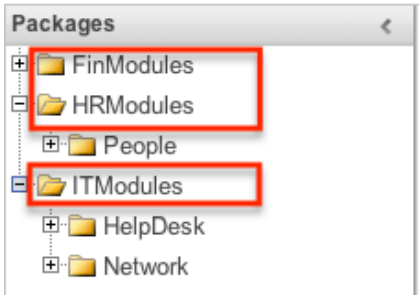


Creating Modules Via Duplication

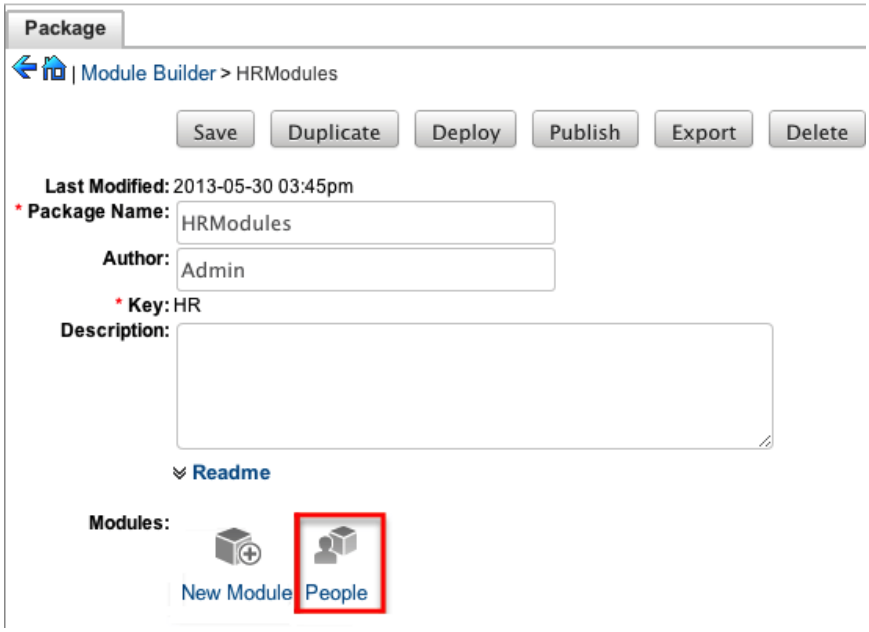
You can also create a new module by duplicating an existing module within a package. The duplicate option is useful if the module you are creating has similar information or structure to an existing module.

Use the following steps to create a module by duplicating an existing module:

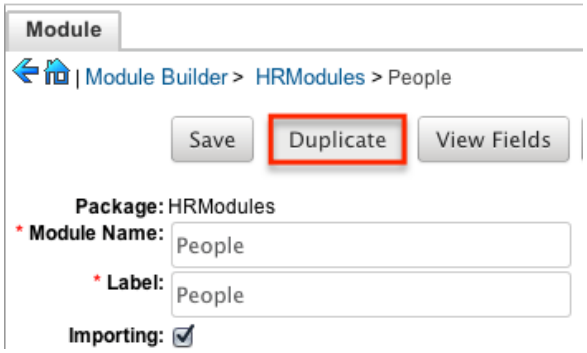
1. Select a package from the Packages panel to create a new module.



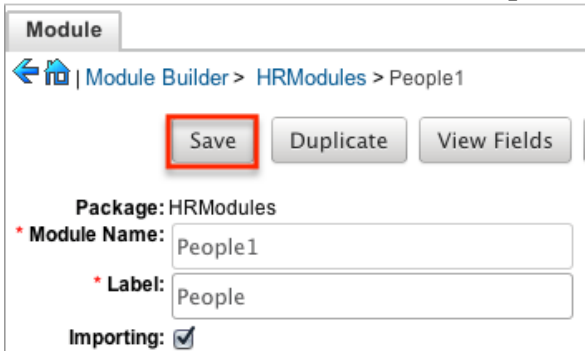
2. In the main panel, select a module to duplicate.



3. Click "Duplicate" to create a copy of the module.

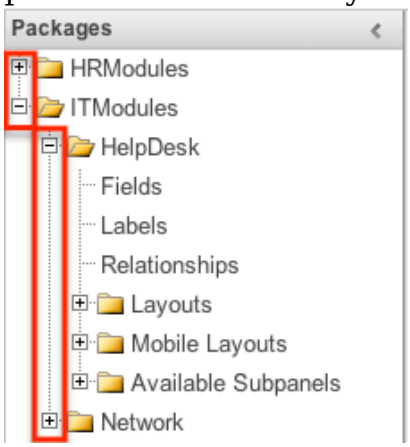


4. The selected module is duplicated to a new module with a "1" appended at the end of the module name. Update the necessary fields, then click "Save".



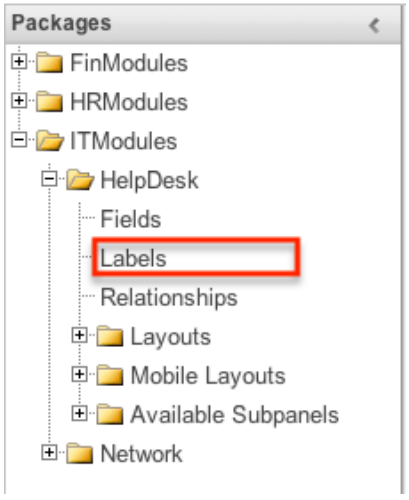
Modifying Modules

The associated fields, labels, layouts, subpanels, etc. for each module can be modified within each package. Click the plus sign (+) preceding the module name to expand the module and view the associated items (e.g. Layouts, Fields, etc.). Selecting the module from the Packages panel will load the view into the main panel. You can modify the Module options for the selected module via this page.

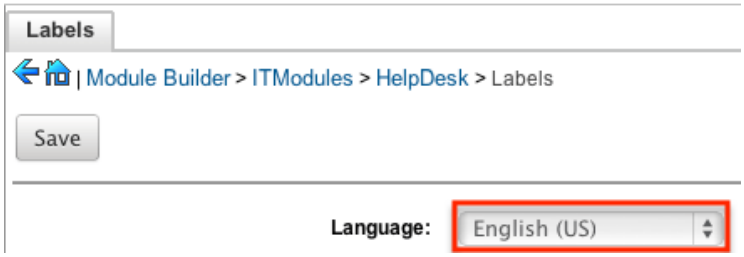


Modifying Labels

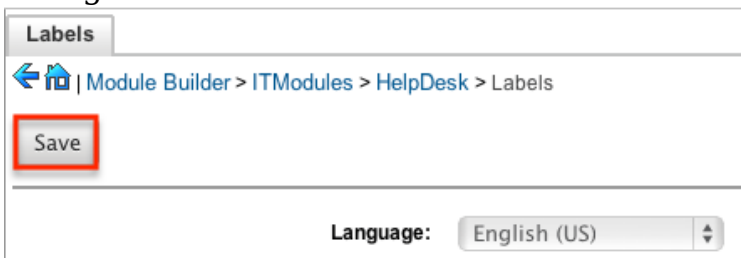
Labels are used throughout Sugar for items like buttons, field headers, subpanel titles, error messages, and more. To modify the labels for a module, select "Labels" from the Packages panel under the desired module.



The Labels tab will open up in the main panel where you can change the names for specific labels associated to the module. Please note that you can also define the primary language to use per the language packs currently installed in Sugar when changing the labels. Select the desired language from the dropdown to view and modify the labels according to that language.

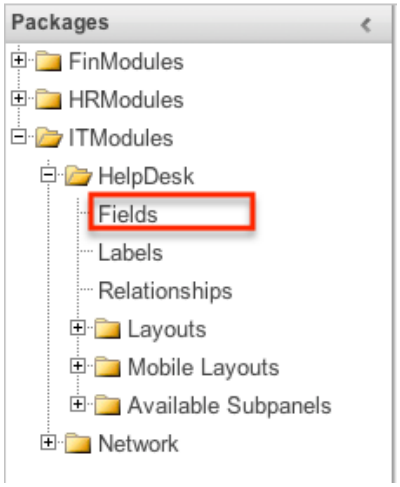


Modify the labels for the selected language and click "Save" to preserve your changes.



Fields

The Fields section in Module Builder allows administrators to create new fields as well as change properties on existing fields within a module. To access the Fields section in Module Builder, select "Fields" from the Packages panel under the desired module and the view will open up in the main panel to the right.



Field Types

The Fields section for each module contains a number of stock fields that come out of the box with Sugar. Please note that each data type has various options and properties available to configure.

The following data types are available to be added to modules in Module Builder:

Data Type	Description

Address	Creates fields for street, city, postal code, state, and country. **Note**: Custom address fields cannot be grouped together like the stock address fields.
Checkbox	Creates a checkbox for data fields with a Yes/No action.
Currency	Creates a field to enter a currency value. The system automatically creates a dropdown of the currency type if the field does not already exist in that module.
Date	Creates a field to enter a date. Includes a button for a calendar popup.
DateTime	Creates a field to enter the date and time. Includes a button for a calendar popup as well as dropdowns for the time.
Decimal	Creates a field to hold a number rounded to a specified decimal precision. Sugar stores the exact representation of the number in the database (e.g., For a precision of 2: 1.236 is stored as 1.24).
DropDown	Creates a field that you can associate with a dropdown list of values.
Encrypt	Creates a field for sensitive information, such as social security numbers, whose value is to be encrypted in the Sugar database. The value is encrypted in the database but is visible in the user interface to users.
Float	Creates a field to hold a number rounded to a specified decimal precision. Sugar stores the value differently based on the database platform Sugar is running on.
HTML	Creates static HTML-formatted text to display in record views.
IFrame	Creates a field to store or generate a URL to display an iFrame in record views.

	Note: To load content from an external website in the iframe field, administrators will need to add the URL (e.g. https://www.example.com) as a trusted site via Admin > Content Security Policy Settings.
Image	Creates an image field to upload an image to display on a record.
Integer	Creates a field to specify positive or negative numbers with no decimal places.
MultiSelect	Creates a dropdown list of values where multiple values can be selected at once.
Flex Relate	Creates a dropdown list from which you can relate a single record from a variety of modules. Only one Flex Relate field is allowed per module. If the module already has a Flex Relate field, this option does not display in the Data Type dropdown list.
Phone	Creates a field to enter a phone number.
Radio	Creates a radio button for a user to select one value from a dropdown list.
Relate	Creates a field to associate a record with another module's record as a one-way relationship. You can add multiple Relate fields to a module. **Note**: Relate fields and custom relationships are independent of each other. Changes made to either one are not reflected in the other. Relate fields can be added to a report, but any data on the related record cannot be accessed in the report. To access related record data in a report you will need to create a custom relationship.
TextArea	Creates an open text area field for multiple lines of text.
TextField	Creates a field for a single line of text.
URL	Creates a field to store or generate a URL and display as a link.

Field Options

Fields provide ways to store different data types in Sugar. While many fields come out of the box with Sugar by default, there can be instances where your organization needs to store additional data.

When creating or modifying fields via Module Builder, there are some properties that exist across all field types, and there are some that are unique to only a few types.

The following field properties and options are available in Sugar:

- **Audit**: Select this checkbox to audit the field for changes made in Sugar.
    - Users can view the changes made to audited fields via the View Change Log option in the module's record view (for Sidecar modules).
    - **Note**: The Audit option is available for all data type fields.
- **Boost value**: Enter a boost value for the field to enhance the relevancy of the field for full-text search.
    - The default boost value is 1.0 which indicates a neutral boost. To apply a positive boost, set the boost value higher than 1. To apply a negative boost, use values lower than 1. For example, a value of 1.35 will positively boost a field by 135%. But using a value of 0.60 will apply a negative boost.
    - **Note**: It is not necessary to perform a full system index when boost values are changed for fields.
- **Border**: Select this checkbox to add a border around the image for this field.
    - **Note**: The Border option is only available for Image data type fields.
- **Calculated Value**: Select this checkbox to designate this field as a calculated field.
    - This opens up the Formula option and disables the Default Value and Importable options. For more information regarding entering a formula for a calculated value, please refer to the Formula option

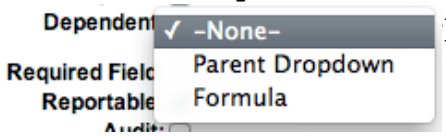


    - The result of the formula will be entered into the field for any new or modified records. When selecting this option, the field value cannot be modified by users.
    - **Note**: The Calculated Value option is only available for the following data type fields:

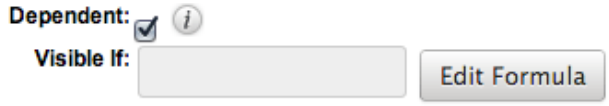
Checkbox	Currency
Date	Datetime
Decimal	Encrypt
Float	Integer

Phone	TextArea
TextField	

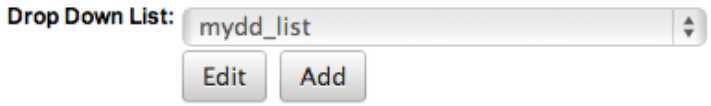
- **Columns**: Enter the number of columns to specify the width of a TextArea data type field.
    - **Note**: The Columns option is only available for TextArea data type fields.
- **Comment Text**: Enter a comment or description about the field. The comment text is only viewable via Module Builder and Studio.
    - **Note**: The Comment Text option is available for all data type fields except Flex Relate.
- **Default Value**: Specify or select a default value for this field when a record is created. Default values for the record are populated by default on the record view layout but can be modified by users.
    - **Note**: The Default Value option is available for all data type fields except HTML, Image, Flex Relate, and Relate.
- **Dependent**: Select this option to designate this field as being dependent on a formula or a parent dropdown.
    - For DropDown data type fields you can select "Parent Dropdown" or pendency.



    - Selecting "Parent Dropdown" will open the Parent Dropdown option as shown below. Selecting "Formula" will open the Visible If option to create a dependency formula. For other field data types (e.g. Date), select the Dependent checkbox to open the Visible If option. For more information regarding entering a formula to make a dependent field visible, please refer to the Visible If option listed in this section.



    - **Note**: The Dependent option is available for all data type fields except Address.
- **Disable Format**: Select this checkbox to disable number formatting such as the thousands separator.
    - **Note**: The Disable Format option is only available for Integer data type fields.
- **Display Label**: Enter a value to display as the field label and header in layouts. Normally defaults to the Field name entered when creating the field.
    - This value is also modifiable in the packages panel under Labels.
    - **Note**: The Display Label option is available for all data type fields except Flex Relate. Flex Relate uses the Label Value option.
- **Drop Down List**: Select a list of values to associate to the field.

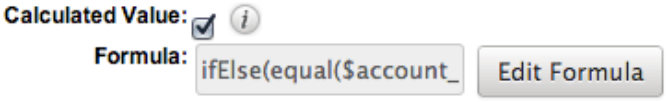


    - Only values in the chosen list will be available for selection in the field. Click "Edit" to change the values for the currently selected list, or click "Add" to create a new list.
    - **Note**: The Drop Down List option is only available for the DropDown, MultiSelect, and Radio data type fields. For more information on editing dropdown values via the Dropdown Editor, please refer to the Editing Dropdown Lists section of the Developer Tools documentation.
- **Duplicate Merge**: Select one of the following options to determine the field's functionality when records are being merged:
    - **Disabled**: Selected by default. The field will not appear in the Merge Duplicates feature and will not be available to use for the filter conditions in the Find Duplicates feature.
    - **Enabled**: The field will appear in the Merge Duplicates feature, but will not be available to use for the filter conditions in the Find Duplicates feature.
    - **In Filter**: The field will appear in the Merge Duplicates feature, and will also be available in the Find Duplicates feature.
    - **Default Selected Filter**: The field will be used for a filter condition by default in the Find Duplicates page, and will also appear in the Merge Duplicates feature.
    - **Filter Only**: The field will not appear in the Merge Duplicates feature but will be available in the Find Duplicates feature.
    - **Note**: The Duplicate Merge option is available for all data type fields except Image.
- **Field Name**: Enter the name of the field being created. Once a field has been created, the field name cannot be changed.
    - Field names can contain only alphanumeric characters as well as the underscore character.
    - The Field Name option is required for all data type fields.
    - Please do not name a custom field "processed", as this will cause the web logic hooks to fail to trigger because it conflicts with Sugar's internal logic hook handling. Be sure to use a different, un-reserved string as the field name to avoid any unexpected behavior in Sugar.
- **Full Text Searchable**: Specify whether or not the field should affect Global Search results.
    - **Disabled**: Select "Disabled" if you do not want this field to be captured when the database is indexed for searches. Search indices collect the values of searchable fields for evaluation by the Global Search.
    - **Searchable**: Select "Searchable" to include this field's value in search indexes.

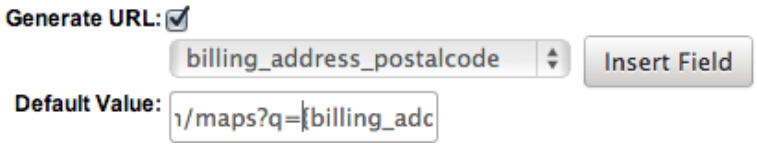
        - Selecting "Searchable" will reveal the Boost value field, which allows you to set a relevance weight for searches. When a user's search query matches the value of a field with a higher boost level, the record will appear higher in the search results. For more information regarding boost values in Full Text Search, please refer to the Search documentation in the Application Guide.
        - **Note**: The Full Text Searchable option is only available for the following data type fields:

Phone	TextArea
TextField	URL

- **Formula**: Contains the current formula to return a calculated value.
    - Click "Edit Formula" to launch the formula builder and change the formula. For more information on how to build a formula using the formula builder, please refer to the Using Sugar Logic section of

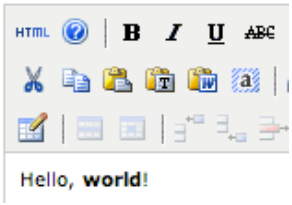


    - **Note**: The Formula option is only available when the Calculated Value option is selected.
- **Generate URL**: Select this checkbox to allow variables from the current module to be placed into the Default Value option for creating dynamic URLs.



    - This is useful for providing links or iFrames to internal systems such as an ERP or to external systems such as Google Maps.
    - Select the desired field to add from the dropdown and click "Insert Field" to add the field to the Default Value. When selecting this option, the field value cannot be modified by users.
    - **Note**: The Generate URL option is only available for IFrame and URL data type fields.
- **Height**: Enter the number of pixels to vertically scale the image for this field. Enter only the Width or Height options to retain the aspect ratio of the image.
    - **Note**: The Height option is only available for Image data type fields.
- **Help Text**: Enter basic instructions for populating this field. The text entered here will display when users hover their mouse on the field in record view.
    - **Note**: The Help Text option is available for all data type fields.
- **HTML**: Enter in static rich text with formatting or HTML code to display on a record. For more information on how to use the text editor please refer to the TinyMCE section of the User Interface documentation in the

Application Guide.

HTML: 

  - **Note**: The HTML option is only available for HTML data type fields.
- **IFrame Height**: Enter the number of pixels for the height of the IFrame field. The width of the IFrame field is always the width of the field container.
  - **Note**: The IFrame Height option is only available for IFrame data type fields.
- **Importable**: Select one of the following options to determine the field's functionality when records are being imported:
  - **Yes**: The field can be included in an import operation.
  - **No**: The field cannot be included in an import.
  - **Required**: A value for the field must be provided in any import.
- **Label Value**: Enter a value to display as the field label and header in layouts. This value is also modifiable in the packages panel under Labels. Defaults to "Flex Relate".
  - **Note**: The Label Value option is only available for Flex Relate data type fields.
- **Mass Update**: Select this checkbox to add this field as an option to mass update.
  - **Note**: The Mass Update option is only available for the following data type fields:

Date	Datetime
DropDown	MultiSelect
Radio	

- **Max Size**: Enter the maximum amount of characters allowed for this field. Defaults to 255.
  - **Note**: The Max Size option is only available for the following data type fields:

Address	Decimal
Float	IFrame
Integer	Phone
URL	TextField

- **Max Value**: Enter the highest value allowable for this field. If a user enters a higher value in the field than the specified value, a notification will appear upon save informing them of the set maximum value.
  - **Note**: The Max Value option is only available for Integer data type

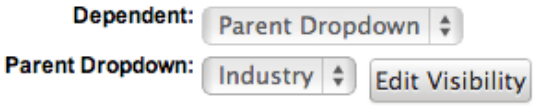
fields.

- **Min Value:** Enter the lowest value allowable for this field. If a user enters a value in the field that is lower than the specified value, a notification will appear upon save informing them of the set minimum value.
    - **Note**: The Min Value option is only available for Integer data type fields.
- **Module**: Select a module from the dropdown to relate to the current module.
    - A module can relate back to itself, a good example of this would be a relate field on Contacts to relate back to Contacts for a referred by field. This will allow users to select which contact record referred a different contact. The chosen module cannot be modified



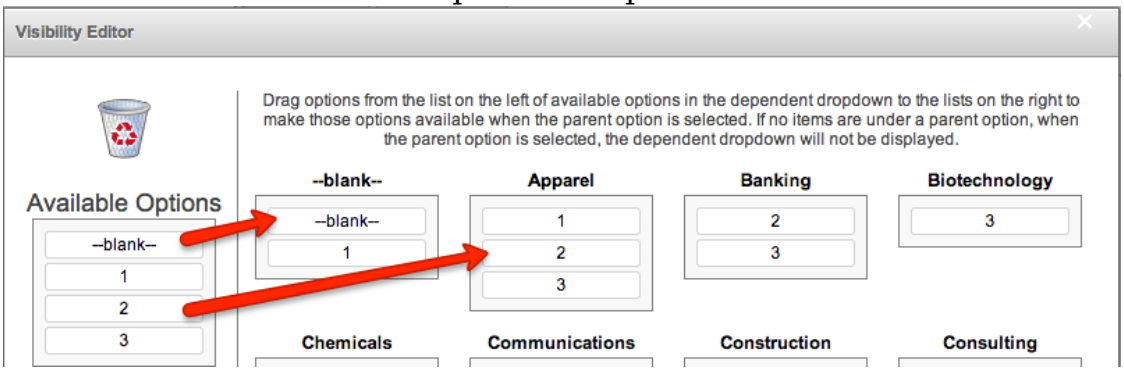
ted.

    - **Note**: The Module option is only available for Relate data type fields.
- **Open Link In** Select one of the following options to determine how a URL will open:
    - **New Window**: Opens the URL in a new Tab or Window depending on your browser and settings.
    - **Same Window**: Opens the URL in the same window as the record you are currently browsing.
    - **Note**: The Open Link In option is only available for URL data type fields.
- **Parent Dropdown**: Select an option from the dropdown to specify the parent that controls the visibility of this dropdown field.
    - The Parent Dropdown option is populated with the other dropdown



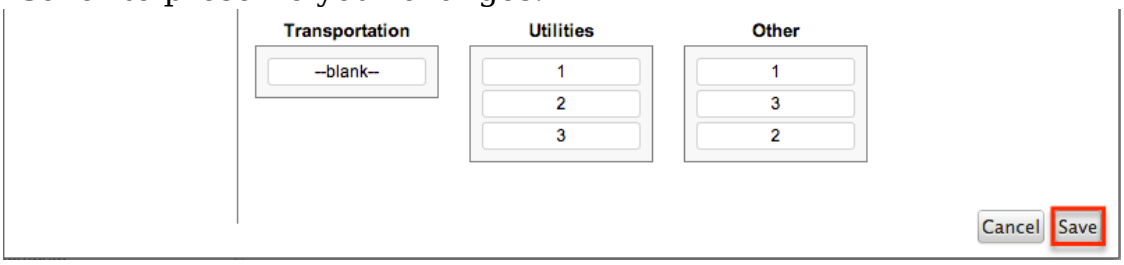
ent module.

    - **Note**: The Parent Dropdown option is only available when the Dependent option has "Parent Dropdown" selected.
    - Click "Edit Visibility" to specify which options are available from the current dropdown for each value of the parent dropdown. In the Visibility Editor window, drag values from the current dropdown list to the value sections of the parent dropdown.

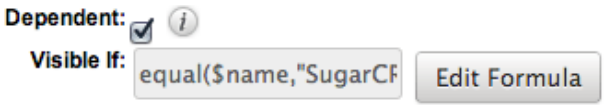


    - This will determine which options in the dropdown list are available

when the parent dropdown is set to the specified value. In this example, if the parent dropdown is set to "Apparel", then the current dropdown will have options 1, 2, and 3 where if the parent dropdown is set to "Banking", then the current dropdown will only have options 2 and 3 available. If there are no available options for a parent dropdown value, then the dependent dropdown will not display. To remove an item from the list, simply click and drag the value to the Trash bin on the left. Once the values are set, click "Save" to preserve your changes.



- **Precision**: Enter a number to specify the number of digits to the right of the decimal point the value should be stored as in Sugar.
    - **Note**: The Precision option is only available for Decimal and Float data type fields.
- **Reportable**: Select this checkbox to allow the field to be used in reports.
    - **Note**: The Reportable option is available for all data type fields except Encrypt, Flex Relate, HTML, IFrame, and Image.
- **Required Field**: Select this checkbox to mark the field as required in Sugar. The user will be required to enter a value for the field before saving the record.
    - **Note**: The Required option is available for all data type fields except Checkbox and HTML.
- **Rows**: Enter the number of rows to specify the height of a TextArea data type field.
    - **Note**: The Rows option is only available for TextArea data type fields.
- **System Label**: Enter the system value for storing the label of the field. This defaults to the name of the field preceded by "LBL". Any lowercase characters entered will be converted to an uppercase upon saving. Once the field has been created, the system label cannot be changed.
    - It is recommended that administrators avoid naming fields with the same system label in order to prevent the same label and header values from existing in the system.
    - **Note**: The System Label option is available for all data type fields.
    - **Note**: Only single-byte characters are supported for system labels for fields.
- **Visible If**: Contains the current formula to determine if a field is visible on the layout or not.
    - Click "Edit Formula" to launch the formula builder to change the formula.

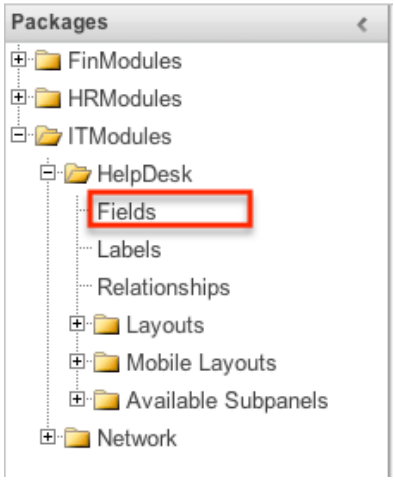


  - The formula must result in a Boolean (true/false) response. For more information on how to build a formula using the formula builder, please refer to the Using Sugar Logic section of this page.
  - **Note**: The Visible If option is only available when the Dependent option is checked or "Formula" is selected from the dropdown.
- **Width**: Enter the number of pixels to horizontally scale the image for this field. Enter only the Width or Height options to retain the aspect ratio of the image.
  - **Note**: The Width option is only available for Image data type fields.

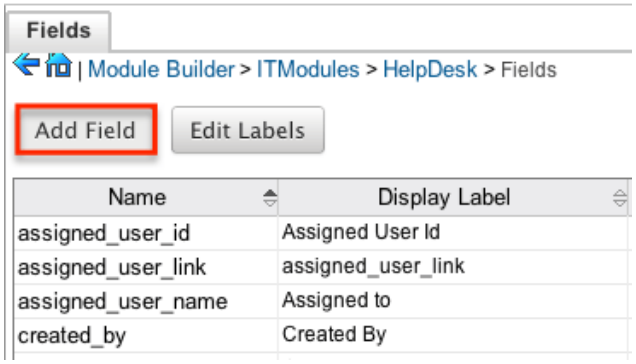
Creating Fields

Use the following steps to create a new field via Module Builder:

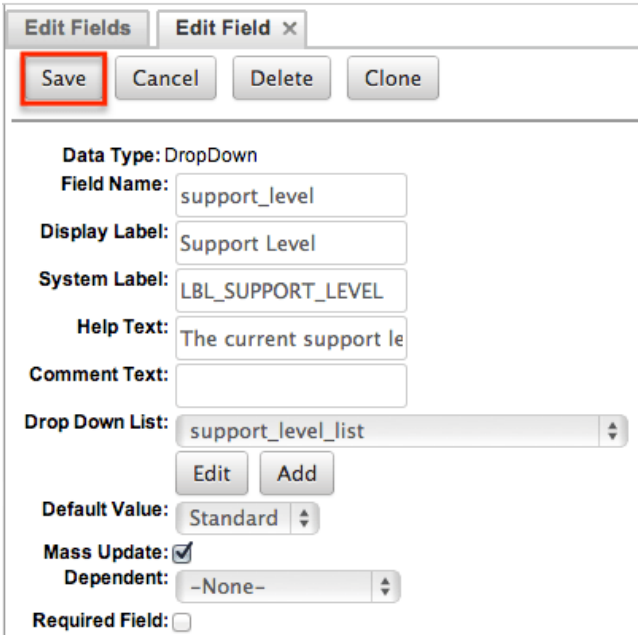
1. Expand out the tree under the desired module in the Packages panel and select "Fields".



2. In the main panel click "Add Field".



3. Enter appropriate values for the Field options. Please note that Field Name is required.
4. Once the necessary information is entered, click "Save".

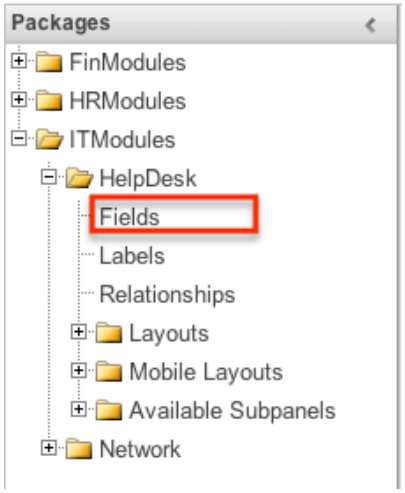


5. Once a field is created it must be placed on the record view layout in order for users to enter data into that field. For more information on editing layouts, please refer to the Editing Layouts section of this page.

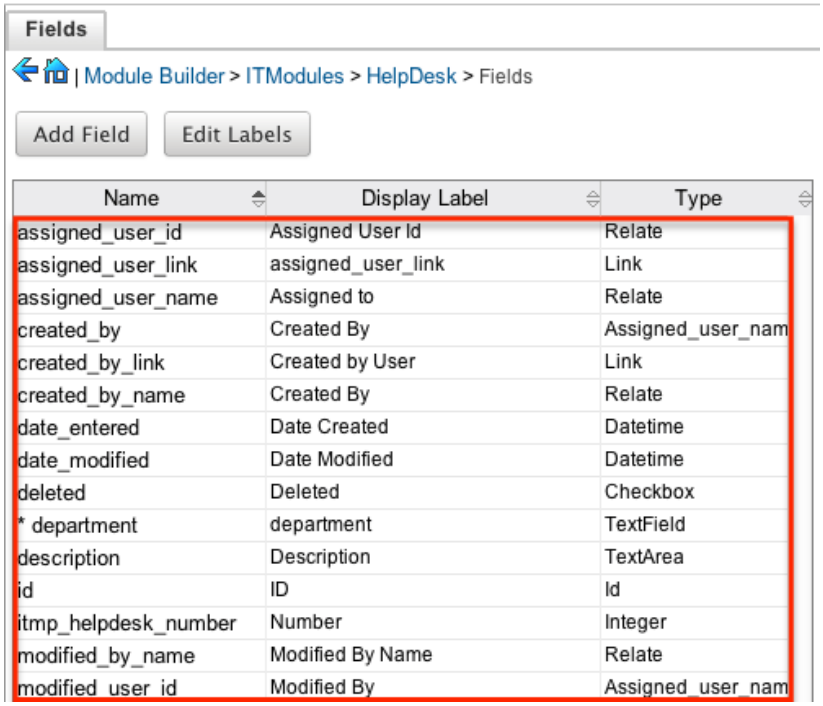
Editing Fields

Use the following steps to edit an existing field via Module Builder:

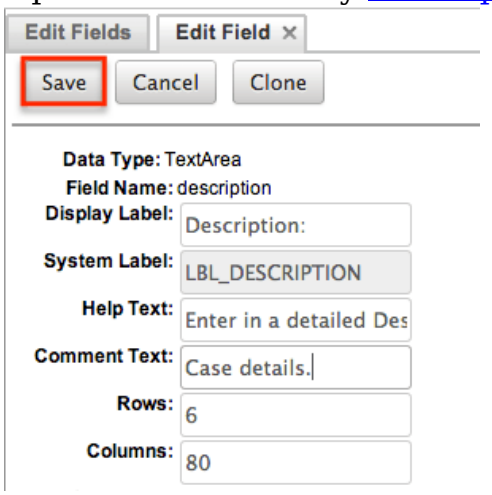
1. Expand out the tree under the desired module in the Packages panel and select "Fields".



2. In the main panel, select a field to edit. Sorting the fields by the column header will help in locating the field faster.
    - **Note**: Fields created via Module Builder will display an asterisk (*) in front of their name.



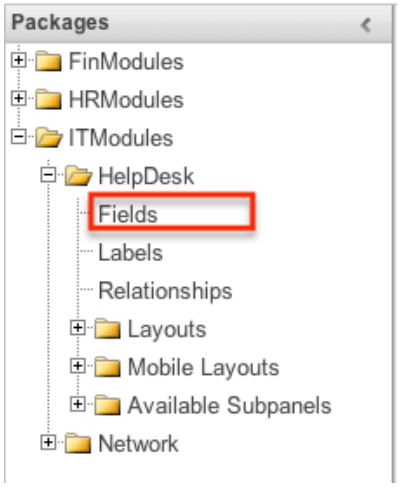
3. Update the necessary Field options and click "Save" once complete.



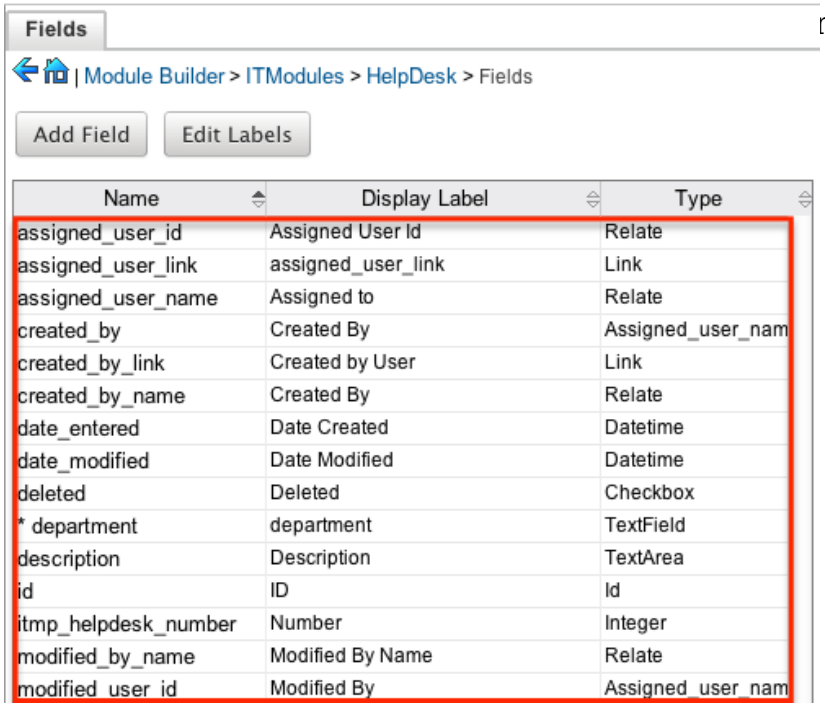
Deleting Fields

Use the following steps to delete an existing field via Module Builder:

1. Expand out the tree under the desired module in the Packages panel and select "Fields".

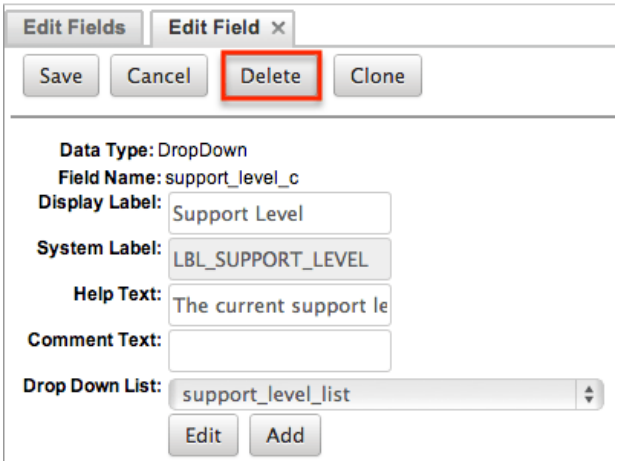


2. In the main panel, select a field to delete. Sorting the fields by the column header will help in locating the field faster.
    - Fields created via Module Builder will display an asterisk in front of their name.



mplate cannot be deleted.

3. Select "Delete" to remove the field.

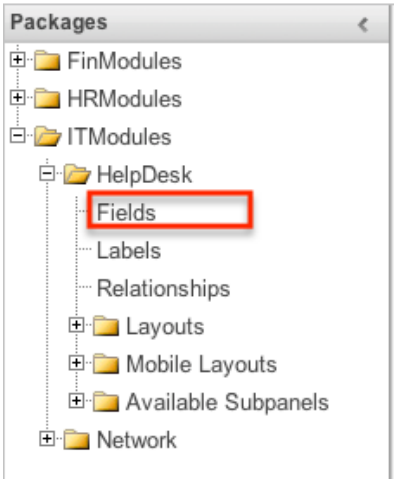


4. A pop-up message will display asking for confirmation. Click "Ok" to proceed.
    - Before deleting a field please verify and resolve the following issues:
        1. Field must be removed from any report filters or displays.
        2. Field must be removed from any workflows that filters or displays the field.
        3. Field must be removed from any dashlet that filters or displays the field.
        4. Field must be removed from any Sugar Logic formulas.
        5. Field must be removed from any email templates.
        6. Field must be removed from any saved searches.
5. The field will automatically be removed from any module layouts when deleted.
    - **Note**: When deleting fields in a module and re-deploying the package, the data related to the field in the database will not be removed.

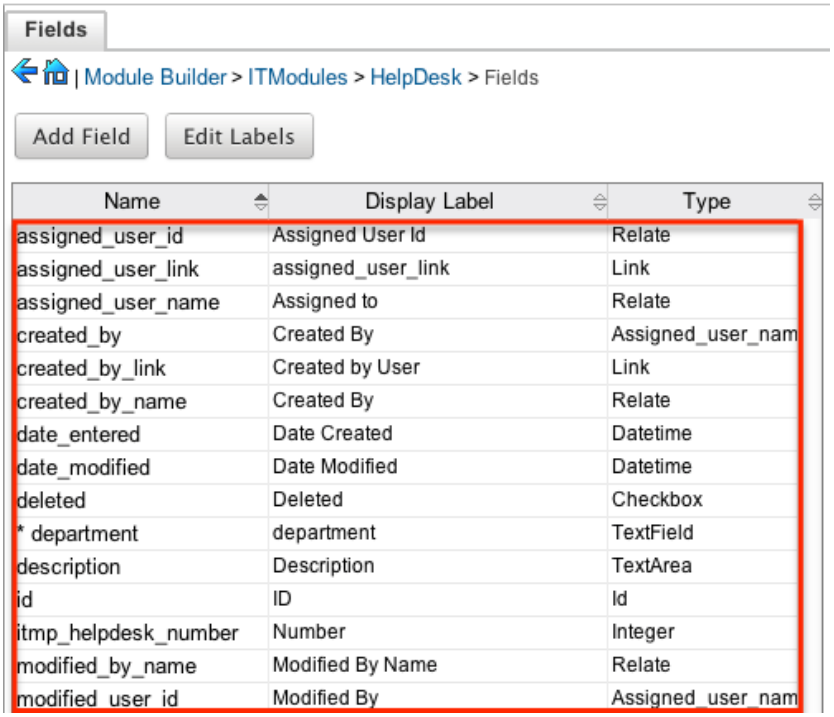
Cloning Fields

Use the following steps to clone an existing field via Module Builder:

1. Expand out the tree under the desired module in the Packages panel and select "Fields".

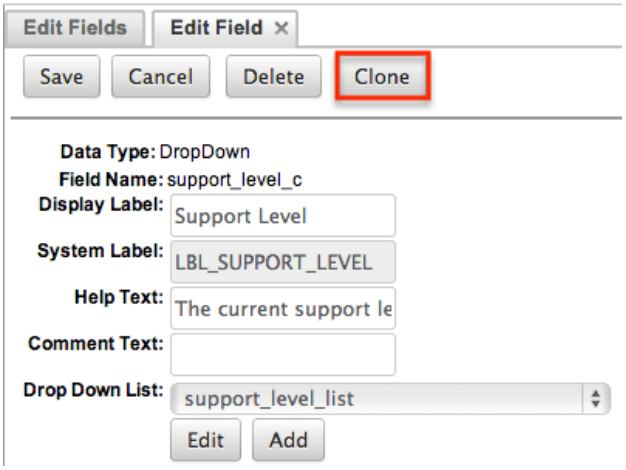


2. In the main panel, select a field to delete. Sorting the fields by the column header will help in locating the field faster.
    - **Note**: Fields created via Module Builder will display an asterisk (*)

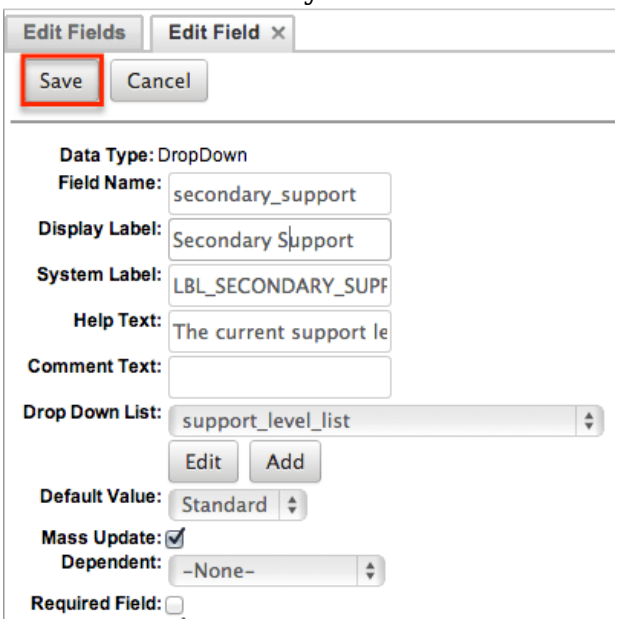


Name	Display Label	Type
assigned_user_id	Assigned User Id	Relate
assigned_user_link	assigned_user_link	Link
assigned_user_name	Assigned to	Relate
created_by	Created By	Assigned_user_nam
created_by_link	Created by User	Link
created_by_name	Created By	Relate
date_entered	Date Created	Datetime
date_modified	Date Modified	Datetime
deleted	Deleted	Checkbox
* department	department	TextField
description	Description	TextArea
id	ID	Id
itmp_helpdesk_number	Number	Integer
modified_by_name	Modified By Name	Relate
modified_user_id	Modified By	Assigned_user_nam

3. Select "Clone" to duplicate the field.
    - **Note**: Some non-standard stock fields (e.g. Name) do not have the ability to clone.

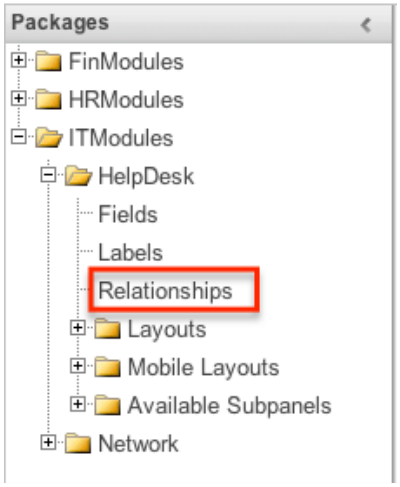


4. Enter appropriate values for the Field options.
5. Once the necessary information is entered, click "Save".



Relationships

Relationships define the links between different modules in Sugar and allow records between those modules to be related. Related records display in fields or subpanels on a module's detail page depending on the relationship type. When you create a new relationship between two modules, the system automatically creates the necessary subpanels, related fields, and metadata relationships. Relationships provide the added benefit in reports to allow access to a related records fields in addition to the base module's fields.
The relationships section in Module Builder allows administrators to create new relationships between custom and stock modules as well as change some properties on existing relationships. To access the relationship section in Module Builder, select "Relationships" from the Packages panel under the desired module.

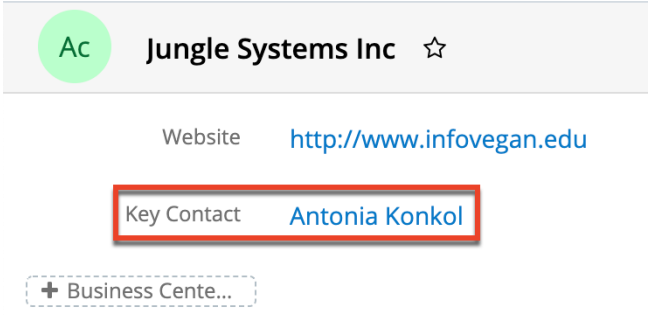


Note: Relationships created through Module Builder cannot be deleted in Studio after being deployed. Due to this, it is recommended that relationships be created in Studio after deploying the module instead of via Module Builder. As a best practice, never re-deploy the module from Module Builder as it will remove all customizations made to your module via Studio, code customizations, etc.

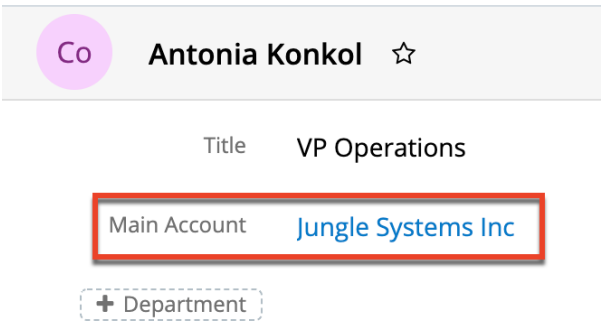
Relationship Types

Sugar contains a few different types of relationships you can create between modules. The relationship type will determine what fields or tables will be created in the database as well as what interface the user will see to manage the relationship.
The following relationship types are available in Module Builder:

- **One-to-One**: Records in the primary module and the related module are uniquely related to each other. For a one-to-one relationship between Accounts and Contacts, an account can be associated with only one contact and a contact can be associated with only one account. The relationship will show as a field in each module's record view where changing the relationship from either module will also change the value in the other module.
  - From the primary Accounts module:

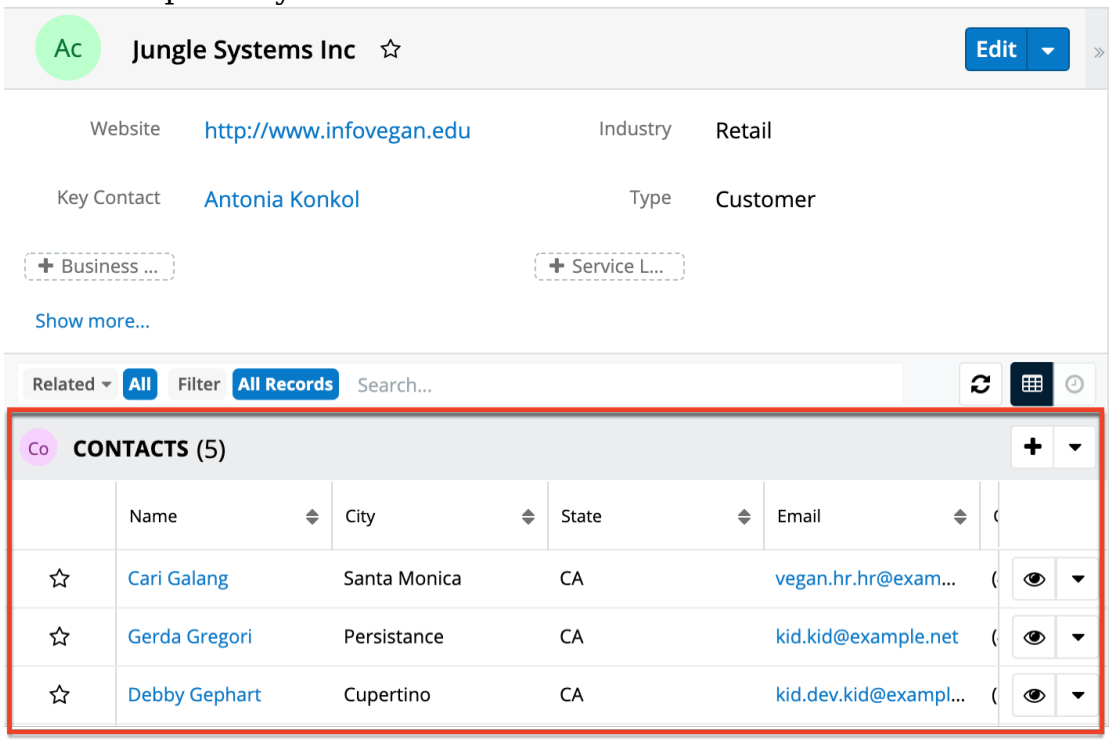


  - From the related Contacts module:

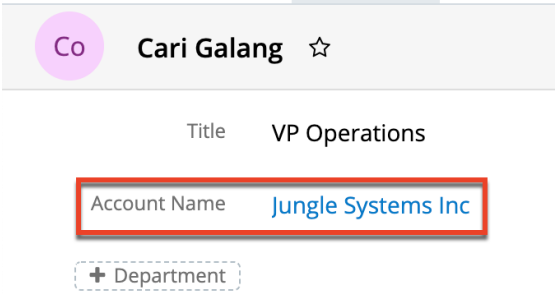


Note: You can create a one-way relationship between modules using relate fields. For more information regarding relate fields, please refer to the Field Types section of this page.

- **One-to-Many**: Records in the primary module can have relationships with many records in the related module. For a one-to-many relationship between Accounts and Contacts, an account can be associated with many contacts, but each contact can be associated with only one account. The record view of the primary module will display a subpanel for the related module, and the detail view of the related module will display a field containing a link to the related record.
- From the primary Accounts module:



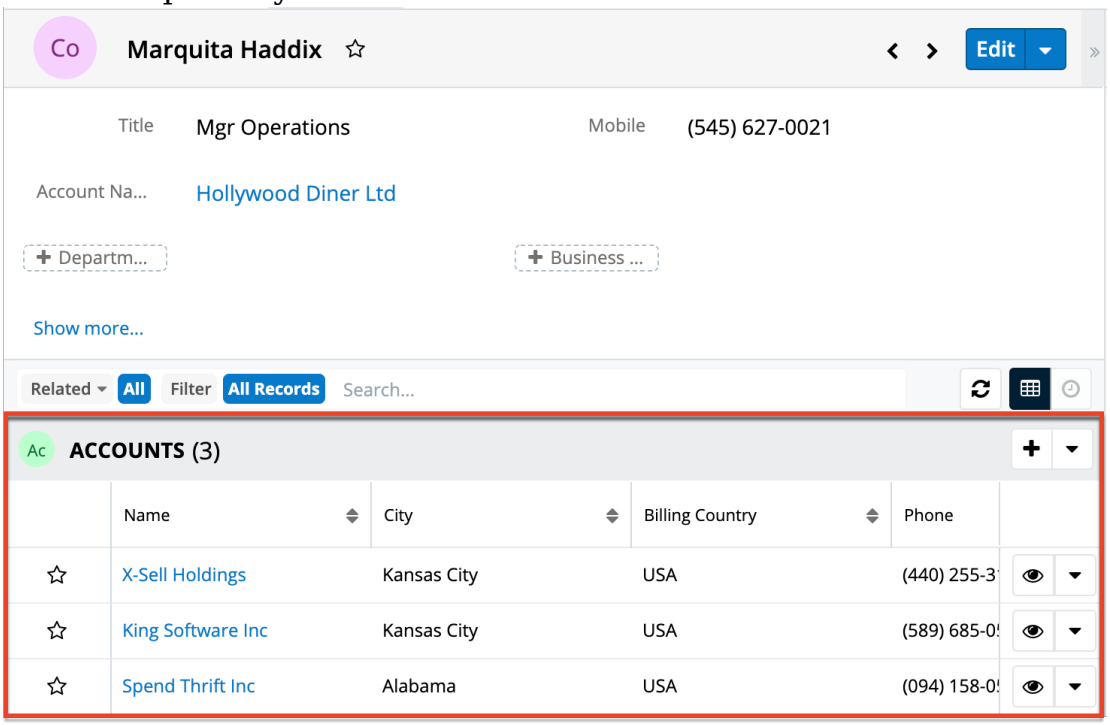
- From the related Contacts module:



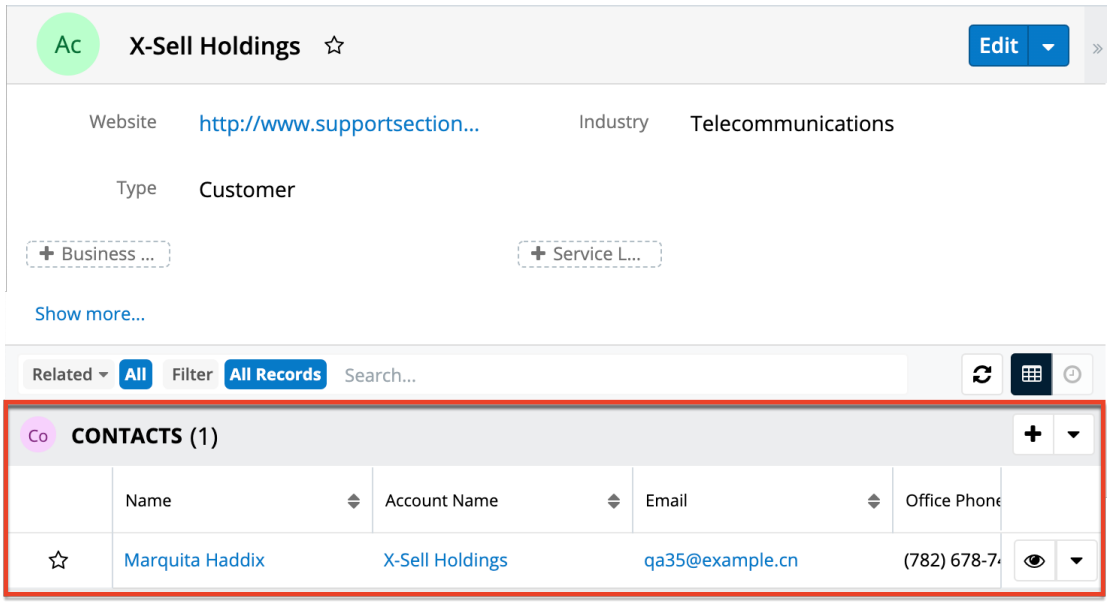
Note: A one-to-many relationship is the same as a many-to-one relationship except the Primary and Related modules are reversed. Adding a custom one-to-many relationship to "Activities" will add custom relationships to calls, meetings, messages, notes, tasks, and emails. This will also automatically add these subpanels to the record view.

- **Many-to-Many**: Records in both the primary module and the related module can have multiple records related in each module. For a many-to-many relationship between Accounts and Contacts, an account can be associated with many contacts, and a contact can be associated with many accounts. Both module's record view will display a subpanel for the opposite module.

    - From the primary Accounts module:



    - From the related Contacts module:



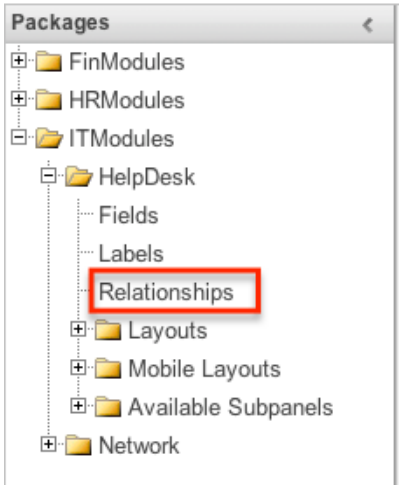
Note: Only modules with subpanels available can be on the "Many" side of a relationship. For example, the Product Catalog module lacks a subpanel; therefore, Product Catalog can only be selected on the "One" side of a relationship.

When you create a relationship for a module, the selected module is considered to be the primary module and the module that you relate it with is the related module.
You can also create a relationship between a module and itself. In this case, the relationship becomes a parent-child relationship. For example, you can create a relationship from Accounts to Accounts in order to create sub-accounts within the primary account.

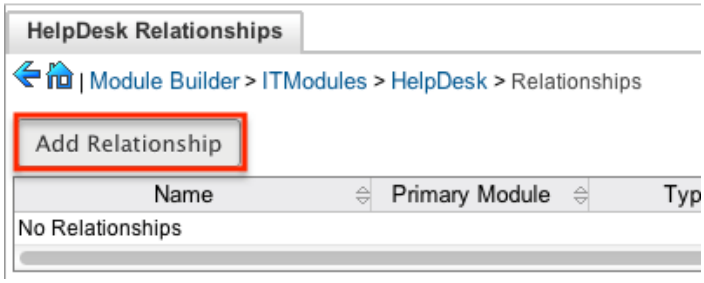
Creating Relationships

Use the following steps to create a new relationship via Module Builder:

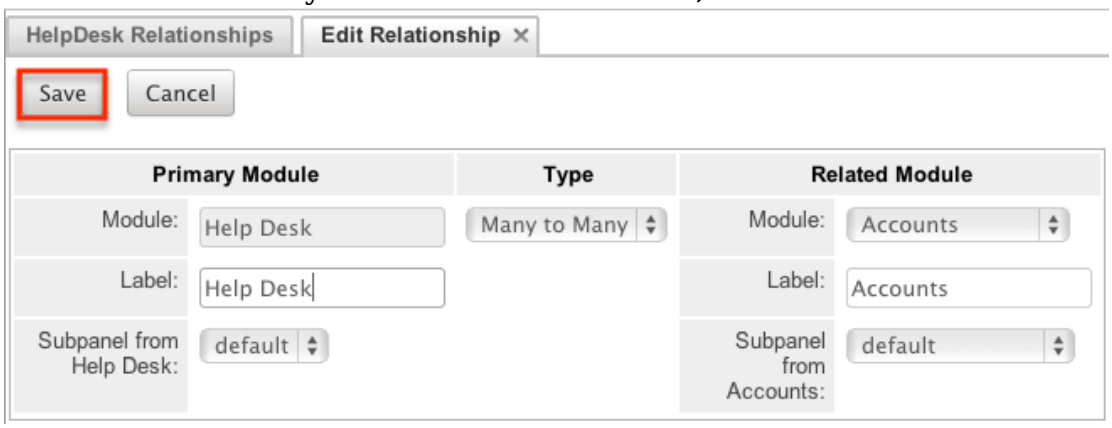
1. Expand out the tree under the desired module in the Packages Panel, and select "Relationships".



2. In the main panel, click "Add Relationship".



3. Enter appropriate values for the following options:
   Type: Select the type of relationship to create from the options in the Relationship Types section.
   Module: The Primary module is set to the moduleto which you are adding the relationship. Select the Related module from the dropdown. The Primary and Related modules can be the same to create a parent-child relationship.
   Label: Enter a label to reference the Primary module or Related module's subpanels for this relationship. This option is only available for the "Many" side of a relationship.
   Subpanel from: Select a subpanel option in which to display the Primary or Related module's records. This will determine the fields displayed in the subpanel. This option is only available for the "Many" side of a relationship.
4. Once the necessary information is entered, click "Save".

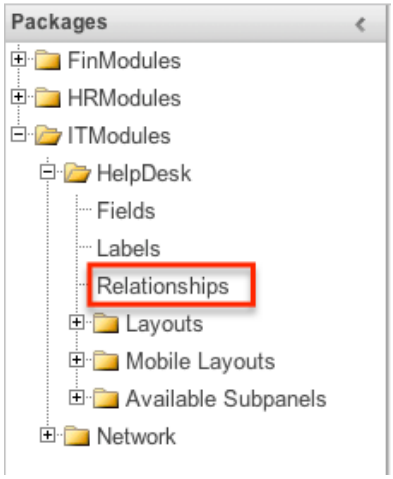


5. The required fields and subpanels are instantly created and saved in the package.

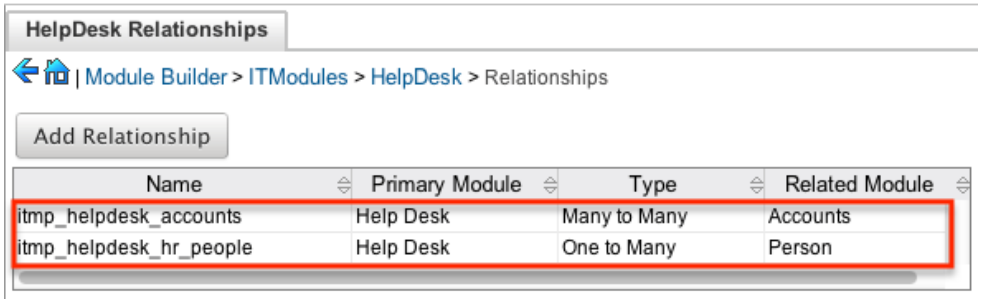
Editing Relationships

Use the following steps to edit a relationship via Module Builder:

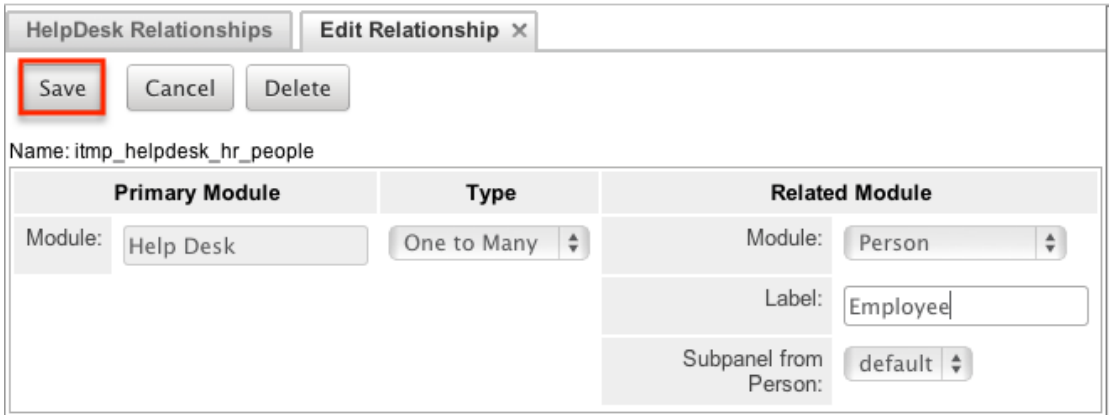
1. Expand out the tree under the desired module in the Packages Panel, and select "Relationships".



2. In the main panel, select a relationship to edit. Click the column headers to sort the grid by different columns to assist in locating the relationship.



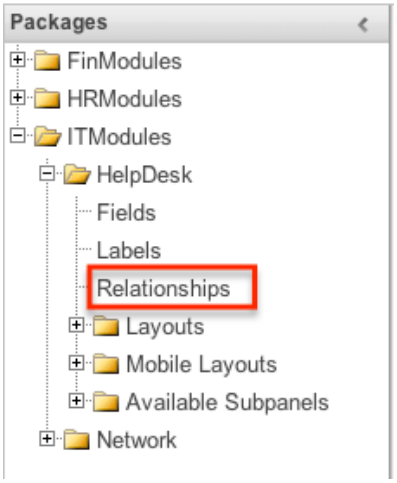
3. The only editable field on a relationship is the Label field for naming the Primary or Related module subpanels. Please note that this option is only available for the "Many" side of a relationship.
4. Once the necessary information for the Label field is entered, click "Save".



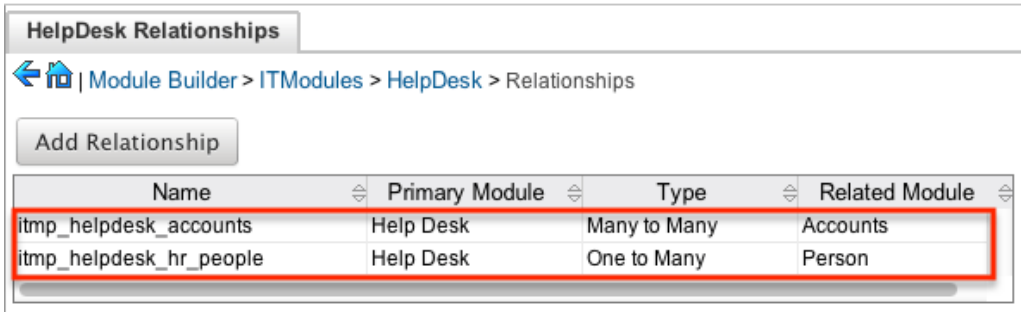
Deleting Relationships

Use the following steps to delete a relationship via Module Builder:

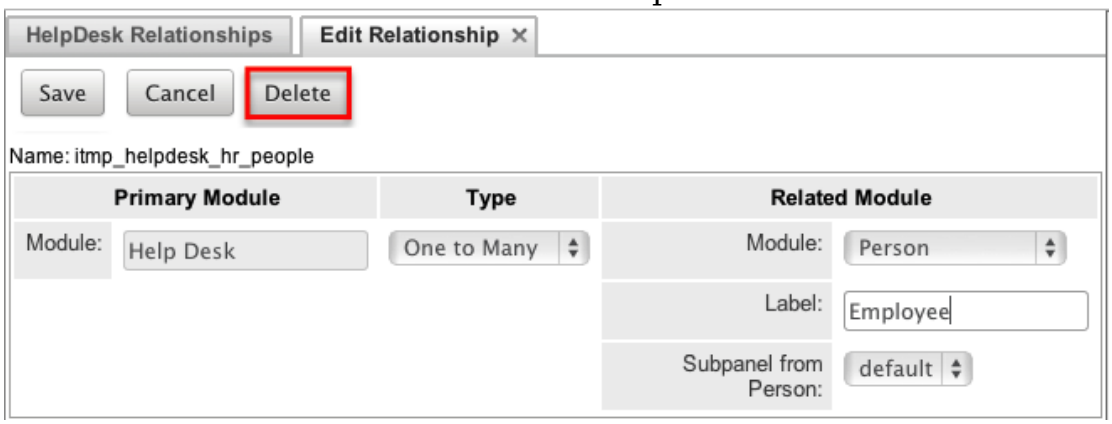
1. Expand out the tree under the desired module in the Packages panel and select "Relationships".



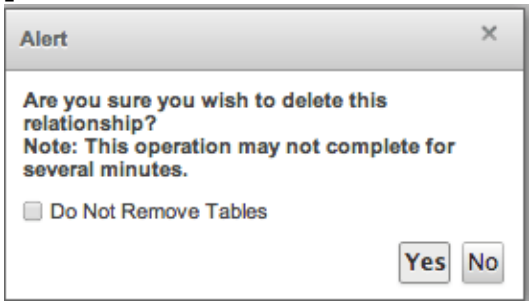
2. Select a relationship to delete in the main panel. Click the column headers to sort the grid by different columns to assist in locating the relationship.



3. Click "Delete" to remove the relationship.



4. A pop-up message will display asking for confirmation. Click "Yes" to proceed.



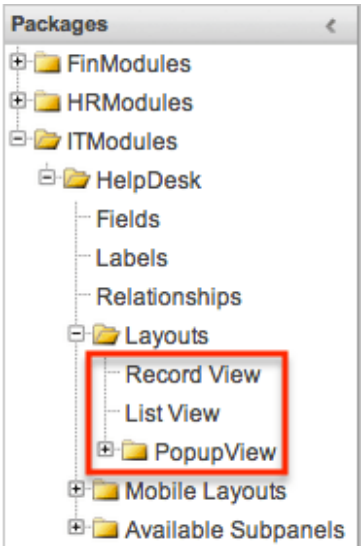
Note: If you wish to retain the data and table structure that currently exists for the relationship, select the "Do Not Remove Tables" option.

Leaving the "Do Not Remove Tables" unchecked will delete the relationship data and remove the tables for the relationship from the database when the package is installed.
Before deleting a relationship please verify and resolve the following issues:

- Relationship must be removed from any report filters or displays.
- Relationship must be removed from any workflows that filters or displays fields from the relationship.
- Relationship must be removed from any Sugar Logic formulas referencing the relationship.

Layouts

Layouts are used to represent many screens in Sugar. The layouts section in Module Builder allows administrators to add fields and configure layouts. To access the layouts section, expand "Layouts" from the packages panel under the desired module. The available layouts for the selected module will appear below.

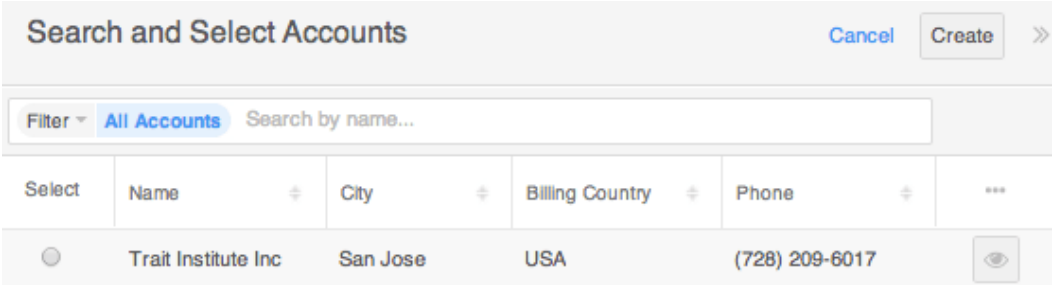


Layout Types

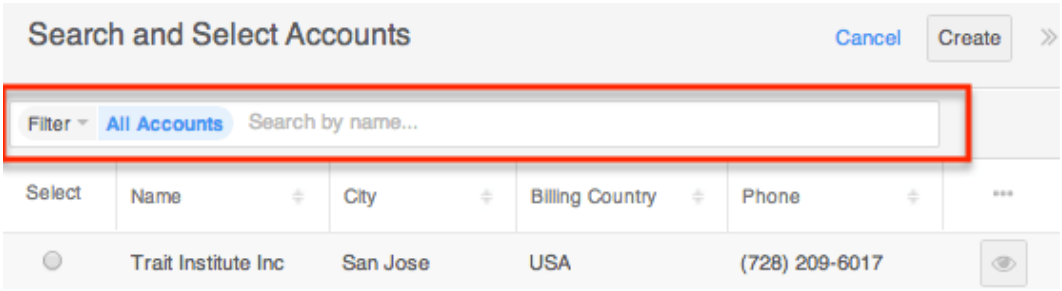
Sugar comes with different types of layouts to represent different sections of Sugar. Please note that not all layouts are available in every module.
The following layouts are available to configure in Module Builder:

- **Record View**: Record view layout is used to modify, create, or view a record within the specified module. Please note that this layout is specific to modules using the Sidecar user interface.
- **List View**: List view layout is used to view multiple records within the specified module and displays all results meeting the current search criteria.
- **Popup List View**: Popup list view layout is used to view multiple records

via a popup window used to locate and select records in the specified module.
For Sidecar modules:



- **Popup Search**: Popup search layout is used to allow users to perform a search via the popup window used to select records in the specified module.
For Sidecar modules:

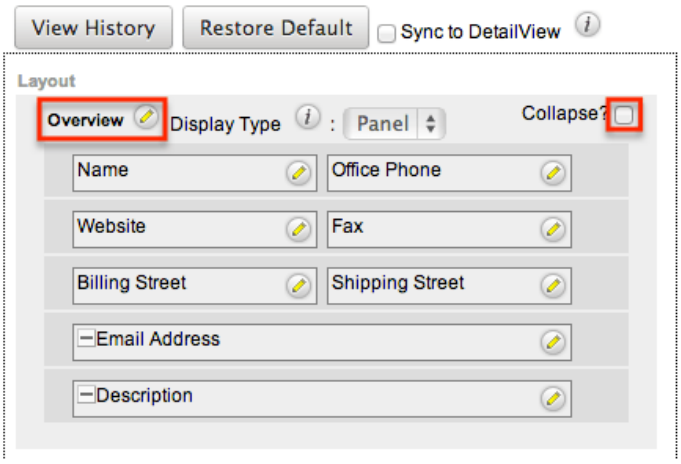


Layout Options

Administrators have the ability to configure the various layouts (e.g. record view, list view, etc.) available via Module Builder. Please note that the layouts can be configured via Admin > Studio as well once the module has been deployed. For more information on configuring layouts, please refer to the Studio documentation.

The following are some of the options available to administrators when configuring layouts via Module Builder:

- **Panels**: Every field on a layout is contained within a panel. Panels can be open or collapsed by default and have a title defining the panel. Panels can be organized to contain groups of similar or related fields to assist in organization.
Select the Pencil icon next to the Panel title to modify the title. Select the Collapsed? checkbox to default the panel as collapsed. Users can open and close panels as they prefer.



Note: The default panel name cannot be modified in Module Builder.

- **View History**: Sugar preserves a history of the changes made to each layout. Click "View History" and the History dialog box will display the timestamp of when changes occurred and allow you to preview the layout then restore if you wish. For more information on viewing the history of layouts, please refer to the Viewing Layout History section of this page.
- **Restore Defaults**: Sugar provides the option to restore a layout to its original default configuration. For more information on how to restore the default layout, please refer to the Restoring Layout Defaults section of this page.

Editing Layouts

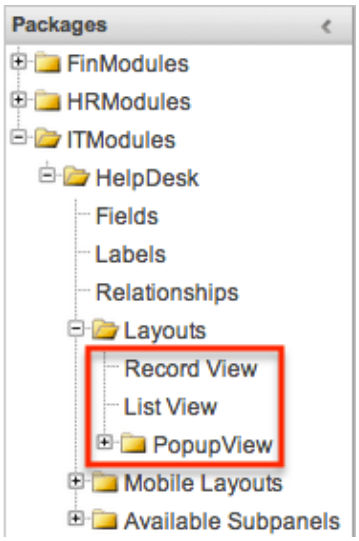
You can add, remove, hide, etc. the fields for the available layouts in the module by selecting the specific layout under the Packages panel to edit. Please note that the List View and Popup View layouts have columns where you can designate fields users can and cannot see.

Once a module is deployed, record views may be configured in Studio to display differently based on the viewing user's role.

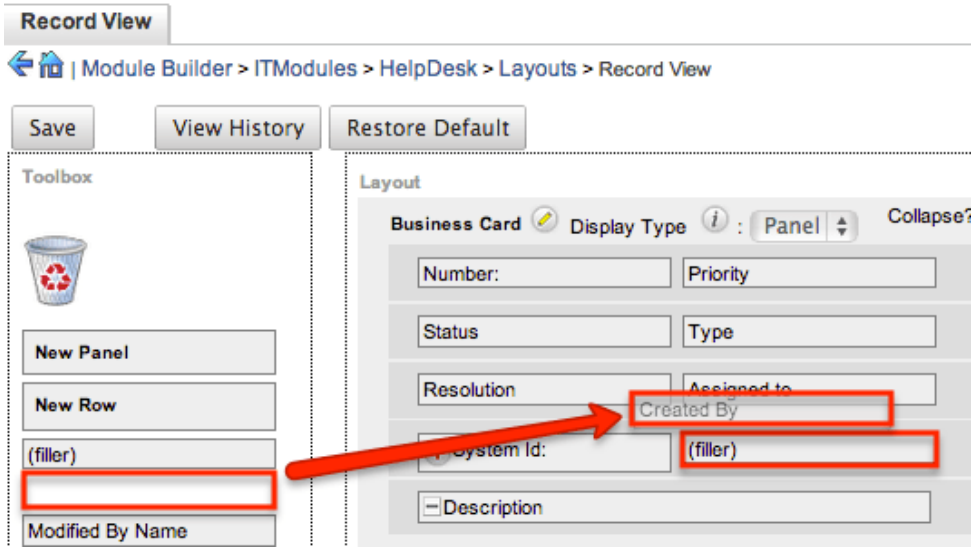
Editing Record View Layout

The following steps cover editing the Record View layout as an example:

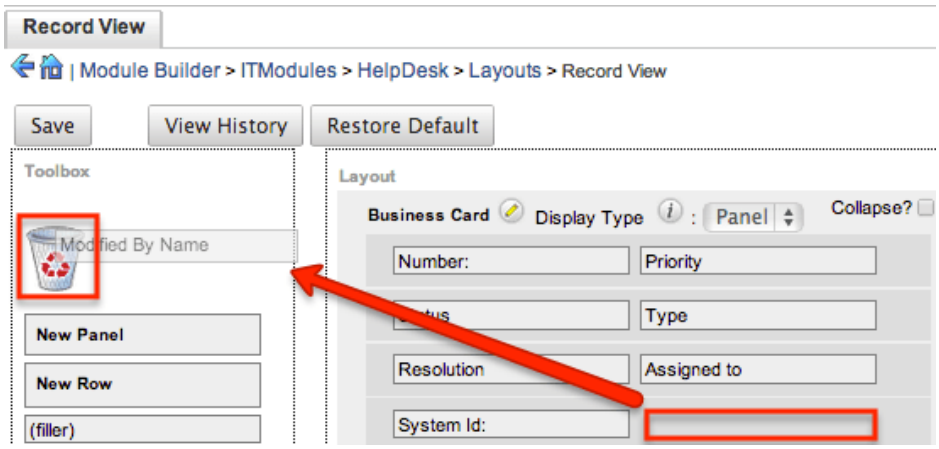
1. Expand "Layouts" from the Packages panel under the desired module and select the layout (e.g. Record View) you wish to edit. The Record View layout will display in the main panel to the right.



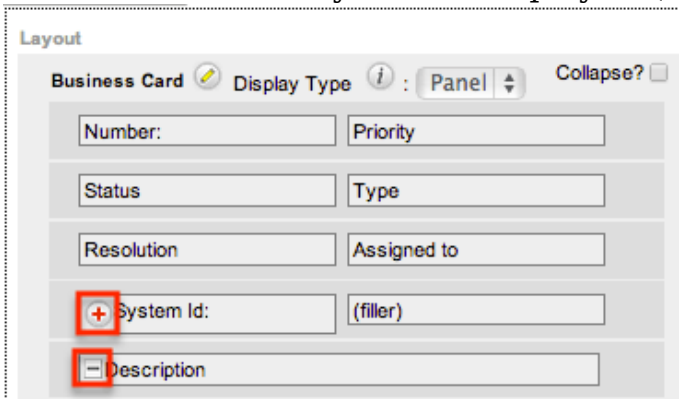
2. To add a field to the Record View layout, drag the field from the list of fields in the Toolbox to a "(filler)" location on the layout per your preference.
    - You can also drag a field to a location on the layout that already has a field in place. The newly added field and the existing field on the



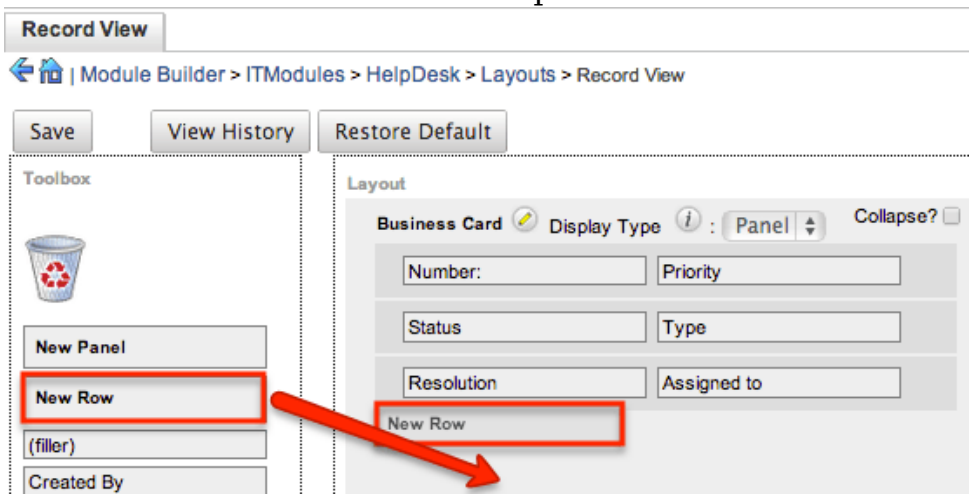
3. To remove a field from the layout, drag and drop the field from the layout to the trash bin in the toolbox to remove the field from the layout. You may remove an entire row in the layout using the same method.



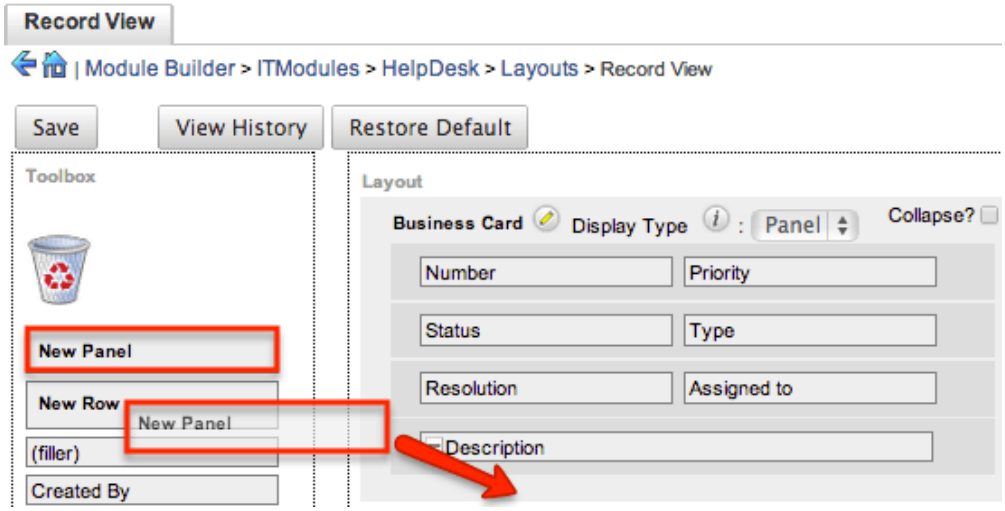
4. To expand or minimize the field column in the layout, click the Plus icon (+) to stretch the field over two columns or click the Minus icon (-) to fit the field into one column.
    - **Note**: The layout will display a "(filler)" if there is no field in that



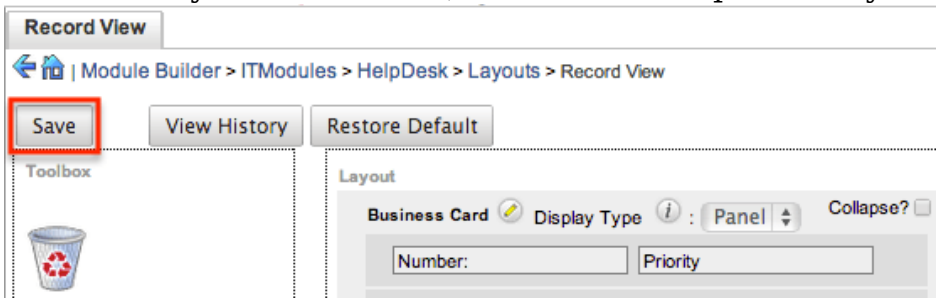
5. To add a new row, drag the "New Row" item in the Toolbox to the layout to allow additional fields or blank spaces to be added.



6. To add a new panel, drag the "New Panel" item in the Toolbox to the layout to group different sets of fields together in the Record View layout.



7. Once the layout is finalized, click "Save" to preserve your changes.



Note: It is recommended that dependent fields be placed below and/or to the right of the independent field in order to preserve the correct display of fields on the layout.

Editing List View Layout

Unlike the Record View layout, the List View layout has columns where you can designate fields users can and cannot see. When configuring the List View layout, you will see three columns (Default, Available, Hidden) where fields can be dragged and dropped accordingly.

Please note that editing the List View layout affects the list of available fields for the module's list view dashlet as well since both are controlled by the same layout (List View). Once the custom module is deployed, the configurations made to the list view layout in Module Builder will be reflected in the Columns fields of the corresponding module dashlet's Configuration Options page. After the custom module is deployed, all succeeding changes to the List View layout can be made via Studio. Please keep in mind that the custom module dashlet will not automatically reflect the Studio changes and users must edit the dashlet in order to view the changes, add new fields to the layout, etc.

Administrators can easily set the column widths for specific fields when configuring the List View layout. You can choose from a pre-defined list of width sizes (e.g., small, medium, large, etc.) that are available out-of-the-box with Sugar

or enter a custom width value in pixels (e.g. 200) for Sidecar modules.

Note: When defining the column width for currency fields (e.g., Likely, Best, etc.), only "large" and above will apply because there is a minimum width requirement in Sugar for this field type. In addition, when defining a custom width for currency fields, the value must be 141px or wider.

The following table lists the available column width sizes in Sugar along with the corresponding width in pixels:

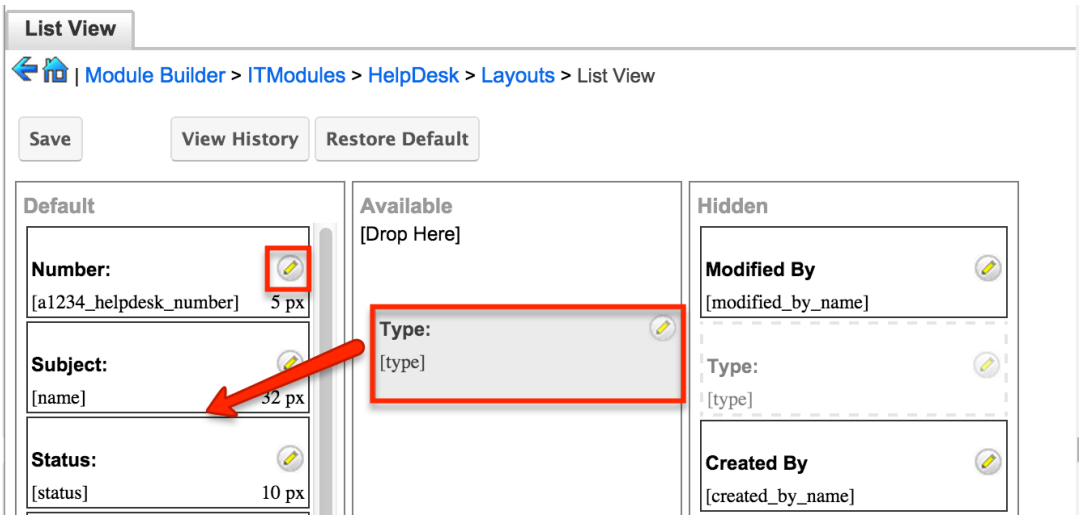
Table column widths

Name	Width	Example
xxsmall	21px	Ex.
xsmall	42px	Exam
small	68px	Example
medium	110px	Example
large	178px	Example
xlarge	288px	Example
xxlarge	466px	Example

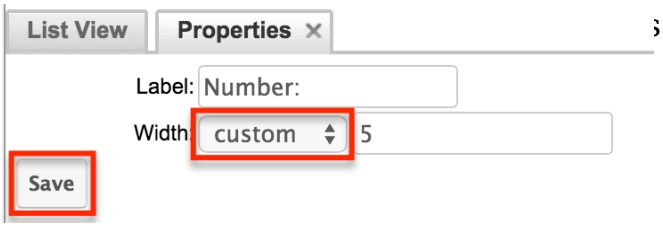
- **Default**: This column contains fields that are displayed in the layout.
- **Available**: Available fields are fields that will not show by default in the layout, but if the layout can be personalized, users can add these fields to their view of the layout. Not all list type layouts have an available fields section.
- **Hidden**: This column contains fields that will not be displayed in the layout.

The following steps cover editing the List View layout as an example:

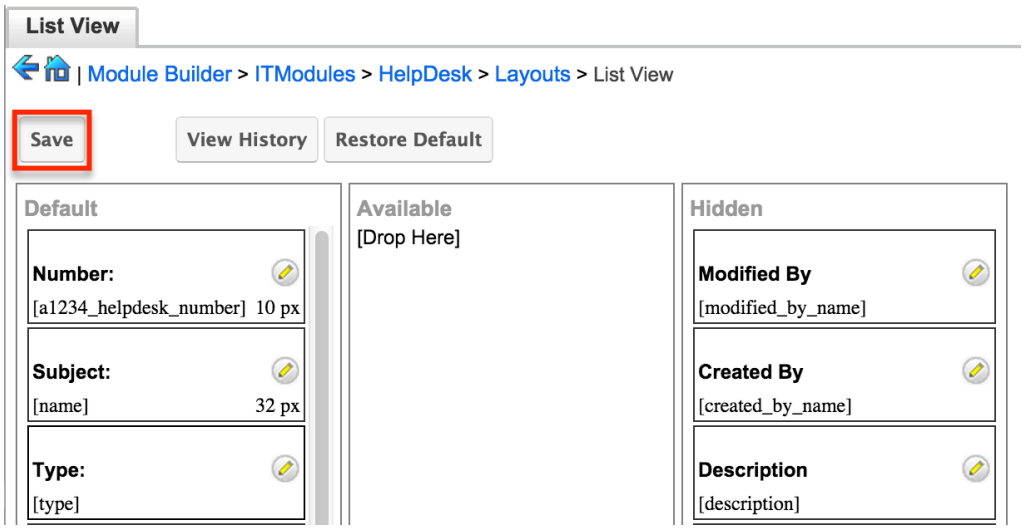
1. Expand "Layouts" from the Packages panel under the desired module and select "List View".
2. To add a field to the List View layout, drag and drop the fields from the Hidden column to the Default column.
    - **Note**: The fields in the Default column will be available to add as display columns in the corresponding custom module dashlet (e.g. My HelpDesk).



3. To remove a field from the layout, drag and drop the field from the Default column to the Hidden column.
4. To change the left-to-right order of the fields displayed on the list view, drag and drop fields up or down within the Default list.
    - **Note**: The order of fields designated for the List View layout also affects the order for the list of available fields in the corresponding custom module dashlet (e.g., My HelpDesk).
5. To modify the label of the field, as well as the width of the field, click the Pencil icon next to each field.
6. Enter the new label or select the width (e.g. small, medium, large, etc.) then click "Save". Please note the modified label will display in all List View layouts for this module.
    - **Note**: Administrators can choose from a pre-defined list of width sizes (e.g., default, small, medium, etc.). Please note that selecting the Default width will set the list view column to equal the Medium width size. Selecting "custom" from the list will allow you to enter a custom width value in the open box. The custom width (e.g., 200) for the fields.

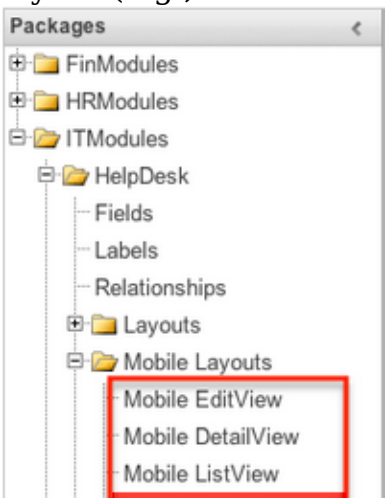


7. Once the layout is finalized, click "Save" to preserve your changes.



Mobile Layouts

Administrators can also configure the mobile layouts for Sugar Mobile by expanding "Mobile Layouts" for the desired module from the Packages panel. The list of available mobile layouts will display below and you can select the specific layout (e.g., Mobile EditView, Mobile ListView, etc.) you wish to configure.



Mobile Layout Types

There are various mobile layouts in Sugar to represent the different areas of the Sugar Mobile application. Please note that not all layouts are available in every module and the different mobile applications will use the information defined here differently.

The following mobile layouts are available in Sugar:

- **Edit View**: Edit view layout is used in Sugar to modify or create records in the specified module.

- **Detail View**: Detail view is used in Sugar to view the current data for a record within the specified module. Certain fields are translated to Sugar Mobile as buttons instead of data. For example, instead of seeing the phone number, there is a phone icon to be able to call the number on the record.
- **List View**: List view layout is used in Sugar to view multiple records within the specified module. Only the first two fields in the list view section will be displayed in Sugar Mobile.

Mobile Layout Options

Administrators have the ability to configure the various layouts available via Module Builder. Please note that the mobile layouts can be configured via Admin > Studio as well once the module has been deployed. For more information on configuring layouts, please refer to the Studio documentation.

The following are some of the available options when configuring mobile layouts via Module Builder:

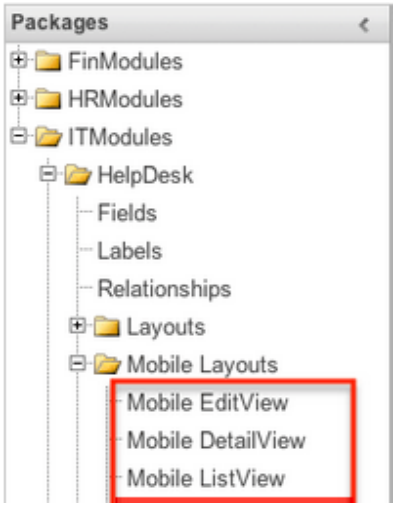
- **View History**: Sugar preserves a history of the changes made to each layout. Click "View History" and the History dialog box will display the timestamp of when changes occurred and allow you to preview the layout then restore if you wish. For more information on viewing the history of layouts, please refer to the Viewing Layout History section of this page.
- **Restore Defaults**: Sugar provides the option to restore a layout to its original default configuration. For more information on how to restore the default layout, please refer to the Restoring Layout Defaults section of this page.

Editing Mobile Layouts

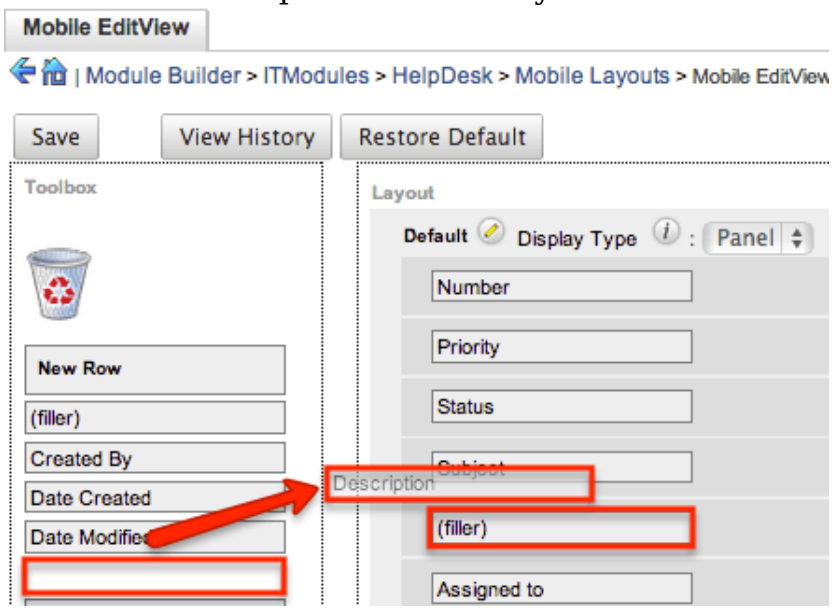
You can add, remove, hide, etc. the fields for the available layouts in "Mobile Layouts" by selecting the specific layout under the Packages panel to edit. Please note that the Mobile EditView and DetailView layouts are modified in similar fashions. The Mobile ListView layout has columns where you can designate fields users can and cannot see.

The following steps cover editing the Mobile EditView layout as an example:

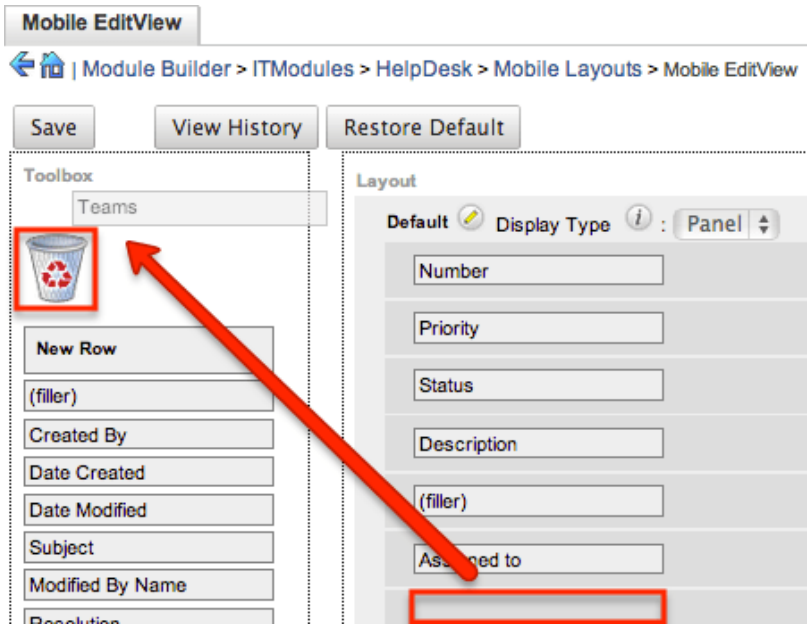
1. Expand "Mobile Layouts" from the Packages panel under the desired module and select "Mobile EditView". The selected layout will display in the main panel to the right.



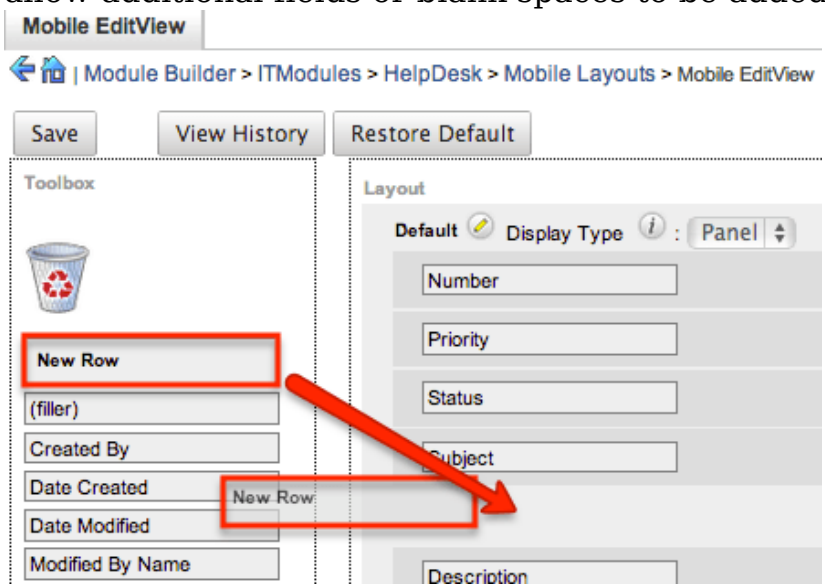
2. To add a field to the Mobile EditView layout, drag the field from the list of fields in the Toolbox to a "(filler)" location on the layout per your preference.
    - You can also drag a field to a location on the layout that already has a field in place. The newly added field and the existing field on the



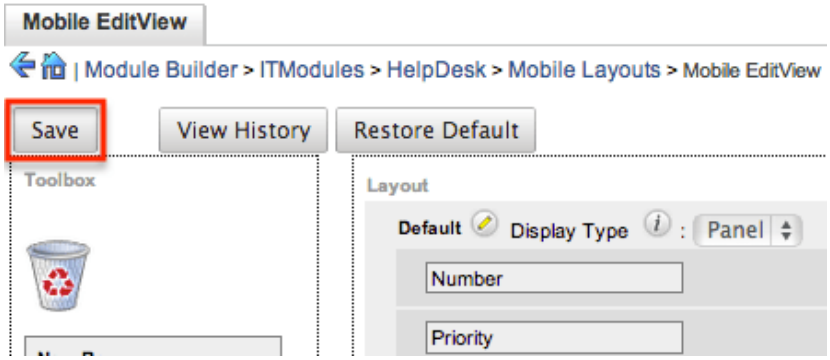
3. To remove a field from the layout, drag and drop the field from the layout to the trash bin in the Toolbox to remove the field from the layout. You may remove an entire row in the layout using the same method.



4. To add a new row, drag the "New Row" item in the Toolbox to the layout to allow additional fields or blank spaces to be added.



5. Once the layout is finalized, click "Save" to preserve your changes.



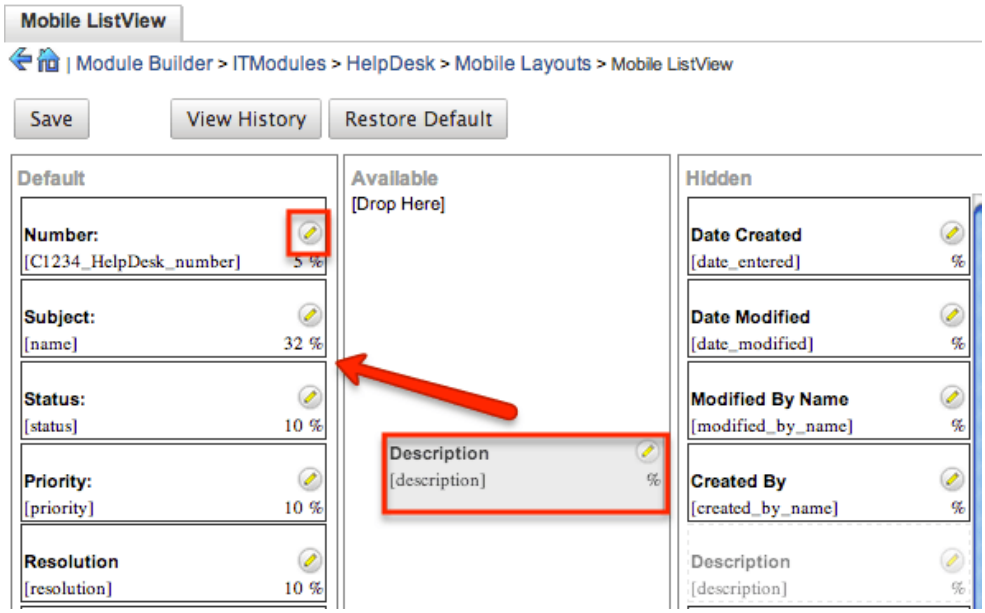
Unlike the Mobile EditView layout, the Mobile ListView layout has columns where you can designate fields users can and cannot see. When configuring the Mobile

ListView layout, you will see three columns (Default, Available, Hidden) where fields can be dragged and dropped accordingly.

- **Default**: This column contains fields that are displayed on the list view.
- **Available**: Available fields are fields that will not show by default in the layout, but if the layout can be personalized, users can add these fields to their view of the layout. Not all list type layouts have an available fields section.
- **Hidden**: This column contains fields that will not be displayed on the list view.

The following steps cover editing the Mobile ListView layout as an example:

1. Expand "Layouts" from the Packages panel under the desired module and select "Mobile ListView".
2. To add a field to the Mobile ListView layout, drag and drop the fields from the Hidden column to the Default column.

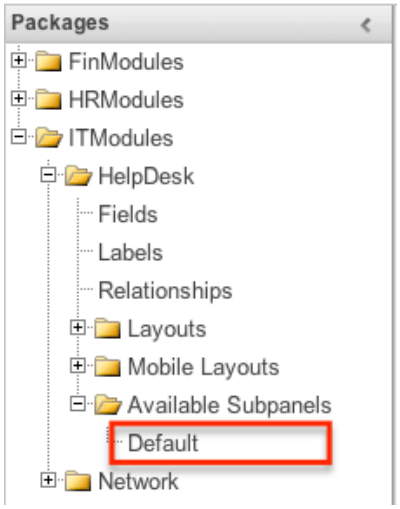


3. Click the Pencil icon to modify the label of the field as well as the width percentage the field will take up in the list view. Please note that the modified label will display in all List View layouts in Sugar Mobile.
4. Once the layout is finalized, click "Save" to preserve your changes.

Available Subpanels

Related records between modules in Sugar are commonly displayed in Subpanels. Similar to list type layouts, administrators can modify the available subpanel layouts to change which fields are shown in a module's subpanel. You can add or remove fields for these subpanels depending on the information that you want to display to users. To access the subpanels section in Module Builder, expand "Available Subpanels" from the Packages panel under the desired module. The

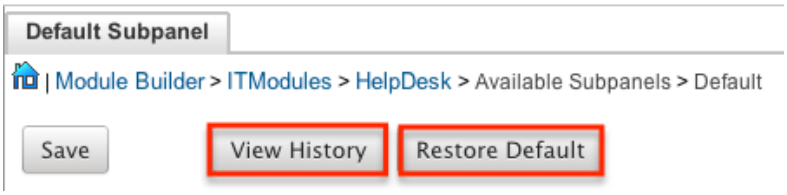
available subpanel for the selected module will appear to the right of the screen.



Subpanel Options

When configuring the Subpanel layout in Module Builder, there are some available options that allow you to view historical layout changes as well as restore the default layout. Please note that the subpanel layout can be configured via Admin > Studio as well once the module has been deployed. For more information on configuring layouts, please refer to the Subpanels section of the Studio documentation.

- **View History**: Sugar keeps a history of the changes made to each subpanel. These changes and when they occurred can be viewed and restored via "View History". For more information on viewing the history of subpanels, please refer to the Viewing Layout History section of this page.
- **Restore Defaults**: Sugar also contains the ability to restore a subpanel to its original default configuration. For more information on how to reset a subpanel to default, please refer to the Restoring Layout Defaults section of this page.

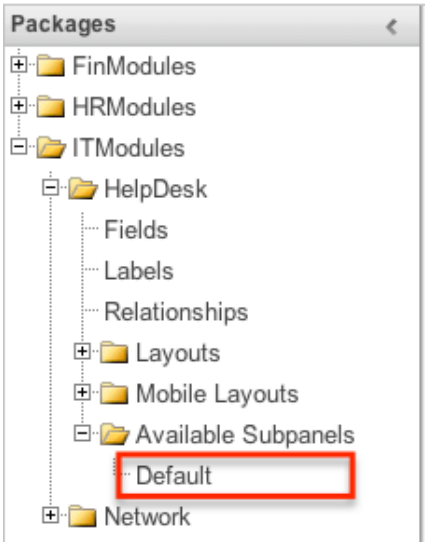


Editing Subpanel Layout

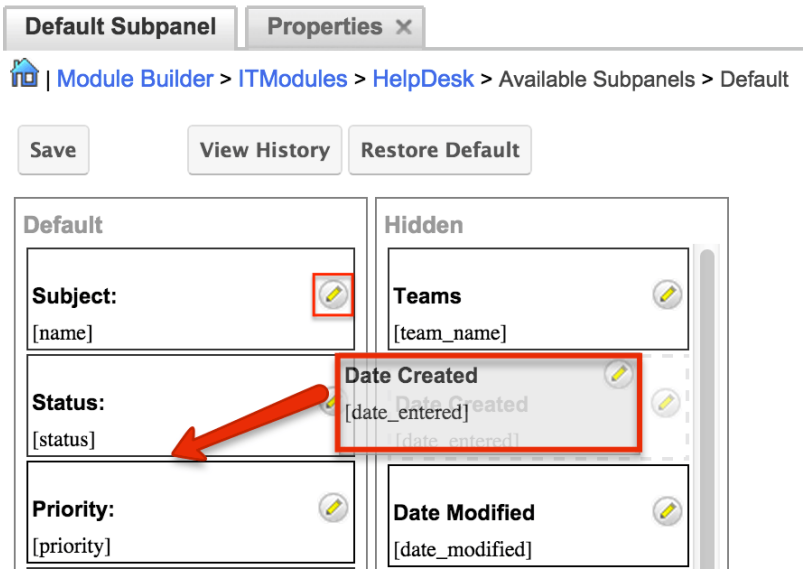
Use the following steps to modify a subpanel via Module Builder:

1. Expand "Available Subpanels" from the Packages panel under the desired module and select the subpanel you wish to edit. The selected subpanel

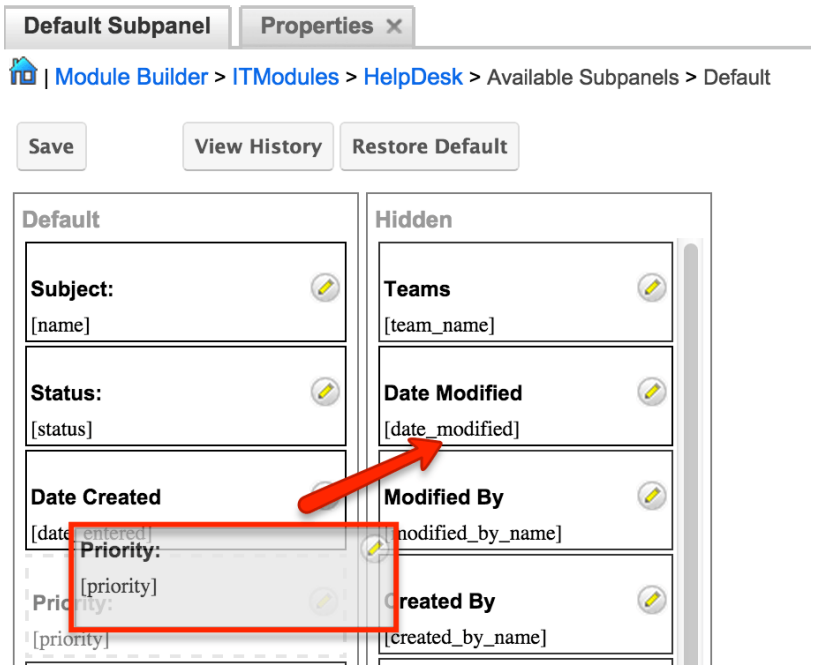
layout will display to the right in the main panel.



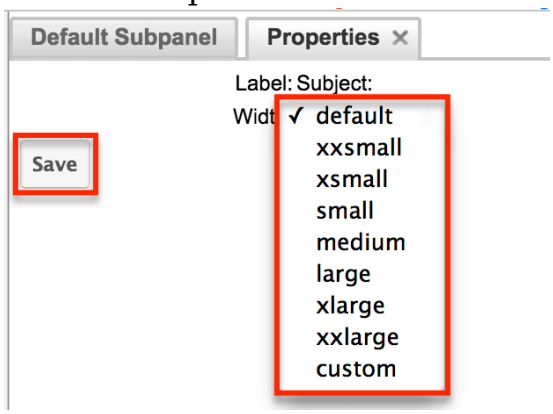
2. To add a field to the Subpanel layout, drag and drop the fields from the Hidden column to the Default column.
    - You can drag the field up and down the list to change the position of



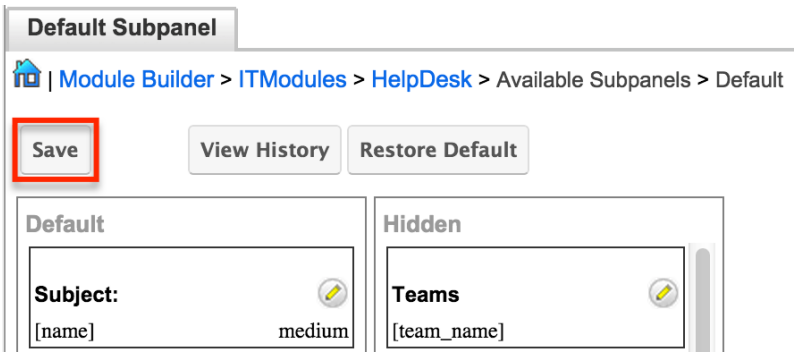
3. To remove a field, drag and drop the fields from the Default column to the Hidden column.



4. Click the Pencil icon to change the column width of the field in the subpanel.
    - **Note**: Administrators can choose from a pre-defined list of width sizes (e.g. default, small, medium, etc.). Please note that selecting the Default width will set the list view column to equal the Medium width size. Selecting "custom" from the list will allow you to enter a custom width value in the open box. The custom width value should be entered in pixels (e.g. 200) for the fields.
    - When defining the column width for currency fields (e.g. Likely, Best, etc.), only "large" and above applies because there is a minimum width requirement in Sugar for this field type. In addition, when defining a custom width for currency fields, the value must be 141px or wider.



5. Once the subpanel layout is finalized, click "Save" to preserve your changes.



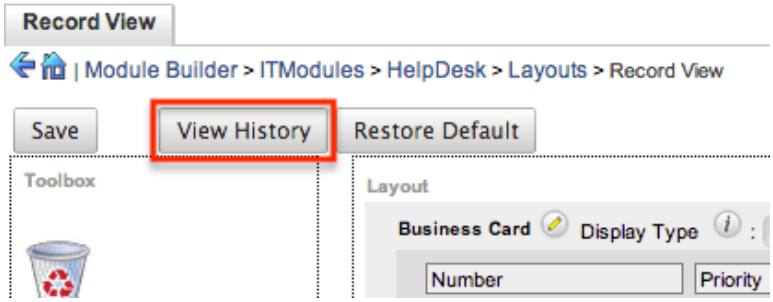
Using Sugar Logic

Sugar Logic allows administrators to write simple formulas and logic checks to provide a calculation for a field or to set the visibility of a field. A formula specifies one or more field values along with operators and functions that are mathematical or logical. When you execute a formula, Sugar performs the calculation to derive the value. When a field is used in a formula, Sugar recalculates the value whenever a user updates it and saves the record. Similarly, if you update a formula, Sugar recalculates the field value based on the updated formula. For the complete list of Sugar Logic functions and how to use them, please refer to the Studio documentation.

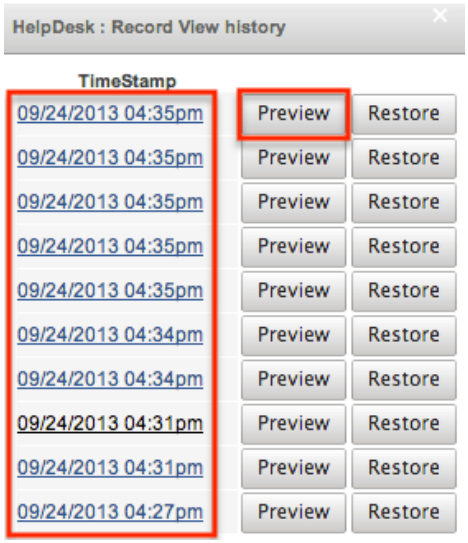
For more information regarding the types of fields that support the use of Sugar Logic, please refer to the Field Options section of this page.

Viewing Layout History

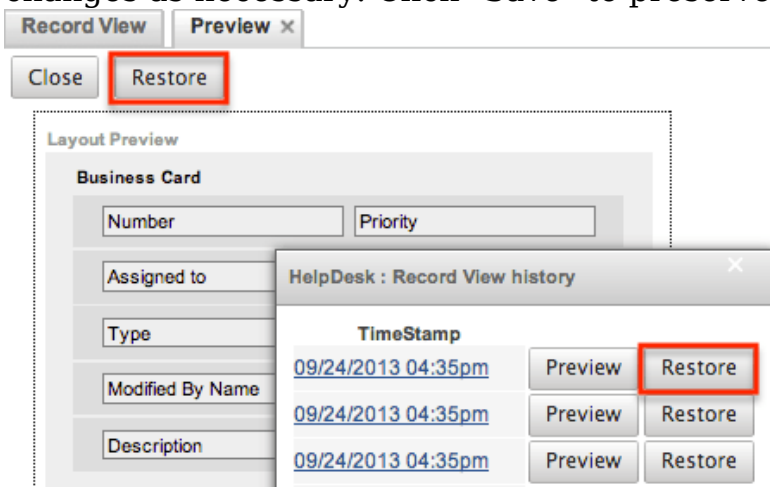
Layouts, subpanels, and mobile layouts keep a history of the last ten changes made to each layout. To view the history for any of these layouts, simply click "View History" on the layout editor view in Module Builder.



The History dialog box will open up displaying the timestamps of when changes occurred and allow you to preview the layout by clicking the Preview button.

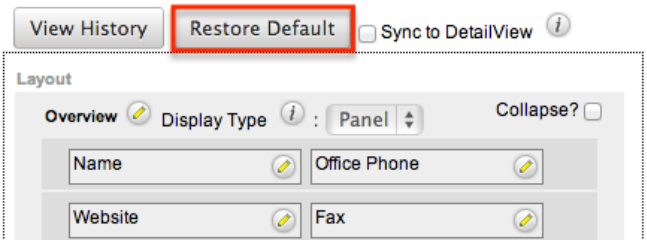


The preview will show the details of the layout as of the specific time it was saved. To restore the layout to the particular version you are viewing, simply click the Restore button from under the Preview tab or in the History dialog box. The restored layout will load into the layout editor allowing you to make any additional changes as necessary. Click "Save" to preserve your changes.



Restoring Layout Defaults

Many layouts, subpanels, and mobile layouts can be restored to their original default configuration. To restore the default for any of these layouts, simply select "Restore Default" from the edit layout screen in Module Builder.

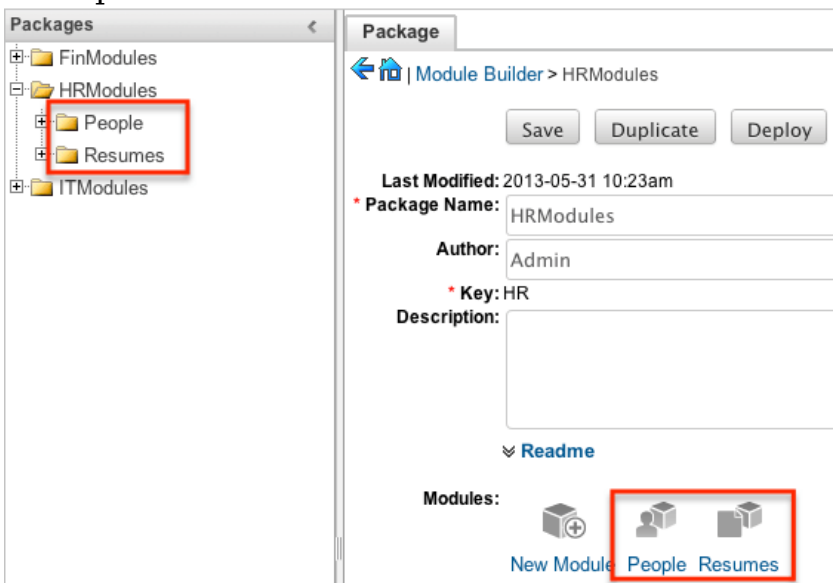


The default layout will load into the editor allowing you to make changes as necessary. Click "Save" to preserve your changes.

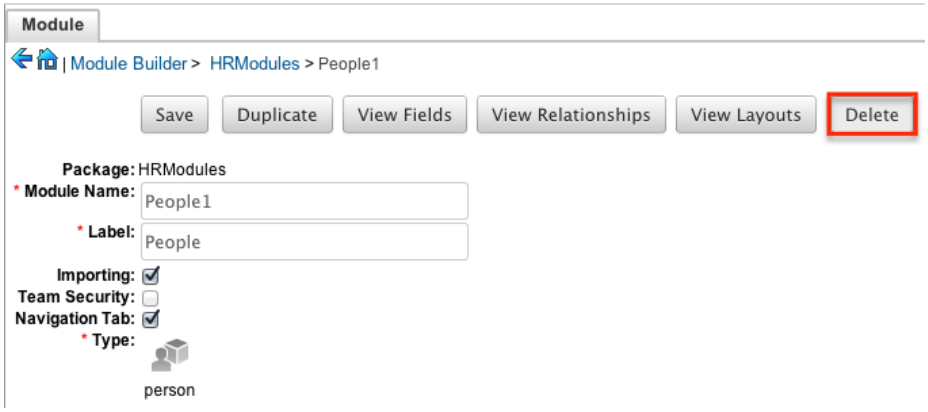
Deleting Modules

If a module is invalid or should no longer appear in a package, it may be deleted from Module Builder. Please note that deleting a module from a package will not remove the module from any instances where the package was deployed. For more information on how to uninstall a deployed package from an instance, please refer to the Module Loader documentation.
Use the following steps to delete a module from a package via Module Builder:

1. Select the desired package and module from the Packages panel or the main panel.



2. Click "Delete" to remove the module.



3. A pop-up message will display asking for confirmation. Click "Ok" to proceed.

Module Loader

Overview

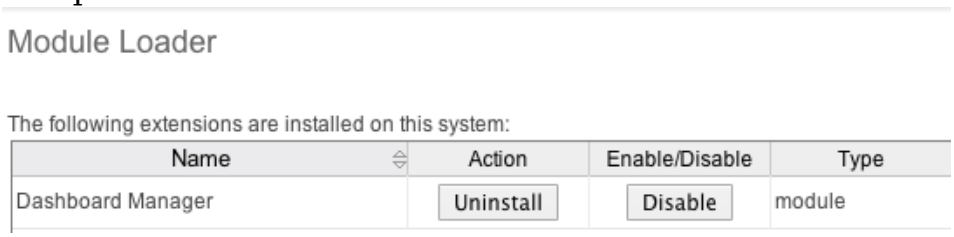
Module Loader is used to install a variety of custom file packages, including custom modules, into a Sugar instance. Using Module Loader, you can also manage and uninstall these packages, all done through Sugar's user interface. Packages are uploaded as a ZIP file from an administrator's local computer and then, when deployed, will force changes upon the instance's filesystem and database.

Custom module packages can be created and modified in Module Builder, and then, after deployment, they will show in Module Loader. They can also be exported from Module Builder in one instance, and then uploaded to another instance via Module Loader.

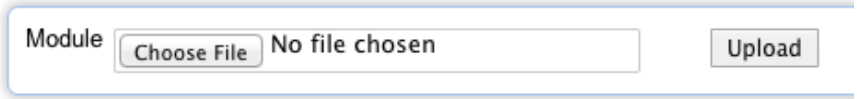
Module Loader Layout

Module Loader consists of three panels. The panels include all necessary information about the packages, and also include different buttons to perform actions, explained in Module Loader Fields. The panels are:

- **Installed Packages:** This panel shows all installed packages. On this panel, you have the option to uninstall or disable installed packages. After installation, the packages will move from the Uploaded Packages panel to this panel.



- **Module Upload:** This panel consists of an upload option where files can be uploaded to Sugar via a browser file selection window. Please review Uploading Modules for more information on using this panel.



- **Uploaded Packages:** This panel shows all packages that have been uploaded to Sugar, but have not yet been installed, or have been uninstalled. Packages can be installed or deleted from Sugar using this panel.



Module Loader Fields

Module Loader contains different fields on the Installed Packages and Uploaded Packages panels. Each set of fields show relevant and identifying information about the module package.

The Installed Packages panel consists of the following fields:

Field	Description
Name	The name of the package, pulled from the manifest.php file of the package.
Action	Button allowing you to uninstall the package from your Sugar instance if the package is marked as uninstallable in the manifest.php file of the package.
Enable/Disable	Button allowing you to enable or disable the functionality of the package without uninstalling. **Note**: Always perform a Quick Repair and Rebuild after disabling and then re-enabling a package via Module Loader.
Type	Describes the type of package, pulled from the manifest.php file of the package.
Version	The version of the package pulled from manifest.php file of the package.
Date Installed	The date and time that the package was installed.
Description	The description of the package pulled from the manifest.php file of the package.

The Uploaded Packages panel consists of the following fields:

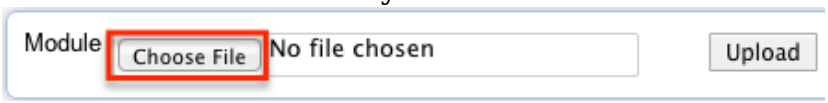
Field	Description
Name	The name of the package pulled from the manifest.php file of the package.
Install	Button allowing you to install the package to your Sugar instance.
Delete	Button allowing you to delete the package from your Sugar instance.
Type	Describes the type of package, pulled from the manifest.php file of the

	package.
Version	The version of the package, pulled from manifest.php file of the package.
Date Published	The date and time that the package was initially created from the publisher.
Uninstallable	Tells you if the package is uninstallable from the manifest.php file of the package.
Description	The description of the package pulled from the manifest.php file of the package.

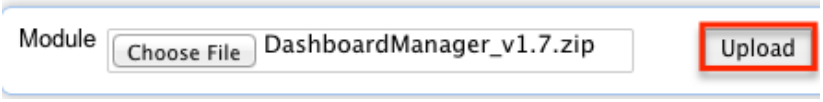
Uploading Packages

After receiving the file that you would like to install, you must first upload it to your Sugar instance. To upload a file, use the following steps:

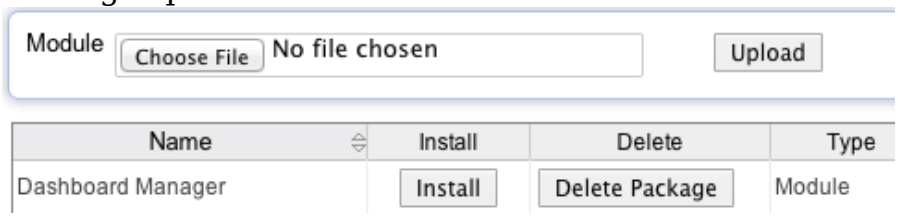
1. Navigate to Admin > Module Loader
2. Click the "Choose File" button in the Module Upload panel to open a file selection window from your browser



3. Select the file from your local computer
4. After you select your file, click the "Upload" button to complete the process



5. After it has been uploaded, the package will show in the Uploaded Packages panel

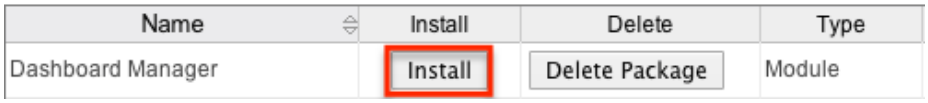


It is also possible to upload packages using a REST API endpoint. Refer to the Developer Guide for more information.

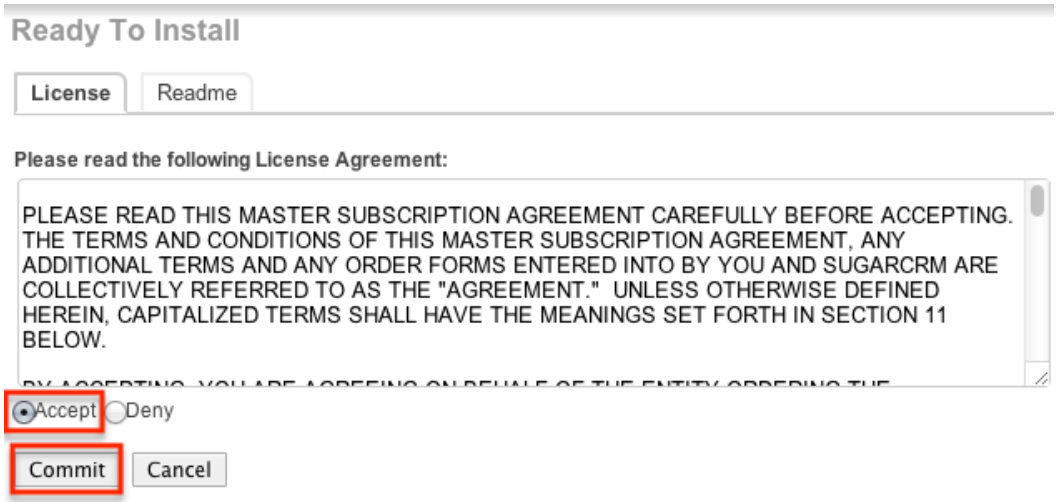
Installing Packages

After uploading a package to Module Loader, it must be installed for the package's contents to take effect on your instance. To install a package, follow the following steps:

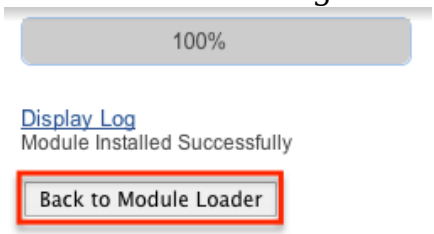
1. Follow the steps to upload your package to Module Loader.
2. Click the "Install" button on the Uploaded Packages panel.



3. You will be brought to the installation screen to confirm that the packages should be installed and to read and accept any license or readme documentation as needed. Click "Commit" when ready to run the installation.



4. The next page will show a progress bar and a completion notice. If there are any errors, they will be displayed with a verbose explanation of what went wrong. If not, click "Display Log" to show what happened during the installation process.
    - **Note:** To sustain the stability, security, and integrity of Sugar's cloud service environment, all installed packages are scanned to check for code not conforming to environmental agreements. Any package that fails this scanner will not be installed and the installer will produce a reason for the failed installation. If this happens, please contact the developer of your package for more information.
5. Click "Back to Module Loader" when complete to return to Module Loader. If you do not need to install any further packages, you can navigate to any other section of Sugar as need be.



If you install a package that causes an error or puts the Sugar instance into an unusable state within the first five minutes, the package installation is rolled back so that the Sugar instance can become usable again. Details of the errors can be found in the sugarcrm.log file to help troubleshoot the cause.

It is also possible to install packages using a REST API endpoint. Refer to the Developer Guide for more information.

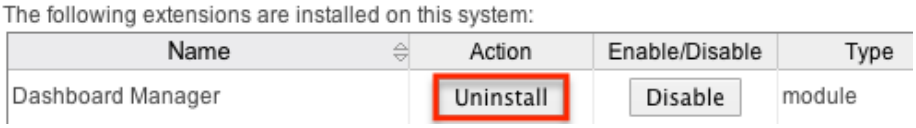
Uninstalling Packages

After a package has been installed in your Sugar instance, it can be removed if it is no longer needed. When uninstalled, the package will remove any available customizations to your instance from the filesystem and database. Any legacy workflows based on the module will also be deleted.

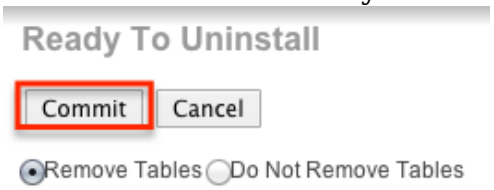
Note: Packages have to be defined as "Uninstallable" in the manifest.php file of the package to be able to be uninstalled.

To uninstall a package, perform the following steps:

1. Navigate to Admin > Module Loader.
2. Locate the package you would like to uninstall in the Installed Packages panel.
3. Click the "Uninstall" button.



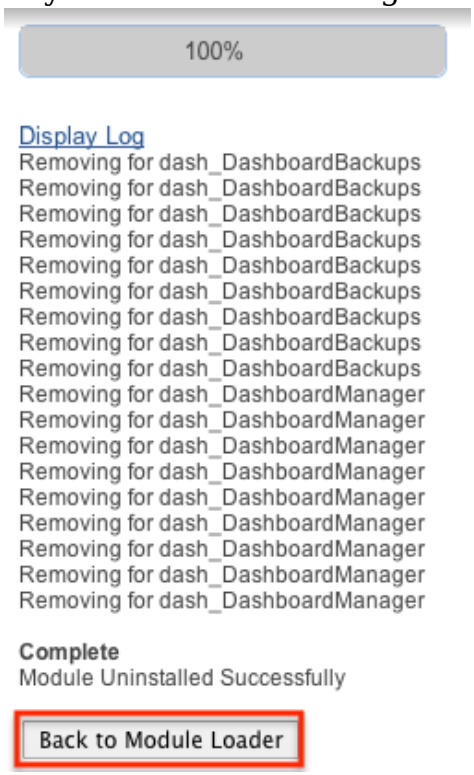
   - **Note:** If you do not see an Uninstall button next to your package, it may be caused by one of the following circumstances:
     - There may be a newer version of the package installed that has an Uninstall button and that package must be uninstalled first.
     - The manifest.php file may not define the package as uninstallable.
     - The package may be missing files that are critical to performing the uninstall.
4. If the package has added any database tables to your instance, you will see a selection of whether to remove or retain the database tables. If the database tables include any information you would like to keep, select the "Do Not Remove Tables" option. An example of this would be if you are uninstalling a custom module but will be reinstalling a new version of the same module. You would want to keep the data but remove any files associated with the old module that will be replaced with the new package.
5. Click "Commit" when you are ready to uninstall the package.



6. The next page will show a progress bar and a completion notice. If there

are any errors, they will be displayed with a verbose explanation of what went wrong. If not, click "Display Log" to show what happened during the uninstall process.

7. Click "Back to Module Loader" when complete to return to Module Loader. If you do not need to uninstall any further packages, you can navigate to any other section of Sugar as need be.



8. After the package has been uninstalled, it can be deleted from your instance via the Uploaded Packages panel.

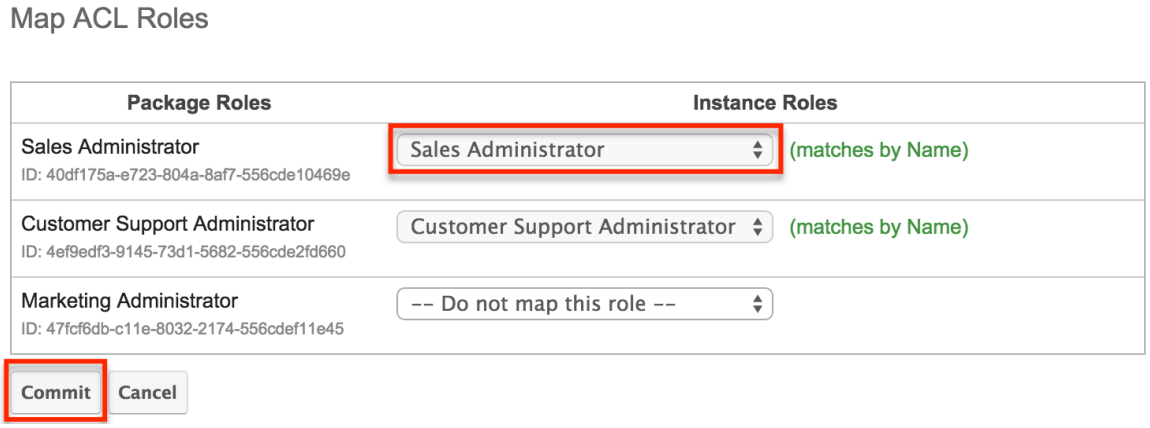


It is also possible to uninstall packages using a REST API endpoint. Refer to the Developer Guide for more information.

Installing Role-Based Customizations

Administrators have the ability to create role-based custom dropdown lists and role-based custom record views via Studio and Dropdown Editor. These role-based customizations are included when exporting customizations via Studio. When the exported package is then installed on a destination instance, administrators will be given the opportunity to map the package's customized roles to the destination instance's roles. Sugar will attempt to select a matching role from amongst the destination instance's roles. The role mapping can be manually altered by selecting a different role from the dropdown menus. If you do not want to install a role's customizations, choose "Do not map this role" in the dropdown. Once the mappings

are correctly set, click "Commit" to proceed with installing the package.



Importing Role-Based Custom Record Views

If the package contains role-based custom record views, the mapped roles in the destination instance will be updated to match the package's custom record views. Any prior customizations made record view for the destination instance's role will be overwritten. Regardless of any prior customizations made on the destination instance, all mapped roles will be updated to completely match the imported role-based record views. For more information about creating role-based custom record views, please refer to the Studio documentation.

Importing Role-Based Custom Dropdown Lists

When a package contains non-stock dropdown values for the default role, the destination instance's default role-list will be completely overwritten by the package.

If the package, the destination instance, or both include role-based custom dropdown lists, Sugar will take the destination instance's original customized role-lists into consideration when deciding on the resulting customized role-lists. The following table demonstrates how default custom dropdown lists and role-based custom dropdown lists will be affected:

- When a cell indicates "Undefined", it means that the role does not have a customized role-list, and it will inherit the custom default list.
- When a cell indicates "Any", it means that the role's role-list is customized, but any of the possible combinations of values will produce the same result.
- When a cell indicates "Empty", it means that the role's role-list is customized to have no enabled values.
- In every situation, the resulting default role-list will be overwritten to exactly match the package's default role-list.

Situation	Destinati	Destinati	Package	Package	Resulting	Resulting

and Outcome	on Default Role-List	on Custom Role-List	Default Role-List	Custom Role-List	Default Role-List	Custom Role-List
The destination and package match. The destination remains unchanged.	A,B,C	B,C	A,B,C	B,C	A,B,C	B,C
This role is not customized in the destination or package. This role will not be customized and will inherit the default role-list.	A,B,C	*Undefined*	X,Y,Z	*Undefined*	X,Y,Z	*Undefined*
This role is customized in both the destination and package. This role's custom role-list is updated to match the package's.	A,B,C	*Any*	A,B,C	A,C	A,B,C	A,C
This role is	A,B,C	*Any*	X,Y,Z	X,Y	X,Y,Z	X,Y

customized in both the destination and package. This role's custom role-list is updated to match the package's.						
This role's custom role-list has no enabled options in the package. This role's custom role-list will have no enabled values.	A,B,C	*Any, Empty, or Undefined*	X,Y,Z	*Empty*	X,Y,Z	*Empty*
This role is customized in the destination but not in the package. This role's custom role-list is reduced to the values present in both the destination's custom	A,B,C	A,C	A,B,E	*Undefined*	A,B,E	A

role-list and the package's default role-list.						
This role is customized in the destination but not in the package. This role's custom role-list will have no enabled values since there is no overlap between the destination's custom role-list and the package's default role-list.	A,B,C	*Any*	X,Y,Z	*Undefined*	X,Y,Z	*Empty*
This role is customized in the destination but not in the package. This role's custom role-list will have no enabled values	A,B,C	C	A,B,E	*Undefined*	A,B,E	*Empty*

since there is no overlap between the destination's custom role-list and the package's default role-list.						

For more information about creating role-based custom dropdown lists, please refer to the Dropdown Editor documentation.

Sugar Portal

Overview

The Sugar Portal is a powerful tool that allows Sugar users to interact with customers and share information related to multiple modules (Bugs, Cases, Knowledge Base). The portal allows customers to log in and review information directly from your Sugar instance and perform actions such as submitting cases and bugs, communicating with your employees regarding the cases and bugs, as well as reviewing knowledge base articles. To enable the portal for your instance, the Enable Portal option must be enabled via Admin > Sugar Portal. This will enable a Portal API User in Admin > User Management which must be left enabled in order for portal users to authenticate. This documentation covers the basics on how to configure the various portal settings, the look and feel of the portal, as well as configure the layout for the available modules (e.g., Cases) in the portal.

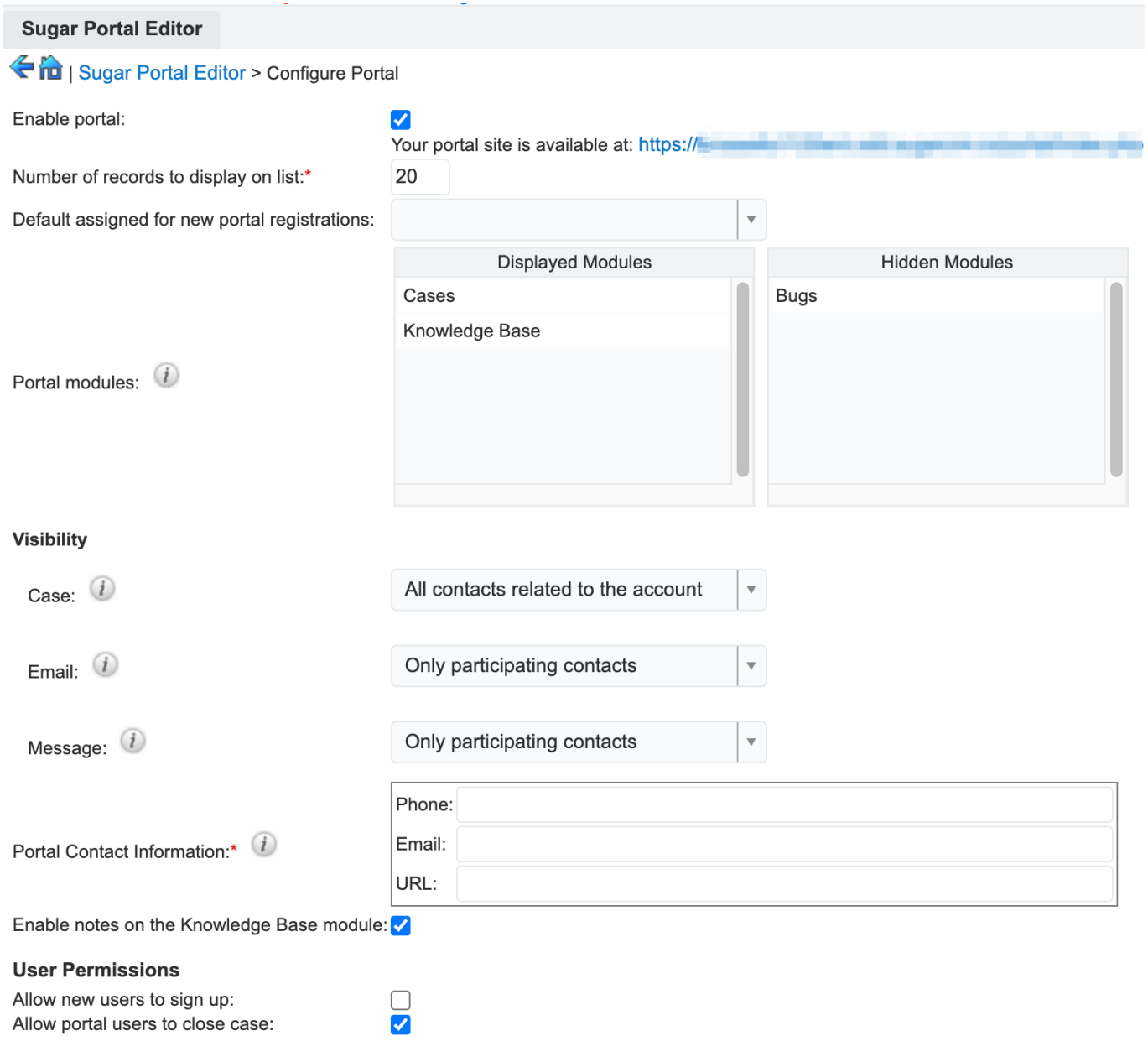
For more information on how a Sugar user can interface with the portal, refer to the Portal Deployment User Guide.

For more information on how your customers can interface with the portal, refer to the Portal User Guide.

Configure Portal

The Configure Portal page allows administrators to enable the portal and configure different aspects of the portal interface such as enabling or disabling modules, defining the number of records to display per list view, etc. For more information

on how these settings are applied in the portal, refer to the Portal User Guide.



The following settings are available to configure when setting up your portal:

Field	Description
Enable portal	Enable the checkbox to have the portal enabled for customers. After enabling the portal and clicking "Save", the portal URL will appear under the checkbox which is where you can access the portal for your instance.
Number of records to display on list	Enter the maximum number of records to display per list view results set in the

	portal. By default, this is set to 20 records per results set. **Note**: This value must be no greater than 100.
Default assigned for new portal registrations	Select the Sugar user that will be assigned to the contact records created from the portal registrations.
Portal modules	Select which modules will appear in the portal's navigation bar by dragging and dropping the module between the Displayed Modules and Hidden Modules columns. You can also designate the order of the modules displayed in the navigation bar by selecting the module in the Displayed Modules column and moving it up or down. **Note**: To completely remove access to the module from the portal, then you will need to disable access to the module via Admin > Role Management for the Customer Self-Service Portal Role. For more information on roles, refer to the Role Management documentation.
Visibility: Case	Select which portal users you wish to be able to see cases in the portal. The following are the options: • **All contacts related to the account**: Choose this option if you wish for all the customer's portal users to be able to see all of their organization's cases. • **Only primary contact and contacts related to the case**: Choose this option if you wish for only the customer's portal users that are related to a specific case to be able to see that case. This includes the user in the Primary Contact field and all contacts in the case's Contacts subpanel. **Note**: This setting only applies to

	instances with the Cases module enabled for the portal.
Visibility: Email	Select which portal users you wish to be able to see emails in the case timeline in the portal. The following are the options: • **All contacts who can see the case**: Choose this option if you wish for all contacts with access to a particular case to be able to see all emails related to the case. • **Only participating contacts**: Choose this option if you wish for only the contacts that are participants in the email (i.e., contacts in the To, From, CC, and BCC fields on the email) to be able to see an email.
Visibility: Message	Select which portal users you wish to be able to see messages in the case timeline in the portal. The following are the options: • **All contacts who can see the case**: Choose this option if you wish for all contacts with access to a particular case to be able to see all messages related to the case. • **Only participating contacts**: Choose this option if you wish for only the contacts that are participants in the message (i.e., contacts in the Guests field on the message) to be able to see a message.
Portal Contact Information	Enter the company's contact information (i.e., phone, email, URL) that will be available to portal users requiring additional assistance logging into their account. This information can be accessed by clicking the Forgot Username link on the Forgot Password screen or clicking the "Did not get an

	email?" link after the portal user submits their username to initiate their password reset. **Note**: At least one field must be configured in order for the contact option to be available in the portal.
Enable notes on the Knowledge Base module	Enable this setting to allow portal users to view and create notes on Knowledge Base articles. When disabled, the Notes subpanel and Add a Note button are hidden.
Allow new users to sign up	Enable this setting to allow new users to create a portal account from the portal login page. When disabled, the Sign Up link on the login page is hidden. This setting can also be controlled in the system config_override.php file via the portal_enableSelfSignUp property. See the Core Settings page in the Developer Guide for details on this property.
Allow portal users to close case	Enable this field to display the Request To Close button on open cases in the portal. Customers can click the button to request to have the case closed, which sets the Request Close and Request Close Date fields on the case. See the Sugar Portal User Guide for more details. **Note**: This setting only applies to instances with the Cases module enabled for the portal.

Enabling the Sugar portal will create a Customer Self-Service Portal Role and enable a Portal API user in Admin > User Management which must be left enabled for portal users to authenticate. The information viewable in the portal can be updated and restricted by Sugar users as allowed by team membership, user access type, and assigned roles. For more information on teams and roles, please refer to the Team Management and Role Management documentation in the Administration Guide.

Do not delete the Customer Self-Service Portal Role or the Portal API user, as they are system-generated based on portal activation. If the portal role or user is accidentally deleted, you must disable and re-enable the Sugar Portal to recreate them.

Note: Hiding a module via Admin > Display Modules and Subpanels will not remove the module from the portal. You will need to disable access to the module via Admin > Role Management for the Customer Self-Service Portal Role in order to remove it from the portal. For more information on roles, refer to the Role Management documentation.

Theme Portal

The Portal Theme Preview page allows you to customize the look and feel of the portal, such as changing the logo, banner, text, and colors, to match your organization's theme and message. Certain settings on this page only take effect if they are available in your product. The following lists outline the settings available for each product:

Sugar Serve:

- All settings on the page, including the dashboard in the bottom left corner

Sugar Sell:

- Login Page Image URL
- Navigation Bar Logo URL
- Button Color
- Text Link Color

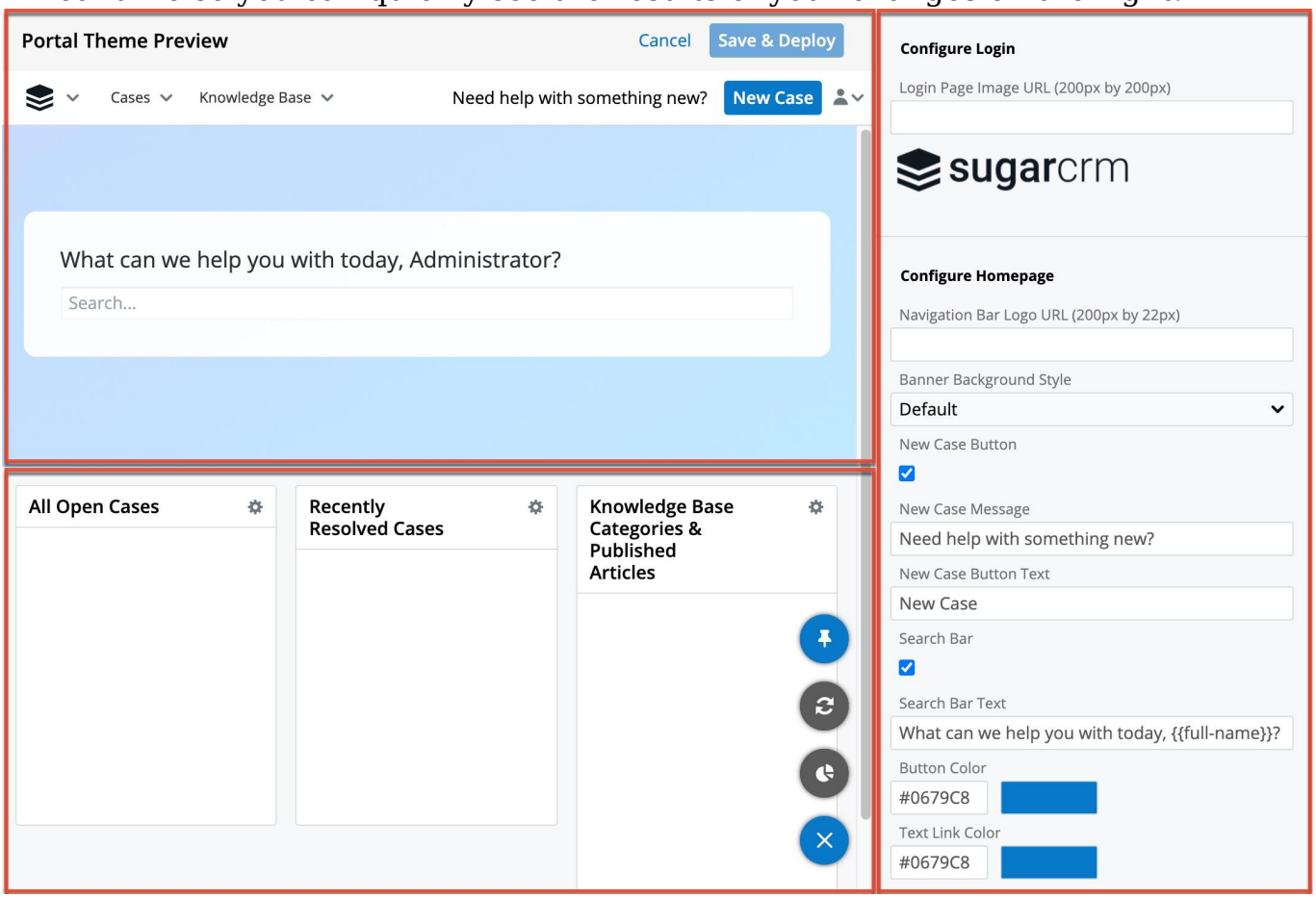
Sugar Enterprise:

- Login Page Image URL
- Navigation Bar Logo URL
- New Case Button
- New Case Message
- New Case Button Text
- Button Color
- Text Link Color

Making changes to a setting that is not available in your product will have no impact on the portal.

The Portal Theme Preview page is divided into three sections. On the left, you can see a preview of the portal Home page. Specifically, the top half is a preview of

configuration changes you make on the right side and the bottom half is a dashboard that you can configure in place. On the right, you can update a variety of settings to change the portal experience. The left-hand-side preview is updated in real-time so you can quickly see the results of your changes on the right.



The right-hand-side panel includes the following settings:

- **Login Page Image URL**: Enter the URL of the image you wish to display on the portal login page. The image is scaled down if necessary to fit in the login box.
    - If you do not enter a URL, the SugarCRM logo is displayed by default.
    - For reference, the SugarCRM logo that is used by default has dimensions of 1000 x 189 px and is scaled down on the login page.
    - When you enter a URL, a preview of the image is displayed directly below the field; if you do not see a preview, the image cannot be found using the URL and will not appear in the portal.
    - Since the login page is not shown in the preview on the left, it is recommended to open the portal login page to verify that the image is displayed as you would like and to resize the image if it is not.
- **Navigation Bar Logo URL**: Enter the URL of the image you wish to display in the top left corner of the portal. The image is scaled down if

necessary to fit in the navigation bar.
    - If you do not enter a URL, the SugarCRM logo is displayed by default.
    - For reference, the SugarCRM logo that is used by default has dimensions of 22 x 22 px. Either a small, square image or a short but wide image is recommended to ensure it scales down nicely.
- **Banner Background Style**: Choose the style of background to use. The following options are available:
    - **Default**: This is the default blue gradient that is used if you do not change the background.
    - **Color**: This allows you to specify any color. Selecting it causes the Background Color field to appear, where you can choose a color by entering the hex color code or clicking in the text field to open the color picker.
    - **Image**: This allows you to use an image. Enter the URL of the image you wish to use; the image is scaled down if necessary.
        - When you enter a URL, a preview of the image is displayed directly below the field; if you do not see a preview, the image cannot be found using the URL and will not appear in the portal.
- **New Case Button**: Enable this checkbox to add a button to the navigation bar for users to create a case.
- **New Case Message**: Enter the text you would like to display next to the New Case button.
- **New Case Button Text**: Enter the name you would like to use for the New Case button, if not "New Case". If you leave this value blank while the New Case button is enabled, the default value of "New Case" will be used.
- **Search Bar**: Enable this checkbox to display a search bar on the Home page to allow users to search knowledge base articles.
- **Search Bar Text**: Enter the text you would like to display above the search bar. You can use the following variable to display the full name of the portal user within the message: {{full-name}}.
- **Button Color**: Choose a color for all portal buttons by entering the hex color code or clicking in the text field to open the color picker.
- **Text Link Color**: Choose a color for the text of all links in the portal by entering the hex color code or clicking in the text field to open the color picker. Link text is not represented in the preview on the left, so it is recommended to log in to the portal to verify that the color you have chosen meets your expectations.

Once you are happy with your changes to the settings on the right-hand side, click "Save & Deploy" to push the changes to all portal users. If you want to reset all the settings to their default values, click the link at the bottom of the section. Note that this does not affect the dashboard section at the bottom left; there is a separate Restore Default Dashlets option in the floating actions button in the dashboard.

The note at the bottom of the right section also contains a link to open the Amazon Connect Settings page to set up Sugar Portal Chat.

On the left-hand side, the top section shows a live preview of the changes you make in the right panel. The bottom section is a dashboard that can be configured in the same way you edit any dashboard, by dragging, resizing, adding, editing, and removing dashlets. This includes defining filters for List View dashlets to limit which records portal users see, in addition to the basic restrictions that are already applied to portal users (e.g. case visibility defined in Configure Portal). Note that custom filters saved in the Portal Theme Preview page are only available for use in configuring the portal and are not available in the rest of Sugar. Likewise, existing custom Sugar list view filters cannot be used in the portal.

Changes you make in the dashboard are immediately visible to all users without using the Save & Deploy button. To avoid disruption to your portal users, it is recommended to make portal dashboard configuration changes outside of regular business hours. If you want to reset the dashboard and all of its dashlets to the default layout and settings, click the Restore Default Dashlets option in the floating actions button, but note that this cannot be undone. This does not impact the settings on the right-hand side of the page.

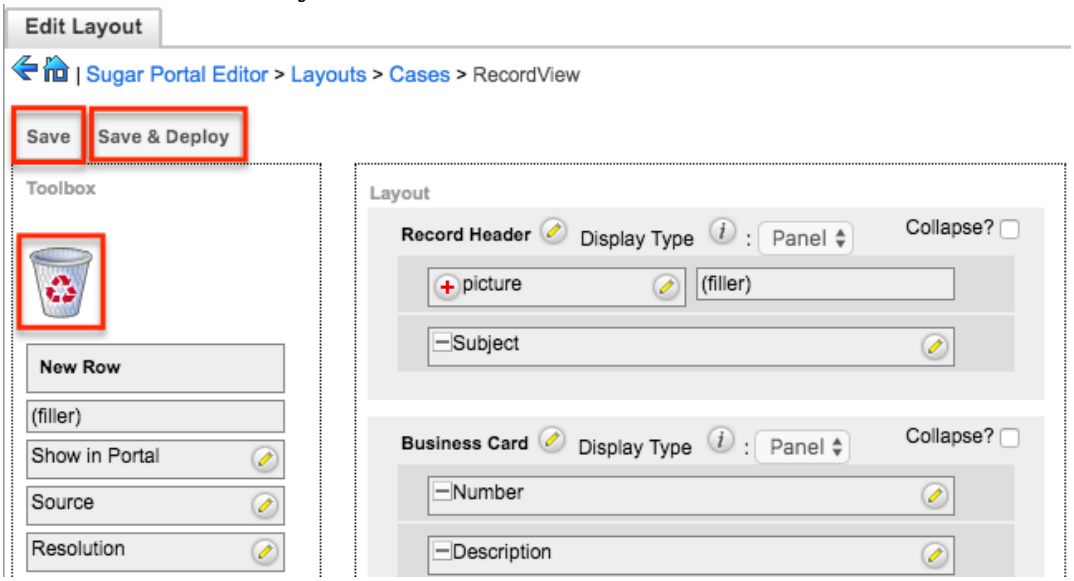
Layouts

The Sugar Portal Editor also allows you to configure the record view and list view layouts for the Cases, Bugs, and Knowledge Base modules in the portal. You can also configure the Contacts record view layout to control what fields to display in the portal user's profile. Please note that both stock and custom fields that appear in Admin > Studio are available to add to the portal layouts.

Record View

The portal record view displays key record information including all relevant fields for the module (e.g., Knowledge Base) and the user's profile. The editor allows you to add a field to the Record View layout by dragging the field from the list of fields in the Toolbox to a "(filler)" location on the layout per your preference. You can also change the location of existing fields in the layout by dragging and dropping the field to a different location on the layout. To remove a field from the layout, simply drag and drop the field(s) from the layout to the trash bin in the Toolbox. Please note that changes to the Record View layout will also affect what fields appear when a portal user previews a record (e.g. knowledge base) in the portal. Once the layout is finalized, click "Save & Deploy" to preserve your changes and deploy them to the portal. You can also click "Save" if you wish to preserve the

changes but not deploy the changes to the portal. For more information on editing the record view layout, refer to the Studio documentation.



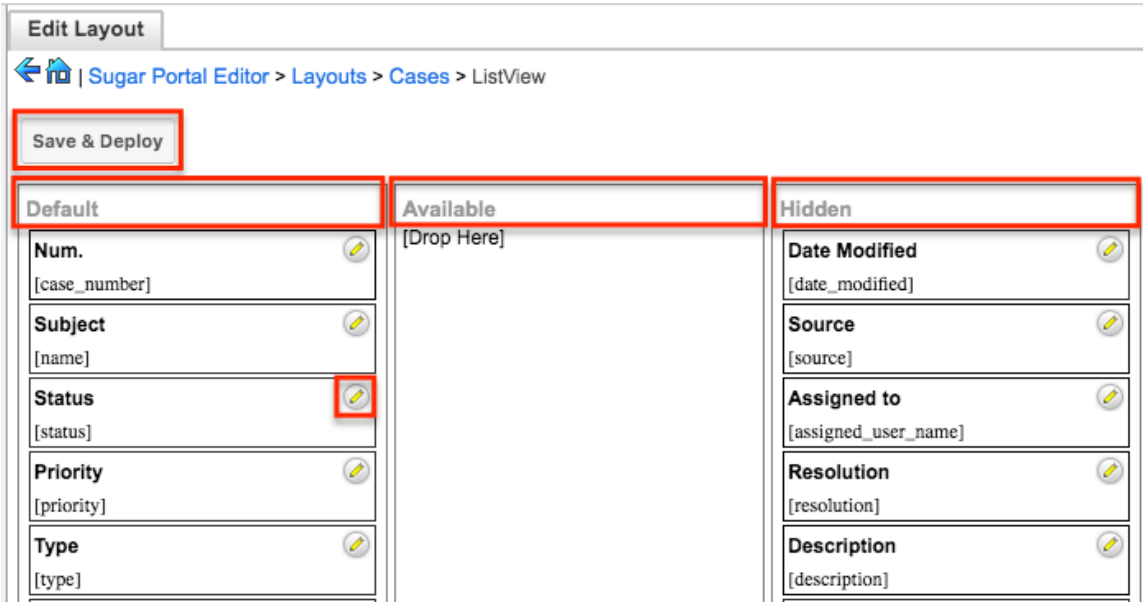
List View

The portal list view displays all records that meet the current search criteria in the Cases, Bugs, and/or Knowledge Base modules that the portal users can access. The editor allows you to drag and drop fields between the Default, Available, and Hidden columns as follows:

- **Default**: Drag fields into the Default column to display them in the default List View layout. To change the left-to-right order of the fields displayed on the list view (or right-to-left for users viewing an RTL language), drag and drop the fields up or down within the Default list.
- **Available**: Drag fields into the Available column to make them available for portal users to personalize their view of the list view layout without making them part of the default layout. Portal users will be able to click the Column Selection icon to the far right of the list view column headers to see the list of available fields.
- **Hidden**: Drag fields into the Hidden column to hide them from portal users in the module's list view.

You can also modify the label and width for a field by clicking the Pencil icon to the right of each field and entering the new field label and selecting the width (e.g., small, medium) of the field column in the list view.

Once the list view layout is finalized, click "Save & Deploy" to preserve your changes and deploy them to the portal. For more information on editing the list view layout, refer to the Studio documentation.



Legacy Workflow Management

Overview

Notice: While the legacy functionality discussed on this page is still supported in the product, we recommend using the latest technology for the best user experience. Please refer to the SugarBPM documentation to learn more.

Sugar's Workflow functionality allows administrators to configure cause-and-effect type actions throughout Sugar and across multiple modules. Workflows can be used to update fields, send emails, or create records when certain conditions are met. Workflows are a great way to configure automated processes within Sugar so that users do not need to remember manual steps and instead can focus on their primary tasks and job responsibilities.

All workflow conditions are reached and checked for once a record is saved. Workflows can be configured to either start their process to perform the job the moment the save occurs, or they can be delayed for a given amount of time.

The following save events can trigger a workflow to fire:

- Manually saving a record
- Mass updating records
- Importing records
- Another workflow updating a record
- Reassigning Records via User Management

- Updating or creating a record via plug-ins
- Updating or creating a record via Sugar mobile applications
- Updating or creating a record via the portal
- Updating or creating a record via the Web Services

Workflows can be viewed and configured by any System Administrator User. In addition, regular users with a role that provides Developer access will be able to access workflows for the module they have the rights to. For more information on Roles, please review the Roles documentation.

Workflow Fields

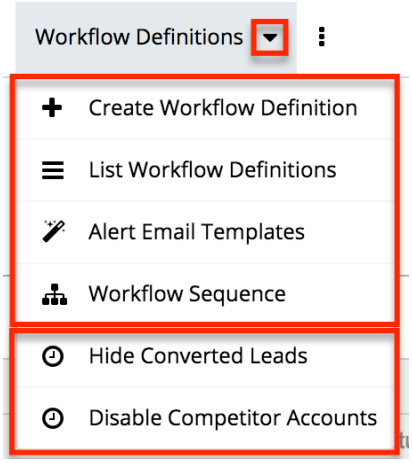
The Workflow module contains seven fields that will retain both functional and organizational purposes in Workflows. These fields cannot be edited or added to because of their functional purposes in the workflow process.

Field	Dropdown Options	Description
Applies To	• New and Updated Records • New Records Only • Updated Records Only	Choose if this workflow is going to fire on all saves, when a new record is created, or when an existing record is updated
Description	(Text Area Field, no character limit)	A description of this workflow and its purpose
Execution Occurs	• When record saved • After time elapses	Whether the workflow effects will occur once a record is saved, or if they will be re-checked and occur after a defined amount of time
Name	(Text field, limit of 50 characters)	Identifying name of the workflow
Processing Order	• Alerts then Actions • Actions then Alerts	If your workflow is going to include both email alerts and workflow actions, select which of the two you would like to happen first
Status	• Active • Inactive	When set to Inactive, the workflow will not process

Target Module	(Module List)	A list of all modules in Sugar that are compatible with workflows. Choose which module the primary conditions will be triggered from

Workflow Module Tab

The Workflow Definitions module tab is typically located on the navigation bar at the top your Sugar screen after navigating to Admin > Workflow Management. Click the tab to access the Workflows list view. You may also click the triangle in the Workflow Definitions tab to display the Actions and Recently Viewed menus. The Actions menu allows you to perform important actions within the module. The Recently Viewed menu displays the list of workflow definitions you last viewed in the module.

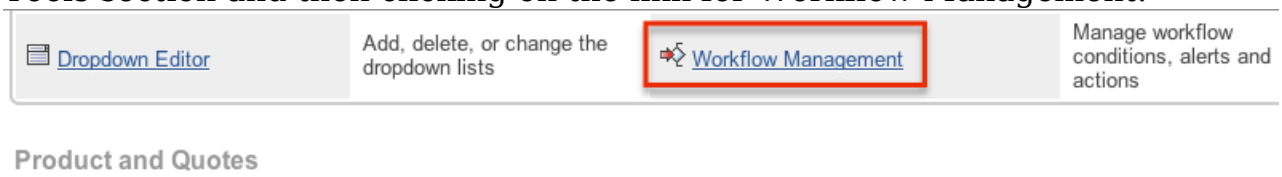


The Actions menu allows you to perform the following operations:

Menu Item	Description
Create Workflow Definition	Opens the edit view layout to create a new workflow.
List Workflow Definitions	Opens the list view layout to search and display workflows.
Alert Email Templates	Opens the Alert Template menu to allow you to create, view, and edit existing alert email templates.
Workflow Sequence	Opens the Workflow Sequence menu to allow you to reorganize the processing order of your workflows for each module.

Creating Workflows

Workflows are created by accessing the Admin menu, navigating to the Developer Tools section and then clicking on the link for Workflow Management.



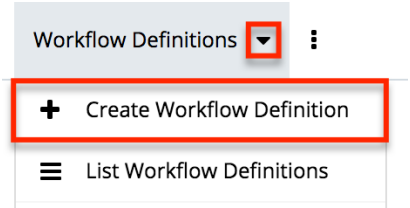
Once on the Workflow Management module, you can create a new workflow or duplicate an existing one. The process of creating workflows contains four main sections. First, the workflow itself must be created. This creation process will include the name of the workflow, as well as the rest of the values for the fields listed in the Workflow Fields section of this documentation. After the workflow has been saved, the next step will be to configure the Workflow Conditions, which defines what will cause the workflow to happen, or its triggers. Finally, the Workflow Alerts and Workflow Actions must be configured. These define what the workflow will do to Sugar records or what emails will be sent out after triggered.

Creating Via Workflow Module

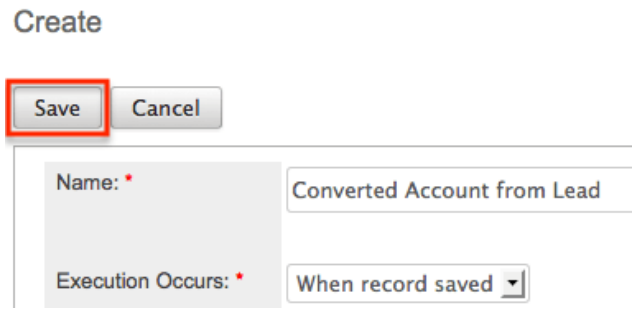
The most common method of workflow creation is via the Create Workflow Definition option in the Workflow Management module. This opens up the edit view layout which allows you to enter in all the relevant information for the workflow.

Use the following steps to create a workflow via the Workflow Management module:

1. Navigate to Admin > Workflow Management.
2. Click the triangle in the Workflow Definitions tab to open the Actions menu and select "Create Workflow Definition".



3. Enter appropriate values for the fields in the edit view layout. All required fields are marked with a red asterisk and must be completed prior to saving.
4. Once the necessary information is entered, click "Save".



5. Define the conditions of the workflow that will trigger the workflow to process as described in Creating Workflow Conditions.

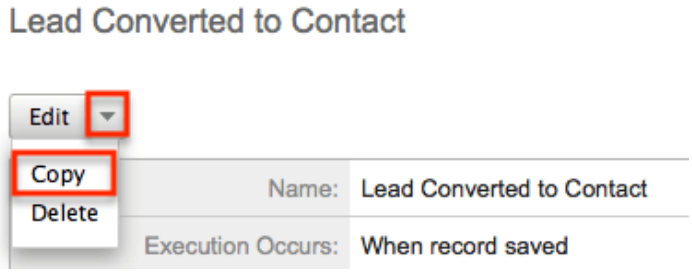
6. Define what will happen when the workflow is processed as described in Creating Workflow Alerts and Creating Workflow Actions.

Creating Via Duplication

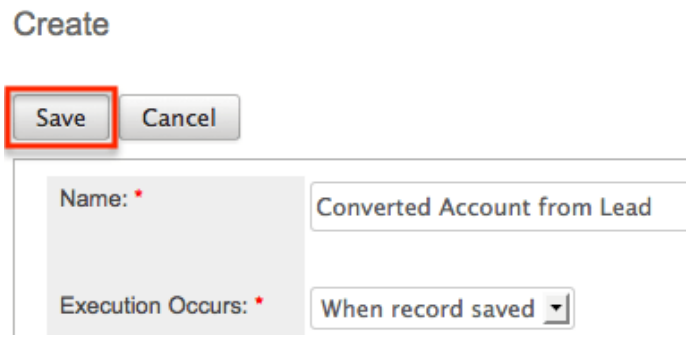
You can also create a new workflow definition by duplicating an existing workflow record. The duplicate option is useful if the workflow you are creating has similar information, conditions, and alerts and actions to an existing workflow as all of these are copied over during the duplication process.

Use the following steps to create a workflow definition by duplicating an existing record:

1. Navigate to a workflow definition's detail view.
2. Click the Actions menu and select "Copy".



3. The displayed edit view is pre-populated with the values of the original workflow. Update the necessary fields then click "Save".

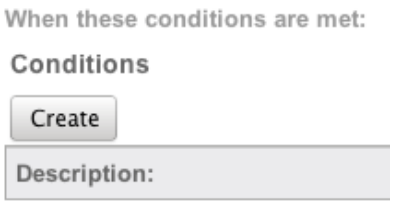


Creating Workflow Conditions

Workflow conditions are an essential function when creating workflows. Workflow Conditions define the "cause" side of the workflow's cause and effect type functionality. At least one condition must exist for a workflow to trigger. If more than one conditions exist, they all must be fulfilled for the workflow to trigger.

Use the following steps to create a workflow condition:

1. Navigate to the detail view of the workflow.
2. Click "Create" on the Conditions subpanel to open a popup box with the different condition possibilities.



3. Follow the prompts in the popup to create the different conditions, as described below. Once complete, click "Save" and the condition will be added to your workflow definition.
4. Repeat this process as necessary to add additional conditions.
5. After the condition has been created, it will appear in the conditions subpanel.

Note: The available conditions will vary depending on the execution type ("When record saved" or "After time elapses") you have chosen for the workflow.

Creating "After Time Elapsed" Workflow Conditions

Before creating workflows with time-elapsed conditions, please take note of the following:

- The system's Process Workflow Tasks scheduler must be enabled and

running as often as possible for time-elapsed workflows to work. For more information, please refer to the Schedulers documentation.
- When a time-elapsed condition is used on a workflow definition, the Date Modified and Modified By fields will change on the records affected by the workflow's action(s). The Modified By user will be the admin user with ID = 1 (usually "Administrator") and the Date Modified will reflect the date and time that the action occurred in the system.
- The time intervals (e.g., 0 hours, 4 hours) available when setting up time-elapsed conditions can be configured via Admin > Dropdown Editor. For more information on configuring the time intervals, please refer to the Developer Tools documentation.

The "After time elapsed" workflow condition options are different for the first condition and subsequent conditions. This is to ensure that your time-based condition is recorded. After that, you can set additional conditions to filter the records from which the workflows will fire.

When used as the first condition of a workflow, the "After time elapsed" options are as follows:

- **When a field in the target module changes to or from a specified value:** You will be asked to specify a specific field within the module, and its value. Then, you will select the amount of time after the change that, after this threshold, the workflow will fire.
- **Field does not change for a specified amount of time:** You will be asked to specify a specific field within the module and a timeframe. After the field changes, if it does not change again in the given timeframe, the workflow will fire.

When used as subsequent conditions of a workflow, the "After time elapsed" options are the two mentioned above as well as two additional options:

- **When a field in the target module contains a specified value:** This condition is used to filter records that should or should not be included in the workflow. You will be asked to specify a field and the value of the field, and if you want to include records where the field is a specific value, or if it is not a specific value. These conditions will vary by which field is chosen.
- **When the target module changes and a field in a related module contains a specified value:** This condition is used to filter records based on their related records. You will be asked to specify which relationship you would like to the workflow to look at, and which field and value should or should not be used when triggering the workflow.

Creating "When Record Saves" Workflow Conditions

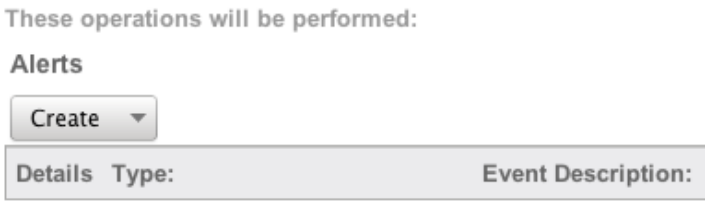
The "When record saves" workflow condition options are as follows:

- **When a field in the target module changes to or from a specified value:** This option can be used to specify both the new value of a specific field to trigger a workflow, and also what the previous value was. You will be asked to specify the specific field and the new value after save to use this condition. The previous value is not required.
- **When the target module changes:** This option will cause the workflow to trigger when any change to the record takes place.
- **When a field on the target module changes:** This option will cause the workflow to trigger when there is any change to a specific field, regardless of what the change is.
- **When a field in the target module contains a specified value:** This condition is used to filter records that should or should not be included in the workflow. You will be asked to specify a field and the value of the field, and if you want to include records where the field is a specific value, or if it is not a specific value. These conditions will vary by which field is chosen.
- **When the target module changes and a field in a related module contains a specified value:** This condition is used to filter records based on their related records. You will be asked to specify which relationship you would like to the workflow to look at, and which field and value should or should not be used when triggering the workflow.

Creating Workflow Alerts

Workflow alerts are one of the possible effects of workflow's cause-and-effect type functionality. These can be used with or without workflow actions. Workflow alerts, when triggered by the workflow condition, will cause an email to be sent to a specified recipient. These recipients include Sugar users or individuals related to the target module. To create a workflow alert, follow the following steps:

1. Navigate to the detail view of the workflow.
2. Click "Create" on the Alerts subpanel, which will bring you to the alert setup page.



3. You will be presented with the following fields to populate.

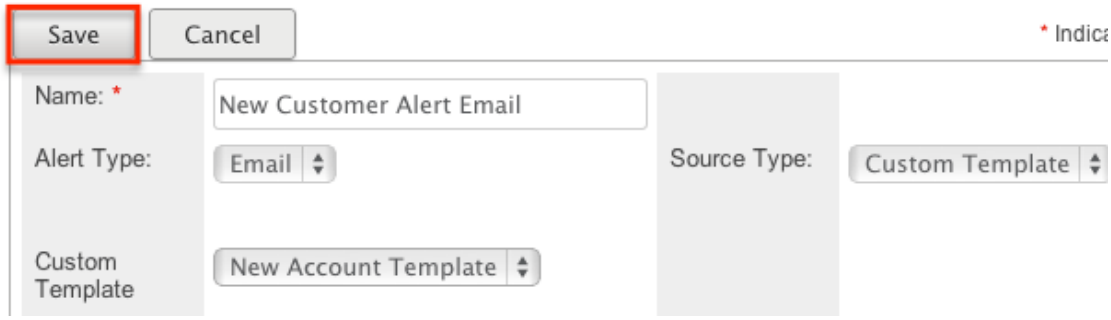
Field	Description
Name	Choose a brief, descriptive name

	for this alert.
Alert Type	Defaults to "Email", which is the most common usage, but you can choose "Invite" if the alert is going to send an invitation for appointment-based modules.
Source Type	Choose "Normal message" to type a plain-text email message in the Alert Text field, or choose "Custom Tem

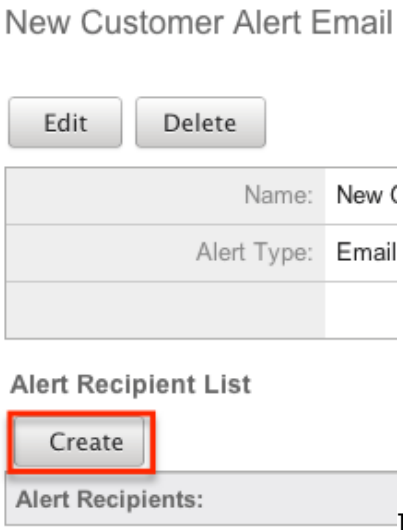
	plate" to select and use a Workflow Alert Template.
Alert Text	Enter text that will be sent to the alert's recipients as a simple email message without formatting or variables. **Note:** This field is shown only when the Source Type field contains "Normal message".
Custo	Select

m Tem plate	from your a vailabl e Workfl ow Alert T emplat es for this alert's target module . **Note:** This field is shown only when the Source Type field co ntains "Custo m Tem plate".

4. Enter necessary values for all fields and click Save.

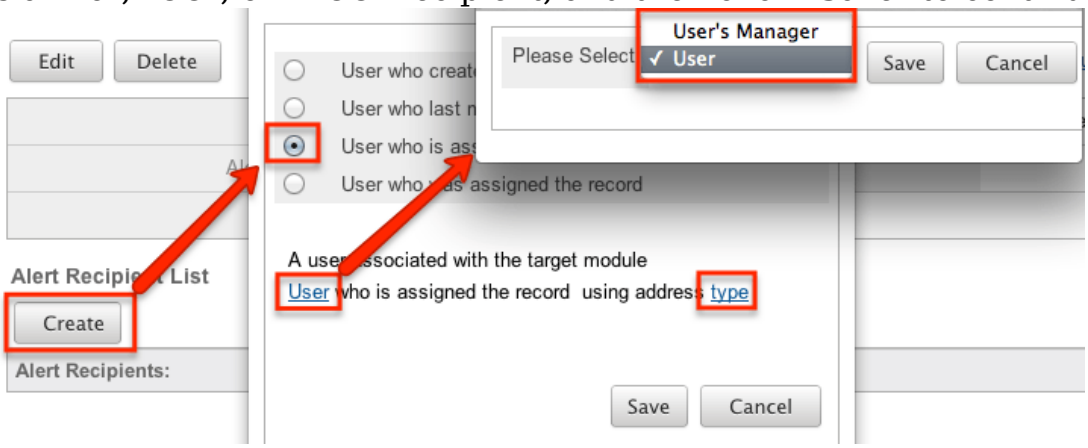


5. On the next screen, click "Create" on the "Alert Recipient List" subpanel to choose your recipients.

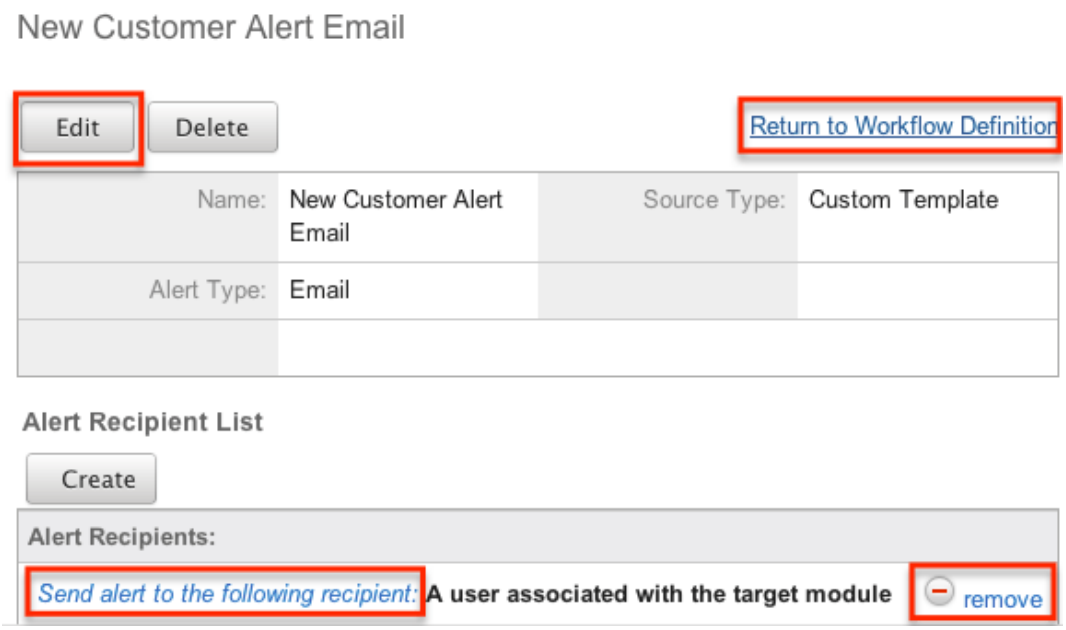


Note: The only options that will send to someone other than a Sugar user are "Recipient associated with the target module" and "Recipient associated with a related module".

6. Pick the recipients, select any blue hyperlink text to define any variables, such as who a specified user is, or if the recipient should be sent the email as a "To", "CC", or "BCC" recipient, and then click "Save" to continue.



7. Repeat steps 5 and 6 as need be to add additional recipients for this workflow alert.
8. Click the hyperlink for "Send alert to the following recipient" to make any changes, remove any errant recipients with the "Remove" button on the corresponding row, or the "Edit" button on the top left if you need to change any configurations. Once complete, click "Return to Workflow Definition".

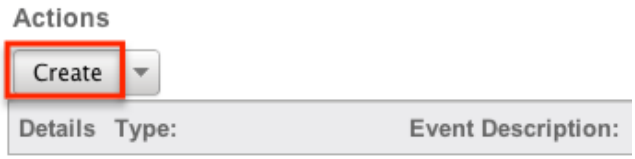


9. After the alert has been created, it will appear in the Alert Subpanels.

Creating Workflow Actions

Workflow actions are one of the possible effects of workflow's cause and effect type functionality. These can be used with or without Workflow Alerts. Workflow actions, when triggered by the workflow condition, will cause either updates to existing records or creation of new records. To create a workflow action, follow the following steps:

1. Navigate to the detail view of the workflow that you are working on
2. Click "Create" on the Actions subpanel to open a popup box with the different action possibilities



3. Follow the prompts in the popup to create the different actions, as described in Workflow Actions. Once complete, click "Save" and the action will be added to your workflow definition.

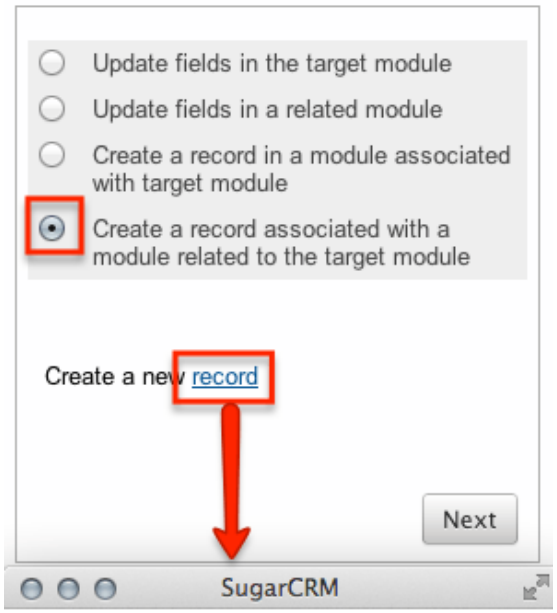
4. Repeat this process as necessary to add additional actions.

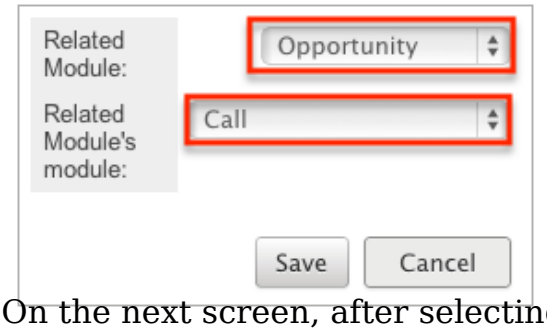
5. After that action has been created, it will appear in the Actions Subpanel.

Workflow Action Types

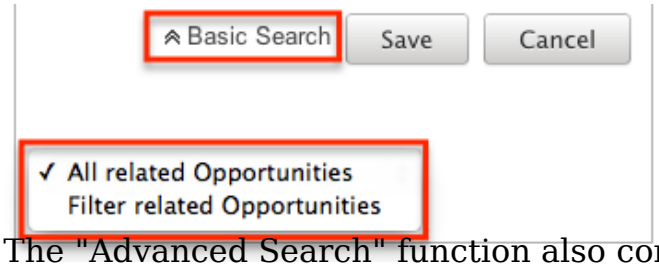
There are four options for actions that are available. These options can make updates to the module your workflow is tied to, or a module related to this target module. The options can also create records in related modules or modules related to related modules. The options are as follows:

- **Update fields in the target module:** You will be given the option so select one or more fields within the target module of the workflow, and what the new value or values should be.
- **Update fields in a related module:** You will first be given the option to choose which related module to the target module you would like to update. After selecting the related module, you will select one or more fields within the related module to update, and what the new value or values should be.
- **Create a record in a module associated with target module:** You will be given the option to choose a related module to your target module. This action will create a new record in the related module, such as creating a new call related to an account, where Accounts is the target module. After selecting the module, you will be given the option to populate any or all fields with the related module. Any required fields will be marked with a red asterisk.
- **Create a record associated with a module related to the target module:** This action will take a record, or all records, related to your target module, and create a related record to this middle module. When creating these actions, you are asked to select the related module to your target module, and then select that module's related module where the new record is going to be created. For example, if your workflow's target module is Contacts, the following screenshot shows how a call will be created and related to the contact's related Opportunity.





On the next screen, after selecting your modules, you will select one or more fields within the related module to update, and what the new value or values should be. Clicking on the "Advanced Search" button at the bottom of this window will allow you to select if the workflow is specific for all related records (Opportunities), or if the related record should be filtered at all.



The "Advanced Search" function also contains special functions for specific field types:

- **Assigned User:** Allows you to configure the action to set the assigned user to be either the actual user or the user's manager who either is currently assigned to the triggered record, the one who most recently updated it, the one who created it, or is the one saving the record.
- **Team ID:** Allows you to configure the action to set the team to be the default team of the user who triggered the workflow or, if it is

updating a related record, to match the primary team of the triggered record.
- **Dropdown Fields:** Allows you to configure the action to sequentially move the dropdown option forward or backward in the order in which it appears in the dropdown list.

Viewing Workflows

There are various options available for viewing workflow records in Sugar including via Workflow Definitions list view, Workflow Definitions detail view, and the Workflow Definitions Last Viewed menu. Each method will provide varying degrees of detail and insight into the workflow.

Viewing Via List View

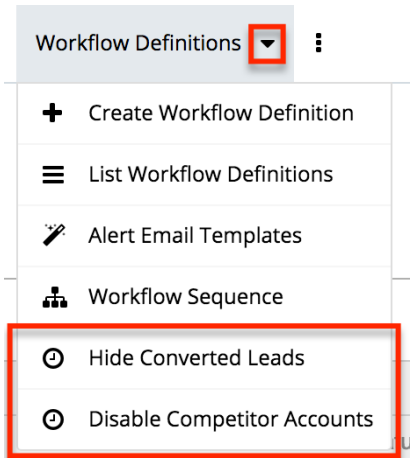
The Workflow Definitions list view displays all records meeting the current search criteria. To access the list view, simply click the Workflow Definitions module tab, which is made available by navigating to Admin > Workflow Management. While list view shows key workflow fields, you can click the workflow definition's name to open the record in detail view. For more information on viewing workflows via list view, please refer to the Workflows List View section of this documentation.

Viewing Via Detail View

The Workflow Definitions detail view displays thorough workflow information including all workflow fields followed by subpanels showing the Conditions, Alerts, and Actions that process the workflow. The detail view can be reached by clicking a workflow definition's link from the Workflow Definitions list view. For more information on viewing workflows via detail view, please refer to the Workflow Detail View section of this documentation.

Viewing Via Recently Viewed

As you work, Sugar will keep track of which workflows you have recently viewed. Click the Actions menu in the Workflow Definitions module tab to see a list of your most recently viewed workflows and click each name to open the workflow definition in detail view.



Searching Workflows

The Workflow Definitions list view includes a Basic and Advanced Search to help you locate records easily and effectively. Once the search is performed, the relevant results will be displayed in the Workflows list view below. Please note that Sugar automatically appends the wildcard character (%) to the end of your search phrase. This allows the system to retrieve all records that start with the keyword entered in the search. If you would like to broaden the search, you can use the wildcard at the beginning of your text as well (e.g., %created). This will pull up any workflow that has the word "created" in the name, regardless of how it starts or ends.

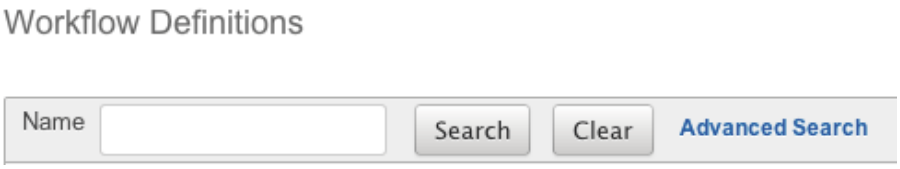
For more information on using the various search methods as well as how wildcards are used in the different methods, please refer to the Search documentation.

Basic Search

Basic search offers a simplified search experience allowing you to search for just the name of the workflow. From the Basic Search panel, you can click "Advanced Search" to access additional search functionality as needed.

The buttons and checkboxes available in Basic Search panel have the following functions:

- **Search**: Click the Search button or press your Return/Enter key to perform the search.
- **Clear**: Click the Clear button to clear criteria from the Name field.



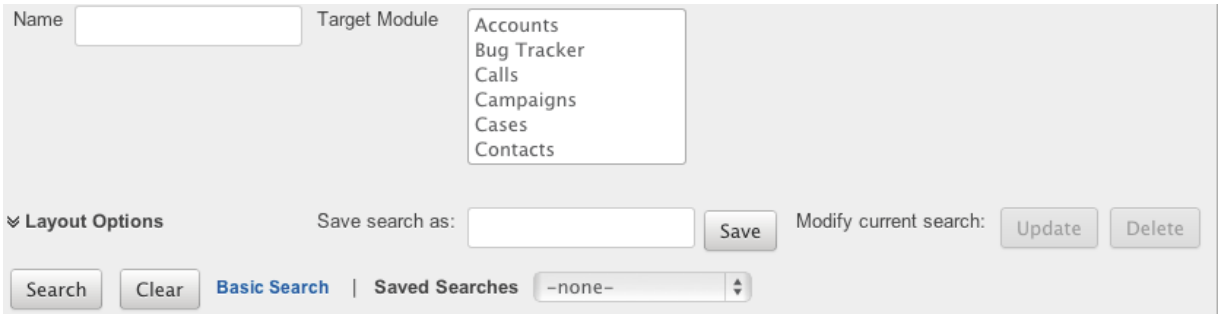
When you run a search, Sugar will return records matching all (as opposed to any) of the fields for which you have given a value. Once the search is complete, the relevant results will populate in the list view beneath the search panel. To see all workflow definitions, simply click "Clear" and then "Search" to perform a blank search with no filters.

Advanced Search

Advanced Search offers a more in-depth search experience than Basic Search including additional fields, layout options, and saved search capability. From the Advanced search panel, you can click "Basic Search" for simplified searching.

The buttons and dropdowns available in Advanced Search have the following functions:

- **Search**: Click the Search button or press your Return/Enter key to perform the search.
- **Clear**: Click the Clear button to clear all criteria from the searchable fields.
- **Layout Options**: Use the expandable Layout Options section to configure your list view. For more information, please refer to the Layout Options section of the Search documentation.
- **Saved Searches**: Save, recall, update, and delete searches which you use often. For more information, please refer to the Saved Search section of the Search documentation.



When you run a search, Sugar will return records matching all (as opposed to any) of the fields for which you have given a value. For example, if you select the Target Module as "Accounts" or "Contacts" and enter in the word "Created" for the Name search, Sugar will only return workflow definitions with a matching name from the

Accounts or Contacts modules. Once the search completes, the relevant results will populate in the list view beneath the search panel. To see all workflow definitions, simply click "Clear" and then "Search" to perform a blank search with no filters.

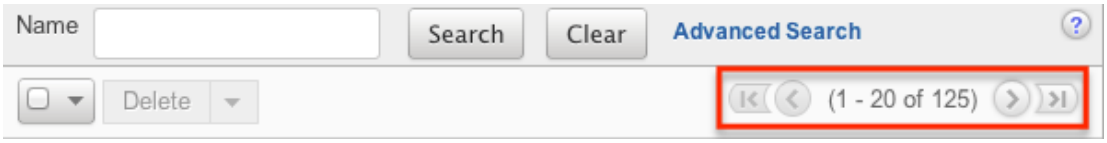
Workflows List View

The Workflows list view displays all workflow definitions meeting the current search criteria. You can view the basic details of each workflow within the field columns. The list view also allows for records to be edited or deleted as need be.

Pagination

List view displays the current search results broken into pages that you can scroll through rather than displaying potentially thousands of rows at once. To the right just below the search panel you can see which records of the total results set are currently being displayed. The two single-arrow Next and Previous buttons can be used to scroll through the records page-by-page. The two double-arrow First Page and Last Page buttons allow you to skip to the beginning or the end of your current results.

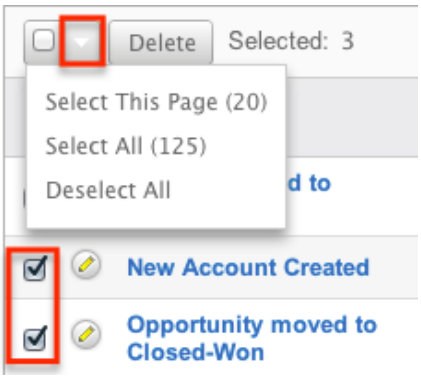
By default, Sugar displays 20 records per list view page, but the number of records displayed can be changed via Admin > System Settings. For more information on changing the number of displayed records, please refer to the System documentation.



Checkbox Selection

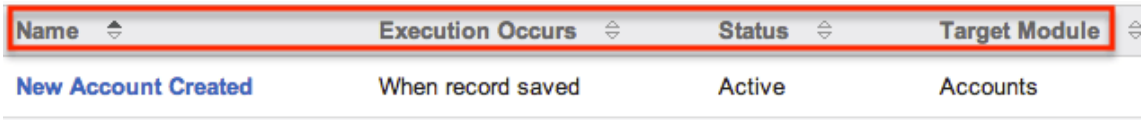
You can delete workflow definitions directly from the list view by first selecting the desired records. To select individual workflows on the Workflow Definitions list view, mark the checkbox on the left of each row. To select or deselect multiple workflow definitions on the list view, use the options in the checkbox dropdown menu:

- **Select This Page**: Selects all records shown on the current page of workflow results.
- **Select All**: Selects all records in the current search results across all pages of workflow results.
- **Deselect All**: Deselects all records that are currently selected.



Column Sorting

List view provides the ability to sort all of the current search results by a field column in either ascending or descending order. To sort by a field or switch the sort direction, click the column header noting that the fields which allow sorting will have a pair of arrows. The list view may be sorted by only one column at a time. You can also set a default order-by column using the layout options in Advanced Search. For more information on setting a default column sort, please refer to the Layout Options section of the Search documentation.

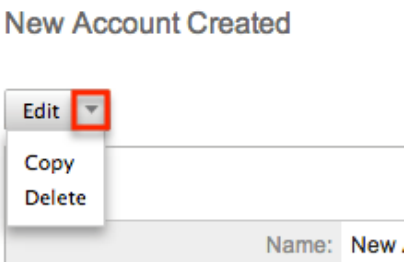


Workflow Detail View

The Workflow Definition detail view displays thorough workflow information including all workflow fields. You will also see the Conditions, Alerts, and Actionssubpanels beneath the workflow fields. The detail view can be reached by clicking a workflow record's link from the Workflow Definitions list view or from the recently viewed menu.

Actions Menu

The Actions menu on the top left of each workflow definition's detail view allows you to perform various actions on the current record. The action items can be configured to be displayed as separate buttons instead of a dropdown menu via Admin > System Settings. For more information on configuring the actions menu, please refer to the System documentation in the Administration Guide.

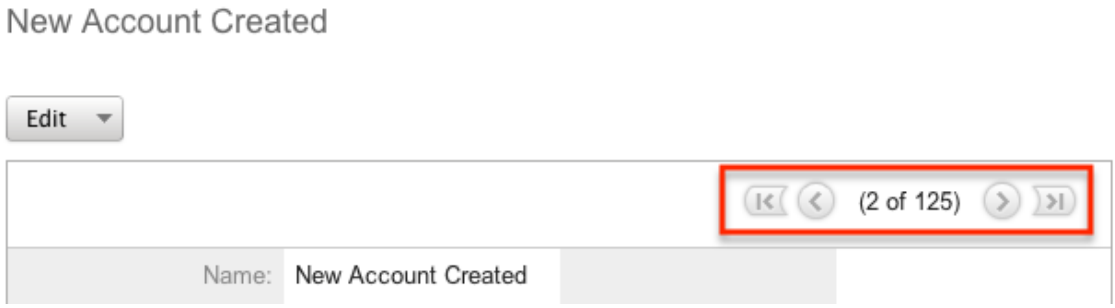


The Options in the Actions menu allow you to perform the following operations:

Menu Item	Description
Edit	Edit this workflow definition.
Copy	Duplicate this workflow definition.
Delete	Delete this workflow definition.

Next or Previous Record

On the upper right of the Workflow Definitions detail view, there are four buttons that allow you to page through each workflow in the Workflow Definition list view's current search results. Clicking the Previous button displays the previous workflow of the current search results while clicking the Next button displays the next workflow of the current search results. The two double-arrow First Page and Last Page buttons allow you to skip to the first or the last workflow of your current results. The text in between shows which workflow result you are currently viewing within the total number of current results.



Conditions Subpanel

The Workflow Conditions subpanel allows you to create additional conditions for your workflow and also lets you view and modify the existing ones. The subpanel shows a Description and a Value for each condition. The Description is an automatically generated, brief explanation of the condition. The Value shows what field or fields are covered in the condition, if not expressly stated in the description. The Conditions subpanel allows the following operations to be performed.

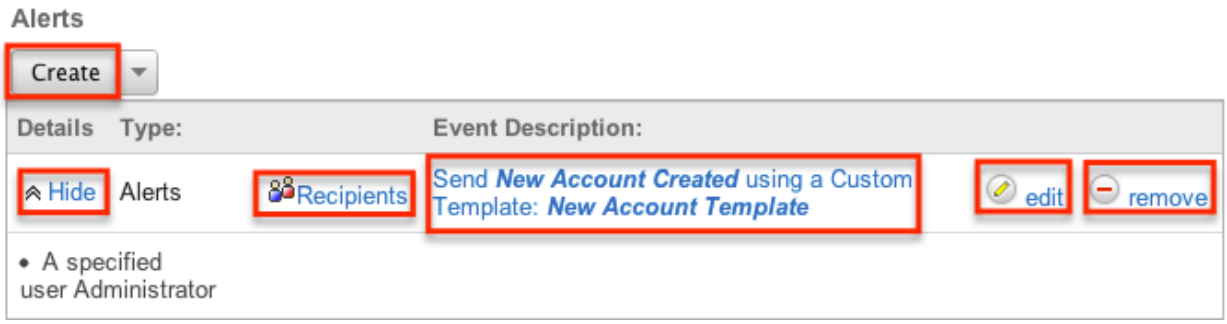
- To view the details or edit a condition, either click the condition's description in the subpanel or click the edit button from the far right of the record's row to open the condition popup.
- To create a new workflow condition, choose "Create" from above the subpanel, then follow the steps supplied in the Creating Workflow Conditions section of this documentation.
- To delete a condition on this workflow, choose "Remove" from the far right of the record's row.



Alert Subpanels

The Workflow Alert subpanel allows you to create additional alerts for your workflow and also lets you view and modify the existing ones. The subpanel displays the "Detail"s, "Type", and "Event Description" for each condition. After an alert has been created, there is also a column for Recipients. The "Event Description" is automatically generated and provides a brief explanation of the alert with the name of the Alert record and what template (if applicable) is being sent to the recipients. The Alerts subpanel allows the following operations to be performed.

- To view or edit an alert, either click the alert's event description or click "Edit" on the far right of the row to open the alert's edit view.
- To view the recipients of the alert, click "Show" from the far left of the record's row. Click "Hide" to collapse the drawer highlighting the recipients
- To edit or add recipients of the workflow alert, click "Recipients". This button will also open the alert's detail view.
- To create a new workflow alert, choose "Create" from above the subpanel, then follow the steps supplied in the Creating Workflow Alerts section of this documentation.
- To delete an alert on this workflow, choose "Remove" from the far right of the record's row.



Actions Subpanel

The Workflow Actions subpanel allows you to create additional actions for your workflow and also lets you view and modify the existing ones. The subpanel shows a Details, Type and an Event Description for each condition. The Event Description is an automatically generated, brief explanation of the action that will be performed by the workflow. The Conditions subpanel allows the following operations to be performed.

- To view the details or edit a condition, either click the condition's description in the subpanel or click the edit button from the far right of the record's row to open the condition popup.
- To view the actions that will be performed, click "Show" from the far left of the record's row. Click "Hide" to collapse the drawer highlighting the actions.
- To create a new workflow action, choose "Create" from above the subpanel, then follow the steps supplied in the Creating Workflow Actions section of this documentation.
- To delete an action on this workflow, choose "Remove" from the far right of the record's row.



Editing Workflows

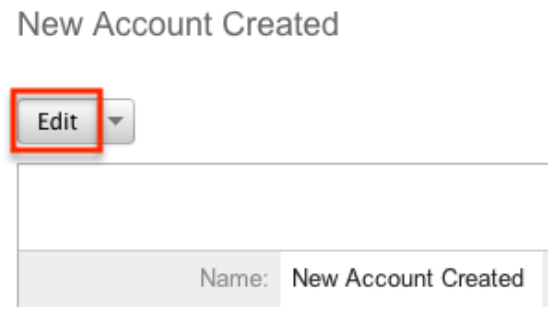
Workflows may be edited at any time to update or add information to the definition. You can make changes to existing workflow definitions via the

Workflows edit view. Edit view is available within the Workflows module and includes all of the Workflow fields. It can be accessed either via the detail view or list view. Please note that Conditions, Alerts, and Actions are not edited through the Workflow edit view.

Note: After a workflow has been created, the fields "Execution Occurs" and "Target Module" cannot be edited

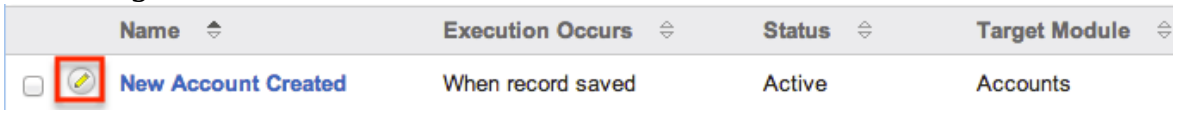
Editing Via Detail View

You can edit workflows via the detail view by clicking the Edit button on the upper left of the page. Once the edit view layout is open, update the necessary fields, then click "Save" to preserve the changes made.



Editing Via List View

You can edit workflows via the list view by clicking the Pencil icon to the left of each workflow's name. The page will navigate to the edit view. Update the necessary fields, then click "Save" to preserve the changes. After saving, you will be brought to the detail view of the workflow.



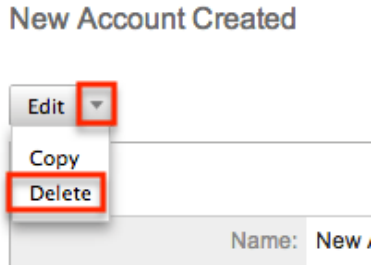
Deleting Workflows

If a workflow definition is invalid or should no longer appear in your organization's Sugar instance, it may be deleted from either the Workflow Definition's detail view or list view. Deleting via the detail view allows you to delete a single record while the list view allows for mass deleting multiple records at once. Deleting the workflow definition will also remove the conditions, actions, and alerts to stop workflows from firing.

Deleting Via Detail View

Use the following steps to delete a workflow via the detail view:

1. Navigate to a workflow definition's detail view.
2. Select "Delete" from the Actions menu.

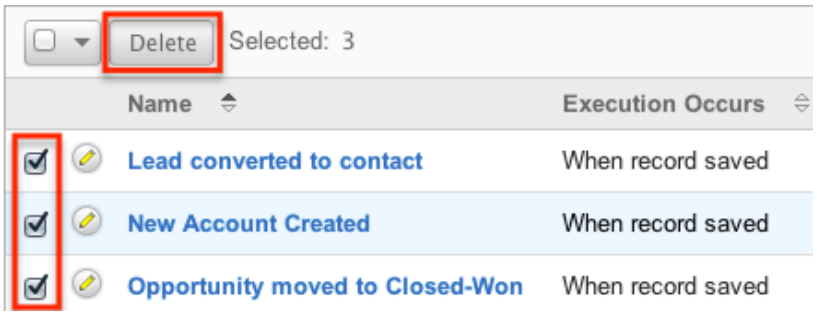


3. A pop-up message will display asking for confirmation. Click "Ok" to proceed.

Mass Deleting Via List View

Use the following steps to delete one or more workflows via the list view:

1. Navigate to the Workflow Definitions list view via Admin > Workflow Management.
2. Use the Basic or Advanced Search to find the Workflow Definitions you wish to delete.
3. Select the desired records individually or using the checkbox dropdown's options.
4. Choose "Delete" from the Actions menu.



5. A pop-up message will display asking for confirmation. Click "Ok" to proceed.

Due to PHP memory limitations on the server, there may be occasions when the application times out while deleting a large number of workflow definitions. If you encounter an error when performing this action, we recommend selecting the records in smaller batches.

Workflow Alert Templates

When sending a workflow alert, you have the option of sending either a "Normal

Message" which will be just a simple, plain text alert, or utilizing a workflow template. Templates have the option to use full HTML editing, to include formatting changes, colors, variables to include data from fields in Sugar, and more.

Alert Template Fields

The Workflow Templates functionality contains several fields that will retain both functional and organizational purposes in Workflows. These fields cannot be edited or added to because of their functional purposes in the workflow process.

Field	Description
Body	This is where you can design your email template using the WYSIWYG (What you See Is What You Get) editor. Click the "Alt Text" checkbox to edit the plain text version of this email. The entry into this box is what will actually be sent to the recipients of the email.
Description	A short explanation of the template and what it is used for.
Field List	Used to select which field from the given module will be inserted into the Variable Insert field to eventually be inserted into the template, which can be changed by updating the Related Module dropdown field.
From Address	What sender's email address will be shown on the email when received by the recipient. **Note:** Mail servers have the functionality to override this setting meaning the email address will show as the one that actually sends this, defined in Admin > System Email Settings. Please review the Emails documentation for more information.
From Name	What sender's name will be shown on the email when received by the recipient.
Name	Identifying name of the template.
Related Module	List of modules related to the Target

	Module, which will change the Field List and, therefore, change the fields that can be used for variables in the email.
Subject	The subject line of the email which will show for the recipients.
Target Module	Selected when creating the template and a non-editable field, this will cause the template show when using the template for workflows made to the corresponding module.
Type	Will only show as workflow, but will vary when making other template types to include Email and Campaign.
Value Type	Select "New Value" or "Old Value" if the variable will be changing on the workflow to determine if the variable should include the value of the field before or after the record is saved.
Variable Insert	This field will build the variable for you based on the Target Module, Related Module, Field List, and Value Type fields.

Creating Alert Templates

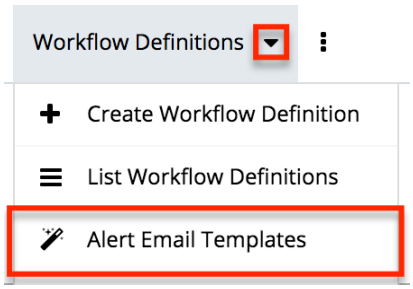
Alert Templates are created only via the Workflow module. Alert templates can be created either directly from the workflows module via the Alert Templates page, or via duplication. The Target Module is defined during the creation process, and then a full edit view layout opens including all fields that will be necessary to create the template.

Creating Alert Templates Via Workflows Module

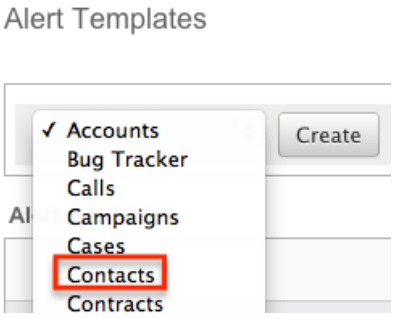
The most common method of template creation is via the Alert Email Templates option in the Workflow Definitions module tab. This will open the edit view layout allowing you to configure the template to your specifications.

Use the following steps to create the template via Workflow Management:

1. Navigate to Admin > Workflow Management.
2. Click the triangle in the Workflow Definitions tab and select "Alert Email Templates".



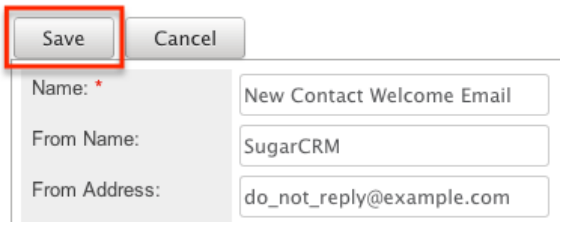
3. Select the module you wish to create the alert template for then click "Create".



4. Enter appropriate values for the following fields below. Required fields are marked with a red asterisk and must be completed prior to saving.
    - **Name**: Enter a name for the email template.
    - **Type**: Leave as "Workflow".
    - **From Name**: The name that the email recipient will see as the sender.
    - **From Address**: The email address that the email recipient will see as the sender.
      Note: This may be overwritten by your mail server configured in Admin > System Email Settings.
    - **Description**: Enter a description or other information about the template.
    - **Related Module**: To insert a field from a record related to the target module, select the related module.
    - **Subject**: Enter the subject of the email that will be sent.
    - **Body**: Enter the body of the emails that will be sent.
    - **Attachments**: Click the "Choose File" button to open a file selection window from your browser and attach a file. Click the Sugar Document button to attach a file from the sugar database.
5. Populate the template body that will be sent to the email recipients. Insert variables as necessary for your workflows.
6. Using the TinyMCE functions, add simple formatting to your email's content. For more advanced customization you can click the HTML button in the top left to access and edit the generated HTML code. For more information on using TinyMCE, please refer to the User Interface documentation.
   Note: If images or advanced CSS are required in your email template, it is highly recommended to host the images or CSS file on a publicly available

hosting service and link to it in the email template.

7. Once the necessary information is entered, click "Save" to preserve your changes to the email template.

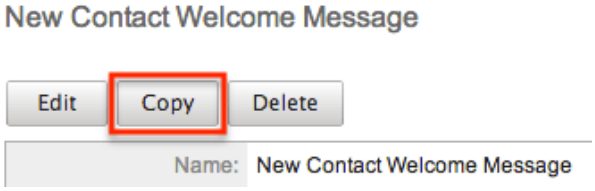


Creating Alert Templates Via Duplication

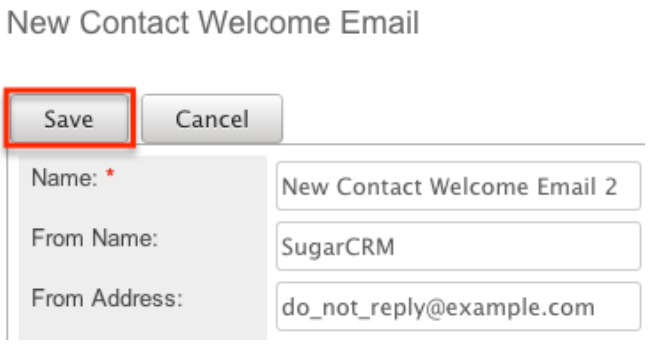
You can also create a new template by duplicating an existing template. The duplicate option is useful if the template you are creating has similar information to an existing template.

Use the following steps to create a template by duplicating an existing template:

1. Navigate to an existing template's detail view.
2. Click the action option for "Copy".



3. The displayed edit view is pre-populated with the original template's values. Update the necessary fields then click "Save".

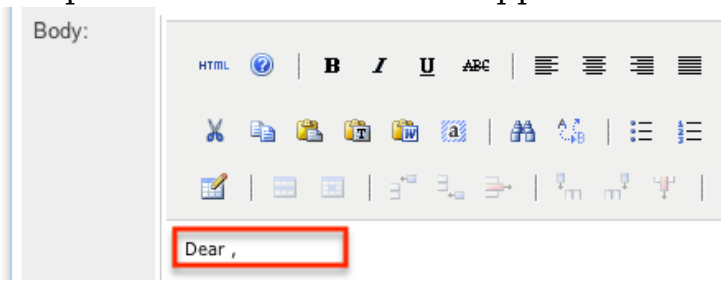


Inserting Variables

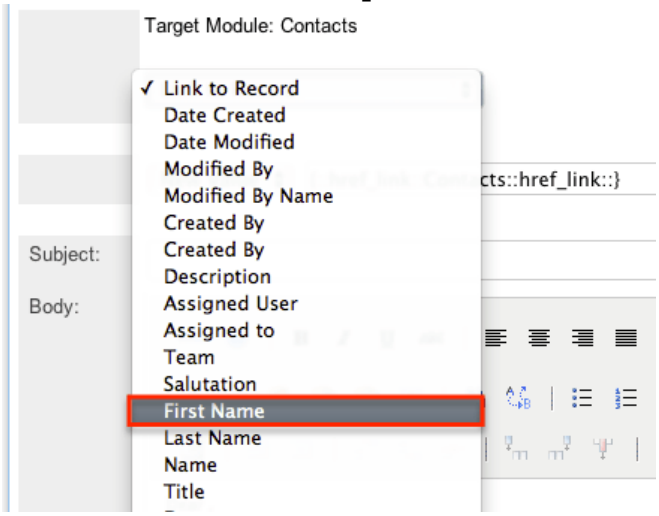
When constructing the subject and body of your email, Sugar allows you to insert

variables, or placeholders, into the template that will be populated with the record's information for that variable. The variables allow you to insert data from fields within the record that triggered the workflow and its related records into your template. Use the following steps to insert a variable for the recipient's first name into the template:

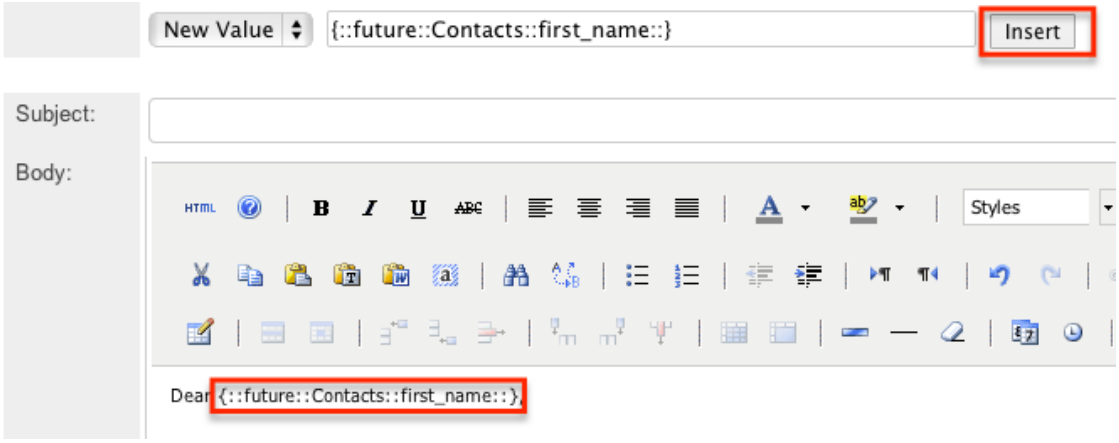
1. Click to place your cursor on the location in the subject or body where the recipient's first name should appear.



2. Set the variable dropdown to the desired field from the workflow's target module. For our example, select "First Name".



3. Choose between "New Value" and "Old Value" in the value dropdown field. This will determine if the value of the given variable shown on the template will be the value of the field in question before or after the workflow fired. This functionality is especially helpful if you are showing a change between two values, such as an opportunity moving from new ("Old Value") to closed-won ("New Value"). "New Value" is the default option for this list.
4. Click "Insert" to insert the generated variable name to your subject or body at your cursor's location.



Note: You can click "Alt Text" at the bottom of the page to have the plain text option send differently than the HTML text.

Viewing Alert Templates

There are various options available for viewing workflow templates in Sugar including via Workflow Templates list view, Workflow Templates detail view, and from the Emails module.

Viewing Alert Templates Via List View

The Workflow Templates list view displays all workflow templates and key fields about each template. To access the list view, simply navigate to the Workflow Management section of the Admin menu and select "Alert Email Templates" from the Workflow Definitions module tab. Use the Alert Templates list view for the following functions:

- To open the record in detail view, click the template's name.
- To re-sort the list view results one column at a time, click the column header, and the columns will sort alphabetically or chronologically.
- Use the arrows in the top right side of the list view navigate through the pages of your templates, or skip to the first or last page using the double arrow buttons.
- To delete a template, click "Remove" from the far right of the corresponding template's row.

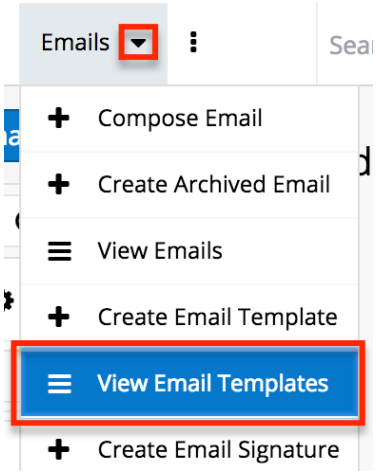
Viewing Alert Templates Via Detail View

The Alert Templates detail view displays thorough alert template information including all template fields and a preview of the workflow template that recipients will see after it is sent. The detail view can be reached by clicking a template's link from the Alert Templates list view.

While viewing the detail view, the preview of the email template is shown as the last field option. You can also click the "Alt Text" checkbox to see how this email will look when the recipient views it as plain text.

Viewing Alert Templates Via Emails Module

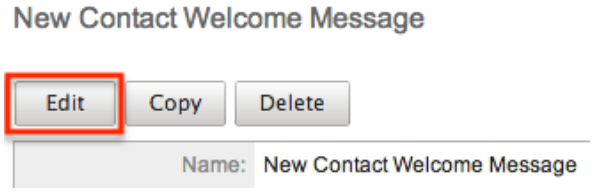
The Emails module contains all of the email templates in Sugar. Alert Templates can be accessed via Emails, in addition to accessing via Workflow Management. To access alert templates via Emails, simply select the View Email Templates option from the Emails module tab.



This will bring you to the Email Templates list view where you can select which template you would like to view. For more information on navigating the Emails module, please review the Emails module section of the Application Guide.

Editing Alert Templates

Alert Templates may be edited at any time to update or add information to the template. You can make changes to existing templates via the Alert Templates edit view. Edit view is accessible via the Alert Templates detail view. You can edit alert templates via the detail view by clicking the Edit button on the upper left of the page. Once the edit view layout is open, update the necessary fields, then click "Save" to preserve the changes made.

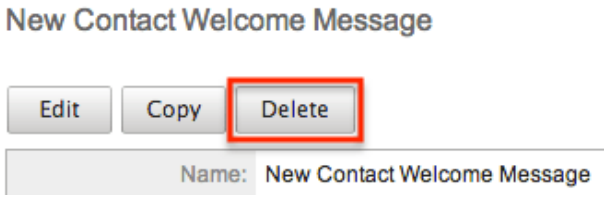


Deleting Alert Templates

If an alert template is invalid or should no longer appear in your organization's

Sugar instance, it may be deleted from either the Alert Templates detail view or list view. Deleting alert templates will not delete any workflows using them. If a workflow is utilizing a template which you are deleting, it is recommended that the workflow be updated to include a new template on the alert.

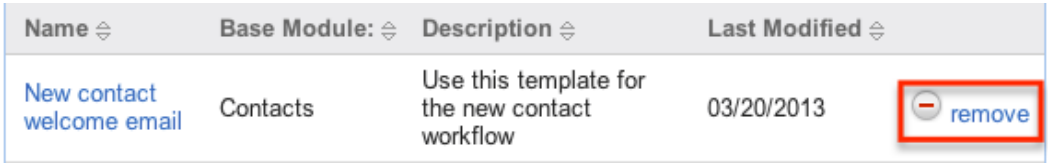
To delete a template from the template's detail use the following steps:

1. Navigate to the Alert Templates detail view.
2. Click the Delete button.
   

3. A pop-up message will display asking for confirmation. Click "Ok" to proceed.

To delete a template from the list view, use the following steps:

1. Navigate to the Alert Templates list view.
2. Select the "Remove" button on the row of the template you would like to delete.



3. A pop-up message will display asking for confirmation. Click "Ok" to proceed.

Time Intervals for Time Elapsed Workflows

Time elapsed workflows trigger after a specified amount of time has passed from when the record was saved. Users with administrator or developer access have the ability to add new time intervals to the dropdown list ("tselect_type_dom") used for time elapsed workflows. The time interval dropdown list can be viewed and edited via Admin > Dropdown Editor. For more information on Dropdown Editor, please refer to the Developer Tools documentation.

By default, the time intervals are:

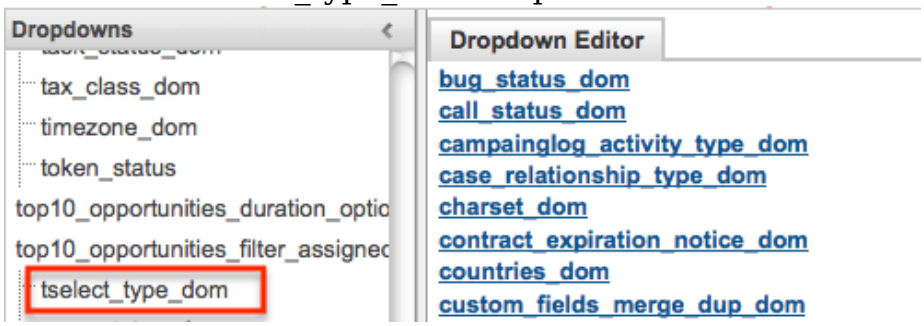
4 days5 days1 week2 weeks3 weeks

0 hours	3 days	30 days
4 hours	60 days	

8 hours	90 days
12 hours	120 days
1 day	150 days
2 days	180 days

The following steps cover adding a 1 hour time interval to the dropdown list via Dropdown Editor as an example:

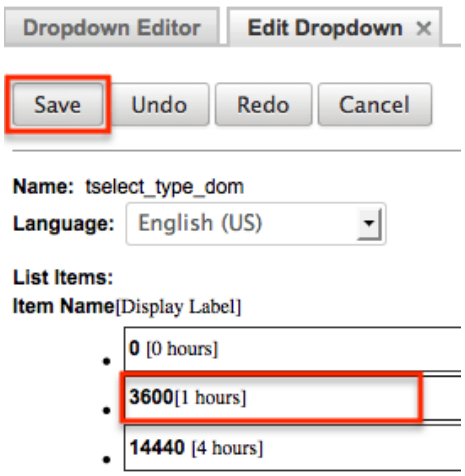
1. Navigate to Admin > Dropdown Editor.
2. Locate the tselect_type_dom dropdown list and click to view the details.



3. Enter an item name (e.g., 3600) and display label (e.g., 1 hours) into the corresponding fields below the existing item list.
    - Please note that the Item Name field must be in seconds equaling to



4. Click "Add" to add the new value to the dropdown list.
    - **Note**: The value will be added to the end of the list, but you can drag and drop the item to the top of the list if you wish. For more information on how to reorder and position values in the dropdown list, please refer to the Developer Tools documentation.



5. Once the item has been added and placed in the correct position, click "Save" to preserve the change.

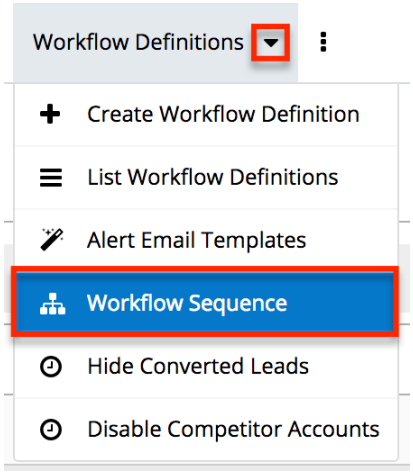
The newly added time interval will now appear in the corresponding dropdown list when creating the condition for a time elapsed workflow.

Workflow Sequence

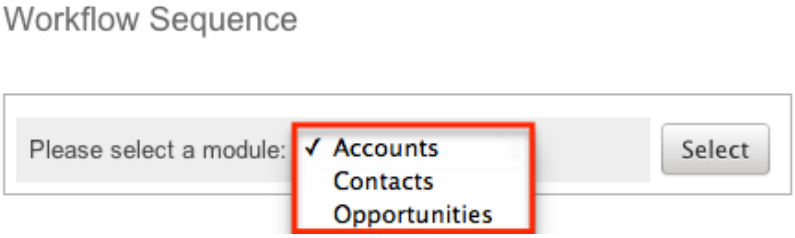
When a record is saved within a module, Sugar will check all workflows for that module to see if they need to process and perform any actions or send any alerts. Sugar processes each of the workflows in sequential order, one after another. By default this order is determined as the order in which the workflow definitions were created; the oldest workflow fires first, moving up to the newest. This order, however, can be reorganized using the Workflow Sequence menu.

Workflow Sequence can be accessed through the following process:

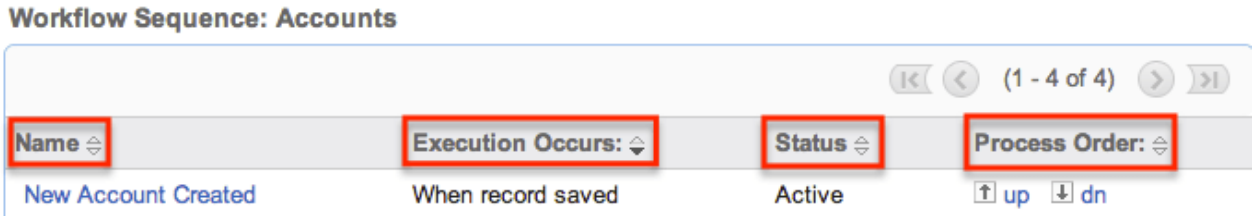
1. Navigate to Admin > Workflow Management.
2. On the Workflow Definitions module tab, select "Workflow Sequence".



3. Select the module you would like to reorganize from the dropdown menu and click "Select".



This process will produce a list view with all of the workflows for the particular selected module. The list view will show three columns containing details from the workflow fields, as well as a fourth column for "Process Order".



The Process Order column is used to reorganize the workflows into their correct processing order. The Up button will move the workflow up one rung in the process, whereas the Dn button will lower it in the sequence. The order of the workflow process for this module is determined on this menu, starting at the top and working its way down.

Products and Quotes

Overview

The Products and Quotes section of the Admin panel enables you to define products and product details that are used in modules that are exclusive to Sugar Sell users. The Products and Quotes panel provides access to the following modules:

Module	Description
Product Catalog	List of products sold by your organization; used as a template for the Quoted Line Items and Revenue Line Items modules for Sugar Sell users.
Product Categories	Populates the categories by which products are organized in the Product Catalog.

Product Types	Populates the Type dropdown list in the Product Catalog.
Manufacturers	Populates the Manufacturer Name dropdown list in the Product Catalog.

Please note the following as pertains to access and visibility of Product Catalog-related modules:

- Quotes Configuration, Shipping Providers, and Tax Rates are additional modules that work with the Product Catalog but are not accessible by Sugar Serve users. For more information on license types and the functionality available for each, refer to the License Types Matrix documentation.
- For some older, unsupported versions of Sugar, the Product Catalog, Product Categories, Product Types, and Manufacturers modules were only available to Administrator users. Information specific to these modules can now be found in the Product Catalog documentation in the Application Guide.
- For Sugar Serve users to leverage the Product Catalog, an administrator would need to add a custom relate field from the Product Catalog module to a supported Sugar Serve module (i.e., Bugs, Cases, or Knowledge Base). For more information on setting up a Product Catalog field for bugs, cases, or knowledge base articles, please refer to the Creating a Relate Field article.

For instructions concerning views and actions which are common across most Sugar modules, such as creating, editing, and deleting records, please refer to the Working With Sugar Modules section of this page.

Product Catalog, Product Categories, Product Types, and Manufacturers

For some older, unsupported versions of Sugar, the Product Catalog, Product Categories, Product Types, and Manufacturers modules were only available to Administrator users but can now be accessed by all users subject to license type and standard role and team restrictions. Information specific to these modules can now be found in the Product Catalog documentation in the Application Guide.

Working With Sugar Modules

The Shipping Providers and Tax Rates modules use Sugar's Sidecar user interface. The following sections detail menus, views, and actions common to sidecar modules and contain links to additional information within the page or links to the

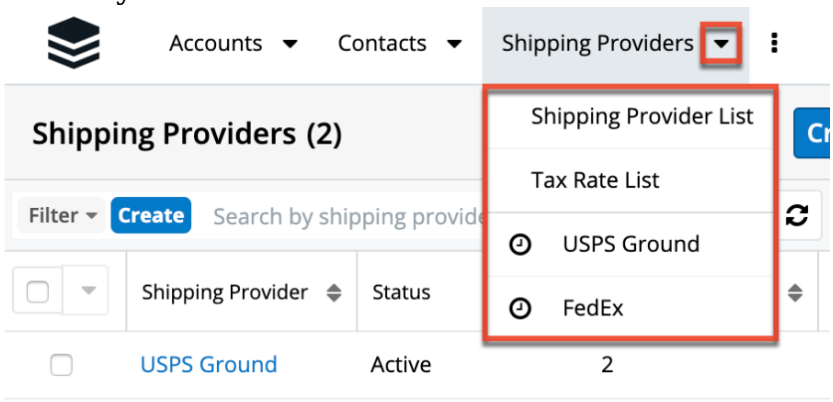
User Interface documentation.

Menus

Sugar modules contain various options that are available via menus in the module tab, list view, and record view. The following sections present each menu type, using the Shipping Providers module as an example, and its options with links to more information about each option in the User Interface documentation or, for module-specific functionality, within this page.

Module Tab Menus

The Shipping Providers list view can be accessed by navigating to the Admin page and selecting "Shipping Providers" under the Product and Quotes panel. Click the tab to access the Shipping Providers list view. You may also click the triangle in the Shipping Providers tab to display the Actions and Recently Viewed menus. The Actions menu allows you to perform important actions within the module. The Recently Viewed menu displays the list of shipping providers you most recently viewed.



The module tab's Actions menu allows you to perform the following operations:

Menu Item	Description
Shipping Provider List	Opens the Shipping Providers list view layout to search and display shipping providers.
Tax Rate List	Opens the Tax Rates list view layout to search and display tax rates.

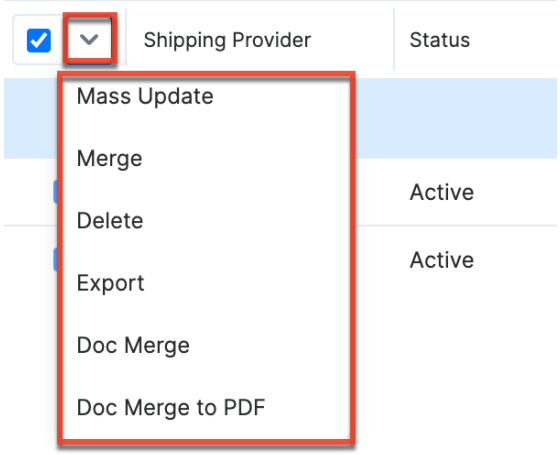
List View Menus

The Shipping Providers list view displays all shipping provider records and allows for searching and filtering to locate specific shipping providers. You can view the basic details of each record within the field columns of the list view or click the

shipping provider's name to open the record view. To access the module's list view, simply navigate to the Admin page and select "Shipping Providers" under the Product and Quotes panel. You can also click the module's tab in the navigation bar once the Shipping Providers module opens.

List View Mass Actions Menu

The Mass Actions menu to the right of the checkbox option in the list header allows you to perform mass actions on all currently selected records. You can use the checkbox on each record's row to select individual shipping provider records or click the checkbox in the list header to select all records displayed on the current set of list view results.



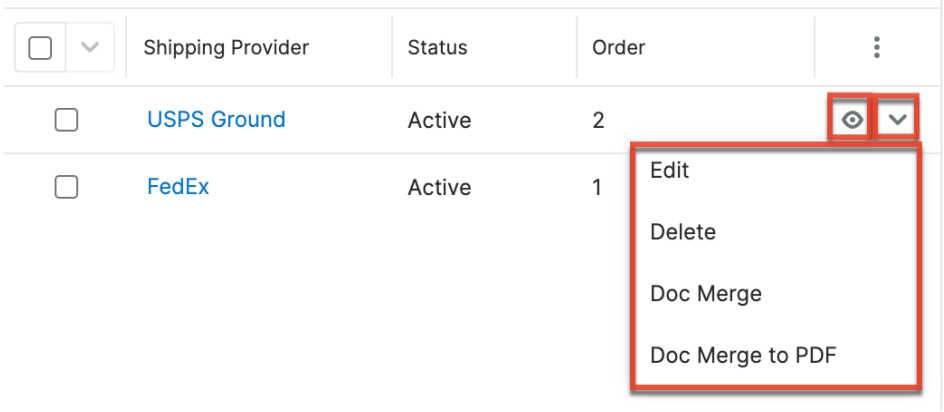
The Mass Actions menu allows you to perform the following operations:

Menu Item	Description
Mass Update	Mass update one or more shipping provider records at a time.
Merge	Merge two or more duplicate shipping providers.
Delete	Delete one or more shipping provider records at a time.
Export	Export one or more shipping provider records to a CSV file.
Doc Merge	Select or create a DOCX template to merge record data into documents that will be accessible in the Doc Merge widget.
Doc Merge to PDF	Select or create a DOCX, XLSX, or PPTX template to merge record data into PDF documents that will be accessible in the

	Doc Merge widget.

List View Record Actions Menu

The Record Actions menu to the far right of each record's row allows you to perform actions on individual shipping provider records directly from the list view.

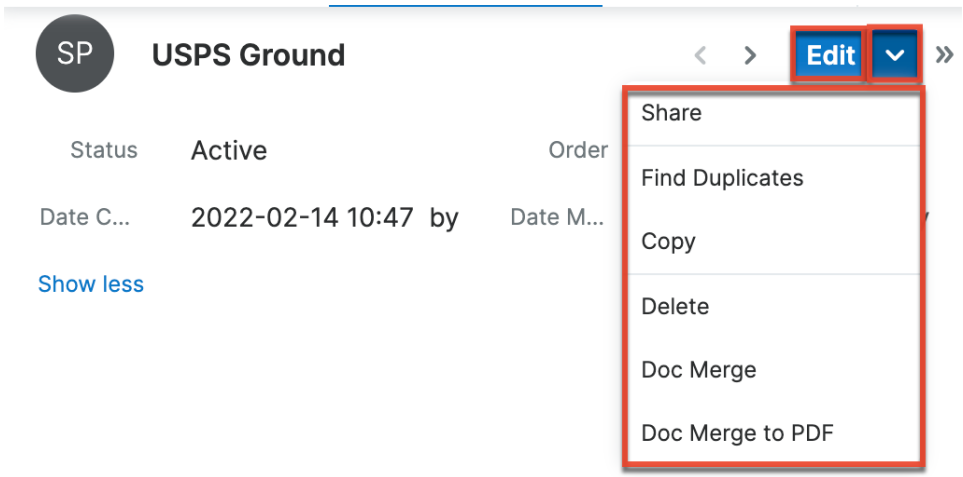


The list view's Record Actions menu allows you to perform the following operations:

Menu Item	Description
Preview (Eye icon)	Preview this shipping provider in the intelligence pane.
Edit	Edit this shipping provider.
Delete	Delete this shipping provider.
Doc Merge	Select or create a DOCX, XLSX, or PPTX template to merge record data into documents that will be accessible in the Doc Merge widget.
Doc Merge to PDF	Select or create a DOCX, XLSX, or PPTX template to merge record data into PDF documents that will be accessible in the Doc Merge widget.

Record View Actions Menu

The Shipping Providers record view displays a single shipping provider in full detail including its fields. To access a shipping provider's record view, simply click the hyperlinked shipping provider name in the Shipping Providers list view. The record view's Actions menu appears on the top right of the page and allows you to perform various operations on the current record.



The Actions menu allows you to perform the following operations:

Menu Item	Description
Edit	Edit this shipping provider.
Share	Share a link to this shipping provider via email.
Find Duplicates	Locate potential duplicates of this shipping provider.
Copy	Duplicate this shipping provider.
Delete	Delete this shipping provider.
Doc Merge	Select or create a DOCX, XLSX, or PPTX template to merge record data into documents that will be accessible in the Doc Merge widget.
Doc Merge to PDF	Select or create a DOCX, XLSX, or PPTX template to merge record data into PDF documents that will be accessible in the Doc Merge widget.

Common Views and Actions

The following links will open specific sections of the User Interface documentation where you can read about views and actions that are common across most Sidecar modules. The sections following this table describe behaviors and functionality specific to the Products- and Quotes-related modules.

Content Link	Description
Creating Records Basic Record Creation	The Creating Records section covers the various methods of creating new

Creating Via Subpanels Creating Via Duplication Importing Records	records, including via the Create button in the module, via the subpanel on related module records, duplication of an existing record, and importing a list of records into Sugar using a .csv spreadsheet.
Viewing Records Viewing Via List View Viewing Via Record View Viewing Via Recently Viewed Viewing Via Preview Viewing Via Reports	The Viewing Records section describes the various methods of viewing records, including via the list view and record view, the Recently Viewed menu in the module tab, previewing records in the right-hand side panel, and reports displaying the record's data.
Searching for Records Global Search List View Search Creating a Filter	The Searching for Records section provides an introduction to the two searching methods for locating Sugar records: global search, which searches across all Sugar modules, and list view search, which searches and filters within the module.
List View Total Record Count Create Button List View Search Checkbox Selection Mass Actions Menu Favorite Designation Column Reordering Column Resizing Column Sorting Column Selection Preview Record Actions Menu Pagination Dashboards	The List View section walks through the many elements of the List View layout, which contains a filterable list of all records in the current module. While the generic menu options are described in the User Interface sections linked to the left, the options specifically available in the list view are described in the List View Mass Actions Menu and List View Record Actions Menu sections of the module overviews below. **Note**: You can only mark records as favorites via the Product Catalog list view.
Record View Favorite Designation Next or Previous Record Actions Menu Show More Dashboards	The Record View section walks through the many elements of the Record View layout, which contains detailed information about a single record. While the generic menu options are described in the User Interface sections linked to the left, the options specifically available in the record view are described in the Record View Actions

	Menu sections of the module overview sections below. **Note**: You can only mark records as favorites via the Product Catalog record view.
Editing Records Editing Inline Via Record View Editing Via Record View Editing Inline Via Subpanels Editing Inline Via List View Mass Editing Via List View	The Editing Records section describes the various methods of editing existing records, including inline via the record view, in full edit mode on the record view, inline via the subpanel on related module records, inline via the list view, and via the Mass Update option on the list view.
Deleting Records Deleting Via Record View Deleting Via List View Mass Deleting Via List View	The Deleting Records section describes the various methods of deleting unwanted records, including via the record view, an individual record's Actions menu on the list view, and the Mass Actions menu on the list view.
Exporting Records	The Exporting Records section provides an introduction to the export functionality, which allows you to download a list of records and all their data as a .csv file for use outside of Sugar (e.g. in Microsoft Excel).
Recalculating Calculated Values	The Recalculating Calculated Values section provides instructions on utilizing the Recalculate Values list view option to update calculated field values in the module if the administrator has changed the field's formula via Admin > Studio.
Finding Duplicate Records	The Finding Duplicate Records section provides instructions for locating duplicate records. If searching on matching fields (e.g. Name) identifies one or more duplicates, they can be merged into a single record.
Merging Records Merging Via List View	The Merging Records section provides instructions for merging duplicates, which combines field values and related records into a single record.
Favoriting Records	The Favoriting Records section

Favoriting via List View Favoriting via Record View	describes the various methods of marking records as favorites, including via the list view and record view. **Note**: You can only mark records as favorites via the Product Catalog module. Favoriting a product catalog record allows you to easily access the product from the list view, Product Catalog Quick Picks dashlet, or the Product Catalog module tab. For more information on the Product Catalog Quick Picks dashlet, please refer to the Opportunities or Quotes documentation.
Sharing Records	The Sharing Records section provides instructions for the Share record view option, which composes an email with a link to the record. If the recipient is logged into Sugar, clicking the link will bring them directly to the record view.

Amazon Web Services

Overview

Amazon Web Services (AWS) allows you to configure Amazon Connect, which Sugar requires to power SugarLive and Sugar Portal Chat. Specifically, Amazon Connect receives data and routes calls to agents and facilitates customer chat sessions initiated in Sugar Portal. From there, the agent and the customer communicate using Amazon's Contact Control Panel (CCP) embedded in Sugar. SugarLive and Sugar Portal Chat are available using the Sugar Serve 11.0 and higher or Sugar Sell 11.1 and higher license types.

To start using SugarLive and Sugar Portal Chat, you must complete some or all of the following steps, depending on which features you wish to use:

1. Set up Single Sign-On (optional)
2. Set up SugarLive and optional additional features
3. Set up Sugar Portal Chat and optional chatbot
4. Configure Amazon Connect in Sugar to enable the above features in Sugar

Prerequisites

SugarLive and Sugar Portal Chat are available in Sugar Serve or Sugar Sell once you have connected your Sugar instance to an Amazon Connect instance that may also rely on other Amazon services. Therefore, these features can only be used after an admin has completed certain configuration steps in the Deployment Guide . In addition, SugarLive and Sugar Portal Chat can only be used with certain web browsers. For more information, refer to the Supported Platforms page.

The following table shows the Amazon services, most of which require payment to Amazon on a per-use basis, used by various Sugar Serve or Sugar Sell features. Each link opens the relevant product page on Amazon's website for that particular service:

Amazon Service	Description	Sugar Serve or Sugar Sell Features that use it
Amazon Connect	Amazon Connect is used to provide SugarLive's omnichannel capabilities.	• SugarLive • Sugar Portal Chat
AWS CloudFormation	AWS CloudFormation is used to create a stack to manage all the resources needed by the Amazon services that SugarLive depends on.	• Call recordings in SugarLive • Call transcripts and sentiment analysis in SugarLive • Sugar Portal Chat • Chatbot in Sugar Portal Chat
Amazon S3	Amazon S3 is used for the storage of Amazon Connect files, including call recordings, call transcripts with sentiment analysis, and chat transcripts.	• SugarLive • Call recordings in SugarLive • Call transcripts and sentiment analysis in SugarLive
AWS Lambda	AWS Lambda is used to run code that passes information between Amazon Connect and Sugar.	• Call recordings in SugarLive • Call transcripts and sentiment analysis in SugarLive • Sugar Portal Chat • Chatbot in Sugar Portal Chat
Contact Lens for Amazon Connect	Contact Lens, a feature of Amazon Connect available	• Call transcripts and sentiment

	at additional cost, is used to generate call transcripts and sentiment analysis for SugarLive calls.	analysis in SugarLive
Amazon Lex	Amazon Lex is used to build a conversational chatbot that customers can speak to in Sugar Portal Chat.	• Chatbot in Sugar Portal Chat
Amazon API Gateway	Amazon API Gateway is used to establish the communication via API between Sugar and Amazon Connect.	• Sugar Portal Chat

Setting up Single Sign-On

Before setting up SugarLive, you may want to consider setting up single sign-on (SSO). This will allow your agents to log in to SugarLive with the same credentials they use to sign in to Sugar. First, you would set up an identity provider (e.g., OneLogin) for Sugar and Amazon Connect. See the following articles for steps to set up some common identity providers for Sugar and AWS:

- Configuring SSO With OneLogin Using SAML
- Configuring SSO With Okta Using SAML
- Configuring SSO With Google Using SAML
- Configuring SSO With Active Directory's ADFS

Next, Configure SAML in your Sugar instance. You must ensure you have an Amazon Connect instance that uses SAML 2.0-based authentication.

Note: An existing Amazon Connect instance that does not use SAML cannot be updated to start using it. You must create a new instance that uses SAML 2.0-based authentication. See the Plan your identity management in Amazon Connect article on Amazon's website for more details on identity management options in Amazon Connect.

Setting up SugarLive

To use SugarLive, an admin must do the following:

- Set up your organization's Amazon Connect instance, including phone numbers, external chat apps, routing, contact flows, and users. Refer to the

Get Started page of the Amazon Connect Administration Guide on Amazon's website for details on these steps, or see their Amazon Connect documentation for a full set of resources.
- Add your Sugar instance URL to your Amazon Connect's approved origins list so that the two systems can communicate. See the Use an allow list for integrated applications article on Amazon's website for the steps to do this.
- Refer to the Amazon Connect Settings page to complete the configuration within Sugar.

Also, there are optional SugarLive features that require external services and admin configuration:

- **Single sign-on**: Before setting up SugarLive, you may want to consider setting up single sign-on (SSO). This will allow your agents to log in to SugarLive with the same credentials they use to sign in to Sugar.
- **Call recordings**: Download and configure the files necessary for call recording, including creating an AWS CloudFormation stack, configuring a Lambda function, and enabling call recording in your Amazon Connect contact flows.
- **Call transcripts and sentiment analysis**: Download and configure the files necessary for call transcripts and sentiment analysis, including creating an AWS CloudFormation stack, configuring a Lambda function, and enabling call recording and Contact Lens speech analytics in your Amazon Connect contact flows.

Note: SugarLive can only be used with certain web browsers. For more information, refer to the Supported Platforms page.

Setting up Sugar Portal Chat

To use Sugar Portal Chat, an admin must do the following:

- Set up a contact flow in your organization's Amazon Connect instance for use in the portal chat or use the sample contact flow included with your SugarLive assets, which uses a sample chatbot and requires additional configuration. Please note, the sample chatbot is an example of how customer service organizations may choose to leverage a contact flow.
- Download and configure the files necessary for Sugar Portal Chat, including creating an AWS CloudFormation stack.
- Refer to the Amazon Connect Settings page to complete the configuration within Sugar. The style settings for the portal chat window can be left as their default values or optionally configured to match your organization's desired theme.

Also, to use a chatbot in Sugar Portal Chat using Amazon services, an admin must

do the following:

- Download and configure the files necessary for a chatbot in Sugar Portal Chat, including creating an AWS CloudFormation stack, importing and configuring a Lex bot, configuring your Amazon Connect instance, and importing and configuring a contact flow.
- Update the Sugar Portal Chat tab in Admin > Amazon Connect Settings in Sugar to use the contact flow configured above.

Note: SugarLive can only be used with certain web browsers. For more information, refer to the Supported Platforms page.

Configuring Amazon Services for use in Sugar Serve or Sell

To use certain SugarLive and Sugar Portal Chat features that rely on Amazon Web Services (AWS), you must download and set up a collection of assets. These files are available as a zip file on your account's Downloads page. On the Downloads page, select "Serve" or "Sell" in the dropdown menu and then open your Sugar version to find the zip file. Once you have the files, follow the steps in the Amazon Connect Deployment Guide for SugarLive to set up various Amazon services for these features.

The following four Sugar Serve or Sell features require this AWS configuration:

- Sugar Portal Chat basic functionality
- Sugar Portal Chat chatbot
- SugarLive call recordings
- SugarLive call transcripts and sentiment analysis

You can choose to set up any or all of the above features. Following the Amazon Connect Deployment Guide for SugarLive, you will need to first set up a CloudFormation stack. From there, you can choose which of the four features to set up and then follow the relevant steps. In the case of the chatbot, you are also able to use your own Amazon Lex chatbot and Amazon Connect contact flow, if you prefer, but Sugar Serve and Sell come with a sample of each and the necessary Lambda functions to get you started.

If you need assistance with any of the Amazon services, you will need to contact Amazon's Customer Support department. See the Contact Us page on Amazon's website for details on their support offerings.

Amazon Connect Deployment Guide for SugarLive

Overview

To use some of the features in Sugar Serve and Sell, you must perform specific steps in Amazon Web Services (AWS) using the files provided in the zip file available for download from your account's Downloads page. However, please note that SugarLive is a robust product and the external configuration that it requires in AWS is outside of Sugar's typical scope of support.

This guide covers the setup on the Amazon side for SugarLive and Sugar Portal Chat features. To use each of these five features, you must first complete the steps in the Creating the AWS CloudFormation Stack section and then the appropriate section for the feature after that:

- Call recording in SugarLive calls
- Call transcripts and sentiment analysis in SugarLive calls
- Sugar Portal Chat
- Chatbot in Sugar Portal Chat
- Chat window on your own website (optional)

See the Amazon Connect Settings page for details on setting up these features in Sugar.

Prerequisites

To walk through this guide, you must already have an Amazon Connect instance and a Sugar instance. To successfully create an Amazon Connect instance and the S3 bucket required by many of the SugarLive features, your AWS account must have the "AmazonConnect_FullAccess" policy attached in the IAM console on Amazon's website. To attach the "AmazonConnect_FullAccess" policy, see this article on Amazon's website: Adding and removing IAM identity permissions.

Note: SugarLive and Sugar Portal Chat can only be used with certain web browsers. For more information, refer to the Supported Platforms page.

Upgrading the SugarLive Package

v1.4 of the package updates the following files:

- Lambda-v1.3.zip
- README.pdf

If you are using the files in v1.3 of the zip file, follow these steps to start using v1.4:

1. Upload the new Lambda-v1.3.zip file to your S3 bucket.

2. Update your CloudFormation stack parameters by clicking Update > Use current template > Next.
3. Update the InstallationFile parameter to be the Lambda zip file you just uploaded, including the path within the bucket.
4. All other settings can be left as is. Click "Next" on this page and the following page and then enable the checkbox at the bottom before clicking "Update stack".

Creating the AWS CloudFormation Stack

1. Open Amazon S3 and either create a new S3 bucket or use an existing bucket.
2. Upload Lambda-v1.3.zip to a location within the S3 bucket.
3. Open AWS CloudFormation > Create Stack > With new resources.



4. Select "Upload a template file" and upload CloudFormation_Template-v1.3.yml. Click "Next".
5. Enter a stack name.
6. Populate the following parameters:
    1. **InstallationS3BucketName**: The bucket name created or selected in step 1
    2. **InstallationFile**: The file, including the path within the bucket, uploaded in step 2
        1. An easy way to find this value is to open the created object in step 2 and find the key

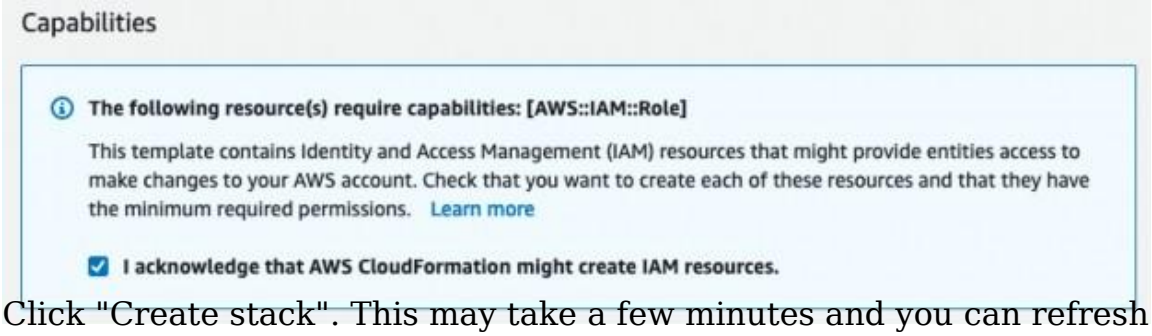


Note: The remaining parameters can be skipped at this time. You will insert values for them as needed when setting up specific features in the below sections. If you want to set them now for the features you plan to use, see the following sections for the required parameters:

- Setting up Call Recording
- Setting up Call Transcripts and Sentiment Analysis
- Setting up Sugar Portal Chat
- Setting up the Chatbot in Sugar Portal Chat

7. Click "Next" and leave the Configure Stack Options and Advanced Options sections as is.

8. Click "Next" and enable the checkbox under the Capabilities section at the bottom.



9. Click "Create stack". This may take a few minutes and you can refresh the Events tab of the stack to monitor the progress

Once the stack is ready, you can proceed to one of the below sections in this guide to set up certain SugarLive features.

Creating the AWS Secret

An AWS secret holding the credentials for your Sugar instance is required when setting up all of the SugarLive features. Use the following steps to create a secret that can be used in your CloudFormation stack:

1. Open AWS Secrets Manager, click "Store a new secret", then select "Other type of secrets" as the secret type.

2. Add two rows in the Secret Key/Value tab and populate them with the sugarUsername and sugarPass keys listed below with their values.

    1. **sugarUsername**: The username of a Sugar user that AWS Lambda will use to access Sugar. This user should have the privileges required to perform the necessary actions in Sugar (e.g., update call records to save the call recording URL).

    2. **sugarPass**: The password of the provided Sugar user



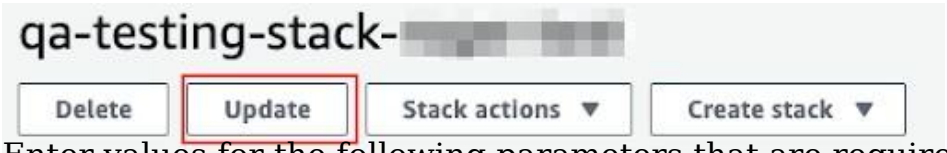
3. Click "Next" and provide a name for the secret. Click "Next" again and then "Store".

Setting up Call Recording

1. Follow the instructions in the Creating the AWS CloudFormation Stack section.

2. Follow the instructions in the Creating the AWS Secret section to create a secret. Note its ARN, which you will copy and paste into the CloudFormation stack in a later step.

3. Once the stack has been created, update the stack parameters with more values by clicking Update > Use current template > Next.

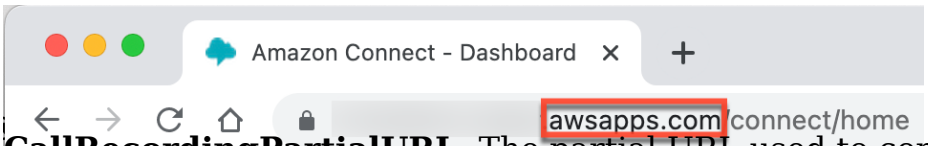


4. Enter values for the following parameters that are required for call recording:

    1. **EnableCallRecordingLink**: "true"

    2. **AWSConnectInstanceName**: The instance name of your Amazon Connect instance (i.e. the first part of your instance's URL)

    3. **AWSConnectDomain**: The domain of your Amazon Connect instance (e.g. "awsapps.com")



4. **CallRecordingPartialURL**: The partial URL used to construct call recording links. This value should not be changed from the default value unless AWS updates how call recording links are generated.

5. **SugarURL**: The URL of your Sugar instance

6. **SugarSecretARN**: The ARN of the secret you created

5. All other settings can be left as is. Click "Next" on this page and the following page and then enable the checkbox at the bottom before clicking "Update stack".

6. Next, add an S3 trigger to the Call Recording Lambda function by opening the Resources tab of the stack and searching for "callrecording".

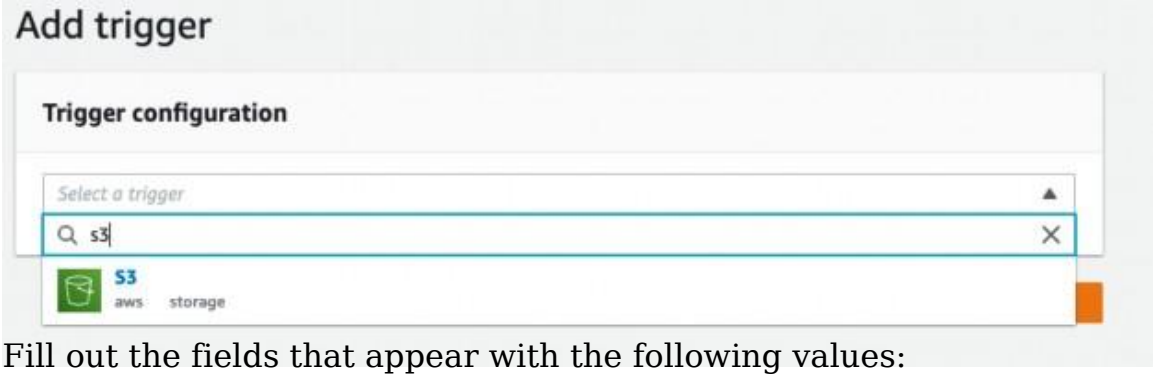


7. Click on the link in the Physical ID column for the function that is returned. It will open the Lambda function in a new tab.

8. In the Lambda function, click "Add trigger".

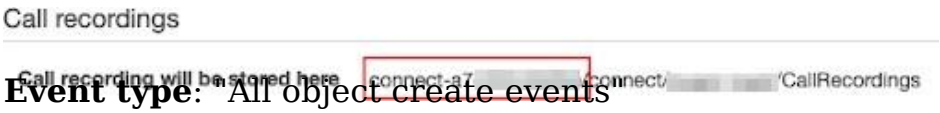


9. Search for S3 and select it.



10. Fill out the fields that appear with the following values:

    1. **Bucket**: The name of the bucket used by your Amazon Connect instance. To find it, open Amazon Connect > your instance > Data storage and copy the bucket name from the path where call recordings will be stored.

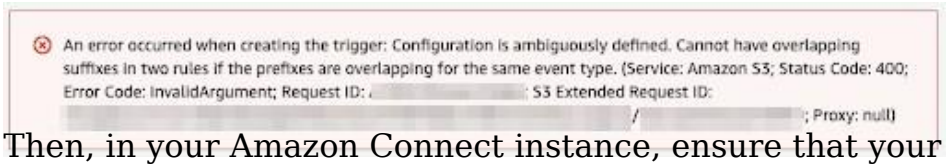
       

    2. **Event type**: "All object create events"

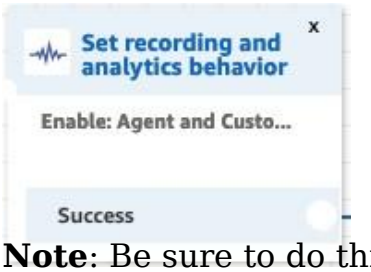
    3. **Prefix**: "connect/**<your-connect-instance-name>**/CallRecordings/"

    4. **Suffix:** Leave this field blank.

11. Enable the checkbox at the bottom and click "Add". If you see the following error, an S3 trigger with the same prefix or suffix has already been added to the bucket:

12. Then, in your Amazon Connect instance, ensure that your contact flows have call recording enabled by adding a "Set recording and analytics behavior" block and turning on call recording within it.

    Note: Be sure to do this for every contact flow that you want to enable call recordings for (e.g. the inbound and outbound flows).

13. Save and publish the contact flows.

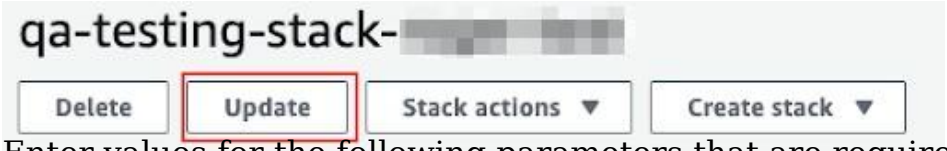
After completing these steps, the link to the call recording will be stored in the Recording field on the call record for calls completed in SugarLive that use one of the contact flows you configured. Note that the link will be immediately saved but the audio file may take a few minutes to become available at that link after you have cleared the contact in SugarLive.

Setting up Call Transcripts and Sentiment Analysis

1. Follow the instructions in the Creating the AWS CloudFormation Stack section.

2. Follow the instructions in the Creating the AWS Secret section to create a secret. Note its ARN, which you will copy and paste into the CloudFormation stack in a later step.

3. Once the stack has been created, update the stack parameters with more values by clicking Update > Use current template > Next.



4. Enter values for the following parameters that are required for call transcripts:

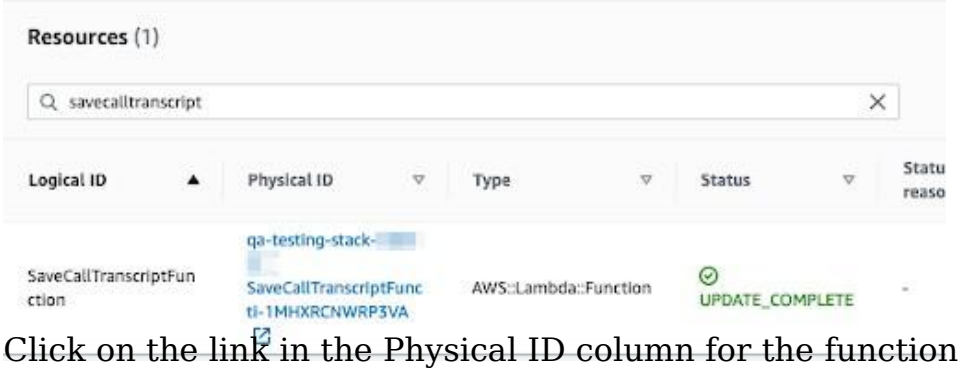
    1. **EnableCallTranscriptUpload**: "true"

    2. **SugarURL**: The URL of your Sugar instance

    3. **SugarSecretARN**: The ARN of the secret you created

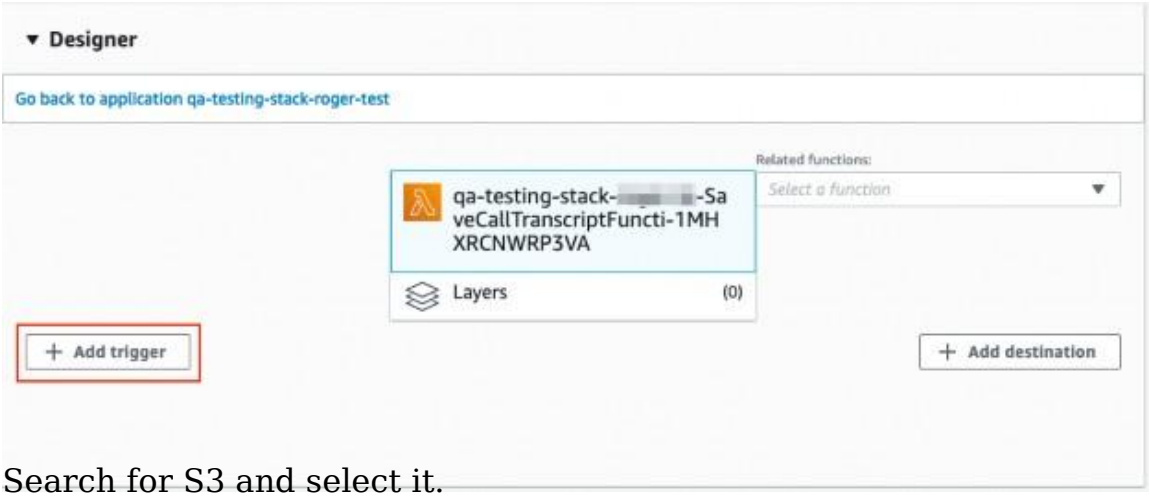
5. All other settings can be left as is. Click "Next" on this page and the following page and then enable the checkbox at the bottom before clicking "Update stack".

6. Next, add an S3 trigger to the Contact Lens Lambda function by opening the Resources tab of the stack and searching for "savecalltranscript".

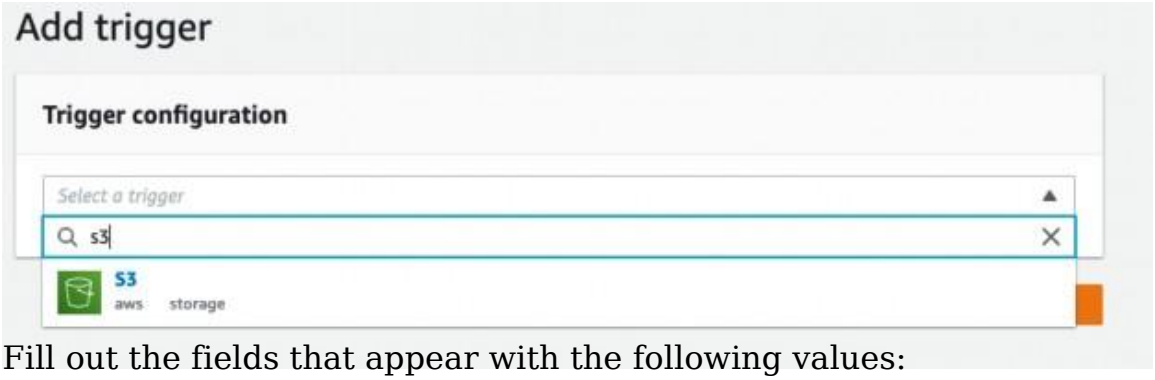


7. Click on the link in the Physical ID column for the function that is returned. It will open the Lambda function in a new tab.

8. In the Lambda function, click "Add trigger".

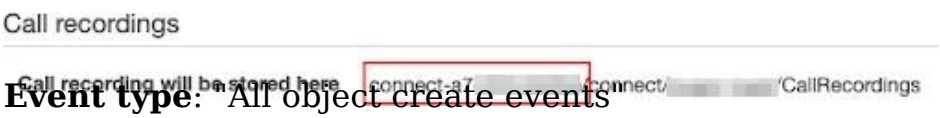


9. Search for S3 and select it.



10. Fill out the fields that appear with the following values:

    1. **Bucket**: The name of the bucket used by your Amazon Connect instance. To find it, open Amazon Connect > your instance > Data storage and copy the bucket name from the path where call recordings are stored.

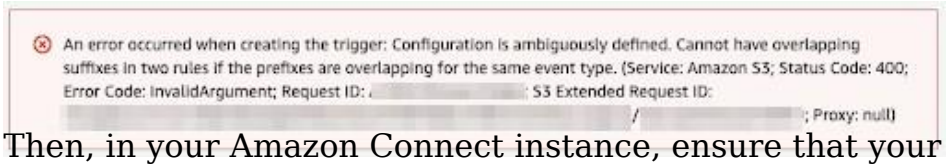
       

    2. **Event type**: "All object create events"

3. **Prefix**: "Analysis/"

4. **Suffix**: Leave this field blank.

11. Enable the checkbox at the bottom and click "Add". If you see the following error, an S3 trigger with the same prefix or suffix has already been added to the bucket:



12. Then, in your Amazon Connect instance, ensure that your contact flows have Contact Lens enabled by adding a "Set recording and analytics behavior" block if one has not already been added. Turn on call recording and Contact Lens speech analytics within it. Contact Lens call transcripts cannot be enabled unless call recordings are enabled in the contact flow first.



Note: Be sure to do this for every contact flow that you want to enable call transcripts and sentiment analysis for (e.g. the inbound and outbound flows).

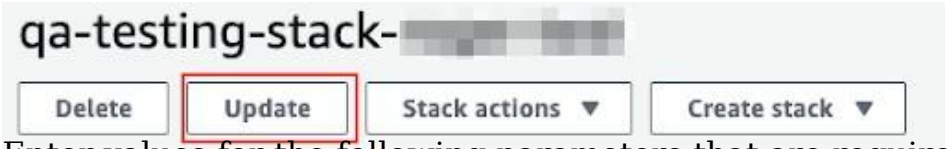
After completing these steps, the transcript will be stored in the Transcript field on the call record for calls completed in SugarLive that use one of the contact flows you configured. The customer and agent sentiment will also be stored in the Customer Sentiment and Agent Sentiment fields on the call. These fields are not displayed by default but can be added to your record and list view layouts using Studio. Note that it may take a while for Contact Lens to process the transcript and sentiment analysis and it will take more time for longer calls.

Setting up Sugar Portal Chat

1. Follow the instructions in the Creating the AWS CloudFormation Stack section.

2. Follow the instructions in the Creating the AWS Secret section to create a secret. Note its ARN, which you will copy and paste into the CloudFormation stack in a later step.

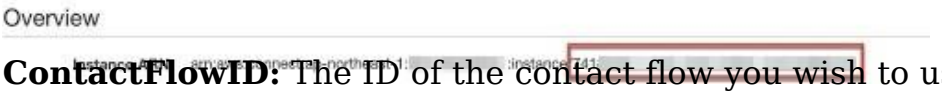
3. In your CloudFormation stack, update the stack parameters with more values by clicking Update > Use current template > Next.



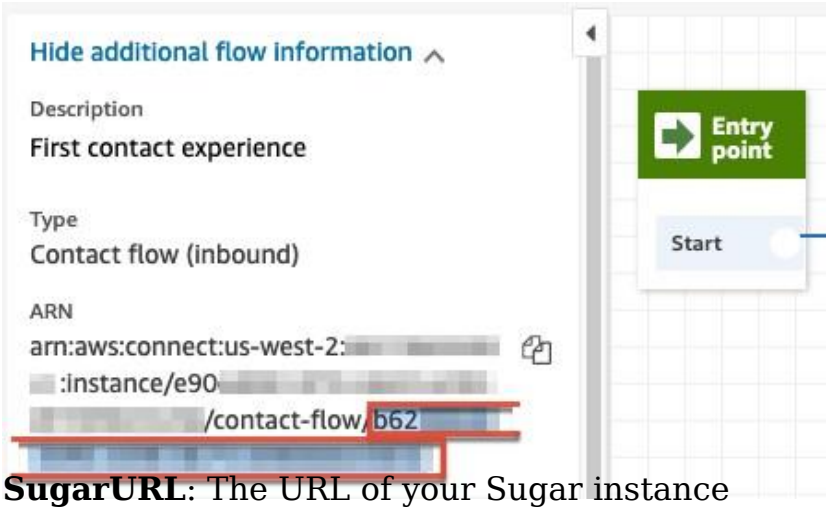
4. Enter values for the following parameters that are required for Sugar Portal Chat:

    1. **EnableSugarPortalChat**: "true"

    2. **AmazonConnectInstanceID**: The ID of your Amazon Connect instance. To find it, open Amazon Connect > your instance > Overview and copy the last part of the instance ARN (i.e. everything after "instance/").



    3. **ContactFlowID:** The ID of the contact flow you wish to use in Sugar Portal Chat. If you plan to use the sample contact flow and chatbot included with Sugar Serve, you can enter a dummy value for now. You will update this when completing the steps to set up the chatbot later. To find the ID of a contact flow, click "Show additional flow information" on the left of your contact flow and copy the last part of the ARN (i.e. everything after "contact-flow/").



    4. **SugarURL**: The URL of your Sugar instance

    5. **SugarSecretARN**: The ARN of the secret you created

5. All other settings can be left as is. Click "Next" on this page and the following page and then enable the checkbox at the bottom before clicking "Update stack".

6. In your Sugar instance, open Admin > Amazon Connect Settings > Sugar Portal Chat tab to configure the following portal chat settings:

    1. **Enable Amazon Connect Chat**: "true"

    2. **API Gateway**: The Invoke URL for the API gateway you are using.

        1. To find it, search for "api" in the Resources tab of your stack and click the link in the Physical ID column of the StartChatAPIGateway value. This will open the API gateway in a new tab.



        2. From there, open Stages > Prod and copy the Invoke URL to paste in Sugar.



    3. **Contact Flow ID**: The ID of the contact flow you wish to use in Sugar Portal Chat. This is the same value you entered in the ContactFlowID parameter in your stack.

4. **Amazon Connect Instance ID**: The ID of your Amazon Connect instance. To find it, open Amazon Connect > your instance > Overview and copy the last part of the instance ARN (i.e. everything after "instance/"). This is the same value you entered in the AmazonConnectInstanceID parameter in your stack.



7. Save your changes to the Amazon Connect Settings page.

8. If you have not already, enable the portal under Admin > Sugar Portal > Configure Portal.

After completing these steps, Sugar Portal Chat will be enabled for your Sugar instance and the chat window will appear for customers using the portal to connect to an agent. If you wish to also set up the chatbot, continue to the Setting Up the Chatbot in Sugar Portal Chat section.

Setting up the Chatbot in Sugar Portal Chat

1. Follow the instructions in the Creating the AWS CloudFormation Stack section.

2. Follow the instructions in the Setting up Sugar Portal Chat section.

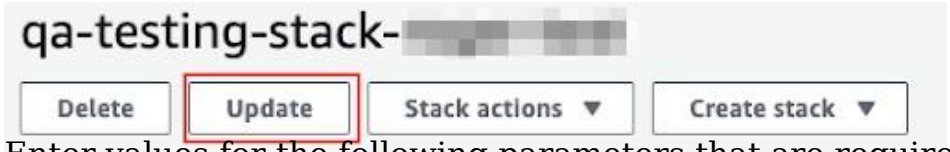
3. Unzip the Portal_Chat.zip file. In your Amazon Connect instance, open Routing > Contact flows > Create contact flow > Import flow and select the portal chat contact flow

   in the unzipped Portal_Chat directory (e.g. SugarCRM_Portal_Chat_Contact_Flow-v1.0).



4. Save the contact flow. There is no need to publish it yet because we will publish it after making further changes later.

5. In your CloudFormation stack, update the stack parameters with more values by clicking Update > Use current template > Next.

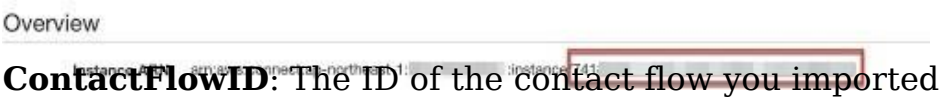


6. Enter values for the following parameters that are required for the Sugar

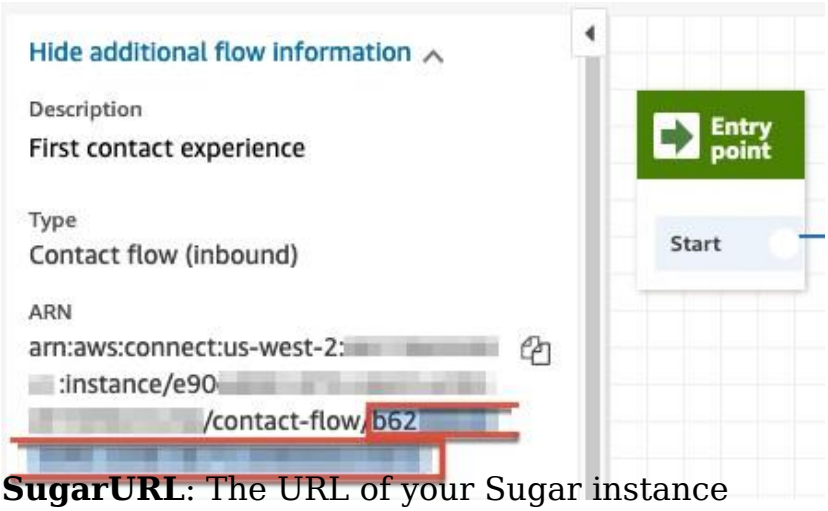
Portal Chat chatbot. Most values will already be accurate, but at a minimum, you will need to update the ContactFlowID parameter to use the sample contact flow included with Sugar Serve:

1. **EnableSugarPortalChat**: "true"

2. **AmazonConnectInstanceID**: The ID of your Amazon Connect instance. To find it, open Amazon Connect > your instance > Overview and copy the last part of the instance ARN (i.e. everything after "instance/").



3. **ContactFlowID**: The ID of the contact flow you imported in step 3. To find the ID, click "Show additional flow information" on the left of your contact flow and copy the last part of the ARN (i.e. everything after "contact-flow/").



4. **SugarURL**: The URL of your Sugar instance

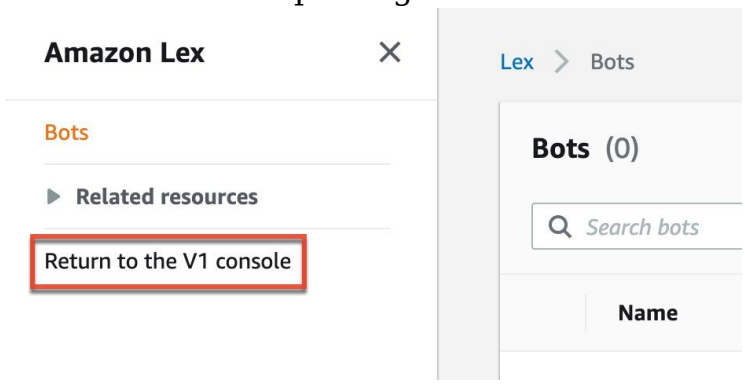
5. **SugarUsername**: The username of a Sugar user that AWS Lambda will use to access Sugar

6. **SugarPassword**: The password of the provided Sugar user

7. All other settings can be left as is. Click "Next" on this page and the following page and then enable the checkbox at the bottom before clicking "Update stack".

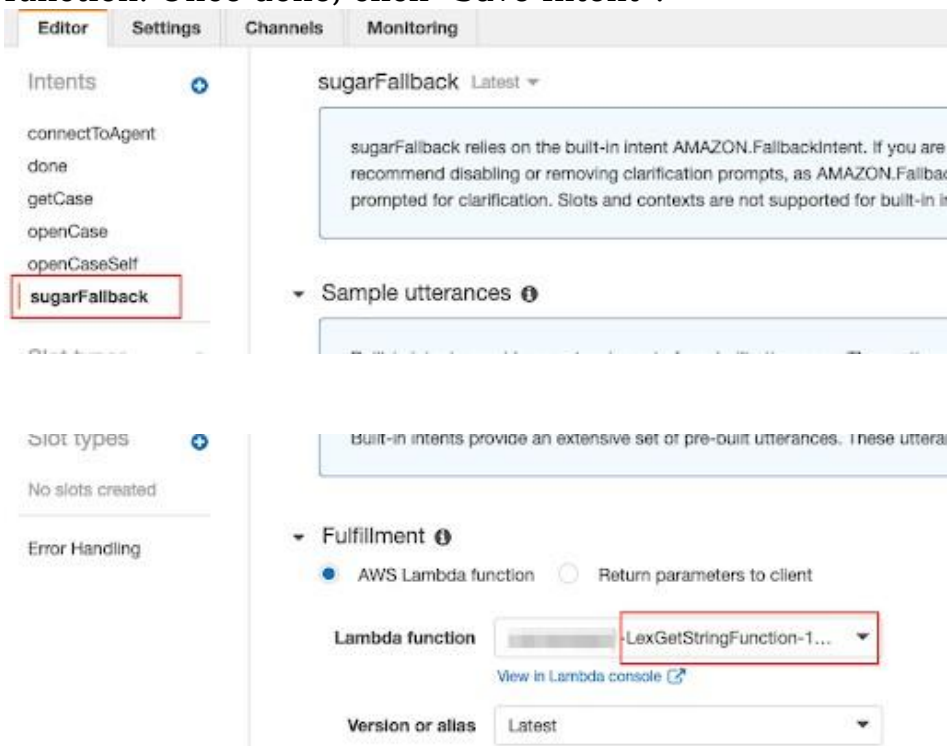
8. Next, in Amazon Lex, open Actions > Import and import SugarServeSampleBot.zip, which can be found in the unzipped Portal_Chat directory. Note that if you have not created a Lex bot before, you may be directed to the Get Started page at first. If so, you will need to click "Get Started" and then "Cancel" to get to the main console. In addition, there are two different versions of the Lex console. The Lex bot provided by

Sugar is only compatible with the V1 console, so be sure to switch to the V1 console before importing:



Note: If you have imported the sample bot before, uploading it again will overwrite the previous one. To avoid this, rename the sample bot before importing it by unzipping the bot, opening the JSON file, and changing the "name" value of the "resource" entry to something unique. Then, zip the updated JSON file and import that zip file instead.

9. Open the imported Lex bot > Editor tab > the "sugarFallback" intent > Fulfillment and select "AWS Lambda function". In the Lambda Function field that appears, select the "**<your-stack-name>**-LexGetStringFunction" function. Once done, click "Save Intent".



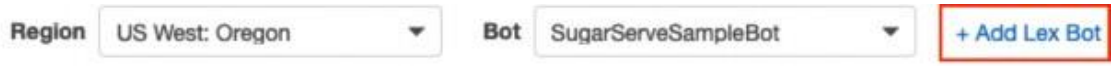
10. Click "Build" to build the Lex bot. When that is complete, click "Publish" and enter the bot name as the alias (e.g. "SugarServeSampleBot").

11. Then, open Amazon Connect > your instance > Contact flows and select

the newly-created Lex bot under the Amazon Lex section.



12. Click "Add Lex Bot" to add it.



13. Under the AWS Lambda section, add the following Lambda functions:

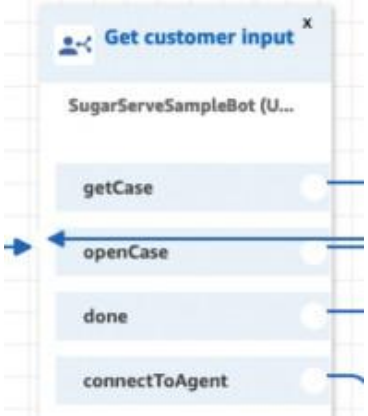
    1. **<your-stack-name>**-CaseStatusFunction

    2. **<your-stack-name>**-CreateCaseFunction

14. Next, open your Amazon Connect instance and open the contact flow you imported in step 3. There should be three "Get customer input" blocks.



In each of these three blocks, select the newly-created Lex bot under the Amazon Lex section and save.



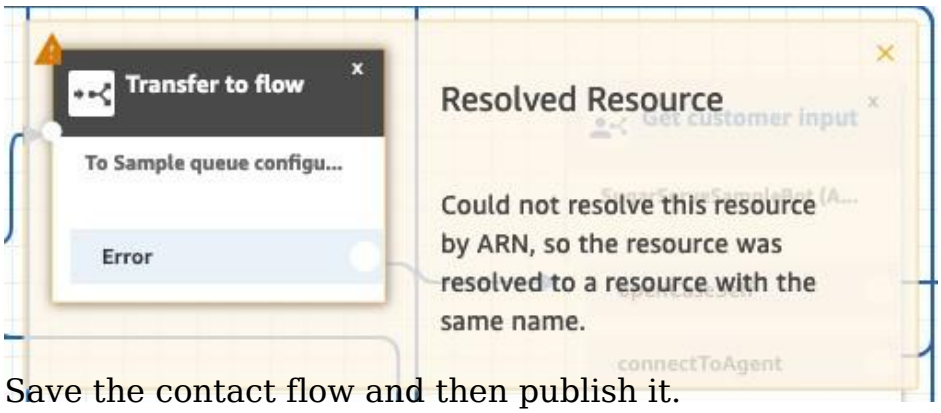
15. Find the "Invoke AWS Lambda function" block of the getCase flow by following the arrow from the "getCase" option in the first "Get customer input" block through to the first "Invoke AWS Lambda function" block. It should be at the top of the contact flow. Open it and select the **<your-stack-name>**-CaseStatusFunction Lambda function in the Select a Function field. Save the block.



16. Find the other "Invoke AWS Lambda function" block, which is the one that comes after the "Transfer to flow" block. Open it and select the

    <your-stack-name>-CreateCaseFunction Lambda function in the Select a Function field. Save the block.

17. Find the "Transfer to flow" block and open it. Select "Sample queue configurations flow" in the Select a Flow field and save.



18. Save the contact flow and then publish it.

19. In your Sugar instance, open Admin > Amazon Connect Settings > Sugar Portal Chat tab to configure the following portal chat settings. Most values will already be accurate, but at a minimum, you will need to update the

Contact Flow ID field to use the sample contact flow included with Sugar Serve:

1. **Enable Amazon Connect Chat**: "true"

2. **API Gateway:** The Invoke URL for the API gateway you are using.

    1. To find it, search for "api" in the Resources tab of your stack and click the link in the Physical ID column of the StartChatAPIGateway value. This will open the API gateway in a new tab.



    2. From there, open Stages > Prod and copy the Invoke URL to paste in Sugar.



3. **Contact Flow ID**: The ID of the contact flow you imported in step 3. This is the same value you entered in the ContactFlowID parameter in your stack.

4. **Amazon Connect Instance ID**: The ID of your Amazon Connect instance. To find it, open Amazon Connect > your instance > Overview and copy the last part of the instance ARN (i.e. everything after "instance/"). This is the same value you entered in the

AmazonConnectInstanceID parameter in your stack.



20. Save your changes to the Amazon Connect Settings page.

21. If you have not already, enable the portal under Admin > Sugar Portal > Configure Portal.

After completing these steps, the chatbot will be enabled in Sugar Portal Chat for your Sugar instance. Customers using the portal can work with the chatbot or connect to an agent in the portal chat window.

Setting up an External Chat Window

If you prefer, you can set up an external chat window on your own hosted website, as opposed to using the Sugar Portal. From there, you can configure the contact flow in your Amazon Connect instance to set several attributes. These attributes are read by SugarLive and can be used to open relevant customer data in the Detail panel when the chat session starts. The following attributes are available to be set:

- **sugarCaseNumber**: The unique number assigned to the case
- **sugarContactId**: The record ID of the contact
- **sugarContactEmail**: The primary email address of the contact
- **sugarContactName**: The first and last name of the contact

They are read in the above order, which means that SugarLive opens the record(s) that match the first provided attribute.

If SugarLive receives a chat with any of these attributes, it opens the matching case and contact records in the Detail panel. If more than one contact matches (e.g., via name or email), they are opened in the Search tab instead so the agent can select the correct one to open. See the contact attributes documentation on Amazon's website for more details on how to use attributes in your contact flows.

Amazon Connect Settings

Overview

Amazon Connect is an Amazon Web Services (AWS) tool that receives incoming calls and chats and routes them to your own customer service or sales automation system (e.g., SugarLive). It also facilitates the customer side of chat sessions (e.g.,

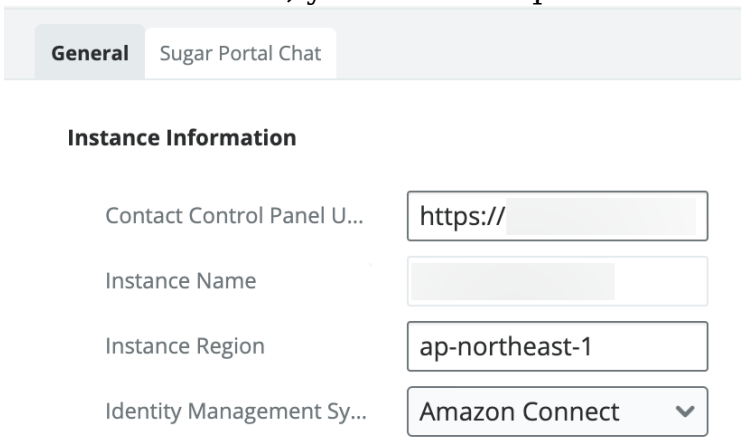
chat sessions initiated in Sugar Portal). Both the agent and the customer communicate using Amazon's Contact Control Panel (CCP) embedded in Sugar.

Once you have set up your Amazon services so that you can use them with SugarLive and Sugar Portal Chat, there are a few settings within Sugar to complete before you can start using these features. These settings are found under the Amazon Web Services section of the Admin page from within Sugar, split between two tabs on the Amazon Connect Settings page.

The General tab includes basic settings to connect Sugar to your Amazon Connect instance and set your identity management system. The Sugar Portal Chat tab includes additional settings to enable a chat window in the portal so your customers can chat with a chatbot or your customer service representatives. In this tab, there are also settings to customize the chat window to match your organization's branding. See the below sections for details on the settings found in each tab.

General Tab

In order for SugarLive and Sugar Portal Chat to communicate with your Amazon Connect instance, you must complete the following configuration fields:



- **Contact Control Panel URL**: Enter the complete URL used to access your Contact Control Panel (CCP), for example "https://example.my.connect.aws/ccp-v2". See the Launch the CCP article on Amazon's website to determine what the URL to your CCP is.
- **Instance Name**: Enter the name of your Amazon Connect instance. The instance name is the first portion of your Amazon Connect URL. For example, in the URL "https://example.awsapps.com/connect/ccp-v2", the instance name is "example".
- **Instance Region**: Enter the region code of your Amazon Connect instance (e.g., "us-west-2"), which can be found in the top right corner of the Amazon Connect console. Click on the name of the region to open the

Region menu, where you can see the code that corresponds to that region.

- **Identity Management System**: Enter the identity management system you wish to use. Options include Amazon Connect and SAML 2.0. If you choose Amazon Connect, users will log in to SugarLive using their Amazon Connect credentials. If you choose SAML 2.0, you must set up an identity provider (e.g., OneLogin), configure SAML in your Sugar instance, and use an Amazon Connect instance that uses SAML 2.0-based authentication. Note that an existing Amazon Connect instance that does not use SAML cannot be updated to start using SAML. You must create a new instance that uses SAML 2.0-based authentication. See the Plan your identity management in Amazon Connect article on Amazon's website for more details on identity management options in Amazon Connect.
    - **Note**: SAML 2.0 in SugarLive can only automatically log users in if SAML is configured in Sugar and users log in to Sugar using single sign-on (SSO). If SAML is not configured in the instance or users choose not to use it, they will have to manually log in to SugarLive using their SSO credentials.
- **Endpoint URL**: Enter the SAML endpoint to which users must connect to authenticate with your single sign-on identity provider using SAML. This field is only displayed if "SAML 2.0" is selected as the identity management system.

To disable Amazon Connect in your Sugar instance, simply set the Contact Control Panel URL, Instance Name, and Instance Region fields to blank and save the page. This removes the SugarLive button from the footer of Sugar when you save the Amazon Connect Settings page. It also prevents the portal chat from working but does not remove the chat window from the portal; to remove it from the view, you must disable the Enable Amazon Connect Chat checkbox in the Sugar Portal Chat tab as well.

When you enable SugarLive by saving a value in the Contact Control Panel URL, Sugar automatically updates the Content Security Policy (CSP) Settings so that the domains required by SugarLive are included in the database. These values are not shown in the user interface and no extra action is required by an admin. If you disable SugarLive by removing the value in the Contact Control Panel field, the domains are automatically removed from the CSP settings. See the System page for more details on the CSP.

If you are configuring Amazon Connect for use with SugarLive, refer to the SugarLive page in the Application Guide for details on how your customer service or sales representatives can start using it. If you are also configuring Amazon Connect to use Sugar Portal Chat, refer to the Sugar Portal Chat documentation in the Portal User Guide for details on how your customers can start using it.

Sugar Portal Chat Tab

To allow your customers to chat with your agents or a chatbot from the portal, you must complete the fields in the Settings section of the Sugar Portal Chat tab in addition to the fields in the General tab described above. To customize the appearance of the chat window to match your organization's branding, update the remaining settings on this tab; these settings have minimal default values that can be used if you wish to leave them as is.

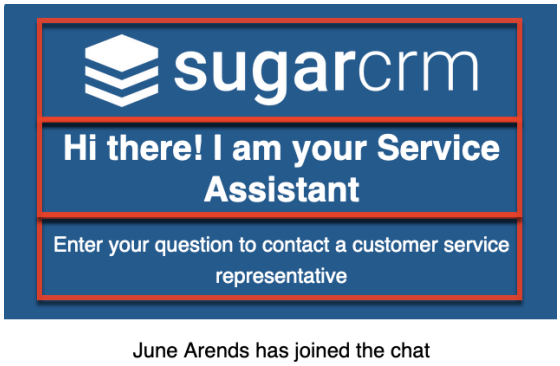
Settings

The following fields are required for Sugar Portal Chat to work:

- **Enable Amazon Connect Chat**: Turn this setting on to enable chat in the portal. Once enabled, the below three fields appear and are required to finish configuring Sugar Portal Chat.
- **API Gateway**: Enter the API Gateway endpoint URL used to start a chat session; in Amazon API Gateway, this is the Invoke URL. This field is only displayed if Enable Amazon Connect Chat is enabled.
- **Contact Flow ID**: Enter the ID of the contact flow you wish to use in the portal chat. If a contact flow's ARN is "arn:aws:connect:us-west-2:123456789012:instance/1111/contact-flow/2222", the contact flow ID is "2222". This field is only displayed if Enable Amazon Connect Chat is enabled.
- **Amazon Connect Instance ID**: Enter the ID of your Amazon Connect instance for use in the portal chat. If your instance ARN is "arn:aws:connect:us-west-2:123456789012:instance/1111", the instance ID is "1111". This field is only displayed if Enable Amazon Connect Chat is enabled.

Header

Use the following fields to customize the appearance of the header in the portal chat window:

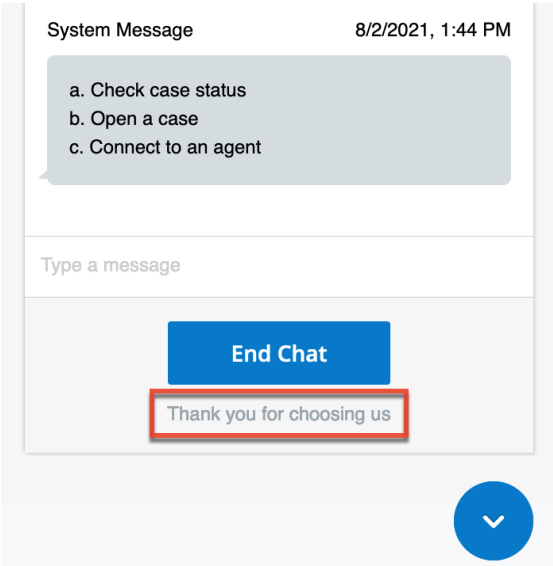


- **Image URL**: Enter the URL of the image you wish to display at the top of the chat window.

    - For reference, the SugarCRM logo that is displayed by default has dimensions of 790 x 147 px, but the image you provide will be scaled down if necessary to fit in the chat window.
    - When you enter a URL, a preview of the image is displayed directly below the field; if you do not see a preview, the image cannot be found using the URL and will not appear in the portal.
    - It is recommended to log in to the portal to verify that the image is displayed as you would like and to resize the image if it is not.
    - If you do not enter a URL, the SugarCRM logo is displayed by default.
- **Title**: Enter the title text you want to be displayed at the top of the chat window. The default title, as shown in the example image, is "Hi there! I am your Service Assistant".
- **Title Color**: Choose the color of the header's title text by entering the hex color code or clicking in the text field to open the color picker.
- **Subtitle**: Enter the text you want to be displayed below the title at the top of the chat window. Its font is slightly smaller than that of the title.
- **Subtitle Color**: Choose the color of the subtitle text by entering the hex color code or clicking in the text field to open the color picker.
- **Background Color**: Choose a background color for the header at the top of the chat window by entering the hex color code or clicking in the text field to open the color picker.

Footer

Use the following fields to customize the appearance of the footer in the portal chat window:

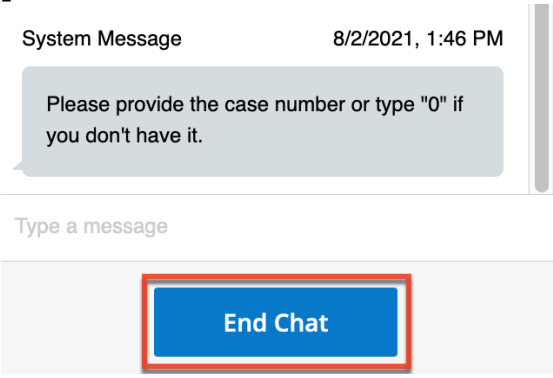


- **Title**: Enter the text you want to be displayed at the bottom of the chat window.

- **Title Color**: Choose the color of the footer's title text by entering the hex color code or clicking in the text field to open the color picker.

End Chat Button

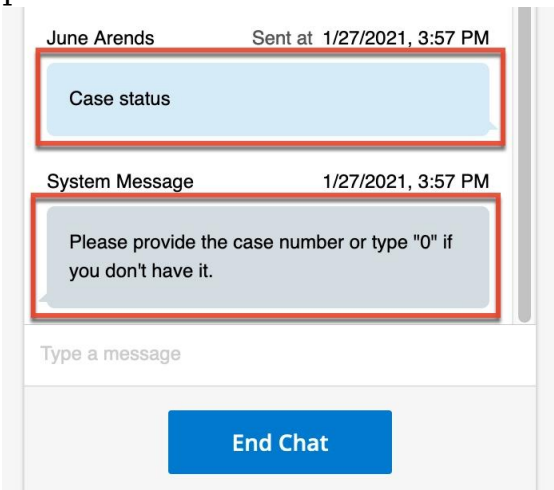
Use the following fields to customize the appearance of the End Chat button in the portal chat window:



- **Text Color**: Choose the color of the text in the End Chat button by entering the hex color code or clicking in the text field to open the color picker.
- **Size**: Specify the height and width of the End Chat button in pixels.
- **Button Fill**: Choose the color of the background in the End Chat button by entering the hex color code or clicking in the text field to open the color picker.

Messages

Use the following fields to customize the appearance of the chat messages in the portal chat window:



- **Text Color**: Choose the color of the text in all messages sent and received in the chat window by entering the hex color code or clicking in the text

field to open the color picker.
- **Customer Chat Bubble Color**: Choose the color of the background in the customer's chat bubbles by entering the hex color code or clicking in the text field to open the color picker.
- **Agent Chat Bubble Color**: Choose the color of the background in the agent's chat bubbles by entering the hex color code or clicking in the text field to open the color picker.

Sugar Maps Administration

Overview

With Sugar Maps, our integration with Microsoft Bing Maps, users can quickly see which records are in close proximity to each other, plot records on a content-rich map, and generate driving directions between records. This guide walks through the steps to configure Sugar Maps. For information on using Sugar Maps once it has been installed, please refer to the Sugar Maps User Guide.

Note: If you have Sugar Sell Premier, Sugar Maps powers the geo-mapping capability. Sugar Maps is automatically enabled and you do not need a separate license key for Sugar Maps.

Prerequisites

- Sugar Maps is included with Sugar Sell Premier and powers the geo-mapping capability. Sugar Maps can also be purchased as an add-on for Sugar Sell Advanced, Enterprise, and Serve. Sugar Maps can be purchased by contacting your Sugar partner or representative.
- If you purchased Sugar Maps as an add-on, an administrator must enable the Sugar Maps license for users who should have access.
- You must be a System Administrator to complete the configuration on this page.

Configuring Sugar Maps

Once Sugar Maps is enabled in your instance a System Administrator will need to perform a series of configuration steps to control the behavior and visibility of Sugar Maps. These steps can include creating schedulers, enabling and configuring modules, configuring the subpanel, setting measurement units, and disabling Sugar Maps.

Sugar Maps Schedulers

The Records Geocoder and Geocoder Resolver schedulers trigger the Sugar Maps geocoding process. Geocoding generates the latitude and longitude of a record's address, which then allows Sugar Maps to map a record. The Records Geocoder sends the records to the geocoding server in batches of 1000, and the Geocode Resolver polls the server for the geocoded results and imports the information into Sugar. Sugar Maps schedulers are created and enabled automatically in Sugar Sell Premier instances that did not have Sugar Maps enabled prior to upgrading. If you have purchased Sugar Maps as an add-on you will need to create the schedulers manually.

Note: The Records Geocoder scheduler's "Job Name" may vary based on how and when the scheduler was created. Please refer to the Understanding Sugar Maps Scheduler's Job Names help article for more information.

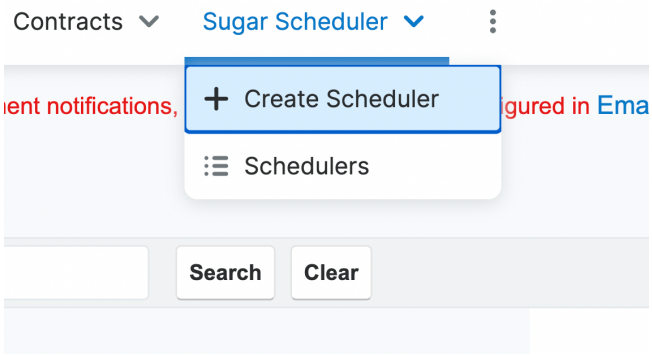
Creating Sugar Maps Schedulers

If you have purchased Sugar Maps as an add-on you will need to create the needed schedulers manually.

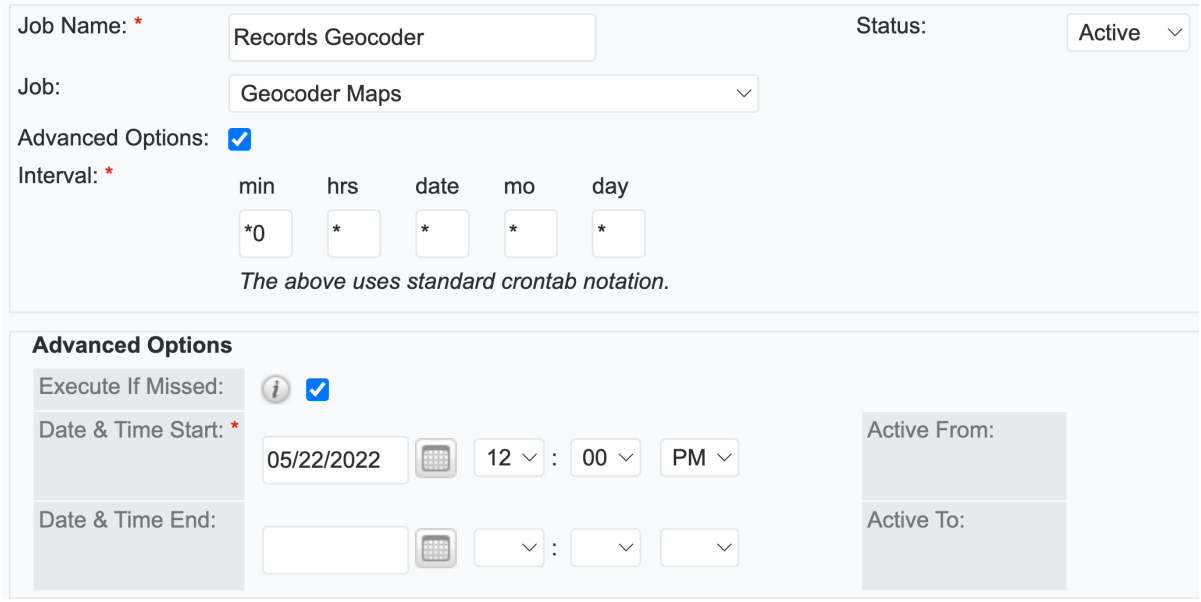
Note: The Sugar Maps schedulers must be created by a System Administrator that is assigned a Sugar Maps license.

Use the following steps to create the Records Geocoder and Geocoder Resolver schedulers:

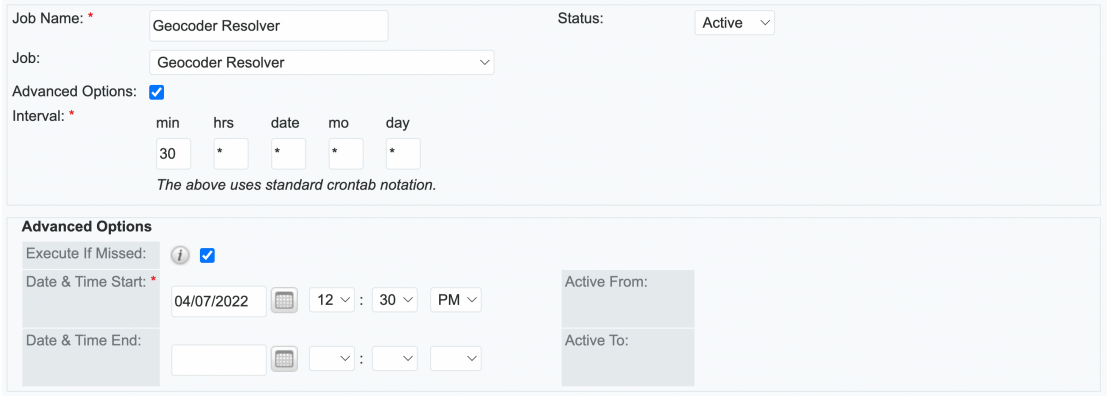
1. Navigate to Admin > Scheduler.
2. Open the Actions menu in the Sugar Scheduler tab and select "Create Scheduler".



3. Set the Job Name field to "Records Geocoder".
4. Set the Job field to "Geocoder Maps".
5. We recommend setting the Sugar Maps schedulers to run 30 minutes apart from one another, with the Records Geocoder scheduler running first. To achieve this, check the Advanced Options checkbox field to reveal the additional interval settings. Then set the interval to 0 min for the Records Geocoder scheduler. Under Advanced Options, set the Date and Time Start to a future date and time starting at the top of an hour.



6. Click the Save button to create the scheduler.
7. Repeat steps 1-6 to create the Geocoder Resolver scheduler, setting the scheduler job to "Geocoder Resolver". The Geocoder Resolver scheduler "Interval" should be set at 30 min intervals, with the Date and Time Start set a half-hour after the Records Geocoder scheduler start date and time.



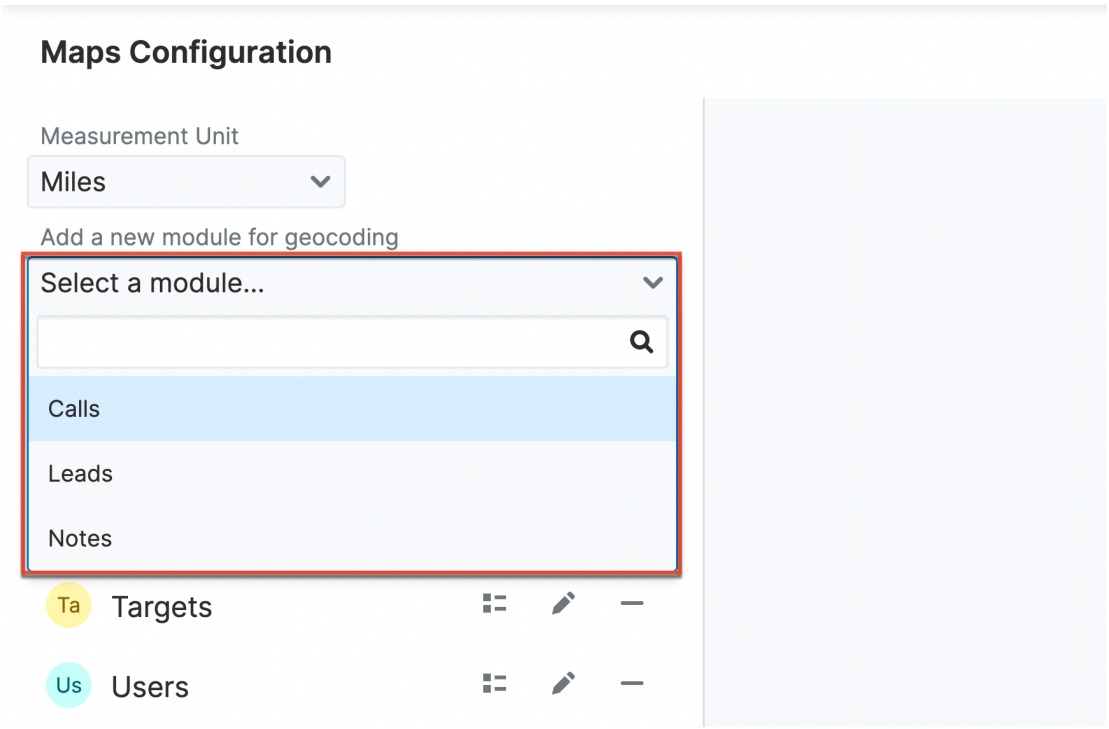
Refer to the Schedulers documentation for complete steps on creating schedulers.

Enabling and Configuring Modules for Sugar Maps

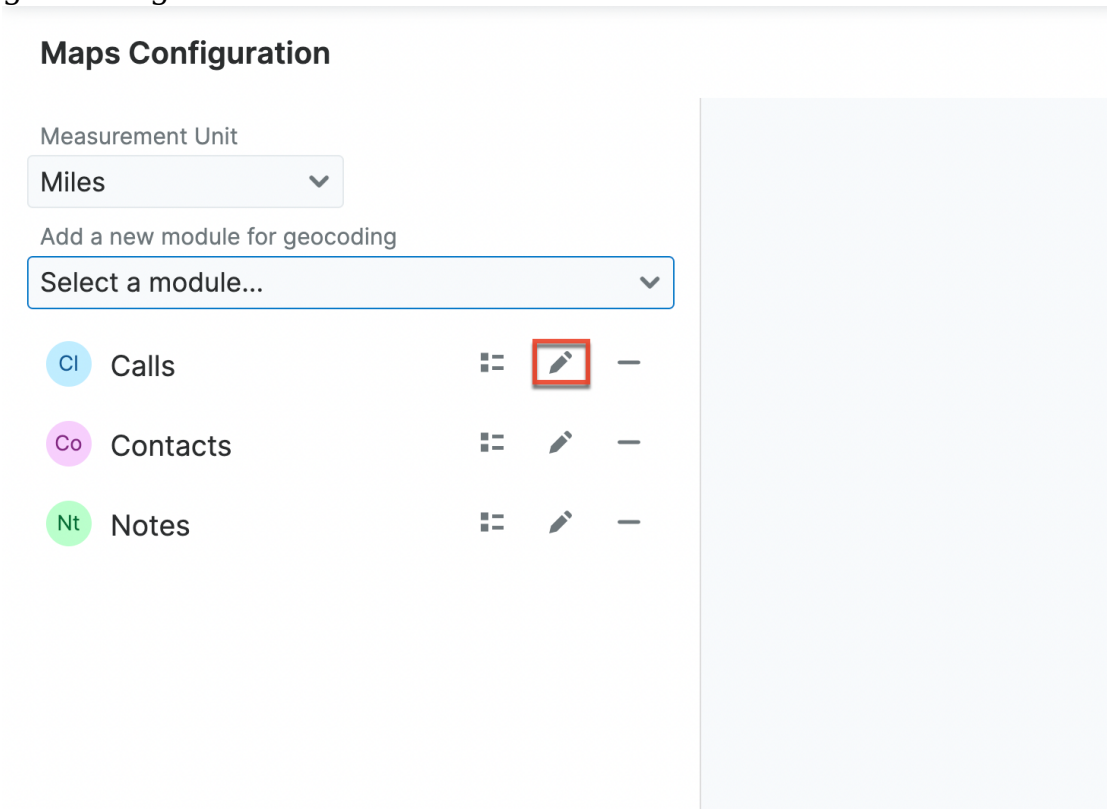
Sugar Maps can be enabled for a range of stock modules as well as custom modules. To enable a module, you will need to add the module in your Maps Configuration settings and map the module's fields or a related module's fields for geocoding.

Use the following steps to enable a module for Sugar Maps:

1. Navigate to Admin > Maps.
2. From the Maps Configuration page, select the module you want to add from the Add a new module for geocoding dropdown.

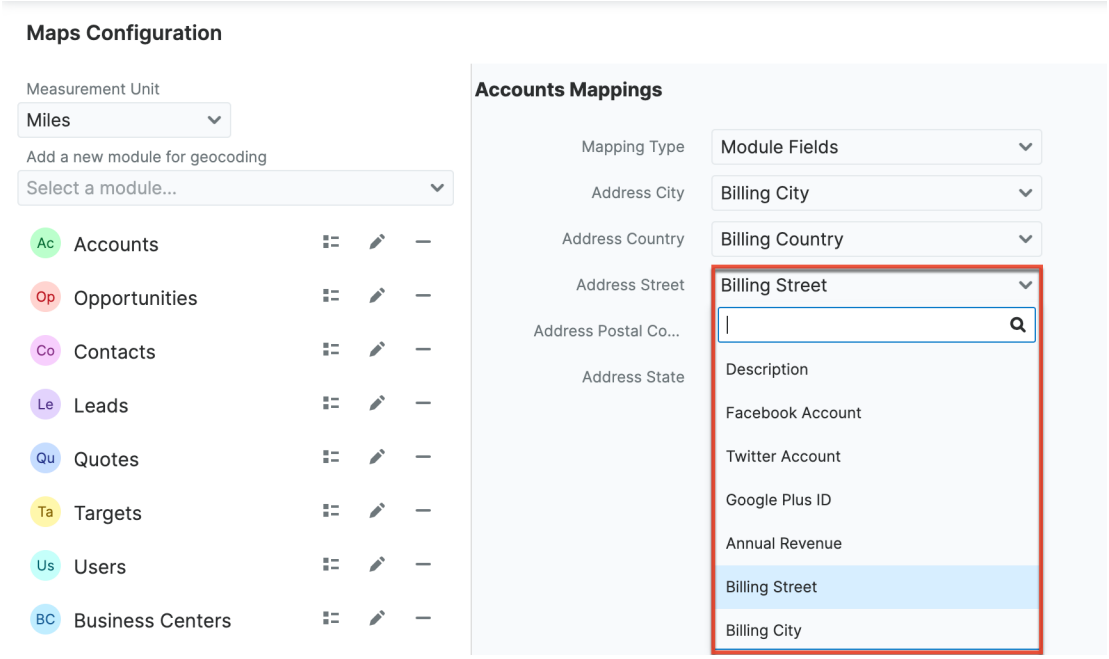


3. Click the pencil icon to access the module's mapping settings for geocoding.



4. From the mappings page, use the Mapping Type dropdown to select if you would like to configure your field mappings to the selected module's fields or to a related record's fields.
Note: When mapping to a related record only related records with an address field will be available.

5. When mapping to the selected module's fields, use the dropdowns to map each address field to the module field that matches the address value you want to use for geocoding.



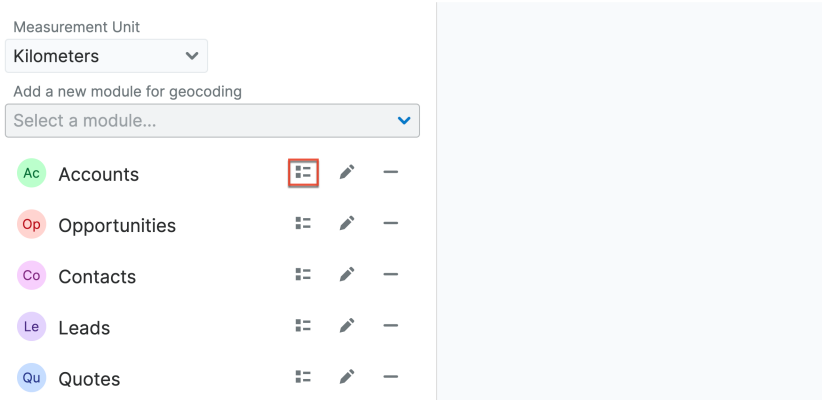
6. Click the Save button.

Configuring the Maps Subpanel

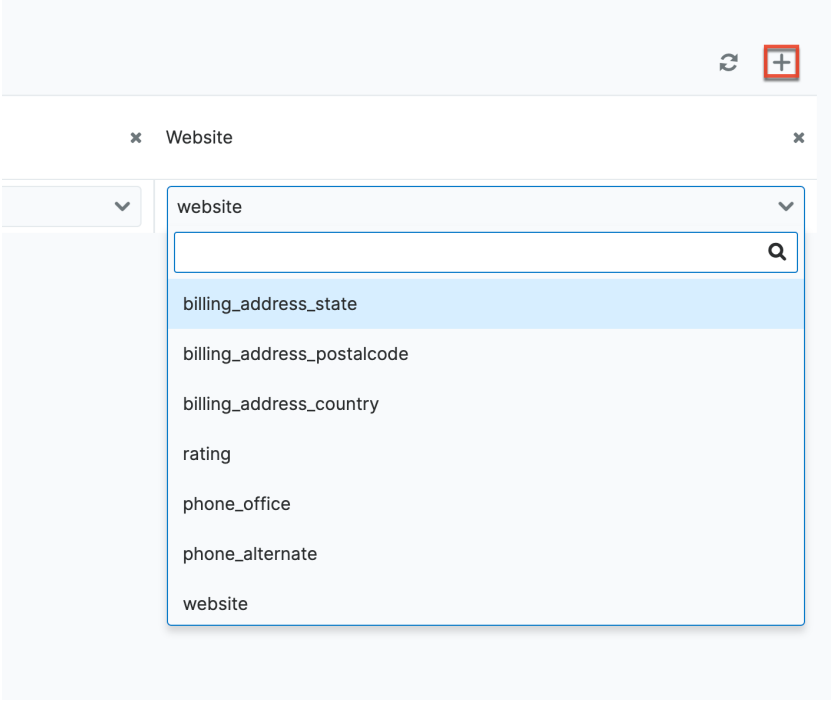
Once a module is enabled for Sugar Maps, the Maps subpanel is automatically added to the module's record view. From your Maps Configuration settings, you can edit the columns displayed when viewing records from a specific module type within the Maps subpanel.

Use the following steps to configure the columns shown in a Maps subpanel:

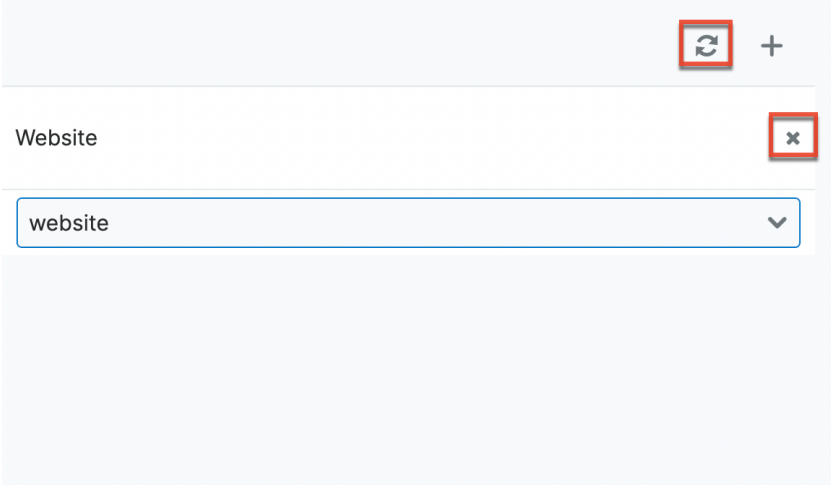
1. Navigate to Admin > Maps.
2. Click the subpanel icon for an enabled module.



3. Click the plus icon to add a column.
4. Use the dropdown to select the column field.



5. To remove columns, click the x icon. If you need to reset the subpanel configuration to the default settings click the refresh icon.



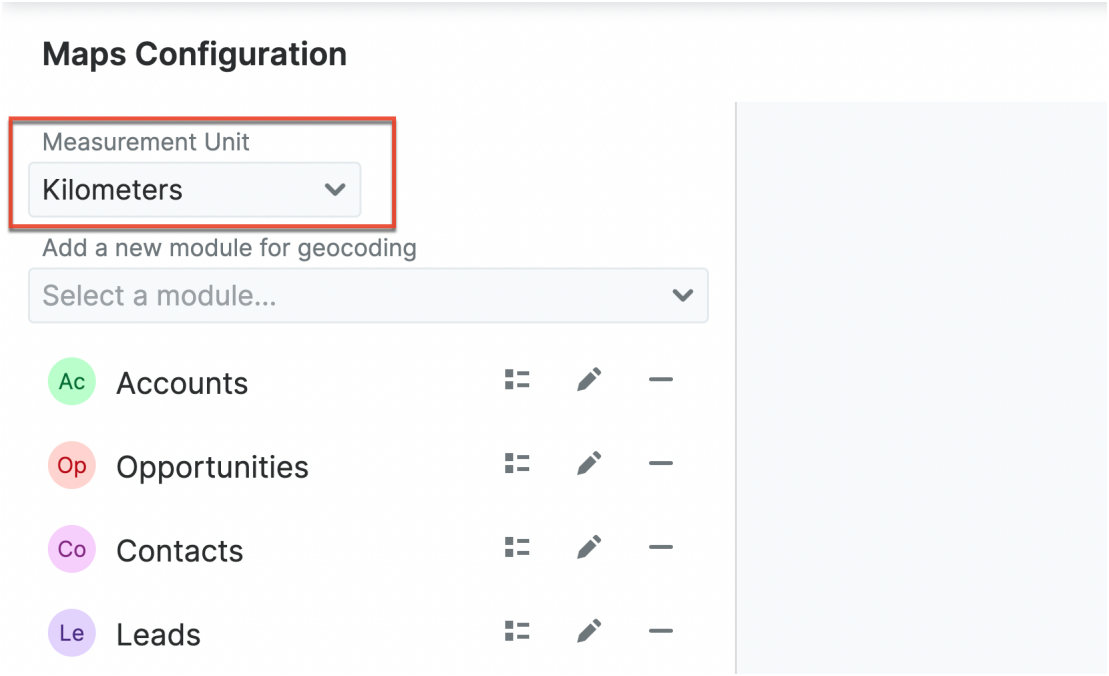
6. Click the Save button.

Setting the Measurement Unit for Driving Directions

You can choose to display driving direction distances in kilometers or miles.

Use the following steps to set the default measurement unit used for driving directions:

1. Navigate to Admin > Maps > Maps.
2. Select the default measurement unit from the Measurement Unit dropdown field.



3. Click the Save button.

Geocoder Log Viewer

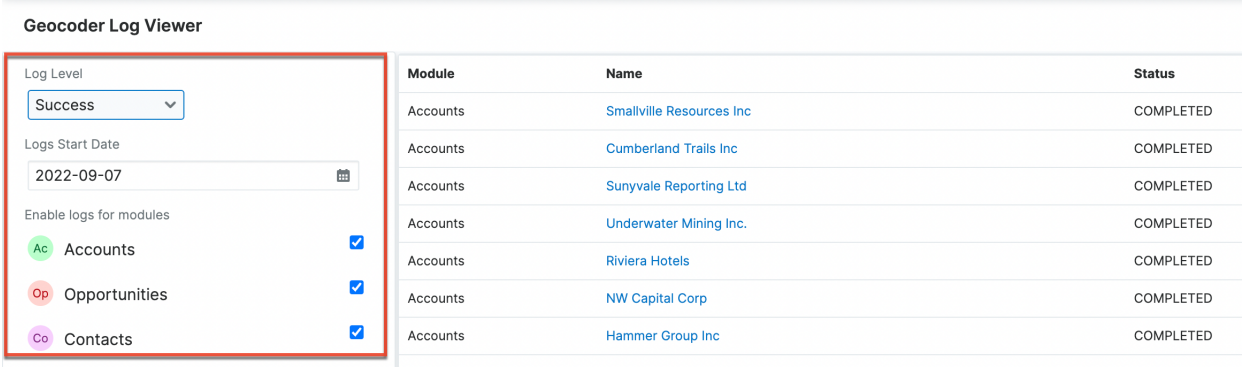
System Administrators can access the Geocoder Log Viewer to review all geocoding activity. This view provides a quick and comprehensive way to troubleshoot geocoding for your enabled modules.

Use the following steps to access the Geocoder Log Viewer:

1. Navigate to Admin > Maps > Log Viewer.



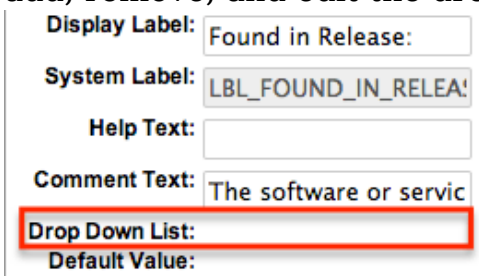
2. Adjust the available fields to filter your results by the geocode activity status, date and module.



Bug Tracker

Overview

In the Bugs module, there are two dropdown fields, "Found in Release" and "Fixed in Release", that cannot be edited through normal means. Although these are dropdown fields, they do not show a dropdown list option in Dropdown Editor to add, remove, and edit the dropdown options.



The release dropdown list is instead controlled by the Releases section of the Administration page. The release list is more comprehensive than a standard dropdown list, so each list option needs additional information. This documentation will cover how to use the Releases module to make changes to the list that controls these fields.

Release Fields

The Releases module contains three fields that come out-of-the-box with Sugar. These fields are not found in Studio, and therefore cannot be edited.

Field	Description
Release Version	The version name or number of this release.
Status	Select Active from this dropdown list to display the name in the Release

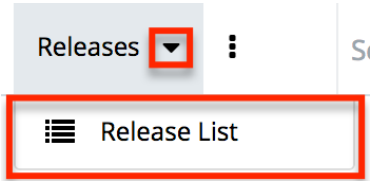
	dropdown list. Inactive records will only show in the list view of this page.
Order	Enter a number to specify the order in which the release is displayed in the dropdown list. Numbers can be repeated in this field, so they can either be ranked in order (1,2,3...), in order of importance (1,1,1,2,2,2,3,3,3...), or any other ranking that is used internally.

Release Module Tab

The Releases module tab can be accessed by navigating to the Administration page and clicking "Releases" in the Bugs section.



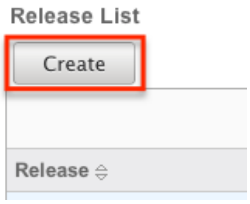
Once in the Releases list view, you can click the triangle in the Releases module tab to display the Actions menu, which allows you to perform important actions within the module. Please note that clicking the module tab only allows you to access the Releases list view.



Creating Releases

Releases can only be created from the Releases module. Use the following steps to create a release option for dropdown lists:

1. Navigate to Admin > Releases.
2. Click the Create button above the Releases list view.



3. An editable subpanel will open below the list view. Enter the required information on the fields provided.



4. Click one of your two save options. Both will store your new record and have it available for use through Sugar. However, the behavior after clicking is dependent on which button used:
    - **Save**: After clicking "Save", the same release option that you created will remain editable for you to make additional changes if need be, after appearing on the list view above.
    - **Save & Create New**: After clicking "Save & Create New", the release appears on the list view, the edit form's "Release Version" field is cleared out, and the "Order" field is increased by one.



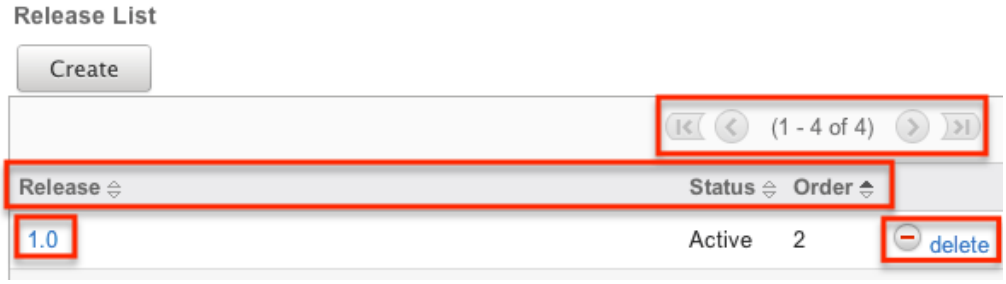
Viewing Releases

All of the release options are shown on a list view in the Releases module. Due to the Releases module only containing three fields, all of the necessary details are shown on this list view. The list view is always available when viewing the Releases module, and specific releases can be selected from the list, but records can also be selected via the Recently Viewed section of the module tab.

Viewing Via Module

To view all of the releases, navigate to Admin > Releases. The list view displays with all currently available releases within Sugar. The list view can be ordered by any of the three fields within Releases. To see additional releases, use the arrows in the top right of the list view to scroll through available pages. Here, you can see which records of the total amount of releases are currently being displayed. The two single-arrow Next and Previous buttons can be used to scroll through the records page-by-page. The two double-arrow First Page and Last Page buttons allow you to skip to the beginning or the end of the list.

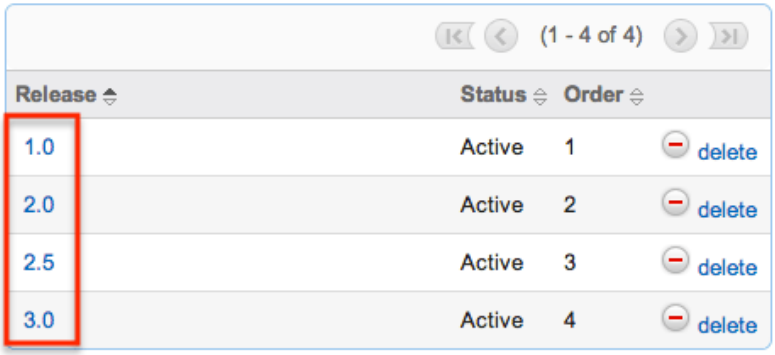
From this list, any of the releases can be clicked and either edited or deleted.



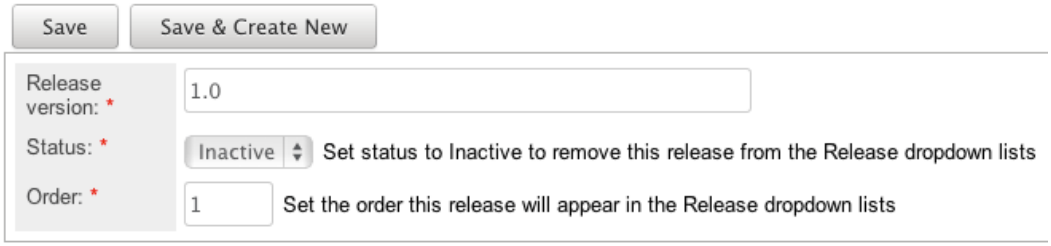
Editing Releases

Changes to releases can be made at the discretion of any admin at any time. To make changes, such as changing the name of the release and how it shows in the Bugs module, whether the release value is active or not, or the order in which the releases display, the release record needs to just be accessed via the list view. Follow these steps to edit releases:

1. Navigate to Admin > Releases.
2. Select the release that you would like to edit by clicking the release name.



3. This will open the editor below the list view for the specific record where you can make the necessary changes.



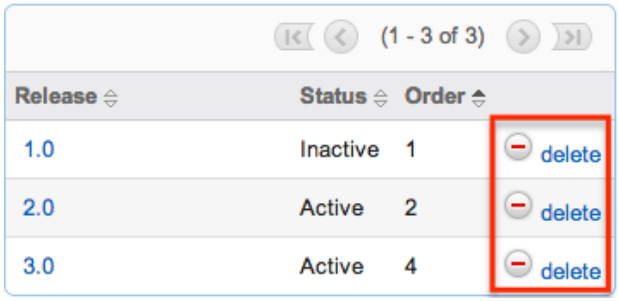
4. Click one of your two save options. Both will store your updates to the record. However, the behavior after clicking is dependent on which button used:
    - **Save**: After clicking "Save", the same release option that you edited will remain editable for you to make additional changes if need be, after the changes update on the list view above.
    - **Save & Create New**: After clicking "Save & Create New", the changes to the release appear on the list view, the edit form

defaults back to creating a new record.

Deleting Releases

If a release option is invalid or should no longer appear in your organization's Sugar instance, it may be deleted from the Releases list view. Deleting release options will not delete the bugs that use them. Instead, if a bug's "Found in Release" or "Fixed in Release" field was filled in with the deleted release, the field will now be blank. Use the following steps to delete a release option from the Bugs module:

1. Navigate to Admin > Releases.
2. Click the Delete button corresponding to the release that you would like deleted.



The page will refresh and the option will now be removed from the list view and no longer appear in the dropdown fields (e.g., Found in Release).

Contract Types

Overview

The Contract Types module in Admin > Contract Types enables you to create and manage contract types for the Contracts module. When a contract type is created, it will display in the Type Name field in the Contracts module for users to select. Please note that when a contract record is created with a specific contract type, the related documents to the contract type will also appear in the Documents subpanel of the contract record.

Only administrators or users with developer-level role access have the ability to modify the available contract types and the order in which they appear in the Type Name field. This documentation will cover the basics of the Contract Types module as well as the various options available in performing the actions related to the module.

Contract Type Fields

The Contract Types module contains two stock fields that come out-of-the-box with Sugar. For information on using and editing various field types, refer to the User Interface documentation. Please note that Contract Type fields are not editable via Admin > Studio as the module does not exist in Studio.

Field	Description
Name	The name of the contract type.
List Order	A number to specify the order in which the contract type is displayed in the Type Name field in the Contracts module.

Ordering Contract Types

When creating contract types, you will define the order in which the contract type option is displayed in the Type Name field of the Contracts module. Enter the numeric value (e.g., 1, 2, 3) in the contract type record's List Order field to determine the order it will display in the contract's Type Name field. For example, a contract type with a list order of "1" will be displayed at the top of the list followed by the next value (e.g., 2), and so forth. Please note that you can change the list order by editing the contract type via the list view or record view.

Working With Sugar Modules

While the Contract Types module has some features that only apply to contract type records, it also uses the Sidecar user interface that most Sugar modules are based on. The following sections detail menus, views, and actions common to Sidecar modules and contain links to additional information within the page or links to the User Interface documentation.

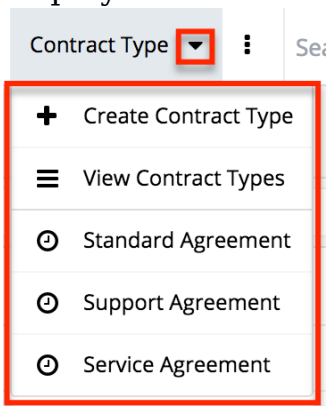
Menus

The Contract Types module contains various options and functionality which are available via menus in the module tab, list view, and record view. The following sections present each menu and its options with links to more information about each option in the User Interface documentation or, for Contract Types-specific functionality, within this page.

Module Tab Menus

The Contract Type module tab can be accessed by navigating to the Admin page and clicking the Contract Types link in the Contracts section. Once in the Contract Types list view, you can click the triangle in the Contract Type module tab to display the Actions and Recently Viewed menus. The Actions menu allows you to

perform important operations within the module. The Recently Viewed menu displays the list of contract type records you most recently viewed.



The module tab's Actions menu allows you to perform the following operations:

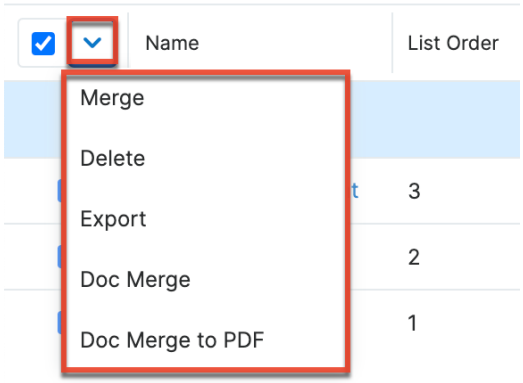
Menu Item	Description
Create Contract Type	Opens the record view layout to create a new contract type.
View Contract Types	Opens the list view layout to search and display contract types.

List View Menus

The Contract Types list view displays all contract type records and allows for searching and filtering to locate specific contract types. You can view the basic details of each record within the field columns of the list view or click a contract type's name to open the record view. To access the module's list view, simply navigate to the Admin page and select "Contract Types" under the Contracts panel. You can also click the module's tab in the navigation bar once the Contract Types module opens.

List View Mass Actions Menu

The Mass Actions menu to the right of the checkbox option in the list header allows you to perform mass actions on all currently selected records. You can use the checkbox on each record's row to select individual contract type records or click the checkbox in the list header to select all records displayed in the current set of list view results.

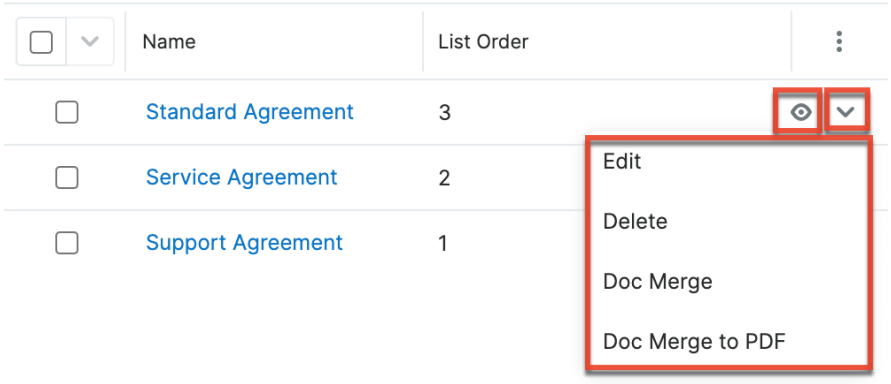


The Mass Actions menu allows you to perform the following operations:

Menu Item	Description
Merge	Merge two or more duplicate contract types.
Delete	Delete one or more contract types at a time.
Export	Export one or more contract types to a CSV file.
Doc Merge	Select or create a DOCX template to merge record data into documents that will be accessible in the Doc Merge widget.
Doc Merge to PDF	Select or create a DOCX, XLSX, or PPTX template to merge record data into PDF documents that will be accessible in the Doc Merge widget.

List View Record Actions Menu

The Record Actions menu to the far right of each record's row allows you to perform actions on the individual contract type directly from the list view.

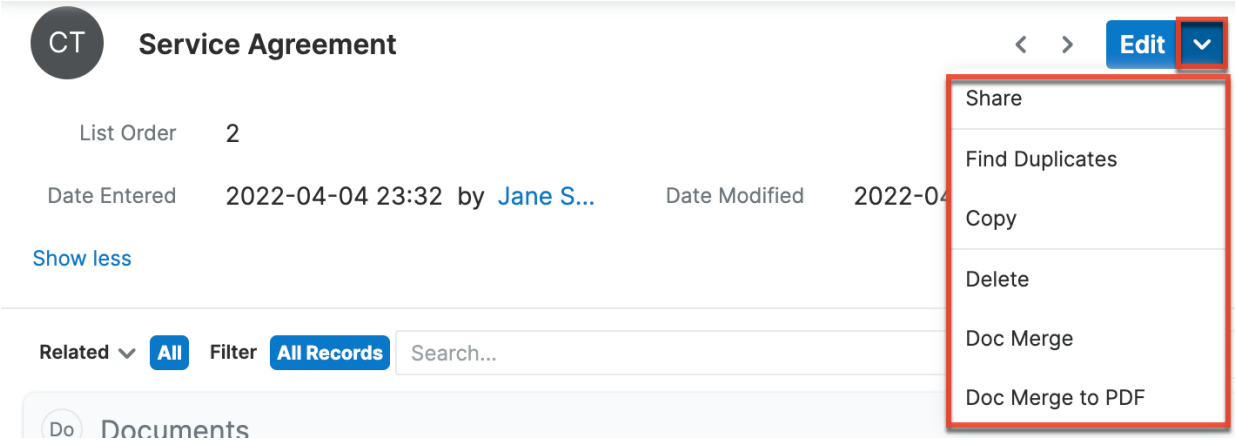


The list view's Record Actions menu allows you to perform the following operations:

Menu Item	Description
Preview (Eye icon)	Preview this contract type in the intelligence pane.
Edit	Edit this contract type.
Delete	Delete this contract type.
Doc Merge	Select or create a DOCX, XLSX, or PPTX template to merge record data into documents that will be accessible in the Doc Merge widget.
Doc Merge to PDF	Select or create a DOCX, XLSX, or PPTX template to merge record data into PDF documents that will be accessible in the Doc Merge widget.

Record View Actions Menu

The Contract Types record view displays a single contract type in full detail including its fields and subpanels of related records. To access a contract type's record view, simply click the hyperlinked contract type name in the Contract Types list view. The record view's Actions menu appears on the top right of the page and allows you to perform various operations on the current record.



The Actions menu allows you to perform the following operations:

Menu Item	Description
Edit	Edit this contract type.
Share	Share a link to this contract type via email.

Find Duplicates	Locate potential duplicates of this contract type.
Copy	Duplicate this contract type to create a new contract type.
Delete	Delete this contract type.
Doc Merge	Select or create a DOCX, XLSX, or PPTX template to merge record data into documents that will be accessible in the Doc Merge widget.
Doc Merge to PDF	Select or create a DOCX, XLSX, or PPTX template to merge record data into PDF documents that will be accessible in the Doc Merge widget.

Common Views and Actions

In the table below, the left column contains links to the User Interface page covering topics that are applicable to all Sidecar modules. The right column has links to sections of the current page that cover topics specific to contract types.

General Instructions for Working With Sugar Modules	Contract-Types-Specific Instructions
Use the links below to navigate to the User Interface page which covers topics generic to many Sugar modules.	When Contract-Types-specific help exists for each topic, use the links below to navigate to sections of the current page.
Creating Records	
Viewing Records	
Searching for Records	
List View	List View Mass Actions Menu List View Record Actions Menu
Record View	Record View Actions Menu
Intelligence Pane	
Editing Records	Ordering Contract Types
Deleting Records	
Exporting Records	
Finding Duplicate Records	
Merging Records	
Sharing Records	

SugarBPM

Overview

SugarBPM™ enables administrators to streamline common business processes by managing approvals, sales processes, call triaging, and more. SugarBPM is an easy-to-use business process management (BPM) and workflow tool that adds advanced BPM functionality to Sugar.

The SugarBPM suite features an extensive toolbox of modules that provide the ability to easily create digital forms and map out robust workflows using a drag-and-drop interface.

Scope

This documentation only defines relevant BPM terminology and the concepts used specifically for SugarBPM modules. It is not intended for general BPM educational purposes, and should not be used as a complete BPM modeling resource.

The SugarBPM documentation contains the following pages:

- SugarBPM™ (current page)
- Process Definitions
- Process Business Rules
- Process Email Templates
- Stock SugarBPM Templates

Additionally, the Processes page of the Application Guide contains documentation for the user-facing elements of SugarBPM, and the Knowledge Base contains several business use-case tutorials on how to design some common processes for your organization.

Prerequisites

- Basic knowledge of process design is required.
- Basic knowledge of process standards such as BPMN is preferred. BPMN is a flowchart-based notation used to define business processes within an organization.
- You should know which business processes you want to automate in Sugar.

Core Concepts

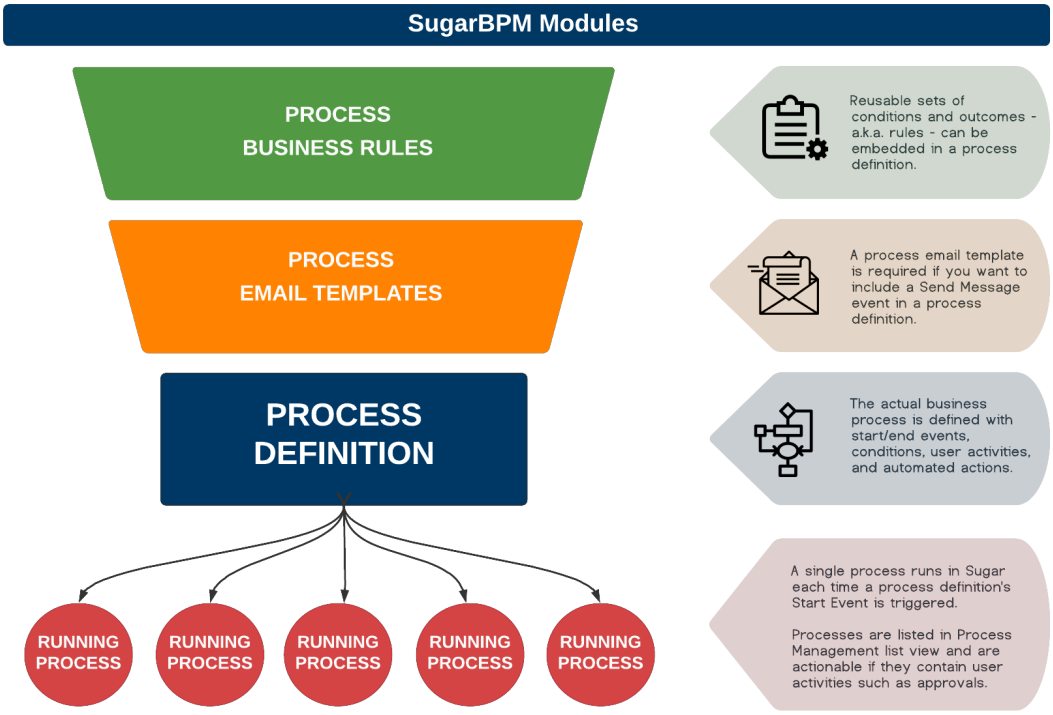
A business process is a set of logically related tasks that are performed in order to achieve a specific organizational goal. It presents all of the tasks that must be completed in a simplified and streamlined format. SugarBPM empowers Sugar administrators to automate vital business processes for their organization. Some examples of business processes that can be automated using SugarBPM include invoice approvals, lead routing, customer service case routing, and automated reminders and escalations.

SugarBPM Modules

In order to seamlessly automate business processes, the SugarBPM suite leverages four interconnected process-related modules. The Process Business Rules module and the Process Email Templates module are used to create rules and email templates that will be referenced by records created in the Process Definitions module. Once a process definition has been created, it will generate a record in the Processes module each time the process definition is triggered.

The Process Business Rules, Process Email Templates, and Process Definitions modules can be viewed and configured by any system administrator user. In addition, regular users with a role that provides developer access to one or more modules for which a SugarBPM process can be triggered (e.g., Accounts module, Cases module) will be able to access all SugarBPM functions for those modules. For example, a regular user with developer access to the Accounts and Cases module can see the SugarBPM functions so that they can design process definitions, business rules, and email templates targeting the Accounts and Cases modules. Regular users without developer role permissions will only have access to the Processes module. For more information about roles, please review the Role Management documentation.

The following image illustrates the relationship between the SugarBPM modules:



The following table describes the four SugarBPM modules and their intended use. To learn more about any of the modules, click on the hyperlinked module name.

Note: We recommend reading this page in its entirety before moving on to other SugarBPM sections.

Module	Description
Process Definitions	A process definition defines the steps in an overall business process. Process definitions are created by a Sugar administrator. The process definition consists of a network of activities and their relationships, criteria to indicate the start and end of the process, and information about the individual activities (e.g., participants) contained within the business process.
Processes	A process is a running instance of a process definition. A single process begins every time a process definition is executed. For example, a single process definition could be created to automate quote approvals, but because users may engage in several quote approvals per

day, each approval will be represented by a separate process instance, all governed by the single process definition. In other words, the Processes module is the many-to-one (M:1) child module of Process Definitions.

The Processes module is the only SugarBPM module that is visible to regular users. From the Processes dashlet and module list view, they will be able to see running processes if there is anything for them to approve, reject, or review.

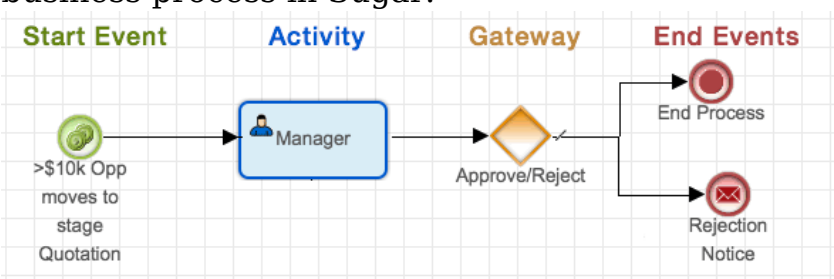
There are three ways an administrator can view a list of processes:

- **Processes module list view:** List views for the Processes module display processes that require the logged-in user to take approve, reject, or review action. Admin users, like regular users, will only see the processes that are waiting for them. List views can be accessed by navigating to Processes > View Processes.
- Processes dashlet**:** This dashlet displays processes that require the logged-in user to take approve, reject, or review action. Admin users, like regular users, will only see the processes that they need to act upon.
- Process Management page**:** This is the one place in Sugar where an administrator can see all running, cancelled, and completed processes. From the Process Management page, the admin can also monitor process status, reassign or cancel an in-progress process, or repair processes in an error state. The

	Process Management page is accessible via the Admin > SugarBPM panel or via the Processes module tab by clicking on "Process Management".
Process Business Rules	A process business rule is a reusable set of conditions and outcomes that can be embedded in a process definition. The set of rules may enforce business policy, make a decision, or infer new data from existing data. For example, if Sally manages all business opportunities of $10,000 or more, and Chris manages all business opportunities under $10,000, a process business rule can be created and used by all relevant process definitions to ensure that the assignment policy is respected. In the case of an eventual personnel change, only the process business rule will need to be edited to affect all related processes.
Process Email Templates	A process email template is required in order to include a Send Message event in a process definition. Sugar's core product includes several places where email templates can be created for different purposes, but SugarBPM requires all sent messages to be created via the Process Email Templates module.

Basic Visual Notation Elements

SugarBPM depends on process definitions created by the administrator using a Visual Designer tool. When complete, the design will graphically display a collection of flow elements that connect with each other to define and regulate a business process in Sugar.



The following table defines the different types of flow elements that are available when creating a process definition in the Visual Designer.

Element	Symbol	Definition
Events		An Event is something that happens during the course of a business process. Events affect the flow of the Process and usually have a trigger and/or a result. They can start, interrupt, or end the flow of a process. An Event is represented by a circle in the Visual Designer.
Start Events		The Start event indicates where a process will begin. It defines the action that will trigger the Process. The Start event will always be triggered by a record in the Sugar module selected as the process definition's Target Module. **Note:** A process definition's target module will be the same module that is used for the Start event. A Start event is represented by a green circle on the Visual Designer canvas.
Intermediate Events		As the name suggests, Intermediate events occur after a process starts but before the process is complete. Intermediate events that are placed within the overall process

		flow represent things that happen during the normal operation of the process such as sending messages, receiving messages, or mandatory waiting periods. Intermediate events are represented by blue circles in the Visual Designer.
Activities		The only unit of work that may require a user response (opposed to automation) is an Activity. It is a moment within a flow where a user must decide if a circumstance is approved or rejected, or review a record that has been routed to them. Activities are represented by rounded-corner rectangles in the Visual Designer.
Actions		Actions are automated elements used to execute a business rule, create or update a Sugar record, or identify a process user. Actions are completed by the SugarBPM engine and do not require any human interaction to execute. Actions are represented by rounded-corner squares in the Visual Designer.
Gateways		Gateway elements are used to control the flow of a process via merging and splitting. When several

		activities may result in a common outcome, a gateway serves as a merging mechanism, or a "converging" element. When a single activity may result in several different outcomes, a gateway serves as a splitting mechanism, or a "diverging" element. A Gateway is represented by a diamond in the Visual Designer.
End Events		End events signal completion of a process. There are three end-event options: Do Nothing, Terminate Process, or Send Message. An End event is represented by a red circle in the Visual Designer.

Basic Steps to Automate a Business Process

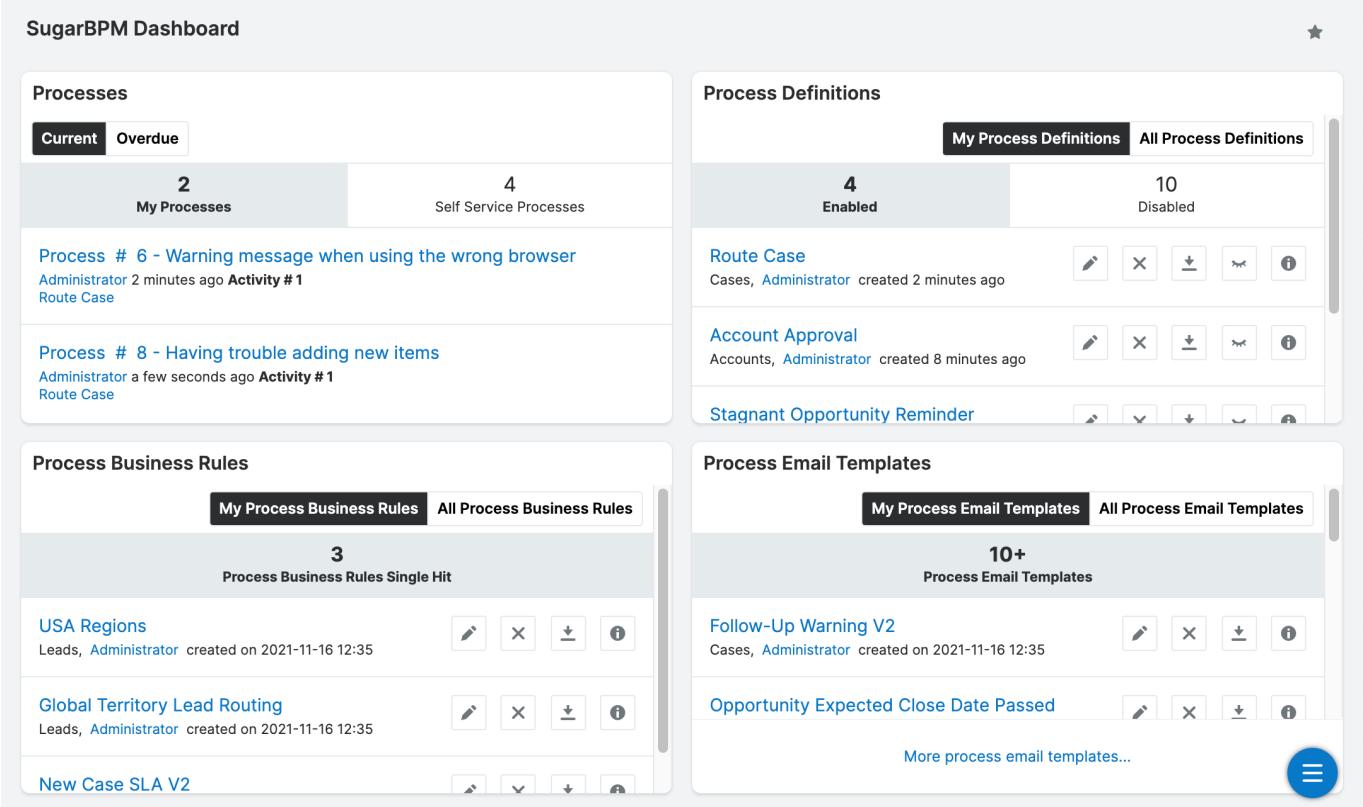
It is important to understand how all of the modules and elements of the SugarBPM suite will work together. Here is the best-practice chronology of the overall procedure for automating business processes in Sugar using SugarBPM:

1. Create a SugarBPM Dashboard: Before using SugarBPM for the first time, create a new dashboard specific to SugarBPM for easy, one-stop access to all automated business processes and their components.
2. Create and Configure a Process Business Rule: (optional) Create at least one Process Business Rule that will be used in a process definition. For example, automated lead assignments might require a process business rule to define which lead source values will be assigned to which user.
3. Create and Configure a Process Email Template**:** (optional) Prepare at least one Process Email Template for processes that require alerts or notifications.
4. Create and Configure a Process Definition: Using the Process Designer canvas, create the visual design of the overall business process that you want to automate. The process definition may make use of Process Business Rules and Process Email Templates created in previous steps.

5. Process Management: With all of the SugarBPM modules now working in harmony, administrators can navigate to the Process Management page to monitor process status, reassign or cancel an in-progress process, or repair processes in an error state. Users can monitor the Processes dashlet for activities that are queued or awaiting feedback.

Creating a SugarBPM Dashboard

Before getting started, we recommend that the administrator user creates a SugarBPM-specific dashboard on their home page. This will allow the administrator to easily manage Process Definitions and their supporting modules all in one place. Regular users who may be engaged in running processes should place the Processes dashlet on their home pages to stay abreast of activities requiring their attention.

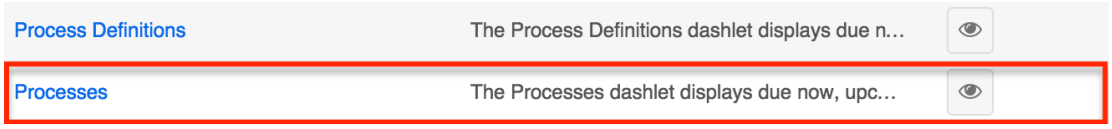


Processes Dashlet

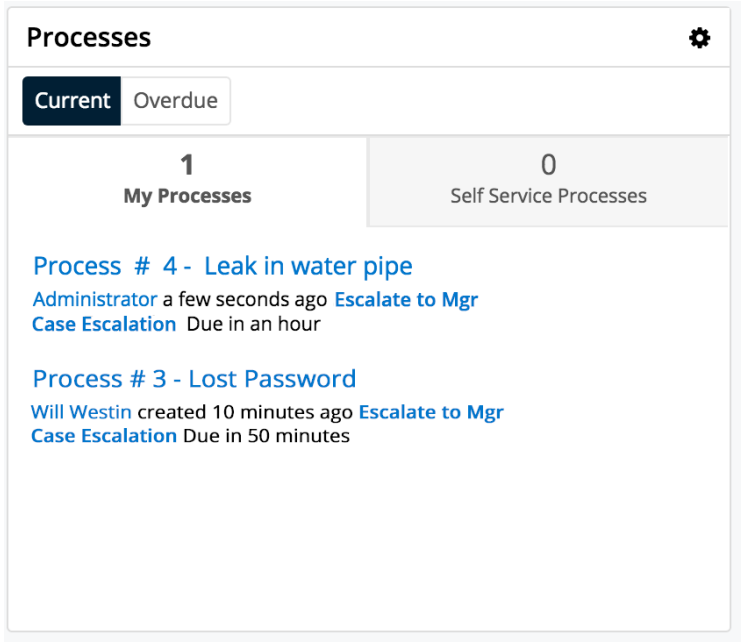
This is the only SugarBPM dashlet available to regular users. It is important for all users who may be engaged in a process to place this dashlet on their home screens. Open, running processes and self-service processes waiting to be acted upon by the logged-in user will be listed in this dashlet.

Note: Users (including administrators) will see only the processes that immediately require their attention.

To add a Processes dashlet, please refer to the Dashboards and Dashlets documentation, choosing "Processes" from the Add a Dashlet page.



After saving the dashlet and its containing dashboard, the dashlet will offer several process-specific management tools:

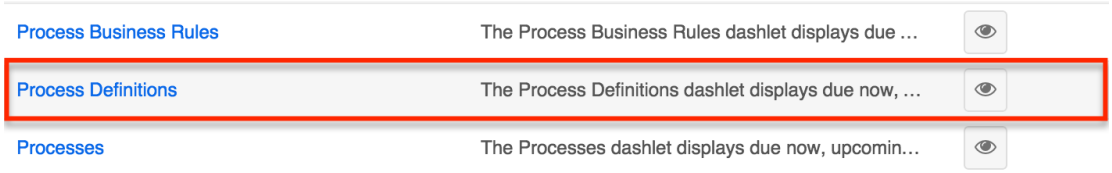


- **Current**: Click on this button to view all processes that are running within the expected timeframe.
- **Overdue**: Click on this button to view all processes that have a due date in the past. The label "Overdue" and the due date will be displayed adjacent to the process description.
- **My Processes**: View this tab to view the running processes upon which the logged-in user must act. Self-Service processes are not displayed here.
    - To execute a Process from the dashlet, click on the name of the process. Please note that admin users cannot see processes running for other users via the dashlet. To access the system's exhaustive list of running and completed processes, refer to the Process Management section of this documentation.
- **Self Service Processes**: View this tab to view only the running processes in the queue to be claimed by a user. Self-Service processes are configured inside the User Activity element settings of the related process definition.
- **Process Description**: Running processes are displayed in list view format with descriptive fields including the unique process number, the name of the affected Sugar record, the process title, the responsible user's name, and the label of the relevant process step.

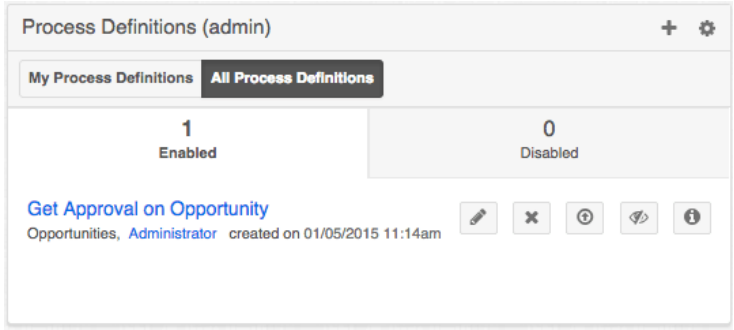
- **Due Date**: When a due date exists it will appear adjacent to the process description.

Process Definitions Dashlet

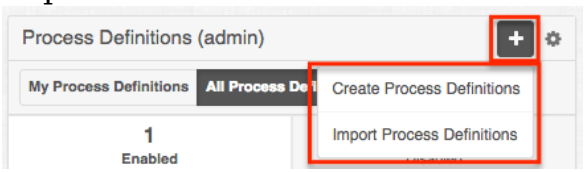
You must be an administrator user to add this dashlet to your home page. To add a Process Definitions dashlet, please refer to the Adding Dashlets section of the Dashboards and Dashlets documentation, choosing "Process Definitions" from the Add a Dashlet page.



After saving the dashlet and its containing dashboard, the dashlet will offer several SugarBPM-specific administration tools:



- **Actions Menu**: Click on the plus (+) icon to access the "Create Process Definitions" and "Import Process Definitions" options. Please note that imports for this module must have a .bpm file extension.



- **My Process Definitions**: Click on this button to list all process definitions created by the current admin user.
- **All Process Definitions**: Click on this button to list all process definitions created by any admin user.
- **Enabled**: View this tab to view a list of process definitions that are currently enabled in the system.
- **Disabled**: View this tab to view a list of process definitions that are currently disabled in the system. Disabling a process definition will prevent it from triggering new processes. Any running processes related to the disabled process definition will pause in an In-Progress state until the process definition is re-enabled.

- **Process Definition Shortcut Buttons**
  - **Design**: Click on this icon to edit the process definition via the Visual Designer.



  - **Delete**: Click on this icon to delete the adjacent process definition. A confirmation message will appear on the top of the screen; click "Confirm" to delete the process definition or click "Cancel" to close the message without deleting.



  - **Export**: Click on this icon to export the process definition to a .bpm file.



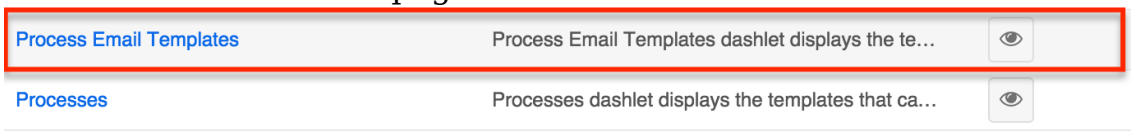
  - **Disable/Enable**: Click on this icon to disable an active process definition or to enable an inactive one. Disabled process definitions will be listed in the "Disabled" tab.
    - All process definitions are disabled by default and must be enabled by an administrator. For more information, please refer to Enabling Process Definitions.
    - Disabling a process definition will prevent it from triggering new processes. Any running processes related to the disabled process definition will pause in an In-Progress state until the process definition is re-enabled.



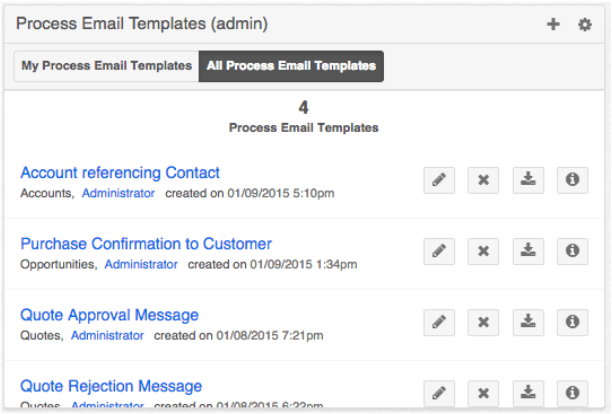
  - **Description**: Click this icon to open a blue alert window that displays the admin-specified description of the process definition. To close the description dialogue, click on the x in the corner of the message.

Process Email Templates Dashlet

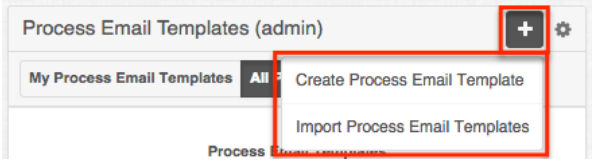
You must be an administrator user to add this dashlet to your home page. To add a Process Email Templates dashlet, please refer to the Adding Dashlets section of the Dashboards and Dashlets documentation, choosing "Process Email Templates" from the Add a Dashlet page.



After saving the dashlet and its containing dashboard, the dashlet will offer several SugarBPM-specific administration tools:



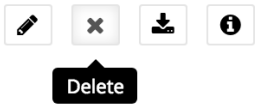
- **Actions Menu**: Click on the plus (+) icon to access the "Create Process Email Template" shortcut.



- **My Process Email Templates**: Click on this button to list all email templates created by the current admin user.
- **All Process Email Templates**: Click on this button to list all email templates created by any admin user.
- **Process Email Template Shortcut Buttons**
    - **Edit**: Click on this icon to edit the template record from record view. It is then possible to access the template designer from the record view.



    - **Delete**: Click on this icon to delete the adjacent email template. A confirmation message will appear on the top of the screen; click "Confirm" to delete the email template or click "Cancel" to close the message without deleting.

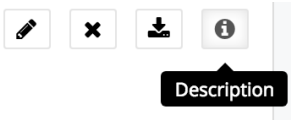


    - **Export**: Click on this icon to export the process email template to a .pet file.



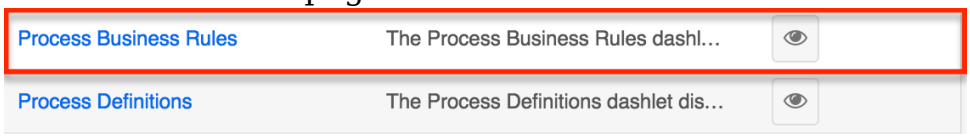
    - **Description**: Click this icon to open a blue alert window that displays the admin-specified description of the process email

template. To close the description dialogue, click on the X in the corner of the message.

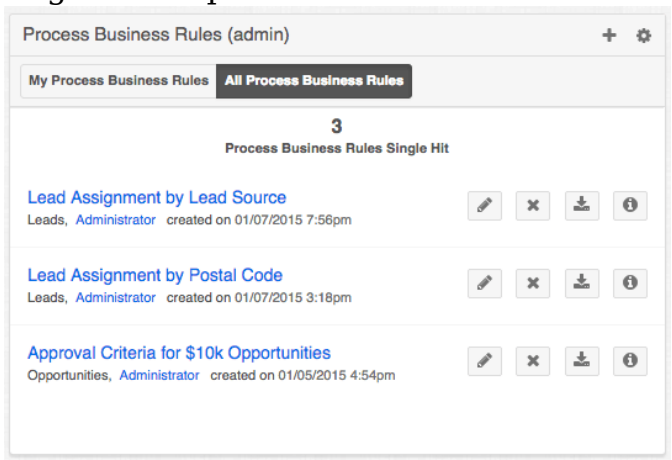


Process Business Rules Dashlet

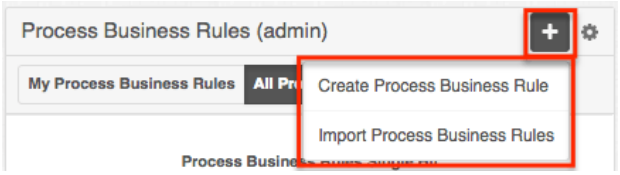
You must be an administrator user to add this dashlet to your home page. To add a Process Business Rules dashlet, please refer to the Adding Dashlets section of the Dashboards and Dashlets documentation, choosing "Process Business Rules" from the Add a Dashlet page.



After saving the dashlet and its containing dashboard, the dashlet will offer several SugarBPM-specific administration tools:



- **Actions Menu**: Click on the plus (+) icon to access the "Create Process Business Rule" shortcut.



- **My Process Business Rules**: Click on this button to view business rules created by the logged-in admin user.
- **All Process Business Rules**: Click on this button to view business rules created by any admin user.
- **Business Rules Shortcut Buttons**
    - **Edit**: Click on this icon to edit the rule configuration from the

Business Rules Builder interface.



- **Delete**: Click on this option to delete the adjacent business rule. A confirmation message will appear on the top of the screen; click "Confirm" to delete the process business rule or click "Cancel" to close the message without deleting.



- **Export**: Click on this icon to export the process business rule to a .pbr file.



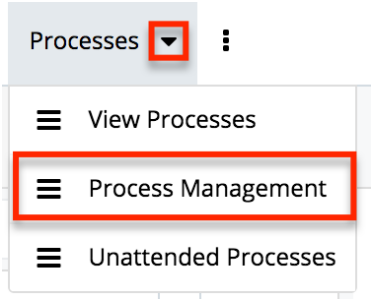
- **Description**: Click this icon to open a blue alert window that displays the admin-specified description of the process business rule. To close the description dialogue, click on the X in the corner of the message.

Process Management List View

For processes, the admin user is restricted to the same access as a regular user in the Processes module. This means that in Processes list view and the Processes dashlet, the admin user will not see processes unless they have participated in that process or they are expected to participate in it.

The exhaustive list of open and completed processes is accessible only via the admin's Process Management page. This page can be accessed from either of the following two places in Sugar:

- Admin > SugarBPM™ > Process Management.
- The Processes module tab's actions menu:



The following columns are available from the Process Management page:

Process Number	Process Definition Name	Record Name	Status	Run Order	Date Created	Assigned To	Process User	Process Owner
28	Customer Success Tasks	Ciel Ops	COMPLETED		2020-03-03 12:25	Administrator		Administrator
27	Account Updated	X-Sell Holdings	COMPLETED	3	2020-03-03 12:23	Max Jensen		Administrator
26	Account Updated	Smith & Sons	COMPLETED	3	2020-03-03 12:23	Sarah Smith		Administrator
25	Ignored Case Alert	Smith & Sons	COMPLETED	2	2020-03-03 12:23	Sarah Smith		Administrator

- **Process Number**: Similar to a case number, this is a unique auto-increment number assigned to the process in the order it was triggered by the SugarBPM. This field is not related to the Sugar system ID field.
- **Process Definition Name**: The name of the originating process definition that triggered the process.
- **Record Name**: The related Sugar module record to which the process applies.
- **Run Order**: The order in which running processes targeting the same module are executed. This value is set on the process definition and is optional; processes with a blank run order are run last. In the case of a tie, processes are run oldest to newest by their process definition's Date Created field.
- **Date Created**: The date and time that the process was triggered.
- **Assigned To**: The user who is assigned to the Sugar record that triggered the process's Start event.
- **Process User**: The user who is responsible for executing the current activity in a running process if a Route or Approval activity is running.
- **Process Owner**: The administrator who created the process definition (not necessarily affiliated with the running process).
- **Status**
    - **Completed**: The process has successfully reached an end event and is no longer running.
    - **Cancelled**: An administrator user has chosen to cancel this process.
    - **In Progress**: The process is currently open and running.
    - **Terminated**: The record that triggered the process has been deleted or merged.
    - **Error**: The process has encountered a configuration problem and is paused.

Record Actions Menu

The Record Actions menu to the right of each record's Preview button allows users to view vital process information, re-direct processes, and navigate to the process execution screen directly from the list view.

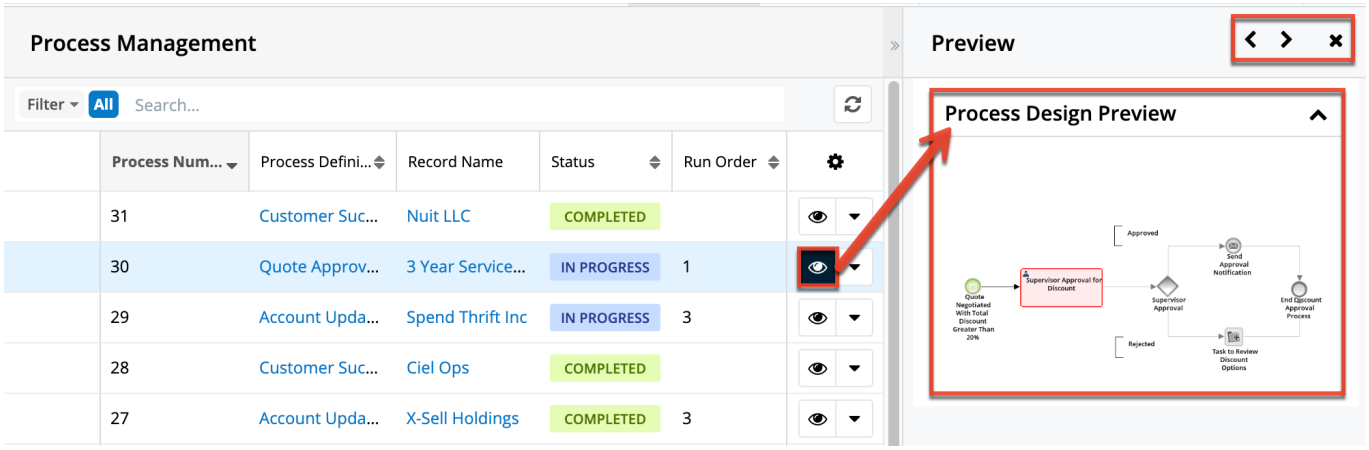


Menu Item	Description
Preview (eye icon)	See an image of the current process and how it has progressed within the overall flow.
History	Launch the Process History window, which provides a historical summary of the process's lifecycle.
Show Notes	Display user-created comments and add your own.
Select New Process User	Display all of the process users who have engaged with the process and, optionally, reassign its current activity to a new process user. To reassign the process after clicking this option, select a new value for the "Process User" field and then click "Done".
Execute	Available only for processes in an Error state, the "Execute" option allows an administrator to re-commence the flow of a process that has been stopped due to an error. This option should only be used after the condition that caused the error has been corrected.
Cancel	Terminate the process occurrence.

Preview

Administrators can view the progression of a process within the overall flow directly from the Processes list view by clicking the Preview icon to the far right of each process list row. A color-coded representation of the process' design layout will display to the right of the list view providing key information regarding the stages that have already been completed, the current stage of the process, and the stages that have yet to execute.

The executed and in-progress stages of the process will be displayed in color, while skipped or not-yet-executed stages will be presented in a grayed-out style.



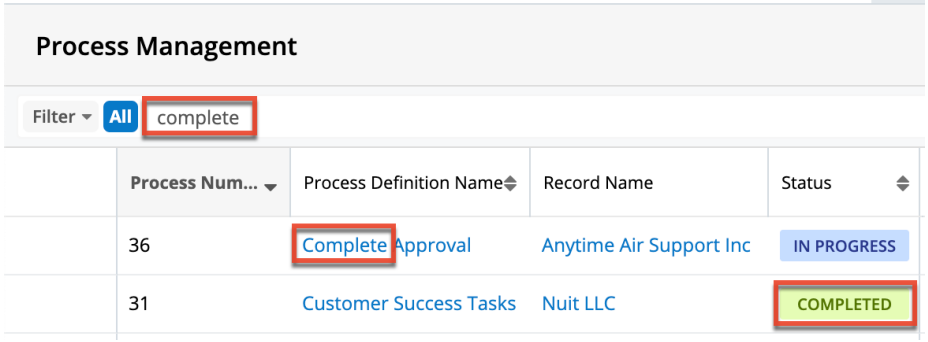
Note: To view the process design layout in more detail, simply click on the preview image to open a full-sized version of the flow in a new browser tab.

On the upper right of the intelligence pane, there is a Left and Right arrow button that allows you to scroll through the list view's current search results by previewing the next or previous record. To close the preview, simply click the "X" on the upper right of the intelligence pane.

Searching Processes

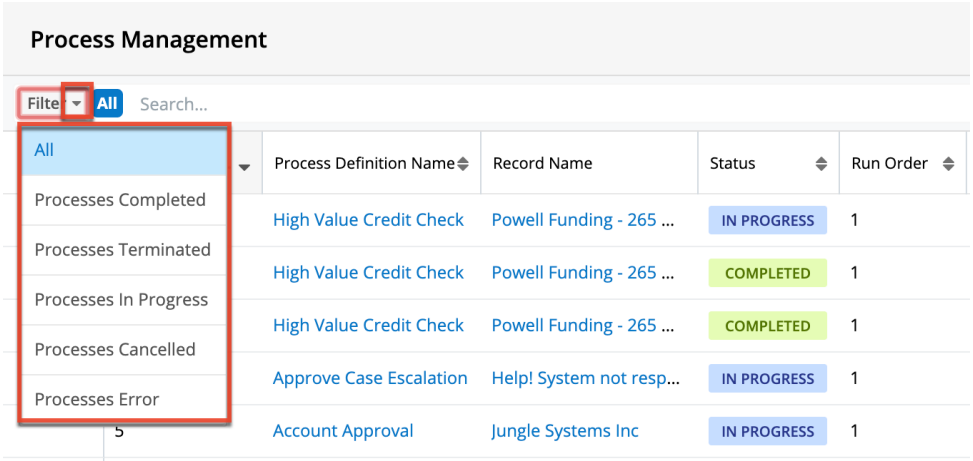
The Process Management list view includes a module search to help you locate running, completed, and incomplete processes easily and effectively. Once the search is performed, the relevant results will be displayed in the list view below.

Unlike the standard Sugar filter, the Process Management search bar will query all Process fields by default with the exception of "Record Name", which is technically a field from a related module. Furthermore, Sugar automatically assumes a wildcard character (%) at both the beginning and the end of your search phrase for processes. This means that, for example, a search for "error" will return processes named "Approve Error Resolution" as well as processes that are in an "Error" status.



The search also provides a Filter option that can be used in combination with the open Search box to narrow your search further using the available options as follows:

- **All**: Returns all processes.
- **Processes Completed**: Returns only processes with a status of "Completed".
- **Processes Terminated**: Returns only processes with a status of "Terminated".
- **Processes In Progress**: Returns only processes with a status of "In Progress".
- **Processes Cancelled**: Returns only processes with a status of "Cancelled".
- **Processes Error**: Returns only processes with a status of "Error".



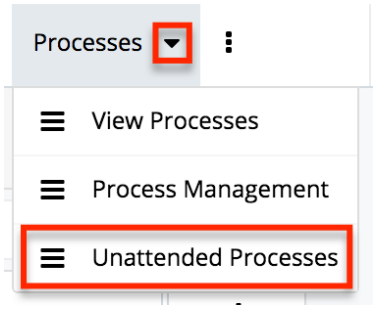
When you choose a filter, Sugar will return processes that match both the selected filter and any name provided in the "Search..." bar in the filtered list view results. For example, if you select "Processes Completed" in the Filter options and enter a search query, Sugar will only return processes that contain a match to the search query and have a Completed status. To see all processes, simply select "All" in the filter and remove any text from the search bar. You can also click the X that appears within the search bar. When you run a search using a saved filter, the search will not be preserved when you navigate away from the module. Returning to the Process Management page will automatically display all unfiltered results.

Unattended Processes

An unattended process is a running process instance that has been interrupted because an activity is dependent upon the response of an inactive or deleted user. If an activity is encountered within a process, and the activity's process user record's status is "Deleted" or "Inactive" or its employee status is "Not Active", the process will be considered unattended. The activity cannot be completed unless the administrator designates a new process user.

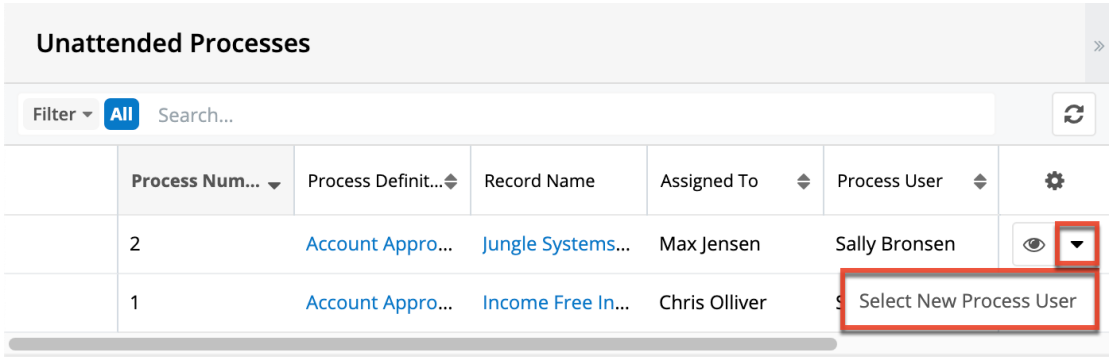
Note: While an unattended process will also appear in the Process Management list, its status will remain "In Progress" and will not indicate that it is in an unattended state.

The list of unattended processes is accessible via the admin's Unattended Processes page. This page can only be accessed from the Processes module tab's actions menu:

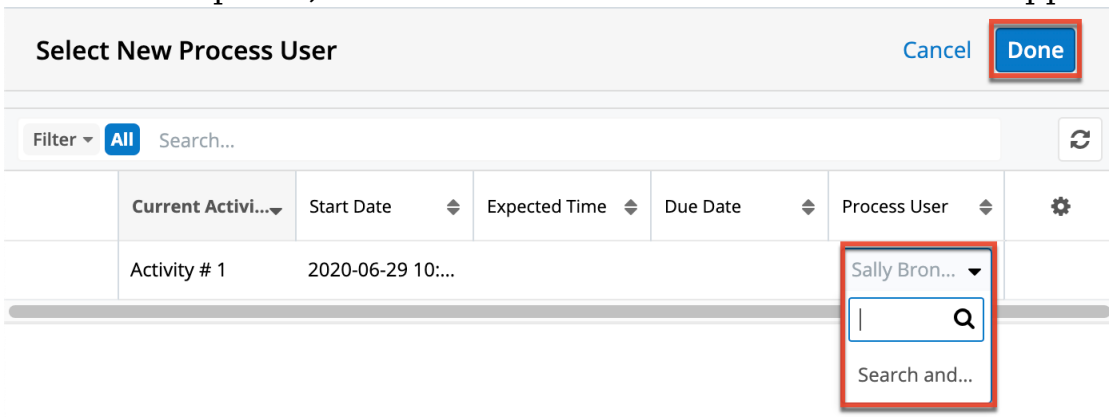


To select a new process user for an unattended process, follow these steps:

1. From the Unattended Processes list view, expand the actions menu for the row that contains the unattended process.
2. Click on "Select New Process User".



3. After a brief pause, the Select New Process User drawer will appear.



4. Find and select the name of the new process user and then click Done.

The updated process should no longer be visible in the Unattended Processes list, and the new process user will see the activity in their Processes dashlet and list

view.

Terminated vs. Cancelled Processes

SugarBPM automatically terminates a process when the record related to the process' Start event is deleted. The associated process will be removed from the Processes dashlet and the process record will display "Terminated" in the Status column of the Process Management list view. Processes may also be terminated as a result of meeting conditions specified in the Process Termination settings. For more information, please refer to the Process Definitions documentation.

Cancelled processes, on the other hand, have been intentionally stopped by the administrator. The associated process will be removed from the Processes dashlet and the process record will display "Cancelled" in the Status column of the Process Management list view.

Importing and Exporting SugarBPM Module Records

SugarBPM supports import/export functionality for records in all modules except the Processes module, which only contains running instances of process definitions. To import records into the Process Definitions, Process Email Templates, or Process Business Rules modules, the import file must be formatted as the appropriate proprietary file type, as shown in the table below.

SugarBPM Module	Supported File Extension
Process Definitions	.bpm
Process Email Templates	.pet
Process Business Rules	.pbr

Note: The .bpm file type is a package that may include email templates and business rules that are related to the process definition. Process email templates and process business rules, when exported or imported on their own, will have the .pet and .pbr file extensions, respectively. More information is available in the Exporting and Importing SugarBPM Records sections below.

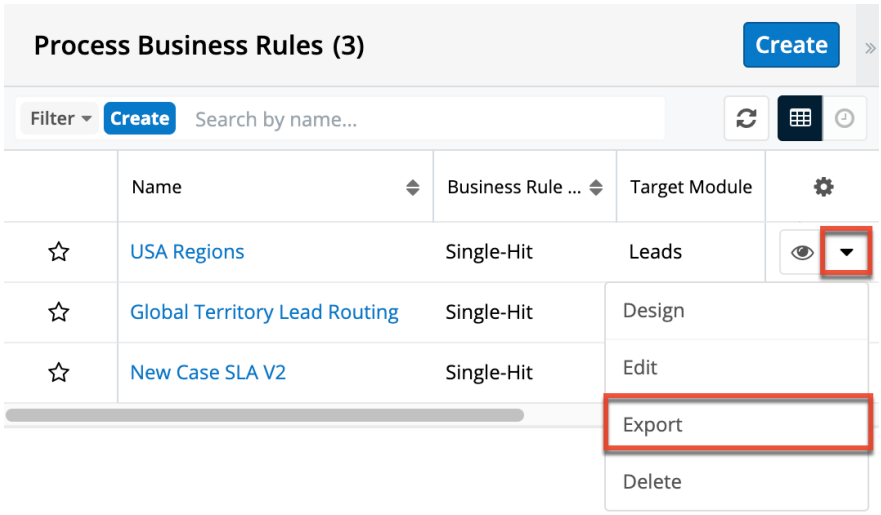
Due to the proprietary nature of the SugarBPM file types, only files that have been exported from a Sugar instance can be imported into a Sugar instance. For example, an administrator may choose to design process definitions in a sandbox or development instance before moving them to a production environment. For this, the process definitions would be exported from the dev instance as .bpm files and then imported into the production instance's Process Definitions module.

Exporting SugarBPM Records

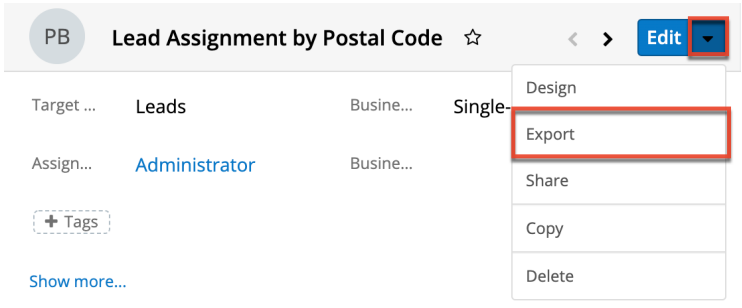
Exported SugarBPM records will automatically download as the appropriate file type. If a process definition uses any email templates or business rules, then the related records will automatically be included as part of the exported process definition's .bpm file. Any tags applied to the SugarBPM records in the .bpm file will also be retained. The user who later imports the process definition will be prompted to decide which supporting files they want to import with the process definition. The process definition and related email template(s) and business rule(s) will be created in their respective modules. More information is available in the Importing SugarBPM Records section below.

SugarBPM module records can be exported from any of the following locations:

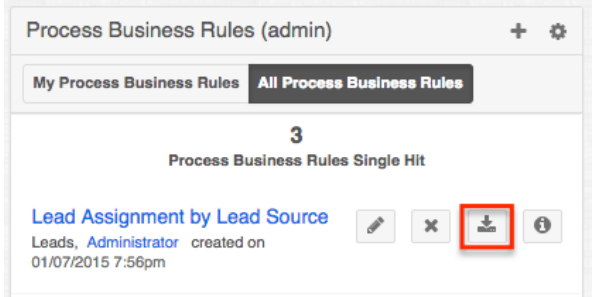
- The record's list view actions menu:



- The record's record view actions menu:



- The dashlet's Export button adjacent to the record:



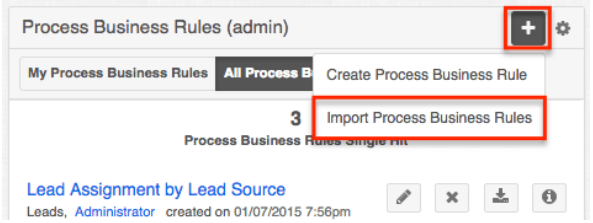
Importing SugarBPM Records

You can import a business rule (.pbr), an email template (.pet), or a process definition (.bpm) that has been exported from another Sugar instance. Most often, this action is performed between a production and development instance for testing or debugging.

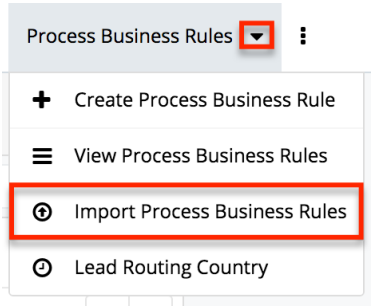
Note: By default, Sugar will automatically validate imported process definitions, but you may disable this feature via Admin > System Settings.

After exporting a SugarBPM module record, it can be imported via the option in one of the following menus:

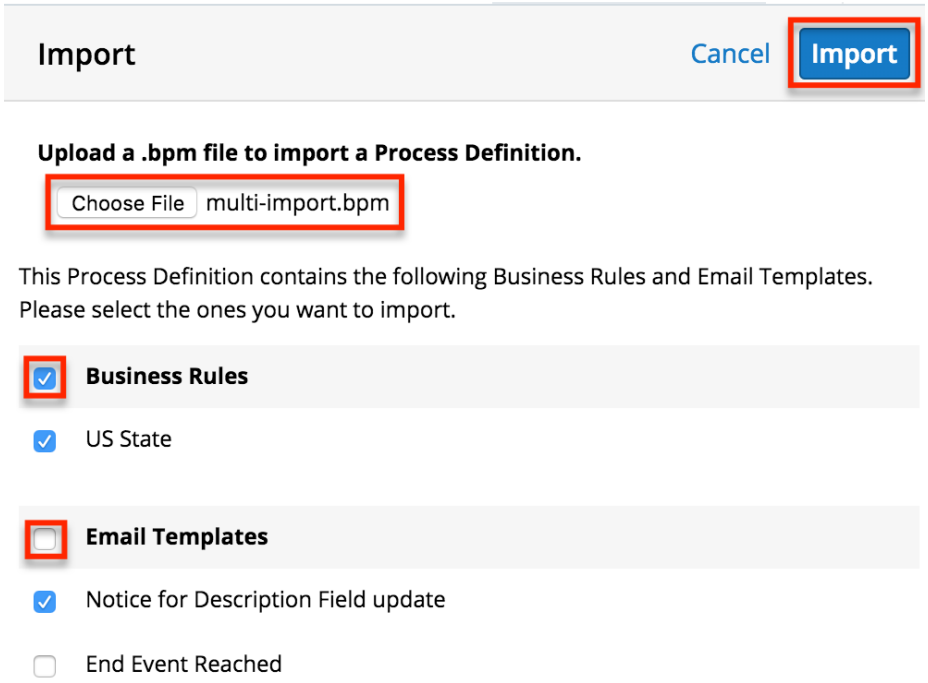
- The Actions menu on the module's dashlet:



- The module tab's Actions menu:



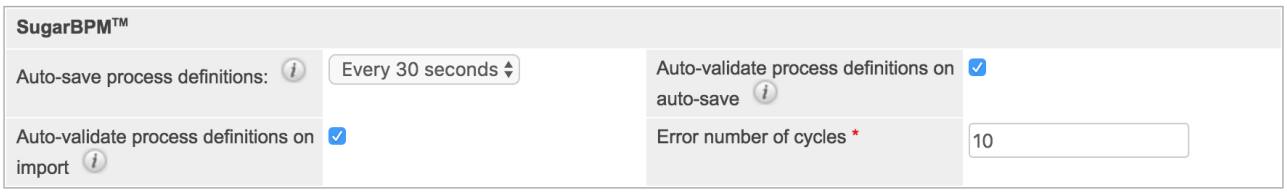
When importing a process definition record, if the .bpm file was exported with related email templates and business rules, you will see a list of those records and be given the option to import them as well. Select the checkbox next to the record type (e.g., Business Rules) to import all of the records in that category. To select related records individually, enable only the checkboxes next to those records.



Click "Import" when you are ready to continue. The process definition and any related email template(s) and business rule(s) will be created in their respective modules and retain their settings and field values, including record-level tags. Please note that the systems that you are exporting and importing between should be clones so that any custom fields, modules, or relationships used by the SugarBPM records can be found.

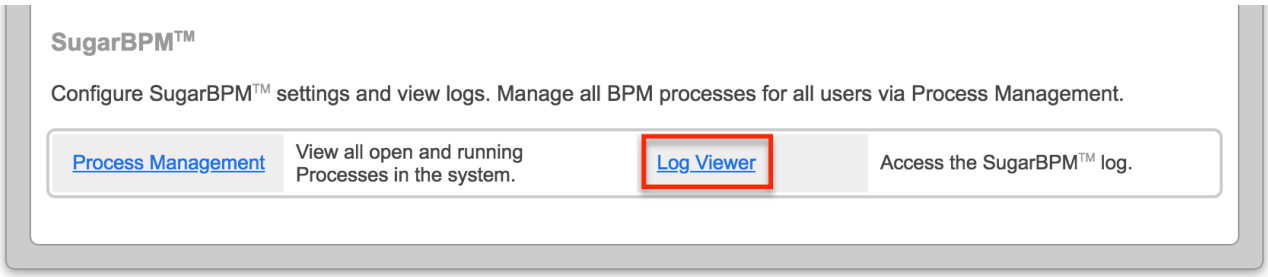
SugarBPM Settings

To configure SugarBPM settings such as auto-save and auto-validation intervals, navigate to Admin > System Settings and find the SugarBPM™ panel. For more information on the system configuration options for SugarBPM, please refer to the System documentation.



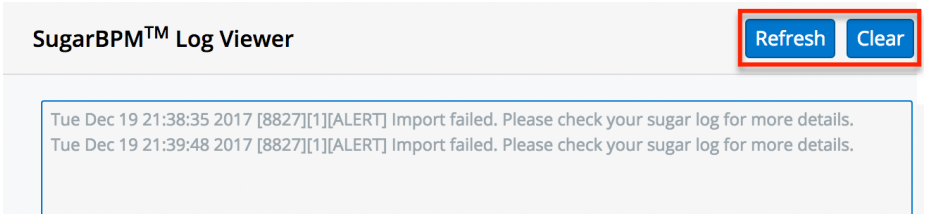
SugarBPM Log Viewer

Administrators and developers can gain insight into the performance of the SugarBPM engine by viewing the SugarBPM log. To access the SugarBPM Log Viewer, navigate to the Admin page and click on "Log Viewer" under the SugarBPM panel.



There are two options on the SugarBPM Log Viewer page:

- **Refresh**: Refreshes the log view, loading the last records.
- **Clear**: Permanently deletes all log history. This cannot be undone.



The log level is set to Critical, which is equivalent to Sugar's Fatal log level and starts recording events as soon as SugarBPM has been installed. A developer can update the system config.php to change SugarBPM settings including "logger_level" and "error_timeout". Changes that are made to config.php are honored in real-time. For more information, please refer to the Core Settings documentation in the Developer Guide.

SugarBPM Scheduler

Schedulers in Sugar automate the execution of system processes. Schedulers are available only to administrative users and can be accessed by navigating to Admin > Schedulers. SugarBPM Scheduled Job is responsible for processes associated with SugarBPM. It is active and runs as often as possible by default. The SugarBPM Scheduled Job will check for any active, time-based process events (e.g., Wait events, Receive Message events, and Send Message events) in a pending state. If any processes meet this criterion, the scheduler will ensure that the process flow continues.

For more information about Sugar schedulers, please refer to the Schedulers documentation. For more information on troubleshooting the SugarBPM Scheduled Job, please refer to the Troubleshooting Wait Events in Process Definitions article.

Note: Process events processed by this scheduler will be run by the admin user

(user id = '1') in Process History unless the admin user is disabled.

SugarBPM Excluded Fields

As the SugarBPM functionality evolves, certain fields and field types that were available in earlier versions may be prohibited in later versions for data integrity purposes. Please be sure to stay up to date with the SugarBPM Exclude List for a list of the excluded items in SugarBPM modules and the Sugar version in which they were removed.

Process Definitions

Overview

The Process Definitions module is one of four modules that make up SugarBPM™, Sugar's business process management tool that enables administrators to streamline common business processes by managing approvals, sales processes, call triaging, and more. Process definitions are central to the SugarBPM suite. They define the steps in automated business processes and control the flow of work that is allocated during running processes in Sugar. Process definitions are created by a Sugar administrator and consist of a network of activities and their relationships, criteria to indicate the start and end of the process, and information about the individual activities (e.g., participants) contained within the business process.

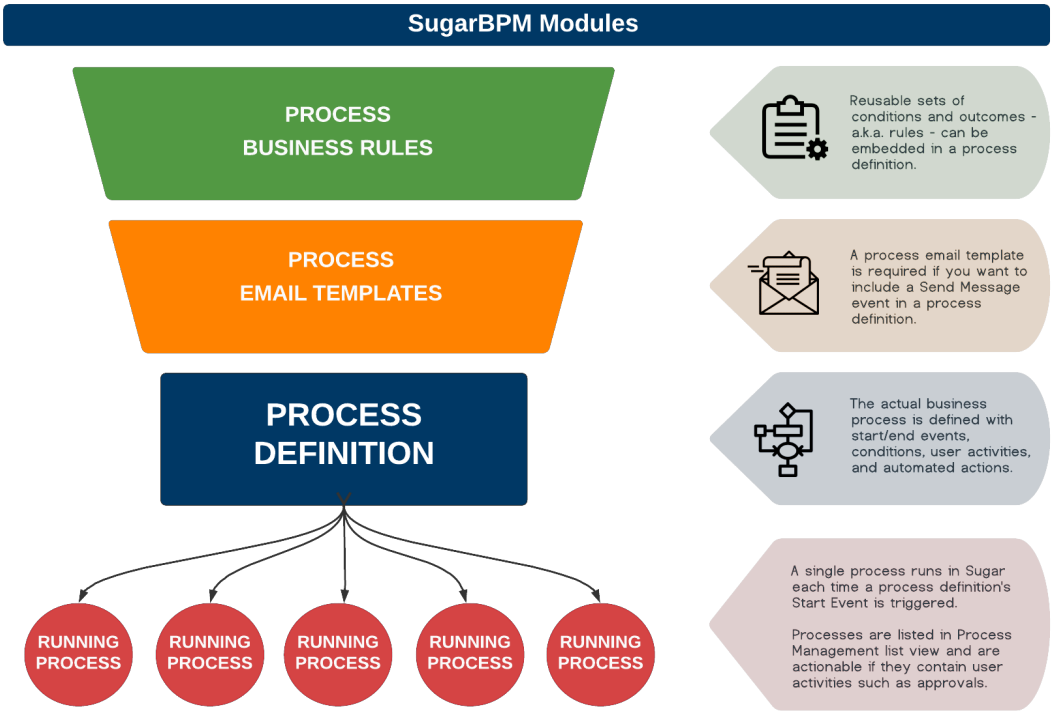
Before continuing, please read the SugarBPM overview page, which defines critical vocabulary and other elements that may be referenced on this page.

This documentation contains the following pages:

- SugarBPM
- Process Definitions (current page)
- Process Business Rules
- Process Email Templates
- Stock SugarBPM Templates

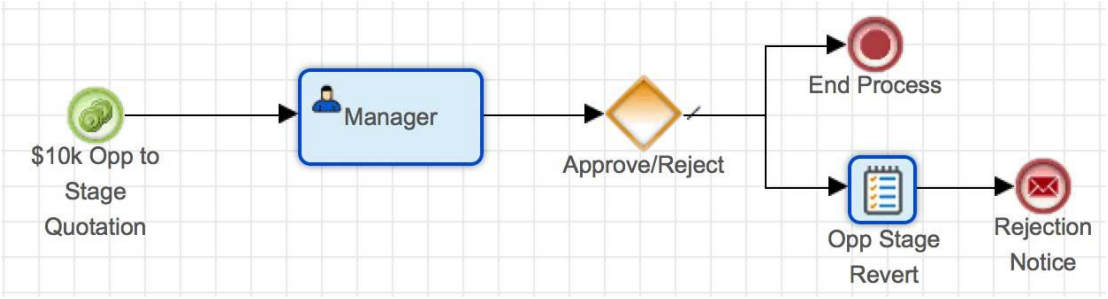
Additionally, the Processes page of the Application Guide contains documentation for the user-facing elements of SugarBPM.

The following image illustrates the relationship between all of the SugarBPM modules:



The process definition will be the parent record for countless running processes in Sugar. Every time a process definition's Start event is triggered, a single process will begin to run in Sugar. When a running process requires action from a user, that user will see the process in their Processes dashlet and Processes module list view. Users will never see the parent process definition that controls the process, nor will they see any processes for which they are not required to act.

This is an example of a complete process definition created in the Visual Designer:



In the example above, the Start event is triggered when a $10,000+ opportunity moves to stage "Quotation" from any other stage. Every time this condition is met, the process definition will generate a new process instance.

Note: If a process definition will utilize process business rules or process email templates, those records must be created before designing the process definition. For more information about creating records in these supporting SugarBPM

modules, please refer to the corresponding section of the SugarBPM documentation.

This documentation will cover information and actions specific to the Process Defintions module. For instructions concerning views and actions which are common across most Sugar modules, such as creating, editing, and deleting records, please refer to the Working With Sugar Modules section of this page.

Process Definition Fields

The Process Definitions module contains the following fields. For information on using and editing various field types, refer to the User Interface documentation.

Field	Description
Assigned To	The Sugar user assigned to the process definition.
Date Created	The date the process definition record was created.
Date Modified	The date the process definition record or its design was last modified.
Description	A description or other information about the process definition.
Integration Sync ID	The sync key field used by external integrations to identify Sugar records in the external application. See the Integrate REST API endpoints in the Developer Guide for more details on how to use this field. **Note**: This field is not visible in the user interface.
Name	A unique and descriptive name.
Run Order	The order in which running processes targeting the same module are executed. The field is optional, and processes with a blank run order are run last. In the case of a tie, processes are run oldest to newest by their process definition's Date Created field.
Status	The enabled or disabled state of the process definition.
Tags	User-created keywords that can be used to identify records in filters, dashlets,

	and reports. **Note**: For more information on creating and using tags, please refer to the Tags documentation.
Target Module	The module that will be used for the Start event in the process definition design.

Fields Exclusive to Process Definition Design

The following fields are available when designing process definitions targeting the given modules, but are not available in typical module views (e.g., record view) or in Studio. They can be leveraged in your process definitions, but it is important to note that some should only be read and not updated, while others can be updated under certain circumstances. See the sections below for more details.

Field	Module(s)	Description
Contact Source	Contacts	A system-level dropdown field that represents the origin of newly created contacts. Its possible values are "Internal" and "External".
Is Attachment	Notes	A system-level checkbox field that Sugar sets to "true" on notes that represent a file attachment to another record (i.e., an email, knowledge base article, or another note).
Note Source	Notes	A system-level dropdown field that represents the origin of newly created notes. Its possible values are "Internal" and "External".
Pending Processing	Bugs, Cases, and custom issue-type modules	A system-level checkbox field. Sugar automatically sets the field to "true" on cases when creating a case via inbound email or relating a case to an inbound email. Sugar does

		not update it on bugs or other issue-type modules.

Contact Source

The Contact Source field is available on the Contacts module. It is a system-level dropdown field that represents the origin of newly created contacts. It is set to External on contacts created via Portal and set to Internal on contacts created in Sugar. This field is not available in Studio or the user interface and is only available in SugarBPM. Note that it is intended to be read but not written to in order to preserve the accurate meaning of its value. Therefore, its value can be read in process definitions to determine the source of a contact, but should not be changed.

Is Attachment

The Is Attachment field is available on the Notes module and is a system-level checkbox field that indicates if the note represents a file attachment to another record. Files attached to records are stored in Sugar as notes and when designing process definitions, you may need to know if a particular note is an attachment to another record or not. This field differentiates between an individual note and an attachment note because it is only set to "true" on notes that are attachments to emails, knowledge base articles, or other notes.

Specifically, this field can be used to prevent inadvertent processes targeting the Notes module from being triggered for attachment notes. For example, if you create a process definition that is triggered when a new note is created, you may want to add a Start event criteria for "Is Attachment" is equal to "false". This way, processes are only started for notes that were created by a user or another workflow and not when a file is attached to a record. This can be particularly important for notes that are created with many attachment files, because in Sugar, the new note is created, as well as an additional note for every attachment file on the original note. If you do not want to trigger a process for each of these, the Is Attachment field can be used to filter out note records that do not meet the criteria.

Note Source

The Note Source field is available on the Notes module. It is a system-level dropdown field that represents the origin of newly created notes. It is set to External on notes created via Portal and set to Internal on notes created in Sugar. This field is not available in Studio or the user interface and is only available in SugarBPM. Note that it is intended to be read but not written to in order to preserve the accurate meaning of its value. Therefore, its value can be read in process definitions to determine the source of a note, but should not be changed.

Pending Processing

The Pending Processing field is available on the Bugs and Cases modules and also on all issue-type modules created in Module Builder. It is a system-level checkbox field. Sugar automatically sets the field to "true" on cases when creating a case via inbound email or relating a case to an inbound email. Refer to the Cases documentation for more details on how emails and cases can work together.

In addition to Sugar setting the value of the Pending Processing field on cases, Sugar Serve includes several stock process definitions that both read and write to the field on cases. If your instance uses these SugarBPM templates to automate customer service processes, do not update the Pending Processing field on cases. Doing so may cause the processes to behave unexpectedly. However, you may still read its value in process definitions without updating the field.

Sugar and the stock SugarBPM templates only use the Pending Processing field on the Cases module and not the Bugs module or other issue-type modules. Therefore, it is safe to leverage the field and make changes to it on bugs and other issue-type modules in SugarBPM (e.g., via process business rules or Change Field events in process definitions).

Note: The Cases and Bugs modules are not available for Sugar Sell users. For more information on license types and the functionality available for each type, refer to the License Types Matrix documentation.

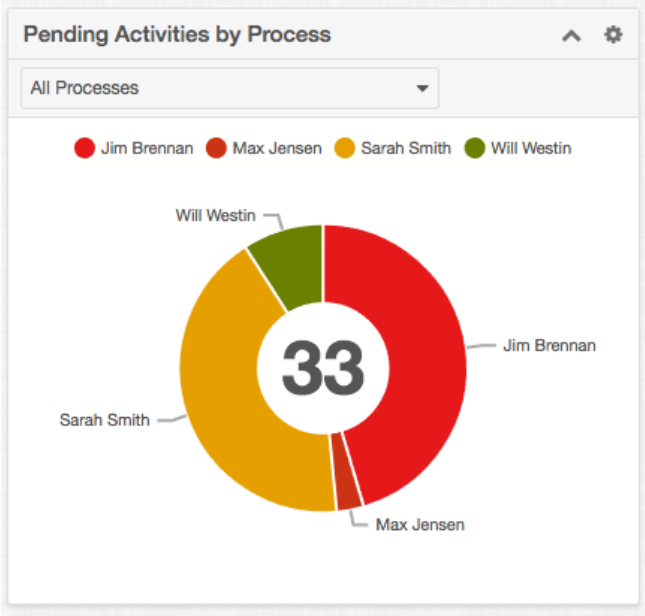
Process Definitions List View Dashlets

There are two specialized dashlets available exclusively on the intelligence pane for the Process Definitions module's list view. The following sections describe these dashlets, which offer insight into running processes in your instance.

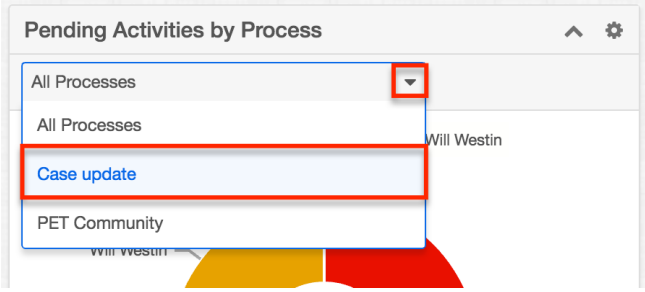
Note: For more information on creating dashboards and adding dashlets to the intelligence pane, please refer to the Dashboards and Dashlets documentation.

Pending Activities by Process

The Pending Activities by Process dashlet displays a summary of the total number of activities that are awaiting a response from a process user. All open process activities are reflected in the dashlet as a whole number and are also grouped by user in the circular graph.

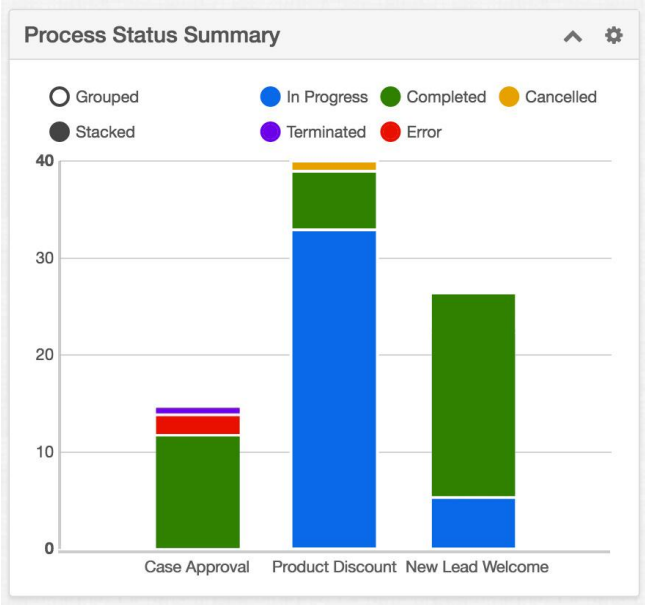


You can refine the dashlet's view by selecting a process definition from the dashlet's filter. This will restrict results to only the processes related to that process definition.

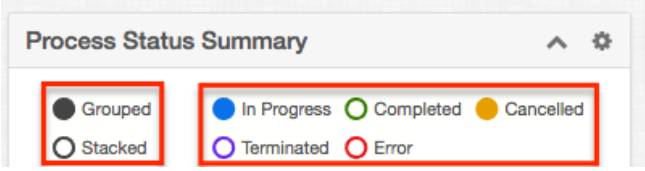


Process Summary Dashlet

The Process Summary dashlet can also be added to the Process Definition's list view intelligence pane. It displays an overview of all processes that have triggered in your instance.



You can customize the dashlet view using the options above the chart. Toggle the display between "Stacked" and "Grouped" to view the results in different formats. To exclude a status from the display, click on the solid circle next to that status's name in the key above the chart.

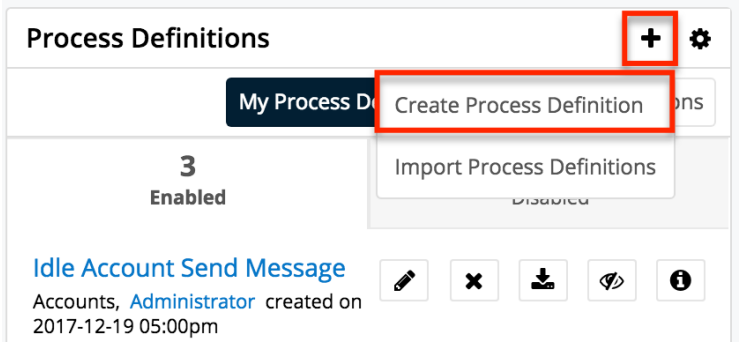


Creating Process Definitions

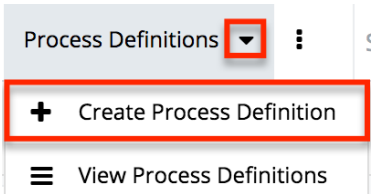
Note: All process definitions are disabled by default so that they will not trigger during the design phase. Please refer to the Enabling Process Definitions section of this page for steps to enable a completed process definition.

Process Definitions can be created from any of the following places in Sugar:

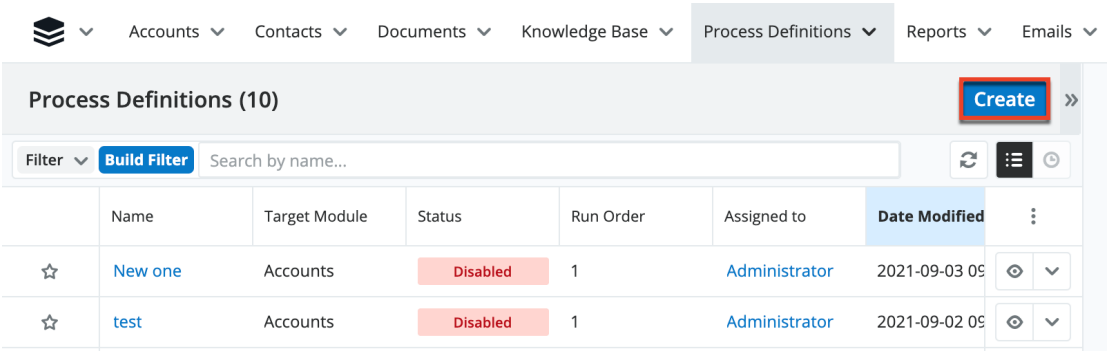
- Process Definitions dashlet:



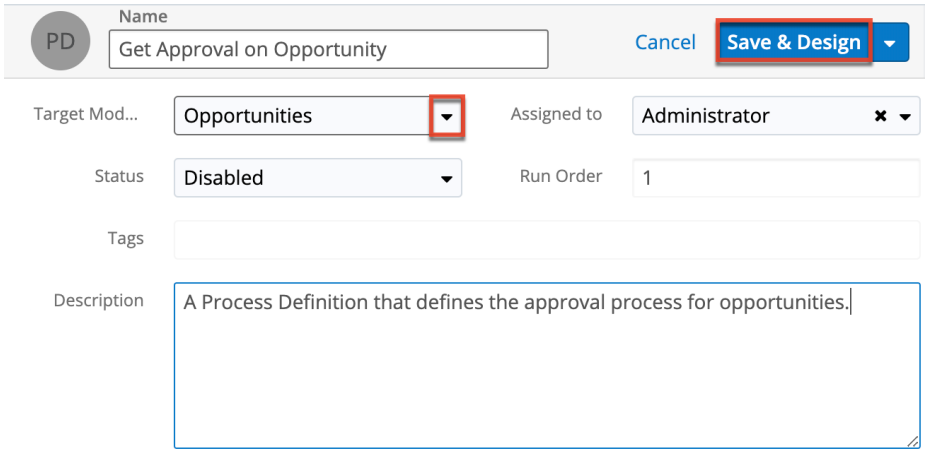
- Process Definitions module tab menu:



- Process Definitions list view:



Upon clicking "Create Process Definition" (or the Create button from list view), you will be directed to the process definition's record view. The record view is where you store information that will make it easy to find and understand the process definition in the future. For more information about the available fields in the Process Definitions module, please refer to the Process Definitions Fields section of this documentation.



After completing this form, you will be directed to the Visual Designer canvas where the process definition's elements can be composed.

Designing Process Definitions

Creating a process definition for your business process is easy using SugarBPM's visual designer, where you can graphically assemble a series of flow elements using an intuitive drag-and-drop interface. All process definitions are set to "Disabled" by default in order to prevent triggering of processes before the design

is complete. This means that you must change the status to "Enabled" before it will work. Please see Enabling Process Definitions for more information.

Using the Visual Designer

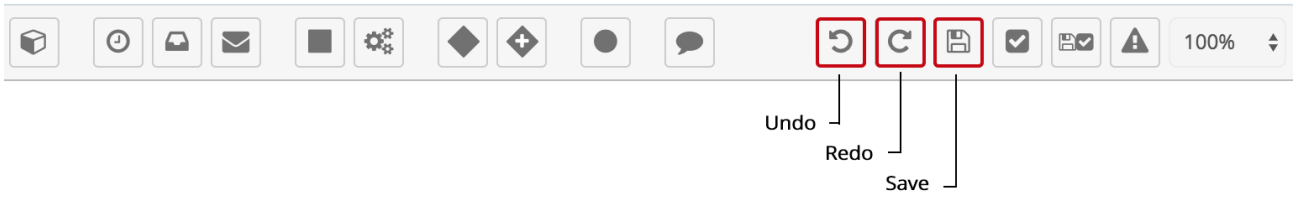
Before designing a process definition, take a moment to understand how to interact with process definition elements on the design canvas. In the visual designer, process definitions are auto-saved every 30 seconds by default, and the Undo button can revert changes as far as 25 levels back per session. You can disable or adjust the auto-save increment via Admin > System Settings.

Note: The visual designer interface may not be compatible with some touchscreen mobile devices. Please build process definitions from a desktop or laptop computer to prevent any potential complications.

Editing Tools

If you edit the design of an enabled process definition, any running process will immediately adapt to the new flow pattern. Therefore, it is best practice to disable a process definition before making changes to its design. Disabling the process definition will prevent running processes from adapting to the new flow prematurely. Changing the process definition's status to "Disabled" will not cause any interruptions to already running processes. Upon re-enabling the process definition, any processes still running will adapt to the new flow.

Three icons on the right side of the design toolbar represent editing tools for your process definition design.



- **Undo**: Click the Undo button to revert the last change made in the Process Definition (up to 25 changes). When an undo action restores a design element on the page, it should also restore the element's configuration, but you should always confirm the configuration via the element's settings.
- **Redo**: Click the Redo button to reverse an undo action. When a redo action restores a design element on the page, it should also restore the element's configuration, but you should always confirm the configuration via the element's settings.
- **Save**: This control allows you to save changes made to the Process Definition design. The Save button is enabled only when there are unsaved changes. Keep in mind that the Visual Designer auto-saves your work every

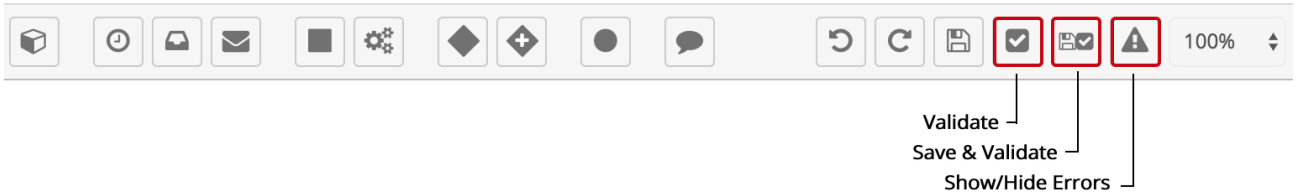
30 seconds by default and the auto-save increment can be configured or disabled via Admin > System Settings.

Always review the settings for any canvas element re-instated by the Undo or Redo buttons to confirm they are configured as expected.

Process Validation

When using the SugarBPM visual designer for creating process definitions, a validation job periodically runs to inspect the layout and configuration of the process definition's elements. The validation job may run automatically at regular intervals configured in Admin > System Settings, and the administrator may also manually trigger the validate action at any time from the designer toolbar.

Three icons on the right side of the design toolbar represent the validation tools for your process definition design.



- **Validate**: The Validate button triggers an action that inspects each element in the design and verifies that evaluations and settings are valid. Any errors or warnings are displayed as badges on the affected elements and in the Error Console in the lower part of the screen.
- **Save and Validate**: Click the Save and Validate button to save your work and simultaneously validate the process design.
- **Show/Hide Errors**: Click this button to view or minimize the Error Console. The console displays warnings and errors that were found in the last validation action and may not reflect changes you have made since the last validation ran. For the most accurate information, click on Validate or Save and Validate immediately after repairing any errors.

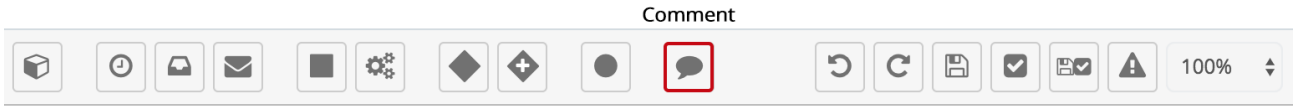
Any configuration or sequence flow errors will be displayed in the Process Validation pane at the bottom of the design canvas. Expanding the validation pane will not force a new validation, but clicking "Validate" or "Save and Validate" will automatically expand the validation pane if it has been minimized or not yet opened.

Some errors will occur and then resolve themselves naturally as the Process Definition is pieced together. For example, all elements will be considered in an error state until the appropriate connectors have been inserted in between elements. For more information on the errors and warnings returned by the

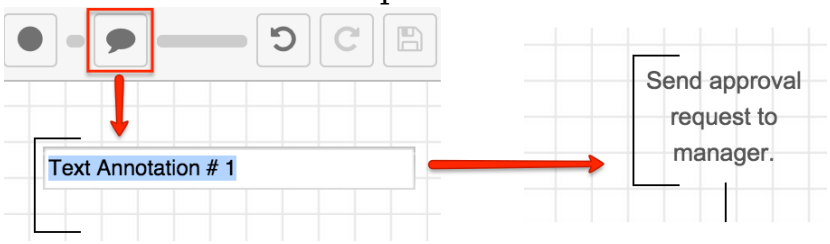
process validator, refer to the article Troubleshooting Validation Errors and Warnings for Process Definitions.

Comments

The Comment element allows admins to mark up the designer canvas with helpful annotations connected to Action and Activity elements. While all elements can be descriptively labeled, further explanation may be needed to explain more complex Process Definitions.



To insert a comment onto the Designer Canvas, simply drag and drop the comment icon onto the canvas and then double-click on the text "Text Annotation" to type a comment. Hit Enter to preserve the comment.



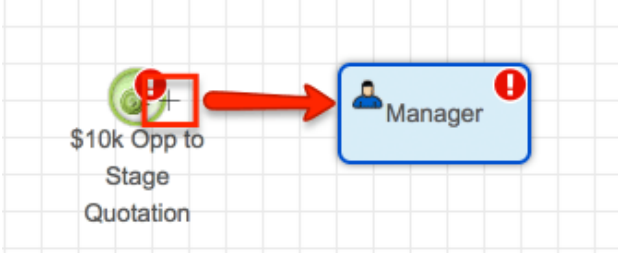
Sequence Flow

When you assemble a process definition, you are defining the overall sequence flow. The flow dictates the processing order of the events, actions, and activities in a process and is visually represented by lines called sequence connectors. Each sequence connector originates from a single source element (e.g., action, event, etc.) to a single target element.

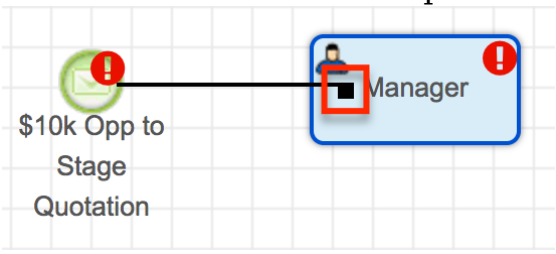
Adding Sequence Connectors

All elements of a process flow must be connected by at least one directional line. Failure to connect flow elements correctly will result in an error in the Process Validation panel.

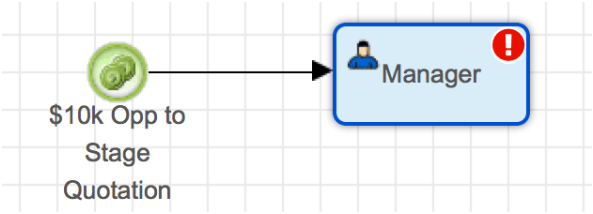
1. To connect two elements on the Designer canvas, hover over the outer edge of the Start event icon until the mouse tip changes into a crosshair:



2. Click the mouse button and drag the black square at the end of the connector onto the subsequent design element:



3. Release the mouse button and the square at the end of the connector line will transition into an arrow pointing toward the subsequent element and indicating the direction of flow from one element to another.



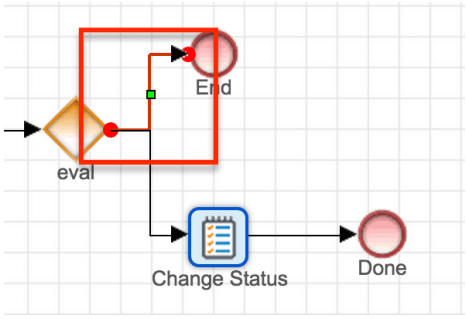
4. Optionally, adjust the position of the process elements as described in the Moving and Deleting Design Elements section to achieve an organized appearance.

Note: When dragging a connector to a subsequent element, you may choose to release the mouse button at the top, bottom, left, or right edge of the element in order to aesthetically organize the process and avoid running into other connector lines, which may possibly affect the flow of the process. For more information on interacting with objects on the canvas, please refer to the Moving and Deleting Design Elements section of this documentation.

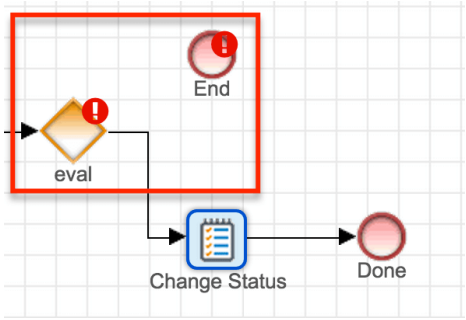
Removing Sequence Connectors

To remove unwanted or misplaced sequence connectors from the design canvas, simply click on the line and press Delete on your keyboard as explained here:

1. Click on the segment of the line that you wish to remove. The connector will transition to a selected state, and the beginning and end points of the connector line will be represented by red dots. Please confirm that the line connecting these red dots is the line that you intend to delete.



2. Press the Delete key on your keyboard. The selected line will disappear.



If you accidentally delete a sequence connector, simply press the Undo button on the toolbar. Always review the settings for any canvas element reinstated by the Undo or Redo buttons to confirm they are configured as expected. For more information on interacting with objects on the canvas, please refer to the Moving and Deleting Design Elements section of this documentation.

Moving and Deleting Design Elements

To reposition or remove an entire branch or group of elements from a process definition design, you can easily mass select them on the canvas. The following table summarizes the mass actions available via the design canvas.

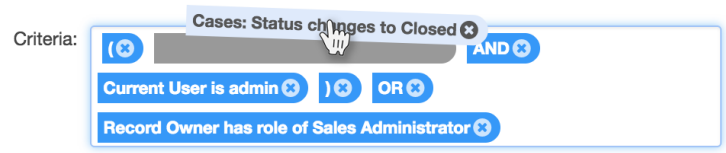
Task	Procedure
Select a single element	Point to the element on the design canvas until the mouse tip becomes a four-headed arrow then click the shape.
Select multiple elements within an area	Click on the design canvas above and to the left of the elements that you want to select and then drag to create a selection box around the shapes. Any elements partially within the selection area will be included as part of the selection.
Move an element or group of elements using your mouse	1. Select the element(s) that you want to move. 2. Position the mouse pointer over

	one of the elements. A four-headed arrow appears. 3. Click and drag the elements to their new positions. 4. All of the selected elements will move the same distance and direction from their original positions.
Nudge an element or group of elements using the arrow keys	1. Select the element(s) that you want to move. 2. Press an arrow key in the direction you want the group to move. The elements will nudge one pixel for each tap of an arrow key. Press and hold the arrow key to move the elements quickly. **Note**: If pressing an arrow key scrolls or zooms the entire canvas instead of moving the selected elements, please make sure that the SCROLL LOCK key is disabled on your keyboard.
Delete an element or group of elements within an area	1. Select the element(s) that you want to delete. 2. Press the delete key to remove the selected items from the design canvas. **Note**: Sequence connectors associated with deleted elements will also be deleted.
Delete a sequence connector	Please refer to Removing Sequence Connectors for more information on how to remove unwanted or misplaced sequence connectors from the design canvas.
Deselect all elements	Click a blank area on the design canvas.

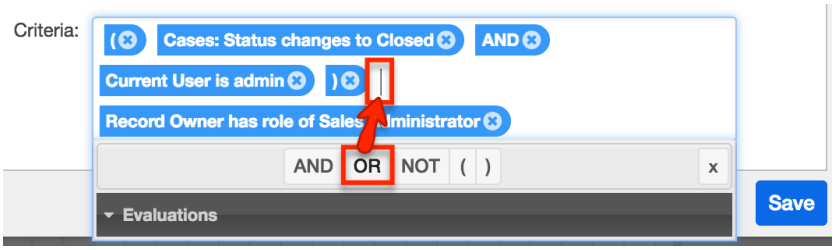
Evaluation Criteria Box

Certain elements in the process definition design can be configured in a criteria box. For these evaluations, you can interact with the operators and variables that comprise the criteria in the following ways:

Criteria pills are movable via drag and drop:



Criteria can be inserted by placing a cursor at the point of insertion and then clicking on the operator or variable to insert:

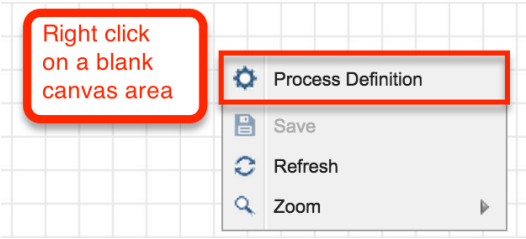


Note: Never use single quotes (' ') or double quotes (" ") inside the criteria builder; the SugarBPM engine automatically recognizes input types when processing the condition.

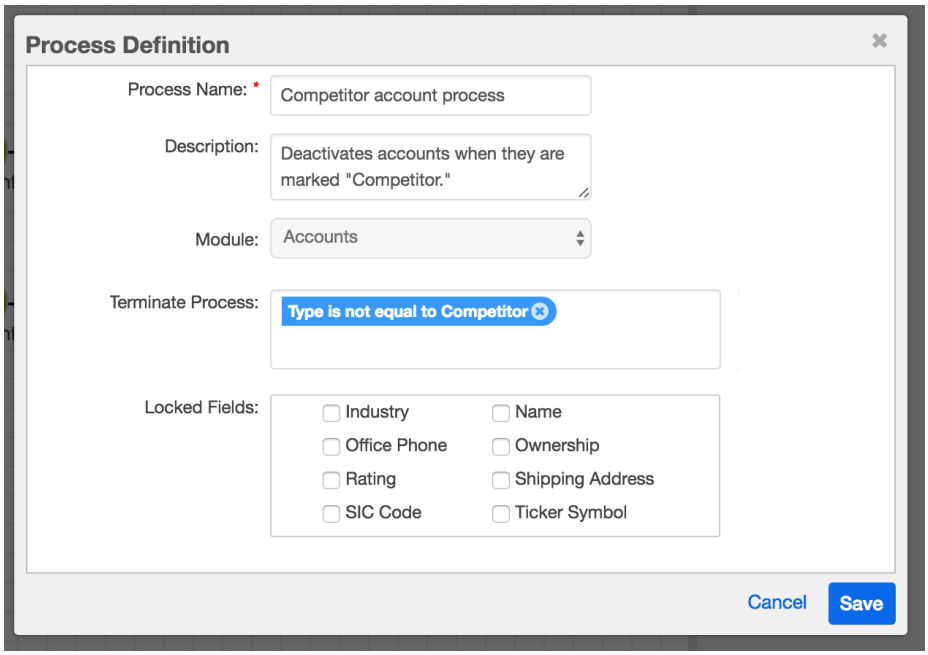
For more information on defining criteria, please refer to the Setting Conditions section of this page.

Process Definition Settings

Every process definition has a well-concealed option to configure important overall settings. To access this option, simply right-click on any empty space on the process definition's design canvas and select the "Process Definition" menu item:



The Process Definition settings window will open where you can edit the name and description without exiting the designer. In addition, the settings window contains two tools for enhanced security over records that engage in processes triggered by the current process definition. The following sections describe how to configure Terminate Process conditions and how to prevent users from making changes to records during the process duration via Locked Fields.

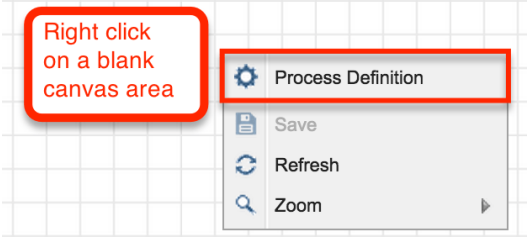


Terminate Process

All process definitions should include a condition for termination. Informally known as the process definition's "emergency brake," the Terminate Process settings can tell Sugar when NOT to start a process or under what conditions a process should abruptly end. If a process's target record meets the Terminate Process conditions, the process instance will instantly force stop and display a status of "Terminated" in the Process Management list. This setting is important to prevent conflicts between multiple running processes or conflicts between SugarBPM and other automated parts of your Sugar instance (e.g., Workflows, Sugar Logic, or third-party customizations).

Follow these steps to define Terminate Process conditions for a process definition:

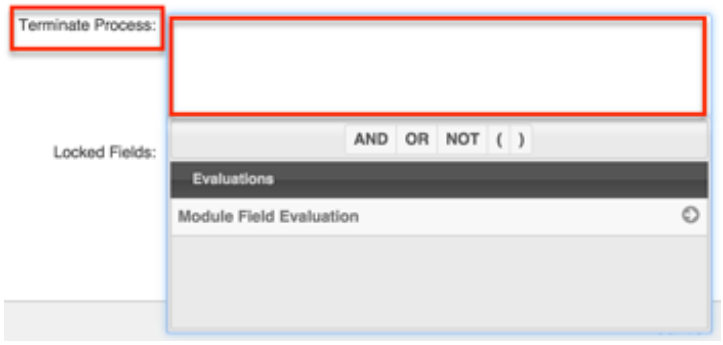
1. Navigate to the Visual Designer canvas for the relevant process definition.
2. Find a blank spot on the design canvas and right-click to access the Process Definition's general settings.



3. Click on "Process Definition". The Process Definition settings will appear. Here you can edit the record-level settings and set Terminate Process criteria for this process definition.



4. Click inside the Terminate Process field to reveal the criteria builder.



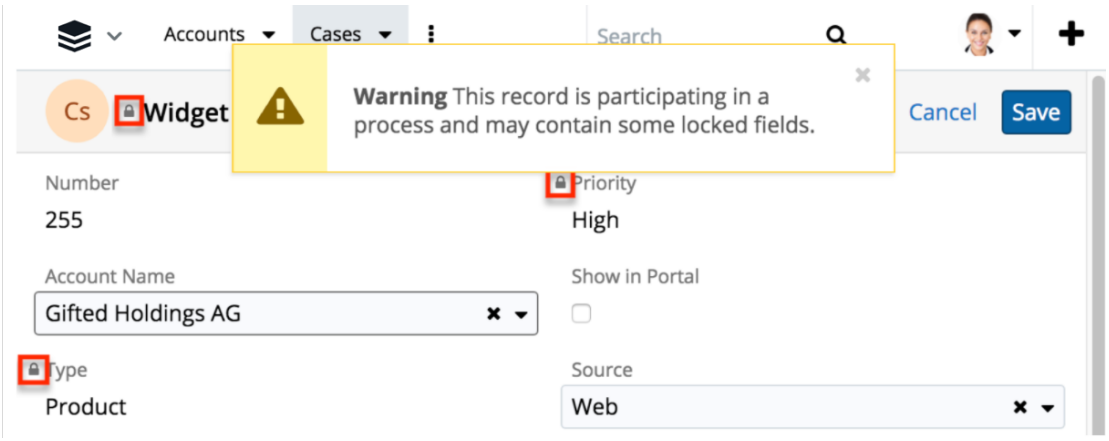
5. Refer to the Module Field Evaluation section of this page to build a conditional statement that, when met, will force-stop a running process that was triggered by this process definition.



6. Click "Save" to preserve this setting and return to the design canvas. Be sure to save the overall process definition before navigating away from the canvas.

Locked Fields

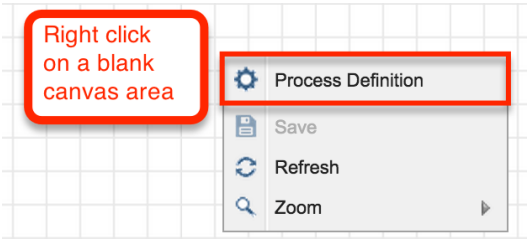
The Locked Fields feature of SugarBPM lets administrators, developers, and process administrators prevent users from changing select field data on records that are involved in active processes. Any number of fields (from none to all) can be locked on the record. When a record becomes involved in a process that has locked fields, that record will respect those field locks until the record is no longer participating in the process.



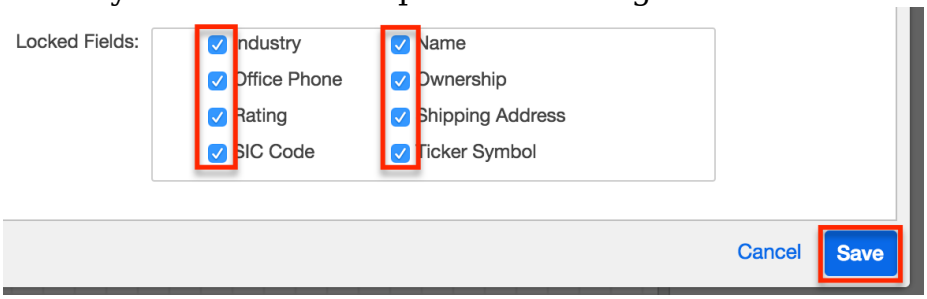
Note: Locked Fields configured in the Process Definition settings **do not apply to the process user** when he or she is executing the process. To prevent the process user from editing fields during the approve/reject or route stage, you must configure the fields as read-only on the Activity's Read-Only Fields tab.

Follow these steps to set Locked Fields for records participating in the current process definition:

1. Navigate to the Visual Designer canvas for the relevant process definition.
2. Find a blank spot on the design canvas and right-click to access the Process Definition's general settings.
3. Click on "Process Definition".



4. The Process Definition settings will appear. Here you can edit the record-level settings and set Locked Fields for this process definition. In the Locked Fields section, place a checkmark next to the field or fields for which you would like to prohibit editing:



5. Click "Save" to preserve this setting and return to the design canvas. Be sure to save the overall process definition before navigating away from the canvas.

Note: Records that are processed through the job queue, imported, mass updated, or merged will undergo locked-field validation.

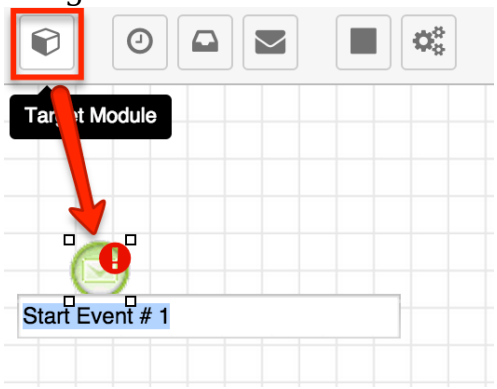
Adding a Start Event

A Start event indicates where a process will begin. It defines the action that will trigger a new process to run. The target module chosen in the process definition's record view is the module that is used for the Start event in the process definition design. When a record in the target module meets the criteria set in the Start event, then a new process will commence based on this process definition. In other words, the Start event will receive a message from the target module that it is time to begin a new process.

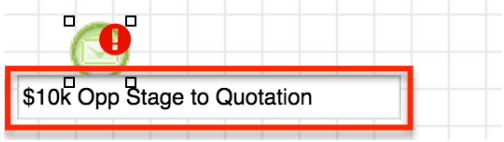


Follow these steps to add a Start event to the process definition:

1. Drag the Start event icon onto the Designer canvas.

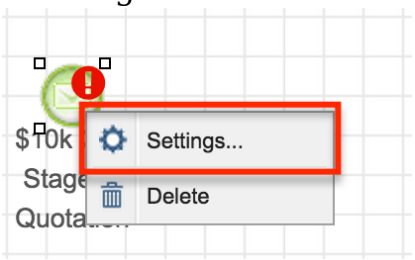


2. Double-click the Start event icon's label to rename it.



   Note: The Start event will have an error icon and a warning icon if the process validator runs before the Start event has been configured and connected to the next element. This is normal. For more information about resolving validation errors, refer to the Process Validation section of this page.
3. To configure the Start event, right-click on the Start event icon and choose

"Settings".



4. Select an "Applies to" preference to choose how the process definition will be triggered to start. See the Start Event Types section below to understand each option.



5. Click inside the Criteria field to expose the criteria builder and set the conditions for the Start event. Please refer to the Creating Conditions for Events and Actions section of this page to configure the conditions for the Start event.

Note: Comparison operators in Start event evaluations may not always work as expected for existing records that were last edited before the process definition was enabled. To ensure that existing records are evaluated properly for comparators such as "field changes from/to", perform an arbitrary mass update on the target module's records immediately after enabling the process definition so that Sugar can capture the "from" field values.

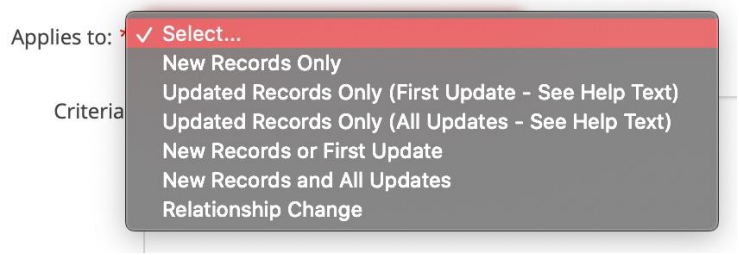
Start Event Types

There are several options when choosing how a process definition will be triggered to start. You can trigger processes based on several different conditions in a single Start event.

- **New Records Only**: A new process will begin if a record is created and the specified conditions are met on the first save.
- **Updated Records Only (First Update)**: A new process will begin the first time the specified conditions are met on an existing record, even if the record has been updated several times before it qualifies. Once a record meets the conditions to trigger a First Update process, it cannot trigger that process definition again.
- **Updated Records Only (All Updates)**: A new process will begin every time an existing record is saved and the specified conditions are met, as long as a process is not already running against the record. A given process definition can only run one process instance against a particular record at a

time. However, it is important to note that two or more different process definitions may simultaneously run against the same record.

- **New Records or First Update**: A new process will begin when a new record is created or the first time it is updated if the specified conditions are met. Once a record meets the conditions to trigger a New Records or First Update process, whether it was triggered by a new record or a first update, it cannot trigger that process definition again.
- **New Records and All Updates**: A new process will begin every time a new record is created or an existing record is saved and the specified criteria are met, as long as a process is not already running against the record. A given process definition can only run one process instance against a particular record at a time. However, it is important to note that two or more different process definitions may simultaneously run against the same record.
- **Relationship Change**: A new process will begin every time a related record is added or removed from the target record and the specified conditions are met. This option can be configured to trigger on any module relationship change or only a change from a specified module.



Adding Multiple Start Events

Most use cases can be represented in a single Start event using one of the Start event types. It is best practice to use only one Start event when possible to prevent creating an invalid process definition with multiple Start events that can meet their conditions simultaneously. However, certain very specific use cases cannot be achieved using the available "Applies To" options. In these cases, it is acceptable to use multiple Start events, as long as they contain mutually exclusive criteria. In other words, only one Start event can evaluate to "true" for any given record. If it is possible for two or more Start events to evaluate as "true" against one Sugar record, the criteria for these Start events will be met simultaneously. SugarBPM does not support this type of configuration.

The following table demonstrates the proper and improper use of Start events that apply to multiple scenarios:

		Applies to	Criteria	Explanation
✅ Good design	Start Event #1	Accounts;	Type {is}	Using a single

		New Records or First Update	Customer	Start event prevents any possibility of an invalid process definition that can meet two sets of criteria simultaneously.
Acceptable design	Start Event #1	Accounts; New Records Only	Type {is} Prospect	This combination of conditions cannot be represented in a single Start event, so in this case, it is necessary to use two. A Sugar record cannot be simultaneously "new" and "updated" (i.e., existing). It is therefore impossible for these two Start events to evaluate as "true" at the same time, making them mutually exclusive.
	Start Event #2	Accounts; Updated Records Only (First Update)	Type {is} Customer	
Bad design	Start Event #1	Accounts; New Records Only	Type {is} Customer	This combination of Start event criteria is not mutually exclusive. A new account in Sugar may be classified as both "Manufacturing" and

	Start Event #2	Accounts; New records Only	Industry {contains} Manufacturing	"Customer", which would make both events evaluate as "true". Instead, use one Start event with an OR operator between the two sets of criteria.

The "Good design" example above applies a process definition to both new and updated records by using a single Start event triggered by "New Records or First Update".

The "Acceptable design" example above applies a process definition to both new and updated records by using one Start event triggered by "New Records Only" and a second Start event triggered by "Updated Records Only". For this use case, each Start event type has different criteria, which is why two events are needed. When using multiple Start events, join each of them to the next element in the process definition with separate connectors. Multiple Start events in a process definition should always merge into a single path.

Scenarios That Require Multiple Start Events

Most criteria can be represented in a single Start event, but there are a few types of scenarios where this is not possible:

- Processes that start with a split flow that eventually converges cannot be represented in a single Start event. If each subsection involves different elements before converging, multiple Start events are necessary to initiate each flow. An example of this is the stock Case Follow-Up Date Management process definition that comes out-of-the-box with Sugar Serve.
- Processes with Start event criteria that differ depending on if the process is triggered by a new record or an updated record cannot be represented in a single Start event. In other words, the following set of criteria can only be represented in two Start events: (new record AND Status = A) OR (updated record AND Status = B).

Adding Intermediate Events

As the name suggests, intermediate events occur after a process starts but before

the process is complete. Intermediate events that are placed within the overall process flow represent things that happen during the normal operation of the process such as sending messages, receiving messages, or mandatory waiting periods.

Note: Intermediate events require the SugarBPM Scheduled Job scheduler to execute. If schedulers are not running, the flow of the process will be interrupted. For more information, please refer to the SugarBPM documentation.

Intermediate events are represented by the second group of icons on the design toolbar. There are three icons that each enable a configurable event.



The types of intermediate events are:

- Wait Events
- Receive Message Events
- Send Message Events

Wait Events

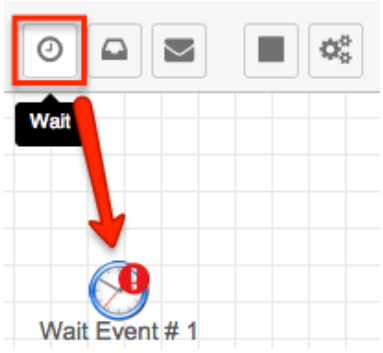
This element will stop the execution of a process by the time interval set in the configuration. Wait events support specified times as well as a calculated delta between two times or events.

Note: Schedulers, specifically the SugarBPM Scheduled Job, must be running to execute Wait events. If schedulers are not running or if the event is not properly configured, the flow will be halted indefinitely, thereby stopping the flow of the process. For more information, please refer to the SugarBPM documentation.

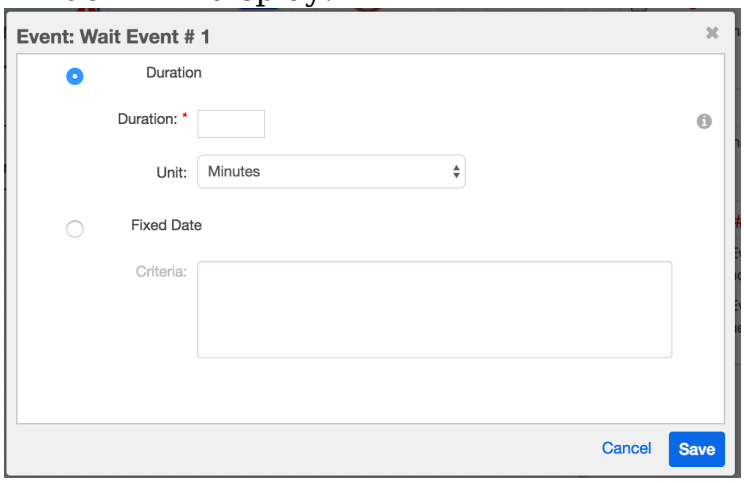
A Wait event's clock begins when the Wait event is triggered. For example, consider a process definition that contains three five-minute Wait events. Each one will pause and evaluate a running process at 5-minute intervals for an aggregate 15 minutes of wait time from the beginning until the end of the process definition. While the Wait events enforce an evaluation at 5, 10, and 15 minutes into the process, the settings for each element need only account for the 5-minute span between timed events, and not its relative distance from the start of the process. Therefore, the Duration setting for each Wait event in the example should be set to

5 minutes.

To add a Wait event to the flow, drag and drop the clock icon onto the canvas:

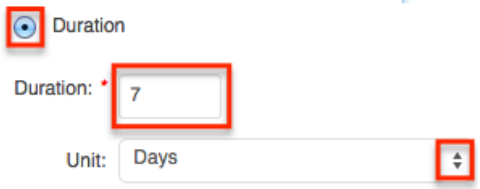


To configure this event, right-click on the icon and choose "Settings". A new window will display:

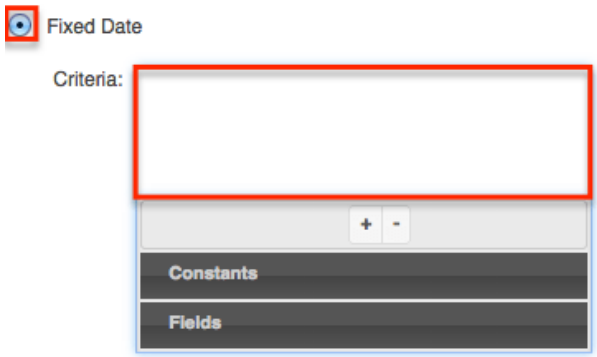


The configuration window has two main options: Duration and Fixed Date. Choose one of these options to enable its configuration fields.

- **Duration** (radio button): Choose this option to define the duration of the Wait event in minutes, days, or hours.



  - **Duration** (text field): Required field when "Duration" is selected above. Enter an integer to use in conjunction with the Unit field.
  - **Unit** (dropdown): The duration defined in days, hours or minutes.
- **Fixed Date** (radio button): Choose this option if the Wait event will be based on one or more of the record's datetime fields, a specific date, or a calculated formula. Formulas may be constructed using a combination of operators, Sugar variables, and constants.



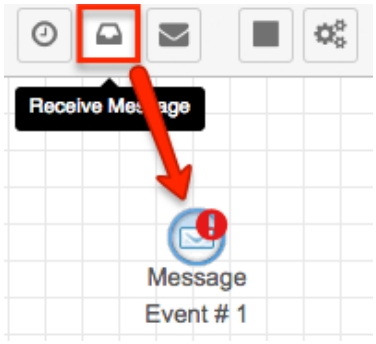
- **Criteria**: Click inside this field to reveal the criteria builder. Please refer to the Creating Conditions for Events and Actions section of this page for instructions on using the criteria builder.

Receive Message Events

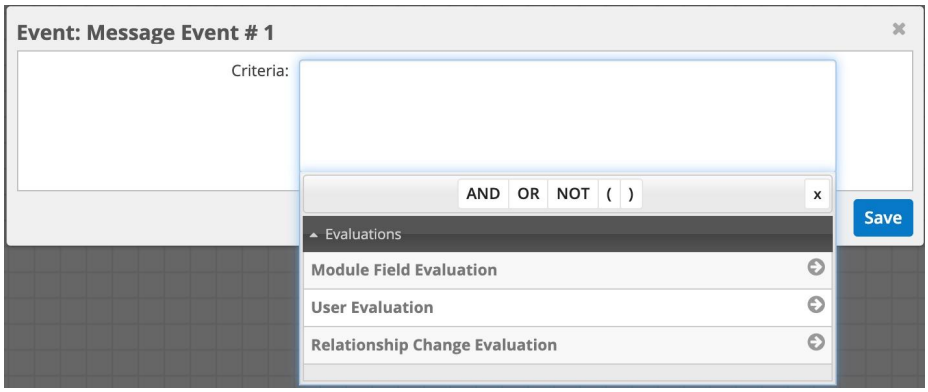
This event will stop the flow of a process definition until the established criteria in the configuration are accomplished. In essence, it is a Wait event that pauses until a condition is met instead of for a specified duration. Most notably, Receive Message events can detect when a field's value changes or when a related record is added or removed.

Note: Schedulers, specifically the SugarBPM Scheduled Job, must be running to execute Receive Message events. If schedulers are not running or if the event is not properly configured, then the event will stop the flow of the process. For more information, please refer to the SugarBPM documentation.

To add a Receive Message event to the flow, drag and drop the Receive Message icon onto the canvas:



To configure this event, right-click on the icon and choose "Settings". A criteria builder window will display:



Click inside the Criteria field to reveal the criteria builder. Please refer to the Creating Conditions for Events and Actions section of this page for further instructions.

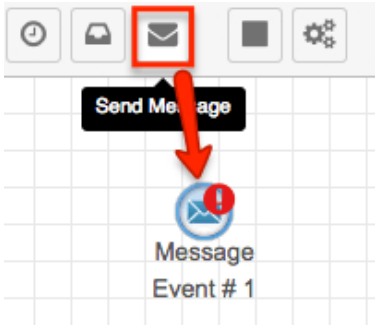
Send Message Events

This event is the only one that can send email messages. These messages must be created in the Process Email Templates module. Your email template can contain field variables to reference actual data from your target record or its related records.

Note: Schedulers, specifically the SugarBPM Scheduled Job, must be running to execute Send Message events. If schedulers are not running or if the event is not properly configured, the flow will ignore the event and continue running without sending any mail. For more information, please refer to the SugarBPM documentation.

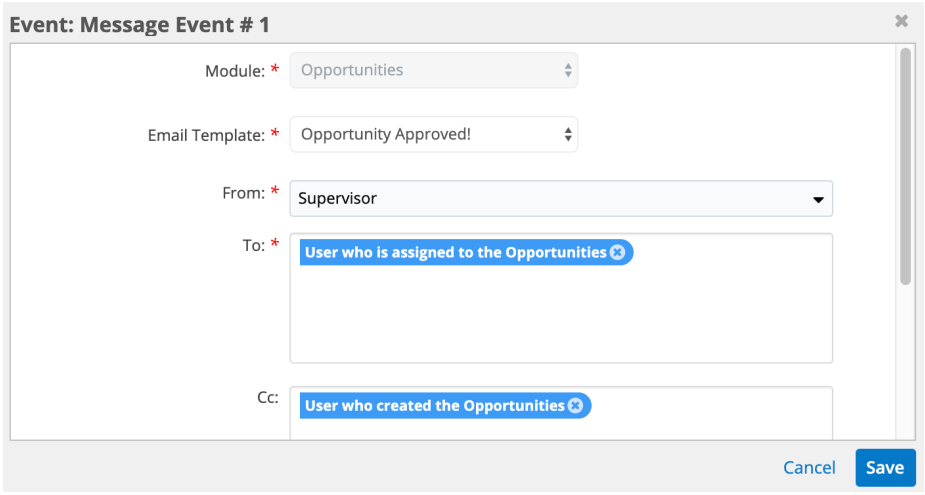
Note: If your email template has been configured with a variable to show the old value of a changed field, it is important to strategically position the Send Message event within your process definition's design. For more information, refer to the Process Email Templates documentation.

To add a Send Message event to the flow, drag and drop the envelope icon onto the canvas:



Right-click on the canvas icon and select "Settings" to open its configuration window, which contains the following options:

- **Module**: (read-only) This is the module that was set as the target module for the process definition and which also must be the target module for the email template.
- **Email Template**: (required) Choose an email template from the dropdown list. This list will only display templates that use the target module shown in the previous field.
- **From**: (required) Choose who should be shown as the sender of this email. Options include users associated with the target record (e.g., Record Owner), System Email, any Sugar user, and any outgoing email account configured in Sugar. If you select a user, the name of the sender will be the user's first and last name, and the email address of the sender and reply-to email address will be their primary email address. For details on how these fields are set for outgoing email accounts, see the Emails documentation.
- **To** (required)**, Cc, Bcc**: Specify the message's recipients. For more information, refer to the Working With Recipient Fields section.

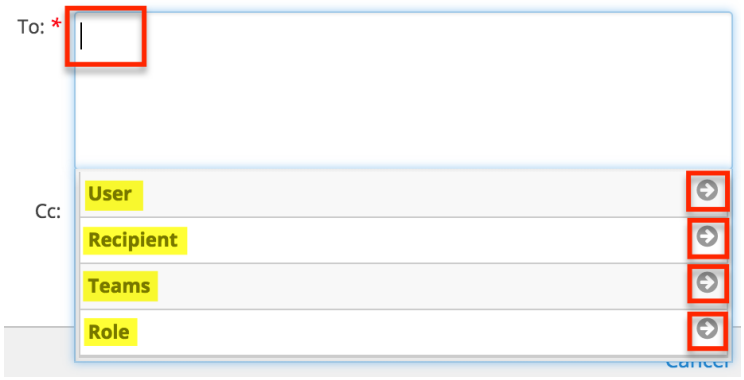


Note: Marketing and campaign emails should never be sent using SugarBPM. This is because SugarBPM does not respect the subject's request to opt out, which raises a liability concern.

Working With Recipient Fields

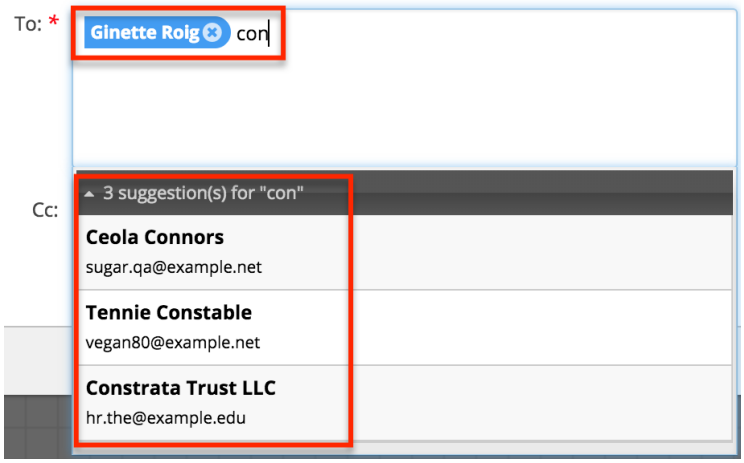
Recipient fields for Send Message events have options that are unique when compared with the recipient fields in Sugar's Emails module. Send Message events can be configured to send messages to individual recipients or users, members of user teams or roles, their user relationships such as a supervisor, users who created, modified, or are assigned to records, and other recipients from the process's target record or records related to the target record.

Email addresses can be added to the recipient fields via a combination of free entry in the recipient box and using the User, Recipient, Teams, and Role menus. These methods are described in the following sections.



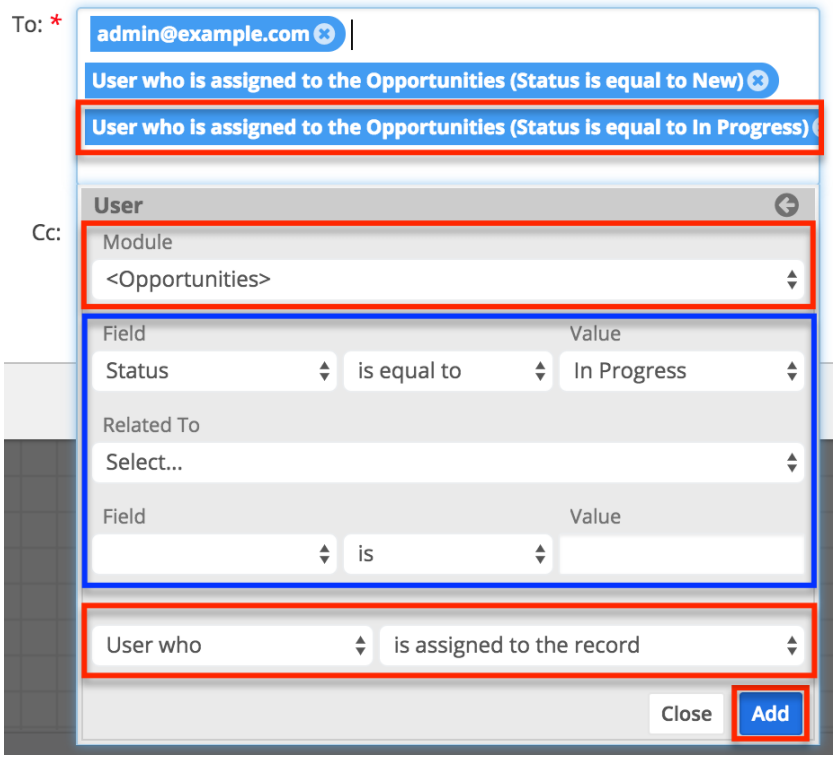
Adding Recipients via Free Entry

When you click inside the text area and start typing, Sugar will display a list of suggestions that auto-updates as you type. If the text you enter is found in an email address or name field for a record that has an email address in Sugar, then the corresponding record will be suggested as a potential match. You may click on a matching recipient to add their email address to the distribution list or continue typing a complete email address (e.g., mail@example.com) directly into the To, CC, or BCC field. When entering email addresses directly, press the Enter key after each address.



Adding Recipients via User Menu

To send a message to a user or the manager of a user associated with the target record, expand the User recipient panel.



The User panel contains five rows but only the topmost Module field and bottom-most User row (highlighted in red above) are required. The available options are:

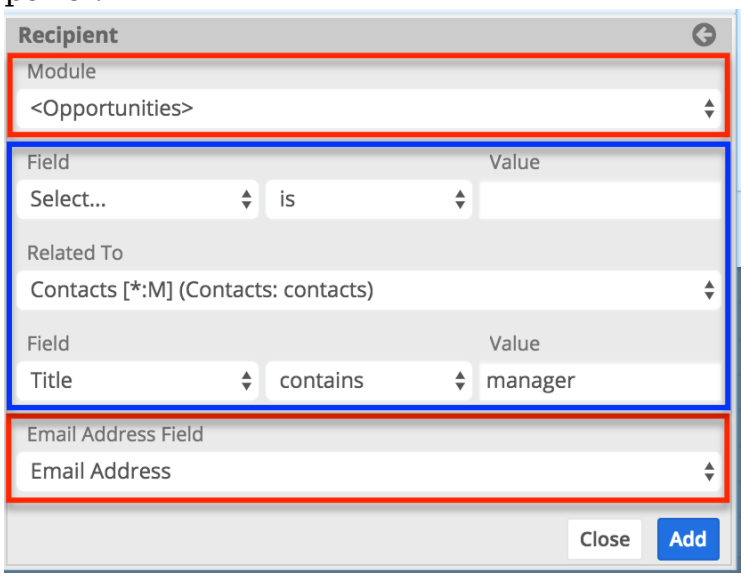
- **Module** (required): Select the first-level module relationship to the user recipient.
    - If the user (or user's manager) is related to the target record, then select the target module. For example, the user who created or is assigned to the target record.
    - If the user is related to a one-away record (e.g., a user who is related to a record that is related to the target record), then select the module that contains the user field.
    - If the user is related to a two-away record (e.g., a user who is related to a record that is related to a record that is related to the target record), then select the intermediate module here, not the target module nor the module that contains the user field.
- **Field/Value**: Optionally, apply a filter to the first-level module. For example, if the first-level module is Opportunities, you can restrict the criteria to apply to only in-progress opportunities by setting "Status > is equal to > In Progress".
- **Related To**: Optionally, select a second-level module relationship. For example, set the second-level module to Contacts if you want to send an email to the users related to contacts that are related to the records in the first-level module.
- **Field/Value**: Optionally, apply a filter to the second-level module.
- **User** (required; not labeled): In the final row, select whether to send the

message to a user or to the user's manager, and what their relationship to the bottom-most selected module is.

Note: Another way to add users as recipients is to message all users on a Sugar team. Refer to the Teams recipient option for more information.

Adding Recipients via Recipient Menu

To send a message to an email address stored in the Sugar database within the target module or a related module's email address field, expand the Recipient panel.



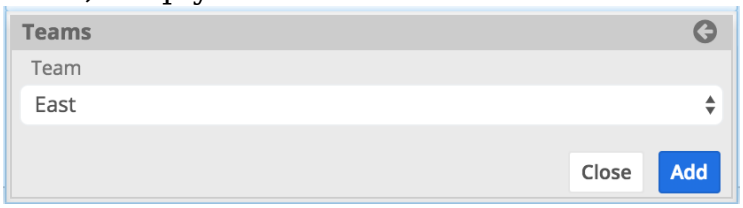
The Recipient panel contains five rows but only the topmost Module field and bottom-most Email Address Field rows (highlighted in red above) are required. The available options are:

- **Module** (required): Select the first-level module relationship to the recipient.
    - If the recipient's email address is on the target record, then select the target module.
    - If the recipient's email address is on a one-away record (e.g., in a field on a record that is related to the target record), then select the module that contains the email address field.
    - If the recipient's email address is on a two-away record (e.g., in a field on a record that is related to a record that is related to the target record), then select the intermediate module here; not the target module nor the module that contains the user field.
- **Field/Value**: Optionally, apply a filter to the first-level module. For example, if the first-level module is Opportunities, you can restrict the criteria to apply to only open and won opportunities by setting "Status > is not equal to > Closed Lost".

- **Related To**: Optionally, select a second-level module relationship. For example, set the second-level module to Contacts if you want to send an email to a recipient related to contacts that are related to the records in the first-level module field.
- **Field/Value**: Optionally, apply a filter to the second-level module.
- **Email Address Field** (required): Finally, select the field that contains the recipient's email address.

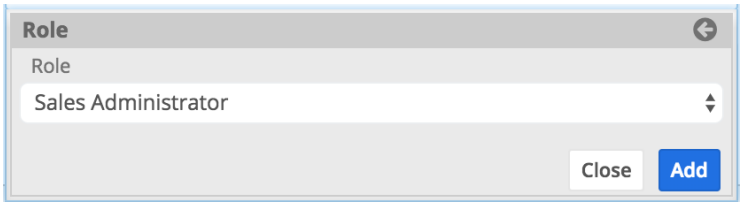
Adding Recipients via Teams Menu

To send a message to the explicit members of a Sugar team or to all teams assigned to the target record, expand the Teams panel. The Team dropdown menu shows all active teams in Sugar but does not list any private or inactive teams. It also includes an "All teams assigned to the record" option to dynamically choose all teams in the Teams field on the target record at the time the process runs. To add all of the users on a team as recipients, select the team and then click "Add" to move the team's name to the distribution list. To add users from more than one team, simply select the next team and click "Add" again.



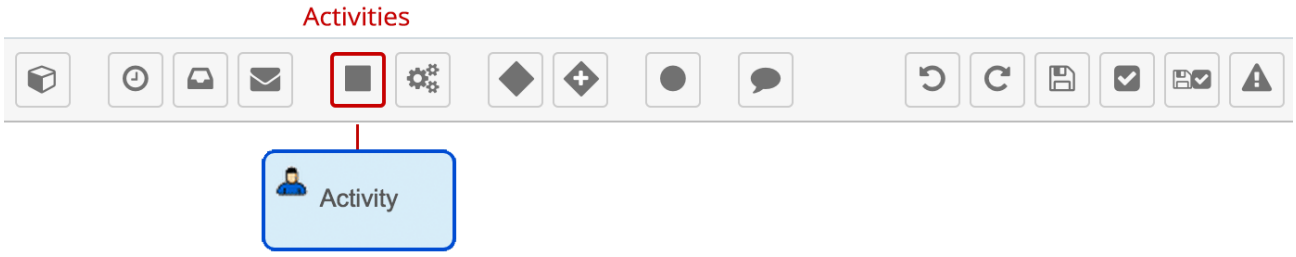
Adding Recipients via Role Menu

Click on the Role menu item to send a message to all of the users assigned to a specified Sugar role. To add users from more than one role, select the role, click "Add" and then select the next role and click "Add" again.



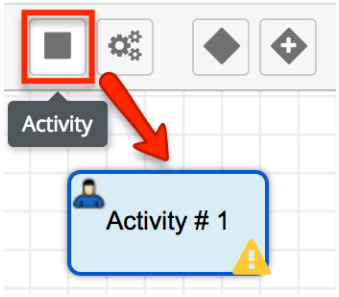
Adding Form Activities

The only unit of work that requires user interaction (as opposed to automation) is an Activity. It is a moment within a flow where a user must decide if a circumstance is approved or rejected, review a record that has been routed to them, or send a record to DocuSign. Activities are represented by the solid square icon on the design toolbar:



Activities pause a process until a user makes a decision to either approve or reject the record or indicates that they have reviewed a record that has been routed to them. When a process reaches this point in the flow, the appropriate user will see a line item in their Processes dashlet or Processes module list view. An Activity form element is configured in two steps. First, configure the Forms setting and then configure the Users setting.

To add a Form activity to the process definition's flow, drag and drop the Activity icon onto the canvas:



Forms Setting

The "Forms..." setting controls what type of form the process user will see when they are asked to execute this activity. The process user must be separately configured in the "Users..." setting. There are three types of Activity forms:

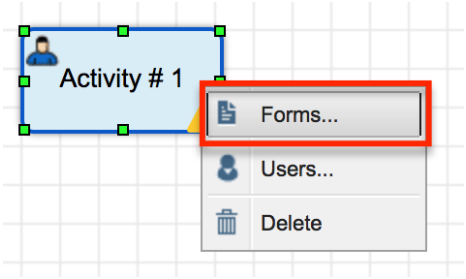
- **Approve/Reject**: This type of form will present itself as an Approve button and a Reject button on the record view of the record that triggered the process. A Gateway element must be placed after the Approve/Reject activity in order to specify a flow for approval as well as a flow for rejection.
- **Route**: This type of form should be used to ensure that a record within a process has been viewed or edited by the user configured in the Activity's "Users..." setting. The form will present itself as a Route button on the record view of the record that triggered the process. The process user has the option to edit the record before clicking the Route button. The administrator may choose to ensure only relevant fields are edited by leveraging the Read Only Fields and Required Fields options for this

activity.

- **Send to DocuSign**: This type of form will present itself as a Send to DocuSign button on the record view of the record that triggered the process.

Note: If an activity is not properly configured, it will default to an Approve/Reject form.

To configure the Forms setting for an activity, right-click on the icon and select "Forms...".



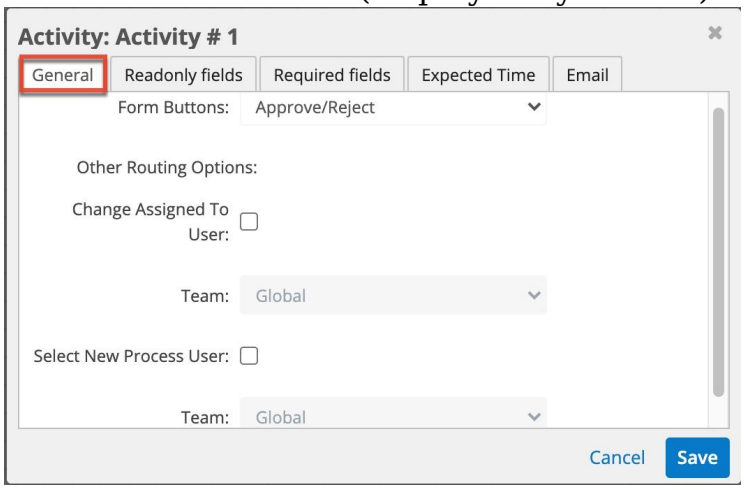
A configuration window will open. The configuration window has four tabbed sections.

- General Tab
- Read-Only Fields Tab
- Required Fields Tab
- Expected Time Tab
- Email Tab

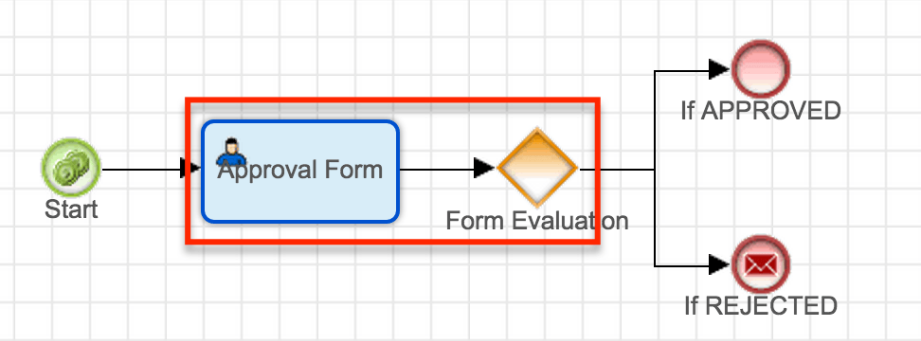
These are explained in detail in the following sections.

General Tab

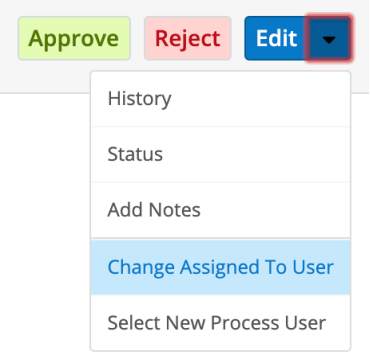
View the General tab (displayed by default) to choose a form type for the activity.



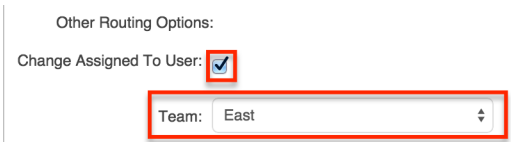
- **Form Buttons**: Select the type of form to display.
    - **Route**: The user will be prompted to acknowledge that they have reviewed and optionally edited/commented on the record.
    - **Approve/Reject** (default): The user will be prompted to approve or reject a circumstance. Approve/Reject Form activities should always be followed by a Gateway element with Form Response Evaluation criteria to define the next step of the process in the case of approval or rejection.
    - **Send to DocuSign**: The user will be prompted to view the record. Then, they can press the Send to DocuSign button in the Processes dashlet to open DocuSign's website, where they can manage documents, recipients, and the signing workflow.



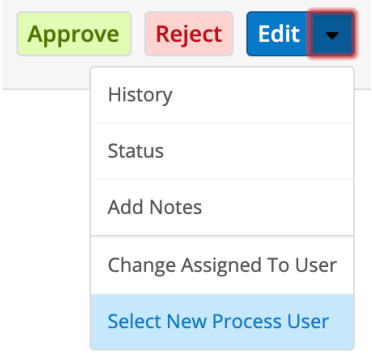
- **Other Routing Options**: During a Form activity's execution, the process user may be given the option to reassign the record associated with the process. It may be appropriate to create specialized teams for users who will be engaged in particular parts of a process. For more information about managing teams and users, see the Team Management and User Management sections of the Administration Guide.
    - **Change Assigned To User**: Enabling this option will add the "Change Assigned To User" option to the actions menu of the process execution screen, as seen here:



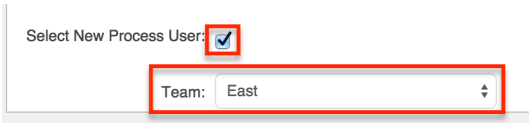
When the process activity is executed, the process user must select this option if they want to change the Sugar record's Assigned To user. The process user can only assign a user from the team configured by admin in the team field under "Other Routing Options".



- **Select New Process User**: Enabling this option will add the "Select New Process User" option to the actions menu of the process execution screen, allowing the designated process user to delegate the Form activity to someone else. The process user can only select a new user from the team configured by admin in the Team field under "Other Routing Options".

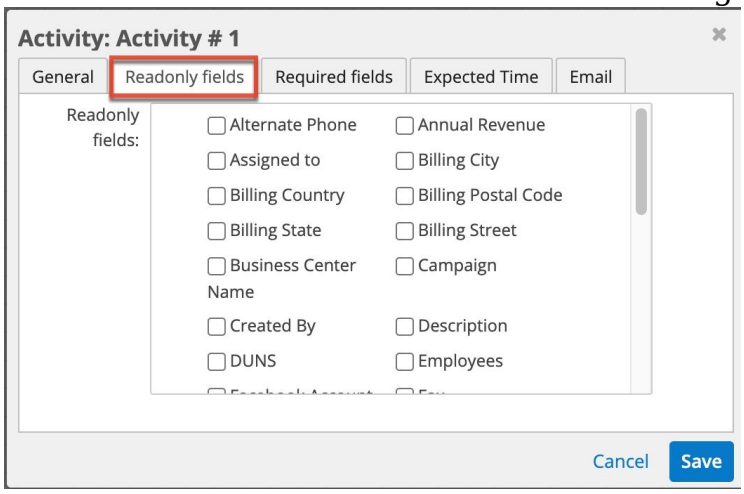


The current process user may select a new process user from the team configured by admin in the "Other Routing Options" Team field.



Read-Only Fields Tab

Here, the administrator can restrict the process user from editing some or all fields on the Sugar record for which the process applies. Place a checkmark next to the fields that should not be edited during the form processing step.

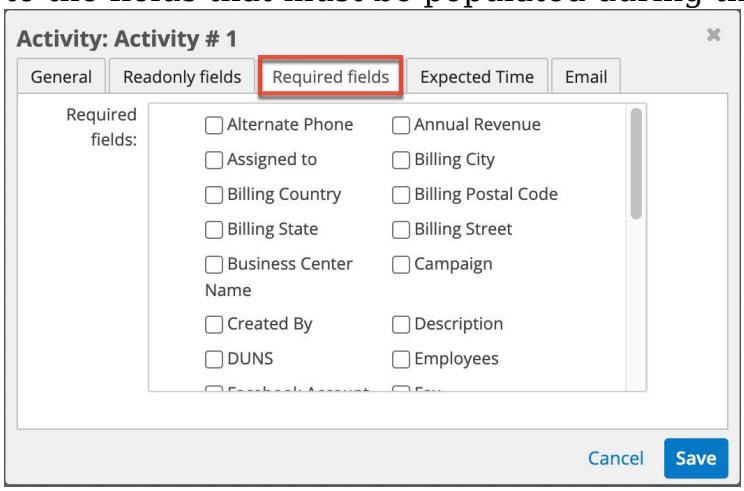


Note: Fields configured as Locked Fields in the Process Definition settings do not

apply to the process user when he or she is executing the process. To prevent the process user from editing a field during the approve/reject or route stage, you must configure the fields as read-only in the activity's Read-Only Fields tab.

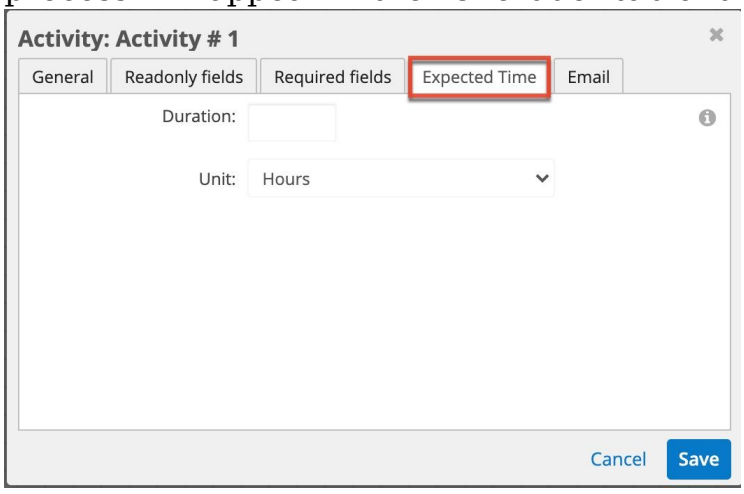
Required Fields Tab

In this tab, the administrator can require the process user to complete some or all fields on the Sugar record for which the process applies. Place a checkmark next to the fields that must be populated during the form processing step.



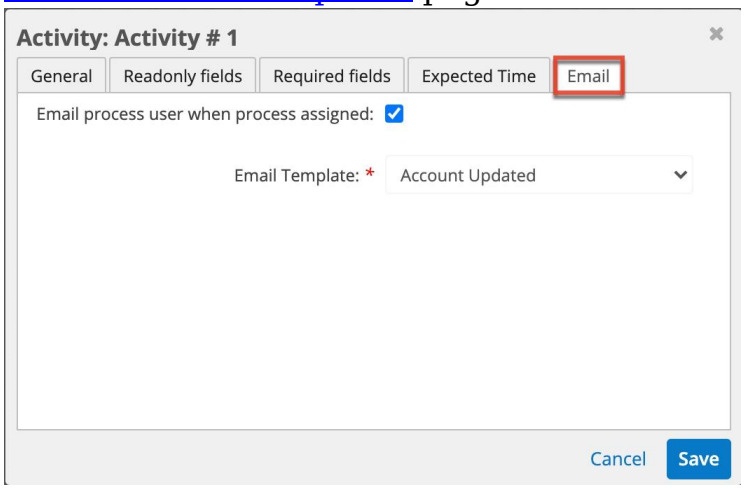
Expected Time Tab

Complete the fields in the Expected Time tab to set a timeout interval for the process user to execute this activity. When the time specified in the Duration field has expired, the activity will be considered overdue. If an Activity is overdue, the Due Date property will be shown in red on the process execution screen and the process will appear in the "Overdue" tab of the My Processes dashlet.



Email Tab

If you wish to send an email notification to the process user to inform them that a new process has been assigned to them, enable the checkbox in this tab. Then, select a process email template to use for the email. In this scenario, it is most useful to use an email template that contains a link to the process so the recipient can click the link to open the specific process requiring action in Sugar. See the Process Email Templates page for details on inserting this link.

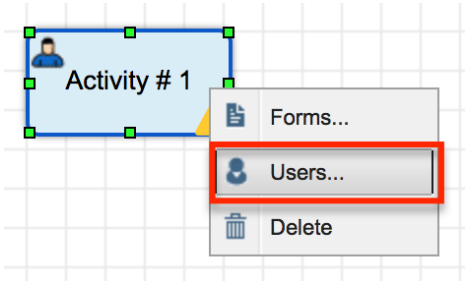


Users Setting

The "Users..." setting controls which user will be responsible for executing the process activity form. When a process reaches the activity in a flow, the process user will see a line item in their Processes dashlet or Processes module list view. The form type and other options must be separately configured in the "Forms..." setting.

Note: The Assignment Method chosen here refers only to the user that will execute the process, or "Process User". References to the Sugar record's assigned user are labeled "Assigned To User".

To configure the Users setting for an activity, right-click on the icon and select "Users...".

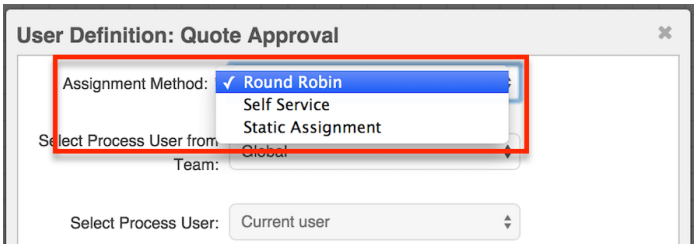


A configuration window will open. Choose one of the following process user assignment methods from the dropdown list:

- Static Assignment
- Round Robin (default)
- Self Service

These three options are explained in detail in the following sections.

Note: If this activity type is not properly configured, it will default to the Round Robin process-assignment method for the Global team.

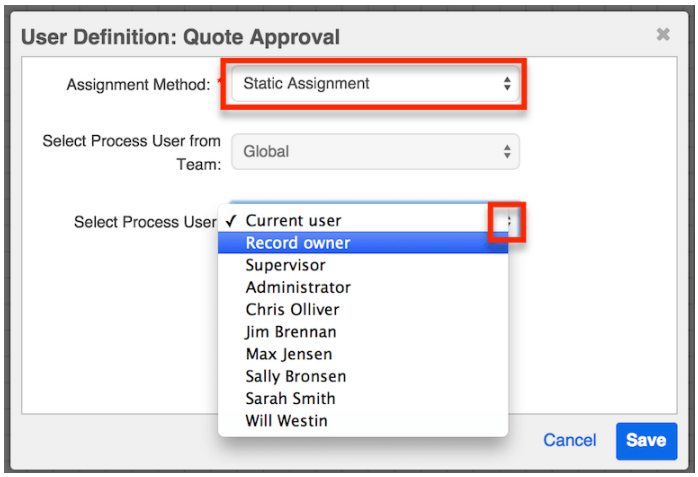


Static Assignment

Choose "Static Assignment" to assign process Activities to a specific process user. You can also select one of the following variable user types:

- **Current User**: The Current User refers to the last process user who has been defined in the process definition. If no process user has been previously defined, the Current User will be the user who is in the Assigned To field of the targeted Sugar record.
- **Record Owner**: The Record Owner is the user who is in the Assigned To field of the targeted Sugar record.
- **Supervisor**: When selected, the supervisor of the user who is in the Assigned To field of the targeted Sugar record will be prompted to execute this process activity. This relationship must be configured in the "Reports to" field of the Users module. For more information about editing User fields, please refer to the User Management page of the Administration Guide.

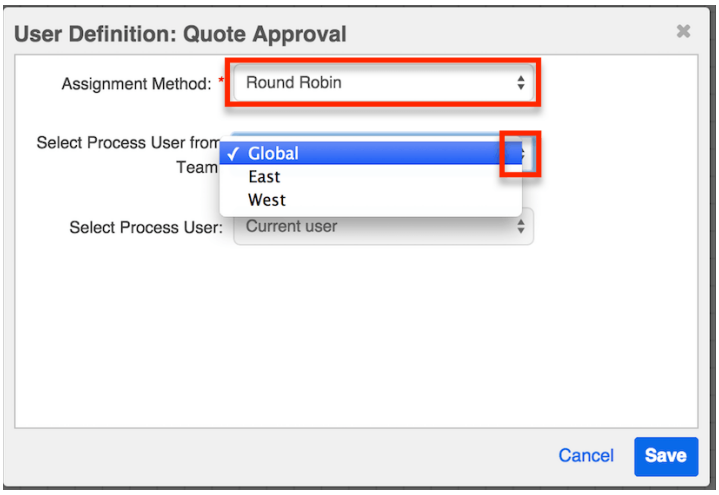
Static Assignment will disable the Team configuration option in this window and require only the Select Process User field to complete the configuration.



Round-Robin

Choose the Round Robin assignment method to equally distribute process activities to the explicit members of a team in a take-your-turn fashion. For example, if Jim and Sally belong to team "East," a Round Robin distribution for team East will assign the activity to Jim the first time it runs, to Sally the second time it runs, and then to Jim again on the third execution (and so on). Round Robin actions process users in ascending order based on the ID of the user record in the Users module.

Round Robin will disable the Select Process User option in this window and require only the "Select Process User From Team" field to complete the configuration.

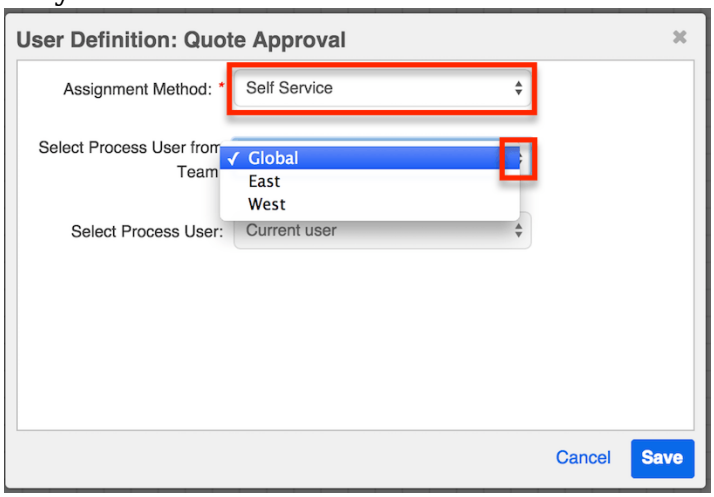


Self Service

Choose the Self Service assignment method to allow any user of a specified team to claim the activity in a process. By enabling users to claim process activities as

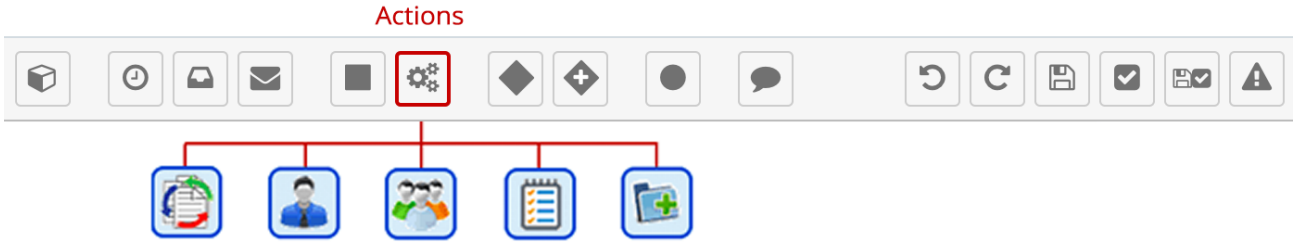
they have time for them, Self Service assignment reduces congestion in the workflow. Self Service activities that are ready to be claimed will appear in the Self Service Processes tab of the Processes dashlet.

Self Service will disable the Select Process User option in this window and require only the "Select Process User From Team" field to complete the configuration.



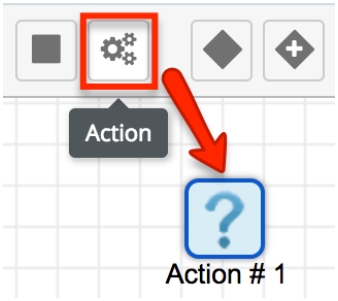
Adding Actions

Actions are automated elements used to execute a business rule, create or update a Sugar record, or designate a process user. Actions are completed by the SugarBPM engine and do not require any human interaction to execute. There are five types of actions available in the Visual Designer and they are all represented by a single icon on the design toolbar:



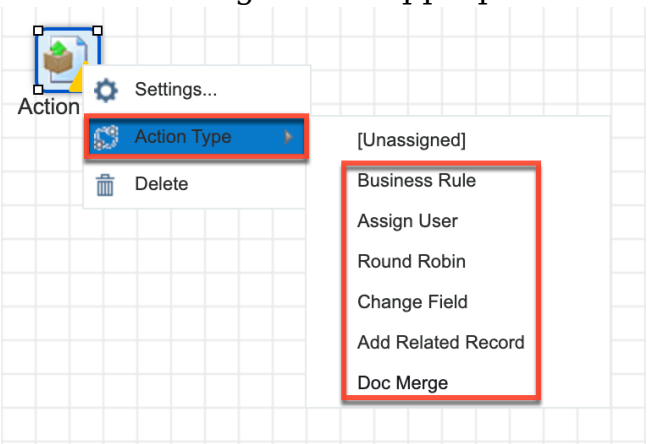
The action must be configured after adding it to the designer canvas. The available action types are:

- Business Rule
- Assign User
- Round Robin
- Change Field
- Add Related Record
- Doc Merge



Note: The Action will have an error alert (!) icon warning you to add an outgoing sequence connector. This is normal and will disappear after you create the next element and connect it to the action. For more information about element errors, refer to the Process Validation section of this page.

The Action will display a question mark image until it has been configured. Right-click on the Action icon to configure the action type. By default, an Action element is configured as type "Unassigned". This is simply to prevent a non-configured Action from affecting the Process flow. You must choose one of the Action Types and then configure the appropriate settings.



- **Settings**: This option will be grayed out until an action type is selected.
- **Action Type**: Choose the type of action this element will execute. These options are explained in detail in the remaining Adding Actions sections of this page.
- **Delete**: Remove the element from the canvas.

Business Rule

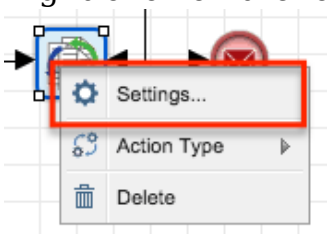
This Action type allows the administrator to select a process business rule in order to return a corresponding value. Business Rule actions must be followed by a Gateway element to analyze the rule's return value. Follow these steps to add a process business rule to the process definition:

Note: The process business rule must already be configured and saved in the Process Business Rules module in order for it to be available in the Action's settings and must utilize the same target module as the process definition.

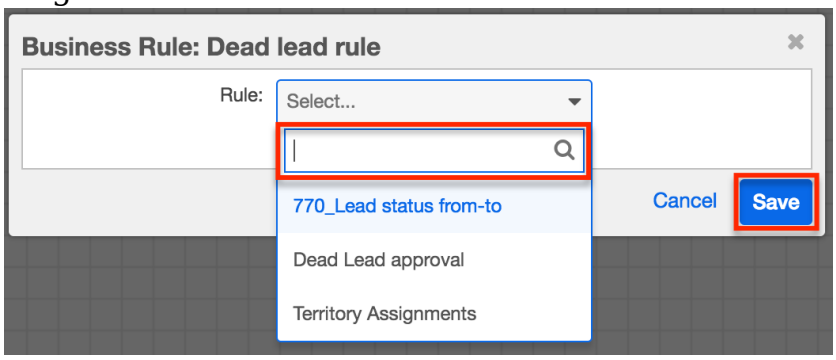
1. Right-click on the Action icon and then select Action Type > "Business Rule":
2. The Action's icon will change to:



3. Right-click on the icon again and choose "Settings":



4. Select the appropriate process business rule and then click the Save button. Please note that the Rule dropdown list will only display rules that were configured for the same target module as the process definition's target module.



5. Now place a gateway element to the right of the business rule icon. Connect the business rule action to the gateway using a sequence connector.
   Note: The gateway element is required in conjunction with a business rule action.
6. Determine the number of possible outcomes for the business rule. Drag the corresponding elements for each icon (any combination of events, actions, or activities) to the design canvas, just to the right of the gateway.
7. Connect the gateway to these elements using sequence connectors.
8. Finally, configure the gateway criteria before moving on. The gateway will evaluate all possible outcomes of the business rule and direct the flow of the process to the next element as appropriate. Please refer to the Adding Gateway Elements section of this page for more information.

Assign User

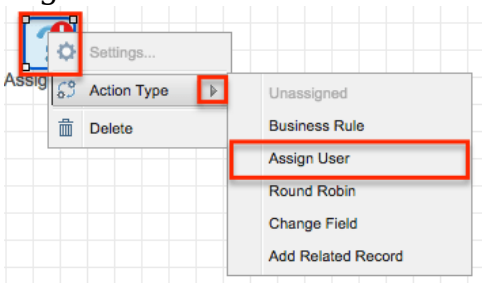
This Action type allows the administrator to specify a new process user or the user

who will be responsible for the remaining part of the process. Assign User actions should be followed by an Activity for the process user to complete. When a process reaches this point in a flow, the process user will see a line item in their Processes dashlet or Processes module list view.

Follow these steps to add an Assign User action to the process definition:

Note: If an Assign User action is not properly configured, it will stop the flow of the process.

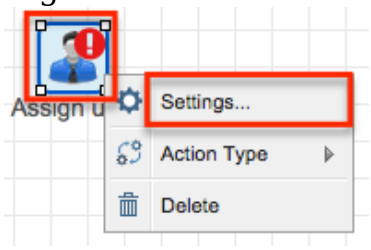
1. Right-click on the Action icon and then select Action Type > "Assign User":



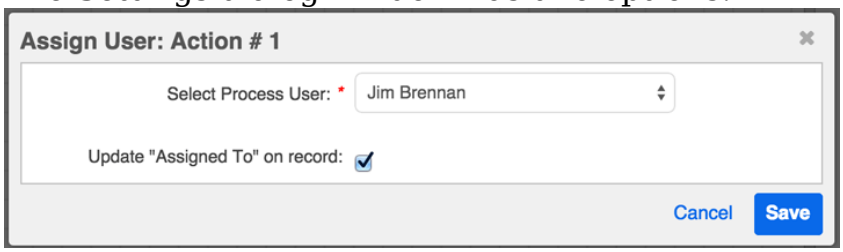
2. The Action's icon will change to:



3. Right-click on the icon and choose "Settings":



4. The Settings dialog window has two options:



- **Select Process User**: Select the name of the user that will be responsible for the remaining process steps, until the process ends or a new process user is designated. The Dropdown list will only display users that have an Active status in the Users module.
- **Update "Assigned To" on record**: Enable this option to automatically change the Sugar record's "Assigned To" field to the process user chosen in the previous field. If the new user is not already a member of any of the teams on the record, the SugarBPM engine will append the user's private team to the record for visibility purposes.

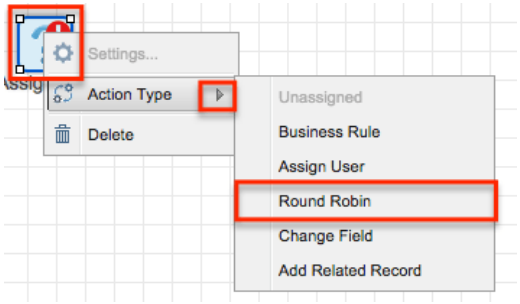
Click "Save" to preserve these settings and return to the visual designer canvas.

Round Robin

This Action type assigns the process and, optionally, the target record, to the members of a team in a take-your-turn fashion. For example, if Jim and Sally belong to team "East", a Round Robin distribution for team East will assign the record to Jim the first time it runs, to Sally the second time it runs, and then to Jim again on the third execution (and so on). Round Robin actions select users for record assignment in ascending order based on the ID of the user record in the Users module.

Follow these steps to add a Round Robin action to the process definition:

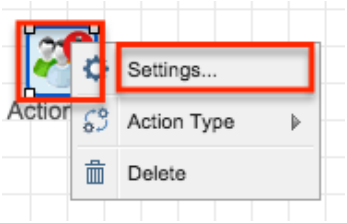
1. Right-click on the Action icon and then select Action Type > "Round Robin":



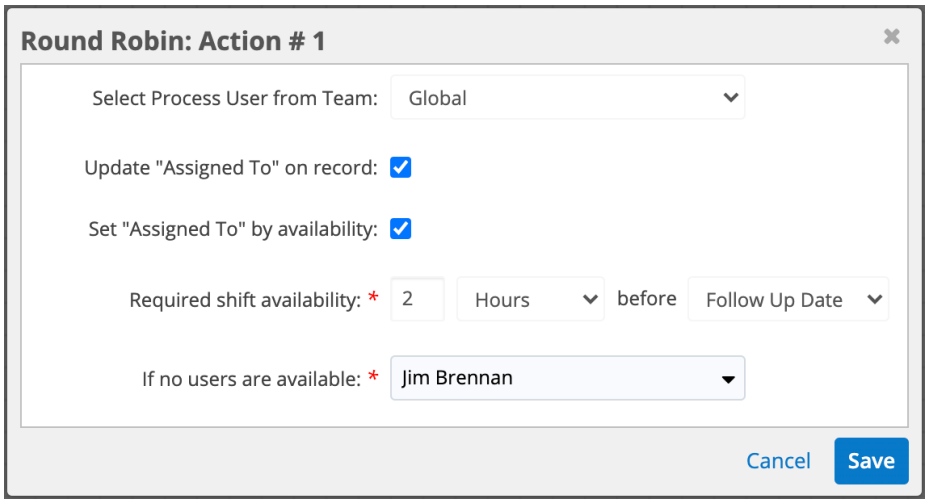
   The Action's icon will change to:



2. Right-click on the icon and choose "Settings":



3. The Settings dialog window has two options initially but more become available as fields are enabled:



- **Select Process User from Team**: Select the name of the team from which a member will be chosen for assignment. If the Round Robin team is not already related to the record engaged in the process, it will be appended to the record's team set. Note that users with a "Members Reports-to" membership in a team are not included in the round-robin selection. See the Team Management documentation for more details on this type of membership.
- **Update "Assigned To" on record**: Enable this option if the Sugar record's Assigned To field should also be updated to the team member selected by the Round Robin action. Enabling this field causes the next checkbox to be displayed.
- **Set "Assigned To" by availability**: Enabling the previous checkbox causes this field to be displayed. Enable this option if you want SugarBPM to assign records based on users' availability for work.
- **Required shift availability**: Set these fields according to how much time employees need to have available to be assigned the record. See the Round Robin Availability section below for details on setting this field.
- **If no users are available**: Select the user that will be assigned records if no users in the Round Robin team are available.

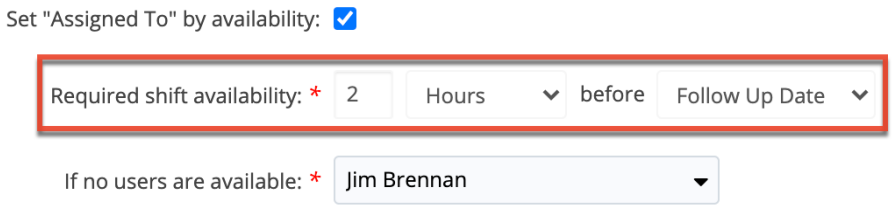
4. Click "Save" to preserve these settings and return to the visual designer canvas.

Round Robin Availability

If you configure a Round Robin action to assign records by availability, the process calculates the next user in the round-robin sequence that is available based on their shifts, shift exceptions, and holidays. Users who are currently on shift are considered available unless they have an enabled shift exception or holiday at that moment. Shift exceptions that are not enabled are not included. Refer to the Shifts documentation for details on setting up shifts and shift exceptions, and refer to

the Getting Started documentation for details on creating user holidays.

If you also specify the minimum required shift availability, the calculations will consider only the users that have enough shift time before the specified deadline to complete the necessary work. For example, if your employees need two hours to perform the work required before the deadline (e.g., to meet the Service Level Agreement for a customer), set the Required shift availability field as follows:



- **Number field**: Enter the number portion of the minimum required availability duration.
- **Time dropdown field**: Select the time unit (e.g., hours or minutes) for the duration.
- **Datetime dropdown field**: Select the deadline before which users must have the required amount of availability. This dropdown menu lists all fields of type Datetime on the target record. Note that it may not make sense to use datetime fields that are always in the past (e.g., Date Created).

Use the "If no users are available" field to select a default user to assign records to if none of the members of the team are available. Note that if the deadline is in the past at the time of record assignment, it is not possible for any user to have enough availability to be selected. As a result, the default user will be selected.

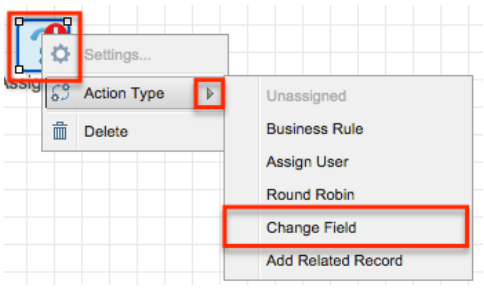
Change Field

This Action type will let you change the value of one or more fields on the target record, on records related to the target record, or on records related to that related record. Please note that calculated fields, including the Forecast field in the Revenue Line Items module (or in the Opportunities module if Revenue Line Items are disabled), cannot be modified by a Change Field action.

Note: If a Change Field action is not properly configured, the flow will ignore the action and continue running without changing any fields.

Follow these steps to add a Change Field action to the process definition:

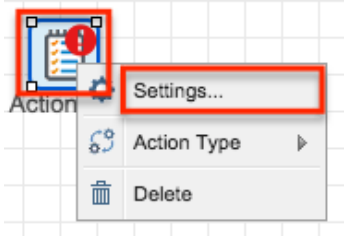
1. Right-click on the Action icon and then select Action Type > "Change Field":



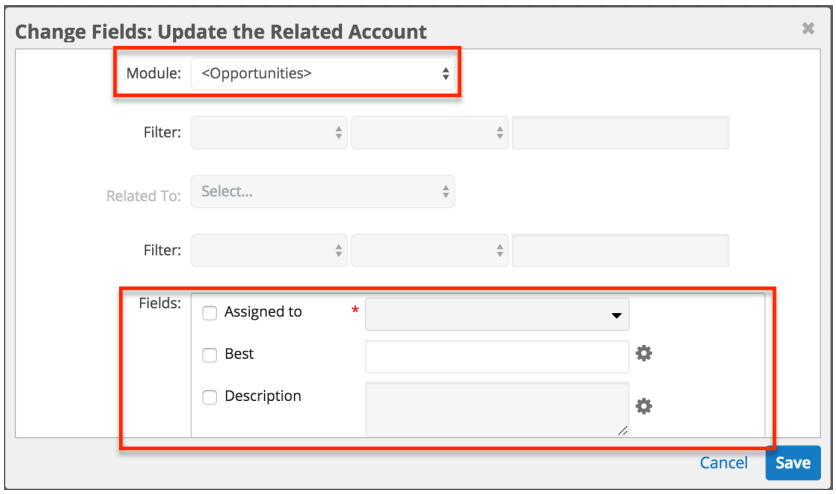
2. The Action's icon will change to:



3. Right-click on the icon again and choose "Settings":



4. The Change Fields window will appear. The Module field will be pre-populated according to the target module specified in the process definition's record view, and that module's available fields will be listed in the Fields section below.



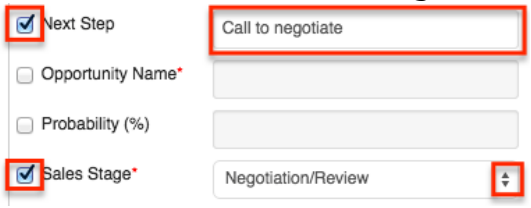
There are also several options that will allow you to change one or more fields on a one-away or two-away record related to the target module. The options are as follows:

- **Module** (required): Select the first-level module relationship to the record you want to modify.
  - If the record you want to modify is the target record, then simply leave the target module selected (default).
  - If the record you want to modify is a one-away record (e.g., a record that is directly related to the target record), then select the module with the record that you want to modify.
  - If the record you want to modify is a two-away record (e.g.,

a record that is related to a record that is directly related to the target record), then select the intermediate module here; not the target module nor the module that contains the record you want to modify.

- **Filter**: Optionally, apply a filter to the first-level module. For example, if the first-level module is Cases, you can restrict the criteria to apply to only open cases by setting "Status > is not equal to > Closed". Please note that, if the first-level module is on the one side of a one-to-one or many-to-one relationship, then the filter option will be grayed out, as the filter can be defined in the criteria of the event that precedes the action.
- **Related To**: Optionally, select a second-level module relationship. For example, set the second-level module to Accounts if you want to modify the accounts that are related to the records in the first-level module field.
- **Filter**: Optionally, apply a filter to the second-level module records. Please note that, if the first-level module is on the one side of a one-to-one or many-to-one relationship, then the filter option will be grayed out.
- **Fields** (required): Finally, select the fields you want to modify on the record, as explained in the next step.

5. To have the process definition update a field, you must first enable that field for editing by clicking inside the field's adjacent checkbox. Each field will be locked from editing until its corresponding checkbox is selected.



6. Enter or select the desired field value. Fields that display a Settings icon support advanced configurations.
7. Click "Save" to preserve these settings and return to the Visual Designer canvas.

Advanced Configuration Options for Change Field Actions

The following field types support advanced configuration options for Change Field actions, as indicated by the Settings icon.

Text Fields

To specify the value of a text field, use any combination of Sugar field variables and text strings. For example, to append the Opportunity's Likely Amount to an existing Opportunity name, follow these steps. In this example, a $100 opportunity named "5 Widgets" will be updated to "5 Widgets - $100".

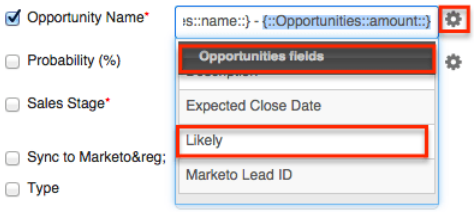
1. Enable the checkmark next to the field name that you want to edit, and then click on the Settings icon next to the empty field:



2. Click on Opportunities Fields > Opportunity Name. This will insert a variable into the Opportunity Name field that references the current value of the field when the corresponding process reaches this point in the flow.



3. Place the cursor inside the field immediately after the variable and type a space or hyphen character for formatting.
4. Click on the Settings icon again.
5. Click on Opportunities Fields > Likely to insert a second field variable.



6. When the formula is complete, the field value container will look similar to this:

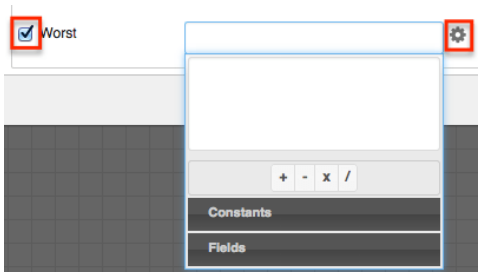


Note: If a Change Field action references a field variable that is also changed by the action, the variable will reflect the value of the field before the change field action executes. For example, if the action changes the Probability field to {probability + 1}, and the same action also inserts the Probability field variable into the Description field, after saving, the description will display {probability} and the Probability field will equal {probability + 1}.

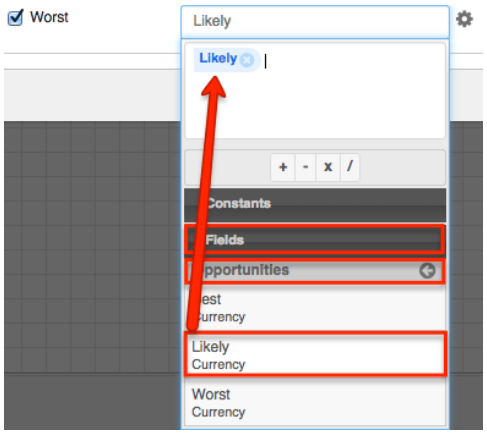
Number Fields

To create a calculated value for number fields, use some combination of operators, Sugar variables, and constants. For example, to calculate the Worst Amount field to contain 50% of the value of the Likely Amount field, follow these steps:

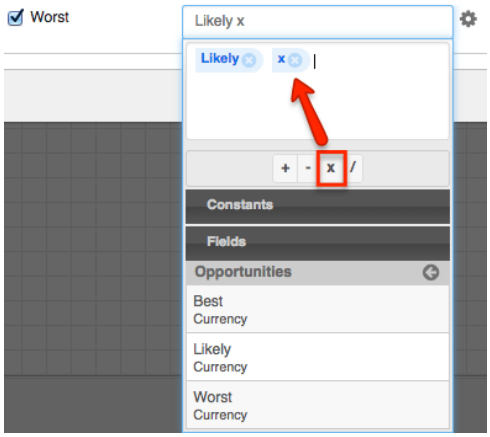
1. Enable the checkmark next to the field name that you want to edit, and then click on the Settings icon next to the empty field:



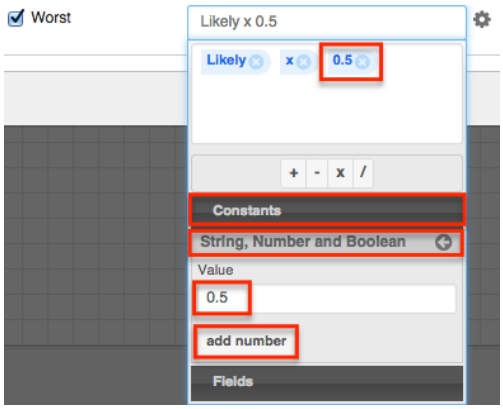
2. In the criteria builder, place the variable for "Likely Currency" onto the criteria window by clicking on Fields > Opportunities > Likely Currency. This will automatically add the variable to the window:



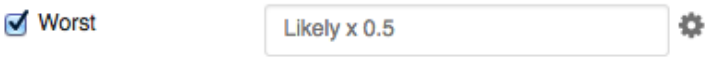
3. Click on the multiply (x) operator from the Operators list to add it to the formula window:



4. Now tell the criteria builder to multiply the Likely amount by half, or 0.5. Click on Constants > String, Number and Boolean > type "0.5" in the Value field (with no quotes) and then click "Add Number" to move the value to the criteria builder canvas.

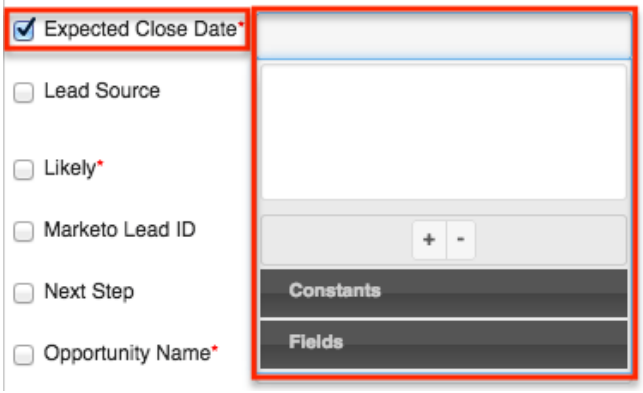


5. When the formula is complete, click away from the criteria builder window to see the formula in the field value container:



Date Fields

Date and datetime fields will reveal a criteria builder where the admin can calculate a particular value. Please see the Fixed Dates section of the Creating Conditions for Events and Actions documentation on this page to learn how to configure date fields.



User Fields

For Change Field actions, user fields support the following variable user types relative to the record that triggered the running process:

- **Created by User**: The user who created the trigger record
- **Current User**: The user who is defined as the process user within the process definition
- **Last Modified by User**: The user who last modified the trigger record
- **Record Owner**: The user assigned to the trigger record
- **Supervisor**: The supervisor of the user assigned to the trigger record

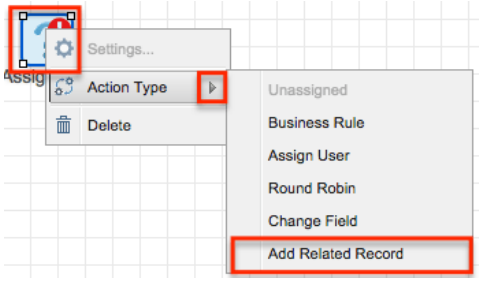
Add Related Record

This Action type will create a new Sugar record and relate it to the target Sugar record or to a record related to the target record. Please note that the values of calculated fields, including the Forecast field in the Revenue Line Items module (or in the Opportunities module if Revenue Line Items are disabled), cannot be directly defined by an Add Related Record action.

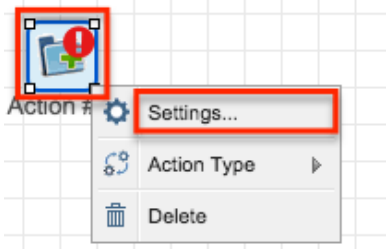
When the SugarBPM engine creates a new record, the record's assigned user will receive an assignment notification email if notifications are enabled in Sugar's system settings and the user has enabled notifications in their user profile. For more information on assignment notifications, please refer to the Getting Started documentation in the Application Guide and the Email documentation in the Administration Guide.

Note: If an Add Related Record action is not properly configured, the flow will ignore the action and continue running without creating a new record.

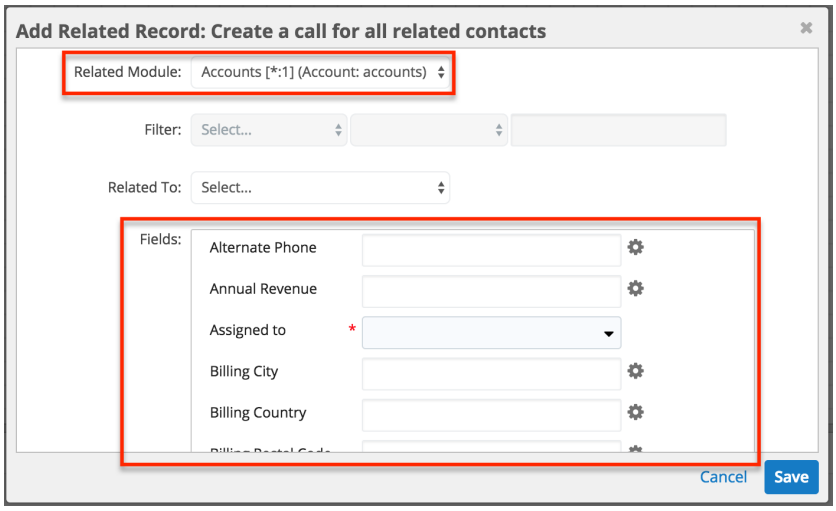
Follow these steps to add an Add Related Record action to the process definition:

1. Right-click on the Action icon and then select Action Type > "Add Related Record":


2. The Action's icon will change to:

3. Right-click on the icon and choose "Settings":


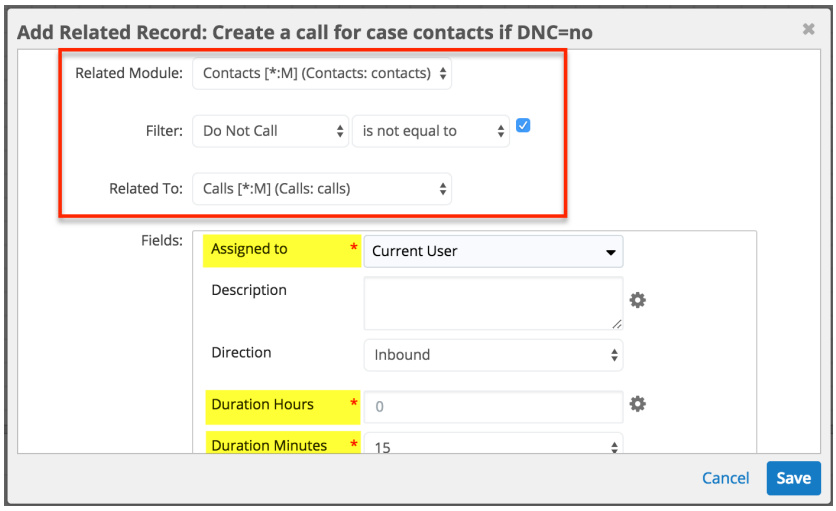
4. The Add Related Record window will appear. The Module field will present the potential options in alphabetical order, with the topmost module's available fields listed in the Fields section below.



The following options will allow you to create a related record or a record in a two-away module related to the target module:

- **Related Module** (required): Select the first-level module relationship to the record you want to create.
  - If the record you want to create is directly related to the target record, then select that module here.
  - If the record you want to create is a two-away record (e.g., a record that will be related to a record that is directly related to the target record), then select the intermediate module here; not the target module nor the module where you want to create a new record.
- **Filter**: If the record you want to create is a two-away record, optionally, apply a filter to the first-level module. For example, if the first-level (i.e., one-away) module is Contacts, you can create related call records for only the related contacts where "Do Not Call > is not equal to > Yes". Please note that, if the first-level module is on the one side of a one-to-one or many-to-one relationship, then the filter option will be grayed out.
- **Related To**: Optionally, select a second-level module relationship. For example, set the second-level module to Calls if you want to create calls related to the contact records in the first-level Related Module field.

5. Complete the fields that the SugarBPM engine will populate in the new record. Any fields that are required by the module (indicated by a red asterisk) must be configured in this step. The following screenshot shows an Add Related Record action configured for a Cases process to create call records related to any contacts that are related to the target case and do not have Do Not Call set.



Fields that display a Settings ⚙ icon support advanced configurations.

6. Click "Save" to preserve these settings and return to the Visual Designer canvas.

Advanced Configuration Options for Add Related Record Actions

The following field types support advanced configuration options for Add Related Record actions, as indicated by the Settings ⚙ icon.

Text Fields

To specify the value of a text field, use any combination of Sugar field variables and text strings. For example, when creating a follow-up task related to a target opportunity, follow these steps to use the opportunity's Name field in the subject of the task. In this example, a task related to an opportunity named "5 Widgets" will have the subject "Follow up - 5 Widgets".

1. Click on the Settings ⚙ icon next to the empty field, then choose Opportunities Fields > Opportunity Name. This will insert a variable into the Subject field that references the opportunity when the corresponding process reaches this point in the flow.

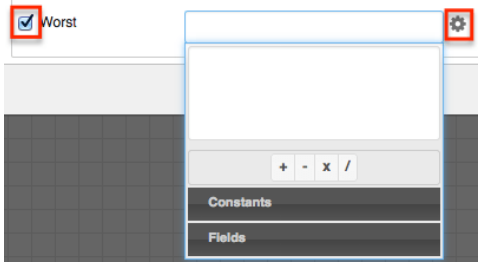


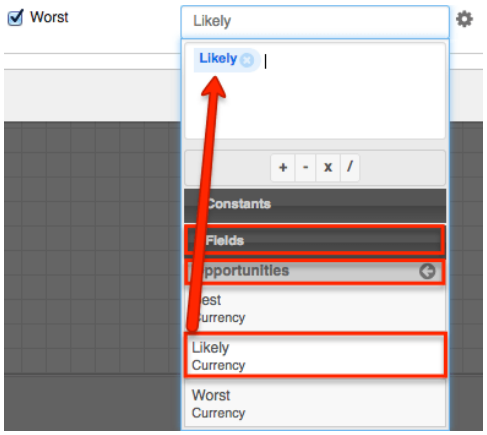
2. Place the cursor inside the field immediately before the variable and type "Follow up: " Include a space or hyphen character for formatting. When the formula is complete, the field value container will look similar to this:

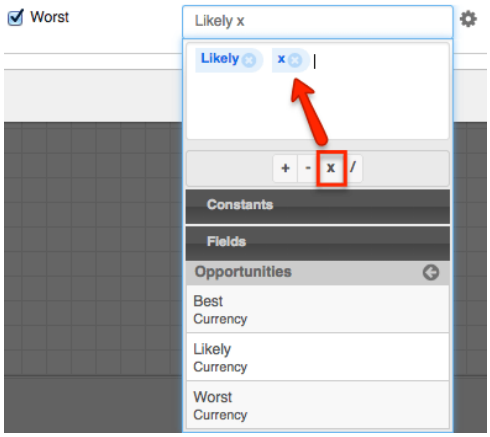


Number Fields

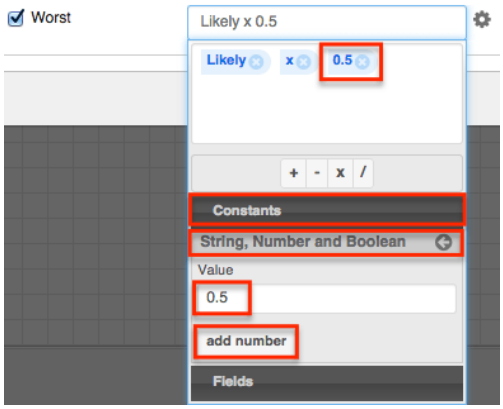
To create a calculated value for number fields, use some combination of operators, Sugar variables, and constants. For example, to calculate the Worst Amount field to contain 50% of the value of the Likely Amount field, follow these steps:

1. Click on the settings ⚙ icon next to the empty field:


2. In the criteria builder, place the variable for "Likely Currency" onto the criteria window by clicking on Fields > Opportunities > Likely Currency. This will automatically add the variable to the window:


3. Click on the multiply (x) operator from the Operators list to add it to the formula window:


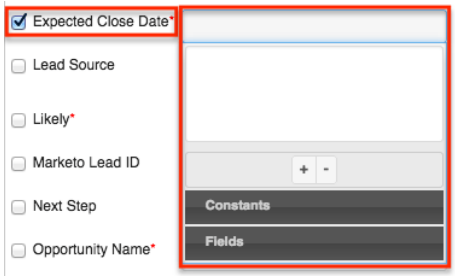
4. Now tell the criteria builder to multiply the Likely amount by half, or 0.5. Click on Constants > String, Number and Boolean > type "0.5" in the Value field (with no quotes) and then click "Add Number" to move the value to the criteria builder canvas.



5. When the formula is complete, click away from the criteria builder window to see the formula in the field value container:



Date Fields: Date and datetime fields will reveal a criteria builder where the admin can calculate a particular value. Please see the Fixed Dates section of the Creating Conditions for Events and Actions documentation on this page to learn how to configure date fields.



User Fields: For Add Related Record actions, user fields support the following variable user types relative to the record that triggered the running process:

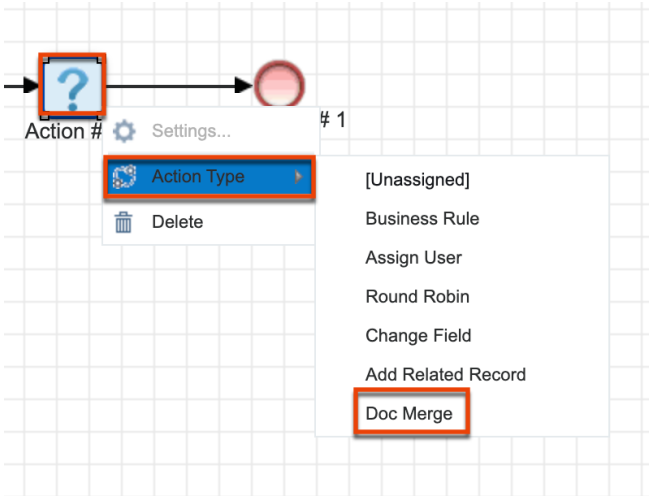
- **Created by User**: The user who created the trigger record
- **Current User**: The user who is defined as the process user within the process definition
- **Last Modified by User**: The user who last modified the trigger record
- **Record Owner**: The user assigned to the trigger record
- **Supervisor**: The supervisor of the user assigned to the trigger record

Doc Merge

This action type uses the Doc Merge feature to merge a document template with designated records. Merged documents are assigned to the user who initiates the process action.

Follow these steps to add a Doc Merge action to the process definition:

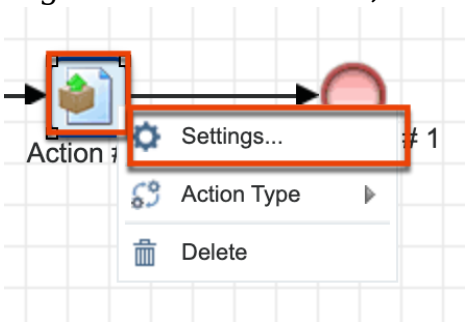
1. Right-click on the Action icon and then select Action Type > "Doc Merge".



   The icon changes to:

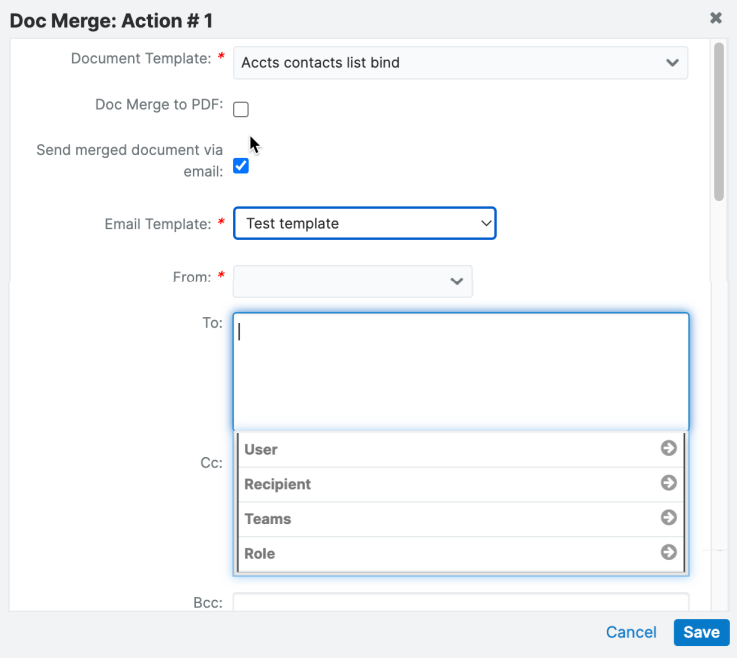


2. Right-click on the icon, and then choose "Settings":



3. Identify the following options in the Settings dialog window:

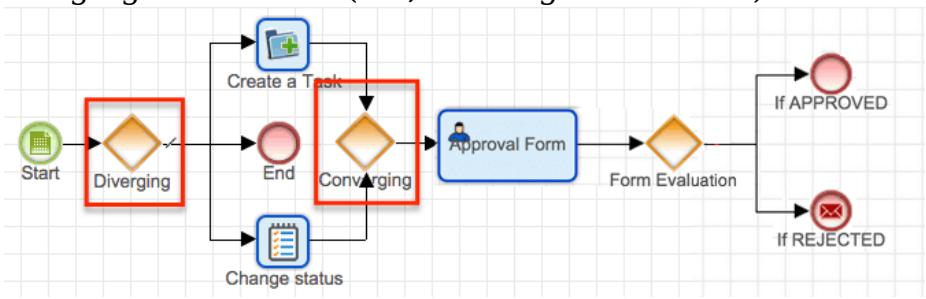
   - **Document Template**: The name of the Document Template to be merged with records. You must begin typing in the Search field to initiate a search for Document Templates.
   - **Doc Merge to PDF**: When this option is selected, the resulting merged document will be a PDF file type. Leave the checkbox de-selected to output the file as its native file type as stored in the Document Templates module (e.g., DOCX).
   - **Send merged document via email**: If this option is selected, the resulting merged document will be sent via email using the selected email template, From, and To values.



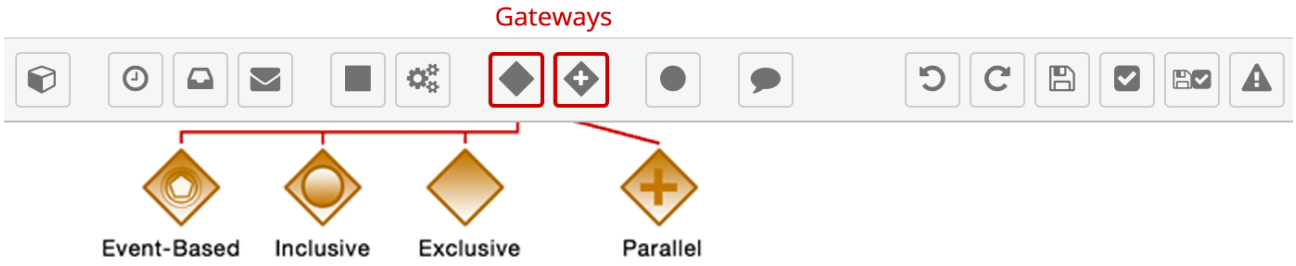
4. Click the Save button to preserve these settings and return to the visual designer canvas.

Adding Gateway Elements

Gateways are connective elements used to control the flow of a process via merging and splitting. When a single activity may result in several different outcomes, a Gateway serves as a splitting mechanism (i.e., divergent element). When several activities may result in a common outcome, a Gateway serves as a merging mechanism (i.e., convergent element).



A Gateway is represented as a diamond in the Visual Designer and by the fourth group of icons on the design toolbar. There are two icons that each enable at least one type of configurable divergent or convergent moment.



To add a Gateway element to a process definition, drag and drop one of the two Gateway icons onto the designer canvas. Right-click on the diamond-shaped icon that appears in order to define a Gateway type, direction, and configure its settings.

The four types of Gateways are explained in the following sections.

Gateway Type	Divergent	Convergent	Use
Exclusive Gateway	□	□	When divergent, determines a single outgoing path based on data conditions; When convergent, accepts only the flow that reaches it first
Inclusive Gateway	□		Evaluates all criteria to determine one or more outgoing paths
Parallel Gateway	□	□	When divergent, begins the concurrent execution of all outgoing paths; When convergent, waits for completion of all concurrent paths
Event-Based Gateway	□		Evaluates Wait events and Receive Message events, creating a "race"

			condition

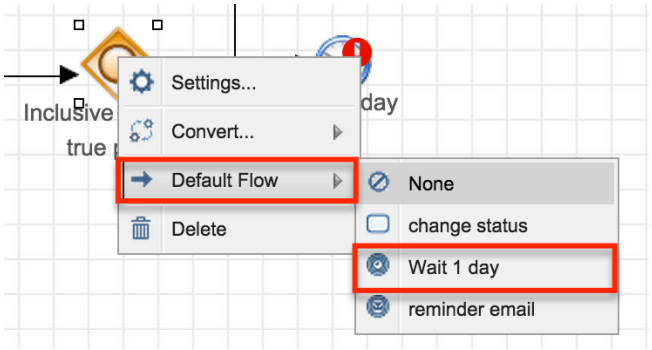
Note: A convergent gateway is usually required after a divergent gateway, but not always. Carefully consider the outcome for each path in all possible user scenarios and be sure to use the appropriate End event(s). When divergent paths do not converge, you will most likely need to use Terminate Process End events. For more information on End events, please refer to the Adding End Events section of this page.

Default Sequence Flows

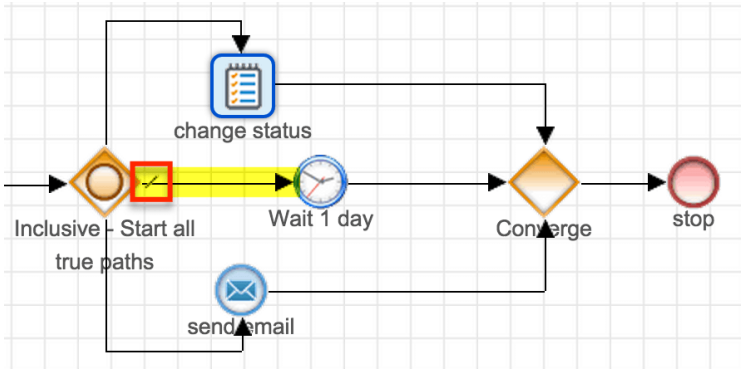
Default sequence flows represent the path your process takes when none of the defined gateway conditions evaluate to true.

- There must be one default sequence flow defined per divergent gateway object.
- Define the default flow before configuring any other criteria for the outgoing flows. Because default flow elements require no conditions, the default flow element will not have a corresponding Criteria field in the Gateway's criteria builder pop-up.
- Failure to define a default sequence flow will result in an element error, as explained in the Process Validation section of this page.

To define a default sequence flow, first, connect the Gateway to all possible outcome elements. Next, right-click on the Gateway icon and hover over the Default Flow option. A menu will appear listing all of the potential flow routes from the Gateway. Select the element that should occur when no criteria are met by the others.



After defining the default flow, the sequence connector leading to the default flow element will be distinguished by a small hash mark through the connector line:



For more information on interacting with sequence connectors, please refer to the Sequence Flow section of this documentation.

Exclusive Gateways



Exclusive gateways can be used to diverge or converge flow elements in a process. Exclusive gateways will evaluate several conditions but only direct the flow to or from a single path in the flow.

Divergent Exclusive Gateway

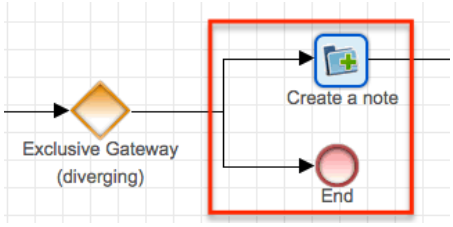
Only one path will succeed from an Exclusive gateway, and it will be the one that first accomplishes its start criteria.

Note: You must define a default sequence flow for divergent Exclusive gateways to account for situations where all criteria are false.

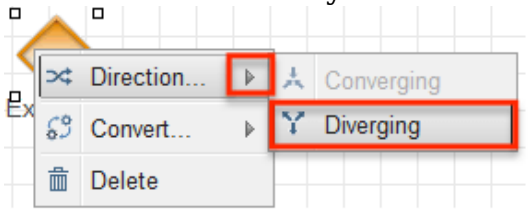
- If several criteria are true, the flow will be routed through the first (topmost) flow that evaluates as true.
- If no criteria are true, the flow will be routed through the default flow. If you have not set a default flow, the process definition will be blocked by this element.

Follow these steps to configure a divergent Exclusive gateway:

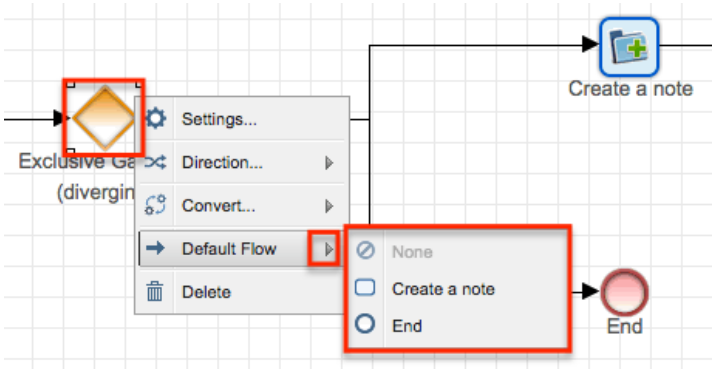
1. Drag the Exclusive gateway icon onto the designer canvas.
2. A divergent Gateway requires two or more subsequent elements (any combination of intermediate events, end events, actions, and/or activities). These must be placed on the canvas and connectors must join the elements on the canvas before the Gateway can be configured.



3. Once the Gateway has been connected to the subsequent elements, right-click on the Gateway icon and select Direction > Diverging:

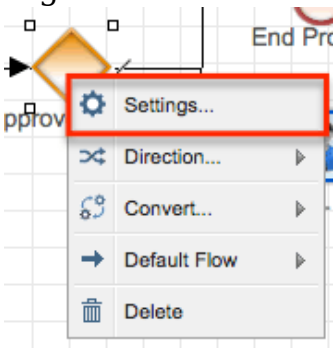


4. Specify a default flow for the Gateway. If no criteria are fulfilled, the flow will be routed through the default one. From the visual designer canvas, right-click on the Gateway icon and hover over the Default Flow option. A menu will appear listing all of the potential flow routes from the Gateway. Select the element that should occur when no criteria are met by the others.



Note: The route set as default will not appear in the Criteria configuration window (step 6).

5. Right-click on the element again and select the option "Settings".



6. A pop-up window will appear with a separate Criteria field for each potential outcome except the default one, which requires no criteria.
    - Click inside each criteria field to display the criteria builder tool. Refer to the Creating Conditions for Events and Actions section of this page for criteria builder instructions.

- Drag and drop the Criteria fields in descending order of priority.



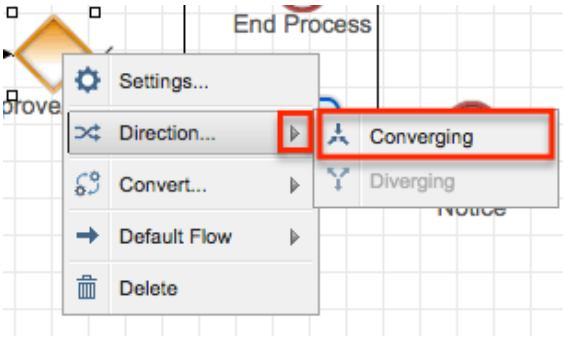
  The criteria will be evaluated as they are presented in this window from top to bottom. Only one path will succeed from an Exclusive gateway, and it will be the one that first accomplishes its criteria. The remaining criteria will not be evaluated. If no criteria are fulfilled, the default flow will succeed (see step 4).

7. Click "Save" to return to the design canvas and continue building the process definition.

Note: A convergent gateway is usually required after a divergent gateway, but not always. Carefully consider the outcome for each path in all possible user scenarios and be sure to use the appropriate End event(s). When divergent paths do not converge, you will most likely need to use Terminate Process End events. For more information on End events, please refer to the Adding End Events section of this page.

Convergent Exclusive Gateway

This Gateway joins multiple paths in a single thread, but only accepts the first flow that reaches the Gateway; the other flows will not be evaluated after that. There are no settings for this element. To configure this Gateway as a convergent element, right-click on the Gateway element and select Direction > Converging:



Inclusive Gateways



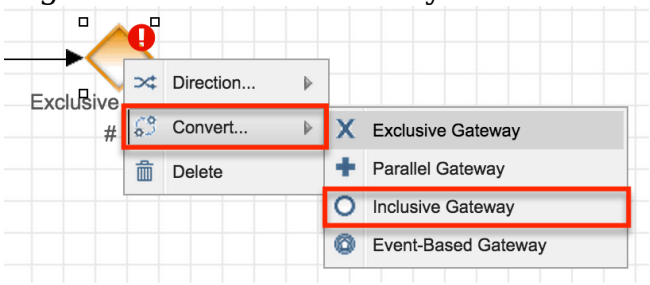
Inclusive gateways are divergent elements that direct a process's flow along all of the paths that accomplish their criteria. This may result in one flow or multiple flows.

Note: You must define a default sequence flow for Inclusive gateways to account for situations where all criteria are false.

- If only one set of criteria evaluates as true, the flow will follow that path as well as the default path.
- If several criteria are true, the flow will be routed along all paths that evaluate as true, which always includes the default path.
- If no criteria are true, the flow will only be routed through the default flow. If you have not set a default flow, the Process Definition will be blocked by this element.

Follow these steps to configure an Inclusive gateway:

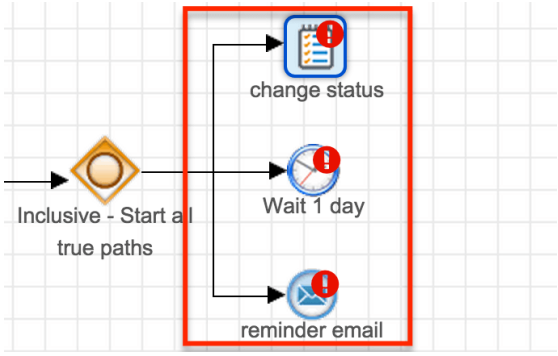
1. Drag the Exclusive gateway icon onto the designer canvas.
2. Right-click on the Gateway icon and select Convert > Inclusive Gateway.



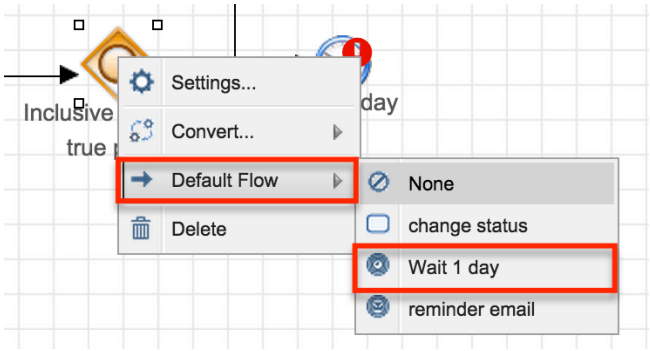
   - The icon will transform from an empty diamond to a diamond containing a circle.
   - Please note that the label will not automatically update and may still be labeled as "Exclusive". Edit this label as appropriate for your process.



3. A divergent Gateway requires two or more subsequent elements (any combination of intermediate events, end events, actions, and/or activities). These must be placed on the canvas and connectors must join the elements on the canvas before the Gateway can be configured.

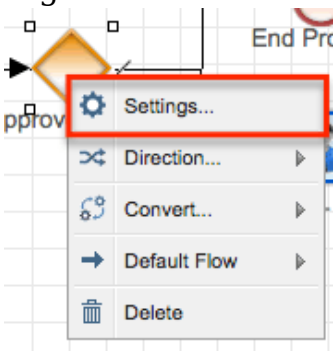


4. Once the Gateway has been connected to the subsequent elements, specify a default sequence flow for the Gateway. The flow will always be routed through the default one at a minimum, as well as through any other paths that evaluate to true. From the visual designer canvas, right-click on the Gateway icon and hover over the Default Flow option. A menu will appear listing all of the potential flow paths from the Gateway. Select the element that should occur when no criteria are met by the others.



Note: The path set as default will not appear in the Criteria configuration window (step 6).

5. Right-click on the Gateway again and select "Settings".



6. A pop-up window will appear with a separate Criteria field for each potential outcome except the default one, which requires no criteria. Click inside each criteria field to display the criteria builder tool. Refer to the Creating Conditions for Events and Actions section of this page for criteria builder instructions.
7. Click "Save" to return to the design canvas and continue building the process definition.

Note: A convergent gateway is usually required after a divergent gateway, but not

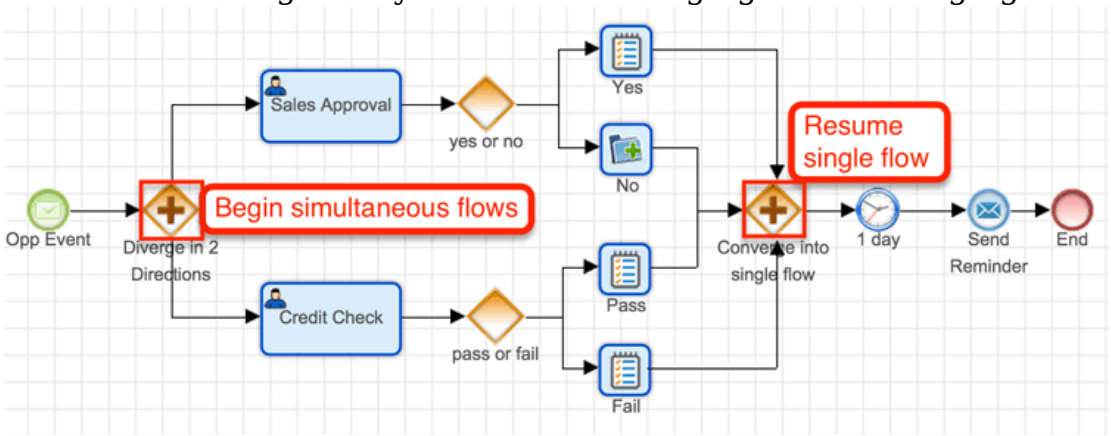
always. Carefully consider the outcome for each path in all possible user scenarios and be sure to use the appropriate End event(s). When divergent paths do not converge, you will most likely need to use Terminate Process End events. For more information on End events, please refer to the Adding End Events section of this page.

Parallel Gateways



Use a Parallel gateway in a complex process that has multiple things happening all at once (or "parallel" to each other). Unlike other gateways, there is no evaluation inside this gateway; it simply tells the process that two or more flows are about to happen at the same time.

Parallel gateways can be divergent or convergent. Divergent Parallel gateways will direct parallel flows, whereas convergent Parallel gateways will receive parallel flows. The same gateway is used for diverging and converging:



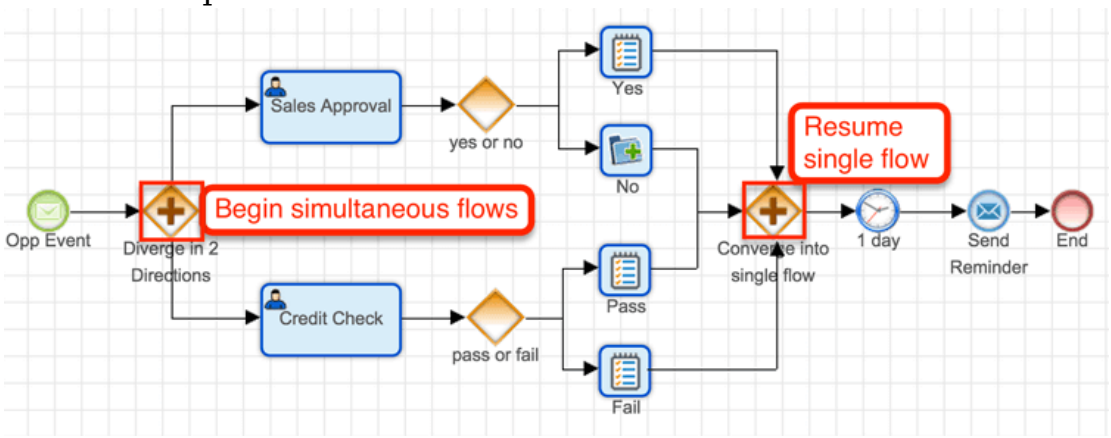
Divergent Parallel Gateway

The divergent Parallel gateway divides the flow into two or more elements in parallel until a subsequent (convergent) Parallel gateway or until the paths are legally terminated via End events. For example, in the screenshot above, the process requires approval from the sales manager and a credit check from the accounting department. If you tried to use an Exclusive gateway for this, it would enforce only one of these options (sales approval OR credit check). But using a Parallel gateway, the process can branch off in both directions at the same time and then converge later. When the parallel flows reconvene, use a convergent Parallel gateway to merge them.

Note: All divergent Parallel gateways must have a convergent Parallel gateway to

close out the multiple paths; otherwise, the engine leaves them active.

The following example demonstrates a process where the Parallel gateway is leveraged to kick off two separate functions. The top flow starts the approval and specifies behavior for approve/reject response. The bottom flow starts a separate flow and eventually, a convergent parallel gateway is used to resume a singular flow for the process.



Note: A convergent gateway is usually required after a divergent gateway, but not always. Carefully consider the outcome for each path in all possible user scenarios and be sure to use the appropriate End event(s). When divergent paths do not converge, you will most likely need to use Terminate Process End events. For more information on End events, please refer to the Adding End Events section of this page.

Convergent Parallel Gateway

A convergent Parallel gateway joins multiple paths into a single thread. The process flow will re-commence only when all of the flows that converge into this gateway have arrived. There are no configuration settings for this gateway.

Event-Based Gateways



Event-based gateways are used to create a "race" condition between Activities, Wait events, and Receive Message events that occur immediately after the gateway. Event-based gateways stop the process flow until one of the activities or events have completed per the following guidelines:

- Receive Message events are complete when their condition is met.
- Wait events are complete when they have satisfied the entirety of their set

duration.
- Activity elements are complete when the activity's form has been approved, rejected, or routed, or if the activity gets reassigned to another user via "Select New Process User".

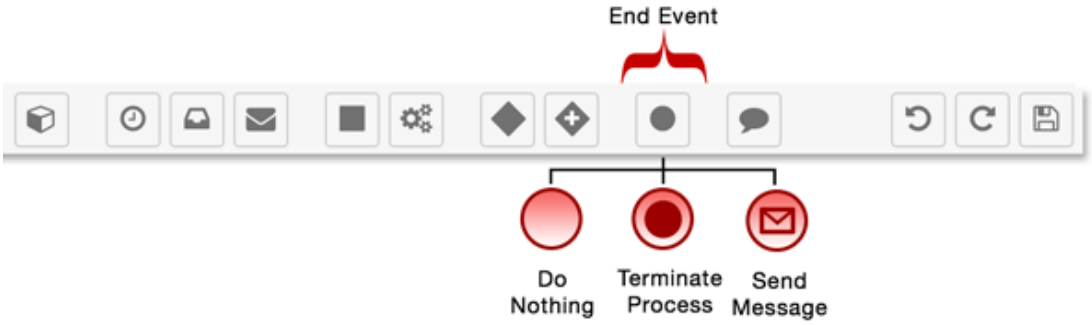
As soon as the first element completes, the flow direction then continues along the path that completed first and the incomplete paths are dropped. There are no configuration settings for an event-based gateway, but the following supporting elements are required:

- A combination of two or more form Activities, Wait events, or Receive Message events to evaluate immediately after the gateway.
- A convergent exclusive gateway must close out the multiple paths; otherwise, the engine leaves them active.

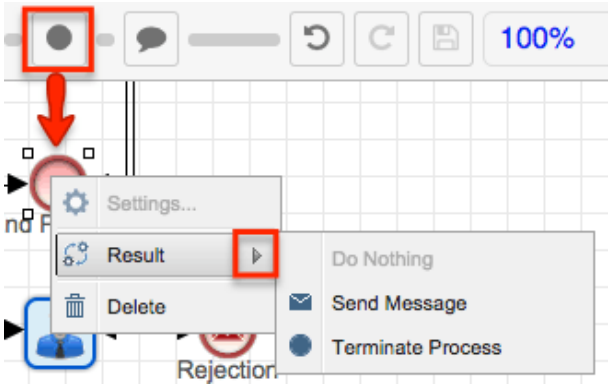
To add an Event-based gateway to your process design, drag and drop the gateway element onto the canvas. By default, it will be set as Exclusive; to convert it into event-based, right-click on the icon and select Convert > Event-Based Gateway.

Adding End Events

End events are represented by the fifth icon grouping on the design toolbar. There is one icon that can be configured three different ways after placing it on the Designer Canvas.



To define an End event type, drag the End event icon onto the Designer Canvas and then right-click on the red circle. Choose "Result" from the menu, and then find the appropriate End event type. Note that the active End event type will be grayed out because it is already selected, and the default type is "Do Nothing".

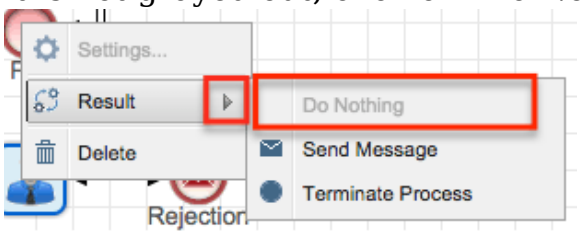


The three types of End event are:

Do Nothing

Most often used for sequential processes, this event ends a thread of the Process Definition without doing anything. It will not affect parallel threads that may be running simultaneously in the process. Those threads will continue to run uninterrupted by the Do Nothing End event. This event does not need any configuration; it is set by default when you drag and drop an End event onto the canvas.

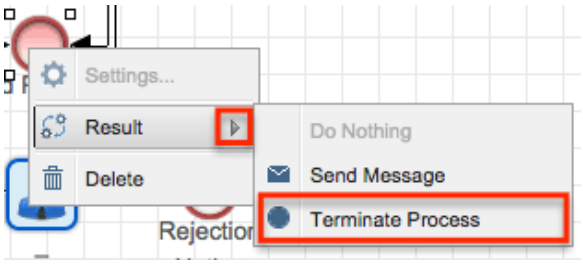
To create a Do Nothing End event, drag and drop the End event icon into the canvas. Right-click on the element icon and confirm that "Do Nothing" is grayed out by default in the Result menu, indicating that it is the active End event type. If it is not grayed out, click on "Do Nothing" to make it the active End event type.



Terminate Process

Most often used for parallel processes, this event terminates the flow of the branch for which it is designed while simultaneously terminating the entire process, regardless of any parallel events in the process definition. The Terminate Process event does not need any configuration.

To create a Terminate Process End event, drag and drop the End event icon into the canvas. Right-click on the element icon then choose "Terminate Process" in the Result menu to make it the active End event type.



Send Message



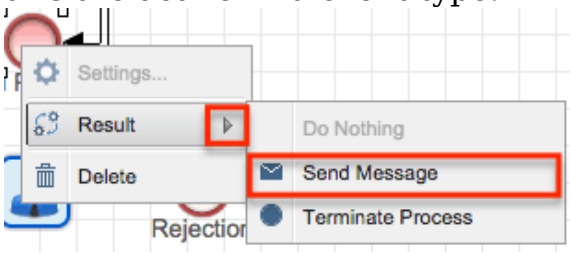
The Send Message End event will signify the end of a process by emailing a message created in the Process Email Templates module to specified recipients. When a Send Message end event has multiple incoming paths, it will send an email message for each path coming into it. If you want the message to be sent only once, then you must use a converging gateway in front of the end event.

Please note that SugarBPM can only send email templates created in the Process Email Templates module and cannot send email messages created in any other part of the Sugar application. If no Process Email Template is specified in the event configuration, then the Process will terminate but no message will be sent. If your email template has been configured with a variable to show the old value of a changed field, it is important to strategically position the Send Message event within your process definition's design. For more information, refer to the Process Email Templates documentation.

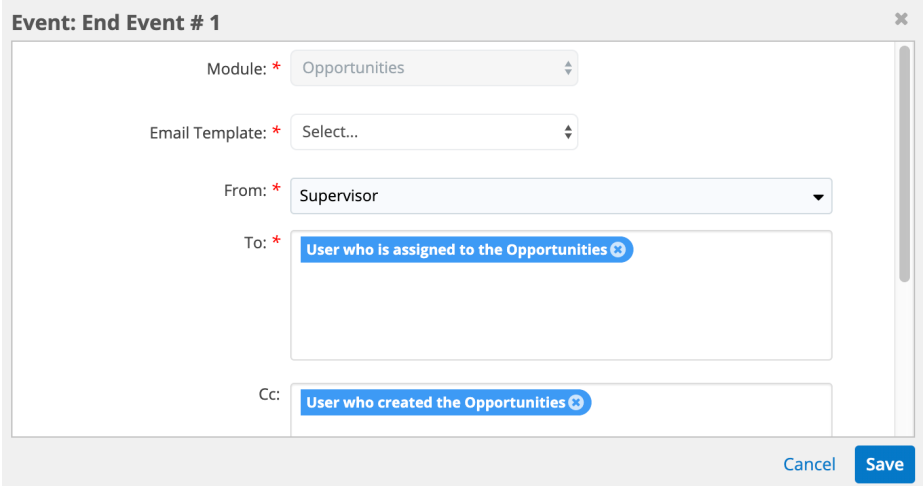
Note: Send Message End events require the SugarBPM Scheduled Job scheduler to execute. If schedulers are not running, the message will not be sent. For more information, please refer to the SugarBPM documentation.

To create a Send Message End event, follow these steps:

1. Drag and drop the End event icon into the canvas. Right-click on the element icon and then choose "Send Message" in the Result menu to make this the active End event type.



2. Right-click on the canvas icon and select the option "Settings" to configure the event. A new window will appear:



- **Module**: (read-only)This is the module that was set as the target module for the process definition and which also must be the target module for the email template.
- **Email Template**: (required) Choose an email template from the dropdown list. This list will only show templates that use the target module specified in the previous field.
- **From**: (required) Choose who should be shown as the sender of this email. Options include users associated with the target record (e.g., Record Owner), System Email, any Sugar user, and any outgoing email account configured in Sugar. If you select a user, the name of the sender will be the user's first and last name, and the email address of the sender and reply-to email address will be their primary email address. For details on how these fields are set for outgoing email accounts, see the Emails documentation.
- **To, Cc, Bcc**: (required) Specify the message's recipients. Click inside the text area to select variable users, the explicit members of a Sugar team, and/or type one or more email addresses. Please refer to the Working With Recipient Fields section of this page for more information about configuring the To, Cc, and Bcc fields.

Note: Marketing and campaign emails should never be sent using SugarBPM. This is because SugarBPM does not respect the subject's request to opt out, which raises a liability concern.

Setting Conditions

Conditional criteria may be defined for elements in a process definition based on process business rules, response forms, field values, related modules, specified users, and date intervals.

Creating Conditions for Events and Actions

Start event, End event, and all types of Action elements will display conditions as logical or mathematical operations, depending on the type of field that is under evaluation.

The available conditional components are:

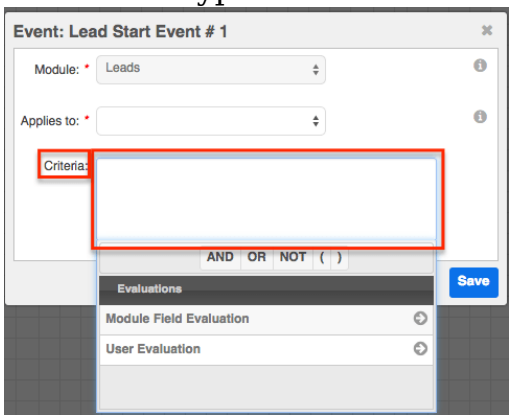
- Logical Operations: Used in criteria builders for text and other non-numerical field types.
    - Module Field Evaluation
    - User Evaluation
    - Relationship Change Evaluation
- Mathematical Operations: Used in criteria builders for date and numerical field types.
    - Fixed Date
    - Time Span
    - Sugar Date Variables

Logical Operations

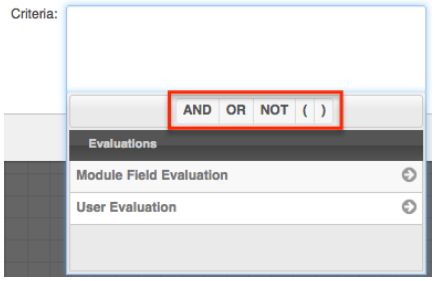
Logical operations utilize the AND, OR, and NOT operators in conjunction with the Module Field Evaluation, User Evaluation, and Relationship Change Evaluation options to specify conditions for an event. For example, a Start event for opportunities may be limited to only opportunities containing a certain sales stage. Logical operations are defined inside a criteria builder in the process definition's design view.

The logical operations window will always contain a criteria field and logical operators:

- **Criteria field**: This is the field where the criteria will be constructed. Click inside the criteria field to reveal the logical operators and supported evaluation types.



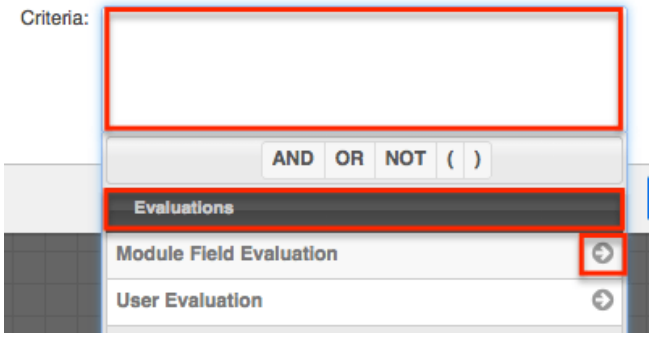
- **Logical Operators**: Click on the AND, OR, and NOT buttons to create logical statements. Use the parentheses to group operations.



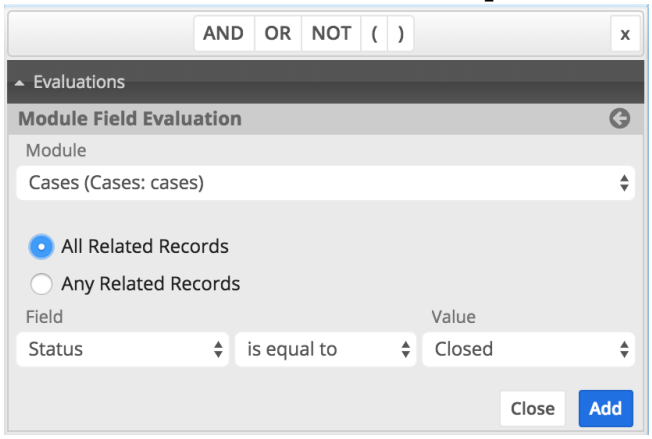
Module Field Evaluation

Note: Module Field Evaluations are logical operations that may be used in Start events and Receive Message events.

To reveal the Module Field Evaluation panel, click inside the criteria field and then click on "Evaluations" and select "Module Field Evaluation":



The Module Field Evaluation panel consists of the following options:



- **Module**: Click the down arrow to list and select the related module whose values will be evaluated.
- **All/Any Related Records** (for related records on the "many" side of a relationship): Decide how to evaluate related records when more than one related record may exist.

    - Select "All Related Records" if the criteria must be true for all related records.
    - Select "Any Related Records" if the criteria require only one or more of the related records to evaluate as true.
    - Select "Any Related Records" if you want to use the "changes", "changes to", or "changes from" operator.
    - **Note**: Process definitions created before Sugar 8.1 did not have the "any/all" option and will evaluate only the most recently modified related record. An administrator can update this setting on the Start event's criteria after upgrading to Sugar 8.1 or higher.
- **Field**: Click the down arrow to list and select the field variable of the chosen module.
- **Comparison Operator** (not labeled): Click the down arrow to list and select a comparative operator. Depending on the field type used in the evaluation, available options may include "is", "is not", "is equal to", "is not equal to", "contains", "does not contain", "includes any", "does not include any", "changes", "changes from", and "changes to".

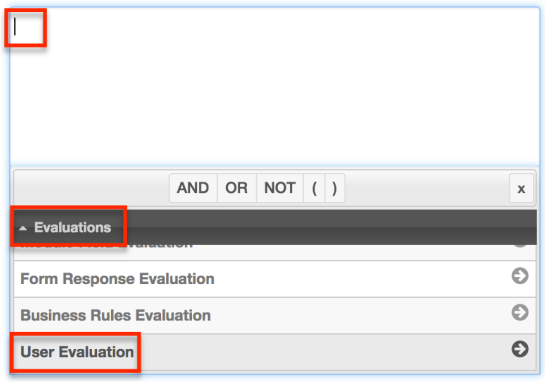
    - For global termination criteria, do not set target record "changes" as a process terminate criteria or it will cause the process to terminate right after starting.
    - **Note**: Comparison operators may not always work as expected for records that were created or edited before the process definition was enabled. To ensure that existing records are evaluated properly for comparators such as "field changes from/to", perform an arbitrary mass update on the target module's records immediately after enabling the process definition so that Sugar can capture the "from" field values.
- **Value**: Enter a value to compare.
- **Add**: Move the evaluation to the criteria field.

Note: Checkbox fields are evaluated as "yes" or "no" (without quotes).

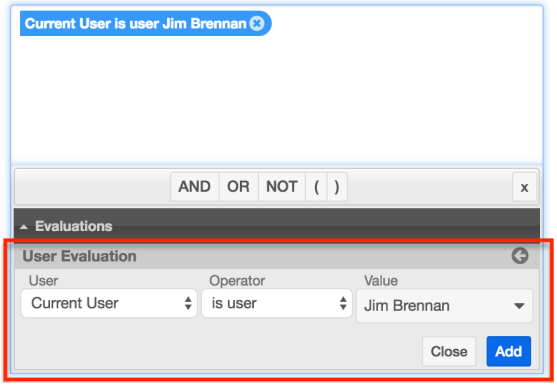
User Evaluation

Note: User Evaluations are logical operations that may be used in Start events, Send Message events, and Gateways.

To reveal the User Evaluation panel, click inside the criteria field and then click on "Evaluations" and select "User Evaluation":



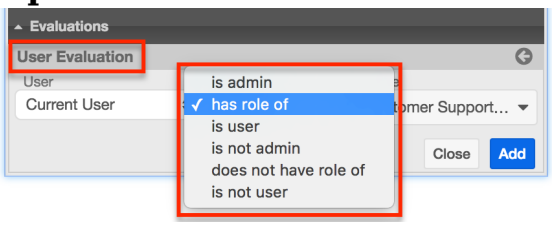
The User Evaluation panel consists of the following options:



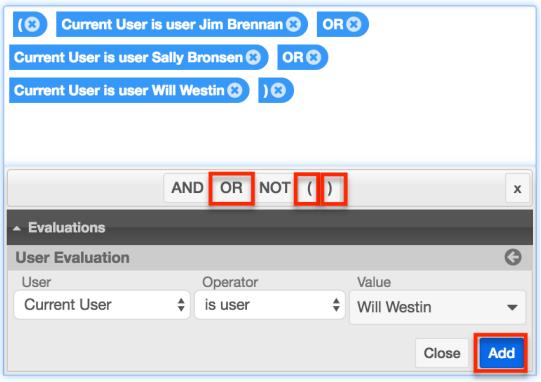
- **User**: Click the down arrow to list and select the type of user related to the current process:



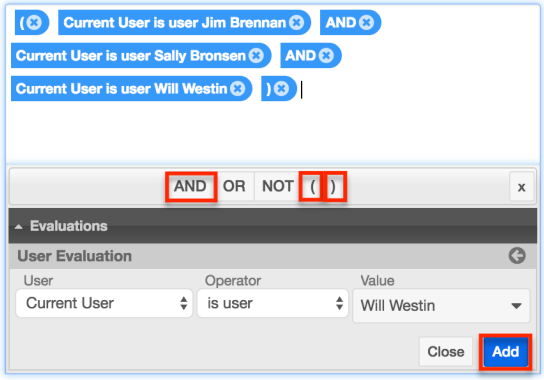
  - **Current User**: For a Start event, the Current User refers to the user who is assigned to the target record. For any other element, the Current User refers to the last user who has been defined in the process definition.
  - **Supervisor**: applies to the supervisor of the logged-in user who triggers the process
  - **Record Owner**: applies to the user who is assigned to the record that triggers the process
- **Operator**: Click the down arrow to select the comparison operator:



- **is admin**: The condition will only evaluate as true if the user specified in the User field is an admin user. This option will complete the evaluation definition and disable the Value field.
- **has role of**: The condition will only evaluate as true if the user specified in the User field is a member of a certain role. This option will populate the Value field with a list of available user roles.
- **is user**: The condition will only evaluate as true if the user specified in the User field is a specific user. This option will populate the Value field with a list of active users. To select multiple users, add this evaluation once for each user and connect the evaluations with OR operators. Surround all of the user evaluations with parentheses.



- **is not admin**: The condition will only evaluate as true if the user specified in the User field is not an admin user. This option will complete the evaluation item and disable the Value field.
- **does not have role of**: The condition will only evaluate as true if the user specified in the User field is not a member of a certain role. This option will populate the Value field with a list of available user roles.
- **is not user**: The condition will only evaluate as true if the user specified in the User field is not a specific user. This option will populate the Value field with a list of active users. To select multiple users, add this evaluation once for each user and connect the evaluations with AND operators. Surround all of the user evaluations with parentheses.



- **Value**: This field will be disabled if the Operator field is set to "is admin" or

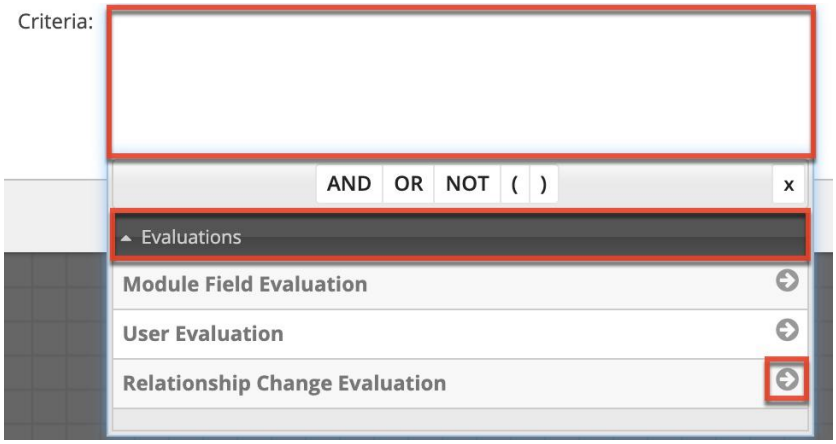
"is not admin". If the Operator is set to "is user" or "is not user", the Value field will load the user list as field options. If the Operator is set to "has role of" or "does not have role of", the Value field will load the roles list as field options.

- **Add**: Move the evaluation to the criteria field. By default, the evaluation will be placed at the end of the criteria statement but can be relocated within the statement by dragging it to the desired location.

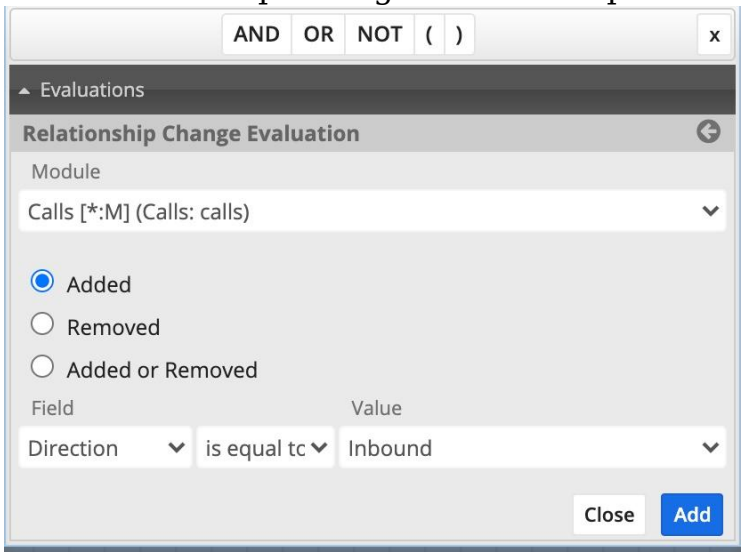
Relationship Change Evaluation

Note: Relationship Change Evaluations are logical operations that may be used in Start events and Receive Message events.

To reveal the Relationship Change Evaluation panel, click inside the criteria field and then click on "Evaluations" and select "Relationship Change Evaluation":



The Relationship Change Evaluation panel consists of the following options:



- **Module**: Click the down arrow to list and select the related module you

want to monitor for relationship addition or removal. The default value is "Any Relationship", which is triggered when any related record is added or removed from the target module, regardless of the related module.

- **Added/Removed/Added or Removed**: Choose which type of relationship change(s) you wish to trigger on.

    - Select "Added" to trigger when a related record is added to the target record.
    - Select "Removed" to trigger when a related record is removed from the target record.
    - Select "Added or Removed" to trigger when a related record is added or removed from the target record.
- **Field**: Click the down arrow to list and select the field variable of the chosen module. If "Any Relationship" is selected instead of a specific module, then this field, the comparison operator, and the value are disabled because it is not possible to add field criteria that apply to every module.
- **Comparison Operator** (not labeled): Click the down arrow to list and select a comparative operator. Depending on the field type used in the evaluation, available options may include "is", "is not", "is equal to", "is not equal to", "contains", "does not contain", "includes any", "does not include any", "changes", "changes from", and "changes to".

    - For global termination criteria, do not set target record "changes" as a process terminate criteria or it will cause the process to terminate right after starting.
    - **Note**: Comparison operators may not always work as expected for records that were created or edited before the process definition was enabled. To ensure that existing records are evaluated properly for comparators such as "field changes from/to", perform an arbitrary mass update on the target module's records immediately after enabling the process definition so that Sugar can capture the "from" field values.
- **Value**: Enter a value to compare.
- **Add**: Move the evaluation to the criteria field.

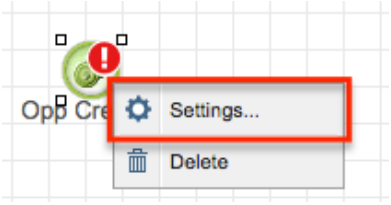
Note: Checkbox fields are evaluated as "yes" or "no" (without quotes).

It is important to note that relationship changes cannot occur at the same time as any other change, whether it is another relationship change, a field change, or a user change. Therefore, criteria that join a relationship change with another evaluation using an AND operator will never evaluate to true because the relationship change happens independently of any other action. It is safe to join them with an OR operator, however, to trigger when either condition is true.

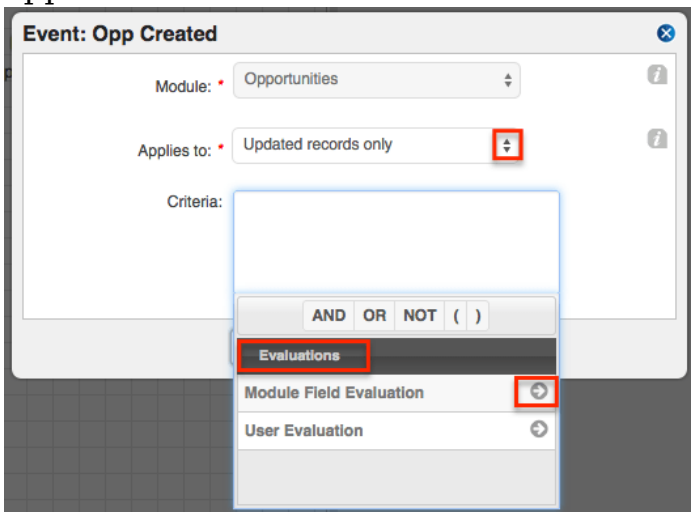
Using Evaluations

Follow these steps to add a condition to a Start event:

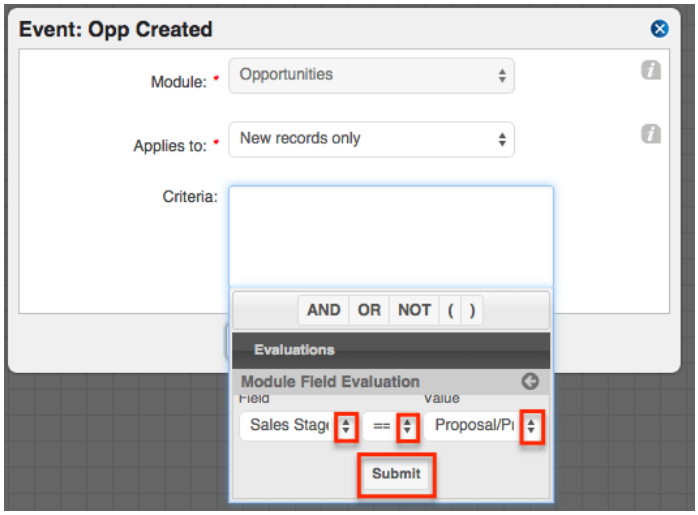
1. Right-click on the opportunity Start event icon and choose "Settings".



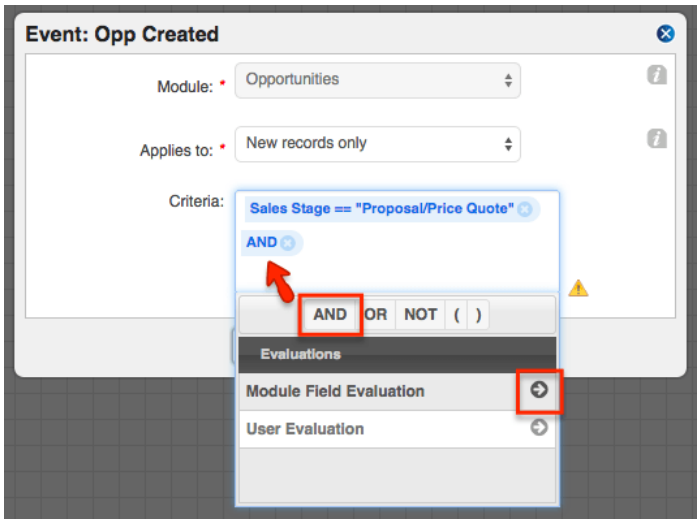
2. Click inside the criteria field and then click on "Evaluations" and select "Module Field Evaluation" to restrict this Process Definition to only certain opportunities.



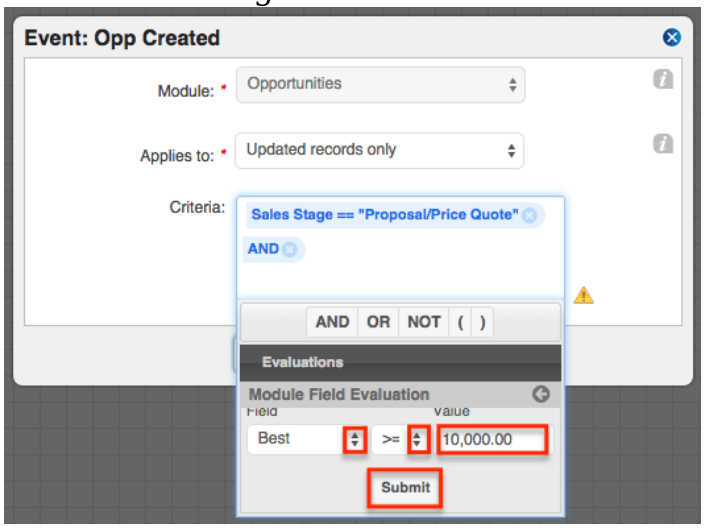
3. Choose a field, operator, and field value for the first condition and then click "Submit" to add the condition to the Criteria window.



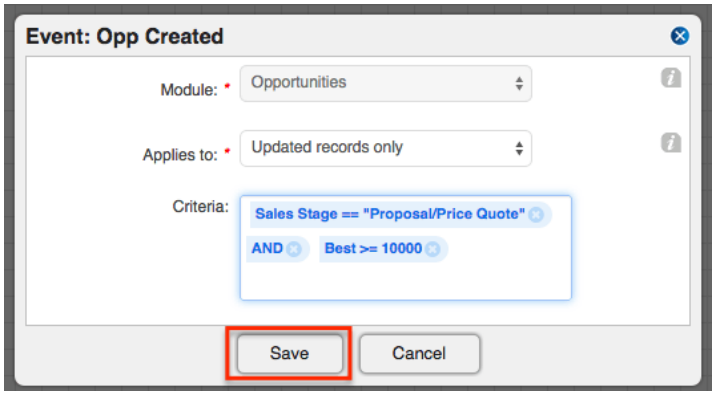
4. Use the boolean logic elements AND, OR, and NOT in conjunction with parentheses for grouped criteria to build a compound filter.



5. Continue adding evaluation filters to the Criteria window.



6. When satisfied, click outside of the Criteria field to close the Evaluations window and then click "Save".



Mathematical Operations

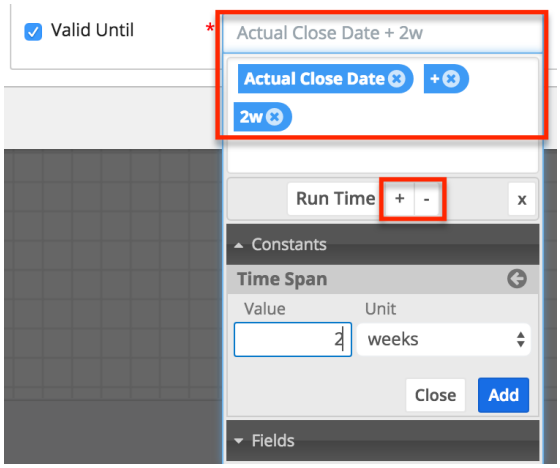
Mathematical operations utilize mathematical operators in conjunction with the Fixed Date, Time Span, and Sugar Date variable options to specify conditions on an event. Mathematical operators can also be used to calculate a numerical value for a Sugar field using a combination of Sugar field variables and constant values.

Mathematical operations are defined inside a criteria builder in the process definition's design view.

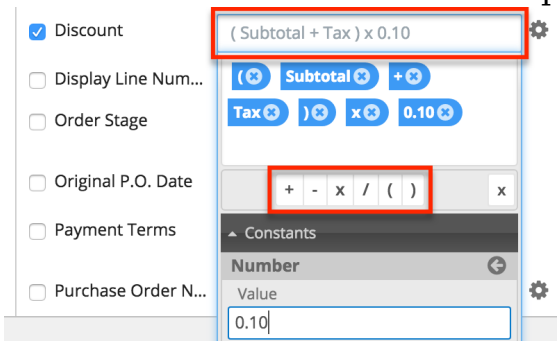
Note: Mathematical Operations may be used for Wait events, Change Field actions, and Add Related Record actions.

Mathematical operators primarily serve two purposes:

- Calculating Dates: Use addition (+) and subtraction (-) to create a date that is relative to another date. For example, set a quote as valid until two weeks after its close date:



- **Calculating Numeric Values**: Use addition (+), subtraction (-), multiplication (x), and division (/) to create a calculated value relative to another Sugar field. Define a specific order of operations by leveraging parentheses in your formulas. For example, set a discount amount to 10% of the sum of a record's subtotal plus tax:



Calculating Dates

Dates are calculated in conditions using one or a combination of fixed date, time span, and Sugar date field variables. Anything other than the listed configurations or a legal chaining of the supported configurations will be marked as not valid and cannot be saved in a process definition.

The following table lists the supported configurations for date, datetime, and time span calculations in criteria:

Configuration Type	Supported Expressions
Time Span	• = date - date • = datetime - datetime • = timespan +/- timespan
Date	• = date (e.g., a Fixed Date or Sugar Date Variable)
Datetime	• = timespan • = datetime (e.g., a Fixed Date or Sugar Date Variable)

Note: For more information on the Run Time option, which is shown near the plus and minus operators, please refer to the Sugar Date Variables section.

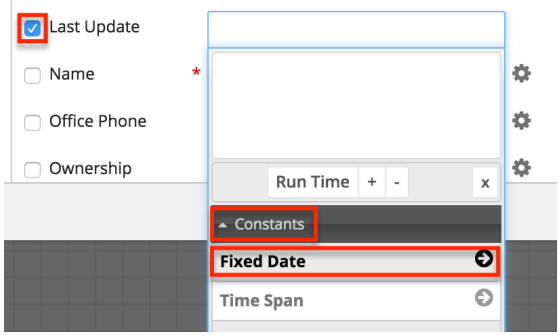
Fixed Date

The Fixed Date option enables the administrator to specify a formal, static date as a field value or as a variable in a formula that will calculate a field value. For example, if all opportunities in a process are expected to close at the end of the year, create a Change Field action that uses Fixed Date to change all opportunities' Expected Close Date fields to December 31, 2015.

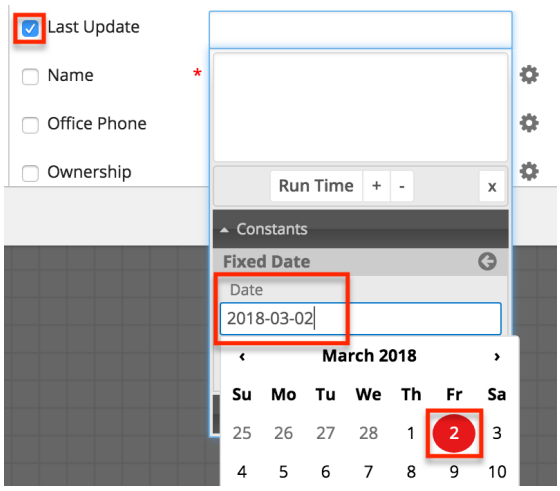
Note: Fixed Dates may be used in mathematical operations for Wait events, Change Field actions, and Add Related Record actions.

To reference a Fixed Date, follow these steps:

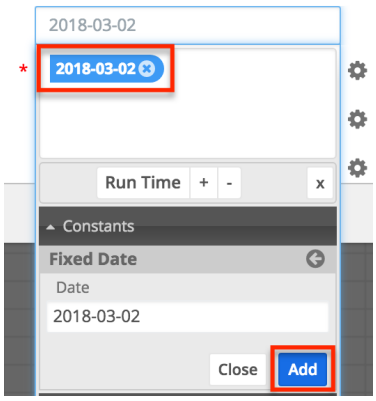
1. Click inside the date field and then click on "Constants" and select "Fixed Date":



2. The window will transition to a single Date field; click inside the Date field to reveal a calendar picker. Navigate from month to month using the back (<) and forward (>) symbols near the month label. Click on the date that will be used in the formula.



3. Click the Add button to move the selected date onto the criteria builder canvas:



If the date added in this step is the static date for the field value, then the formula is complete. If the Fixed Date is only one component of a larger formula that will be used to determine a field value, then the Fixed Date should be entered in the order it is expected in the formula along with a logical combination of Time Span, Sugar Date variables, and mathematical operators.

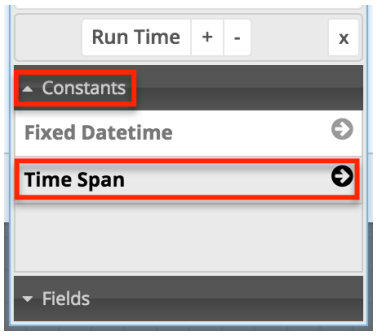
Time Span

The Time Span option allows the passage of time within a date formula. For example, if a Due Date should be set for two weeks after a record's Start Date, build a formula that uses the Time Span "2 weeks" as a variable (e.g., 'Start Date + 2w'). To use a time span element relative to now (e.g., set a due date for 2 weeks from now), then use the Time Span element with a Run Time variable.

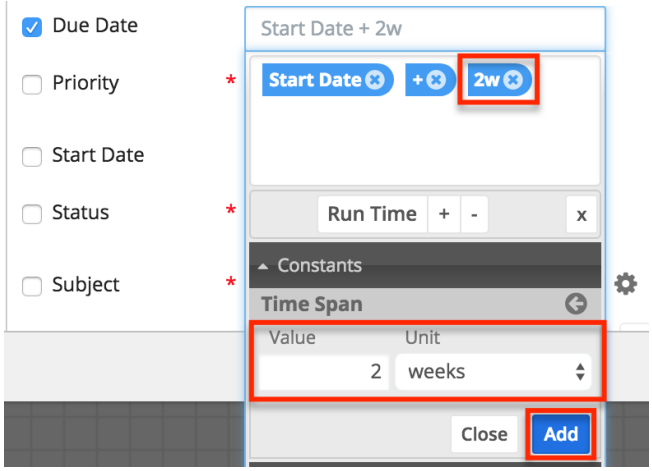
Note: Time Spans may be used in mathematical operations for Wait events, Change Field actions, and Add Related Record actions.

To reference a time span, follow these steps:

1. Click inside the date field and then click on "Constants" and select "Time Span":



2. The next window will display a Value field and a Units field. Use these two fields together to create a logical time span phrase (e.g., 2 weeks would be set as Value=2; Units=weeks). Time spans can be specified in years, months, weeks, and days for date fields and all of the previous increments plus hours and minutes for datetime fields.



   You also have access to the business hours unit for datetime fields on modules related to business centers. This allows you to perform calculations using the open hours of a business center. When you select "business hours", the Business Center dropdown menu appears where you can search for a specific business center or choose "From Target Module" to use the business center associated with the target module. For more information, refer to the Business Center Management documentation.
3. Click the Add button to move the selected time span onto the criteria builder canvas.

Note: The time span element is only one component of a larger formula. Enter it in the order it is expected along with a logical combination of Fixed Date, Sugar Date variables, and/or Mathematical Operators.

Sugar Date Variables

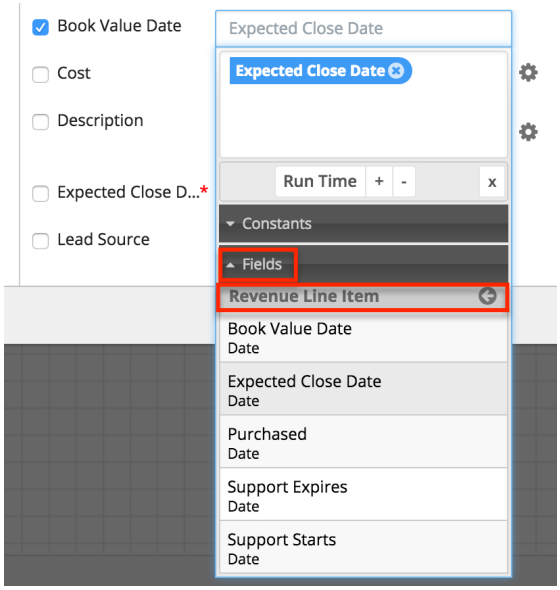
Sugar Date variables include the Run Time variable as well as the date fields from Sugar records. "Run Time" refers to the moment the process element runs. For example, an action that executes at 9:30AM on January 3 has a Run Time value of January 3 for date fields or 9:30AM January 3 for datetime fields. Date field variables can be used to add context to a date formula (e.g., Date Created + 1

month) or referenced independently (e.g., an action or event that triggers on Expected Close Date or three days after run time).

Note: Sugar Date variables may be used in mathematical operations for Wait events, Change Field actions, and Add Related Record actions.

To reference a Sugar date variable, follow these steps:

1. Click inside the date field and the Run Time variable will appear as a button next to the plus and minus operators. To drill down to the date variables for each available module, click on "Fields" then click on the arrow adjacent to the desired module.
2. After clicking on the module name, the window will reveal a list of all available date fields for that module. Click on any date field to move it to the criteria builder window:



Note: If the date variable is the only component of the date formula, then the formula is complete. If the date variable is only one component of a larger formula that will be used to determine a field value, then the variable should be entered in the order it is expected in the formula along with a logical combination of Time Span, Fixed Dates, and/or Mathematical Operators.

Creating Conditions for Activities and Gateways

Form activities and gateway elements can evaluate user responses to forms or business rules that have been created by the administrator.

The available evaluations are:

- Form Response Evaluations: Configure this type of criteria for gateways that follow a Form activity.

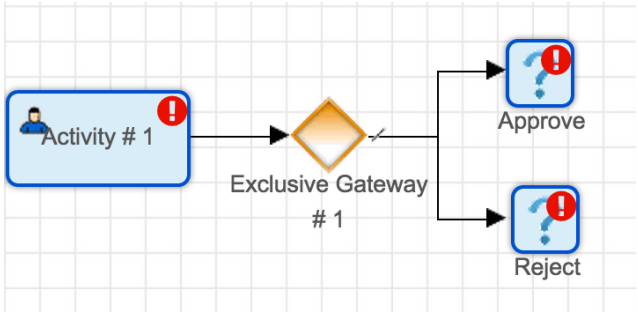
- Business Rule Evaluations: Configure this type of criteria for gateways that follow a business rule action.

Form Response Evaluations

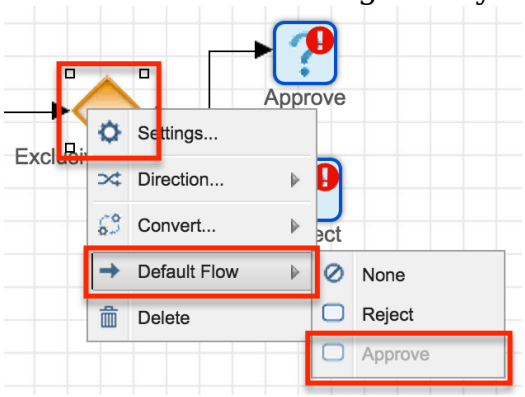
If a process contains an Approve/Reject activity, it must be followed by a gateway with a form response evaluation. To configure this evaluation, follow these steps:

Note: A divergent Gateway requires two or more subsequent elements (any combination of intermediate events, end events, actions, and/or activities). These must be placed on the canvas and connectors must join the elements on the canvas before the Gateway can be configured.

1. Drag an Activity element onto the design canvas as explained in Adding Form Activities.
2. Drag an Exclusive gateway element onto the design canvas to the right of the Activity.
3. Drag two or more Actions or Events onto the canvas to the right of the Gateway.

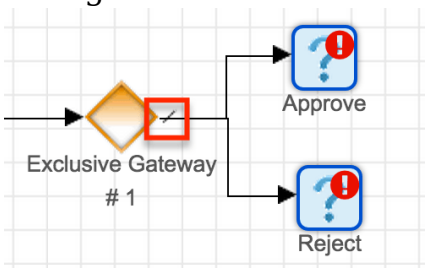


4. Connect the activity to the gateway and the gateway to the subsequent elements using Sequence Connectors.
5. Right-click on the gateway element and specify a default flow. This will be the direction that the flow takes if no criteria are accomplished within the gateway element. For this example, the default flow is set to the action labeled, "Approve". Please note that the default flow options will not be available until the corresponding elements have been placed on the canvas and connected to the gateway.

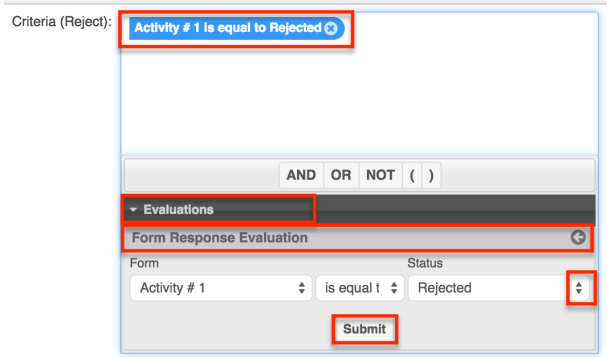


A hash mark will indicate that a default flow has been successfully

configured:



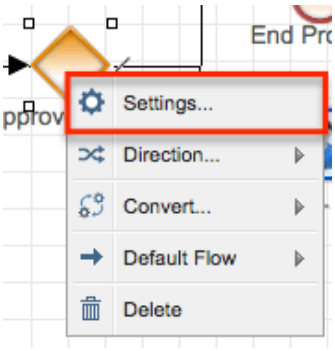
6. Next, right-click on the gateway element again and select "Settings". Note that only the non-default outcome or outcomes will need to be configured. For the current example, we set the default flow to "Approve" so there is one criteria window, which represents the one non-default element in this example.
7. Click inside the Criteria window to reveal evaluation options. The only required evaluation for a Form activity is the "Form Response Evaluation". Click on Evaluations > Form Response Evaluation and then select the form response that will result in the non-default flow. In this example, the form response must be "Rejected" or else the default flow will take over. Click "Submit" to move the condition to the Criteria window. If multiple criteria are required, click on the AND, OR, NOT, and parentheses operators as needed and insert additional conditional statements.



Note: Despite a Form activity having two outcomes (approval and rejection), it is possible to configure additional outcomes using a combination of criteria beyond the form response. For example, a separate outcome may be configured for:

- Form Response = Rejected AND Status = New
- Form Response = Approved AND Status = New
- Form Response = Approved AND Status = Closed
- else Default Flow: In other words, if none of the above criteria are accomplished, continue with the default flow element. Please note that the default element does not need to be configured. It will always be the outcome when all other criteria evaluate to false.

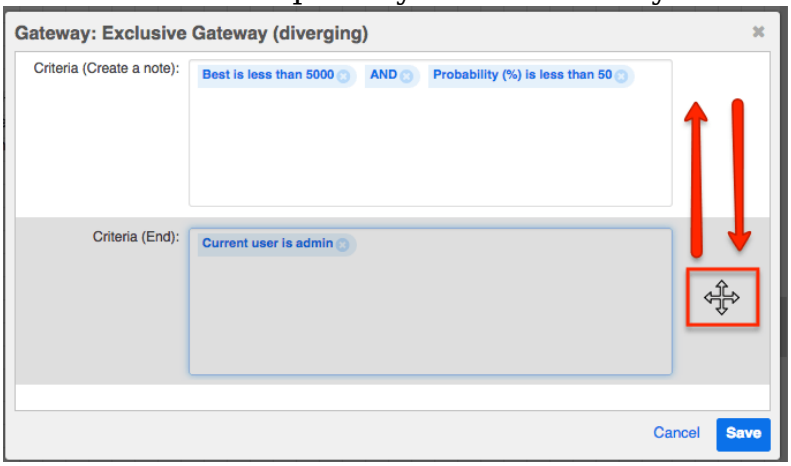
8. Only one outcome can occur from an Exclusive gateway, and it will be the one that accomplishes the condition. If several criteria are true, the priority will be higher on the one that lies further up the configuration. To change the priority order of a Gateway that is directed toward multiple elements:
    - Right-click on the Gateway element and select the option "Settings".



- There will be a criteria builder window for each related element. Place the mouse pointer to the left or right side of the criteria fields and the pointer will change its appearance to a standard "move" cursor type.



- Drag and drop the criteria fields into the desired sequence. This order will set the priority of the Gateway criteria.



- When you are satisfied with the conditions and their processing order, click "Save" to preserve the changes and return to the visual designer canvas.

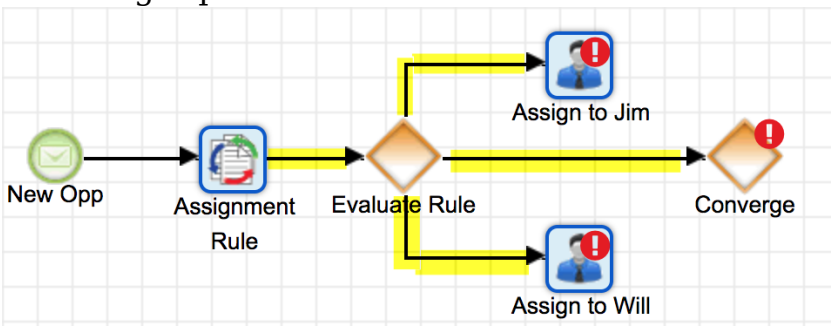
Business Rule Evaluations

When referencing a process business rule within a process definition, the action must be followed by a gateway with a business rules evaluation.

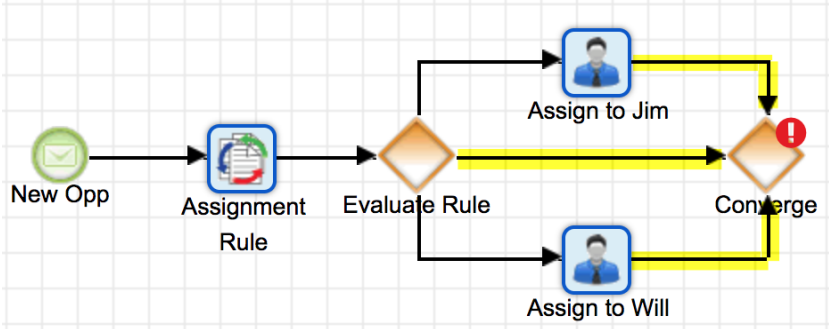
Note: A divergent Gateway requires two or more subsequent elements (any combination of intermediate events, end events, actions, and activities). These must be placed on the canvas and connectors must join the elements on the canvas before the Gateway can be configured.

The following steps are an example of incorporating a business rule evaluation in a process definition:

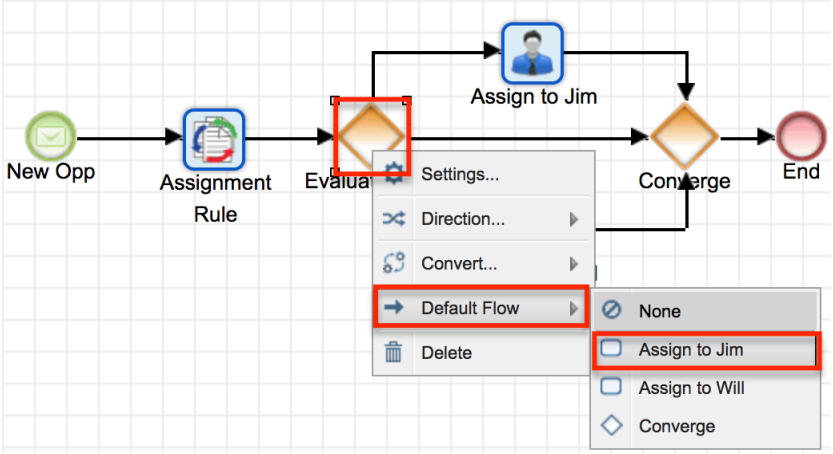
1. Drag an Action element onto the design canvas and configure it as explained in the Business Rule section of this page.
2. Drag an Exclusive gateway element onto the design canvas to the right of the Action.
3. Drag two or more action, intermediate, or end events onto the canvas to the right of the diverging gateway.
4. Add a converging exclusive gateway to the right of everything and then connect the Business Rule action to the diverging gateway and connect the diverging gateway to all subsequent elements using Sequence Connectors. Notice that, in the example here, there are three potential outcomes for the gateway: "Assign to Jim", "Assign to Will", or proceed straight to the "Converge" point.



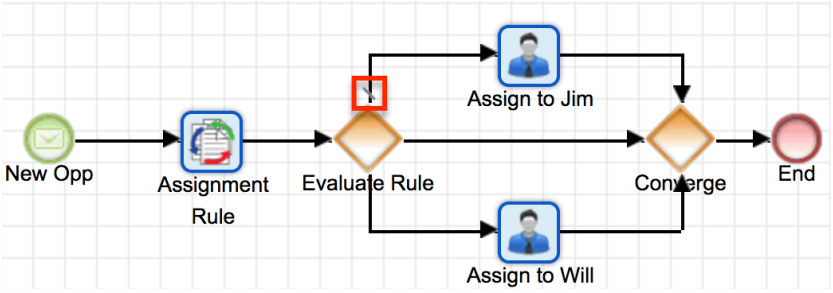
5. Next, confirm that all of the diverging gateway's potential outcomes connect to the converge point using Sequence Connectors.



6. Right-click on the gateway element and specify a default flow. This will be the direction that the flow takes if no criteria are accomplished within the gateway element. For this example, the default flow is set to the action labeled, "Assign to Jim". Please note that the default flow options will not be available until the corresponding elements have been placed on the canvas and connected to the gateway as explained in the previous steps.



A hash mark will indicate that you have successfully configured the default flow:



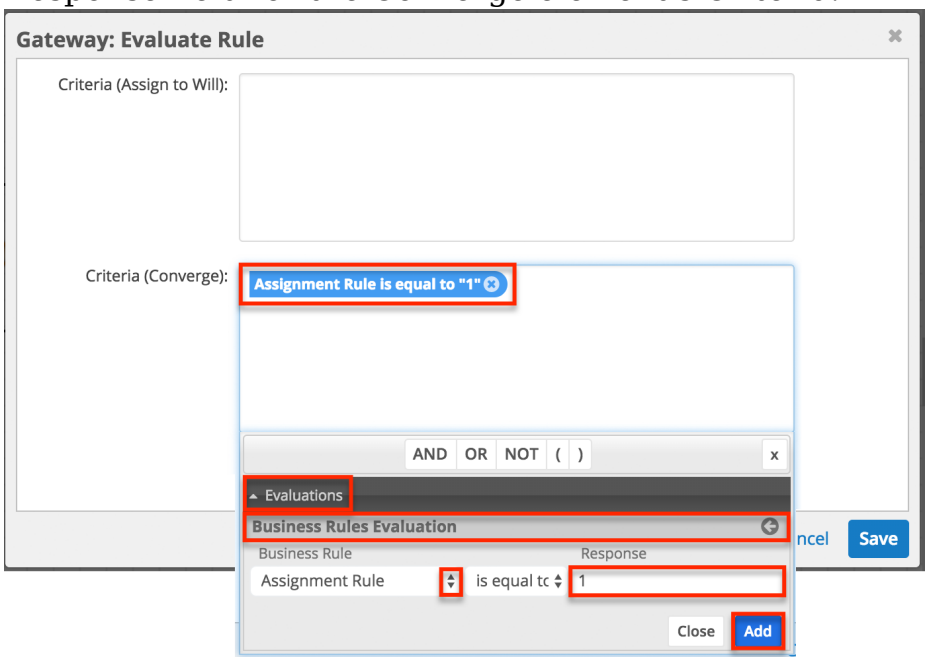
7. Next, right-click on the gateway element again and select "Settings". Only the non-default outcome or outcomes will need to be configured. For the current example, we set the default flow to "Assign to Jim" so there are two criteria windows, which represent the two non-default elements in this example: "Assign to Will" and "Converge".



8. Click inside the first Criteria window to reveal the evaluation options. The only required evaluation for a business rule is the "Business Rules Evaluation". Follow the remaining steps to configure the Business Rules Evaluation.
9. Click on Evaluations > Business Rules Evaluation. The Business Rule field will appear and display all of the Business Rules that have been referenced

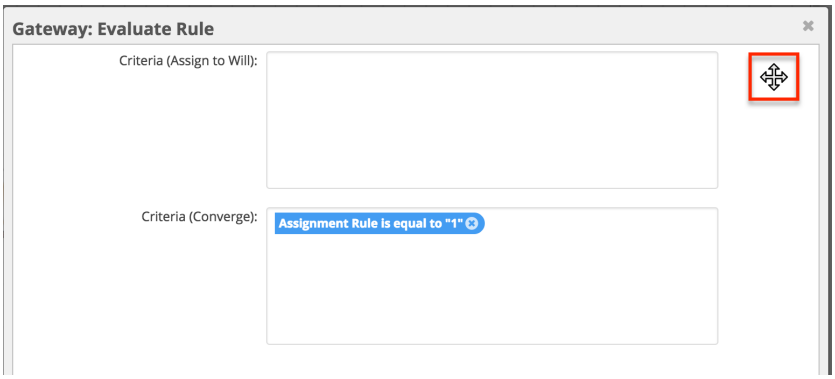
by action elements in the current process definition.

10. Select the name of the Business Rule action that this gateway is evaluating. In this example, we added an action named "Assignment Rule" in step 1, so we will select that value.
11. The Response field will evaluate the Return Value designated in the process business rule. Type the Return Value that, when returned by the business rule, will result in the current process path. For example, if a Return Value of 1 causes the process to end, type "1" (no quotes) into the Response field for the Converge element's Criteria.

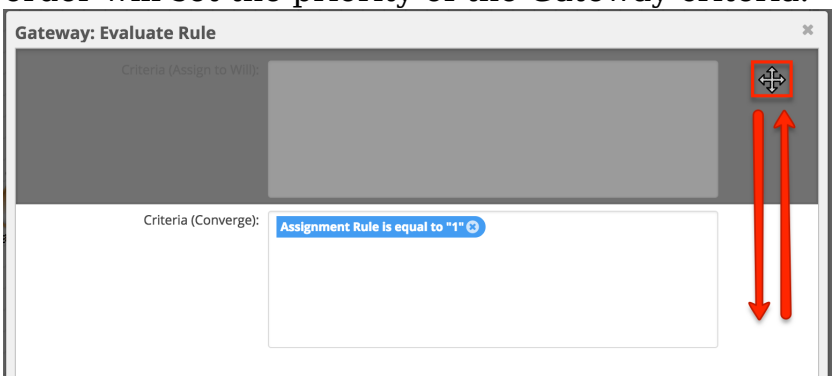


Note: Process business rule "Return Values" will always convert to text for evaluation in the Response field within a process definition.

12. Click "Add" to move the condition to the Criteria window.
13. If multiple criteria are required for a single flow direction, click on the AND, OR, NOT, and parentheses operators as needed and insert additional conditional statements.
14. Continue configuring Criteria for all possible flow outcomes.
15. Only one outcome can occur from an Exclusive gateway, and it will be the one that accomplishes the condition. If several criteria are true, the priority will be higher on the one that lies further up the configuration. To change the priority order of a Gateway that is directed toward multiple elements:
    - Right-click on the Gateway element and select the option "Settings".
    - There will be a criteria builder window for each related element. Place the mouse pointer to the left or right side of the criteria fields and the pointer will change its appearance to a standard "move" cursor type.



- Drag and drop the criteria fields into the desired sequence. This order will set the priority of the Gateway criteria.



- When you are satisfied with the conditions and their processing order, click "Save" to preserve the changes and return to the visual designer canvas.

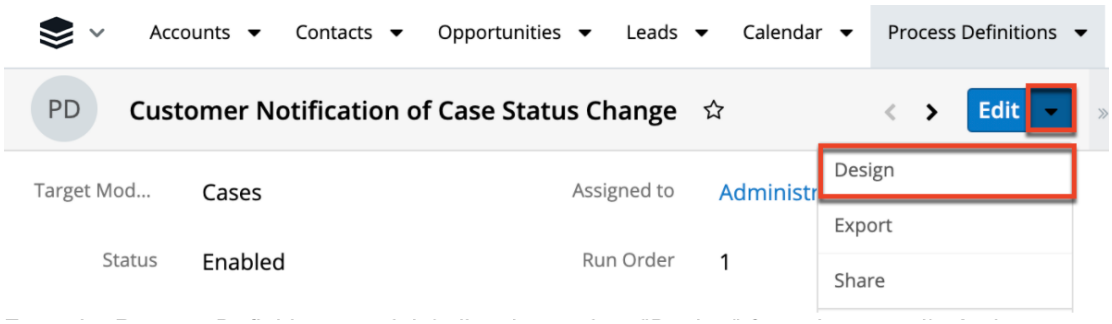
Exiting the Visual Designer

At any time during the design of the process definition, you can exit the visual designer by clicking the X at the top of the design canvas. While the visual designer automatically saves your progress by default, you should always press the Save button before exiting the designer in case the last save action occurred before your most recent change or the auto-save has been disabled in Admin > System Settings.

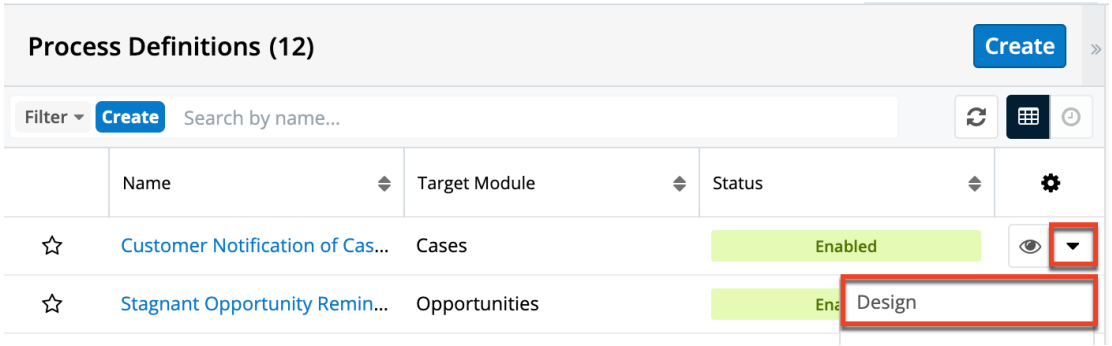
Returning to the Visual Designer

After exiting the Visual Designer, you can return to design view of a process definition from any of the following locations in Sugar:

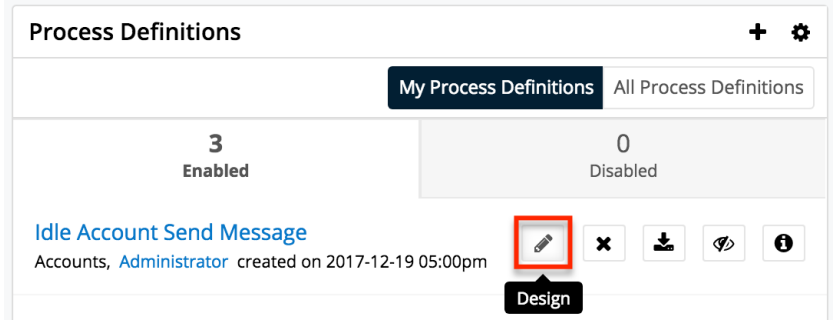
- From the process definition's record view, select "Design" from the record's Actions menu:



- From the Process Definitions module's list view, select "Design" from the record's Actions menu:



- From the Process Definitions dashlet, click on the Design icon adjacent to the relevant process definition:



Please note that it may take several seconds for the design canvas to load.

Enabling and Disabling Process Definitions

It is necessary to enable process definitions when their design is complete. It is also possible to disable process definitions when needed. The following sections explain how to enable or disable a process definition.

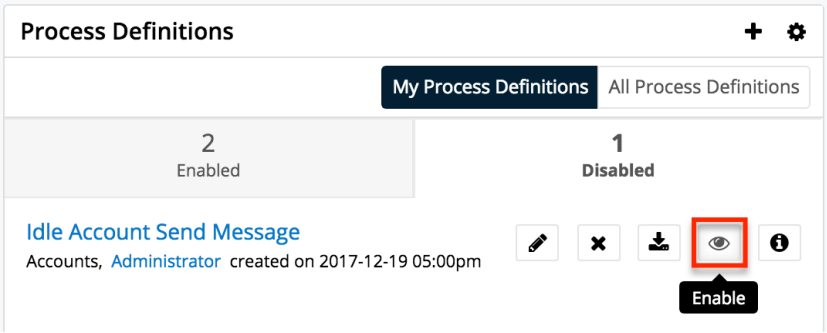
Enabling Process Definitions

New process definitions are set to "Disabled" by default. This is a preventative feature that ensures a process instance is not triggered inadvertently during the design phase.

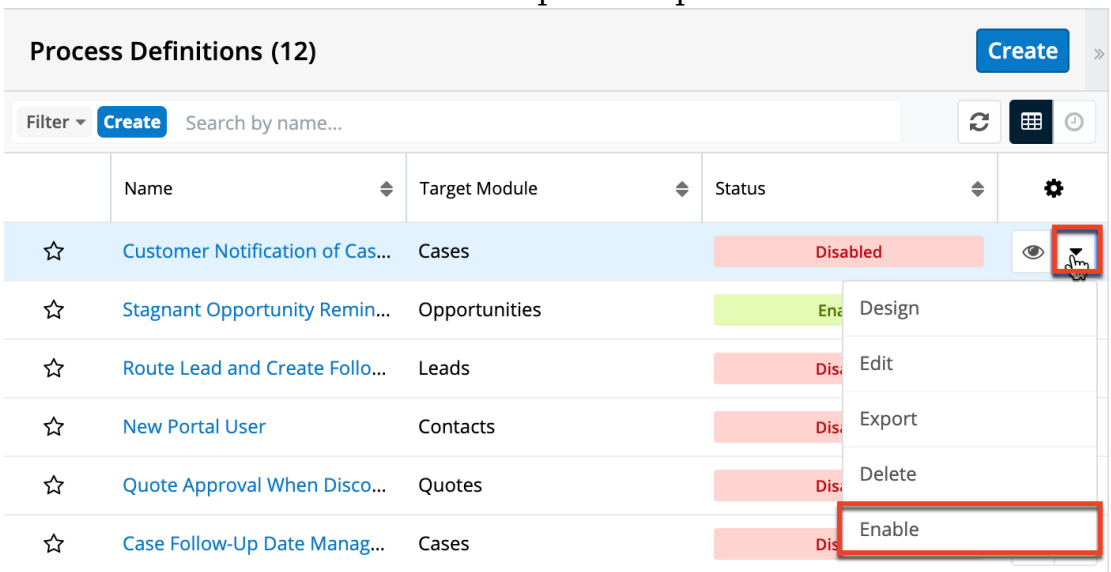
Note: Before enabling a process definition, please be sure that you have included a Terminate Process condition in your process design's settings.

After the design is fully configured, exit the Visual Designer and set the process definition to "Enabled". There are three ways to enable a process definition:

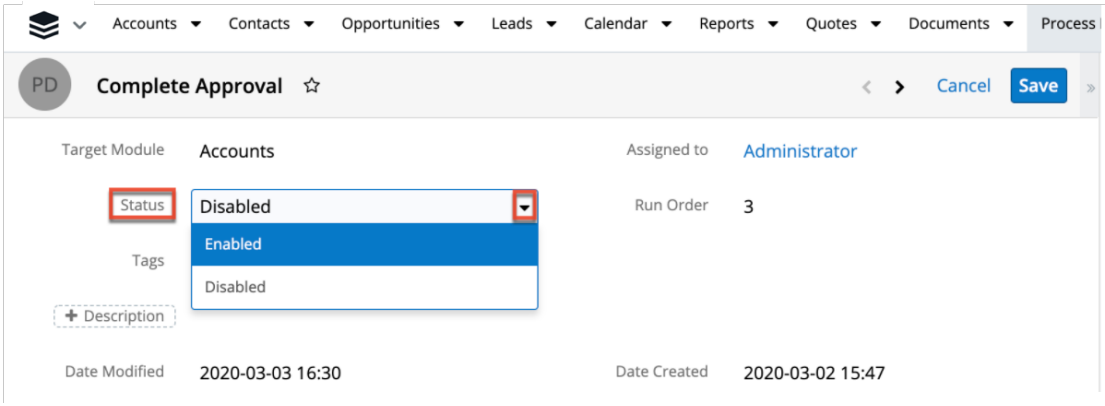
- **Enabling via Dashlet**: Visit your SugarBPM dashboard. Disabled process definitions will be listed in the "Disabled" tab of the Process Definitions dashlet. Find the Enable/Disable icon adjacent to the relevant process definition. Click on the icon and processes will immediately begin running when the process definition's conditions are met.



- **Enabling via List View**: Navigate to the Process Definitions list view by clicking on the Process Definitions module tab. From list view, identify the process definition that you want to enable. Click on that row's actions menu and select "Enable" from the dropdown options.



- **Enabling via Record View**: Click the process definition's name in the list view or from the Process Definitions dashlet to navigate to its record view. Edit the record's Status field to "Enabled" and then click the Save button.



The process definition's Status will change from red to green "Enabled". Processes will immediately begin running when the process definition's conditions are met.

Disabling Process Definitions

Disabling a process definition will prevent it from triggering new processes. Any running processes related to the disabled process definition will pause in an In-Progress state until the process definition is re-enabled. To disable a process definition, use any of the techniques explained in the Enabling Process Definitions section, choosing "Disabled" instead of "Enabled".

Working With Sugar Modules

The Process Definitions module uses Sugar's Sidecar user interface. The following sections detail menus, views, and actions common to Sidecar modules and contain links to additional information within the page or links to the User Interface documentation.

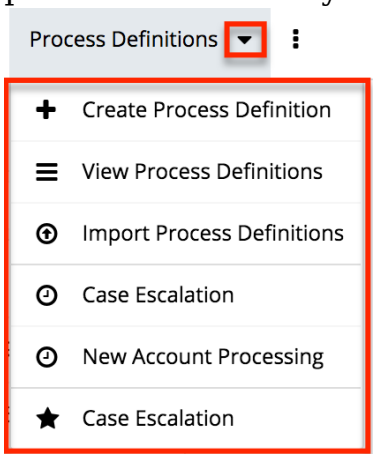
Menus

The following sections describe the various menu options in the Process Definitions module with links to more information about each option in the User Interface documentation or, for process definition-specific functionality, within this page.

Module Tab Menus

The Process Definitions module tab is located on the navigation bar at the top of the Sugar screen when the administrator is engaging with the Process Definitions module. Click the tab to access the Process Definitions list view. You may also click the triangle in the Process Definitions tab to display the Actions, Recently Viewed, and Favorites menus. The Actions menu allows you to perform important actions within the module. The Recently Viewed menu displays the list of process definitions you last viewed in the module. The Favorites menu displays the list of

process definitions you most recently marked as favorites in the module.



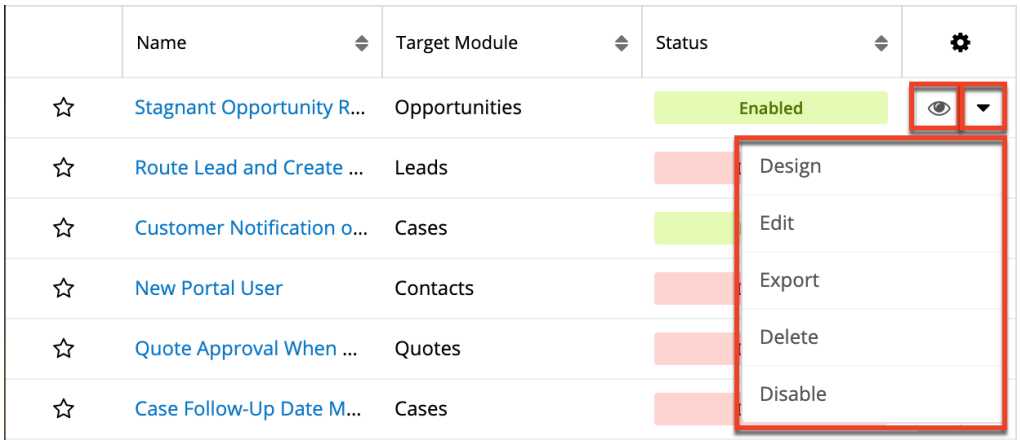
The Actions menu allows you to perform the following operations:

Menu Item	Description
Create Process Definition	Opens the record view layout to create a new process definition.
View Process Definitions	Opens the list view layout to search and display process definitions.
Import Process Definitions	Opens the import wizard to enable import of .bpm files.

To access the Process Definitions module or module tab, you must also be a System Administrator user or a regular user with a role that provides developer access to one or more modules. For more information on module tab menus including other reasons a module may not be included in the menu, see the User Interface documentation.

List View Record Actions Menu

The Record Actions menu to the far right of each record's row allows you to perform actions on the individual process definition record directly from the list view.

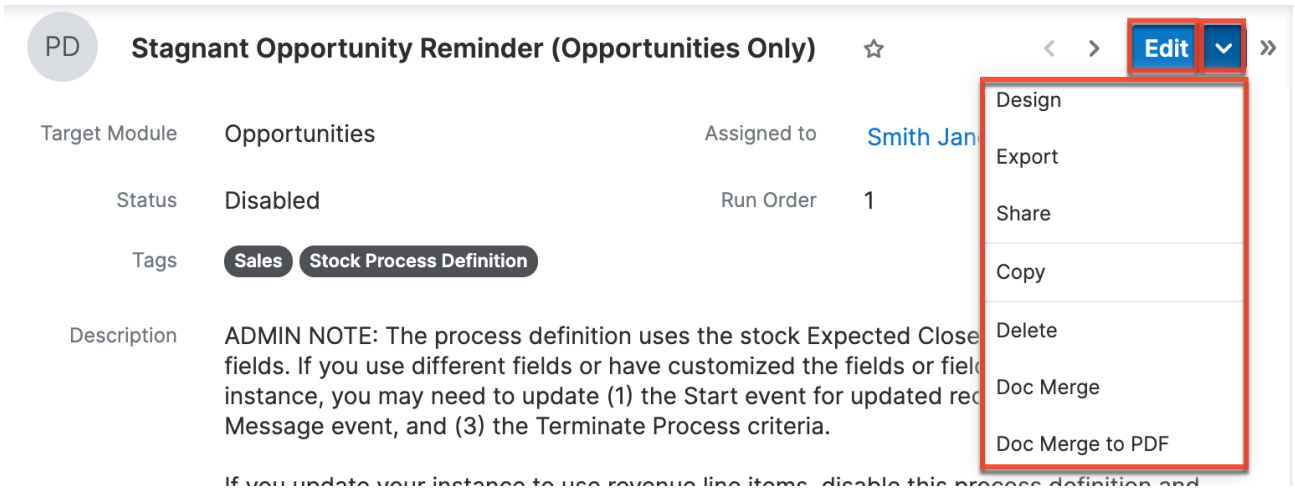


The list view's Record Actions menu allows you to perform the following operations:

Menu Item	Description
Preview (Eye icon)	Preview the design of this process definition in the intelligence pane.
Design	Navigate directly to the process definition's Visual Designer, where you can create and edit the process flow.
Edit	Edit this process definition.
Export	Download a copy of this process definition to your computer as a .bpm file.
Delete	Delete this process definition.
Enable/Disable	Enable or disable this process definition.

Record View Actions Menu

The process definition's record view displays the fields relevant to the Process Definitions module. To access a process definition's record view, simply click a hyperlinked process definition name from the Process Definitions list view. The record view's Actions menu appears on the top right of the page and allows you to perform various operations on the current record.



The Actions menu allows you to perform the following operations:

Menu Item	Description
Edit	Edit this process definition.
Design	Navigate directly to the process definition's Visual Designer, where you can create and edit the process flow.
Export	Download a copy of this process definition to your computer as a .bpm file.
Share	Share a link to this process definition in Sugar via email.
Copy	Duplicate this record to make a new process definition.
Delete	Delete this process definition.
Doc Merge	Select or create a DOCX, XLSX, or PPTX template to merge record data into documents that will be accessible in the Doc Merge widget.
Doc Merge to PDF	Select or create a DOCX, XLSX, or PPTX template to merge record data into PDF documents that will be accessible in the Doc Merge widget.

Common Views and Actions

The following links will open specific sections of the User Interface documentation where you can read about views and actions that are common across most Sidecar modules.

Content Link	Description
Viewing Process Definitions Viewing via List View Viewing via Record View Viewing via Recently Viewed	The Viewing Records section describes various methods of viewing process definition records, including via the Process Definitions list view and record view, the Recently Viewed menu in the Process Definitions module tab. For information on viewing a process definition's message content, please refer to the Designing Process Definitions section below.
Searching for Process Definitions List View Search Creating a Filter	The Searching for Records section provides an introduction to list view search, which searches and filters within the Process Definitions module.
Process Definitions List View Total Record Count Create Button List View Search Favorite Designation Column Reordering Column Resizing Column Sorting Column Selection Preview Record Actions Menu Pagination Intelligence Pane	The List View section walks through the many elements of the Process Definitions List View layout which contains a filterable list of all process definition records in Sugar. While the generic menu options are described in the User Interface sections linked to the left, the options specifically available in the Process Definitions list view are described in the List View Record Actions Menu section of this page.
Process Definitions Record View Favorite Designation Next or Previous Record Actions Menu Show More Intelligence Pane	The Record View section walks through the many elements of the Process Definitions Record View layout which contains detailed information about a single process definition record. While the generic menu options are described in the User Interface sections linked to the left, the options specifically available in the Process Definitions record view are described in the Record View Actions Menu section of this page.
Editing Process Definitions Editing Inline via Record View Editing via Record View Editing Inline via List View	The Editing Records section describes the methods of editing existing process definition record fields: inline via the Process Definitions record view, in full edit mode on the record view, and inline

	via the Process Definitions list view. For information on editing a process definition record's content, please refer to the Designing Process Definitions section below.
Deleting Process Definitions Deleting via Record View Deleting via List View	The Deleting Records section describes two ways to delete process definitions: via the Process Definitions record view and via an individual record's Actions menu on the list view.
Favoriting Process Definitions Favoriting via List View Favoriting via Record View	The Favoriting Records section describes the various methods of marking process definitions as favorites, including via the Process Definitions list view and Process Definitions record view. Favoriting a process definition record allows you to easily access it from list views and the Process Definitions module tab.
Sharing Process Definitions	The Sharing Records section provides instructions for the Share record view option which composes an email with a link to the process definition record. If the recipient is logged into Sugar, clicking the link will bring them directly to the record view.

Process Business Rules

Overview

The Process Business Rules module is one of four modules that make up Sugar's SugarBPM™ (formerly known as Sugar Process Author), Sugar's business process management tool that enables administrators to streamline common business processes by managing approvals, sales processes, call triaging, and more. The Process Business Rules module is used to create reusable rules that will be referenced by records created in the Process Definitions module. The rule or set of rules may enforce business policy, make a decision, or infer new data from existing data.

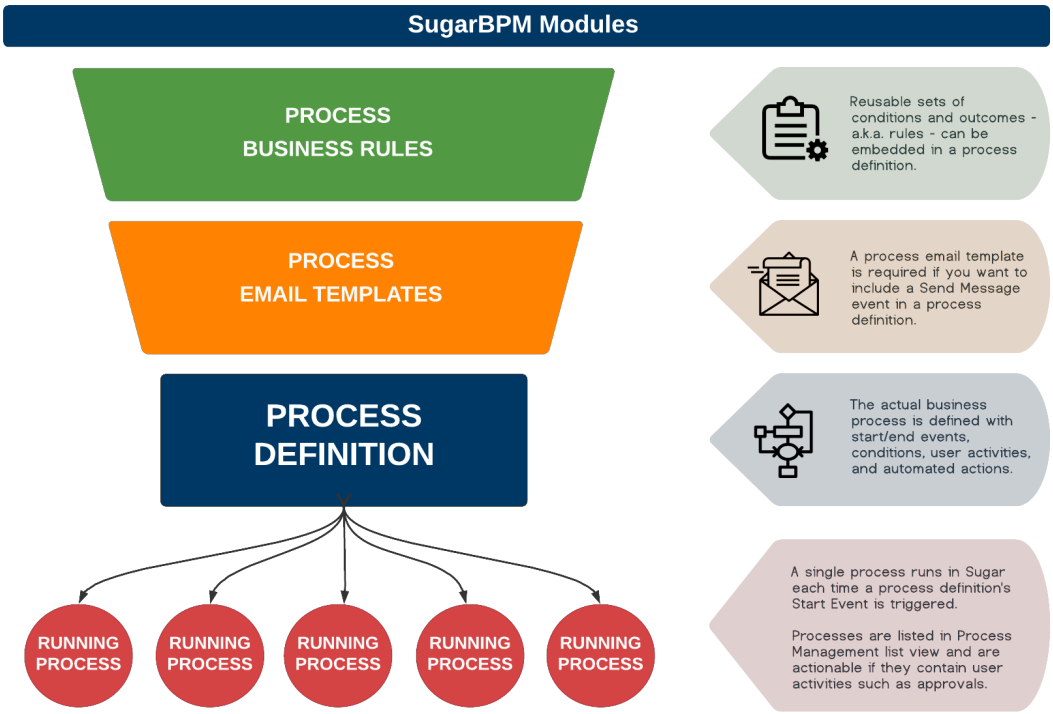
Before continuing, please read the SugarBPM overview page, which defines critical vocabulary and other elements that may be referenced in this article.

This documentation contains the following pages:

- SugarBPM
- Process Definitions
- Process Business Rules (current page)
- Process Email Templates
- Stock SugarBPM Templates

Additionally, the Processes page of the Application Guide contains documentation for the user-facing elements of SugarBPM.

The following image illustrates the relationship between all of the SugarBPM modules:



This documentation will cover information and actions specific to the Process Business Rules module. For instructions concerning views and actions which are common across most Sugar modules, such as creating, editing, and deleting records, please refer to the Working With Sugar Modules section of this page.

Process Business Rule Fields

The Process Business Rules module contains the following fields. For information on using and editing various field types, refer to the User Interface documentation.

Field	Description
Assigned To	The Sugar user assigned to the process

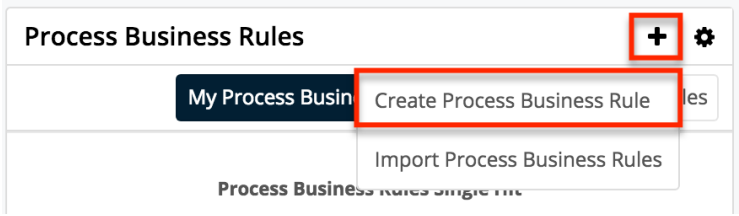
	business rule.
Business Rule Type	Specifies how a rule set will be evaluated. This field defaults to "Single Hit", meaning that each row will be evaluated independently from top to bottom. When a rule in the rule set evaluates as true, the evaluation process stops and that rule's conclusions are executed.
Date Created	The date the process definition record was created.
Date Modified	The date the process definition record or its design was last modified.
Description	A description or other information about the process definition.
Integration Sync ID	The sync key field used by external integrations to identify Sugar records in the external application. See the Integrate REST API endpoints in the Developer Guide for more details on how to use this field. **Note**: This field is not visible in the user interface.
Name	A unique and descriptive name.
Tags	User-created keywords that can be used to identify records in filters, dashlets, and reports. **Note**: For more information on creating and using tags, please refer to the Tags documentation.
Target Module	The module that will be used for the Start event in the process definition design.

Creating Process Business Rules

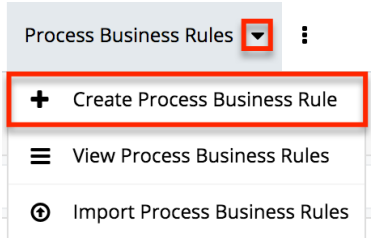
You should typically create business rules before creating any process definitions that will use the rules. However, it is possible to save an incomplete process definition in order to navigate away and build a rule, then return later to complete the process definition.

Process business rules can be created from any of the following places in Sugar:

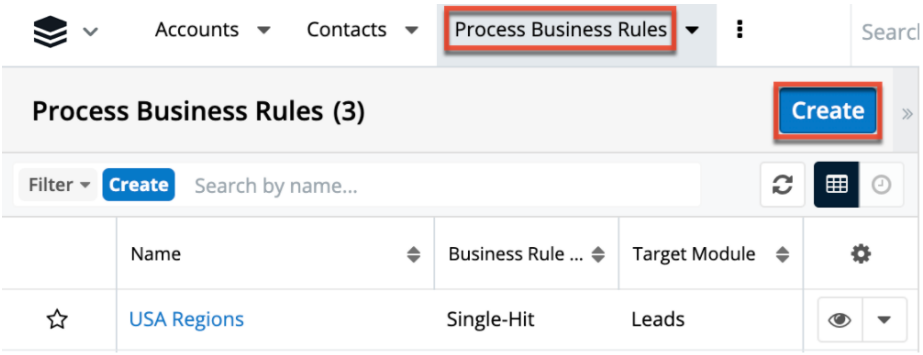
- Process Business Rules dashlet:



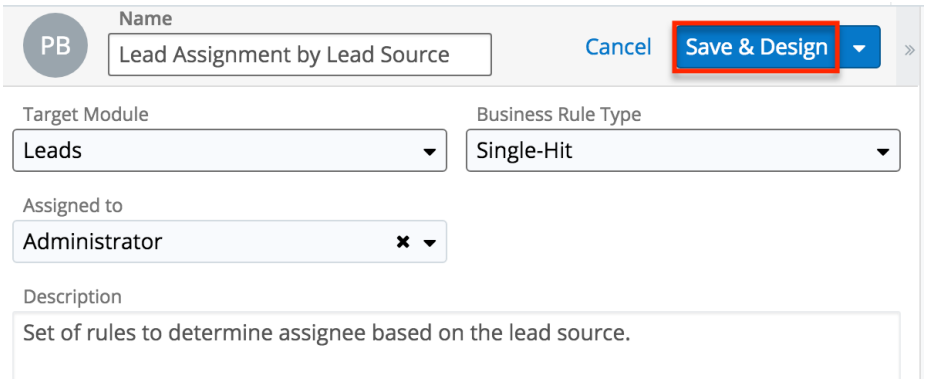
- Process Business Rules module tab menu:



- Process Business Rules list view:



Upon clicking "Create Process Business Rule" (or the Create button from list view), you will be directed to the record view. The record view is where you store information that will make it easy to find and understand the rule in the future. After completing this form, click "Save & Design" to navigate to the Rules Builder interface where the actual rule criteria and outcomes are defined.



For more information about the available fields in the Process Business Rules module, please refer to the Process Business Rule Fields section of this documentation. After configuring and saving the process business rule, it will automatically appear on the administrator's Process Business Rules dashlet and

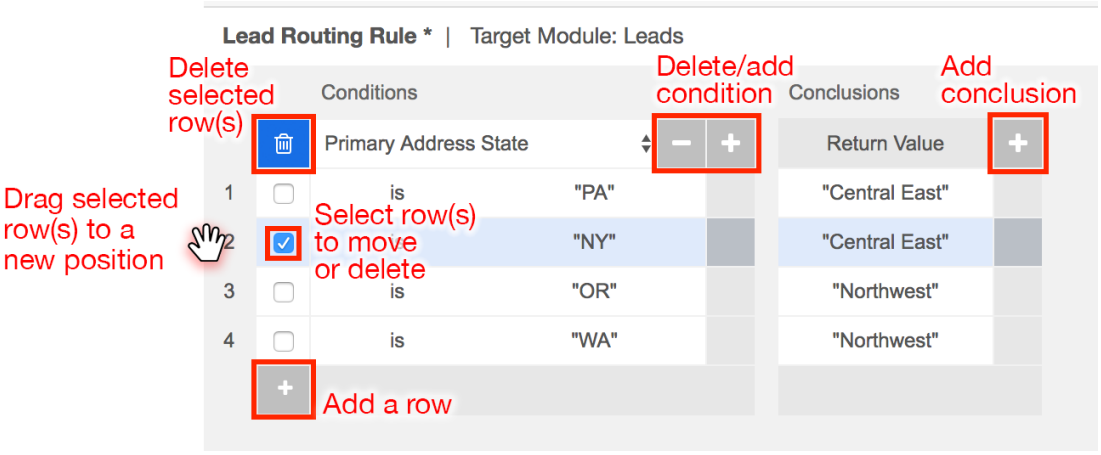
list view, but it will not be ready to use in a process definition until the design step has been completed via the Rules Builder.

Designing Process Business Rules

After saving the process business rule record, use the Rules Builder table to define the conditions and conclusions for the rule(s).

Note: The Rules Builder interface may not be compatible with some touch-screen mobile devices. Please interact with the Rules Builder from a desktop or laptop computer to prevent any potential complications.

The Rules Builder Interface

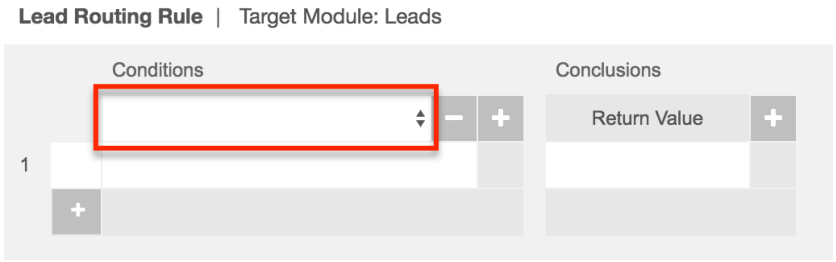


Note: The UI elements of the Rules Builder are only displayed if they are relevant to the current view. For example, new rules and rules with only one row will not contain the selection boxes and Trash icon until additional rows have been added.

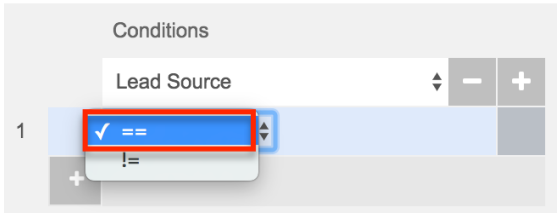
- Click the plus (+) icon to the right of the Conditions header to add additional condition columns.
- Click the minus (-) icon above a condition column to delete the column.
- Click the plus (+) icon to the right of the Conclusions header to add additional conclusion columns.
- Click the minus (-) icon above a conclusion column to delete the column.
- Click the plus (+) icon at the bottom of the table to add additional rows and create a rule set.
- Select the checkbox next to one or more rows and then click the Trash icon to delete the selected row(s).
- Select the checkbox next to one or more rows and then click on one of the selected rows' numbers to drag and drop them to a new position.

The following steps describe how to interact with the Rules Builder.

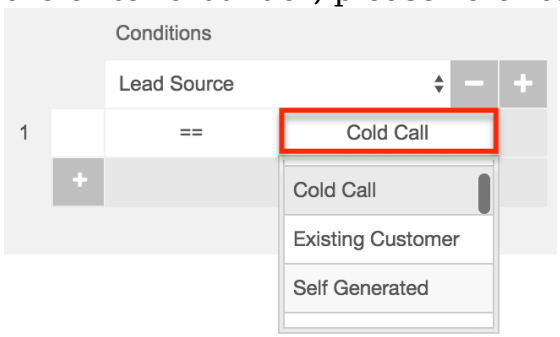
1. For each column in the Conditions section, select a field variable (e.g., Lead Source) from the dropdown inside the white header cell.



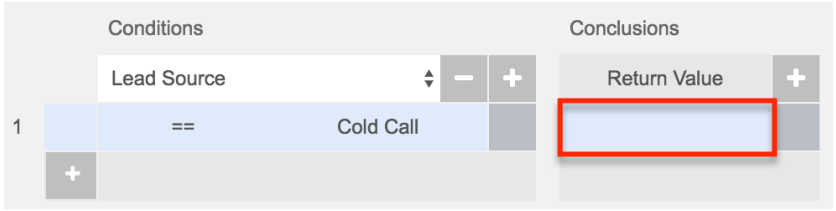
2. Beneath the header, click inside the first row and select the operator needed to evaluate the variable selected in step 1. To change the operator, click on the cell to view and select the available operators in the list.



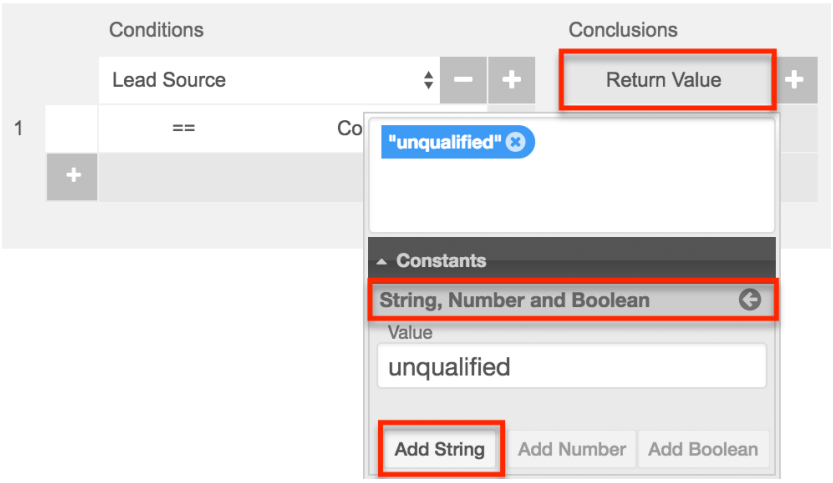
3. Next to the operator, select the field value for the condition. Click on the empty area of the cell to select a field value or access the criteria builder where you can define constants, fields, etc. For more information on using the criteria builder, please refer to the Process Definitions documentation.



4. Optionally, add more Condition columns to satisfy your use case. All conditions defined within the same row must be met in order to trigger the associated conclusion. In addition, when any one row has satisfied all of its conditions, its conclusion will be triggered and no subsequent rows will be evaluated.
5. For the Conclusions block, click in the empty row beneath the Return Value header.



6. In the criteria builder, define the return value for when the row's condition evaluates as true. A process definition's Gateway will evaluate the returned values and react accordingly. A Return Value is required for each row.

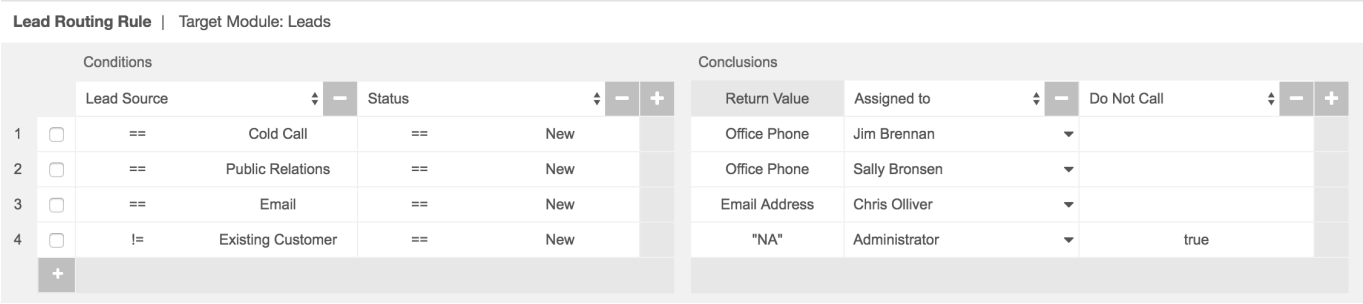


7. Optionally, add more Conclusion columns to update a field value (e.g., "Assigned to") when the row's condition evaluates as true.
8. Continue adding conditional rows as needed until your rule set is complete. For more information, please refer to the Creating Rule Sets section.

Creating Rule Sets

A single process business rule record could potentially define a set of several rules, or a rule set. In the following example of a set of rules for routing leads, each row of the Rules Builder table represents a separate rule that will be evaluated by the process. Each row is evaluated independently in descending order. When a rule in the rule set is evaluated as true, the evaluation process stops. Therefore, only the conclusions defined by the first (topmost) true condition will be returned.

The following example represents a rule set that evaluates two fields, "Lead Source" and "Status", to determine a return value, assigned user, and a possible value for "Do Not Call". The first row translates conversationally to: If the lead has a new status and its source is a Cold Call, then capture the office phone number, assign the lead to Jim Brennan, and make no changes to the Do Not Call field.



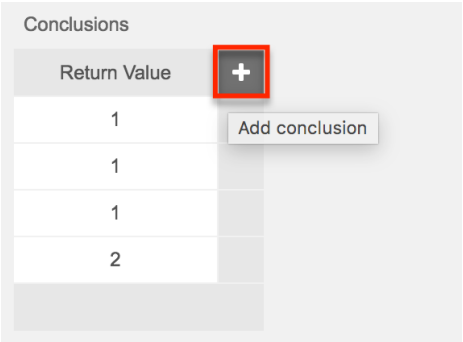
Condition and Conclusion Elements

Process business rules comprise at least one condition:conclusion element.

- **Conditions**: One or more "if" statements that will be evaluated as true or

false.
- **Conclusions**: The results that are returned if the condition evaluates to true.

By default, a true condition must result in a Return value. The Return value can be constructed using variables, constants, operators and/or literal values. If there are to be multiple outcomes to the condition, the Return value must be specified as the first conclusion in the business rule. For example, to change the value of a given field when the condition is true, set an arbitrary return value and then click on the + button adjacent to the table header "Conclusions" to add another conclusion column to the row where the field update can be defined.



The condition will evaluate a set of given variables and if the condition is evaluated as "true", the conclusion will then return a specified value.

Note: Process business rule Return values will always convert to text for evaluation within a process definition.

Operator Elements

Conditions utilize comparison operators. Multiple conditions in a single row will be combined using AND logic, requiring all conditions in a row to be satisfied in order for the statement to be evaluated as true. The available operators are:

Operator	Definition	Available for Field Types
==	is equal to	integer, currency, date, dropdown, multiselect
!=	is not equal to	integer, currency, date, dropdown, multiselect
>=	is greater than or equal to	integer, currency, date
<=	is less than or equal to	integer, currency, date
>	is greater than	integer, currency, date
<	is less than	integer, currency, date

is	exactly matches	text, email
is not	does not exactly match	text, email
starts with	first characters of the field match	text, email
ends with	last characters of the field match	text, email
contains	the characters are found in sequence anywhere in the field	text, email
does not contain	the characters are not found in sequence anywhere in the field	text, email

Note: If using a currency field in a business rule, values should have no currency symbol (such as $) and no thousands separator. Only the period (.) is allowed as a decimal separator.

For information about utilizing process business rules in process definitions, refer to the Actions > Business Rule section of the Process Definitions documentation.

Working With Sugar Modules

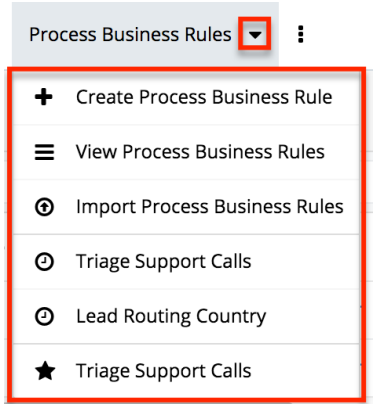
The Process Business Rules module use Sugar's Sidecar user interface. The following sections detail menus, views, and actions common to Sidecar modules and contain links to additional information within the page or links to the User Interface documentation.

Menus

The following sections describe the various menu options in the Process Business Rules module with links to more information about each option in the User Interface documentation or, for template-specific functionality, within this page.

Module Tab Menu

The Process Business Rules module tab is located on the navigation bar at the top of the Sugar screen when the administrator is engaging with the Process Business Rules module. Click the tab to access the Process Business Rules list view. You may also click the triangle in the Process Business Rules tab to display the Actions, Recently Viewed, and Favorites menus. The Actions menu allows you to perform important actions within the module. The Recently Viewed menu displays the list of business rules you last viewed in the module. The Favorites menu displays the list of business rules you most recently marked as favorites in the module.



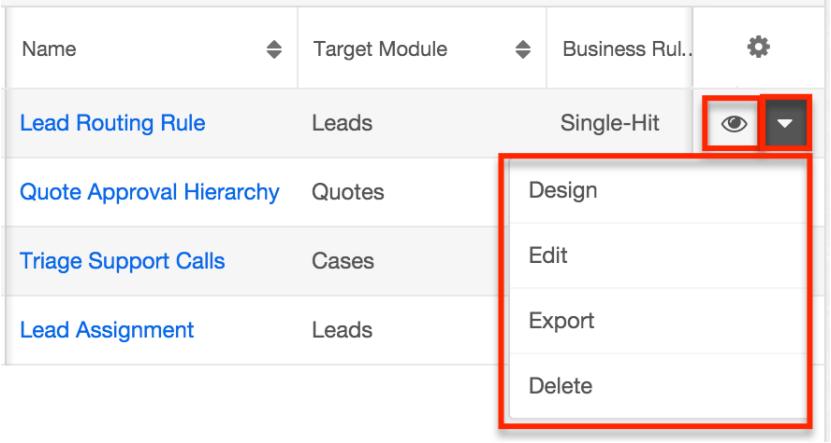
The Actions menu allows you to perform the following operations:

Menu Item	Description
Create Process Business Rule	Opens the record view layout to create a new process rule.
View Process Business Rules	Opens the list view layout to search and display process rules.
Import Process Business Rules	Opens the import wizard to enable import of .pbr files.

To access the Process Business Rules module or module tab, you must also be a System Administrator user or a regular user with a role that provides developer access to one or more modules. For more information on module tab menus including other reasons a module may not be included in the menu, see the User Interface documentation.

List View Record Actions Menu

The Record Actions menu to the far right of each record's row allows you to perform actions on the individual process rule record directly from the list view.

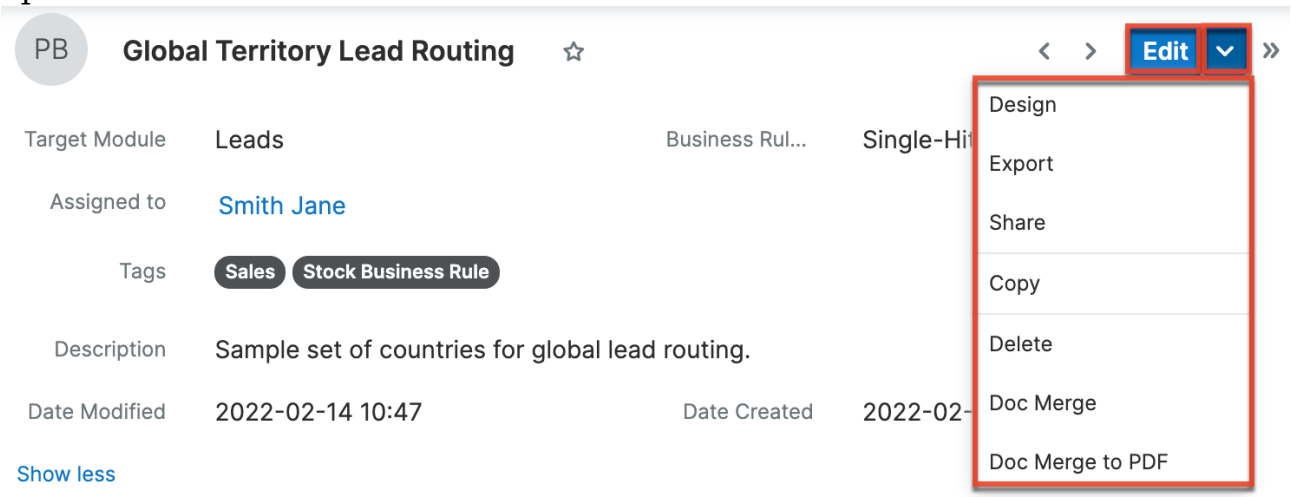


The list view's Record Actions menu allows you to perform the following operations:

Menu Item	Description
Preview	Preview this rule in the intelligence pane.
Design	Navigate directly to the Rules Builder view, where you can create and/or edit the condition(s) and conclusion(s) defined by this process business rule.
Edit	Edit this process business rule record.
Export	Download a copy of this rule to your computer as a .pbr file.
Delete	Delete this process business rule.

Record View Actions Menu

The business rule's record view displays the fields relevant to the Process Business Rules module. To access a rule's record view, simply click a hyperlinked business rule name from the Process Business Rules list view. The record view's Actions menu appears on the top right of the page and allows you to perform various operations on the current record.



The Actions menu allows you to perform the following operations:

Menu Item	Description
Edit	Edit this process business rule record.
Design	Navigate directly to the Rules Builder view, where you can create and/or edit the condition(s) and conclusion(s)

	defined by this process business rule.
Export	Download a copy of this business rule to your computer as a .pbr file.
Share	Share a link to this business rule in Sugar via email.
Copy	Duplicate this record to make a new process business rule.
Delete	Delete this process business rule.
Doc Merge	Select or create a DOCX, XLSX, or PPTX template to merge record data into documents that will be accessible in the Doc Merge widget.
Doc Merge to PDF	Select or create a DOCX, XLSX, or PPTX template to merge record data into PDF documents that will be accessible in the Doc Merge widget.

Common Views and Actions

The following links will open specific sections of the User Interface documentation where you can read about views and actions that are common across most Sidecar modules.

Content Link	Description
Viewing Process Business Rules Viewing via List View Viewing via Record View Viewing via Recently Viewed	The Viewing Records section describes various methods of viewing business rule records, including via the Process Business Rules list view and record view, the Recently Viewed menu in the Process Business Rules module tab. For information on viewing the rule(s) defined within the Rules Builder, please refer to the Designing Process Business Rules section of this page.
Searching for Process Business Rules List View Search Creating a Filter	The Searching for Records section provides an introduction to list view search, which searches and filters within the Process Business Rules module.
Process Business Rules List View Total Record Count Create Button	The List View section walks through the many elements of the Process Business Rules List View layout which contains a

List View Search Favorite Designation Column Reordering Column Resizing Column Sorting Column Selection Preview Record Actions Menu Pagination Intelligence Pane	filterable list of all process business rule records in Sugar. While the generic menu options are described in the User Interface sections linked to the left, the options specifically available in the Process Business Rules list view are described in the List View Record Actions Menu section of this page.
Process Business Rules Record View Favorite Designation Next or Previous Record Actions Menu Show More Intelligence Pane	The Record View section walks through the many elements of the Process Business Rules Record View layout which contains detailed information about a single business rule record. While the generic menu options are described in the User Interface sections linked to the left, the options specifically available in the Process Business Rules record view are described in the Record View Actions Menu section of this page.
Editing Process Business Rules Editing Inline via Record View Editing via Record View Editing Inline via List View	The Editing Records section describes the methods of editing existing business rule record fields: inline via the Process Business Rules record view, in full edit mode on the record view, and inline via the Process Business Rules list view. For information on editing the rules defined in the Rules Builder, please refer to the Designing Process Business Rules section of this page.
Deleting Process Business Rules Deleting via Record View Deleting via List View	The Deleting Records section describes two ways to delete business rules: via the Process Business Rules record view and via an individual record's Actions menu on the list view.
Favoriting Process Business Rules Favoriting via List View Favoriting via Record View	The Favoriting Records section describes the various methods of marking business rules as favorites, including via the Process Business Rules list view and Process Business Rules record view. Favoriting a business rule record allows you to easily access it

	from list views and the Process Business Rules module tab.
Sharing Process Business Rules	The Sharing Records section provides instructions for the Share record view option which composes an email with a link to the process email template record. If the recipient is logged into Sugar, clicking the link will bring them directly to the record view.

Process Email Templates

Overview

The Process Email Templates module is one of four modules that make up SugarBPM™, Sugar's business process management tool that enables administrators to streamline common business processes by managing approvals, sales processes, call triaging, and more. A process email template is required in order to include a Send Message event in a process definition. Sugar's core product includes several places where email templates can be created for different purposes, but SugarBPM requires all sent messages to be created via the Process Email Templates module.

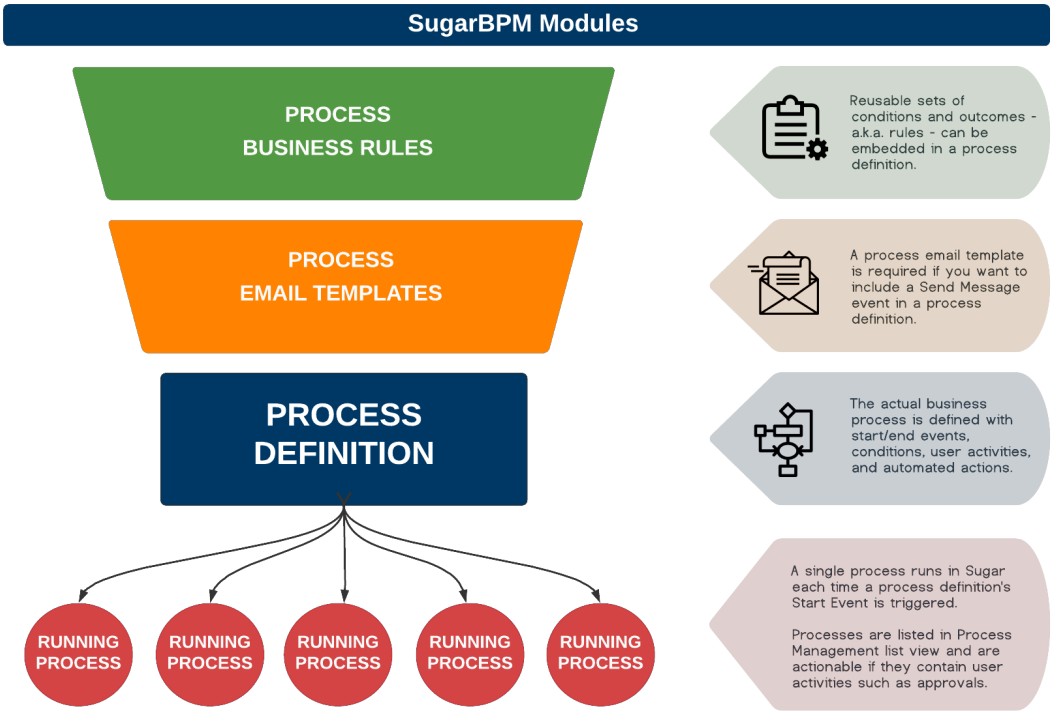
Before continuing, please read the SugarBPM overview page, which defines critical vocabulary and other elements that may be referenced in this article.

The SugarBPM documentation contains the following pages:

- SugarBPM (overview)
- Process Definitions
- Process Business Rules
- Process Email Templates (current page)
- Stock SugarBPM Templates

Additionally, the Processes page of the Application Guide contains documentation for the user-facing elements of SugarBPM.

The following image illustrates the relationship between the four SugarBPM modules:



This documentation will cover information and actions specific to the Process Email Templates module. For instructions concerning views and actions which are common across most Sugar modules, such as creating, editing, and deleting records, please refer to the Working With Sugar Modules section of this page.

Process Email Template Fields

The Process Email Templates module contains the following fields. For information on using and editing various field types, refer to the User Interface documentation.

Field	Description
Assigned To	The Sugar user assigned to the process email template.
Date Created	The date the process email template record was created.
Date Modified	The date the process email template record or its content was last modified.
Description	A description or other information about the process email template.
Integration Sync ID	The sync key field used by external integrations to identify Sugar records in

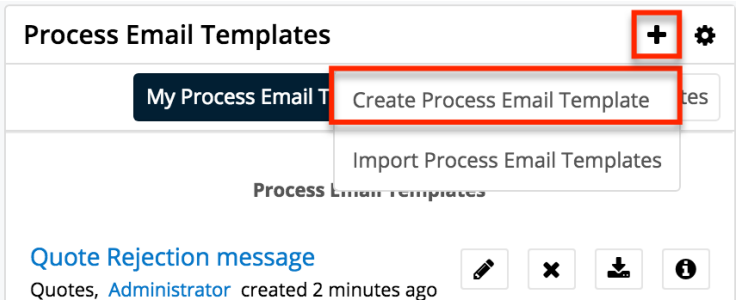
	the external application. See the Integrate REST API endpoints in the Developer Guide for more details on how to use this field. **Note**: This field is not visible in the user interface.
Name	A unique and descriptive name.
Tags	User-created keywords that can be used to identify records in filters, dashlets, and reports. **Note**: For more information on creating and using tags, please refer to the Tags documentation.
Target Module	The module against which the template's processes will be defined.

Creating Process Email Templates

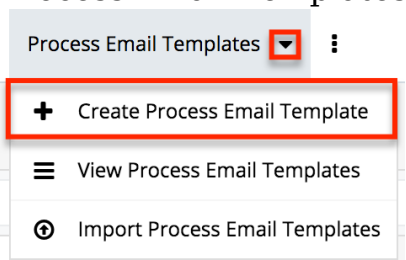
You should typically create email templates before creating any process definitions that will use the templates. However, it is possible to save an incomplete process definition in order to navigate away and build an email template, then return later to complete the process definition.

Process email templates can be created from any of the following places in Sugar:

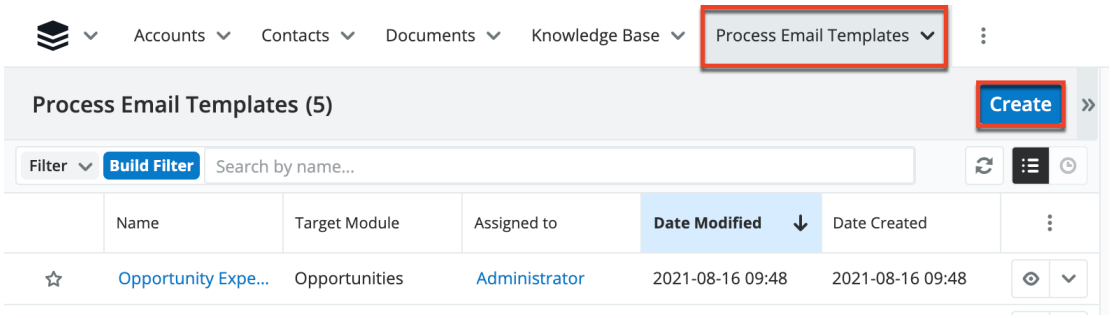
- Process Email Templates dashlet:



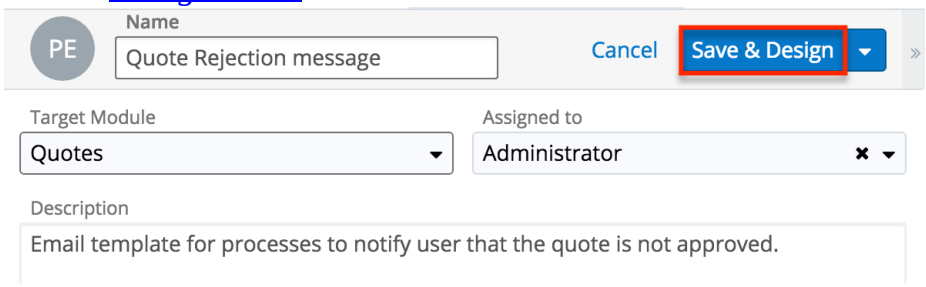
- Process Email Templates module tab menu:



- Process Email Templates list view:



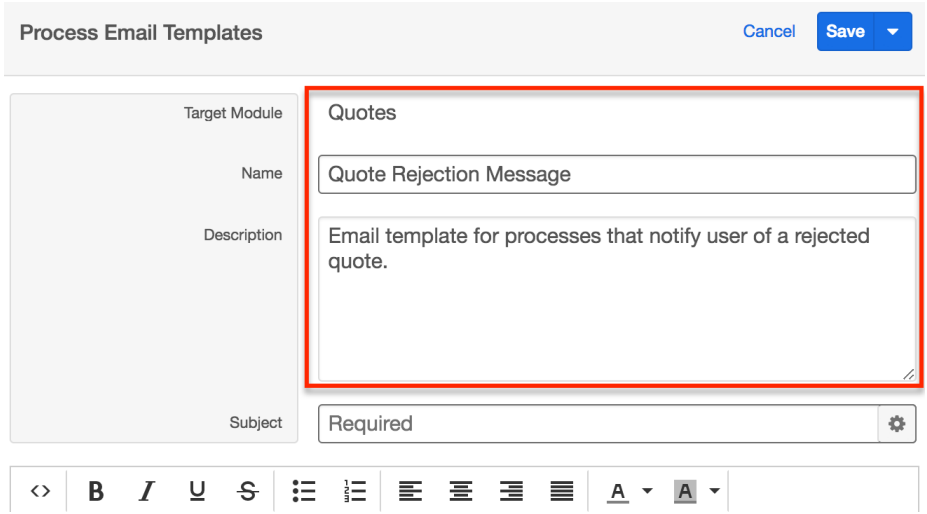
Upon clicking "Create Process Email Template" (or the Create button from list view), you will be directed to the record view. The record view is where Sugar stores information that will make it easy to find and understand the purpose of the email template in the future. After completing this form, you will be directed to the design view to create the actual content of the message.



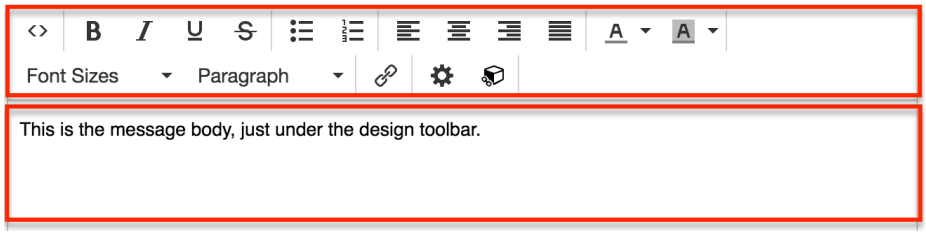
After configuring and saving the process email template, it will automatically appear on the administrator's Process Email Templates dashlet and list view, but it will not be ready to use in a process definition until the design step has been completed via the design view.

Designing Process Email Templates

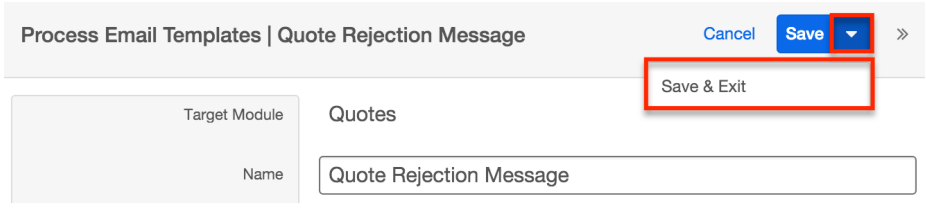
After submitting the template's record view, you must create the custom layout and design of the message that will be sent by related process definitions. Click "Save & Design" in record view to automatically enter the Process Email Template's design view. The field values for Target Module, Name, and Description are automatically pre-populated on this screen based on the values entered on the record view.



SugarBPM's email template design interface is an easy-to-use WYSIWYG editor. The two elements available in the design view that cannot be accessed from record view are the design toolbar and the message body. The following sections cover how to use these elements to craft an email message template.



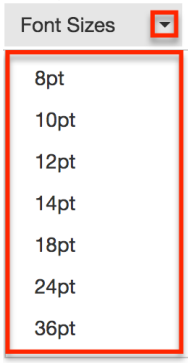
At any time during the design of a template, you may click the Save button to preserve your work. After completing the content of the message, expand the record's Actions Menu to reveal "Save & Exit". Click on this menu item to return to the Process Email Templates list view and continue working in Sugar.



The Design Toolbar

The toolbar is powered by the TinyMCE rich-text editor framework and presents familiar formatting options:

Element	Button(s)	Function
Edit HTML Source	<>	Bypass the rich-text editor options and insert your

		own HTML code, or view the HTML code of an existing template to make advanced changes.
Bold; Italic; Underline; Strikethrough		Use these basic font formatting options to easily add common styles to text in the message body.
Insert/Remove Bulleted List; Insert/Remove Numbered List		Transform paragraphs in the message body into a formatted list.
Align Left; Align Center; Align Right; Justified		Set paragraph alignment.
Text Color; Background Color		Choose a custom font color or highlight text with a background font color.
Font Size		Make text larger or smaller.
Fields Selector		Look up and insert Sugar module field variables. For more information, see the Fields Selector section below.
Record Link Selector		Look up and insert a hyperlink to a Sugar record related to the process's target record. For more information, see the Record Link Selector section below.

Insert/Edit Link		Insert or edit a link to a web page, hosted file, or other location on the web.

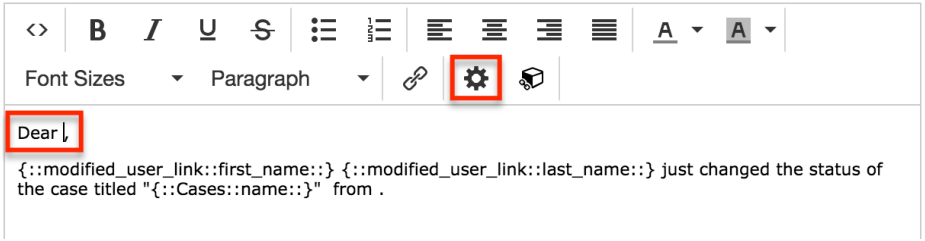
Using the Fields Selector Tool

Process email templates can be customized using data pulled directly from your Sugar database. For example, an email template triggered by the Cases module could contain critical case details such as the support agent's name or the phone number of the contact related to the case. Related-module fields can be referenced from modules that have a one-to-one or one-to-many relationship with the target module. If a field has been updated, both its old and current values can be included.

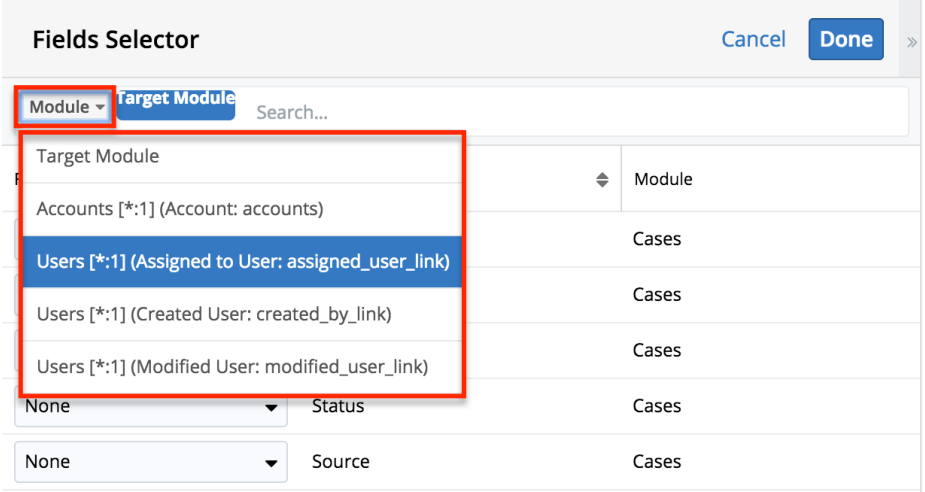
Note: Before using old values in your message's template, be sure to refer to the Understanding Current and Old Values section for important usage information regarding your process definition's design.

Common use cases for the Fields Selector tool include using the recipient's name and mentioning the old and new values of a changed field such as "Status" in the message body. To insert custom values using the Fields Selector tool, follow these steps:

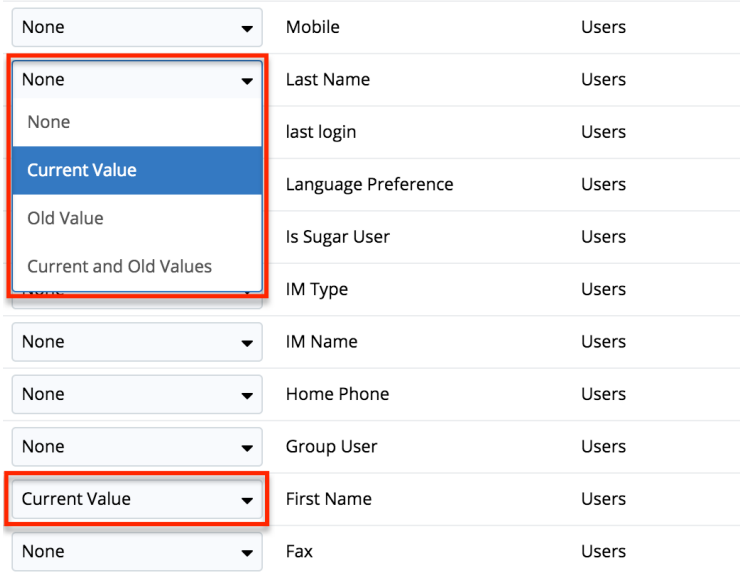
1. From the process email template's design view, place the cursor in the message body where the custom name variable should appear. Click on the Fields Selector icon in the design toolbar.



2. The Fields Selector drawer will open over the current screen. By default, it displays all fields in the template's target module. To find a variable from a related module, click the word "Module" to the left of the search bar and select the desired module.



3. The list of field variables will update automatically. Open the dropdown adjacent to the field or fields that you would like to insert and choose "Current Value". In this example, we are choosing to add the current value of the recipient's first and last name. Click "Done" to insert the field variables into the email template.



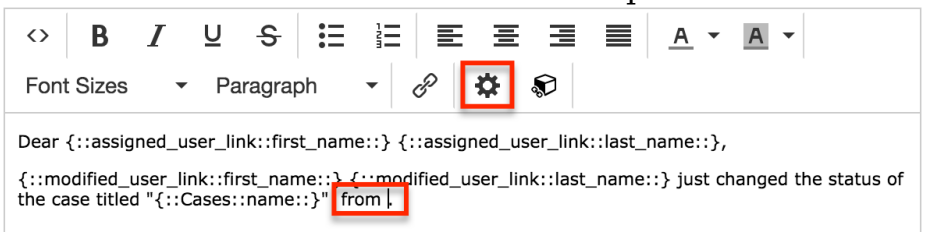
4. The template's design view will once again be visible and the selected variables will appear where your cursor was positioned before clicking the Fields Selector icon. The variables are wrapped in curly braces and must retain their special formatting to be detected in the sent message.



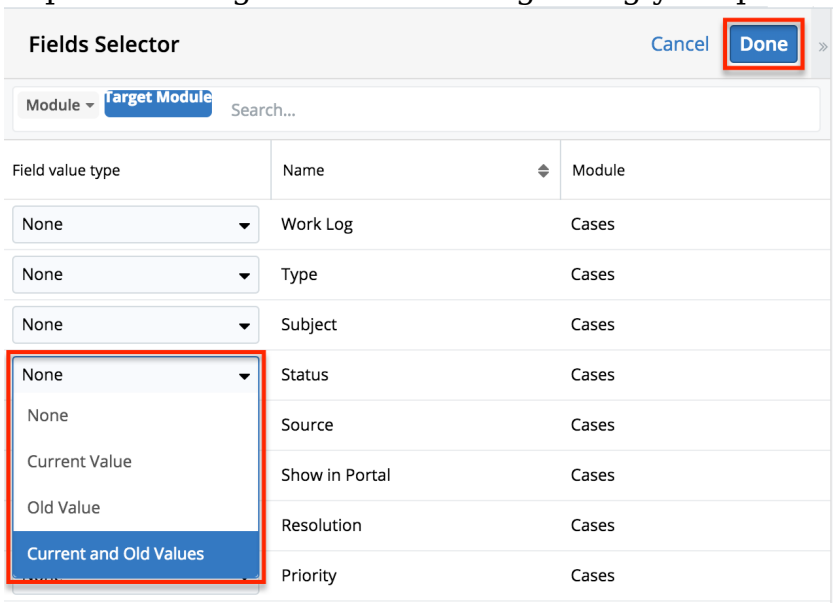
If necessary, use the text editor to move the variables or insert additional characters. In this example, we will move the first name variable {::assigned_user_link::first_name::} into position before the last name variable and insert a space character in between the two:

Dear {::assigned_user_link::first_name::} {::assigned_user_link::last_name::},

5. Next, place the cursor where you would like to insert the old and new values of the case's Status field then open the Fields Selector drawer again.



6. In the drawer, open the dropdown adjacent to the Status field and select "Current and Old Values" then click "Done". Both variables will be inserted into the message.
Note: Before using current and old values in your message's template, be sure to refer to the Understanding Current and Old Values section for important usage information regarding your process definition's design.

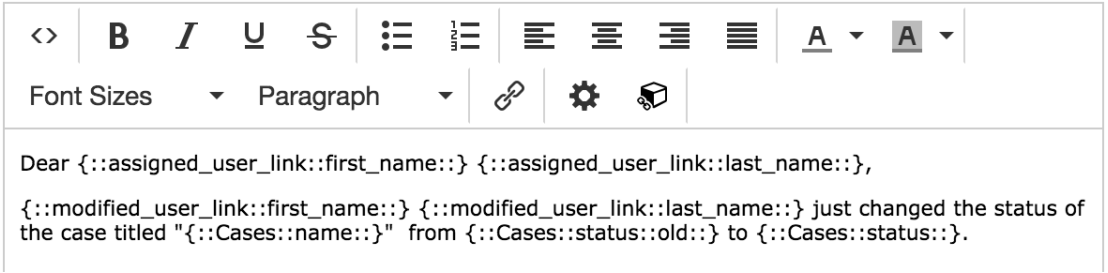


7. If necessary, reorganize the text to place the current and old variables where desired. In this example, we will put the old value before the current one and complete the sentence:

from {::Cases::status::old::} to {::Cases::status::}.

8. Continue editing the template as needed and save.

The final product may look similar to this:



For information about using process email templates in process definitions, refer to the Send Message Events section of the Process Definitions documentation.

Understanding Current and Old Values

When utilizing the Fields Selector tool to insert the current or old value of a field, it is important to strategically position the Send Message event within your process definition's design. Keep in mind the following guidelines:

- If the value of a field did not change during the action that triggers the Send Message event, both the Old Value and Current Value variables will display the current value. Therefore, only use the Old Value variable when a specific field is expected to change during the triggering event.
- If the value of a field changes more than once in a process, then its old and current values will be determined by the event that most closely precedes the Send Message event.
- If your process definition contains a Wait event, be sure that the Wait event does not occur between the action that changes the field and the Send Message event. This would prevent the old value from being communicated to the Send Message event.
- Old values of related-module fields are only preserved if they are changed within the same save, such as a Change Field event in the process or a logic hook that is triggered during the process.

For information about using process email templates in process definitions, refer to the Send Message Events section of the Process Definitions documentation.

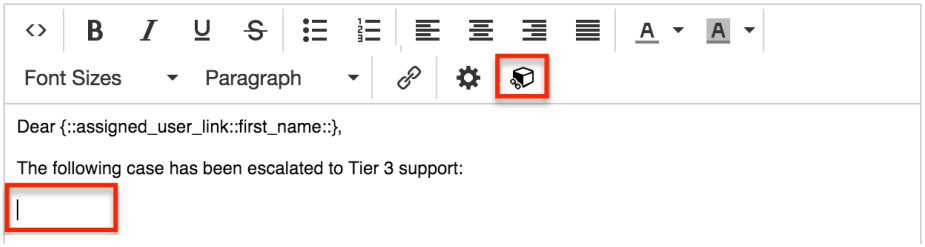
Using the Record Link Selector Tool

If desired, you may insert a URL in the message content that links to the target record or a record from a related module. For example, an email template triggered from the Cases module could contain a link to the related case record in Sugar. If you wish to send an email to a user when a process is assigned to them via an Activity element in the process definition, you can also insert a link to the process awaiting the user's action.

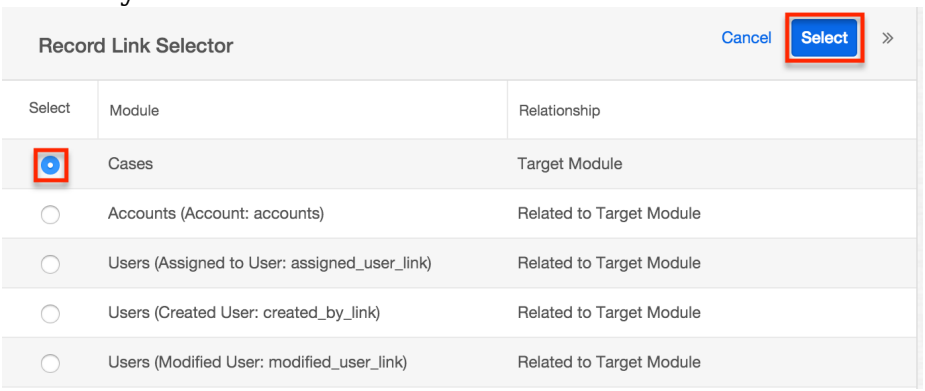
Note: Related-module links will only be available for modules that have a one-to-many relationship with the target module.

To insert a link using the Record Link Selector tool, follow these steps:

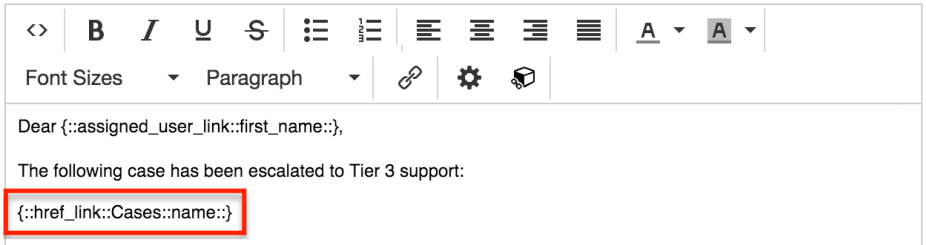
1. From the Process Email Template's design view, place the cursor in the message body where you want to insert a record link. Click on the Record Link Selector icon in the design toolbar.



2. The Record Link Selector drawer will open over the current screen, displaying the name of the target module on the first line followed by the names of modules that have a one-to-many relationship with the target module. Click on the radio button next to the module that contains the record you want to link to and then click "Select".



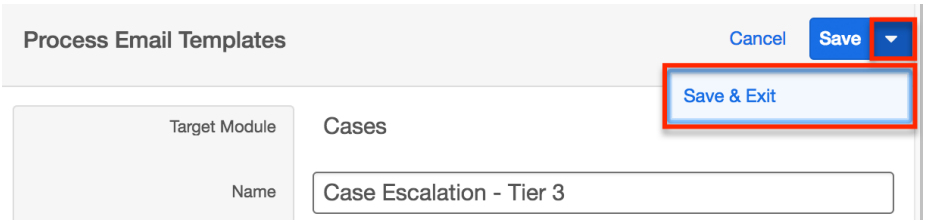
3. The template's design view will once again be visible and a variable representing the selected URL will appear where your cursor was positioned before clicking on the Record Link Selector icon.



Note: In the recipient's inbox, the message will contain an unformatted URL (e.g., https://instancename.com/#Cases/1234-abcd-5678-efgh) that links to the related record. To instead display a word or phrase hyperlinked to the record, you can click on the Edit HTML Source button in the design toolbar and place the link variable in an HTML anchor tag:



4. After completing the content of the message, click "Save & Exit".



For information about using process email templates in process definitions, refer to the Send Message Events section of the Process Definitions documentation.

Linking to Processes

If you wish to send an email to a user when a process is assigned to them via an Activity element in the process definition, you can insert a link directly to the process record awaiting their action. To do this, simply choose the Processes module in the Record Link Selector. When clicked in the email, this link will open the record view of the active process, allowing the assigned user to execute (e.g., approve or route) the process. See the Processes page in the Application Guide for more information on how users can work with processes.

Email templates containing process links should only be used in Activity elements, not Send Message events. Outside the context of an activity, there is no viewable active process awaiting action by a user, and therefore such links are invalid. If you use an email template containing a process link in a Send Message event, the link will simply appear blank in the email.

It is also possible for a process link in an email to become out of date if the user clicks the link after they have already executed the process. Once executed, the process is no longer available to be viewed and the user will see a warning in Sugar that the process is now closed.

Working With Sugar Modules

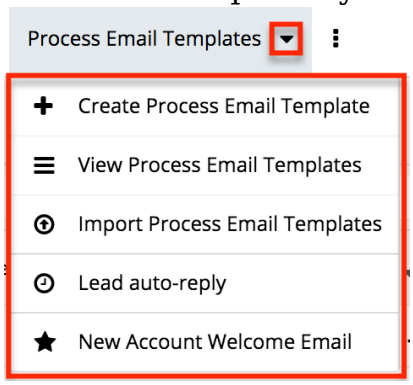
The Process Definitions module uses Sugar's Sidecar user interface. The following sections detail menus, views, and actions common to Sidecar modules and contain links to additional information within the page or links to the User Interface documentation.

Menus

The following sections describe the various menu options in the Process Email Templates module with links to more information about each option in the User Interface documentation or, for template-specific functionality, within this page.

Module Tab Menus

The Process Email Templates module tab is located on the navigation bar at the top of the Sugar screen when the administrator is engaging with the Process Email Templates module. Click the tab to access the Process Email Templates list view. You may also click the triangle in the Process Email Templates tab to display the Actions, Recently Viewed, and Favorites menus. The Actions menu allows you to perform important actions within the module. The Recently Viewed menu displays the list of templates you last viewed in the module. The Favorites menu displays the list of templates you most recently marked as favorites in the module.



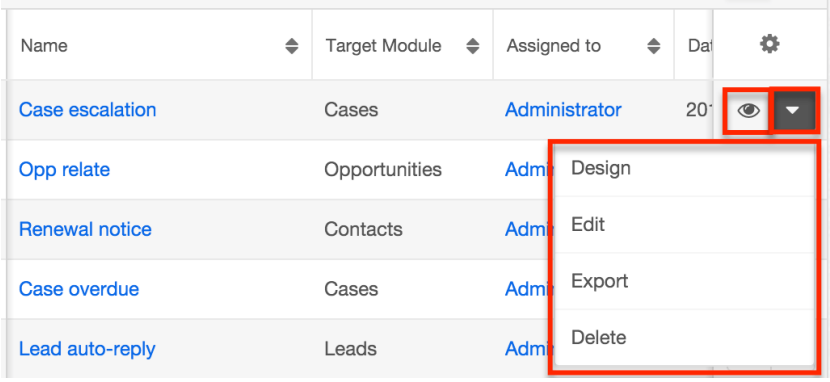
The Actions menu allows you to perform the following operations:

Menu Item	Description
Create Process Email Template	Opens the record view layout to create a new email template.
View Process Email Templates	Opens the list view layout to search and display email templates.
Import Process Email Templates	Opens the import wizard to enable import of .pet files.

To access the Process Email Templates module or module tab, you must also be a System Administrator user or a regular user with a role that provides developer access to one or more modules. For more information on module tab menus including other reasons a module may not be included in the menu, see the User Interface documentation.

List View Record Actions Menu

The Record Actions menu to the far right of each record's row allows you to perform actions on the individual process email template record directly from the list view.

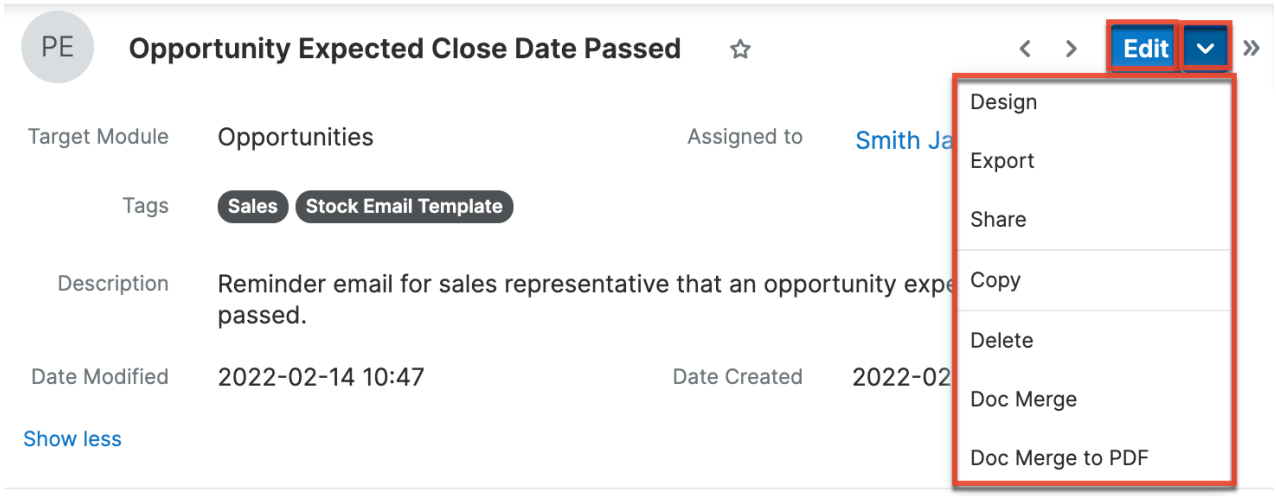


The list view's Record Actions menu allows you to perform the following operations:

Menu Item	Description
Preview	Preview this email template in the intelligence pane.
Design	Navigate directly to the template's design view, where you can create and edit the message's content.
Edit	Edit this process email template.
Export	Download a copy of this template to your computer as a .pet file.
Delete	Delete this process email template.

Record View Actions Menu

The template's record view displays the fields relevant to the Process Email Templates module. To access a template's record view, simply click a hyperlinked template name from the Process Email Templates list view. The record view's Actions menu appears on the top right of the page and allows you to perform various operations on the current record.



The Actions menu allows you to perform the following operations:

Menu Item	Description
Edit	Edit this process email template.
Design	Navigate directly to the template's design view, where you can create and edit the message's content.
Export	Download a copy of this template to your computer as a .pet file.
Share	Share a link to this template in Sugar via email.
Copy	Duplicate this record to make a new process email template.
Delete	Delete this process email template.
Doc Merge	Select or create a DOCX, XLSX, or PPTX template to merge record data into documents that will be accessible in the Doc Merge widget.
Doc Merge to PDF	Select or create a DOCX, XLSX, or PPTX template to merge record data into PDF documents that will be accessible in the Doc Merge widget.

Common Views and Actions

The following links will open specific sections of the User Interface documentation where you can read about views and actions that are common across most Sidecar modules.

Content Link	Description
Viewing Process Email Templates Viewing via List View Viewing via Record View Viewing via Recently Viewed	The Viewing Records section describes various methods of viewing process email template records, including via the Process Email Templates list view and record view and the Recently Viewed menu in the Process Email Templates module tab. For information on viewing the content of a template's message, please refer to the Designing Process Email Templates section below.
Searching for Process Email Templates List View Search Creating a Filter	The Searching for Records section provides an introduction to list view search, which searches and filters within the Process Email Templates module.
Process Email Templates List View Total Record Count Create Button List View Search Favorite Designation Column Reordering Column Resizing Column Sorting Column Selection Preview Record Actions Menu Pagination Intelligence Pane	The List View section walks through the many elements of the Process Email Templates List View layout which contains a filterable list of all process email template records in Sugar. While the generic menu options are described in the User Interface sections linked to the left, the options specifically available in the Process Email Templates list view are described in the List View Record Actions Menu section of this page.
Process Email Templates Record View Favorite Designation Next or Previous Record Actions Menu Show More Intelligence Pane	The Record View section walks through the many elements of the Process Email Templates Record View layout, which contains detailed information about a single process email template record. While the generic menu options are described in the User Interface sections linked to the left, the options specifically available in the Process Email Templates record view are described in the Record View Actions Menu section of this page.
Editing Process Email Templates	The Editing Records section describes

Editing Inline via Record View Editing via Record View Editing Inline via List View	the methods of editing existing process email template record fields: inline via the Process Email Templates record view, in full edit mode on the record view, and inline via the Process Email Templates list view. For information on editing the content of a template's message, please refer to the Designing Process Email Templates section below.
Deleting Process Email Templates Deleting via Record View Deleting via List View	The Deleting Records section describes two ways to delete process email templates: via the Process Email Templates record view and via an individual record's Actions menu on the list view.
Favoriting Process Email Templates Favoriting via List View Favoriting via Record View	The Favoriting Records section describes the various methods of marking process email templates as favorites, including via the Process Email Templates list view and Process Email Templates record view. Favoriting a process email template record allows you to easily access it from list views and the Process Email Templates module tab.
Sharing Process Email Templates	The Sharing Records section provides instructions for the Share option in record view, which composes an email with a link to the process email template record. If the recipient is logged into Sugar, clicking the link will bring them directly to the record view.

Stock SugarBPM Templates

Overview

SugarBPM™ has a number of pre-built, stock process definitions, process business rules, and process email templates that are available depending on your license type. These templates work together to automate common business processes (e.g., Service Level Agreement management on cases). This page lists and describes each of the stock process definitions, including their associated business

rules and email templates, that come out-of-the-box for users with the required license type. For more information on license types, refer to the User Management documentation.

Before continuing, please read the SugarBPM overview page, which defines critical vocabulary and other elements that may be referenced in this page.

The SugarBPM documentation contains the following pages:

- SugarBPM (overview)
- Process Definitions
- Process Business Rules
- Process Email Templates
- Stock SugarBPM Templates (current page)

Additionally, the Processes page of the Application Guide contains documentation for the user-facing elements of SugarBPM.

Prerequisites

The following conditions are required to access and configure the stock process definition templates described below:

- You must be an administrator or have developer-level role access to the template's target module.
- You must have a Sugar Serve license type to access the SugarBPM Serve templates.

For more information on license types, refer to the User Management documentation.

Viewing Stock SugarBPM Templates

All of the available stock SugarBPM templates can be accessed via their respective modules: Process Definitions, Process Business Rules, and Process Email Templates. They can be identified by a tag that indicates they are a stock record:

SugarBPM Module	Tag
Process Definitions	Stock Process Definition
Process Business Rules	Stock Business Rule
Process Email Templates	Stock Email Template

Each stock record also has a category tag such as "Customer Service" or "Sales". Users can filter each list view by tag as explained in the User Interface documentation.

To see which tags a record has, you can view the Tags field on the record or preview it in list view using the eye icon. Refer to the Tags documentation for more details on how tags work and the User Interface documentation for more information on previewing records.

Stock Process Definitions

The sections below list all stock process definitions in Sugar and the stock business rules and email templates that they use.

Serve Templates

The SugarBPM templates in this section help to automate customer service processes around cases and notes. To access these templates, users must have a Sugar Serve license type. See the License Types documentation for more information on how licenses work.

Case Follow-Up Date Management V2

Overview

Target Module	Associated Process Business Rules	Associated Process Email Templates
Cases	• New Case SLA V2	• Follow-Up Warning V2 • Case Assigned V2 • Notify Manager: SLA Missed V2

Description

This SugarBPM template is a revision of the original version that was included in a previous version of Sugar Serve. The V2 version is available in Sugar Serve 11.0 and higher and includes new functionality. For details on the new functionality and how to configure it, refer to the Stock SugarBPM - Case Follow-Up Date Management article.

This process definition updates the case's Follow-Up Date and sends email notifications during the lifecycle of new and updated cases. It can be broken down into three general stages: new case assignment and initial response, existing case waiting on the customer service representative, and existing case waiting on the

customer.

New Case Assignment and Initial Response:
When a new case is created, the process calculates and sets the follow-up date, assigns the case to a customer service representative, notifies them, and waits to ensure that the follow-up date is met by a status change before advancing to the next stage. If it is not met, the process sets the SLA Met field to "No", sends an email notification to the representative's supervisor, and continues to wait for a status change before advancing.

Existing Case Waiting on the Customer Service Representative:
The process waits for a status change on the case and then updates the follow-up date using the business center's business hours and sets the First Response Sent field to "Yes". If the status changes to any open status other than "Pending Input", the process adds 8 business hours to the follow-up date. It then waits for another status change while the customer service representative works on the case.

Existing Case Waiting on the Customer:
If the status changes to "Pending Input", the process adds 16 business hours to the follow-up date then waits for the customer to respond. If they do not respond by the follow-up date, an additional 16 business hours are added and the process sends an email to the customer notifying them that the case is awaiting their response. If the customer sends an email related to the case, the case status is changed to "Assigned". However, if they do not respond by the new follow-up date, then the case is automatically closed.

Configuration Notes

Refer to the Getting Started With SugarBPM for Sugar Serve and Stock SugarBPM - Case Follow-Up Date Management articles for help configuring this process definition and your instance to work together.

Case Status Update on Inbound Customer Note

Overview

Target Module	Associated Process Business Rules	Associated Process Email Templates
Notes	none	none

Description

This process definition changes a case's status from Pending Input to Assigned when a customer adds a note to the case.

Configuration Notes

If you have customized the available values for the Status field in your Cases module, you must update the following elements in the process definition to use the statuses available in your instance:

- Start Event
- Change Field Action

Customer Notification of Case Status Change

Overview

Target Module	Associated Process Business Rules	Associated Process Email Templates
Cases	none	• Customer Notification of Case Status Change

Description

When a case's status changes except when changed by an Inbound Email, all contacts related to the case are notified via email.

New Portal User

Overview

Target Module	Associated Process Business Rules	Associated Process Email Templates
Contacts	none	• New Portal Registration • Portal Registration Acknowledgement

Description

When a new contact is created in Sugar from a new portal registration, this process definition sends two emails. The first is sent to the assigned user of the new contact, informing them of the new portal user needing activation. The second is sent to the new portal user, acknowledging that their registration was submitted successfully.

New Note Notification

Overview

Target Module	Associated Process Business Rules	Associated Process Email Templates

Notes	none	• Client Notification of New Note • Agent Notification of New Note

Description

When a new note related to a case is created, this process definition sends an email notification to the relevant party. If the client creates the note, the email is sent to the case owner. Otherwise, if the customer service representative creates the note, the email is sent to the primary contact on the case. If there is no primary contact, then the note description is updated to specify why no email notification was sent.

Restoring Stock SugarBPM Templates

To undo all changes to a stock Sugar BPM record and restore it to its original state, file a case with the Sugar Support team.

Tile View Settings

Overview

Tile view allows users to visualize and engage with their cases and tasks in an intuitive drag-and-drop interface. Users can drag tiles from one column to another to move a record from one status to another. Administrators can configure tile view to fit their specific business needs by enabling and disabling modules, changing the visible columns, and selecting the fields displayed in each tile via Admin > Tile View Settings. This page describes how to configure the tile views in Sugar.

For information on using tile view in Sugar, refer to the User Interface documentation in the Application Guide.

Note: Tile view functionality is supported for cases, opportunities, tasks, and leads, but not all user license types can access all of these modules. For more information on license types and the module functionality available for each type, refer to the License Types Matrix documentation.

Tile View Modules

Upon navigating to Admin > Tile View Settings, the tile view administration page's topmost section is labeled "Tile View Modules". In this panel, you can enable and disable tile view access for the available modules.

Tile View Modules Fields

The Tile View Modules section for tile view administration contains the following field:

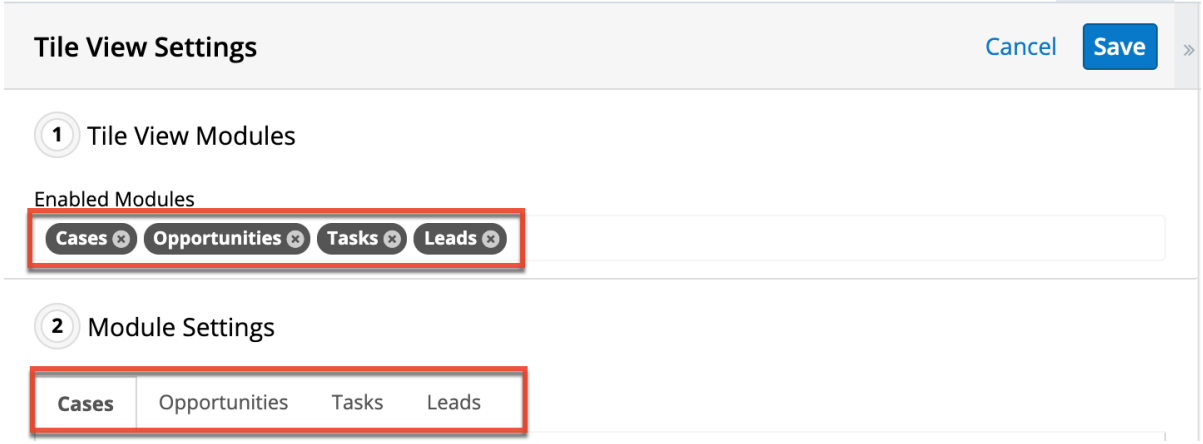
Field	Description
Enabled Modules	Multiselect field used to enable and disable tile view access for supported modules.

Enabling and Disabling Tile View

Use the Enabled Modules field to enable and disable access to tile view for users. By default, tile view is enabled for Cases and Tasks.

To disable tile view for a module, click the X next to its name (e.g., Tasks) to remove it from the Enabled Modules field and then click "Save". To enable a module, click inside the Enabled Modules field and select it from the list of supported modules.

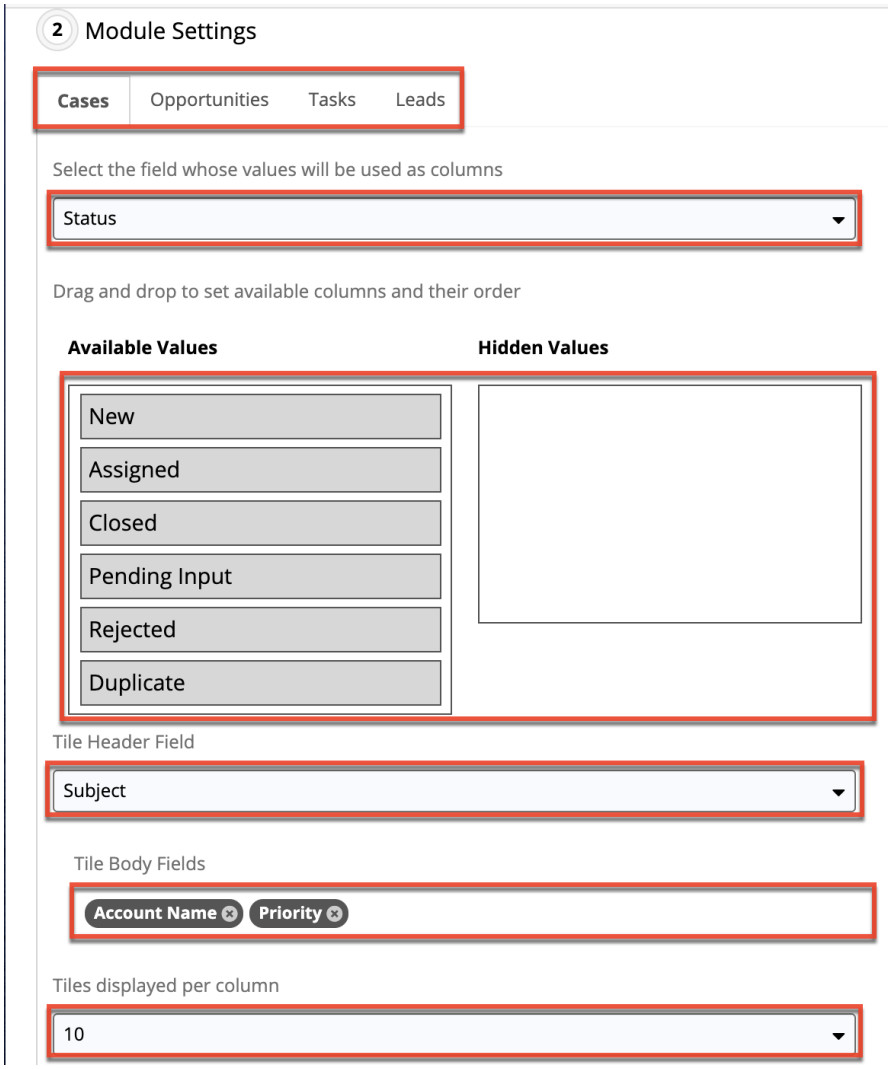
Please note that the order of the module names will also control the order that the modules appear in the Module Settings tab below. Simply drag and drop the modules into your preferred order and then click "Save". The next time you visit Tile View Settings, the tabs under Module Settings will appear in the order that the modules were saved.



Note: Tile view functionality is supported for cases, opportunities, tasks, and leads, but not all user license types can access all of these modules. For more information on license types and the module functionality available for each type, refer to the License Types Matrix documentation.

Module Settings

The tile view administration page's lower section is labeled "Module Settings". In this panel, you can select the field whose values will be used as columns as well as configure the available field values, tile fields, and tiles displayed per column for each module's tile view.



Module Settings Fields

The Module Settings section for tile view administration contains the following fields:

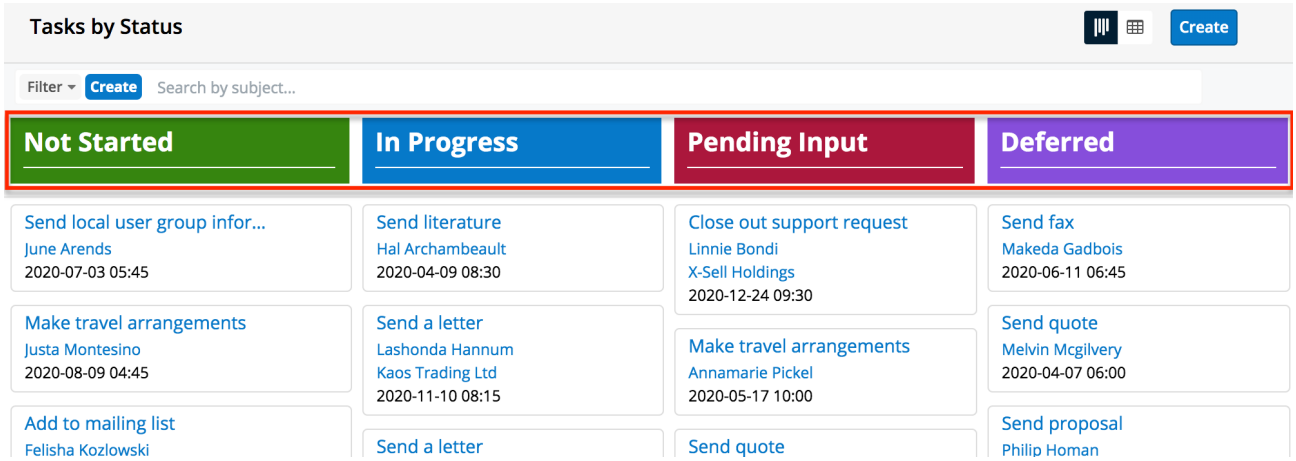
Field	Description

Module (tabs)	Use the Module tabs to navigate from one module's Tile View settings to another. Only the modules enabled in the Tile View Modules section will be shown.
Select the field whose values will be used as columns	The field by which you want to group your tile view. The field's values will be used as columns across the top of the tile view. You may select any dropdown field.
Drag and drop to set available columns and their order	The field values for the field (e.g., Status) selected in the first dropdown option will display in the Available Values column. Use drag and drop to move the field values between hidden and available to determine whether the value will be used as a column in tile view: • **Available Values**: These field values will be used as column headers in the tile view. • **Hidden Values**: Records with these field values will not be shown in the tile view and the values will not appear in the header.
Tile Header Field	Select the field (e.g., Subject) whose value will be shown as the tile's clickable header.
Tile Body Fields	Select the fields whose values will be shown in the tile's body beneath the tile header field (e.g., Subject). Drag and drop the fields into the order that you want them to be listed.
Tiles displayed per column	Select the number of tiles that each column in the tile view should load by default. Users will be able to manually scroll beyond this number of records to load additional tiles.

Configuring Tile View Column Headers

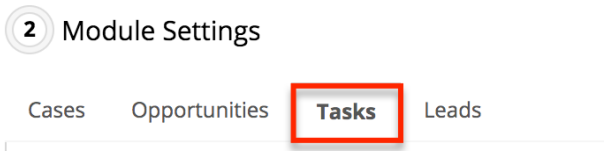
In the Module Settings section, you can select the field (e.g., Status, Priority)

whose values (e.g., Not Started, In Progress) will be used as columns in the tile view as shown in the image below.
Note: It is important to note that only dropdown fields are available to select for the tile view column headers.

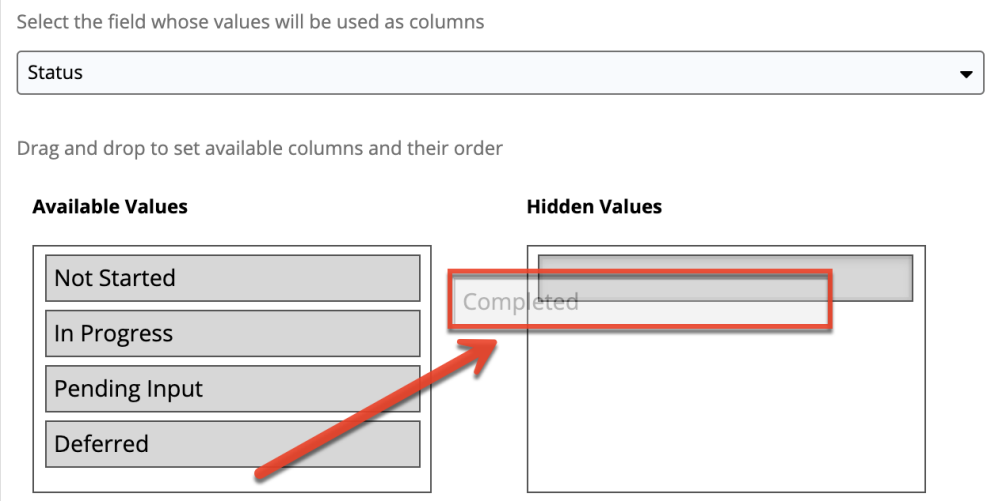


Use the following steps to configure the tile view column headers:

1. Navigate to Admin > Tile View Settings > Module Settings.
2. Click on the tab for the module's tile view that you would like to configure.



3. In the dropdown field below the module tabs, select the field (e.g., Status) whose values will be used as columns in the tile view.
4. The Available Values list below will automatically update with the field values for the field you selected in the previous step. To hide a value from the tile view, simply drag and drop the value from the Available Values column to the Hidden Values column. Hidden values will not appear as columns in the tile view and any records that contain a hidden value will be omitted from the tile view. All values in the Available Values column will appear as column headers in the tile view.
   Note: If you add a new value to the selected dropdown field (e.g., Status) via Admin > Studio, the value will automatically appear in the Available Values column. You will need to click "Save" on the Tile View Settings page in order to have the new dropdown value appear as a column header in tile view. If you do not wish to add the new dropdown value as a column header, simply drag and drop the value to the Hidden Values column.



5. To change the left-to-right order of the tile view column headers, drag and drop the values (e.g., Not Started, In Progress) up or down within the Available Values list per your viewing preference.
6. Click "Save" to preserve your changes or proceed to the next section for steps to configure the appearance of individual tiles.

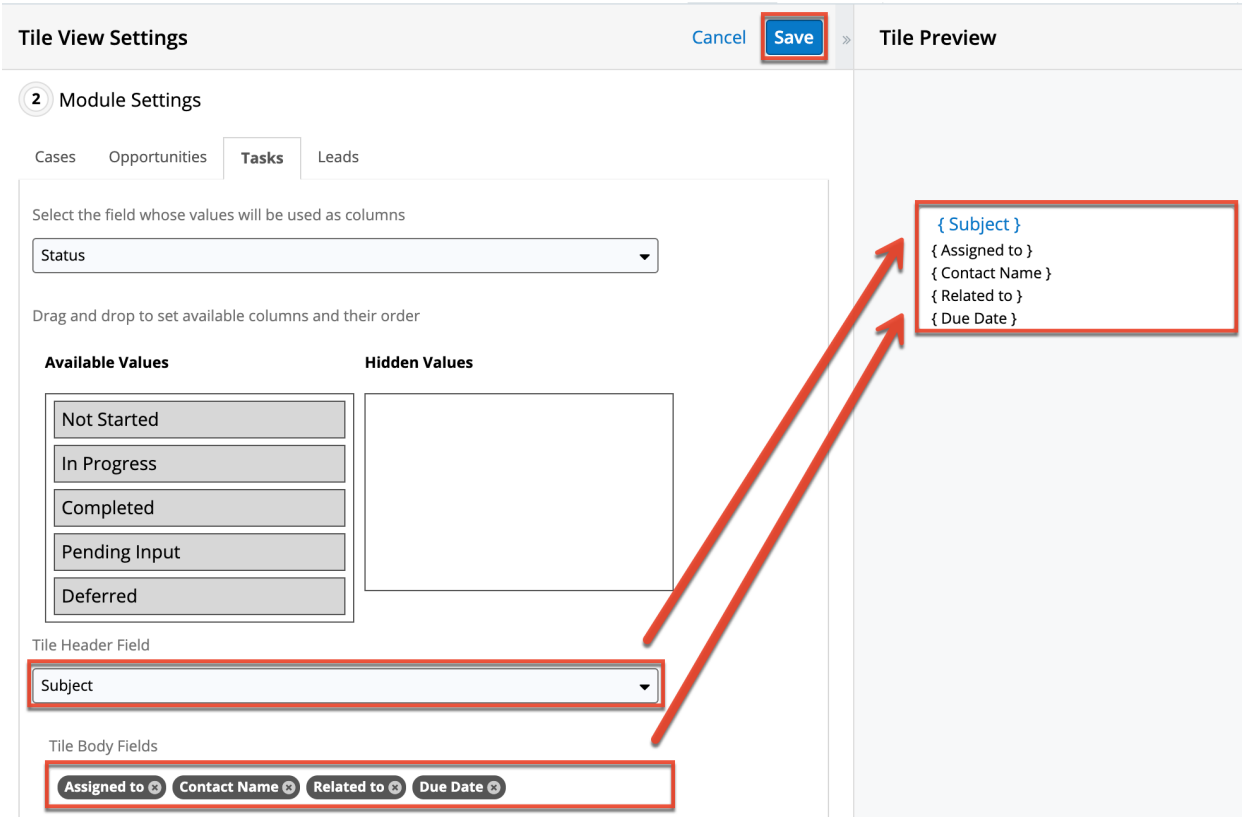
After saving the changes, there will be one column header for each value in the Available Values list. If there are no records that contain one of the Available Values, then that value's column will contain no records in the tile view until a record has been saved with that value.

Configuring Tiles

The following steps explain how to configure the individual tiles to show your preferred fields. Both stock and custom fields in the module (e.g., Tasks) will be available to add to the Tile Header Field and Tile Body Fields to display in the tile view. Please note that as you change the tile-options fields, the Tile Preview in the Intelligence Pane will automatically update to reflect your current selections.

Use the following steps to configure the individual tile header and body:

1. Navigate to Admin > Tile View Settings > Module Settings and click on the tab for the module's tile view that you would like to configure. If you are continuing steps from the previous section, then simply proceed to the next step.
2. Locate the Tile Header Field and select the field that you want to use as the topmost line of the tiles. This is typically the Subject or Name field but can be configured as you please.
3. Next, select the fields that you want to appear under the tile header field in the Tile Body Fields. You can drag and drop them into the order you want them to appear and see the Tile Preview update in real-time.



4. Click "Save" to preserve your changes.

Sugar Hint Administration

Overview

Sugar Hint is a relationship intelligence service that is available to be purchased and enabled on your Sugar instance to make external information available for your contacts, leads, and accounts in Sugar. Data such as social media accounts, work information, and company details are visible for contacts and leads based on their email address and for accounts based on their websites and company names. Users can also quickly import the enriched data into the Sugar database with a single click.

Sugar Hint is built-in to Sugar and enabled via license key. This guide outlines how an admin can configure Hint to suit their organization. For information on using Hint once it has been installed, please refer to the Sugar Hint documentation in the Application Guide.

Note: If you have Sugar Sell Premier, Hint powers the data enrichment and news feed capability. Hint is automatically enabled and there is not a separate license key for Hint.

Prerequisites

Sugar Hint is included with Sugar Sell Premier and enables the data enrichment and news feed capability. Sugar Hint can also be purchased as an add-on for Sugar Sell Advanced, Enterprise, and Serve. Please contact your Sugar partner or representative to learn more.

- Cron must be enabled because Hint relies on several scheduled jobs to function.
- If your Sugar instance is not SugarIdentity-enabled and you want your service region to be Europe or Asia/Pacific, you must specify the Hint services region before you install or upgrade to Sugar 12.0 or higher. The default service region is the United States.
- If your server has firewalls set up that block direct access to the internet, you must add the following Hint service URLs to your allowlist in order for Hint to work:
    - https://hint-data-enrichment.service.sugarcrm.com
    - https://hint-interest-subscription.service.sugarcrm.com
    - https://hint-notifications.service.sugarcrm.com
- If you purchase Hint as an add-on to Sugar Sell Advanced, Enterprise, or Serve, an administrator must also:
    - Input the Hint license key
    - Assign Hint licenses to users

Getting Started with Hint

Once you have enabled Hint, you can proceed with choosing the service region and setting the Hint license.

Choosing the Hint Services Region

If your Sugar instance is SugarIdentity-enabled, your Hint region is automatically configured to connect with services hosted in the supported region nearest to that of your Sugar instance. For Sugar 12.0, the available regions are the United States, Europe, and Asia/Pacific.

If your Sugar instance is not SugarIdentity-enabled, you must manually configure which region you are in by using the hint.hint_install_target_geo property to select a region. You must set the region before installing or upgrading to Sugar 12.0 or higher. Modify this setting in the config.php or config_override.php file located in the root folder. See the Core Settings page in the Developer Guide for details on this property.

Note: Once configured, it is not possible to modify the region Hint connects to.

Setting the Hint License Type

Admins without the Hint license type can still access Hint configuration in the Hint section of the Admin page. If you remove the Hint license type from a user, that user will no longer have access to Hint (e.g., the Hint panel or Hint Insights dashlet) and will no longer receive notifications for any of their Hint Insights subscriptions. However, their notification settings are preserved and notifications resume if you assign the Hint license type to the user again. Note that the Hint license type cannot be selected alone and must be applied in conjunction with a CRM license type (e.g., Sell or Serve).

For information on updating user records, refer to the User Management documentation. For more information on license types, refer to the Understanding User Types, License Types, and Sugar Licenses article.

Admin Configuration

Optionally, an administrator can configure the fields enriched by Hint or shown in the Sugar Hint preview panel for leads, contacts, and accounts. Each module's Sugar Hint panel may be configured independently. Admins can also configure the Hint logger, turn off Hint notifications, and resync with the Hint Insights service in the Sugar Hint section added to the Admin page.

The following two sections describe the available Hint fields and how to configure the Sugar Hint dashboard panels to meet your organization's needs.

Understanding Hint Fields

Hint adds a new panel to the bottom of record view layouts in the Contacts, Leads, and Accounts modules, which causes the Show More panel to be automatically expanded. The Sugar Hint panel in record view displays the fields added by Hint during installation.

The following custom fields will be added to your modules and their record views. An administrator can add these fields to other layouts (e.g., Mobile, list view, etc.) if desired via Admin > Studio. For more information on modifying layouts, please refer to the Studio documentation.

Display Label	Database Name	Type	Added to Accounts	Added to Contacts	Added to Leads
Annual Revenue	hint_account_annual_revenue_c	TextField		□	□
Company	hint_account	TextField		□	□

Description	_description_c				
Company Facebook	hint_account_facebook_handle_c	URL	☐	☐	☐
Company Location	hint_account_location_c	TextField	☐	☐	☐
Company Logo [1]	hint_account_pic_c, hint_account_logo_c	Image, URL	☐		
Company Size	hint_account_size_c	TextField	☐	☐	☐
Company Twitter	hint_account_twitter_handle_c	URL		☐	☐
Company Website	hint_account_website_c	TextArea		☐	
Education	hint_education_c	TextField		☐	☐
Education Additional [2]	hint_education_2_c	TextField		☐	☐
Facebook Link	hint_facebook_c	URL		☐	☐
FY End	hint_account_fiscal_year_end_c	TextField	☐	☐	☐
Industry	hint_account_industry_c	TextField	☐	☐	☐
Industry Tags	hint_industry_tags_c	TextField	☐	☐	☐
NAICS Code	hint_account_naics_code_label_c	TextField	☐	☐	☐
Previous Jobs	hint_job_2_c	TextField		☐	☐
SIC Code	hint_account_sic_code_label_c	TextField		☐	☐
Twitter Link	hint_twitter_	URL		☐	☐

	c				
Year Founded	hint_account_founded_year_c	TextField	☐	☐	☐

[1] In the database, the Company Logo field is represented by two fields: hint_account_pic_c, which is the actual image field you see, and hint_account_logo_c, which contains the URL location of the image.
[2] The Education Additional field is not listed in Admin > Hint Fields because it is always displayed as the second line of the Education field in the Hint panel. Any configurations applied to the Education field are automatically applied to the Education Additional field for the module.

Hint also uses some of Sugar's stock fields to store enriched data. The following stock fields in the Contacts, Leads, and Accounts modules are populated when downloading Hint's enriched data. If you have modified your layouts to remove these fields, you may want to add them back to your layouts via Admin > Studio. For more information on modifying layouts, please refer to the Studio documentation.

Display Label	**Database Name**	**Type**	**Populated for Accounts**	**Populated for Contacts**	**Populated for Leads**
Account Name	account_name	TextField			☐
Annual Revenue	annual_revenue	TextField	☐		
Avatar	picture	Image		☐	☐
Description	description	TextArea	☐		
Mobile	phone_mobile	Phone		☐	☐
Office Phone	phone_work	Phone		☐	☐
Other Phone	phone_other	Phone		☐	☐
SIC Code	sic_code	TextField	☐		
Title	title	TextField		☐	☐
Twitter Account	twitter	TextField	☐		
Website	website	URL	☐		☐

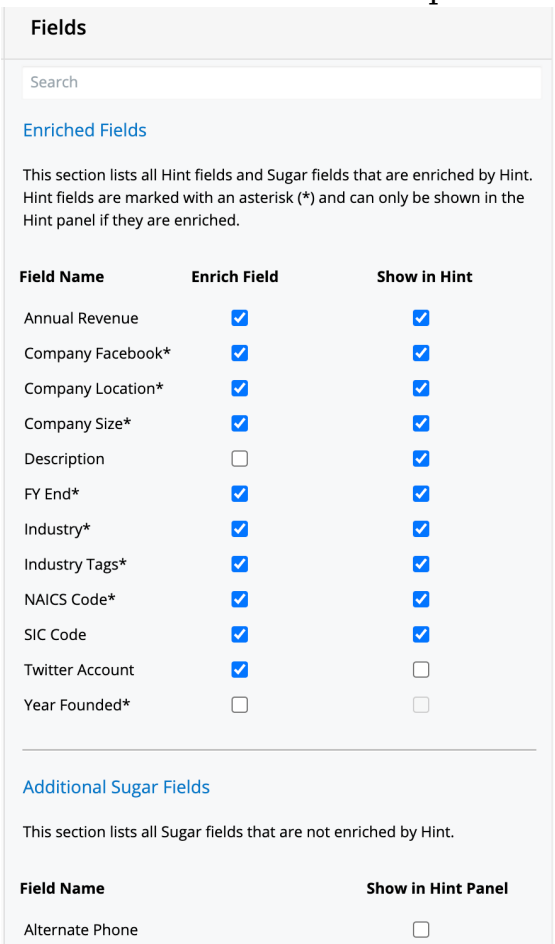
Users without a Hint license can see imported values in these fields if the fields are displayed on their record view. Note that by default, the panel that Hint adds to

record view is only visible to Hint users, but the custom fields it contains can be added to other places (e.g., a different panel in record view) to allow non-Hint users to see the data.

Configuring Hint Fields

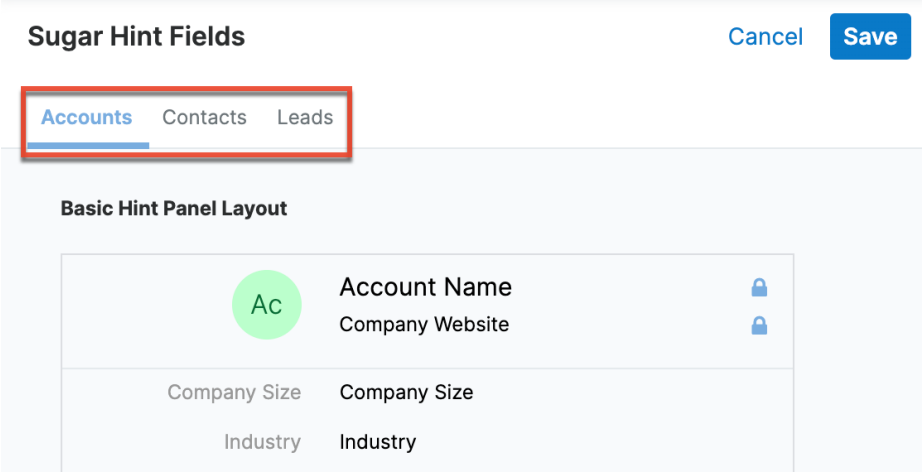
Administrators can navigate to Admin > Hint Fields to personalize the Sugar Hint dashboard panel by showing, hiding, and rearranging the displayed fields, as well as enabling and disabling enrichment for each one. The Sugar Hint Fields drawer displays all of the fields found in Studio for the module along with the Hint fields for that module.

On the right-hand side is a list of fields available to be configured. The top section, Enriched Fields, lists all fields that Hint can enrich, including both those added by Hint and stock Sugar fields. The bottom section, Additional Sugar Fields, lists all fields that Hint cannot enrich; you may wish to show these in the Sugar Hint panel for informational purposes when viewing the Hint preview from list view. Enabling "Show in Hint" for enriched fields displays them in the Hint dashboard panel and the Hint section of record view. Enabling "Show in Hint Panel" for additional Sugar fields simply displays them in the Hint dashboard panel. The search bar at the top can be used to look for a specific field in either section.

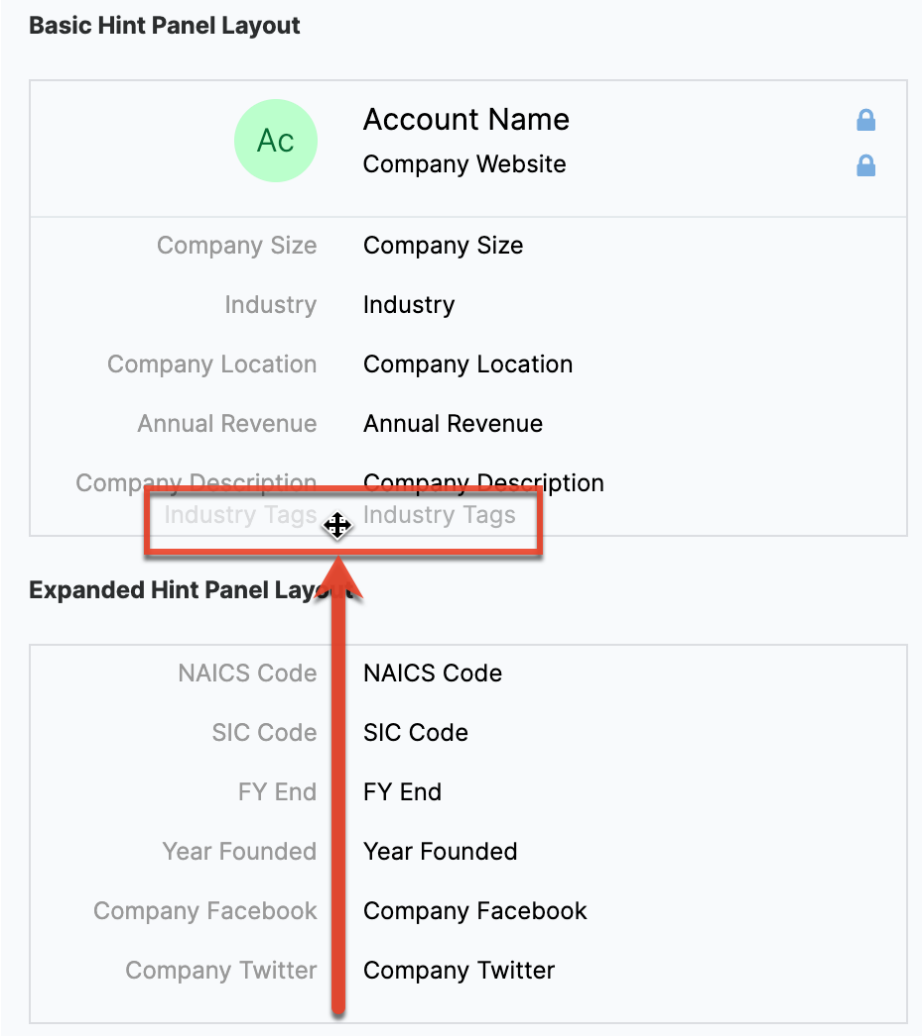


In the Enriched Fields section, fields marked with an asterisk (*) are fields added by Hint. They can only be shown in the Hint panel if they are enriched, and so disabling enrichment for them also disables the Show in Hint checkbox. There are also some fields with the Show in Hint checkbox hidden; these fields cannot be removed from the view because Hint is designed to always show them. Likewise, fields in the Additional Sugar Fields section with the Show in Hint Panel checkbox disabled can also not be removed.

On the left-hand side is a live-updated view of what the Sugar Hint panel will look like as you make your changes. Each module is displayed in its own tab and switching between tabs updates the list of fields on the right as well.



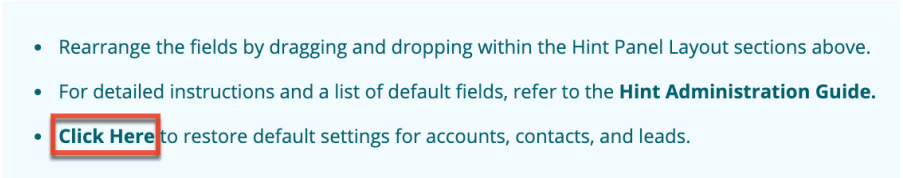
To configure the Hint panel for a module, update the checkboxes for each field on the right-hand side. Disabling "Enrich Field" prevents Hint from returning any enriched data for that field. Once you have the desired fields displayed, drag and drop items directly within the layouts to reorder them. Those displayed with a lock icon cannot be moved or hidden because Hint is designed to always show these fields.



Once you are satisfied with your changes for each module, click "Save" to preserve all three modules' configurations. To restore the specific tab you are viewing to its default values, see the Restoring Default Settings section.

Restoring Default Settings

If you would like to revert the Hint fields for a specific module to its default state, use the link at the bottom of the tab. Clicking this link immediately restores the current tab to its original state. It is recommended to only restore the default settings if you have not already manually made changes to the configuration without saving. That way, if you restore the defaults and decide you do not want to keep this change, you can simply click "Cancel" to close the drawer and undo the reversion.



Configuring the Hint Logger

The Hint logger writes log entries to the Sugar log to help you debug potential unexpected behavior. The default log level is "Alert" but it can be changed to levels such as "Critical", "Info", or "Debug" in Admin > Hint Configuration. Navigate to Admin > Hint Configuration and select the desired level in the dropdown menu in the Hint logger section and click "Save" to preserve the change. The new log level will be used immediately.

Turning off Hint Notifications

Occasionally, it is useful to turn off all notifications (i.e., email, desktop pop-up, and Hint Insights dashlet) for an entire Sugar instance. One particular example is when you are cloning an instance, such as for troubleshooting purposes. If you clone an instance where users are subscribed to Hint notifications, they will start to receive duplicates of all email notifications - one from the original instance and one from the clone. To avoid this, navigate to Admin > Hint Configuration on the cloned instance to turn off notifications and save this change before enabling cron. This way, users will continue to receive notifications from the production instance and will not receive any duplicates once you enable cron on the clone.

Resyncing With the Hint Insights Service

If you are seeing inconsistent behavior in notifications from the Hint Insights service, you may need to resync with the service. This inconsistency may manifest as changes to preferences and email addresses not taking effect.

To resync, click "Resync with the Hint Insights service" in the Hint section of the Admin page. A popup will appear asking you to confirm that you wish to proceed with the sync. It is important to note that performing a resync will cause any pending email digest stories to be lost and existing news to be cleared from the Hint Insights dashlet.

Notifications of all types will resume after the sync completes.

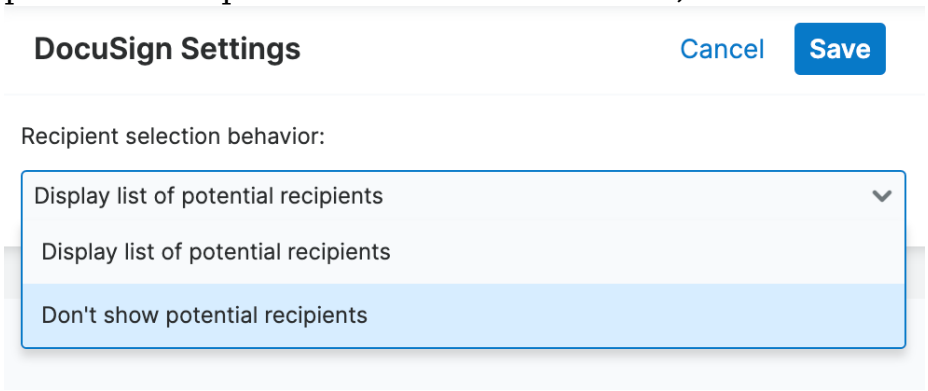
DocuSign

Overview

Sugar provides the option to modify DocuSign settings to change how Sugar users can interact with DocuSign from within Sugar. Sugar admins can select the model that makes the most sense for their organization via Admin > DocuSign > Settings.

DocuSign Settings

Recipient selection behavior allows you to modify if users may select recipients in Sugar. If you set this to "Display list of potential recipients", users are allowed to choose recipients when creating an envelope. The alternative setting, "Don't show potential recipients" disables this feature; this is the default setting.



Advanced Configuration Options

Overview

Sugar comes with many different ways to configure your system to best meet your needs. Many configuration options are available throughout the application; though, some advanced options are not available through the interface, but can still be configured.

In the root directory of Sugar, there are two configuration files: config.php and config_override.php. These files hold many configuration options within your instance of Sugar. The config_override.php file is available for you to modify Sugar's configuration. For more information on which options are available to change, please refer to the Developer Guide.

Note: Instances running on Sugar's cloud service do not have access to modify the config_override.php file.

Maintenance Mode

On rare occasions, you may need to restrict users from logging in to Sugar. This is particularly useful when upgrading Sugar or making significant changes to the application (e.g., changing config values, making code-level changes, or deploying changes via Studio, Module Builder, or Module Loader). For these situations, we recommend enabling maintenance mode, which is disabled by default. With maintenance mode enabled, only administrators will be able to log in, and regular

users will receive an alert on the login screen letting them know that the system is temporarily unavailable. All incoming API calls will also encounter an error message until maintenance mode has been disabled. When possible, it is best practice to notify affected users in advance of a maintenance period.

To enable maintenance mode for your instance, add the following line to the config_override.php file:

```
$sugar_config['maintenanceMode'] = true;
```

System Configuration

Changing values in the config files can change functionality and behaviors in Sugar. We always recommend testing your changes on a development or test system before changing values in a production system. After changing the config_override.php file, you should perform a Quick Repair and Rebuild from the Admin > Repair menu. For more information, please refer to the Repair documentation.

Configuring File Permissions

Many features in Sugar require the web server to have the proper file permission settings to be able to read and write files. At a minimum, the following files and directories need to be writable from your web server:

- ./config.php
- ./config_override.php
- ./sugarcrm.log
- ./cache/ and all subdirectories and files
- ./custom/ and all subdirectories and files
- ./data/ and all subdirectories and files
- ./modules/ and all subdirectories and files

Sugar running on Windows with IIS will need the IIS user (IUSR_[computerName]) to have access to these files.

Sugar running on Linux expects the listed files and directories to be owned by the same user running the web server and to also be in the same group. Sugar would then require the following permissions:

- 2770 for the directories listed above
- 660 for the config.php file and all files in the directories listed above

- 770 for bin/sugarcrm

When running on Linux, the config.php file in your Sugar instance's root directory contains a setting called default_permissions. This setting controls the ownership and accessibility to all files and folders created by Sugar. The following is an example of setting Read, Write, and Execute permissions for the Apache user and the Apache group on CentOS operating system:

```
   default_permissions' => array(
   'dir_mode' => 1528,
   'file_mode' => 432,
   'user' => 'apache',
   'group' => 'apache',
),
```

The values for dir_mode and file_mode are decimal equivalent values for the standard octal values entered for permissions. The value 1528 is the decimal equivalent of the octal value 02770 and a value of 432 which is the decimal equivalent of octal value 0660. These are the recommended directory and file permissions for Linux systems.

Note: If the octal values are entered, they will be interpreted as decimal and will not provide the expected file permission settings.

The 'user' and 'group' values determine the ownership of the files created. When empty, your Apache settings will take precedence to determine file and directory ownership. These values should be set explicitly to the Apache user and group on your server and these values will vary depending on the Apache setup and/or Linux OS you are running. To update these values, please edit the config_override.php file in the root directory of your installation and add the following lines:

```
  $sugar_config['default_permissions']['user'] = '<your Apache user>';
$sugar_config['default_permissions']['group'] = '<your Apache group>';
```

Note: These values will take effect for only newly created files, not existing files. If you need to change the file permissions or ownership for existing files, you must execute the changes through the file system.

Allowing POP Email Accounts

Inbound email accounts are set up to work with IMAP protocols by default. If your email provider required POP3 access instead of IMAP, you can add the following line to the config_override.php file:

```
$sugar_config['allow_pop_inbound'] = true;
```

This will allow new inbound email accounts to be configured with POP3 or IMAP.

Note: POP3 access is not supported and can cause unintended consequences. IMAP is the recommended protocol to use for inbound email accounts.

Security Options

By default, all administrators have access to administrative tools in Sugar like the Upgrade Wizard, Module Builder, and Module Loader. The following sections will show a few different ways to disable these options.

Locking Down Admin Control

If you are managing multiple instances of the Sugar application, you can maintain complete control over the Sugar instances by preventing users with administrative privileges from making any changes. To do this, you can lock down the Upgrade Wizard and Module Builder with a single command in the config_override.php file:

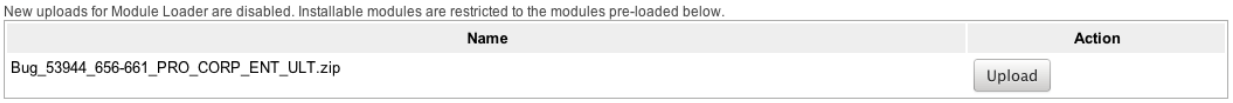
```
$sugar_config['admin_access_control'] = true;
```

Locking Down Module Loader

To ensure that users with administrative privileges do not load sub-standard modules into Sugar, you can restrict the Module Loader to a specific directory on the web server that you control. This allows you to check modules before they are loaded into Sugar. To restrict the module loader, simply add the following lines to the config_override.php file:

```
$sugar_config['use_common_ml_dir'] = true;
$sugar_config['common_ml_dir'] = '/Applications/MAMP/htdocs/sugarcrm/screenedModules';
```

This will prevent any admin users from loading a module from any directory other than the specified directory. Once a module is approved through the necessary channels, the module can be placed in the specified directory for any admin to install when necessary.



Another method for locking down the module loader is to enable the package scanner. The package scanner is enabled by default for instances hosted on SugarCloud. If you are running Sugar on-site, you can enable the package scanner by adding the following command in the config_override.php file:

```
$sugar_config['moduleInstaller']['packageScan'] = true;
```

When the package scanner is enabled, the module loader will check the files being loaded for various functions that could be damaging to the server or instance of Sugar. For more information on which functions are denylisted and how to configure the package scanner, please refer to the Developer Guide.

Note: Sugar Sell Essentials customers do not have the ability to upload custom file packages to Sugar using Module Loader.

Enabling Sites as Referers

To prevent Cross-Site Request Forgery (XSRF) attacks, Sugar has a list of acceptable sites that are allowed as a referer to Sugar. If you receive a "Possible Cross Site Request Forgery (XSRF) Attack Detected" message from an approved site trying to access Sugar, you can add that approved site's URL to the list of valid referers by adding the following line to the config_override.php file:

```
$sugar_config['http_referer']['list'][] = 'my.site.com';
```

This line will add the specified site to the list of approved sites. If you have multiple sites to add, repeat this line for each site required.

Performance

If the performance of your Sugar instance begins to degrade, there are some

configuration options you can enable to lighten the load on your system. The following options may cause Sugar's performance to increase, but some performance gains will come with a loss of functionality.

Recommended Server Settings

Sugar recommends a PHP memory limit of at least 1GB. This value may need to be increased depending on how your users utilize Sugar. For example, operations such as mass update and imports may require additional memory depending on your instance size and configuration. To change this limit, edit the setting within php.ini:

```
memory_limit = 1G
```

In addition, display_errors should always be set to "off". Enabling this option can result in adverse behavior for your users. To turn this setting off, edit the option within php.ini:

```
display_errors = off
```

When making changes to either of these settings or any other settings within php.ini, you must restart the web server before the settings will take effect.

Limiting System Resources

Sugar allows non-admin users to be restricted to how many queries they can run per action. By default, the limit for all modules is set to 1000 queries. This prevents user-initiated processes from taking up too many system resources. If an operation is performed by a user that attempts too many queries they will see a message returned saying: "Error: Query limit of 1000 reached for Leads module." To change this limit for all modules, add the following line to the config_override.php file:

```
$sugar_config['resource_management']['default_limit'] = 5000; // def
ault is 1000
```

Note: Setting the default_limit value to 0 will remove the query limit altogether for all modules.

In addition to setting the default for all modules, you can specify certain modules to have a different value. To remove the limit for specific modules only you need to specify the modules and the limit for those modules by adding the following lines to the config_override.php file:

```
  $sugar_config['resource_management']['special_query_modules'][] = 'A
ccounts';
$sugar_config['resource_management']['special_query_modules'][] = 'Con
tacts';
$sugar_config['resource_management']['special_query_limit'] = 0; // de
fault is 50000
```

In this example, the Accounts module, Contacts module, and any other module in the special_query_modules array will no longer be limited. All other modules will adhere to the default limit.

Note: Setting this limit too low can severely restrict users from performing basic actions. Alternatively, removing the limits altogether may let users inadvertently perform operations that significantly impact overall performance.

Configuring a Secondary Database

Sugar allows you to configure your instance to pull reports or list view data from a secondary database instead of your live database. Reports and list views can create a heavy load on the database, so separating out the reports or list view data on a different database or server can help alleviate some performance issues.

To configure a secondary database, set the appropriate array in the config_override.php file:

- **Reports**: $sugar_config['db']['reports']
- **Dashlets, Subpanels, and List Views**: $sugar_config['db']['listviews']

Set the following values in the array to configure Sugar to use a secondary database:

Key	**Value**
db_host_name	The host name of the server running the secondary database.

db_user_name	The user name to connect to the secondary database.
db_password	The password to connect to the secondary database.
db_name	The name of the secondary database.
db_type	The type of database running the secondary (DB2, mysql, mssql, oracle).

For example:

```
$sugar_config['db']['reports'] =
 array(
    'db_host_name' => 'sugar_secondary',
    'db_user_name' => 'ro_user',
    'db_password' => 'ro_user_password',
    'db_name' => 'sugarcrm_reports',
    'db_type' => 'mysql',
 );
```

Note: You must create the secondary database and the sync mechanism to keep the secondary up to date with the live database. The Sugar application will not sync data from the live database to the secondary.

Changing the Upload Directory

Sugar stores content, such as images, documents, and installable modules, uploaded by users in the upload directory. Some of these documents may be large in size and can cause performance issues. Administrators can move the upload directory to a different location to ensure that enough space is available for uploads without affecting the system. You can change the location of the uploads to a different folder within the sugar directory or use an absolute path to place the folder anywhere in the file system. You can change this location by adding the following line to the config_override.php file:

```
$sugar_config['upload_dir'] = 'd:\upload\';
```

Note: Remember to copy files from the old upload directory into the new upload directory for accessibility. The upload directory should be writable by the user

running the web server.

Changing the Cache Directory

Sugar uses a cache directory to store files (such as compiled templates, aggregated variable definitions, remote mailbox data, various cache files) produced by the system to optimize functionality and enhance system performance. These files can take considerable space, especially in larger systems. You can change the location of the cache to a different folder within the sugar directory or use an absolute path to place the folder anywhere in the file system. You can change this location by adding the following line to the config_override.php file:

```
$sugar_config['cache_dir'] = 'd:\cache\';
```

Some of the cache files can be accessed by direct URLs. So if you move the cache directory, you should also ensure that the URL /cache/ (relative to the main Sugar site URL) on your web server is configured to refer to the new cache location. For more information on how to configure mappings between URLs and file system directories, refer to your web server documentation.

Note: The cache directory needs to be created first, or you may receive an internal server error. The cache directory should be writable by the user running the web server.

Configuring Count Queries

By default, list views and subpanels in Sugar return record counts. This can be convenient to know how many records were found for a specific search, but in order to retrieve the record count; Sugar needs to perform additional queries on the database. When there are large amounts of data, these queries can cause performance issues. You can disable these count queries in Sugar by adding the following line to the config_override.php file:

```
$sugar_config['disable_count_query'] = true;
```

Instead of seeing the total record count, you will see the current known record count with a plus sign next to it.

Disabling Related Calculation Fields

When a calculated field in Sugar uses the related function in the Sugar Logic, this will cause the calculated field to be executed when the related module is updated. This can cause a cascading effect through the system to update related calculated fields. When this happens you may receive a 502 Gateway Error. You can disable the related calculation field updates by adding the following line to the config_override.php file:

```
$sugar_config['disable_related_calc_fields'] = true;
```

Note: This is a global setting that will affect all modules. If you have a calculated field in Accounts that sums up all Opportunities for the account, setting this value to true will no longer update the opportunity account sum in Accounts until the account record itself is modified. However, if this setting is left disabled, the sum would update any time a related opportunity or the account is modified.

Disabling Automatic Searches

By default, list views in Sugar remember the last search performed by the current user in each module. While this can be convenient, it is sometimes unnecessary. If the last search performed in a module was an extensive search, the next time the user navigates to that module will inadvertently perform the search again. This can have a negative impact on performance in Sugar.

Set one of the following values for $sugar_config['save_query'] in the config_override.php file to configure different options for saving list view queries:

Value	Description
all	Populates the last search and executes it. **Note**: This is the default behavior in Sugar.
no	Discards the previous search and executes a search with no criteria.
populate_only	Populates the last search but does not execute it.

For example:

```
$sugar_config['save_query'] = 'populate_only';
```

Note: The $sugar_config['save_query'] setting is not supported for Sidecar modules and only applies to Legacy modules.

Configuring Cron for Schedulers

Sugar's scheduler jobs are executed by the cron utility which runs on your server. There are several configuration options available to ensure that long-running or failed scheduler jobs do not impede your other scheduler jobs from running in a timely manner.

First, max_cron_runtime determines how long a single job should be allowed to run. If a single job exceeds this limit, cron.php is aborted with the long-running job marked as in progress in the job queue. The next time cron runs, it will skip the job that overran the limit and start on the next job in the queue. Additionally, if the total running time of a single cron run across all current jobs exceeds max_cron_runtime, then cron will complete whatever job it is currently executing, then stop. The next time cron runs, it will pick up with the next queued job. The max_cron_runtime uses seconds as its units and defaults to 1800 (30 minutes). You may wish to adjust this number based on the typical time requirements of scheduler jobs in your instance.

By default, max_cron_runtime is not enforced on your instance. In order to enforce this limit, set enforce_runtime to true.

```
  $sugar_config['cron']['enforce_runtime'] = true; // default is false
$sugar_config['cron']['max_cron_runtime'] = 1800; // seconds, default
is 1800
```

The timeout configuration controls how long cron will wait before re-starting a job that previously failed to complete. Once a job has been marked as in progress for longer than the timeout setting, the next cron run will mark the job as failed, making it eligible in the queue to be executed by the following cron run. The timeout uses seconds as its units and defaults to 3600 (1 hour). You may wish to adjust this number based on how quickly you wish a failed or long-running job to be reattempted. Please note that should enforce_runtime be set to false or your max_cron_runtime be longer than the timeout, a job which is running normally may be set to "failed" upon reaching this timeout limit.

```
$sugar_config['jobs']['timeout'] = 3600; // seconds, default is 3600
```

Business Center Management

Overview

Business centers represent your company's centers of operation. When they are related to your accounts and other records, they can be leveraged in reports and filters to add detail and differentiation to your Sugar data like any other relate field. In addition, each business center describes a time zone, operating hours, and holidays so that a concept called "Business Hours" can be leveraged in SugarBPM™. While some companies may only need to define one business center, others may segment their customers by geographical region, customer type, or other criteria and, therefore, require multiple business centers. For example, companies with wide geographical reaches can create business centers for each region, allowing them to use varying business hours on a per-region level.

Business centers are specified at the account level. When a case is created, the related account's Business Center field is copied to the case, though users can also manually set the field. Refer to the Cases documentation for more information. Records' related business centers can then be leveraged by business rules and processes crafted in SugarBPM. SLA management is achieved in Sugar Serve by a stock SugarBPM template leveraging related business centers to calculate case follow-up dates. Refer to the Getting Started With SugarBPM for Sugar Serve and Stock SugarBPM - Case Follow-Up Date Management articles for help configuring the stock template and your instance to work together.

This documentation covers information and actions specific to the Business Centers module, which is available exclusively for Sugar Serve and Sugar Sell users. For instructions concerning views and actions that are common across most Sugar modules, such as creating, editing, and deleting business centers, refer to the Working With Sugar Modules section of this page.

Please note that you will only be able to access business center records if your user has a Sugar Serve or Sugar Sell license type, and as allowed by your team membership and assigned roles. By default, only System Administrator users with a Sugar Serve or Sugar Sell license type have the ability to create, edit, delete, and merge business centers, though these abilities can be granted to regular users as described in the Creating a Business Center Administrator section below.

Business Center Fields

The Business Centers module contains a number of stock fields that come out-of-the-box with Sugar. For information on using and editing various field types, refer to the User Interface documentation.

Field	Description
Time Zone	The time zone where the business center is located
Business Hours	The hours of the day in which business is conducted at this business center **Note**: For more information, refer to the Setting Business Hours section
Address	The business center's physical address
Teams	The Sugar team(s) assigned to the business center record
Assigned To	The Sugar user assigned to the business center record
Tags	User-created keywords that can be used to identify records in filters, dashlets, and reports **Note**: For more information on creating and using tags, please refer to the Tags documentation
Date Created	The date the business center record was created
Date Modified	The date the business center record was last modified
Integration Sync ID	The sync key field used by external integrations to identify Sugar records in the external application. See the Integrate REST API endpoints in the Developer Guide for more details on how to use this field **Note**: This field is not visible in the user interface

Setting Business Hours

Creating a business center and setting its business hours is only available to Sugar Serve and Sugar Sell users who are administrators or who have Admin-level role access to the Business Centers module as explained in the Creating a Business

Center Administrator section. To set business hours, navigate to the Business Hours panel on a business center's record view and enter the hours of operation for each day of the week. For each day's "Hours" field, select one of the following options:

- **Open**: The business center has operating hours on this day of the week. After selecting "Open", you must select the Open Time and Close Time for the day. The default open hours are 8:00 AM - 5:00 PM.
- **Open 24 Hours**: The business center's operating hours are 12:00 AM - 11:59 PM.
- **Closed**: The business center does not have operating hours on this day of the week.

Each business center's specified operating hours can be used in SugarBPM's business hour calculations. After setting the business center's hours, you can designate the holidays for which each business center will be closed.

Business Holidays and Business Centers

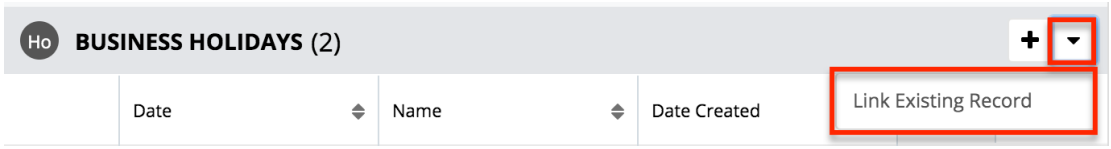
Below a business center record are several subpanels including the Business Holidays subpanel. This subpanel allows administrators to create one-day holiday records for a business center. Holidays will not be included in business hour date and time calculations used by SugarBPM in Sugar Serve and Sugar Sell. Holidays can be added by clicking the Create icon (+) in the Business Holidays subpanel.

Holidays contain three fields:

Field	Description
Holiday Name	A descriptive label for the holiday. **Note**: It is recommended to utilize a standard format that includes the calendar year (e.g., "2020 Independence Day") in the Holiday Name field.
Holiday Date	The year, month, and day that this holiday occurs. **Note**: For holidays that span multiple days, separate Business Holiday records must be created for each day.
Description	A brief description or reason for the holiday.

Holidays created from a business center's subpanel are automatically related to that business center. The same holiday can be used for additional business centers by using the Link Existing Record option in the Business Holidays subpanel for the

other business centers:

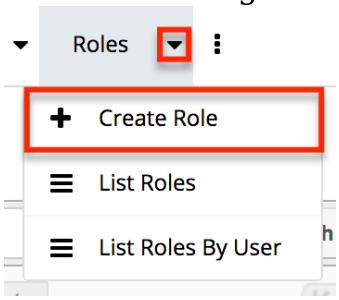


Creating a Business Center Administrator

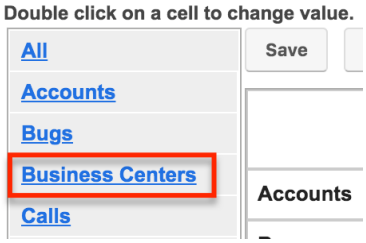
By default, only System Administrator users with a Sugar Serve or Sugar Sell license type have the ability to create, edit, delete, and merge business center records in the Business Centers module. It may be helpful to delegate these administrative tasks to one or more designated user(s) without giving them full administrative permissions in Sugar.

Use the following steps to create a Business Center Administrator role:

1. Navigate to Admin > Role Management.
2. Click the triangle in the Roles module tab and select "Create Role".



3. Enter a name (e.g., Business Center Admin) for the role then click "Save".
4. On the Role Chart screen, click "Business Centers" in the module's list to the far left of the page.

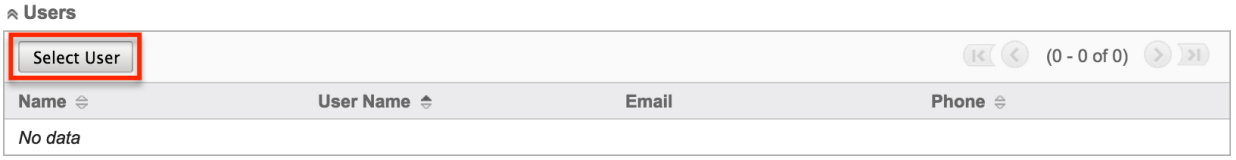


5. The screen will display the role settings specific to the Business Centers module. The Access and Access Type columns will default to "Not Set". Click directly on the "Not Set" text for each column and select the following options:
    - **Access**: Enabled
    - **Access Type**: Admin

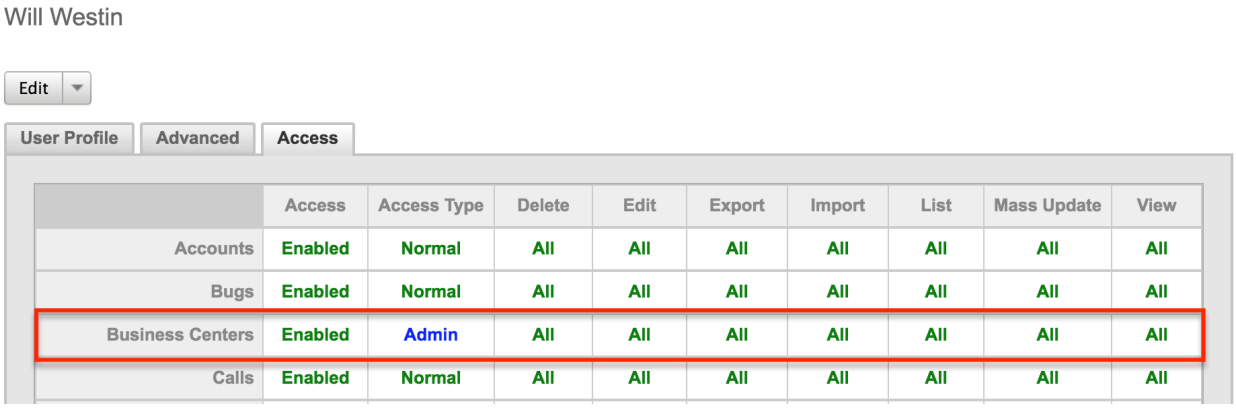
Note: Access Type settings can remain as "Not Set" since the Admin access type will ensure full access to the remaining options.



6. Click "Save" to preserve the changes.
7. Scroll to the Users subpanel on the bottom of the screen and click "Select User". Search and select the user(s) you wish to assign this role to.



8. After selecting the user(s), navigate to the user's profile to view their access information via the Access tab. Confirm that the Business Center Admin role is displayed in the Roles subpanel and the Business Centers module's access is set to "Admin".



Any user assigned to the Business Center Admin role will have the ability to access increased functionality such as creating, editing, deleting, and merging records in the Business Centers module. For more information on creating roles, please refer to the Role Management documentation.

Working With Sugar Modules

While the Business Center Management module has some features that only apply to business centers, it also uses the Sidecar user interface that most Sugar modules are based on. The following sections detail menus, views, and actions common to Sidecar modules and contain links to additional information within the page or links to the User Interface documentation.

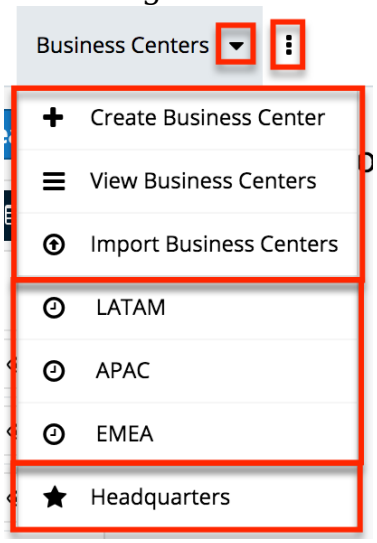
Menus

The Business Centers module contains various options and functionality which are available via menus in the module tab, list view, and record view. The following sections present each menu and its options with links to more information about each option in the User Interface documentation or within this page.

Module Tab Menus

The Business Centers module tab is typically found by clicking the "More" icon represented by three vertical dots to the right of the module tabs on the navigation bar at the top of any Sugar screen. The additional modules will appear on the list and you can click "Business Centers" to access the list view.

Once the Business Centers tab displays on the navigation bar, click the triangle within the tab to display the Actions, Recently Viewed, and Favorites menu. The Actions menu allows you to perform important actions (e.g., create, view, import) within the module. The Recently Viewed menu displays the last few business centers you most recently opened. The Favorites menu displays the last few business centers you most recently marked as favorites. For information about favoriting records in Sugar, please refer to the User Interface documentation.



The Actions menu allows you to perform the following operations:

Menu Item	Description
Create Business Centers	Opens the record view layout to create a new business center record.
View Business Centers	Opens the list view layout to search and display business center records.
Import Business Centers	Opens the import wizard to create or update business center records using external data.

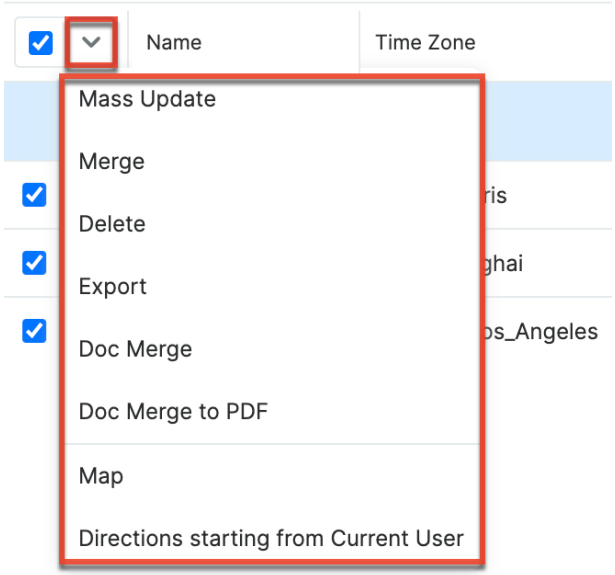
For more information on module tab menus including reasons a module may not be included in the menu, see the User Interface documentation.

List View Menus

The Business Centers list view displays all business center records and allows for searching and filtering to locate specific business centers. You can view the basic details of each record within the field columns of the list view or click a business center's name to open the record view. To access a module's list view, simply click the module's tab in the navigation bar at the top of any Sugar page.

List View Mass Actions Menu

The Mass Actions menu to the right of the checkbox option in the list header allows you to perform mass actions on all currently selected records. You can use the checkbox on each record's row to select individual business center records or click the checkbox in the list header to select all records displayed on the current set of list view results.



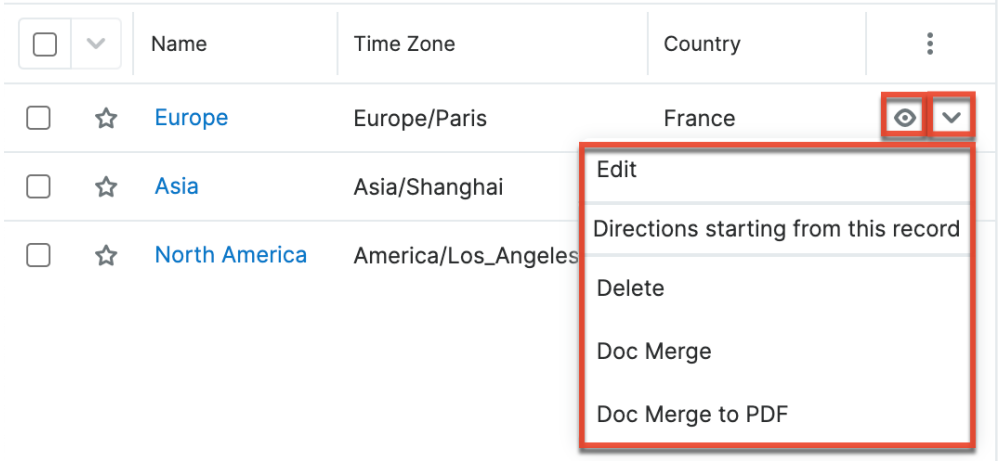
The Mass Actions menu allows you to perform the following operations:

Menu Item	Description
Mass Update	Mass update one or more business center records at a time.
Merge	Merge two or more duplicate business center records.
Delete	Delete one or more business center records at a time.

Export	Export one or more business center records' data to a CSV file.
Doc Merge	Select or create a DOCX template to merge record data into documents that will be accessible in the Doc Merge widget.
Doc Merge to PDF	Select or create a DOCX, XLSX, or PPTX template to merge record data into PDF documents that will be accessible in the Doc Merge widget.
Map	For instances with Sugar Maps enabled, display this record or the selected records on a map.
Directions starting from Current User	For instances with Sugar Maps enabled, plot driving directions on a map from your address to this record or all selected records.

List View Record Actions Menu

The Record Actions menu to the far right of each record's row allows you to perform actions on a business center record directly from the list view.



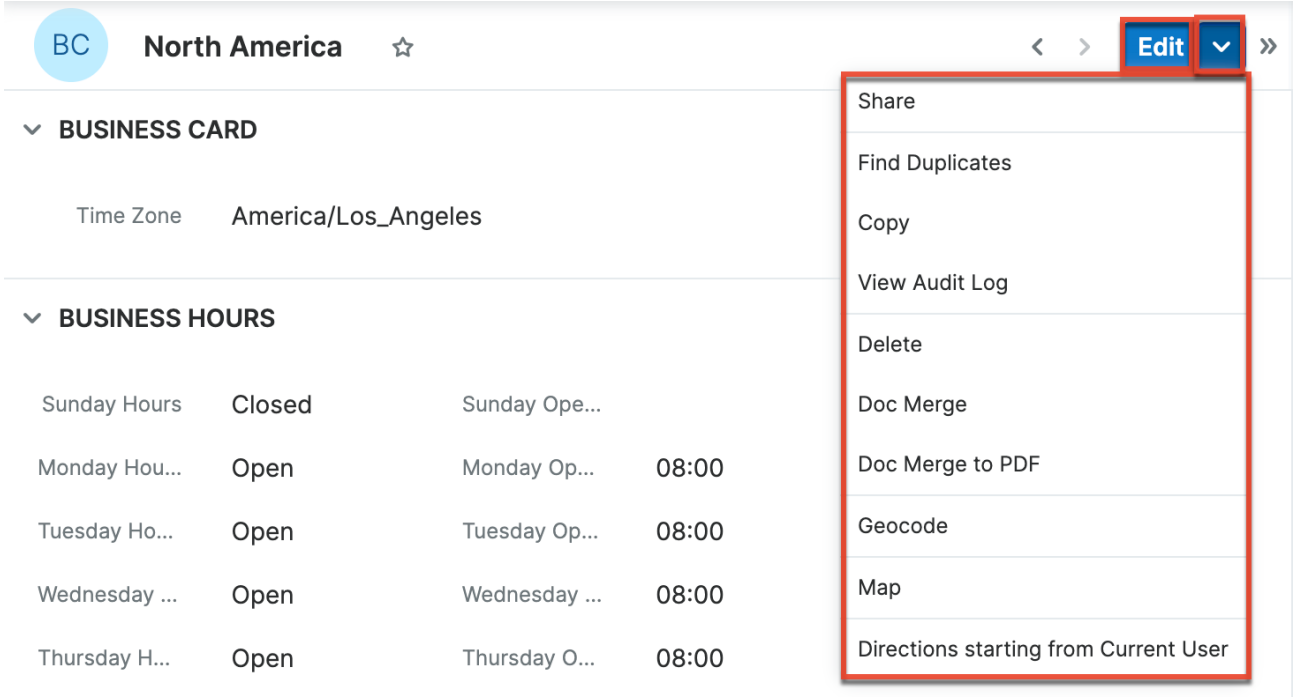
The options in the Record Actions menu allow you to perform the following operations:

Menu Item	Description
Preview (eye icon)	Preview this record in the intelligence pane.
Edit	Edit this record.
Directions starting from this record	For instances with Sugar Maps enabled,

	plot driving directions on a map from this record to another record or records.
Delete	Delete this record.
Doc Merge	Select or create a DOCX, XLSX, or PPTX template to merge record data into documents that will be accessible in the Doc Merge widget.
Doc Merge to PDF	Select or create a DOCX, XLSX, or PPTX template to merge record data into PDF documents that will be accessible in the Doc Merge widget.

Record View Actions Menu

The Business Center record view displays a single business center record in full detail including its relevant fields and subpanels of related records. To access a business center's record view, simply click on the business center's name from the list view, dashlet, or from report results. The record view's Actions menu appears on the top right of the page and allows you to perform various operations on the current record.



The Actions menu allows you to perform the following operations:

Menu Item	Description
Edit	Edit this record.
Share	Share a link to this record via email.

Find Duplicates	Locate potential duplicates of this business center.
Copy	Duplicate this business center to create a new business center.
View Audit Log	View a list of changes that have been made to this business center record.
Delete	Delete this record.
Doc Merge	Select or create a DOCX, XLSX, or PPTX template to merge record data into documents that will be accessible in the Doc Merge widget.
Doc Merge to PDF	Select or create a DOCX, XLSX, or PPTX template to merge record data into PDF documents that will be accessible in the Doc Merge widget.
Geocode	For instances with Sugar Maps enabled, manually set this record's location on a map.
Map	For instances with Sugar Maps enabled, display this record or the selected records on a map.
Directions starting from Current User	For instances with Sugar Maps enabled, plot driving directions on a map from your address to this record or all selected records.

Common Views and Actions

In the table below, the left column contains links to the User Interface page covering topics that are applicable to all Sidecar modules. The right column has links to sections of the current page that cover topics specific to business centers.

General Instructions for Working With Sugar Modules	**Business-Centers-Specific Instructions**
Use the links below to navigate to the User Interface page which covers topics generic to many Sugar modules.	When Business-Centers-specific help exists for each topic, use the links below to navigate to sections of the current page.
Creating Records	
Viewing Records	
Searching for Records	

List View	List View Mass Actions Menu List View Record Actions Menu
Record View	Record View Actions Menu
Intelligence Pane	
Editing Records	Setting Business Hours
Deleting Records	
Finding Duplicate Records	
Viewing Audit Logs	
Favoriting Records	
Sharing Records	

Employee Records

Overview

Sugar's Employees module consists of individual people within your organization. The Employees module allows you to see a list of all employees, their contact information, and their employment status in one convenient location. Employee records are typically created when a user record is created, but users with administrative access can also add non-user employees. This means that, typically, all users will be listed as employees, but not all employees are necessarily Sugar users.

Note: For instances that use SugarIdentity, the administrator will need to access SugarIdentity to create and manage user records.

As the Employees module contains internal information about your company, not specifically Sugar, it is not subject to team and role restrictions.

Employee Fields

The Employees module contains a number of stock fields that come out of the box with Sugar. The below definitions are suggested meanings for the fields, but the fields can be leveraged differently to best meet your organization's needs. Fields can be altered, added, or removed via Admin > Studio. For more information on configuring fields, please refer to the Studio documentation in the Administration Guide.

For instances that use SugarIdentity, the administrator will need to access SugarIdentity to edit the following read-only fields for any employee records that are tied to a user record in SugarIdentity:

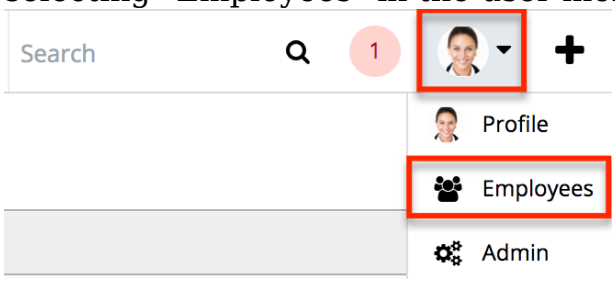
- First Name
- Last Name
- License Type
  Note: For certain SugarIdentity-enabled instances, this field is only available to manage in SugarIdentity.
- Title
- Department
- Office Phone
- Primary Address
- City
- State
- Postal Code
- Country
- Primary Email Address

Field	Description
City	The city of the employee's address.
Country	The country of the employee's address.
Department	The department where this employee works.
Email Address	The employee's email address.
Employee Status	The employee's employment status in the organization, either: Active, Terminated, or Leave of Absence.
Fax	The employee's fax number.
First Name	The employee's first name.
Home Phone	The employee's home phone number.
IM Name	The employee's instant message screen name.
IM Type	The employee's instant message client type.
Last Name	The employee's last name.
Mobile	The employee's mobile phone number.
Notes	A description or other information about this employee.
Office Phone	The employee's office phone number and extension.
Other	An additional phone number for the employee.
Picture	A picture, headshot, or identifying

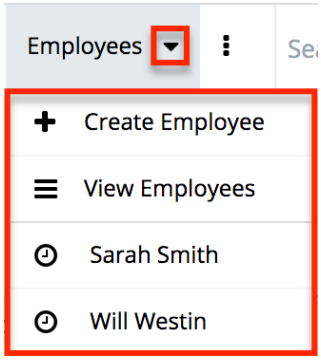
	image of the employee.
Primary Address	The number and street of the employee's address.
Postal Code	The postal code of the employee's address.
Reports to	This field list's the employee's manager, if the manager is a Sugar user.
State	The state of the employee's address.
Title	The employee's job title.

Employees Module Tab

The Employees module tab can be accessed by clicking your profile icon and selecting "Employees" in the user menu.



Once in the Employees list view, you can click the triangle in the Employees module tab to display the Actions and Recently Viewed menus. The Actions menu allows you to perform important actions within the module. The Recently Viewed menu displays the list of employees you last viewed in the module. Please note that clicking the module tab allows you to access the Employees list view.



The Actions menu allows you to perform the following operations:

Menu Item	Description

Create Employee	Opens the edit view layout to create a new employee.
View Employees	Opens the list view layout to search and display employees.

Creating Employees

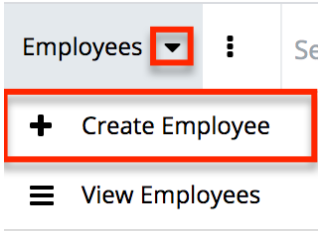
There are various methods for creating employees in Sugar including via the Employees module, the Users module, and duplication. The full edit view layout opens when creating the employee directly from the Employees menu and includes all of the relevant fields for your organization's employees. The edit view layout can be configured via Admin > Studio. For more information on configuring layouts, please refer to the Studio documentation. Please note that when a new user is created, an employee record is also created by default using the relevant information from the user record. For instances that use SugarIdentity, an administrator will need to access SugarIdentity to create new users.

Creating Via Employees Module

One of the most common methods of employee creation is via the Create Employee option in the Employees module tab. This opens up the edit view layout which allows you to enter in all the relevant information for the employee.

Use the following steps to create an employee via the Employees module:

1. Click the triangle in the Employees module tab and select "Create Employee".

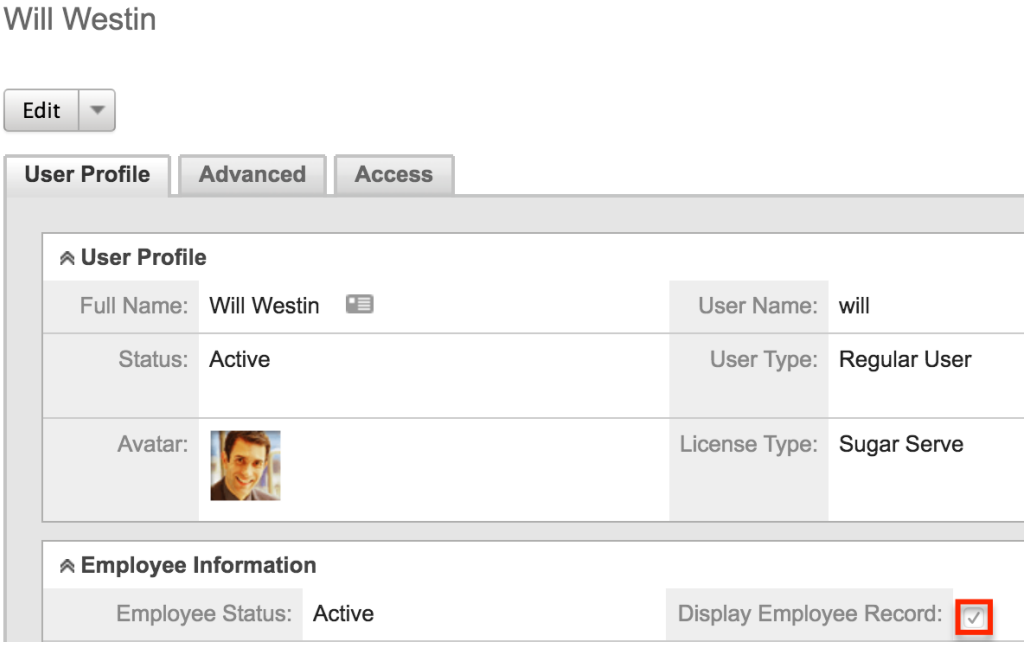


2. Enter appropriate values for the fields in the edit view layout. All required fields are marked with a red asterisk and must be completed prior to saving.
3. Once the necessary information is entered, click "Save".

Creating Via Users Module

When a user is created, an employee record is also created by default using the relevant fields from the user record to be populated on the employee record. The field in the Users module that controls this is the "Display Employee Record" field. For more information on creating users, please review the Users documentation.

Note: For instances that use SugarIdentity, an administrator will need to access SugarIdentity to create new users.

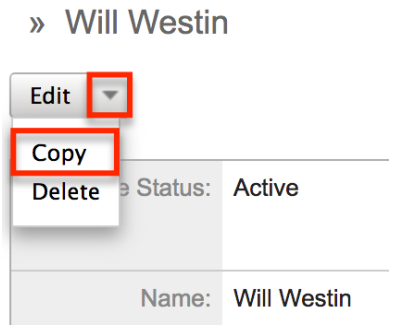


Creating Via Duplication

You can also create a new employee by duplicating an existing employee record. The Copy option is useful if the employee you are creating has similar information to an existing employee.

Use the following steps to create an employee by duplicating an existing record:

1. Navigate to an employee record's detail view.
2. Click the Actions menu and select "Copy".



3. The displayed edit view is pre-populated with the original employee's values. Update the necessary fields, then click "Save".

Viewing Employees

There are various options available for viewing employee records in Sugar including via Employees list view, Employees detail view, and the Employees

Recently Viewed menu. Please note that you will only be able to access these views by first clicking on the Employees button after clicking on your user name on the top right side of Sugar.

Viewing Via List View

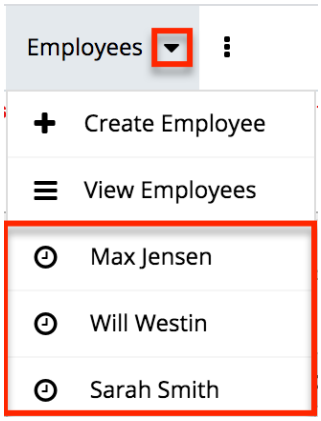
The Employees list view displays all employee records meeting the current search criteria. To access the list view, simply click the Employees option under your user name on the module tab bar. While list view shows key employee fields, you can click the employee's name to open the record in detail view. For more information on viewing employees via list view, please refer to the Employees List View section of this documentation.

Viewing Via Detail View

The Employees detail view displays thorough employee information by showing all employee fields. The detail view can be reached by clicking an employee record's link from the Employees list view. For more information on viewing employees via detail view, please refer to the Employees Detail View section of this documentation.

Viewing Via Recently Viewed

As you work, Sugar will keep track of which employees you have recently viewed. Click the triangle in the Employees module tab to see a list of the 3 records you most recently viewed in the module. Clicking the record's name (e.g., Will Westin) within the list will open it in detail view.



Searching Employees

The Employees list view includes a Basic and Advanced Search to help you locate records easily and effectively in a module-specific manner. Once the search is performed, the relevant results will be displayed in the Employees list view below. Please note that Sugar automatically appends the wildcard character (%) to the

end of your search phrase. This allows the system to retrieve all records that start with the keyword entered in the search. To broaden the search, you can use the wildcard at the beginning of your text as well (e.g., %services). This will pull up any record that has the word "services" in the name, regardless of how it starts or ends.

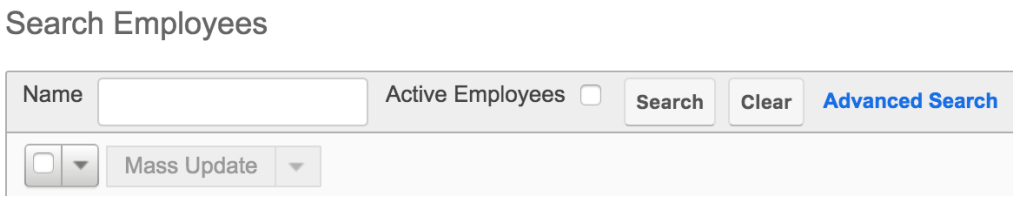
For more information on using the various search methods as well as how wildcards are used in the different methods, please refer to the Search documentation.

Basic Search

Basic search offers a few, commonly used fields for a simplified search experience. From the Basic Search panel, click "Advanced Search" to access additional search functionality as needed.

The buttons and checkboxes available in Basic Search panel have the following functions:

- **Search**: Click the Search button or press your Return/Enter key to perform the search.
- **Clear**: Click the Clear button to clear all criteria from the searchable fields.
- **Active Employees**: Select this box to return only records where Employee Status is Active.



When you run a search, Sugar will return records matching all (as opposed to any) of the fields and checkboxes for which you have given a value. For example, if you select "Active Employees" and enter an employee's name, Sugar will only return employee records with a matching name that is active. Once the search is complete, the relevant results will populate in the list view below the search panel. To see all employee records, simply click "Clear" and then "Search" to perform a blank search with no filters.

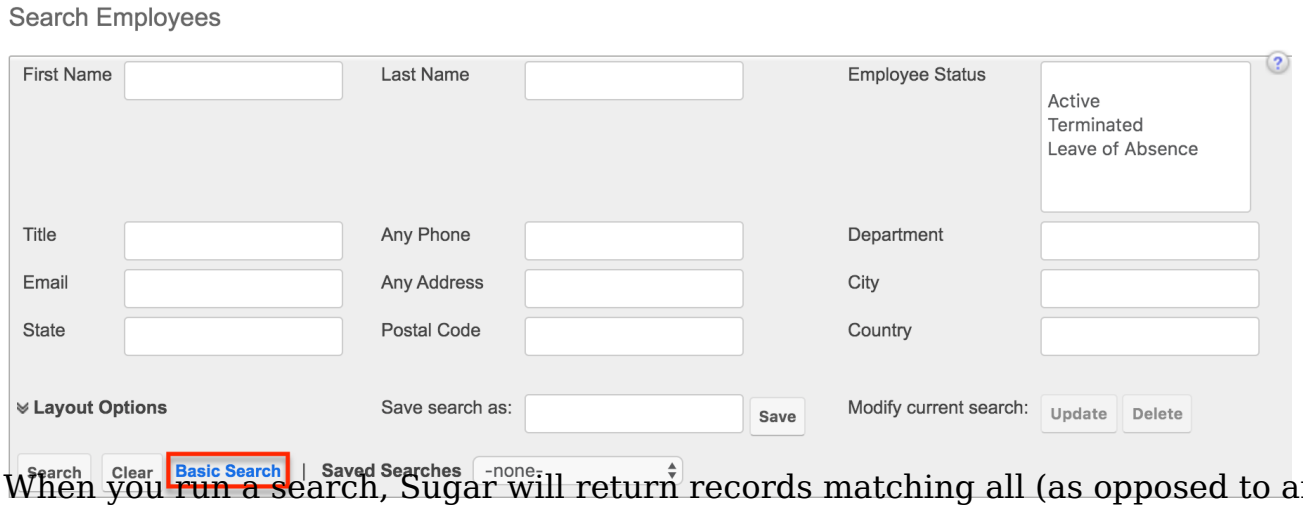
Administrators can configure what fields appear on the Employees Basic Search via Admin > Studio. For more information on editing layouts, please refer to the Studio documentation in the Administration Guide.

Advanced Search

Advanced Search offers a more in-depth search experience than Basic Search including additional fields, layout options, and saved search capability. From the Advanced search panel, you can click "Basic Search" for simplified searching.

The buttons, checkboxes, and dropdowns available in Advanced Search have the following functions:

- **Search**: Click the Search button or press your Return/Enter key to perform the search.
- **Clear**: Click the Clear button to clear all criteria from the searchable fields.
- **Active Employees**: Select this box to return only records where Employee Status is Active.
- **Layout Options**: Use the expandable Layout Options section to configure your list view. For more information, please refer to the Layout Options section of the Search documentation.
- **Saved Searches**: Save, recall, update, and delete searches that you use often. For more information, please refer to the Saved Search section of the Search documentation.



When you run a search, Sugar will return records matching all (as opposed to any) of the fields and checkboxes for which you have given a value. For example, if you select "Active Employees" and enter an employee's name, Sugar will only return employee records with a matching name that is active. Once the search is complete, the relevant results will populate in the list view below the search panel. To see all employee records, simply click "Clear" and then "Search" to perform a blank search with no filters.

Administrators can configure what fields appear on the Employees Basic Search via Admin > Studio. For more information on editing layouts, please refer to the Studio documentation in the Administration Guide.

Employees List View

The Employees list view displays all employee records meeting the current search

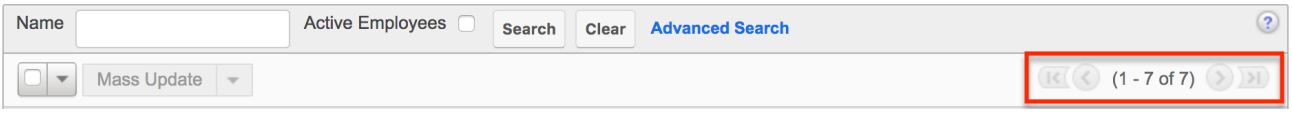
criteria. You can view the basic details of each employee within the field columns.

You have the option to change what fields are displayed in the list view by configuring your layout options in the Employees advanced search. For more information on configuring your list view, please refer to the Layout Options section of the Search documentation. Users with administrator or developer access also have the ability to change what fields are visible in the list view via Admin > Studio. For more information on editing layouts, please refer to the Studio documentation in the Administration Guide.

Pagination

List view displays the current search results broken into pages that you can scroll through rather than displaying potentially thousands of rows at once. To the right just below the search panel, you can see which records of the total results set are currently being displayed. The two single-arrow Next and Previous buttons can be used to scroll through the records page-by-page. The two double-arrow First Page and Last Page buttons allow you to skip to the beginning or the end of your current results.

By default, Sugar displays 20 records per list view page, but administrators can change the number of records displayed via Admin > System Settings. For more information on changing the number of displayed records, please refer to the System documentation in the Administration guide.



Checkbox Selection

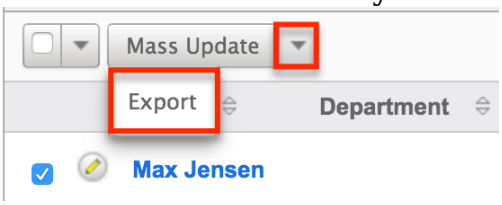
You can perform actions on employee records directly from the list view by first selecting the desired records. To select individual employee records on the Employees list view, mark the checkbox on the left of each row. To select or deselect multiple case records on the list view, use the options in the checkbox dropdown menu:

- **Select This Page**: Selects all records shown on the current page of case results.
- **Select All**: Selects all records in the current search results across all pages of case results.
- **Deselect All**: Deselects all records that are currently selected.



Actions Menu

The Actions menu to the right of the checkbox dropdown allows you to perform actions on the currently selected records.



The options in the Actions menu allow you to perform the following operations:

Menu Item	Description
Mass Update	Mass update one or more employees at a time.
Export	Export one or more employees to a CSV file.

Column Sorting

List view provides the ability to sort all of the current search results by a field column in either ascending or descending order. To sort by a field or switch the sort direction, click the column header noting that the fields which allow sorting will have a pair of arrows. The list view may be sorted by only one column at a time. You can also set a default order-by column using the layout options in Advanced Search. For more information on setting a default column sort, please refer to the Layout Options section of the Search documentation.

Employees Detail View

The Employees detail view displays thorough employee information by way of all

employee fields grouped into one page.

Users with administrator or developer access have the ability to change the detail view by configuring the layout via Admin > Studio. For more information on editing layouts, please refer to the Studio documentation in the Administration Guide.

Next or Previous Record

On the upper right of the Employees detail view, there are two buttons that allow you to page through each employee in the Employees list view's current search results. Clicking the Previous button displays the previous employee of the current search results while clicking the Next button displays the next employee of the current search results. The text in between shows which employee result you are currently viewing within the total number of current results.



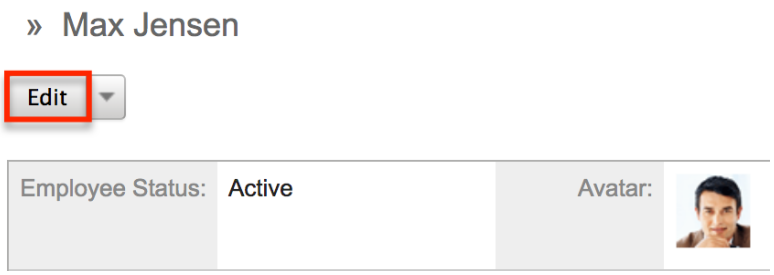
Editing Employees

Administrators may edit employees at any time to update or add information to the record. You can make changes to existing employee records via the Employees edit view and quick create forms. Edit view is available within the Employees module and includes all of the Employees fields you should need. You can configure the Employees edit view via Admin > Studio. For more information on configuring layouts, please refer to the Studio documentation in the Administration Guide.

For instances that use SugarIdentity, the administrator can only edit employee records that are created directly in Sugar. For any employee records that are tied to a user record in SugarIdentity, there are certain fields (e.g., Office Phone, Title) in the employee's record that are read-only and can only be edited in SugarIdentity.

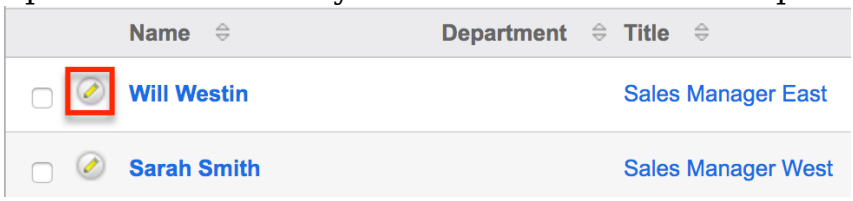
Editing Via Detail View

You can edit employees via the detail view by clicking the Edit button on the upper left of the page. Once the edit view layout is open, update the necessary fields, then click "Save" to preserve your changes.



Editing Via List View

You can also edit employees by clicking the Pencil icon to the left of each employee's name in the list view. The edit view layout will open where you can update the necessary fields and click "Save" to preserve your changes.



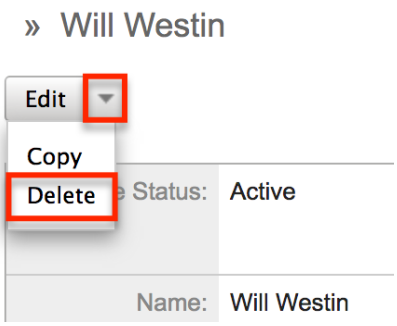
Deleting Employees

If an employee record is invalid or should no longer appear in your organization's Sugar instance, it may be deleted from the Employee's detail view. Deleting employee records will also delete the user record that this employee was related to.

Note: For instances that use SugarIdentity, the administrator can only delete employee records that are created directly in Sugar. Any employee records that are tied to a user record in SugarIdentity cannot be deleted, and administrators will need to access SugarIdentity to delete the user record. Deleting the user record via SugarIdentity will delete the corresponding user and employee records from Sugar.

Use the following steps to delete an employee record via the detail view:

1. Navigate to an employee record's detail view.
2. Click the Actions menu and select "Delete".

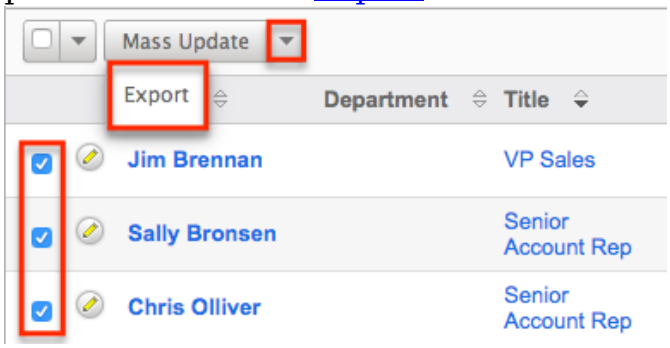


3. A pop-up message will display asking for confirmation and alerting you that the User record will also be deleted. Click "Ok" to proceed.

Exporting Employees

Sugar's Export option allows administrators to download all fields for the selected employees to their computers as a CSV (comma-separated values) file. This may be useful when needing to use Employee data with other software such as Microsoft Excel. Due to PHP memory limitations on the server, there may be occasions when the application times out while exporting a large number of employee records. If you encounter an error when performing this action, we recommend selecting the records in smaller batches.

Employees may be exported from the Employees list view by selecting "Export" from the Actions menu. For more information on exporting records in Sugar, please refer to the Export documentation.



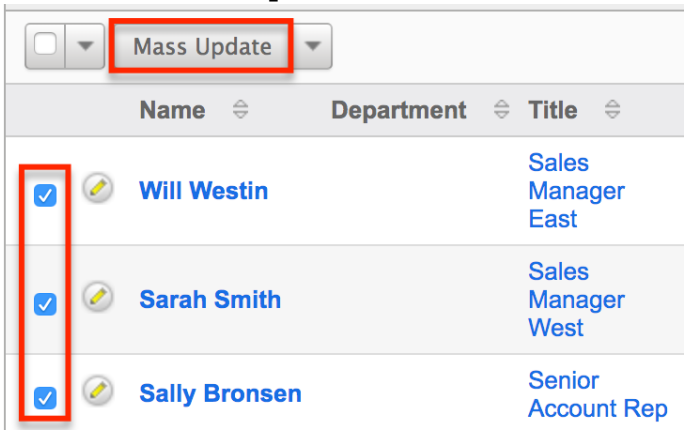
Mass Updating Employees

Mass Updating allows administrators to make the same change to multiple employee records at once from the Employees list view. Administrators can control which fields are available to change during mass update via Admin > Studio. Currently, only fields with the data type of date, datetime, dropdown, multiselect, and radio may be altered during a mass update. For more information on configuring mass update, please refer to the Studio documentation in the Administration Guide. Due to the PHP memory limitations on the server, there may be occasions when the application times out while mass updating a large number

of employee records. If you encounter an error when performing this action, we recommend selecting the records in smaller batches.

Use the following steps to mass update employee records from the list view:

1. Navigate to the Employees list view by clicking the Employees module tab.
2. Use the list view's Basic or Advanced Search to find employees you wish to modify.
3. Select the desired employees individually or using the checkbox dropdown's options.
4. Choose "Mass Update" from the Actions menu.



5. Scroll to the Mass Update panel and set values for the fields you wish to alter.



6. Click "Update" to save the changes to all of the currently selected employee records.

Knowledge Base Administration

Overview

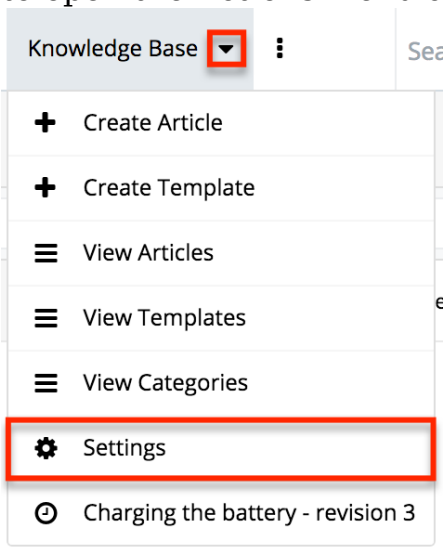
Sugar's Knowledge Base module provides the ability to create, maintain, and publish articles. Certain aspects of the Knowledge Base module are only available for administrators or users with developer-level role access including the creation and editing of templates and accessing the Knowledge Base settings. This documentation will cover information and actions specific to Knowledge Base administration.

For more information on actions available to regular users such as creating and editing articles, please refer to the Knowledge Base documentation in the Application Guide. For instructions concerning views and actions which are common across most Sugar modules, such as creating, editing, and deleting templates, please refer to the Working With Sugar Modules section of this page.

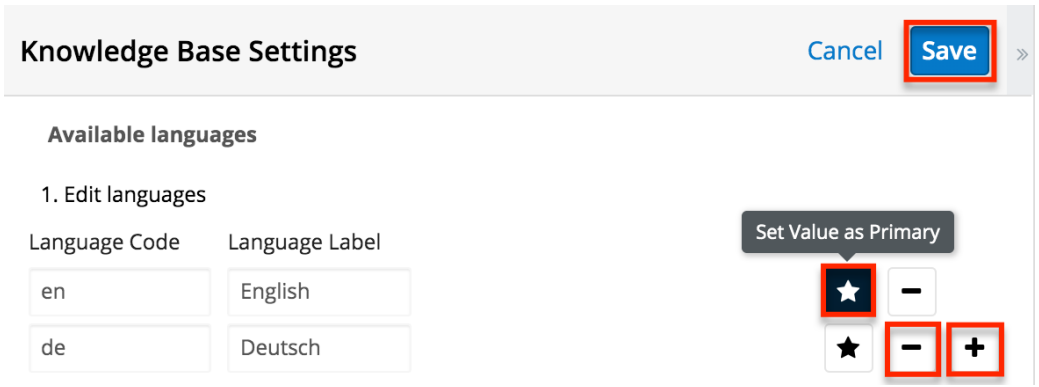
Settings

You have the option to add, edit, or delete different languages for article records in the Settings section. This is helpful if articles are to be translated into multiple languages. When one or more additional languages have been added, users can create localization articles. It is important to note that when a language is deleted from the available languages, all localization articles created with that language will also be deleted.

To access the Settings page, click the triangle in the Knowledge Base module tab to open the Actions menu and select "Settings".



The Knowledge Base Settings drawer will appear which allows you to edit, add, or remove languages for the Knowledge Base module. To add a new language, click the "+" icon and enter the Language Code and Language Label. To remove a language, select the "-" icon. The primary language is set in the Language field by default for all new articles. But you can change the primary language by selecting the star icon. Click "Save" to finalize any changes made.



Working With Sugar Modules

While the Knowledge Base Templates list view has some features that only apply to KB templates, it also uses the Sidecar user interface that most Sugar modules are based on. The following sections detail menus, views, and actions common to Sidecar modules and contain links to additional information within the page or links to the User Interface documentation.

Menus

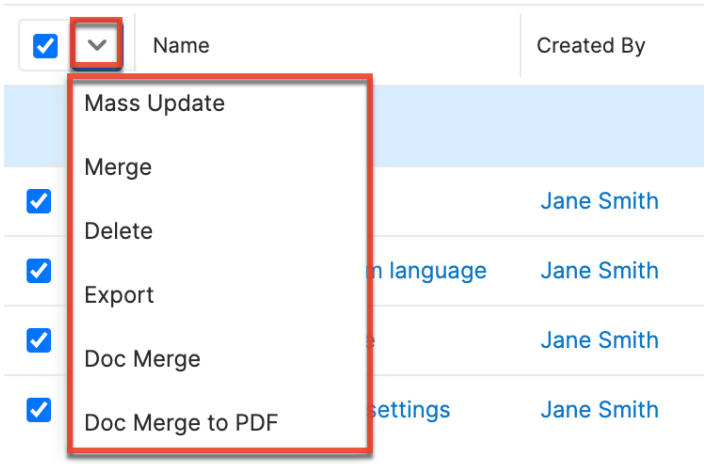
The Knowledge Base Templates section contains various options and functionality which are available via menus in the list view and record view. The following sections present each menu and its options with links to more information about each option in the User Interface documentation or, for Knowledge Base Templates-specific functionality, within this page.

List View Menus

The Knowledge Base Templates list view displays all knowledge base template records and allows for searching and filtering to locate specific templates. You can view the basic details of each record within the field columns of the list view or click a template's name to open the record view. To access a module's list view, simply click the Knowledge Base module's tab in the navigation bar at the top of any Sugar page and select "View Templates".

List View Mass Actions Menu

The Mass Actions menu to the right of the checkbox option in the list header allows you to perform mass actions on all currently selected records. You can use the checkbox on each record's row to select individual template records or click the checkbox in the list header to select all records displayed on the current set of list view results.

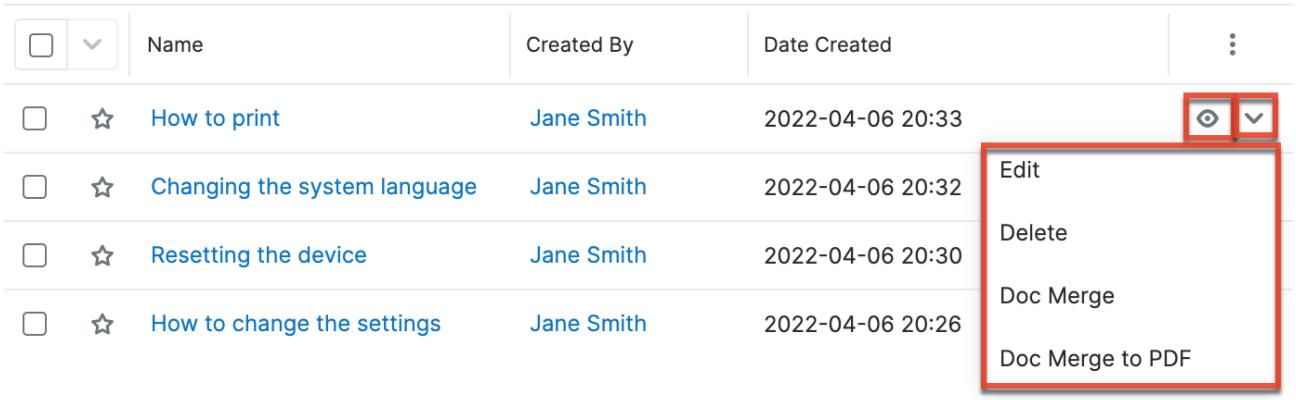


The Mass Actions menu allows you to perform the following operations:

Menu Item	Description
Mass Update	Mass update one or more templates at a time.
Merge	Merge two or more duplicate templates.
Delete	Delete one or more templates at a time.
Export	Export one or more templates to a CSV file.
Doc Merge	Select or create a DOCX template to merge record data into documents that will be accessible in the Doc Merge widget.
Doc Merge to PDF	Select or create a DOCX, XLSX, or PPTX template to merge record data into PDF documents that will be accessible in the Doc Merge widget.

List View Record Actions Menu

The Record Actions menu to the far right of each record's row allows you to perform actions on the individual template directly from the list view.

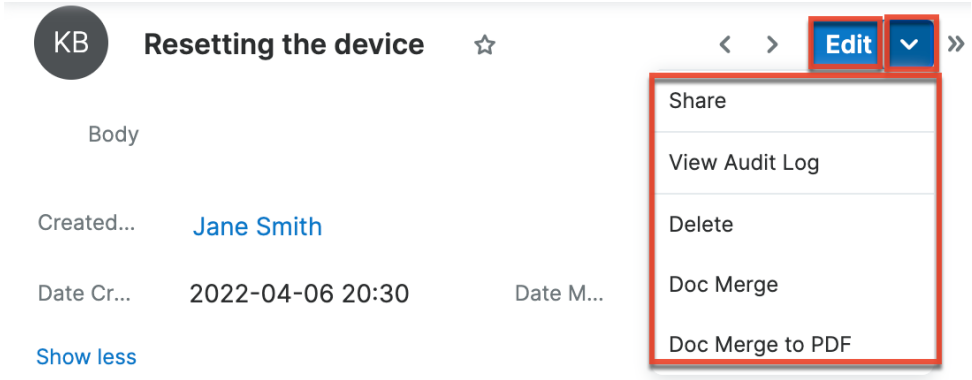


The list view's Record Actions menu allows you to perform the following operations:

Menu Item	Description
Preview (Eye icon)	Preview this template in the intelligence pane.
Edit	Edit this template.
Follow	(Available if Activity Streams are enabled) Follow changes to this template in your activity stream.
Delete	Delete this template.
Doc Merge	Select or create a DOCX, XLSX, or PPTX template to merge record data into documents that will be accessible in the Doc Merge widget.
Doc Merge to PDF	Select or create a DOCX, XLSX, or PPTX template to merge record data into PDF documents that will be accessible in the Doc Merge widget.

Record View Actions Menu

The knowledge base template record view displays a single template in full detail including its fields and the activity stream. To access a template's record view, simply click a hyperlinked template name from anywhere within Sugar. The record view's Actions menu appears on the top right of the page and allows you to perform various operations on the current record.



The Actions menu allows you to perform the following operations:

Menu Item	Description
Edit	Edit this template.
Share	Share this template.
View Audit Log	View a record of changes to this template.
Delete	Delete this template.
Doc Merge	Select or create a DOCX, XLSX, or PPTX template to merge record data into documents that will be accessible in the Doc Merge widget.
Doc Merge to PDF	Select or create a DOCX, XLSX, or PPTX template to merge record data into PDF documents that will be accessible in the Doc Merge widget.

Common Views and Actions

In the table below, the left column contains links to the User Interface page covering topics that are applicable to all Sidecar modules. The right column has links to sections of the current page that cover topics specific to KB templates.

General Instructions for Working With Sugar Modules	KB-Templates-Specific Instructions
Use the links below to navigate to the User Interface page which covers topics generic to many Sugar modules.	When KB-Templates-specific help exists for each topic, use the links below to navigate to sections of the current page.
Creating Records	
Viewing Records	

Searching for Records	
List View	List View Mass Actions Menu List View Record Actions Menu
Record View	Record View Actions Menu
Intelligence Pane	
Editing Records	Settings
Deleting Records	
Exporting Records	
Merging Records	
Viewing Record Audit Logs	
Favoriting Records	
Following Records	
Sharing Records	
Using the TinyMCE Text Editor	

Tag Management

Overview

Tags are user-created keywords or phrases that can help users find, group, and classify large amounts of data by common attributes that may not be defined via basic database fields. Sugar® stores tags as individual records in the Tags module. Modules using the Sidecar user interface (e.g., Accounts, Contacts, etc.) contain a Tags field where users can create and share tags that can be used to identify records in filters, dashlets, and reports. For more information about Sidecar modules, please refer to the User Interface documentation in the Application Guide.

While tags can be created and used by regular Sugar users, some actions in the Tags module are only available to administrators and users with Developer-level role access. This documentation will cover these administration options which allow you to manage the system-wide tag repository. For information about tag functionality which is available to regular users, please refer to the Tags documentation in the Application Guide. For instructions concerning views and actions which are common across most Sugar modules, such as creating, editing, and deleting tags, please refer to the Working With Tags section of this page.

Note: The Tags module is not configurable in Studio.

Understanding Tag Behavior

The act of relating a tag to a Sugar record is referred to as "tagging". By default, modules using the Sidecar user interface (e.g., Contacts, Leads, Accounts, etc.) are enabled for tagging and include the Tags field in the layout. Tags can be related to multiple records across any Sidecar module, so a single tag can appear on multiple records. Likewise, a single record can have multiple tags. Unlike other Sugar modules, users can see all tag records regardless of their team memberships. Additionally, users will be able to edit Tag fields to add existing tags or create new tags regardless of any role restrictions their user has for the Tags module.

Please note that only administrators and users with Developer-level role access may create, edit, merge, and delete tags in the Tags module. To assign a Tags Administrator role to a Sugar user, please refer to the Creating a Tags Administrator section of this page.

Note: While the "Find Duplicates" functionality is disabled for all users of the Tags module, users with administrator access to the Tags module can find and merge duplicate tag records via list view. For more information on merging records, refer to the User Interface documentation.

For more information on tag usage guidelines and interacting with tags in Sugar, please refer to the Tags documentation in the Application Guide.

Tag Fields

The Tags module contains a number of stock fields that come out-of-the-box with Sugar. For information on using and editing various field types, refer to the User Interface documentation. The definitions below are suggested meanings for the fields, but the fields can be leveraged differently to best meet your organization's needs.

Field	Description
Name	The name or designation of the tag.
Assigned To	The Sugar user assigned to the tag record.
Date Created	The date the tag record was created.
Date Modified	The date the tag record was last modified.
Description	A description or other information about the tag.

Consolidating Synonymous Tags

Sugar prohibits users from saving duplicate tag records, but with many users

working in and importing new records to Sugar, it is possible for synonymous tag records (e.g., computer and computers) to accidentally occur in the system.

Before creating a new tag record, a good practice is to first check that a similar tag does not already exist in Sugar. You can locate candidates for cleanup using the list view search from the Tags list view. Searching for tags with similar names or other information can turn search into a powerful, duplicate-finding tool. If synonymous tag records are detected, perform a merge as described in the User Interface documentation.

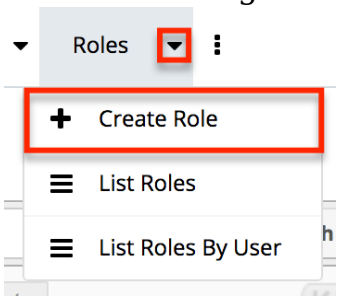
Note: While the "Find Duplicates" functionality is disabled for all users of the Tags module, users with administrator access to the Tags module can find and merge duplicate tag records via list view.

Creating a Tags Administrator

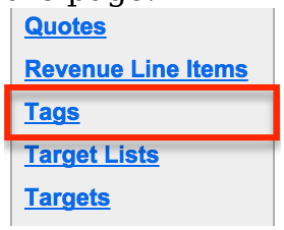
By default, only administrator or developer users have the ability to create, edit, delete, and merge tags in the Tags module. It may be helpful to delegate these administrative tasks to one or more designated user(s) without giving them full administrative permissions in Sugar.

Use the following steps to create a Tags Administrator role:

1. Navigate to Admin > Role Management.
2. Click the triangle in the Roles module tab and select "Create Role".



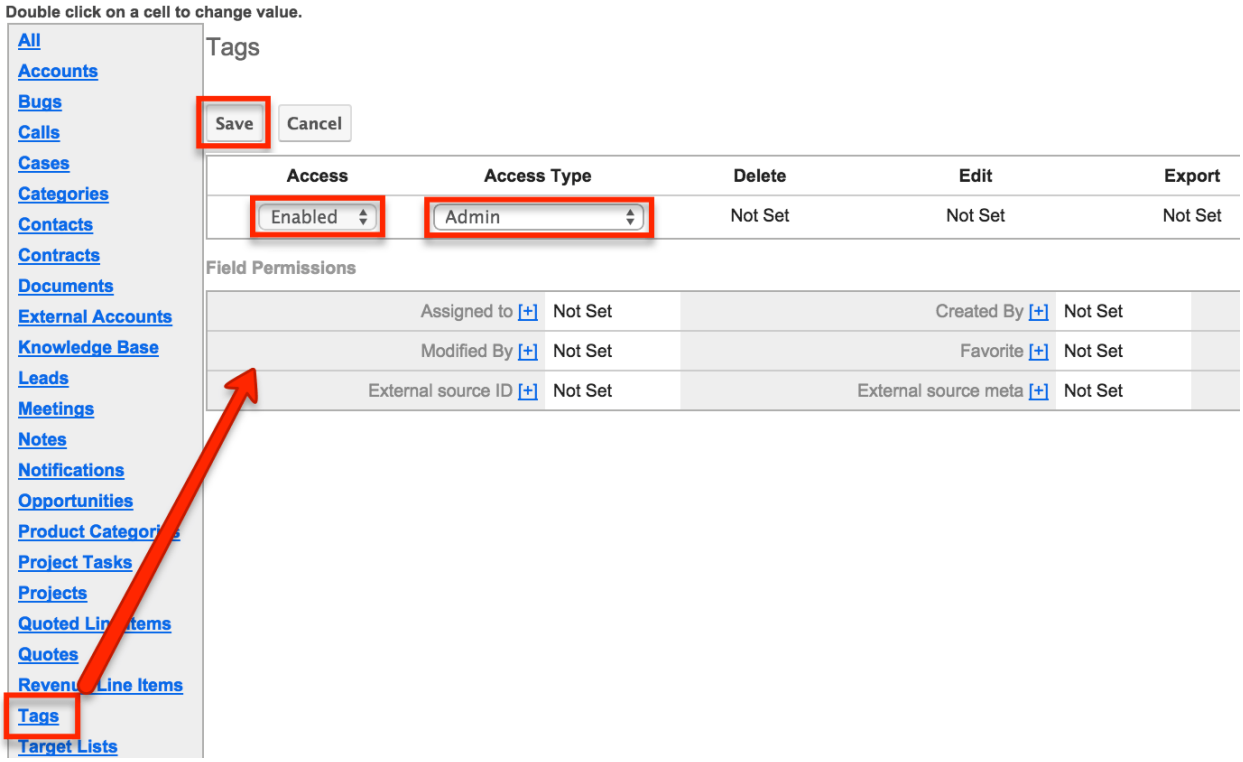
3. Enter a name (e.g., Tags Administrator) for the role then click "Save".
4. On the Role Chart screen, click "Tags" in the module's list to the far left of the page.



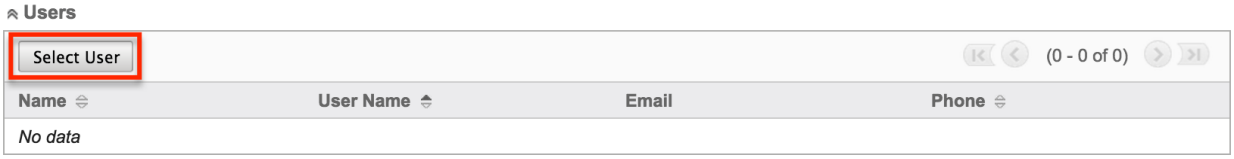
5. The following screen will display the role settings specific to the Tags module. The Access and Access Type columns will default to "Not Set". Click the "Not Set" in both columns and select the following options::

- **Access**: Enabled
- **Access Type**: Admin

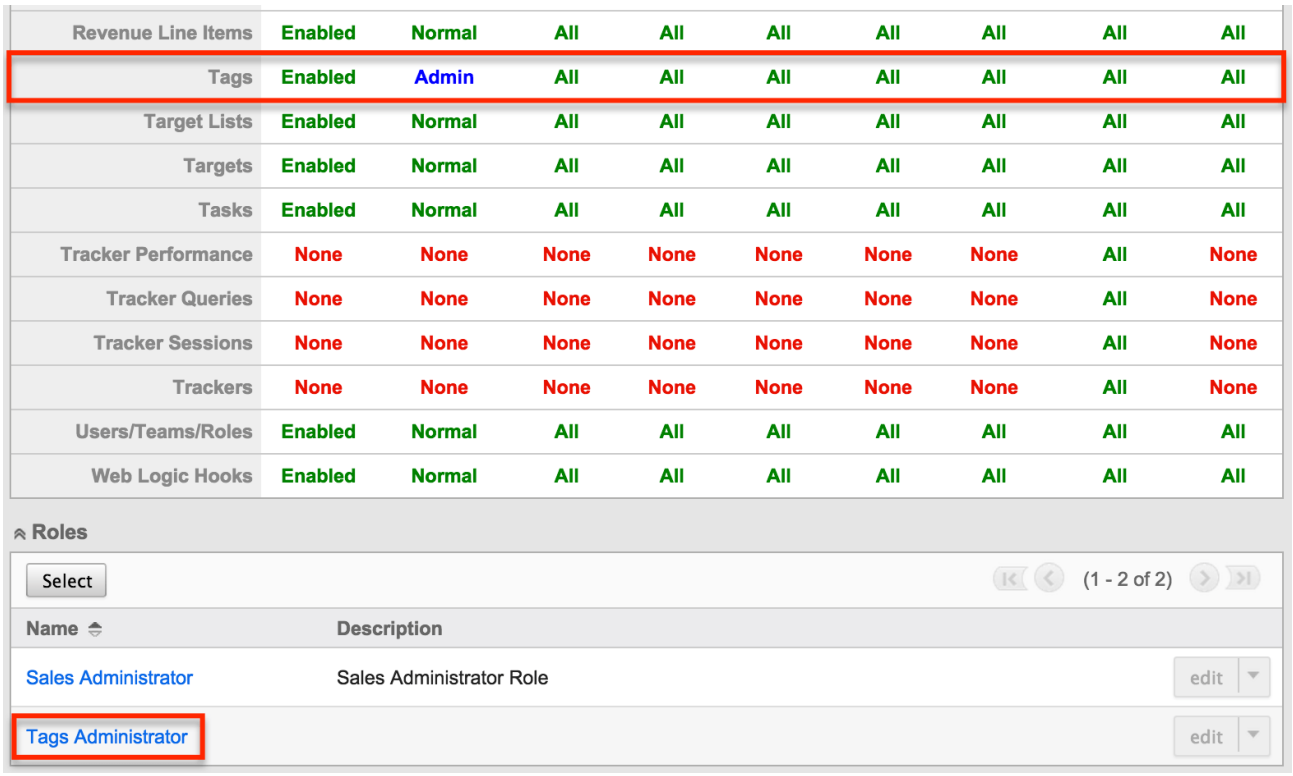
Note: All other settings can remain as "Not Set" since the Admin access type will ensure full access to the remaining options.



6. Click "Save" to preserve the changes.
7. Scroll to the Users subpanel on the bottom of the screen and click "Select User". Search and select the user(s) you wish to assign this role to.



8. After selecting the user(s), navigate to the user's profile to view their access information via the Access tab. Confirm that the Tags Administrator role is displayed in the Roles subpanel and the Tag module's access is set to "Admin".



Any user assigned to the Tags Administrator role will have the ability to access increased functionality such as creating, editing, deleting, and merging records in the Tags module. For more information on creating roles, please refer to the Role Management documentation.

Working With Tags

While the Tags module has some features that only apply to contacts, it also uses the Sidecar user interface that most Sugar modules are based on. The following sections detail menus, views, and actions common to Sidecar modules and contain links to additional information within the page or links to the User Interface documentation.

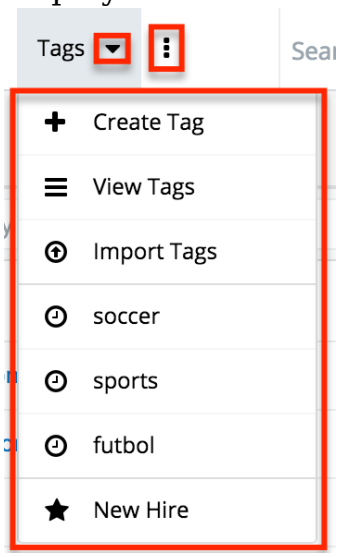
Menus

The Tags module contains various options and functionality which are available via menus in the module tab, list view, and record view. The following sections present each menu and its options with links to more information about each option in the User Interface documentation or, for Tags-specific functionality, within this page.

Module Tab Menus

The Tags module tab is typically found by clicking the arrow to the right of the navigation bar tabs at the top of any Sugar screen. The additional modules will

appear on the list and you can click "Tags" to access the list view. Once the Tags module tab displays on the navigation bar, you can click the triangle within the tab to display the Actions, Recently Viewed, and Favorites menu. The Actions menu allows you to perform important actions within the module. The Recently Viewed menu displays the list of tags you most recently viewed. The Favorites menu displays the list of tags you most recently marked as favorites.



The module tab's Actions menu allows you to perform the following operations:

Menu Item	Description
Create Tag	Opens the record view layout to create a new tag.
View Tags	Opens the list view layout to search and display tags.
Import Tags	Opens the import wizard to create or update tags using external data.

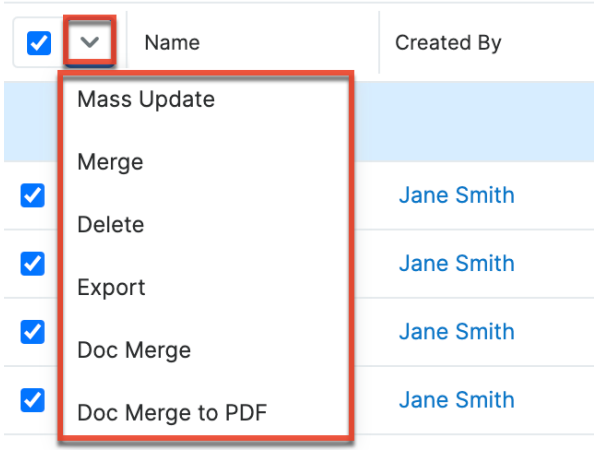
For more information on module tab menus including reasons a module may not be included in the menu, see the User Interface documentation.

List View Menus

The Tags list view displays all tag records and allows for searching and filtering to locate specific tags. You can view the basic details of each record within the field columns of the list view or click a tag's name to open the record view. To access a module's list view, simply click the module's tab in the navigation bar at the top of any Sugar page.

List View Mass Actions Menu

The Mass Actions menu to the right of the checkbox option in the list header allows you to perform mass actions on all currently selected records. You can use the checkbox on each record's row to select individual tag records or click the checkbox in the list header to select all records displayed on the current set of list view results.



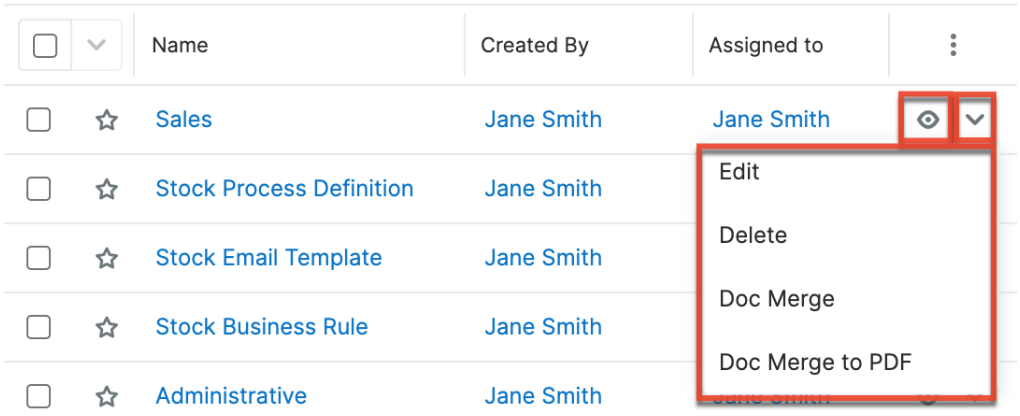
The Mass Actions menu allows you to perform the following operations:

Menu Item	Description
Mass Update	Mass update one or more tags at a time.
Merge	Merge two or more duplicate tags.
Delete	Delete one or more tags at a time.
Export	Export one or more tags to a CSV file.
Doc Merge	Select or create a DOCX template to merge record data into documents that will be accessible in the Doc Merge widget.
Doc Merge to PDF	Select or create a DOCX, XLSX, or PPTX template to merge record data into PDF documents that will be accessible in the Doc Merge widget.

Note: While the "Find Duplicates" functionality is disabled for all users of the Tags module, users with administrator access to the Tags module can find and merge duplicate tag records via list view. For more information on merging records, refer to the User Interface documentation.

List View Record Actions Menu

The Record Actions menu to the far right of each record's row allows you to perform actions on the individual tag directly from the list view.

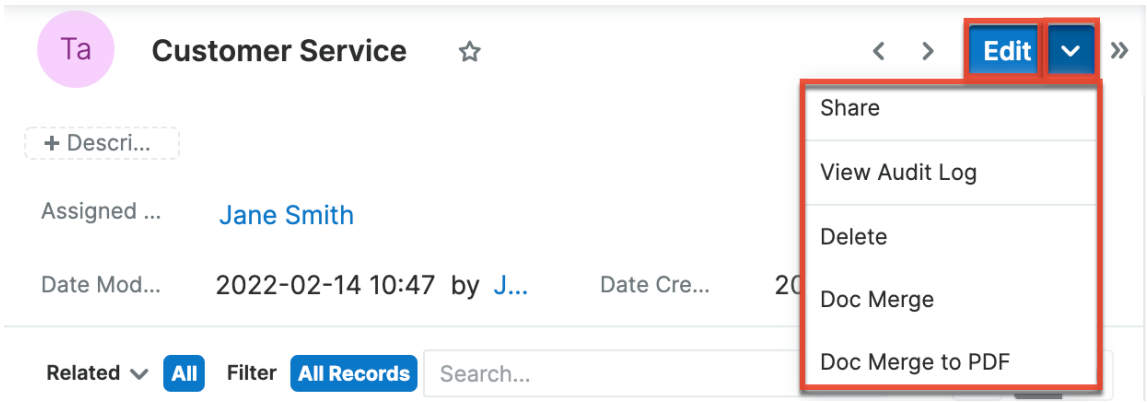


The options in the Record Actions menu allow you to perform the following operations:

Menu Item	Description
Preview (Eye icon)	Preview this tag in the intelligence pane.
Edit	Edit this tag.
Delete	Delete this tag.
Doc Merge	Select or create a DOCX, XLSX, or PPTX template to merge record data into documents that will be accessible in the Doc Merge widget.
Doc Merge to PDF	Select or create a DOCX, XLSX, or PPTX template to merge record data into PDF documents that will be accessible in the Doc Merge widget.

Record View Actions Menu

The Tags record view displays a single tag in full detail including its relevant fields and subpanels of related records. To access a tag's record view, simply click a hyperlinked tag name from the Tags list view, Tags list view dashlet, or from report results. The record view's Actions menu appears on the top right of the page and allows you to perform various operations on the current record.



The Actions menu allows you to perform the following operations:

Menu Item	Description
Edit	Edit this tag.
Share	Share a link to this tag via email.
View Audit Log	View a record of changes to this tag.
Delete	Delete this tag.
Doc Merge	Select or create a DOCX, XLSX, or PPTX template to merge record data into documents that will be accessible in the Doc Merge widget.
Doc Merge to PDF	Select or create a DOCX, XLSX, or PPTX template to merge record data into PDF documents that will be accessible in the Doc Merge widget.

Common Views and Actions

The following links will open specific sections of the User Interface documentation where you can read about views and actions that are common across most Sidecar modules.

Content Link	Description
Creating Tags Basic Tag Creation Importing Tags	The Creating Records section covers the various methods of creating new tag records, including via the Create button in the Tags module and importing a list of tags into Sugar using a .csv spreadsheet.
Viewing Tags Viewing via List View	The Viewing Records section describes the various methods of viewing tag

Viewing via Record View Viewing via Recently Viewed Viewing via Dashlets Viewing via Preview Viewing via Reports	records, including via the Tags list view and record view, the Recently Viewed menu in the Tags module tab, list view dashlets showing tag information, previewing tags in the right hand side panel, and reports displaying tag data.
Searching for Tags List View Search Creating a Filter	The Searching for Records section provides an introduction to list view search, which searches and filters within the Tags module. **Note**: For information on using tags as global search filters, please refer to the Tags documentation in the Application Guide.
Tags List View Total Record Count Create Button List View Search Checkbox Selection Mass Actions Menu Favorite Designation Column Reordering Column Resizing Column Sorting Column Selection Preview Record Actions Menu Pagination Dashboards	The List View section walks through the many elements of the Tags List View layout which contains a filterable list of all tag records in Sugar. While the generic menu options are described in the User Interface sections linked to the left, the options specifically available in the Tags list view are described in the List View Mass Actions Menu and List View Record Actions Menu sections of this page.
Tags Record View Favorite Designation Next or Previous Record Actions Menu Subpanels Related Record Subpanels Filtering Subpanels Reordering Subpanels Dashboards	The Record View section walks through the many elements of the Tags Record View layout which contains detailed information about a single tag record. While the generic menu options are described in the User Interface sections linked to the left, the options specifically available in the Tags record view are described in the Record View Actions Menu section of this page.
Editing Tags Editing Inline via Record View Editing via Record View Editing Inline via List View Mass Editing via List View	The Editing Records section describes the various methods of editing existing tag records, including inline via the Tags record view, in full edit mode on the record view, inline via the Tags list

	view, and via the Mass Update option on the list view. **Note**: If the tag's name is edited, all records related to the tag will automatically display the updated tag value.
Deleting Tags Deleting via Record View Deleting via List View Mass Deleting via List View	The Deleting Records section describes the various methods of deleting unwanted tags, including via the Tags record view, an individual record's Actions menu on the Tags list view, and the Mass Actions menu on the list view.
Exporting Tags	The Exporting Records section provides an introduction to the export functionality which allows you to download a list of tags and all their data as a .csv file for use outside of Sugar (e.g., in Microsoft Excel).
Merging Tags Merging via List View	The Merging Records section provides instructions for merging duplicate tags which will combine field values and related records into a single tag. **Note**: Date Created and Date Modified field types are not supported when merging duplicate Tag records in Sugar.
Viewing Tag Audit Logs	The Viewing Record Audit Logs section describes the View Audit Log record view option which displays a history of changes to the tag's audited fields. **Note**: Only the Assigned User Id field is audited for the Tags module and will be displayed in the audit log.
Favoriting Tags Favoriting via List View Favoriting via Record View	The Favoriting Records section describes the various methods of marking tags as favorites, including via the Tags list view or Tags record view. Favoriting a tag allows you to easily access it from list views, dashlets, or the Tags module tab.
Sharing Tags	The Sharing Records section provides instructions for the Share record view option which composes an email with a link to the tag record. If the recipient is logged into Sugar, clicking the link will

	bring them directly to the tag's record view.

Console Management

Overview

Sugar Serve's Service Console and the Renewals Console are Home page dashboards that provide a powerful work environment for service and sales agents. The Service Console can be managed and configured by system admin users with a Serve license type. The Renewals Console can be managed and configured by system admin users with a Sell or Enterprise license type. In addition, a regular user who is assigned to the dashboard has the ability to administer and configure the consoles. For more information on how to configure the various parts of the consoles, refer to the Configuring the Consoles section below.

For more information on license types and the module functionality available for each type, refer to the User Management documentation. Please note that Sugar's console dashboards cannot be duplicated or deleted.

Prerequisites

In order to configure the consoles, the following requirements must be met:

- You must be a system administrator user.
  Note: The system admin can also assign the console dashboard to a regular user if they wish to designate a console administrator who will manage the dashboard for the organization. For more information, refer to the Designating a Console Administrator section below.
- You must have a Sugar Serve license type to configure the Service Console.
- You must have a Sugar Sell or Enterprise license type to configure the Renewals Console.

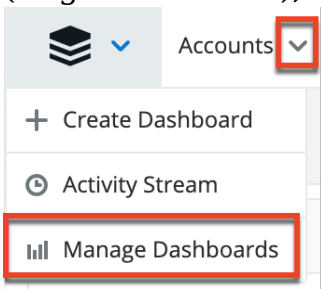
For more information on license types and the module functionality available for each type, refer to the User Management documentation.

Designating a Console Administrator

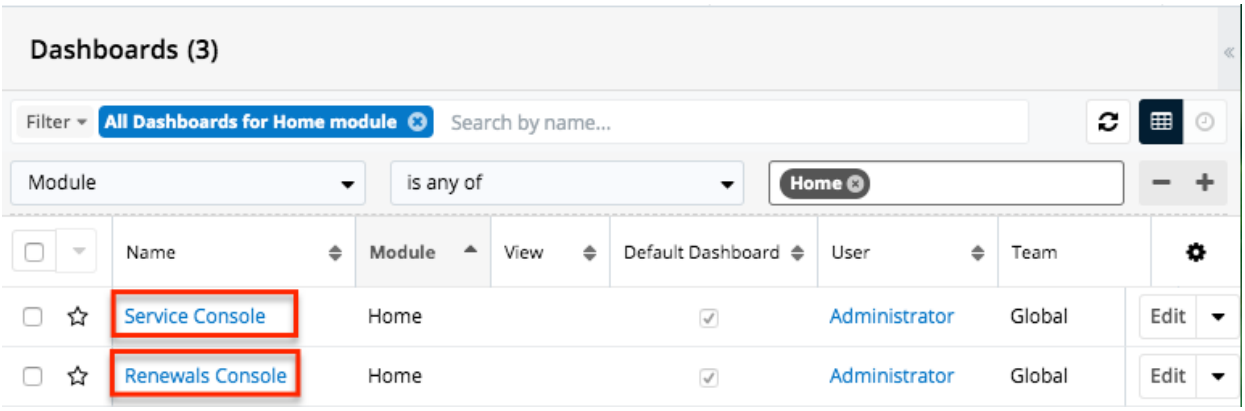
If you wish to designate a non-admin user as a console administrator to manage and configure the consoles for your organization, you will need to assign the applicable dashboards to the specific user. Use the following steps to designate a

user as a console administrator:

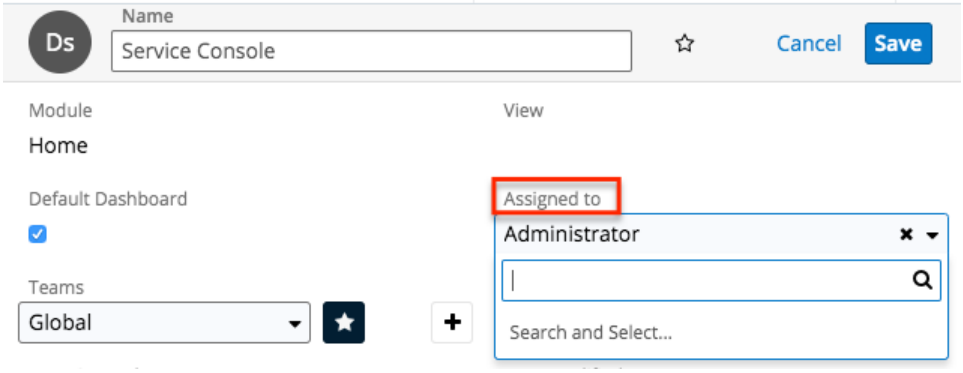
1. Navigate to the Home page, click the triangle next to the Home module tab (Sugar cube icon), and select "Manage Dashboards".



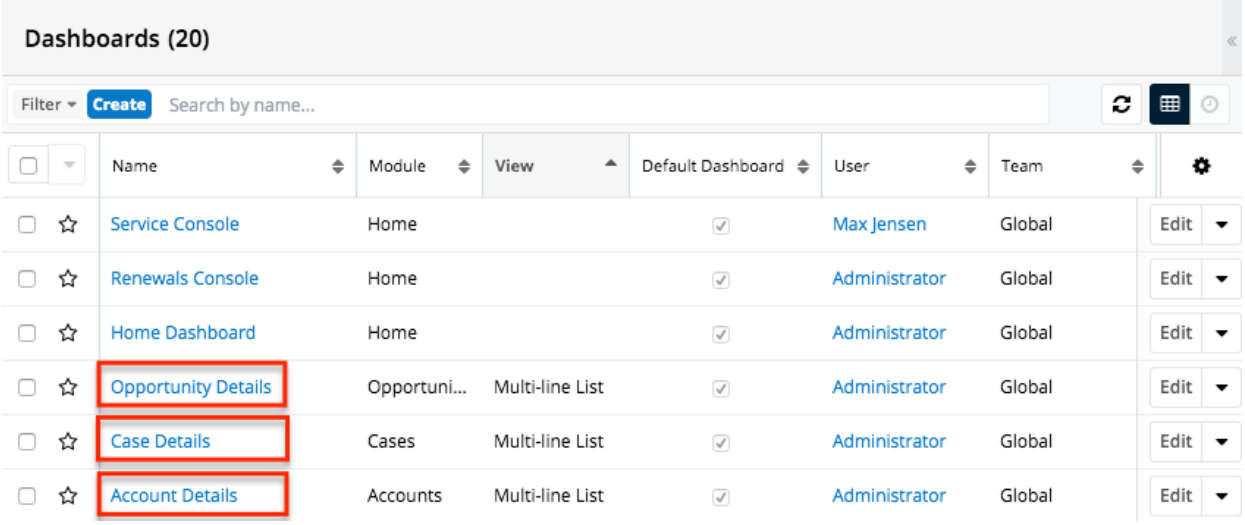
2. In the Dashboards module list view, select the console (i.e., Service Console, Renewals Console) for which you want to designate a console administrator.



3. Change the Assigned To field to the desired user.



4. Next, navigate back to "Manage Dashboards" and remove the filter in the Dashboards list view to display all available dashboards. If you are designating a console administrator for the Service Console, locate the Case Details dashboard and reassign it to the same user from Step 3. For the Renewals Console, locate and reassign the "Account Details" and "Opportunity Details" dashboards to the same user from Step 3. Please note that you must reassign this dashboard to the user in order to give them the ability to edit the dashlets contained in the Case Detail drawer (for Service Console), Account Detail drawer (for Renewals Console), and Opportunity Detail drawer (for Renewals Console).



Once the applicable dashboards have been reassigned to the desired user, going forward the user assigned to the dashboards will be able to manage and configure the consoles just like the system admin user.

Configuring the Consoles

The Console can be configured by system admin users or by a regular user who is assigned to the dashboard. Please note that the user must have a Sugar Serve license type to access and configure the Serve Console, and a Sugar Sell or Enterprise license type to access and configure the Renewals Console. Also, keep in mind that in order to access and configure the dashlets in the module tab drawers (e.g., Case Detail drawer), you will need to have at least one record assigned to you. Any changes made to the Consoles will update the dashboard for all users who access the console. The following sections cover the basics of configuring the Overview tab, the module tab lists, and the module tab drawers.

Configuring the Overview Tab

Admin users and the user assigned to the Console dashboard can rename the dashboard, add and remove dashlets, rearrange and resize dashlets, and edit dashlets on the dashboard. Any changes made to the Overview tab will be updated for all users who access the console.

To add dashlets, click the floating actions button on the Console dashboard then select "Add Dashlet" in the floating actions menu to select and configure your desired dashlet. You can delete dashlets by clicking the Gear icon at the top right of the dashlet and selecting "Remove".

To change the position of dashlets in the Overview tab, simply drag and drop the dashlet in the desired location to swap the position of two dashlets in the dashboard. To resize dashlets, click the double-ended arrow that appears in the

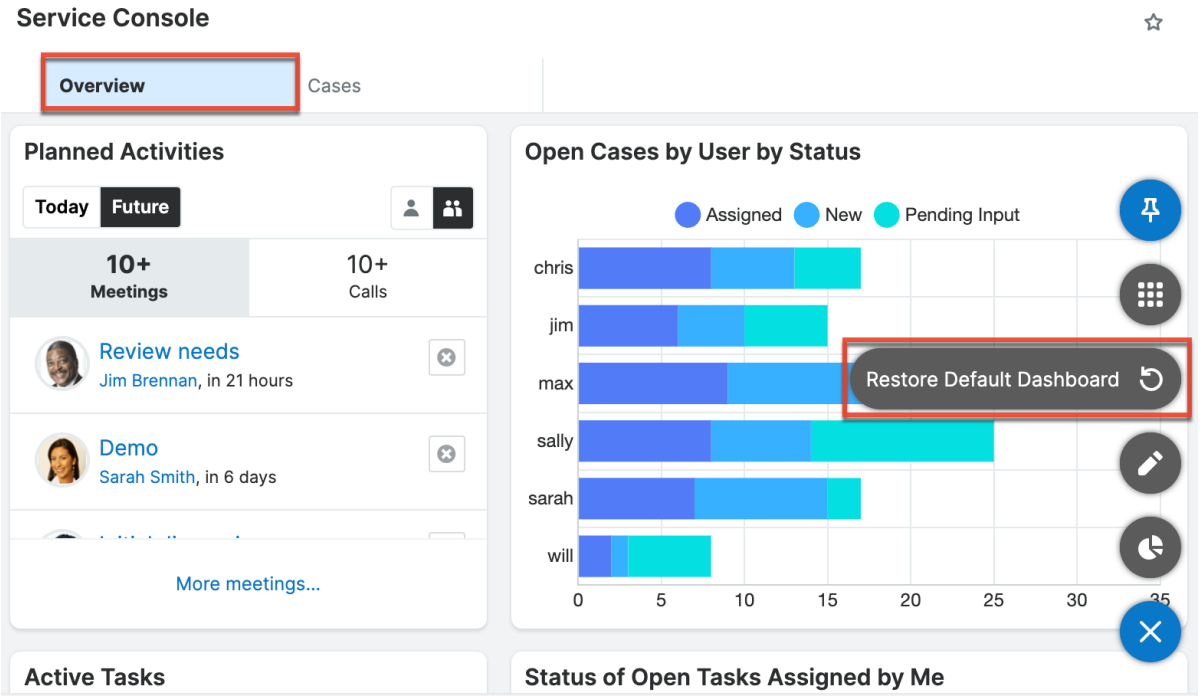
bottom corners of the dashlet and drag to the desired size.

You can also configure dashlets in the dashboard by clicking the Gear icon at the top right of the dashlet and selecting "Edit" which will display configuration options specific to the dashlet.

For more information on rearranging, resizing, and editing dashlets, refer to the Dashboards and Dashlets documentation.

Restoring Overview tab Layout

If you wish to restore the Overview tab of the Service Console dashboard's layout back to the default out-of-the-box layout, simply click the floating actions button and select the Restore Default Dashboard option. The console dashboard layout will be updated to the out-of-the-box layout for all users who access the console.



Configuring the Metric Bar and Metric Tabs

Metric tabs allow you to deploy predefined filters and views to your users for multiple unified team views. Both the Service Console and the Renewals Console require a relationship hierarchy based on teams to determine which users the metric tabs are deployed to. To learn more, please see the Team Management page.

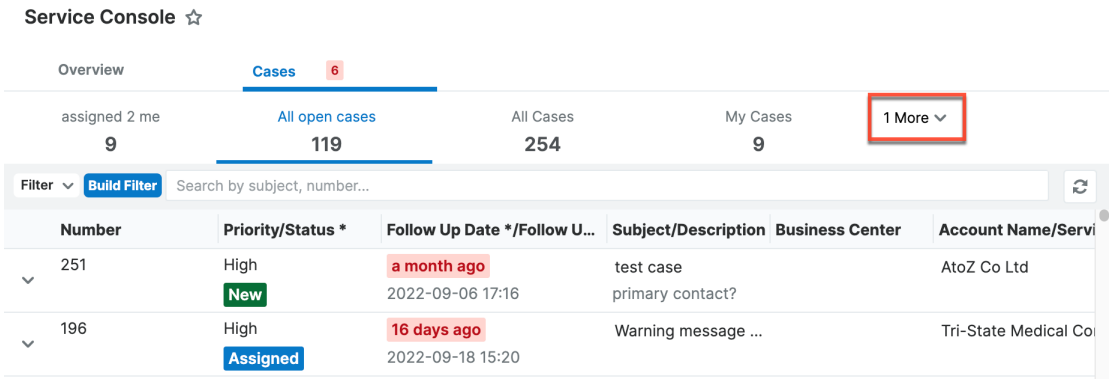
Out of the box, the Service Console's Cases tab has the following metric tabs: All Escalated cases, All Unassigned cases, My Team's Cases, and My Cases. For a more general overview of how metric tabs work, please see the Service Console documentation and the Metrics page.

Metric Bar

The metric bar is a bar across the top of the console that holds all of a user's metric tabs. The bar is available on any module tab (e.g., Cases, Opportunities) and can be seen below the console's tabs:



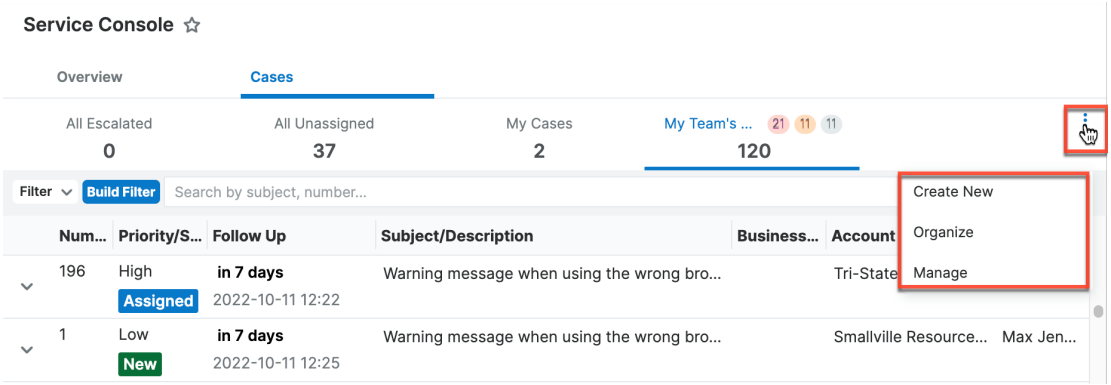
In the above screenshot, you can see that there are four metric tabs on the metrics bar. Each tab has individual settings, while the module bar also has settings that are configured by the three-dots menu available at the end of the metrics bar. There is no limit to how many metric tabs can be included, but they may be hidden in an overflow menu.



Metric Bar Settings

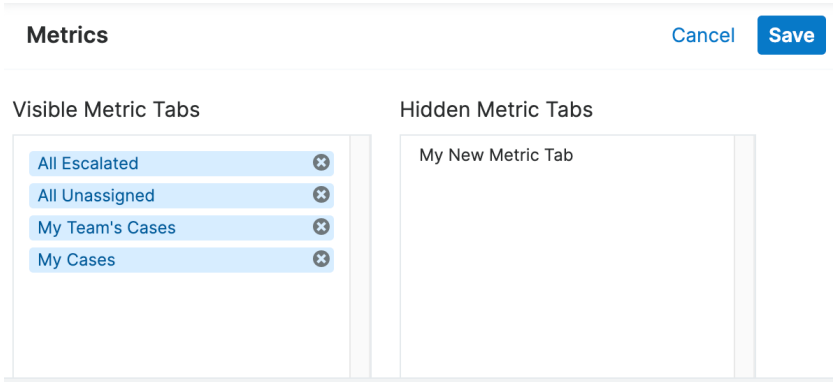
The metric bar stores all the metric tabs, as well as providing the ability to organize and manage a layout to assign and deploy to users. Please see the Metrics documentation for more specific information on creating and deploying metric

tabs.



The following menu options are available:

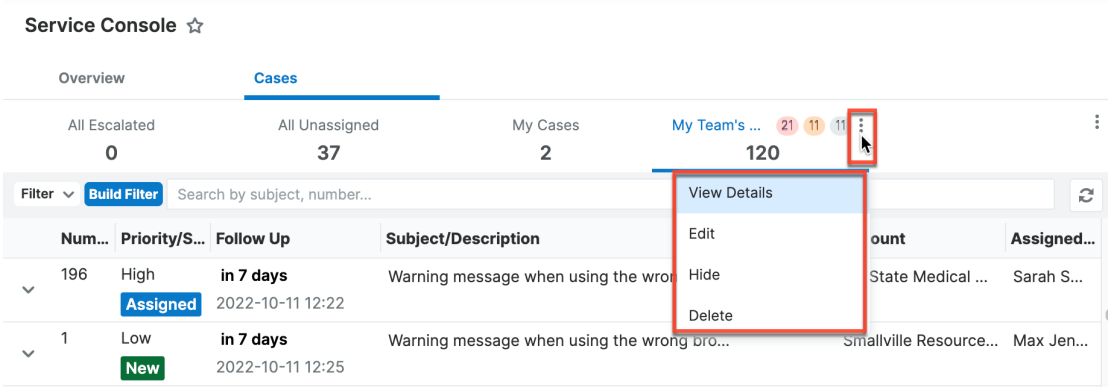
- **Create New**: Create a new metric tab. You will be taken to the Metrics module to create a new record. To view specific information on how to set filters and layouts to a new metric tab, please see the Metrics documentation.
- **Organize**: Set a particular order for metric tabs to deploy to users and choose which tabs are visible on the metric bar. While metric tabs may be dragged to the visible column, you must click the X on the tab to send it to the hidden column.

  Users may also organize their own metric bar; please see the Service Console documentation for more information.
- **Manage**: Access the Metrics module. Please see the Metrics Module section for more information.

Metric Tabs Settings

Each individual metric tab has its own settings; some are accessible only to the admin, while others are for all users. To access these options, hover over a metric tab and click the three-dots menu at the end of the metric tab.



The following menu options are available:

- **View Details**: View all details of the metric record. This module is read-only unless you are an administrator. For more information on the Metrics module, please review the Metrics documentation.
- **Edit**: Edit the metric tab. Only admins can edit metric tabs.
- **Hide**: Remove the tab from the metric bar. All users can do this in their own metric bar. If the user wishes to put the metric tab back, they may navigate to Organize on the metric bar's three-dots menu to return the tab.
- **Delete**: Remove the metric tab. Only admins can remove metric tabs. If you delete all tabs for the console, users will see text that says "No Metric Tabs Configured. Please contact your administrator." If a user hides all of their metric tabs from their own view, they will instead see "No Metric Tabs Visible. Choose "organize" to make metric tabs visible."

Metrics Module

The Metrics module stores all settings for all metric tabs, which are displayed in the consoles. Having multiple metric tabs allows users to quickly view different filtered and configured lists with one click. The metrics may have different filters, as well as different fields visible in the console list view. Regular users can view metrics in a read-only capacity, while administrators can also create and edit metrics. Please see the Metrics page for more information.

Metrics

Overview

The Metrics module stores all settings for all metric tabs, which are displayed in the Service Console. Having multiple metric tabs allows users to quickly view different filtered and configured lists with one click. The metrics may have different filters, as well as different fields visible in the console list view. Regular

users can view metrics in a read-only capacity, while administrators can also create and edit metrics. For more information on working on consoles, please see the Service Console documentation. Additional information on admin configuration can be found in the Console Management page.

Metrics Fields

The Metrics module contains a number of stock fields that come out of the box with Sugar. For information on using and editing various field types, refer to the User Interface documentation.

Settings Tab Fields

Field	Description
Context/Module	The location where the metric can be displayed (e.g., Service Console / Cases)
Teams	The Sugar team(s) assigned to the metric record
Status	The current status of the metric record. Inactive metrics are not displayed in the metric bar
Filter	The filter that is applied when viewing the returned results in the metric tab **Note**: For more details on building filters, please see the Search documentation.
Description	Explanation and details of the metric record
Tags	User-created keywords that can be used to identify records in filters, dashlets, and reports **Note**: For more information on creating and using tags, please refer to the Tags documentation.
Date Created	The date the metric record was created
Date Modified	The date the metric record was last modified
Assigned to	The Sugar user assigned to the metric record

List Layout Tab Fields

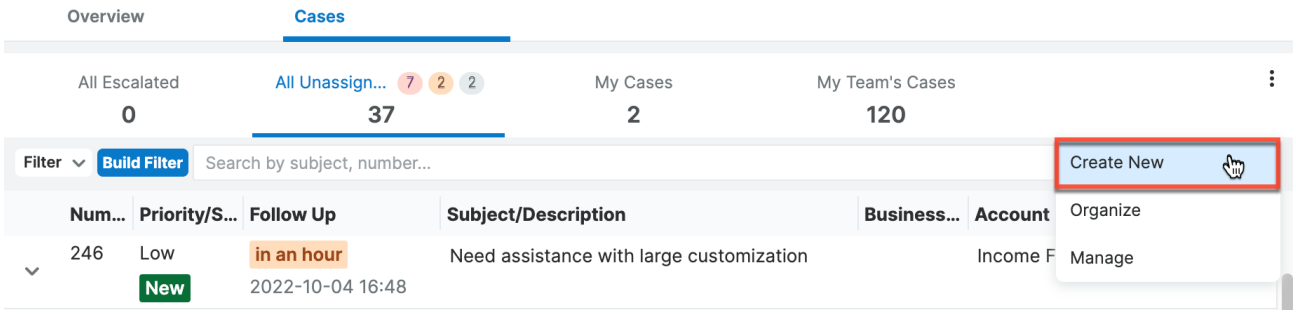
Field	Description
Primary Sort Order	The first field by which the list is sorted
Secondary Sort Order	The optional second field by which the list is sorted
Freeze First Column	A checkbox that automatically freezes the first column of the module tab list view so that it is remains visible when scrolling horizontally

Creating and Editing Metric Tabs

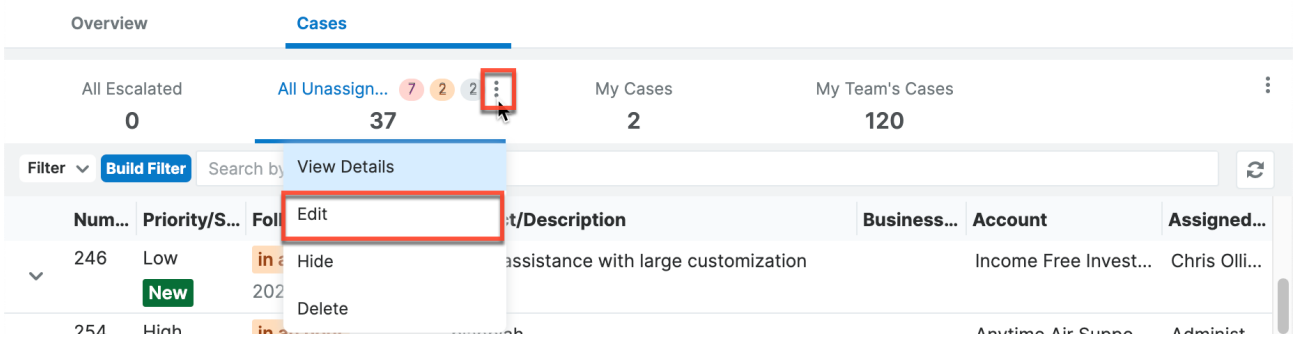
The console's module tab contains a metric bar that contains multiple metric tabs. Metric tabs allow you to deploy predefined filters and views to your users for unified team views. Both the Service Console and the Renewals Console require a relationship hierarchy based on teams to determine which users the metric tabs are deployed to. To learn more, please see the Team Management page.

Each tab has its own settings, and the metric bar also has its own settings. An admin can configure the module tab lists and filters via a metric tab's three-dots menu. Additionally, an admin may use the three-dots menu on the metric bar itself to create and deploy a new metric tab. For more information on how admins can configure the console, please see the Console Management page.

To create a metric tab, choose the Create New option in the metrics bar's three-dots menu.



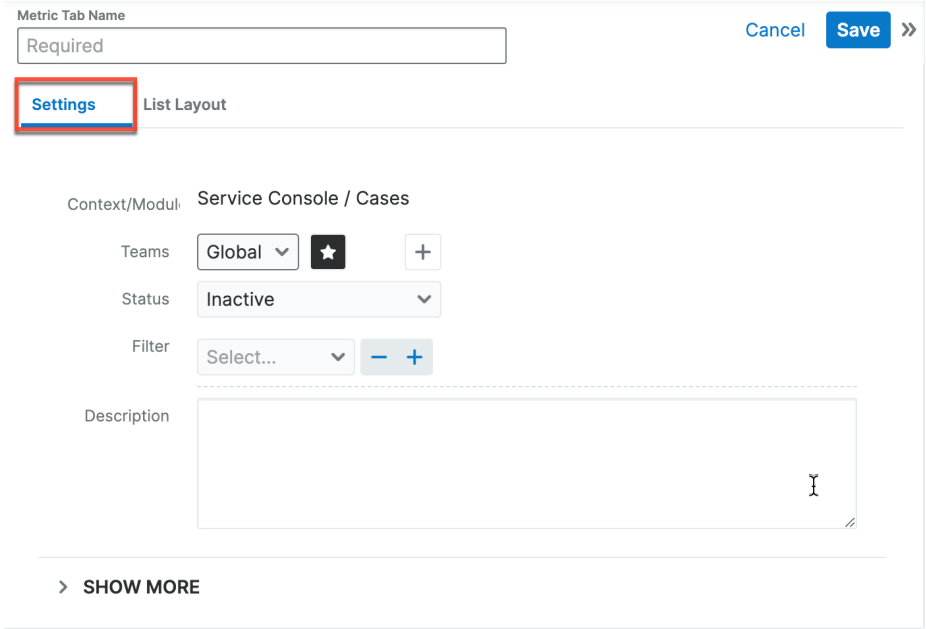
To edit a metric tab, click the Edit option in the specific metric tab's three-dots menu or access it directly in the Metrics module, which can be accessed via the Manage option under the metric bar's three-dots menu.



Settings Tab

When creating or editing a module tab, you will see two tabs, the first of which is the Settings tab. The Settings tab stores all the basic information about the metric tab, including the status and the team(s) it is deployed to. The first field, the Context/Module field is not editable, but instead, shows the console and module associated with the metric (e.g., Service Console / Cases). The Teams field is used to control the teams that will be able to access and use the metric tab in their console. For more information on teams, please read the Team Management page.

Once you have set the teams to which you wish to deploy the metric tab, a filter needs to be set. If no filter is set, the metric tab will show all records in the module. As only 100 records can be displayed on a metric tab at a time, it is best to make different views using filters to narrow down the results to a helpful and manageable subset. Create the filter in the same way you create list view filters. For more information on creating filters, please see the Search documentation.

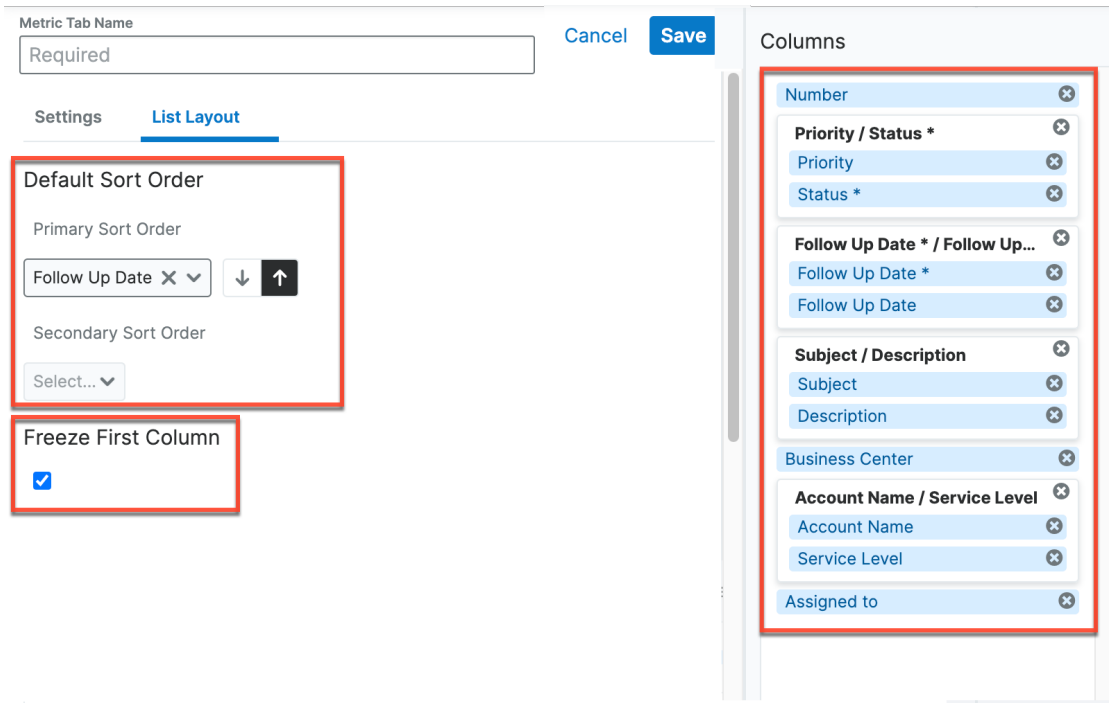


List Layout Tab

Each module tab allows you to set the default sort order, enable or disable column freezing, and define a filter for the Cases tab list in the Service Console. To set a default sort order for a field column in the list view, simply select a primary and optional secondary-level sort order for the list's display in the Default Sort Order section. You can also designate the specific field column to be sorted in descending or ascending order by toggling between the Sort Descending or Sort Ascending button to the right of the dropdown list. Please note that the Sort Descending and Sort Ascending buttons will appear for the Secondary Sort Order once you select a field. The available fields to select in the Primary and Secondary Sort Order dropdown lists are determined by the Columns list on the right-hand side. As fields are added to or removed from the Columns list, the available fields in the sort order dropdown lists will update in real-time. For example, if the selected field (e.g., Priority) in the Primary Sort Order field is removed from the Columns list, then that field will also be removed from both sort order dropdown lists, and the secondary sort order value (e.g., Follow Up Date), if selected, will automatically move up to the Primary Sort Order field. Please note that certain field types such as ID, relate (e.g., Assigned to), and widget-type fields (e.g., Status *, Follow Up Date *) will not appear as available options in the sort order dropdown lists as they are not sortable.

The Freeze First Column setting, if enabled, automatically freezes the first column of the metric tab list view for users so that it is always visible even when scrolling horizontally. Note that an admin can disable this feature for the whole Sugar instance. See the User Interface page for details on column freezing and the System page for details on the system-wide admin setting.

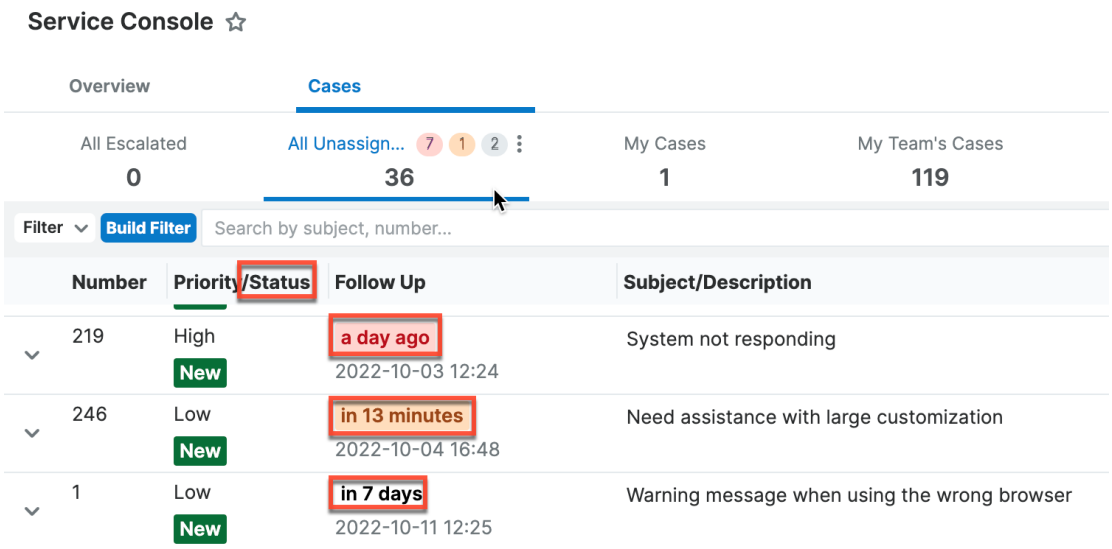
The Filter section allows you to filter the list view based on pre-defined filters (e.g., My Items) as well as custom filters. Simply use the plus and minus buttons to add or remove filter criteria like you would for a standard list view filter. For more information on creating filters, refer to the Search documentation. Please note that administrators can configure the Search layout in Admin > Studio to control which fields are available as filters for the Cases tab list view. For more information on editing the Search layout, refer to the Studio documentation.



Once you have made the necessary configurations, click "Save" to preserve the changes and update the module tab's view for all users who access the console.

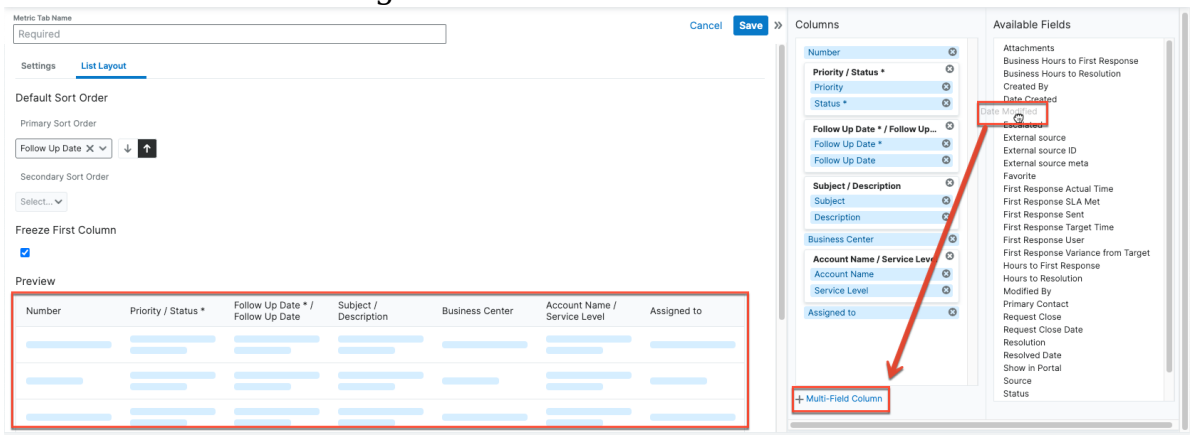
Configuring the Console's Tabbed List Views

In addition to setting a default sort order and defining a filter for the list view, you can also designate which fields to display as columns in the metric tab's list view as well as the left-to-right order of the field columns. Simply use the "Columns" and "Available Fields" lists on the right-hand side to configure the list view layout per your business needs. Fields with an asterisk (e.g., Status *) are widget-type fields that provide data based on one or more fields in a special format. See the Widgets section for a list of widget-type fields available in the Service Console.

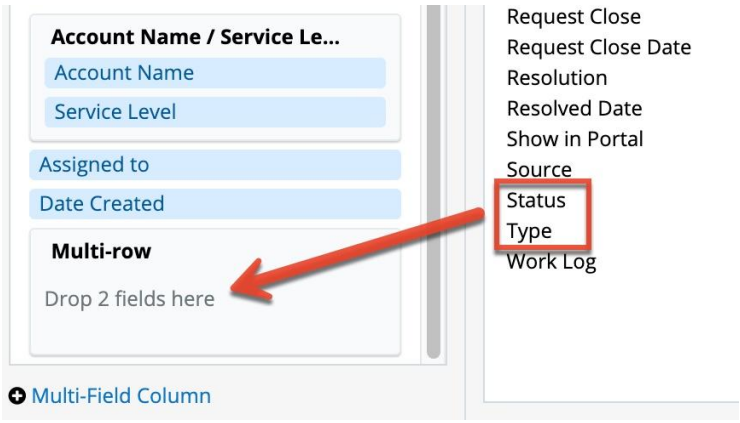


Use the following steps to configure the Cases tab's list view for the Service Console:

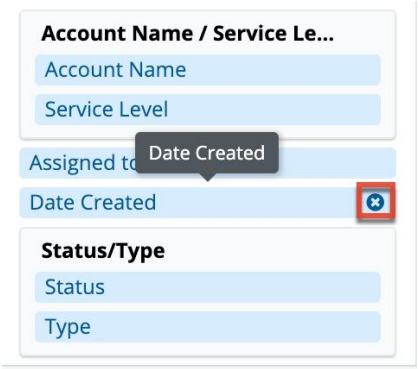
1. To add a field to the list view layout, drag and drop the desired stock/custom fields (e.g., Date Created) from the Available Fields list to the Columns list.
   Note: The Preview table below the Filter field will automatically update in real-time to reflect your current field selections and the designated order of the field columns configured in the Columns list.



2. To display multiple field values in a single column, click the "Multi-Field Column" option below the Columns list. A multi-row box will then appear in the Columns list where you can drag and drop two fields from either the "Available Fields" or "Columns" lists that you wish to display in the same column.
   Note: The column will display the field values in two rows, and you can drag and drop the fields within the multi-field box to designate which field value will appear on top.



3. To remove a field from the layout, simply hover your mouse over the particular field pill or multi-row box in the Columns list then click the "x" to the right of the name. The field(s) will then reappear in the Available Fields list.



4. To change the left-to-right order of the fields displayed on the list view, drag and drop the fields up or down within the Columns list.
5. Click "Save" to preserve and update the Cases tab's list view for all users who access the console.

Widgets

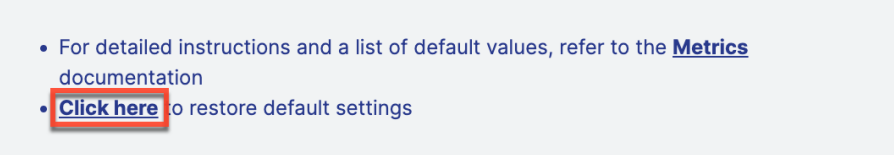
Several widgets are available in the Service Console to display data from existing fields in a different format. These fields are marked with an asterisk (*) in the Columns and Available Fields lists. The following widgets are available in the Cases tab of the Service Console:

- **Follow Up Date** *: Displays the value of the Follow Up Date field in terms of the amount of time until or since the follow-up date (e.g., in 3 days)
- **Status** *: Displays the value of the Status field in a color-coded badge

Restoring Default Settings

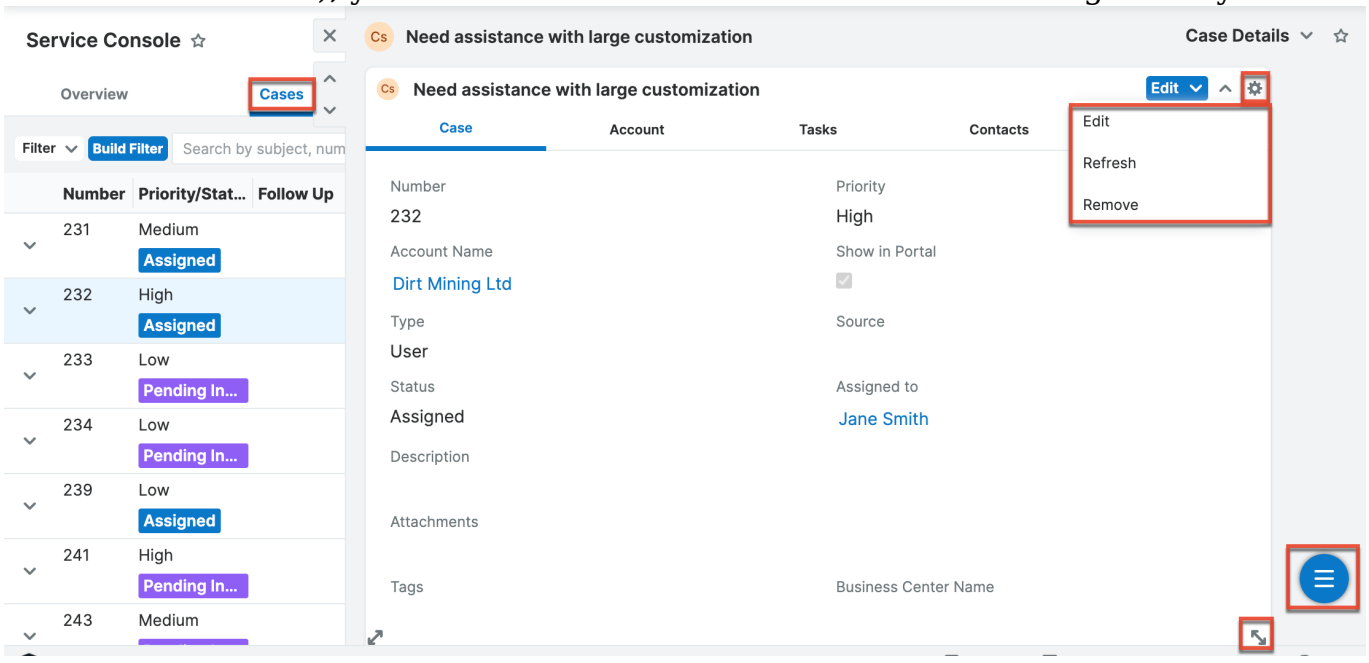
Below the preview table, you will see two options that allow you to easily access

the Console Management documentation from the Console Settings window or restore the console back to the administrator-set default settings. If you wish to restore the default admin-set configuration, simply click the "Click here" link. After restoring the default settings, you will need to click "Save" in the Console Settings window to preserve the changes.



Configuring the Module Tab Drawers

The module tab drawers can be accessed by clicking on a module tab (e.g., Cases) in the console (e.g., Service Console) then clicking the desired record's row in the list view. This opens a drawer within the console that aggregates key information about the record, its related records, past/upcoming interactions (e.g., emails, calls, meetings), etc. The drawer contains four dashlets that can be rearranged and configured by system admin users as well as the regular user assigned to the dashboard. To access and configure the dashlets in the module tab drawers (e.g., Case Detail drawer), you will need to have at least one record assigned to you.



To change the position of dashlets in the module tab drawer, simply drag and drop the dashlet in the desired location on the layout to swap the position of two dashlets. To resize dashlets, drag the double-ended arrow at the bottom right corner. You can also configure the dashlets in the dashboard by clicking the Gear icon at the top right of the dashlet and selecting "Edit", which will display configuration options specific to the dashlet. To retrieve updated information in

the dashlet, you can select the Refresh option in the dashlet gear menu, which will manually refresh the dashlet. Select "Remove" in the dashlet gear menu to delete the dashlet from the module tab drawer.

To add dashlets to the module tab drawer, click the floating actions button in the drawer then select "Add Dashlet". Click the title (e.g., List View) corresponding to the desired dashlet in the Add Dashlet page then configure the dashlet as desired. For more information on rearranging, editing, adding, and deleting dashlets, refer to the Dashboards and Dashlets documentation. Please note that any changes made to the layout and dashlet settings will be updated for all users who access the console.

Note: Record view dashlets such as the Case Record Dashlet and Account Record Dashlet can be edited via Studio > {Module Name} > Layouts > Record View Dashlet. For more information, refer to the Dashboards and Dashlets and Studio documentation.

Working With Sugar Modules

While the Metrics module has some features that only apply to metrics, it also uses the Sidecar user interface that most Sugar modules are based on. The following sections detail menus, views, and actions common to Sidecar modules and contain links to additional information within the page or links to the User Interface documentation.

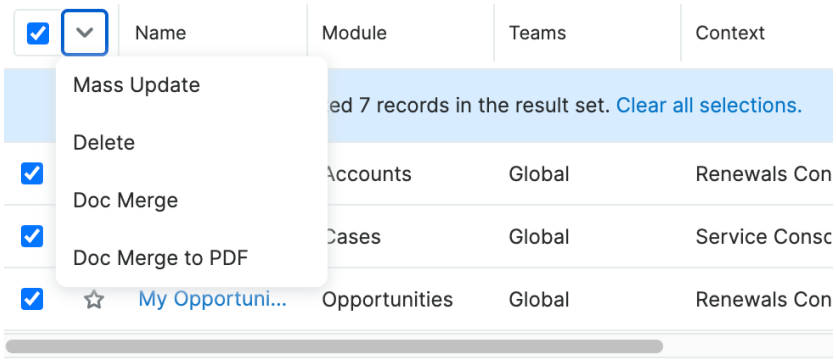
List View Menus

The Metrics list view displays all metric records and allows for searching and filtering to locate specific metrics. You can view the basic details of each record within the field columns of the list view or click a business center's name to open the record view. To access a module's list view, simply click the module's tab in the navigation bar at the top of any Sugar page.

List View Mass Actions Menu

The Mass Actions menu to the right of the checkbox option in the list header allows you to perform mass actions on all currently selected records. You can use the checkbox on each record's row to select individual business center records or click the checkbox in the list header to select all records displayed on the current

set of list view results.

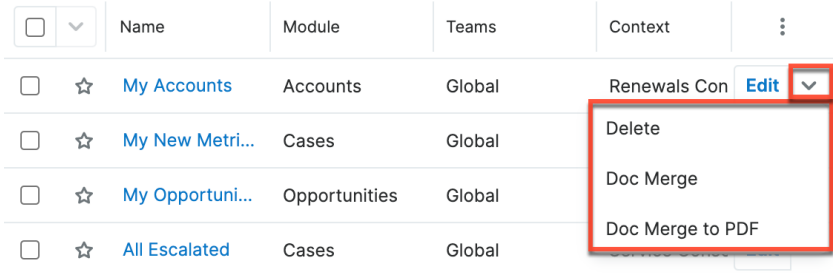


The Mass Actions menu allows you to perform the following operations:

Menu Item	Description
Mass Update	Mass update one or more business center records at a time.
Delete	Delete one or more business center records at a time.
Doc Merge	Select or create a DOCX template to merge record data into documents that will be accessible in the Doc Merge widget.
Doc Merge to PDF	Select or create a DOCX, XLSX, or PPTX template to merge record data into PDF documents that will be accessible in the Doc Merge widget.

List View Record Actions Menu

The Record Actions menu to the far right of each record's row allows you to perform actions on a business center record directly from the list view.



The options in the Record Actions menu allow you to perform the following operations:

Menu Item	Description

Edit	Edit this record.
Delete	Delete this record.
Doc Merge	Select or create a DOCX, XLSX, or PPTX template to merge record data into documents that will be accessible in the Doc Merge widget.
Doc Merge to PDF	Select or create a DOCX, XLSX, or PPTX template to merge record data into PDF documents that will be accessible in the Doc Merge widget.

Common Views and Actions

In the table below, the left column contains links to the User Interface page covering topics that are applicable to all Sidecar modules. The right column has links to sections of the current page that cover topics specific to metrics.

General Instructions for Working With Sugar Modules	**Metrics-Specific Instructions**
Use the links below to navigate to the User Interface page which covers topics generic to many Sugar modules.	When Business-Centers-specific help exists for each topic, use the links below to navigate to sections of the current page.
Creating Records	
Viewing Records	
Searching for Records	
List View	List View Mass Actions Menu List View Record Actions Menu
Record View	
Intelligence Pane	
Editing Records	
Deleting Records	
Finding Duplicate Records	
Viewing Audit Logs	
Favoriting Records	
Sharing Records	

SugarLive Management

Overview

SugarLive, available to users with a Sugar Serve 11.0 and higher or Sugar Sell 11.1 and higher license type, is an omnichannel tool for customer service agents and sales team members to communicate in real-time with customers via chat and phone. SugarLive is available in the footer of Sugar, which is also where system administrators with a Sugar Serve or Sugar Sell license type can open the configuration screen to customize the layout. In particular, admins can choose the fields available in the Summary panel and the inclusion and layout of the dashlets in the Contact, Account, Lead, and Case tabs. Please note, the Lead tab is only available to users with a Sugar Sell license, and the Case tab is only available to users with a Sugar Serve license.

To use SugarLive, your organization must have an Amazon Connect account because Amazon Connect is used to route incoming calls and chats to SugarLive. See the prerequisites outlined in the SugarLive documentation for more details.

Prerequisites

In order to configure the SugarLive layout, the following requirements must be met:

- You must be a system administrator user.
- You must have a Sugar Serve or Sugar Sell license type.
- You must either be logged out of Amazon Connect or have your status set to "Offline" in the Communication panel. See the Configuring the Communication Panel and Logging In sections of the SugarLive documentation for details on logging out and updating your status in Amazon Connect.

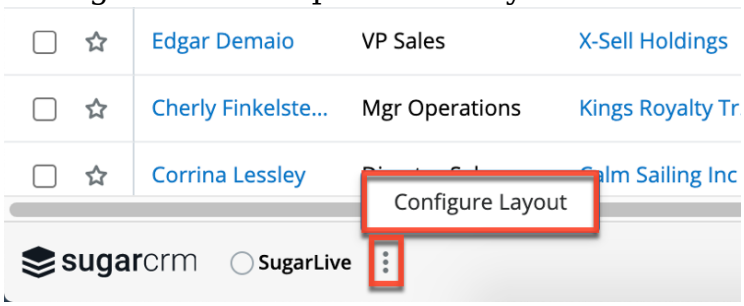
Although SugarLive can only be used with certain web browsers, it is still possible to configure the SugarLive layout using all supported browsers. See the Supported Platforms page for details on which supported browsers cannot be used to access SugarLive.

For more information on license types and the module functionality available for each type, refer to the User Management documentation.

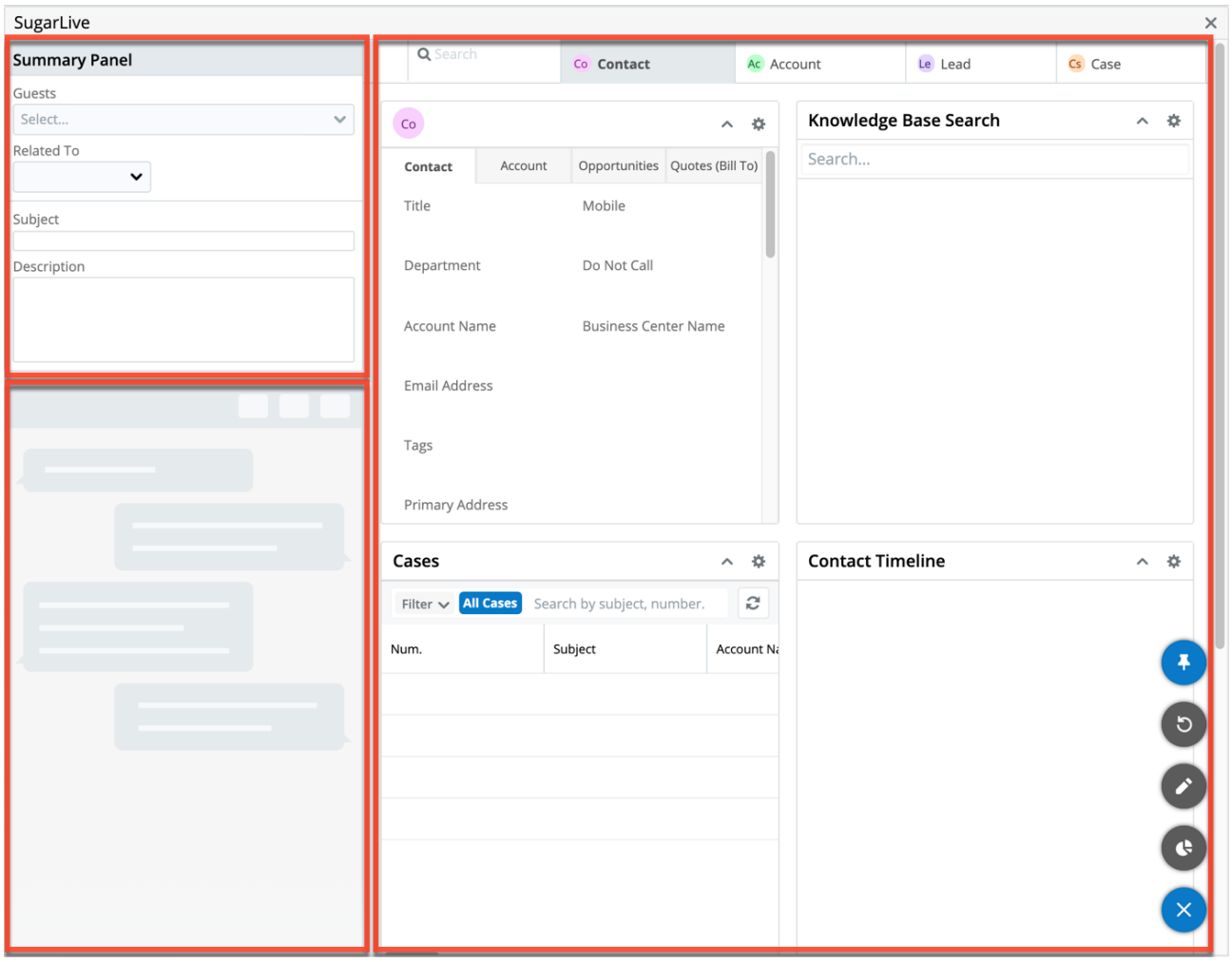
Configuring SugarLive

To customize the layout of SugarLive, click the three-dot menu to the right of the SugarLive icon in the footer of Sugar and choose "Configure Layout". This opens SugarLive in a configuration view where you can change which information is shown and in which layout. The floating actions button is open by default so you can quickly access all of the configuration tools available. Note that the three-dot

menu is only available to Sugar Serve or Sugar Sell admins and can only be opened when logged out of Amazon Connect or set to "Offline". Any changes made to SugarLive will update the layout for all users who access SugarLive.



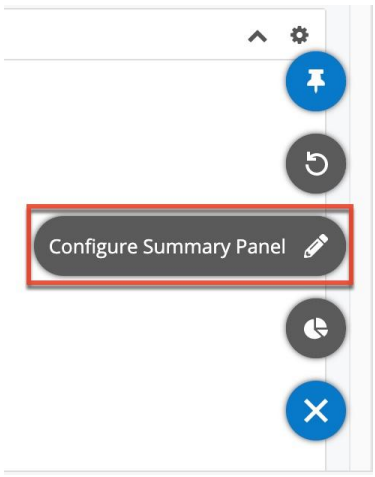
Once open, the SugarLive configuration view shows a read-only preview of what SugarLive looks like for all users without actual data. The Summary panel and Detail panel can be configured but the Communication panel cannot, so it is displayed as a placeholder to help you visualize what the final layout will look like. Certain basic settings can be configured by all users in the Communication panel during a live session; see the SugarLive page for more details on these settings. In the Detail panel, all tabs are enabled even though they are empty so that you can configure them. For more information on using each of these panels during an active session, see the SugarLive documentation.



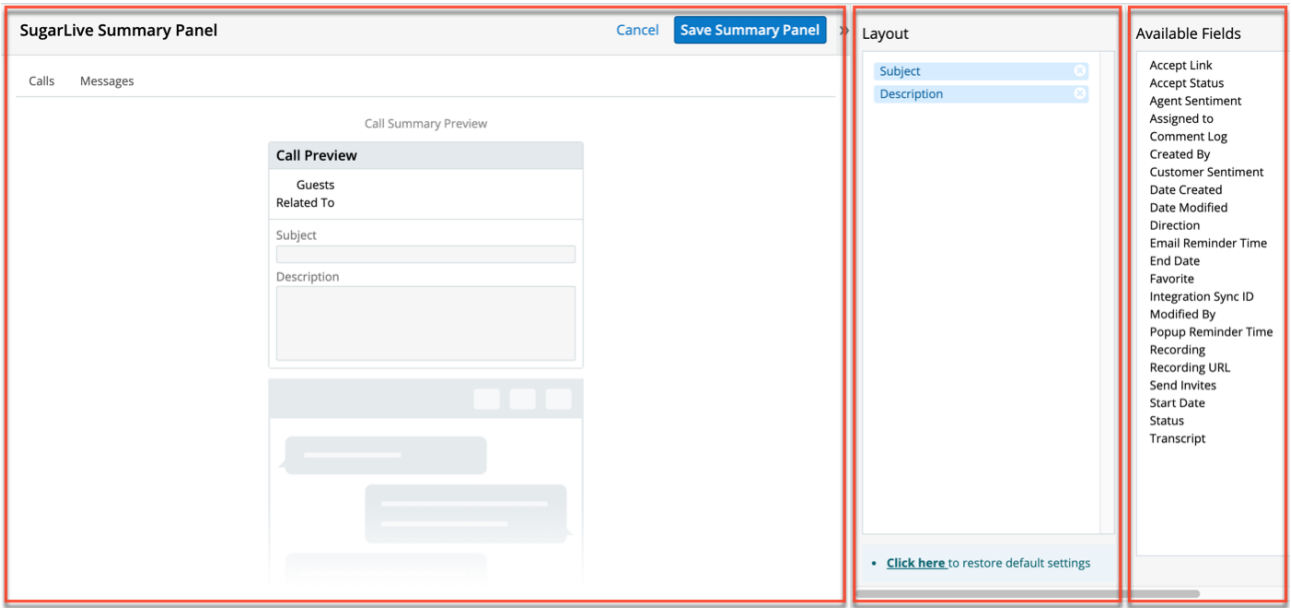
When you are done customizing the SugarLive layout, click the X button in the top right corner. This closes the configuration view, which allows you to log in to Amazon Connect or set yourself to "Available" again. All changes made to the Detail panel are automatically saved, so you can close the view at any time without losing your changes.

Configuring the Summary Panel

To change which fields are displayed in the Summary panel, click the Configure Summary Panel option with the pencil icon in the floating actions button. This opens a drawer where you can configure the fields in the Summary panel for both call and chat sessions. Changes made to the Summary panel are applied for all users once you click the Save Summary Panel button within the drawer.



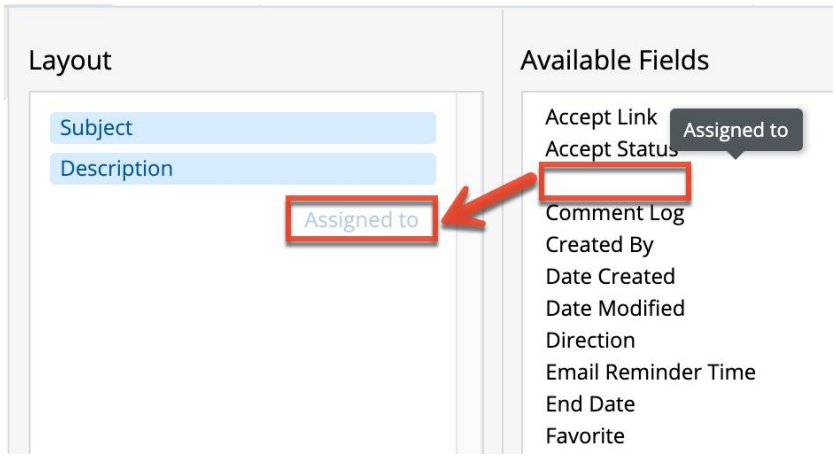
The drawer is divided into three sections:



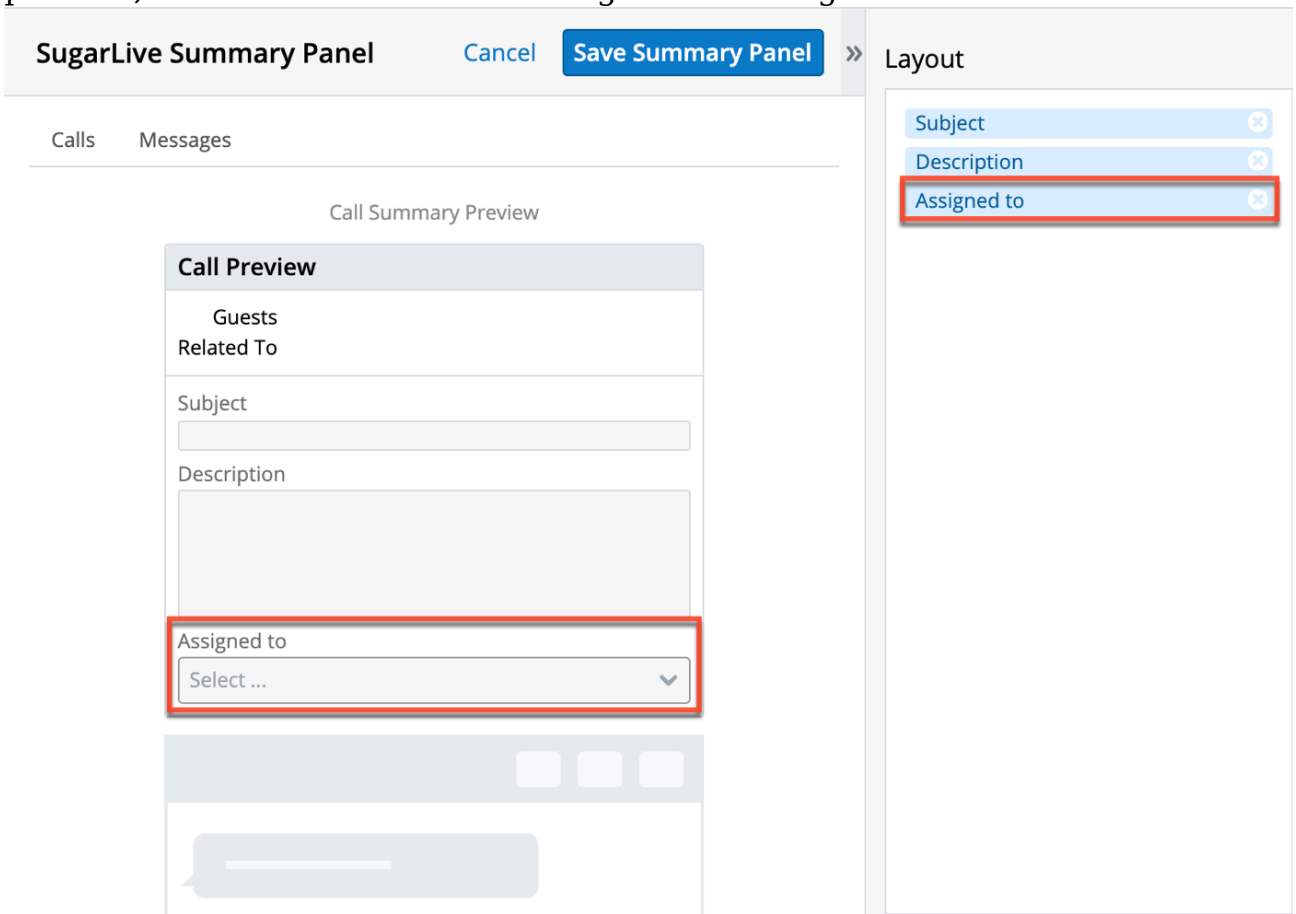
- **Preview**: This section shows a live preview of what the Summary panel currently looks like, including any unsaved changes you have made since opening the drawer. It contains a Calls and a Messages tab so you can configure the Summary panel differently for each.
- **Layout**: This section shows the fields that are currently configured to be displayed in the Summary panel and includes a link to restore the default settings for the tab.
- **Available Fields**: This section lists all fields for the current module (e.g., calls or messages) that are not already displayed in the Summary panel. **Note**: Action Button fields are not available to add to the layout.

To add fields to the Summary panel for call or chat sessions, open the appropriate tab and drag fields from the Available Fields section to any position in the Layout section. You can also drag fields within the Layout section to reorder them. To

remove a field, click the X icon that appears next to the field when you hover over it.



As you make updates to the layout, the preview on the left side is automatically updated to reflect your changes so you can see what each update will look like. The Summary panel has a maximum height, so a vertical scrollbar is added when more fields than can fit are added to the layout. If there is a scrollbar in the preview, there will also be one in SugarLive during an actual session.



Note that the Guests and Related to fields at the top cannot be removed. These

fields indicate to which records the current session is linked and are updated using the Link button in the Detail panel of SugarLive. See the SugarLive documentation for more details on linking records.

Once you are happy with your changes to the layout, click "Save Summary Panel" to save your changes in both the Calls and Messages tabs. Note that the main SugarLive configuration view always shows the Calls Summary panel but both can be previewed within the Configure Summary Panel drawer.

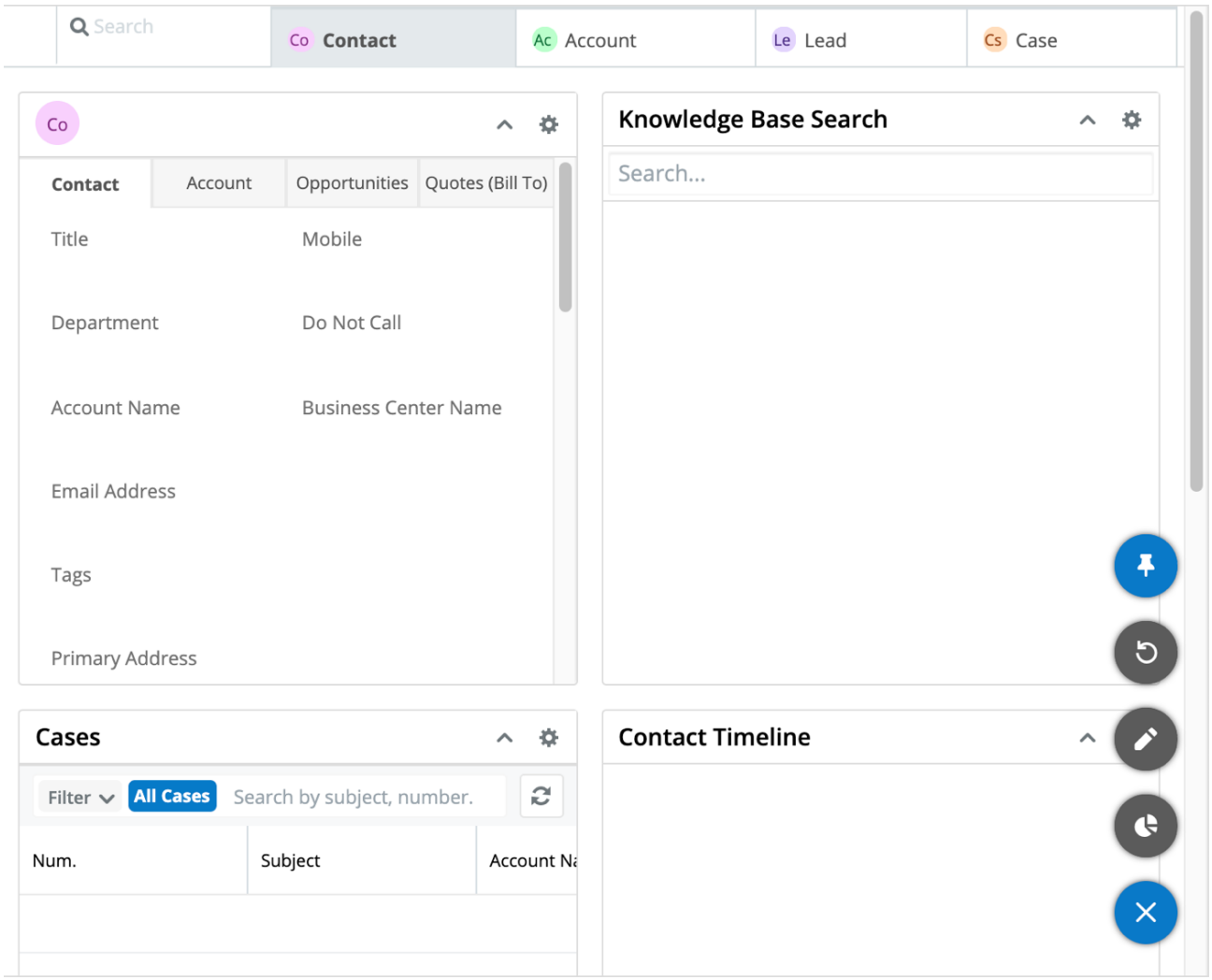
Restoring Default Settings

To reset the layout of the Summary panel for the specific type of session you are editing (e.g., call or chat), select "Click here" in the blue box on the right side. This immediately restores the default settings for the tab. If you change your mind and want to return the layout to its previously-saved state, click "Cancel" to close the drawer without saving. Otherwise, to preserve the reset default layout, click "Save Summary Panel" to save both tabs.



Configuring the Detail Panel

The Detail panel is a tabbed view displayed on the right side of SugarLive. For the most part, it can be configured in the same way you edit any dashboard, by dragging, resizing, adding, editing, and removing dashlets. Changes you make to each tab are immediately visible to all users the next time they open SugarLive. To avoid disruption to your customer service agents' work, it is recommended to make SugarLive configuration changes outside of regular business hours.



When you first open the SugarLive configuration view, the Detail panel is set to the Contact tab and the floating actions button is open so you can quickly access configuration options. See the sections below for details on configuring the Contact, Account, Lead, and Case tabs, and using the floating actions button to restore default settings or configure the Summary panel.

Note: The Search tab is not able to be configured.

Module Tabs

The Contact, Account, Lead, and Case tabs can all be completely configured in the same way you edit any dashboard, by adding, editing, removing, rearranging, and resizing dashlets. Note that the Record View dashlet in the top left corner of each tab includes the Link button to relate the current record to the call or message in context. Removing the dashlet is not recommended because it also removes the ability to choose to which contact, account, lead, or case the ongoing session should be linked. You can use the floating actions button to restore the current tab to its default layout at any time. See the Dashboards and Dashlets page for details

on editing dashboards in Sugar.

Floating Actions Button

The floating actions button is shown on all tabs of the Detail panel and contains options to configure the Summary panel and restore the current tab to its default settings. On the Contact, Account, Lead, and Case tabs, it also contains an option to add a dashlet to the tab. Restoring to defaults only impacts the current tab and will restore all aspects, including the configuration of all dashlets (e.g., list view filters) and the complete dashboard layout. If you click "Confirm" in the pop-up that appears, the change is saved immediately and cannot be undone.

