SUGARCRM
COMMERCIAL OPEN SOURCE

Sugar Community Edition Installation and Administration Guide

Version 5.1

BREAK AWAY

Sugar Community Edition Installation and Administration Guide
Version 5.1, 2008

www.sugarcrm.com

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Contents

Preface

Welcome to Sugar, an open source Customer Relationship Management (CRM) application.

Sugar enables organizations to efficiently organize, populate, and maintain information on all aspects of their customer relationships. It provides integrated management of corporate information on customer accounts and contacts, sales leads and opportunities, plus activities such as calls, meetings, and assigned tasks.The system seamlessly blends all of the functionality required to manage information on many aspects of your business into an intuitive and user-friendly graphical interface.

The system also offers a graphical dashboard to track the sales pipeline, the most successful lead sources, and the month-by-month outcomes for opportunities in the pipeline.

Sugar is based on an open source project, and therefore, advances quickly through the development and contribution of new features by its supporting community.

Welcome to the community!

About this Guide

The *Sugar Community Edition Installation and Administration Guide* is designed for users who are new to Sugar, or to CRM and Web-based applications. This guide introduces you to some basic CRM concepts and helps you get familiar with the Sugar system. It describes how to install and upgrade Sugar and access it through a personal computer and a Web browser to perform a broad range of customer relationship management tasks.

Readers are not required to have any programming or software development knowledge, but should be generally familiar with the use of a personal computer and a Web browser such as Microsoft Internet Explorer or Mozilla Firefox.

Audience

The *Sugar Community Edition Installation and Administration Guide* provides information for users who want to record and track company activities and outcomes.

In addition, this guide provides information for system administrators who manage user access and system configuration.

Overview

Sugar consists of modules, each of which represents a specific functional aspect of CRM such as Accounts, Activities, Leads, and Opportunities. For example, the Accounts module enables you to create and manage customer accounts, and the Activities module enables you to create and manage activities related to accounts, opportunities, etc. These modules are designed to help you manage customer accounts through each step of their lifecycle, starting with generating and qualifying leads to customer support and resolving reported bugs. Because many of these steps are interrelated, each module displays related information. For example, when you view the details of a particular account, the system also displays the related contacts, activities, opportunities, and bugs. You can not only view and edit this information but also create new information.

As an administrator, you have the power to implement access control for these modules. You can customize the look and feel of Sugar across your organization. You can even create new modules if needed. You can also create multiple forums as platforms of discussion on various topics amongst your users and customers.

Core Features

Sales Management

- Lead, Contact, and Opportunity Management to share information and pursue new business.
- Account management to manage all customer interactions in a single location.

Marketing Automation

- Lead management for tracking and cultivating new leads.
- Email marketing for touching prospects and customers with relevant offers.
- Campaign management for tracking campaigns across multiple channels.
- Campaign reporting to analyze the effectiveness of marketing activities

Collaboration

- Activity management for emails, tasks, calls, and meetings
- Content syndication to consolidate third-party information sources.

News Service

- The RSS news feeds module lets you select and manage your favorite news feeds, and display them on your My RSS News Feeds screen.

Administration

- Quickly edit user settings, views and layouts in a single location.

- Customize the application with Sugar Studio so that Sugar meets the exact needs of your company.

Interface Consolidation

The My Portal module allows administrators and users to link external web sites and web applications into the Sugar User Interface, enabling Sugar to become a unified information interface for its users.

Sugar is built on established open-source technologies and widely supported industry standards, including the PHP development environment, the MySQL relational database, the Apache or IIS web servers, and the Linux or Windows Server operating systems. The system supports both the LAMP (Linux, Apache, MySQL, PHP) and WIMP (Windows, IIS, MySQL, PHP) platforms.

What's New in 5.1

With each revision of the Sugar software, significant advances are made in both the feature set and usability of the software.

Enhanced Emails Functionality

With the IMAP protocol, you can limit access to specific folders on your external account. You can also have cases created automatically from inbound emails.

Enhanced Import Functionality

You can now import data for the Bug Tracker. Also, you can enable the import functionality for any custom module that you build in Module Builder.

Creating Relationships Between Modules

You can create relationships between modules in Module Builder as well as Studio. In Module Builder, you can create relationships between two undeployed modules, and between one undeployed module and one deployed module. In Studio, you can create relationships only between deployed modules.

Embedding IFrames in a Layout

You can embed a view of the Website itself in the layout rather than as a link by using the IFrame field.

New Data Type

You can now use the "Encrypt" data type to create a field whose value is stored in an encrypted format in the Sugar database

Locking Down the Upgrade Wizard

If you are managing multiple instances of the Sugar application and you want to maintain complete control over the instances, you can lock down the Upgrade Wizard to ensure that no user with administrative privileges can upgrade any of them.

Locking Down the Module Loader

In order to ensure that users with administrative privileges do not load sub-standard modules into your Sugar application, you can lock down the Module Loader and direct them to load modules from a location of your choice.

Related Documentation

Refer to the following guide for related information:

- *Sugar Community Edition User Guide*: Describes how to use Sugar modules.
- *Sugar Upgrade Guide*: Describes how to upgrade to the latest version of Sugar application.

Chapter 1

Installing Sugar

This chapter describes how to install Sugar Community Edition version 5.1. This chapter is intended for administrators. After installation, you can create users and perform other administrative tasks in Sugar.

Topics are as follows:

Installation Prerequisites and Guidelines

Before installing Sugar 5.1, ensure that you have the appropriate components installed on your server. See the *Sugar Community Edition Release Notes* for a complete list of the supported software versions.

SugarCRM uses GNU General Public License version 3 for the Sugar Community Edition.

Note: Install the MB String module on your Web server to support multi-byte characters.

Memory Requirements

Increase the value of the `memory_limit` parameter in the *php.ini* file as follows:

- MySQL Server: 40M or higher
- MS SQL Server: 40M or higher

Database Requirements

- If you are using MySQL, install version 4.1.2 or higher to use with Sugar 5.1.
- If you are using Microsoft SQL Server, install it and set it up to work with Sugar. For more information, navigate to *www.sugarcrm.com/wiki/Sugar Developer Wiki/Configuration and Installation/Installing SugarCRM with SQL Server.*

Multi-byte Character Storage Support

In order to better support multi-byte character storage with Microsoft SQL Server, you can configure Sugar to use the FreeTDS driver.

If you have already installed Sugar version 5.1, then you will need to migrate the application to use the FreeTDS driver. A pre-requisite for migration is that you are using Sugar version 5.1 with SQL Server 2005 on Apache with a PHP version 5.1.0 or higher. This means that your current *php.ini* file and *config.php* file for SugarCRM instance should already reflect the necessary changes to run SugarCRM with SQL Server. The assumption is that there is data in the tables with multi-byte character values. You can also choose to create test data from a new 5.1 instance. This can be setup through the installation process by choosing to populate multi-byte character seed data with the installer. For more information, see **"To migrate Sugar to FreeTDS driver"**.

To enable Sugar for FreeTDS driver

1. Navigate to http://www.sugarforge.org/frs/?group_id=6.
2. Download the *sugarcrm MB mssql.zip* file listed under Sugar CE 5.1/MSSQL MB Driver.

   This zip file contains the necessary *.lib*, *.conf*, and *.dll* files for FreeTDS.
3. Ensure that Sugar is installed on Apache and that you can connect to SQL Server Database V. 2005 from it.
4. Backup the original *php.ini* file and save it at a location from where you can retrieve it if the changes render Apache inoperable.
5. Modify your *php.ini* file to include extension for FreeTDS and comment out the existing *php_mssql.dll* extension as shown below.

   ```
   ;extension=php_mssql.dll
   extension=php_dblib.dll
   ```
6. Change the `mssql.charset` value to `utf-8`. If the `mssql.charset` parameter is missing, add it underneath the default_charset setting as shown below.

   ```
   ;default_charset = "iso-8859-1"
   mssql.charset = "utf-8"
   ```
7. Open the *sugarcrm MB mssql.zip* file and do the following:
   a. Copy the appropriate *php_dblib.dll* to the extensions folder of the PHP installation.

      There are three separate folders for three different versions of PHP (5.1.x, 5.2.x, 6.x). The *php_dblib.dll* file is the FreeTDS dynamic link library file. Your extension directory is the value for the `extension_dir` key in the *php.ini* file. Typically, it is located in the *ext* folder. Ensure that you choose the appropriate version of the FreeTDS dynamic link library to use. They are organized according to PHP versions under the Drivers folder.

   b. Place the *freetds.conf* file in the c:\ directory of your Windows operating system.

If the SQL Server instance is listening to connections on a port other than the default (1433), modify the *freetds.conf* file accordingly. Even if your Program Files folder that runs SQL Server or Apache resides in another directory (for example, in d: or e:), the *freetds.conf* file should still go in the c:\ directory.

c. Copy *ntwdblib.dll* and *msvcr71.dll* to the Windows/SYSTEM32 folder for runtime extension support and verify the accuracy of the *ntwdblib.dll* file.

The *msvcr71.dll* file is also included in the *freetds.zip* file and should be copied into the Windows/SYSTEM32 folder as well. The subdirectories of your Apache installation directory may also contain copies of the *ntwdblib.dll* file. Ensure that the versions of the *ntwdblib.dll* file in those folders match the one you have placed in Windows/SYSTEM32. If you are unsure, you may also rename the *ntwdblib.dll* files under the Apache directories to be safe.

8. Restart Apache.
9. From the command line where the *apache.exe* file resides enter the following command from a DOS or SHELL terminal:

```
>apache.exe -k restart
```

Alternatively, use any Apache management tools that you are familiar with to restart the Apache Web server.

The configuration is now complete and you can proceed to the Sugar installation page.

If you have problems connecting to the SQL Server database Express edition during the database configuration installation process, do the following:

- Try alternating the use of the IP Address of the host name with and without an explicit port number. For example:

  localhost

  localhost, 1433

- In the SQL Server Configuration Manager, enable TCP/IP to communicate with SQL Server.

To migrate Sugar to FreeTDS driver

1. Backup the Sugar database using tools such as the MS SQL Server Management Studio application.

   If using this application, do the following:

   a. Log into MS SQL Server Management Studio application.

   b. Ensure that the SQL Server Agent service is running.

   c. Select the database you want to copy (Tasks->Copy Database). This will take you to a wizard application that will complete the process of making a backup of the existing database.

2. Run the *upgrade_mssql.php* script in the root directory of the Sugar installation.

   Run this file through the Command Line Interface. Ensure that your PATH settings are setup properly to allow for PHP command line execution. Your PHP executable may reference another php.ini file.

If so, check to make sure that the php.ini file used by the command line PHP executable also has the php_mssql.dll extension enabled. Run the command as follows:

```
> php -f upgrade_mssql.php
```

3. Modify php.ini for apache as follows:

```
>cp php.ini php.bak
```

Note: Ensure that you backup your original php.ini file first.

4. Follow the steps outlined in "To enable Sugar for FreeTDS driver" on page 2 starting from modifying your *php.ini* file as detailed in Step 5.

Installation Process

The process of installing Sugar is as follows:

1. Download Sugar files.
2. Copy the Sugar files to your Web server. Check for and set dependencies and requirements.
3. Install Sugar Community Edition with the Sugar Setup Wizard.

Downloading Sugar Files

To download the latest Sugar files:

1. Go to http://www.sugarcrm.com/
2. Navigate to *Support & Training/Support Portal* or visit http://www.sugarcrm.com/sugarshop/downloads.php.
3. Log in using your Sugar user name and enter the password associated with your account.
4. Click Download Purchased Software.
5. On the Download Manager page, enter your download key into Download Key field and click **Submit**.
6. Click the *SugarCE-5.1.0.zip* to download it.

Copying Sugar Files to the Web Server

After you download Sugar, you need to unzip the files and set permissions.

1. Locate your *webroot* directory on your Web server. This is the directory on your web server where publicly accessible files are made available by your Web server. Common locations for Web root includes:

   /var/www/html/ (*Linux/Apache*)

   C:\Inetpub\wwwroot\ (*Windows/IIS*)

   C:\Program Files\Apache Group\Apache\htdocs\ (*Windows/Apache*)

   /Library/Web server/Documents/ (*MacOS X/Apache*)

2. Unzip the Sugar zip file into your webroot. A directory is automatically created within webroot.
3. Rename this directory at any time.
4. Set permissions on the Sugar files. The following directories, all subdirectories, and files must be made writable by your Web server user:
   - cache
   - custom
   - data
   - modules
   - config.php

   The system user that your Web server uses to access files in your webroot varies depending on your operating system configuration. Common Web server users include:
   - apache (Linux/Apache)
   - nobody (Linux/Apache)
   - IUSR_computerName (Windows/IIS)

If you are unsure of your Web server user, consult your system administrator.

Using the Sugar Setup Wizard

After you copy the Sugar files into your web root, you can use the Sugar Setup Wizard. The Sugar URL *http://<yourServer>/<yourSugarDirectory>/install.php* is the URL that you will use to access the Sugar Setup Wizard.

For example: `http://localhost/Sugar-Full_5.1.0/install.php`

You can perform a typical installation or a custom installation. While typical installation is recommended, you can choose custom installation for the following reasons:

- You do not want to use the same Database Admin User as the Sugar database administrator.
- You want to specify the locale settings during installation instead of specifying it after you log into the Sugar application.

To perform a typical installation of Sugar

1. Launch the browser and enter the URL described above.

   The Welcome page displays on the screen. This screen lists the requirements to help determine if you can successfully install Sugar. Read this page before proceeding with the installation.
2. Click **Next**.

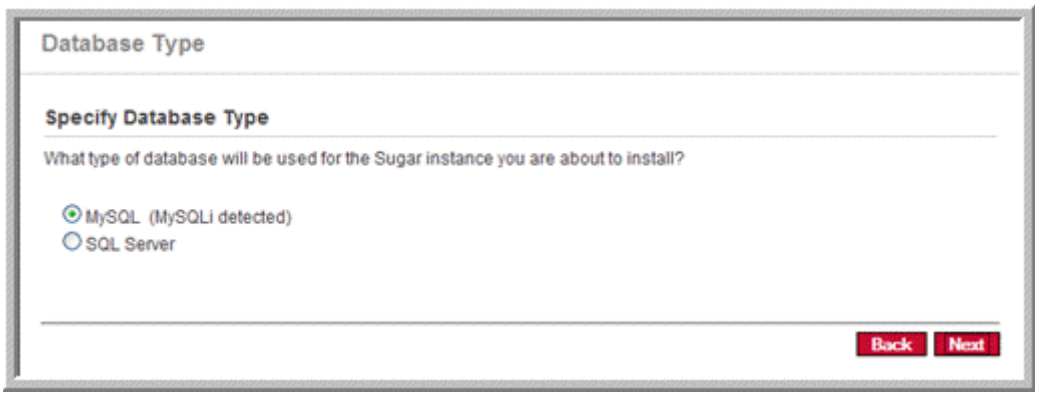
   The Installer displays the Sugar License Agreement screen.
3. Review the license, check “I Accept”, and click **Next**.

The installer checks the system for compatibility and then displays the Installation Options screen.

Note: At any time prior to clicking **Install** in the Confirm Setting menu, you can modify any of your settings. To modify any settings, click the **Back** button to get back to the appropriate screen.

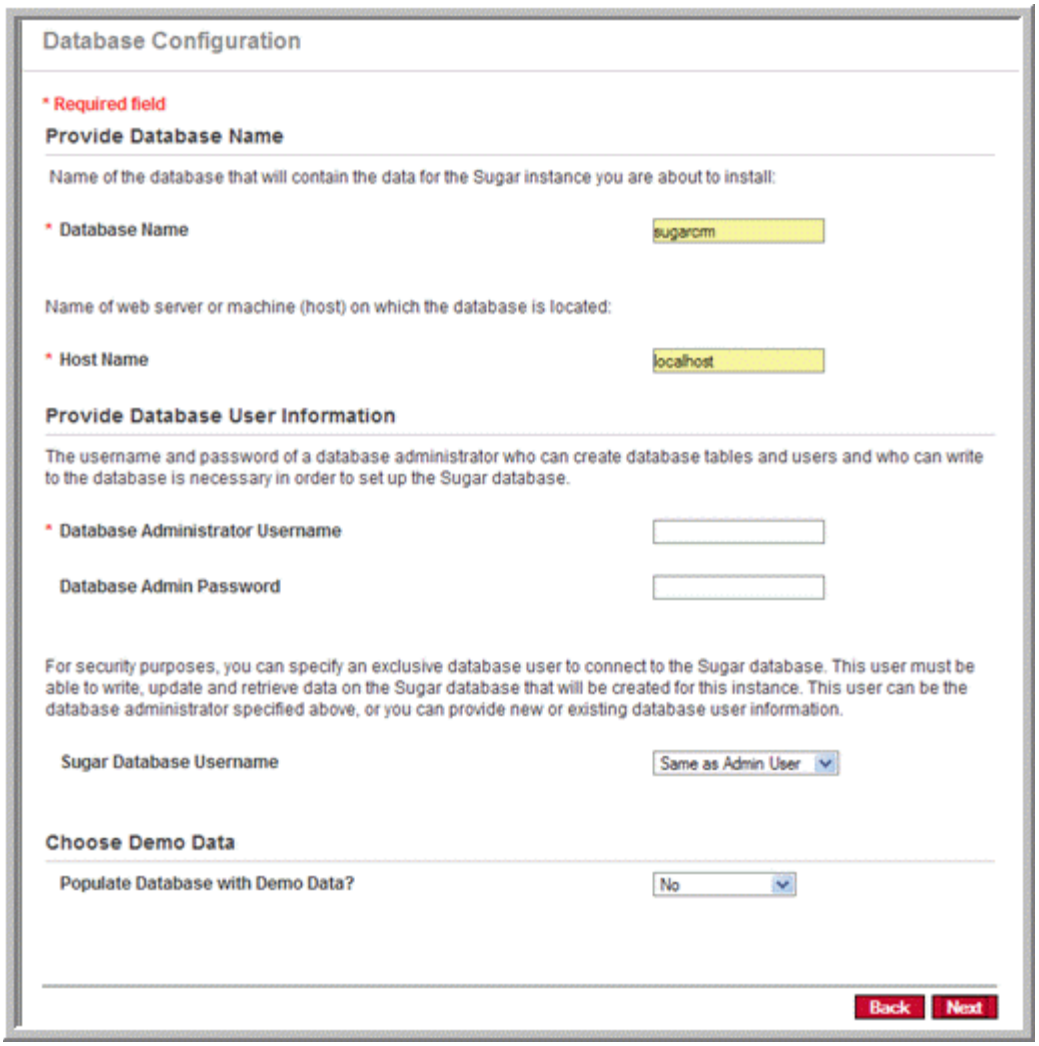
4. Select Typical Install and click **Next**.

   The Database Type screen displays next.

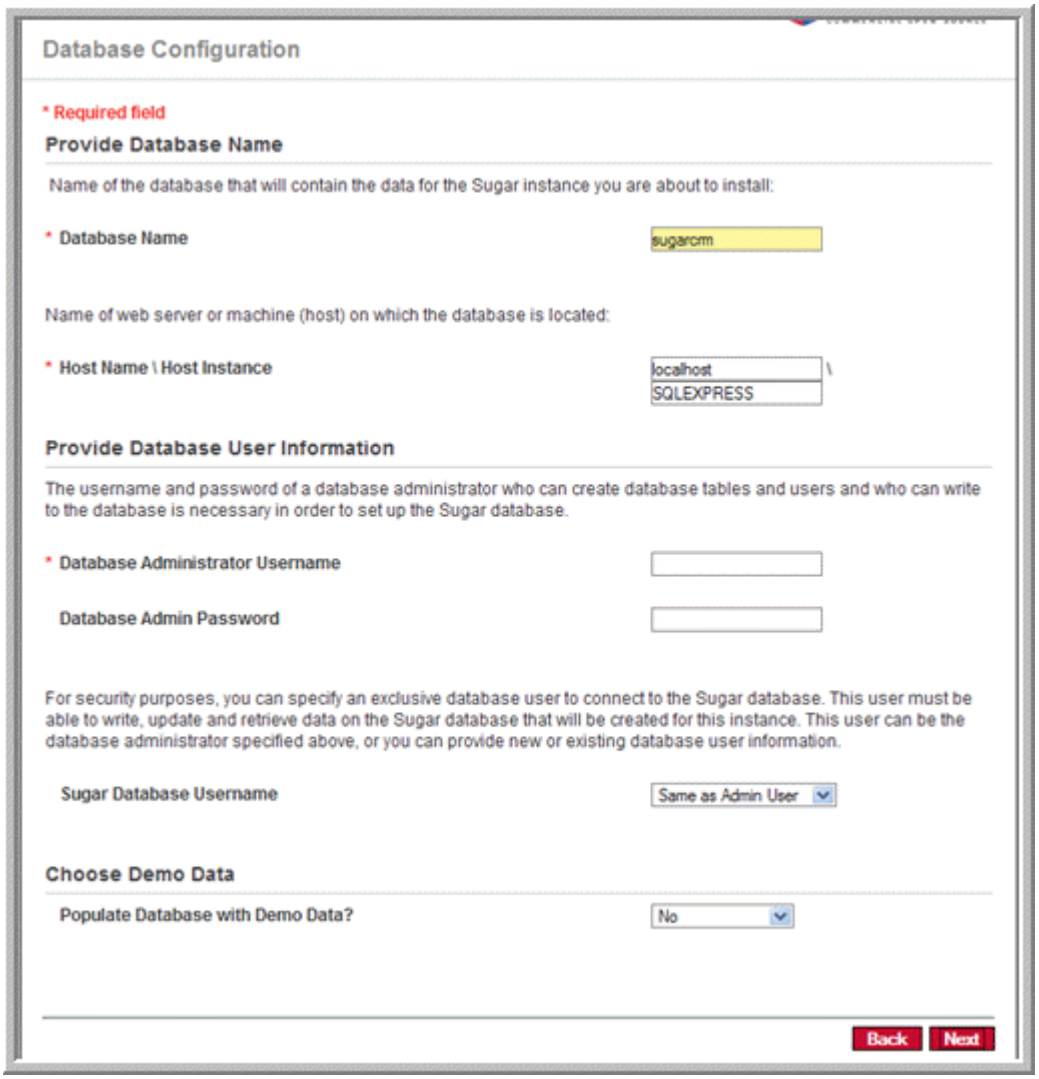


5. Select the database that is installed on your system and click **Next**.

If you select MySQL, the Installer displays the following Database Configuration screen.



If you select SQL Server, the Installer displays the following screen.



6. Enter the database name. The Installer displays *sugarcrm* as the default name for the database, but you can specify a new name for the database.
7. For My SQL and SQL Server, enter the Host Name or the Host Instance.

   If your database server is running on the same machine as your Web server, the host name is, by default, set to *localhost*.
8. Enter the username and password for the Database Administrator. Then, specify the Sugar Database Username.

   Ensure that the Database Administrator you specify has the permissions to create and write to the Sugar database.

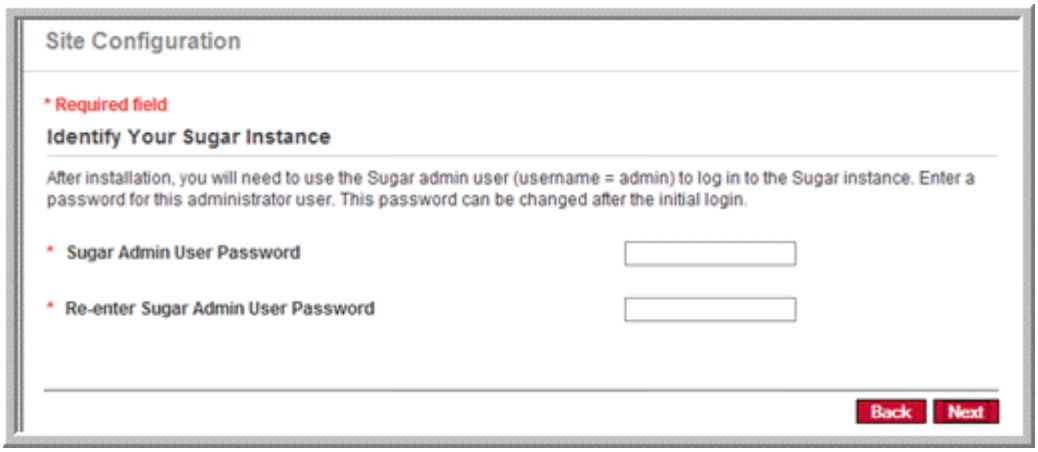
   For My SQL and SQL Server, by default, the Installer selects the Admin User as the Sugar Database User. The Sugar application uses the Sugar Database User to communicate with the Sugar database. But, at this time, you can create a different Sugar Database user.

To select an existing user, select **Provide existing user** from the Sugar Database Username drop-down list. To create a new Sugar Database user, select **Define user** to create. Enter the database user name and password in the fields that display below. Reenter the password to confirm it. This new user information will display under "System Credentials" on the Confirm Settings page at the end of the installation process.

9. From the Demo Data drop-down list, select **Yes** to specify that you want to populate the database with the Sugar Demo data. Or else, select **No**.
10. Click **Next**.

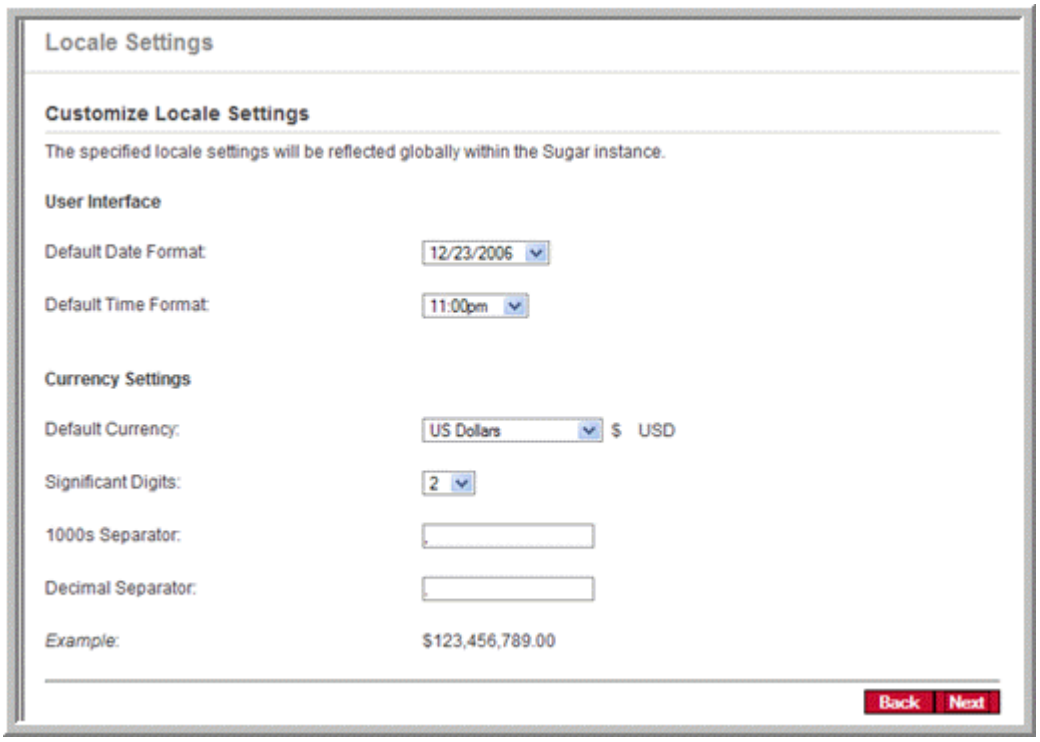
    The Installer validates the credentials of the specified administrator. If a database with the specified name already exists, it displays a dialog box asking you to either accept the database name or choose a new database. If you use an existing database name, the database tables will be dropped.
11. Click **Accept** to accept the database or else click **Cancel** and enter a new name in the Database Name field.

    The Site Configuration screen displays on the page.



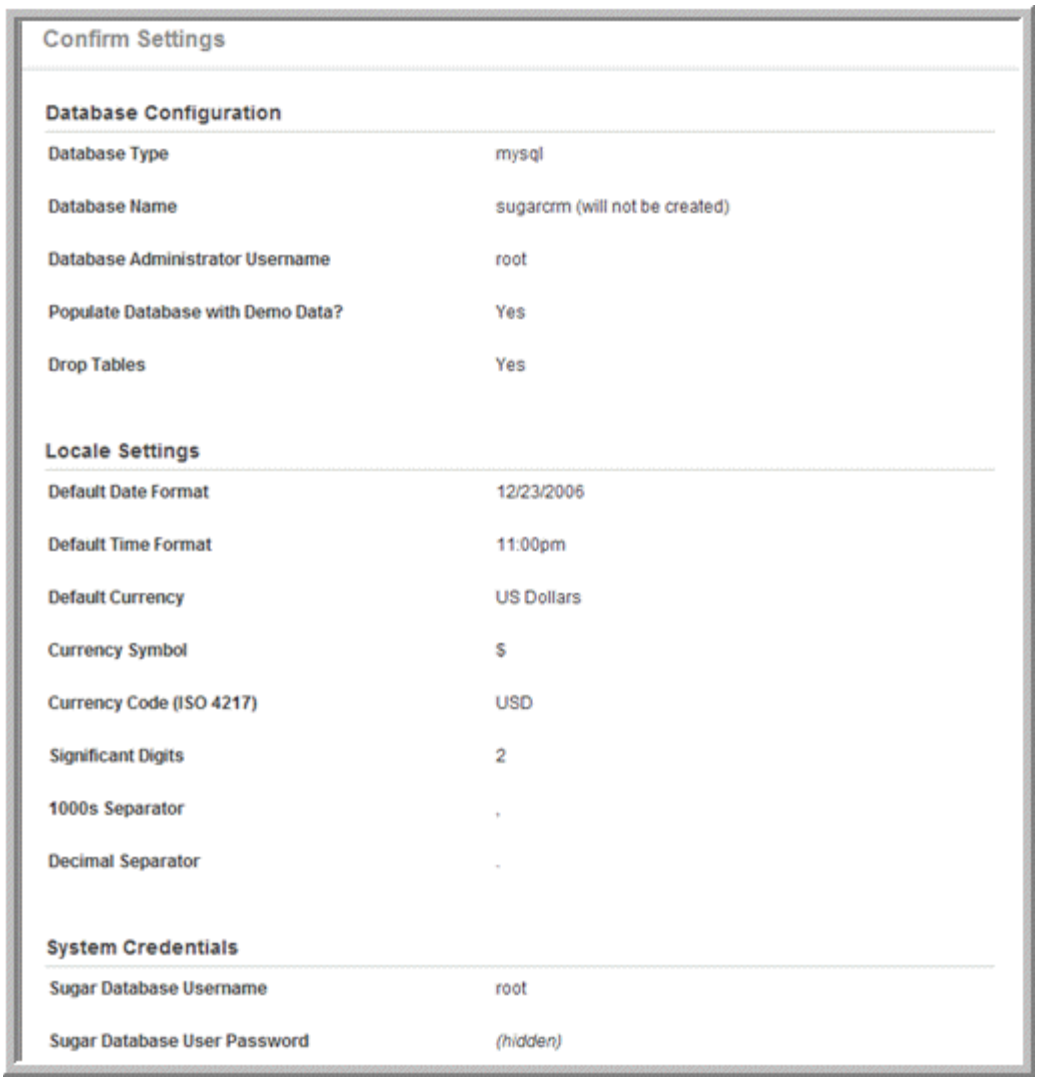
12. Enter a password for the Sugar admin user, re-enter it to confirm the password, and click **Next**.

The Installer displays the Locale Settings screen which lists the default settings for your locale.



13. Accept the default values or change them as needed.
14. Click **Next**.

The Installer displays the Confirm Settings screen. This screen displays a summary of the settings that you specified.



15. If you want a printout for your records, click **Print Summary**.

    To include the database user password and the Sugar admin password in the printout, click **Show Passwords** and then click **Print Summary**. When you click **Show Passwords**, the system displays the passwords and changes the button name to **Hide Passwords**. You can click this button to hide the passwords again.

16. To begin the installation process, click **Install**.

    The Perform Setup page displays the installation progress on the screen.

17. When the setup is complete, click **Next**.

18. The Installer displays the Registration page on the screen.

    Registration is optional.

19. To register your Sugar instance with SugarCRM, enter the necessary information and click **Send Registration**; or else click **No Thanks** to skip registration.

The Sugar log-in page displays on the screen. You can now log into Sugar with the username and password that you specified during installation.

To perform a custom installation of Sugar

1. Launch the browser and enter the URL described above.

   The Welcome page displays on the screen. This screen lists the requirements to help determine if you can successfully install Sugar. Read this page before proceeding with the installation.

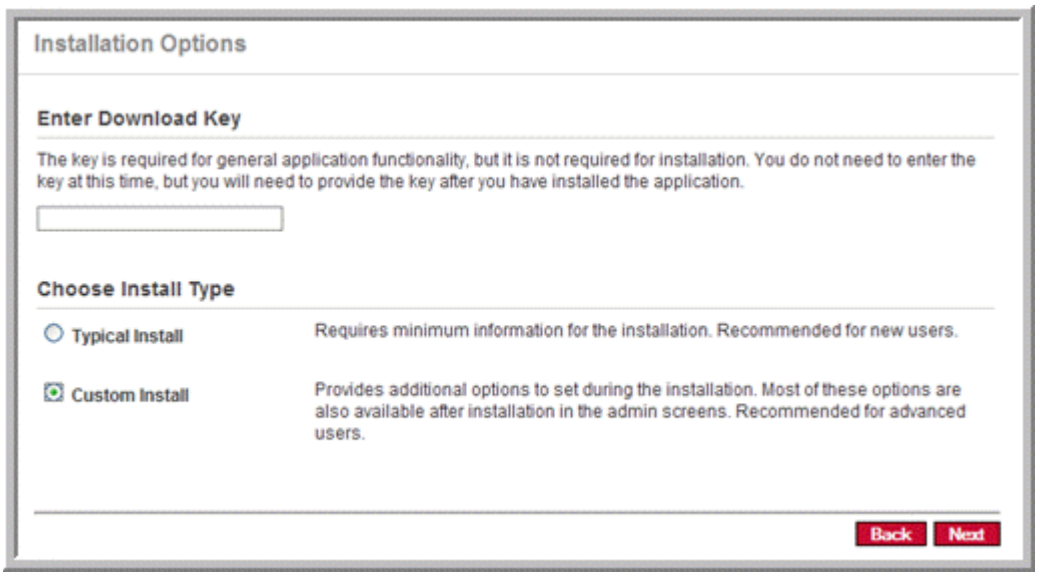
2. Click **Next**.

   The Installer displays the Sugar License Agreement screen.

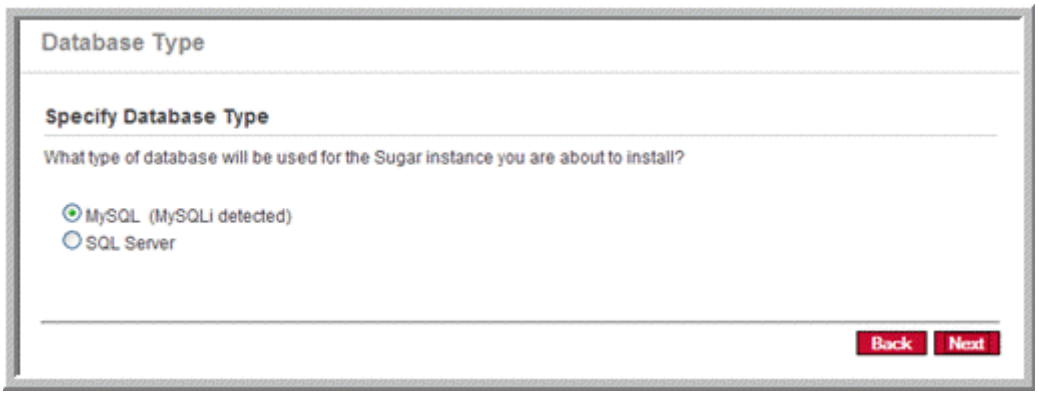
3. Review the license, check "I Accept", and click **Next**.

   The installers checks the system for compatibility and then displays the Installation Options screen

   Select **Custom Install** and click **Next**.

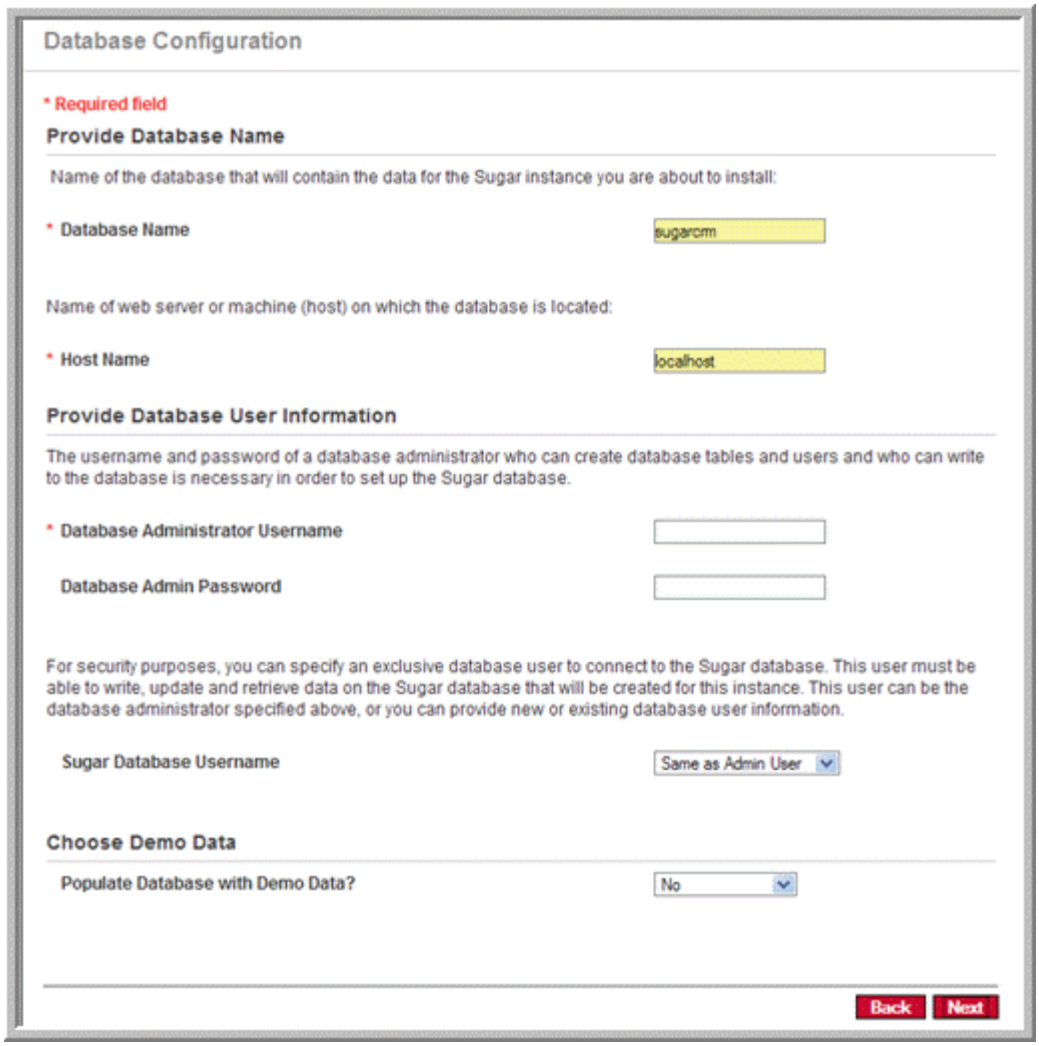


The Installer displays the Database Type screen.

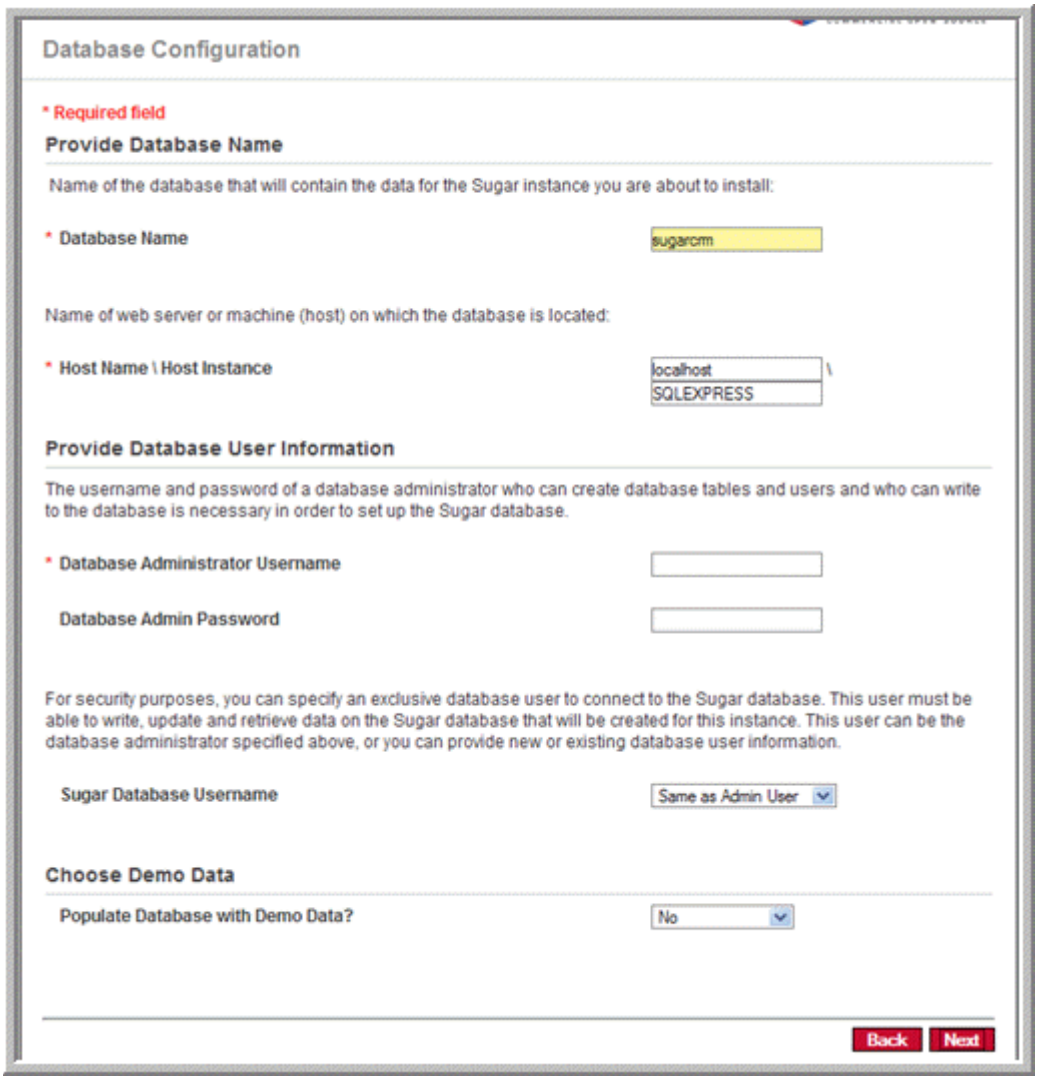


4. Select the database of your choice and click **Next**.

If you select MySQL, the Installer displays the following Database Configuration screen.



If you select SQL Server, the Installer displays the following Database Configuration screen.



5. Enter the database name.

   The Installer displays *sugarcrm* as default name for the database, but you can specify a new name for the database.

6. For My SQL and SQL Server, enter the Host Name or the Host Instance.

   If your database server is running on the same machine as your Web server, the host name is, by default, set to *localhost*.

7. Enter the username and password for the Database Administrator. Then, specify the Sugar Database Username.

   Ensure that the Database Administrator you specify has the permissions to create and write to the Sugar database.

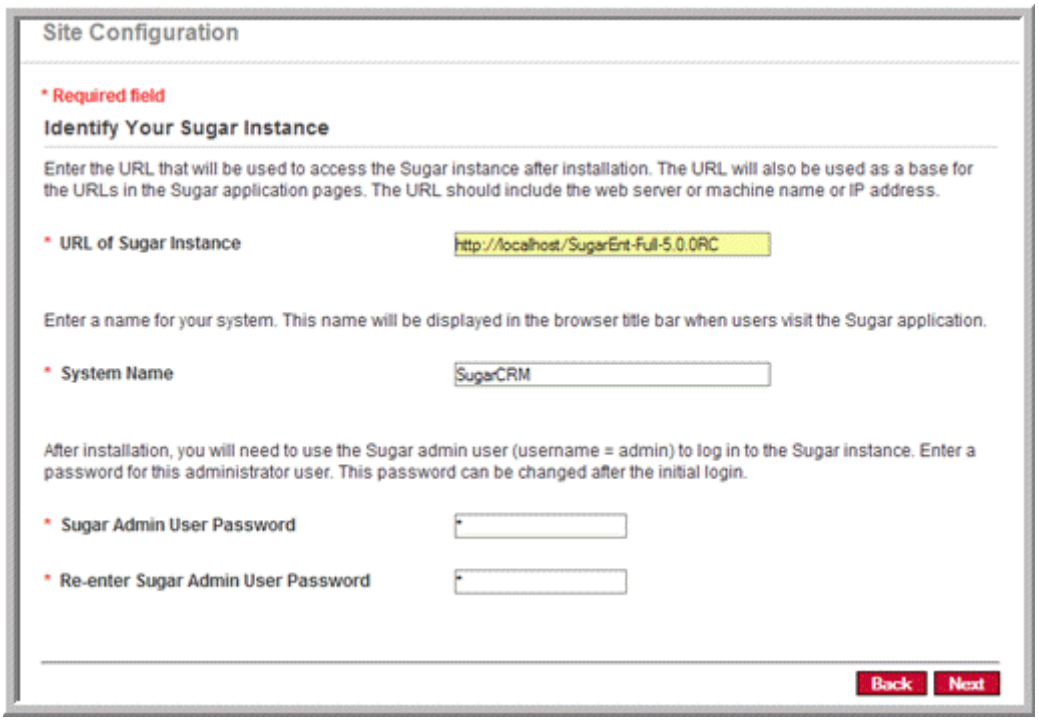
   For My SQL and SQL Server, by default, the Installer selects the Admin User as the Sugar Database User. The Sugar application uses the Sugar Database User to

communicate with the Sugar database. But, at this time, you can create a different Sugar Database user.

To select an existing user, select **Provide existing user** from the Sugar Database Username drop-down list. To create a new Sugar Database user, select **Define user** to create. Enter the database user name and password in the fields that display below. Reenter the password to confirm it. This new user information will display under "System Credentials" on the Confirm Settings page at the end of the installation process.

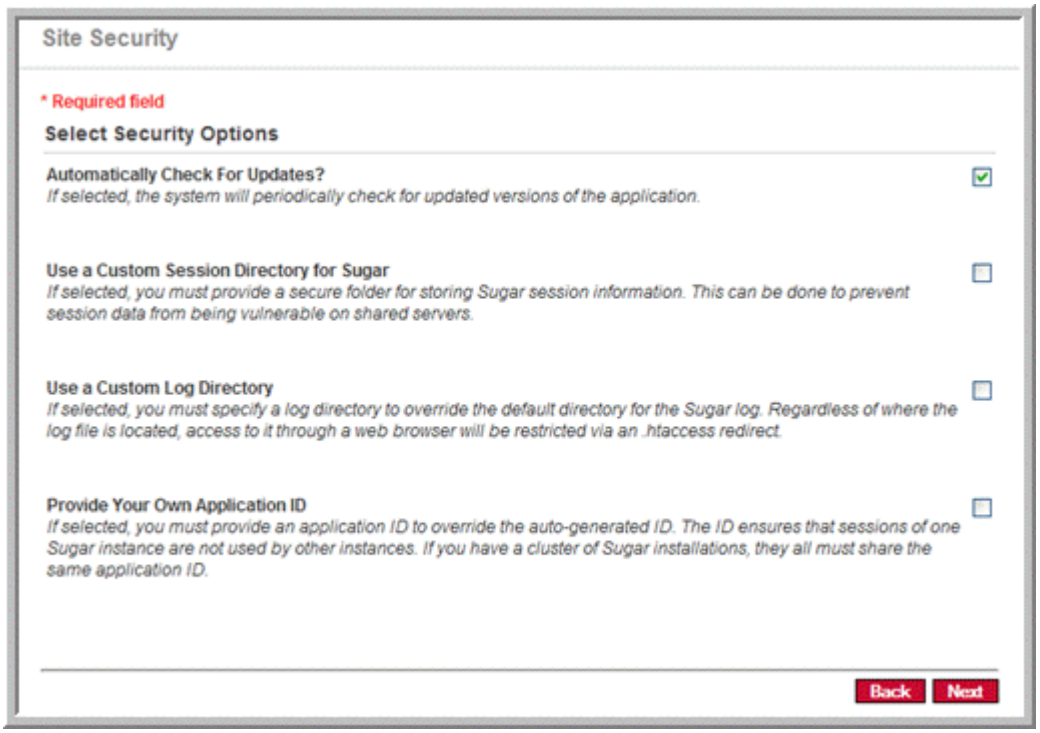
8. Select **Yes** from the Demo Data drop-down list to specify that you want to populate the database with the Sugar Demo data. Or else, accept **No** as the default value.
9. Click **Next**.
10. Click **Accept** to drop current tables or else click **Cancel** and specify a new database name.
11. Click **Next**.

    The Site Configuration screen displays on the page.



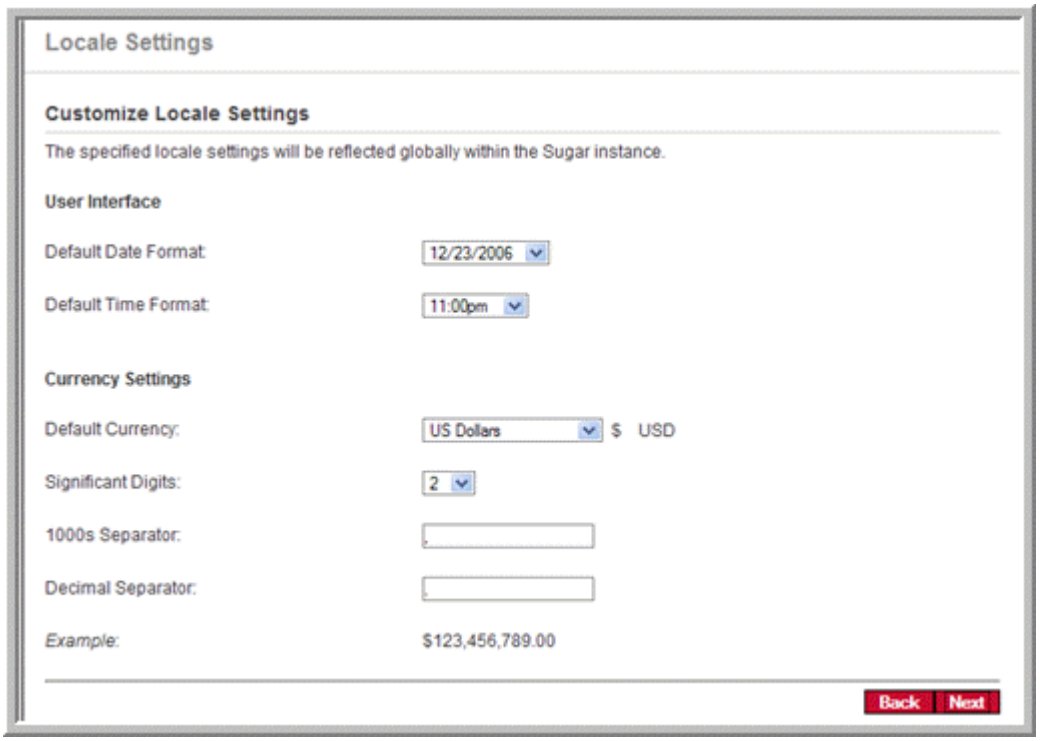
12. Enter the URL of your Sugar instance.
13. Enter a name for your system to display to users on the Sugar application's browser title bar.
14. Enter a password for the Sugar administrator, re-enter it to confirm the password, and click **Next**.

The Site Security screen displays the security options on the page.



15. Select the security options of your choice and specify the necessary information in the appropriate fields.
16. Click **Next**.

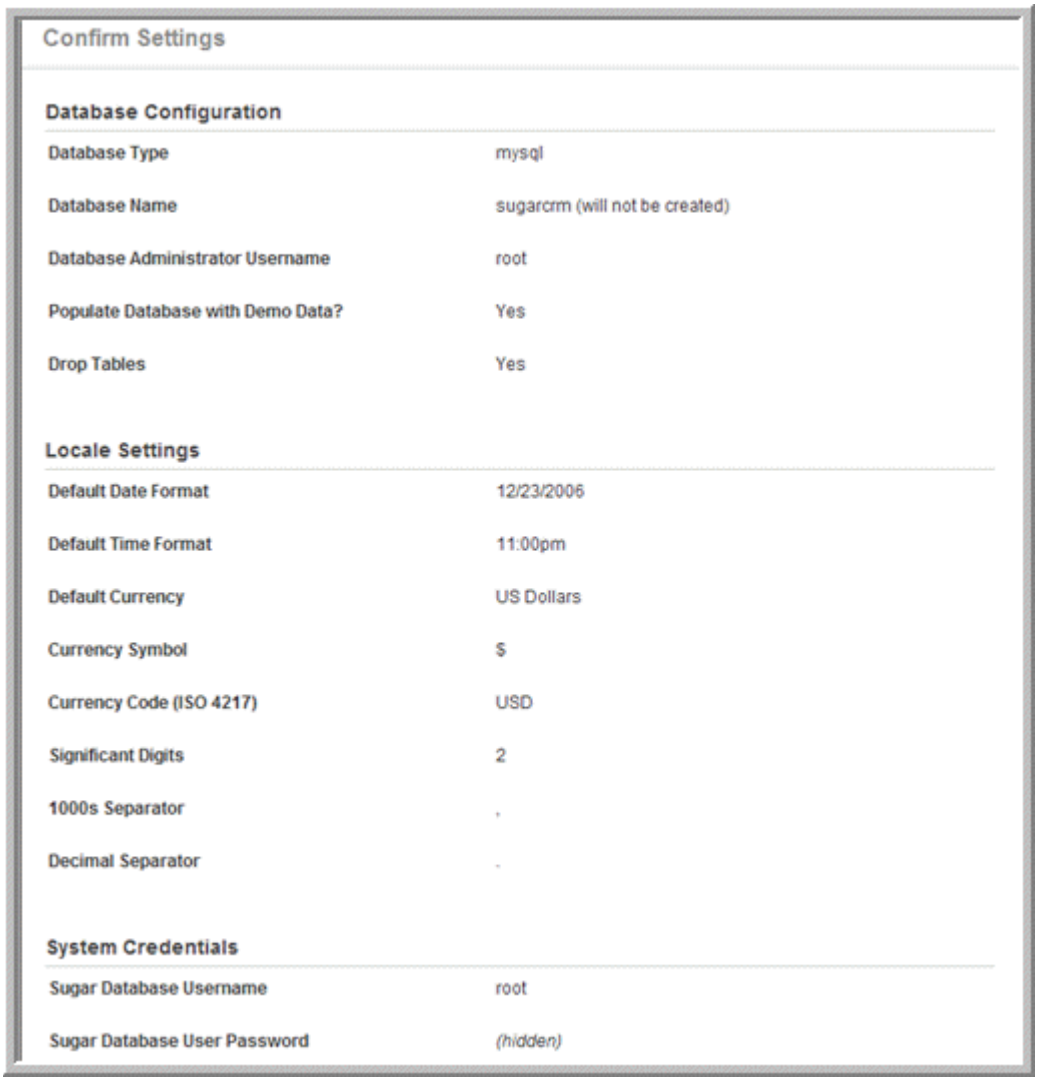
    The Installer displays the Locale Settings screen.



17. Accept the default values or change them as necessary and click **Next**.

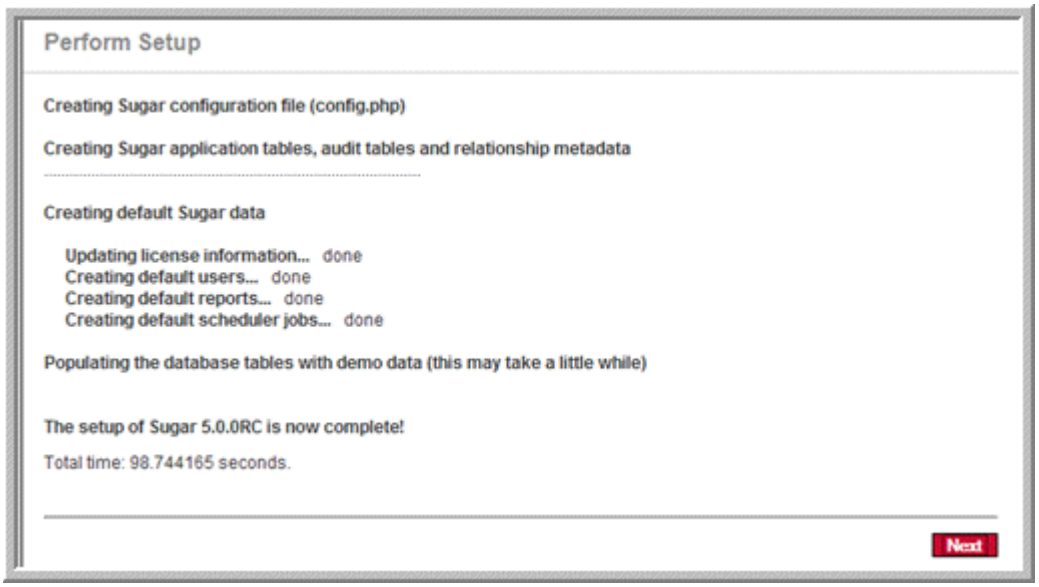
    After installation, you can update this information from the Administration Home page in Sugar.

    The Installer displays the Confirm Settings screen. This screen displays a summary of the settings that you specified.



18. To include the database user password and the Sugar admin password in the printout, click **Show Passwords** and then click **Print Summary**.
19. To begin the installation process, click **Install**.

The Perform Setup page displays the installation progress on the screen.



20. When the setup is complete, click **Next**.
21. The Installer displays the Registration page on the screen.

    Registration is optional.
22. To register your Sugar instance with SugarCRM, enter the necessary information and click **Send Registration**; or else click **No Thanks** to skip registration.

    The Sugar log-in page displays on the screen. You can now log into Sugar with the username and password that you specified during installation.

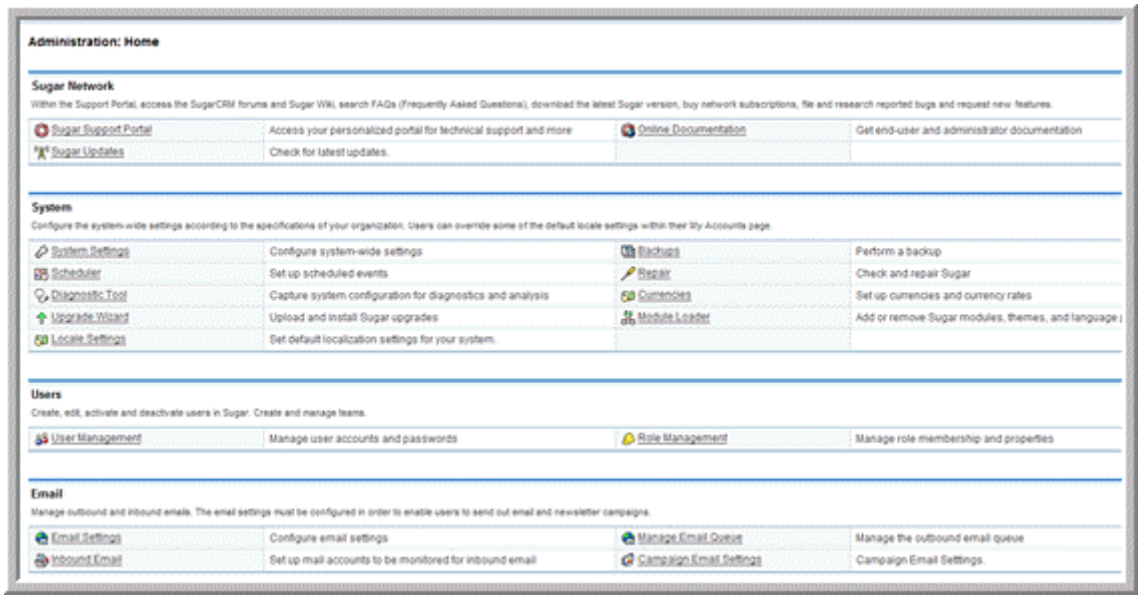
Chapter 2

Administering Sugar

This chapter describes how Sugar administrators can configure Sugar to meet their organization's requirements.

Topics include:

When you log in as administrator, the Admin link displays at the top right. Click this link to view the Administration page.



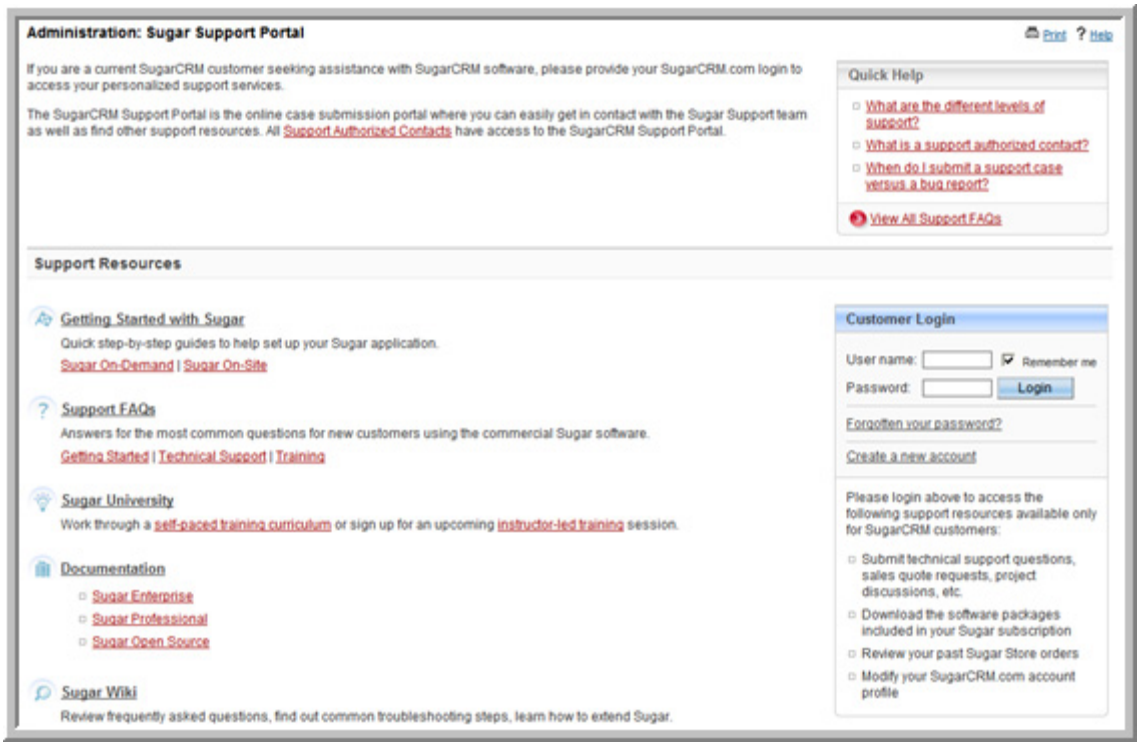
This page displays several sub-panels that group tasks according to the area of administration.

Sugar Network

This sub-panel includes options to access the Sugar support, view license information, and download the latest Sugar versions and documentation.

Sugar Support Portal

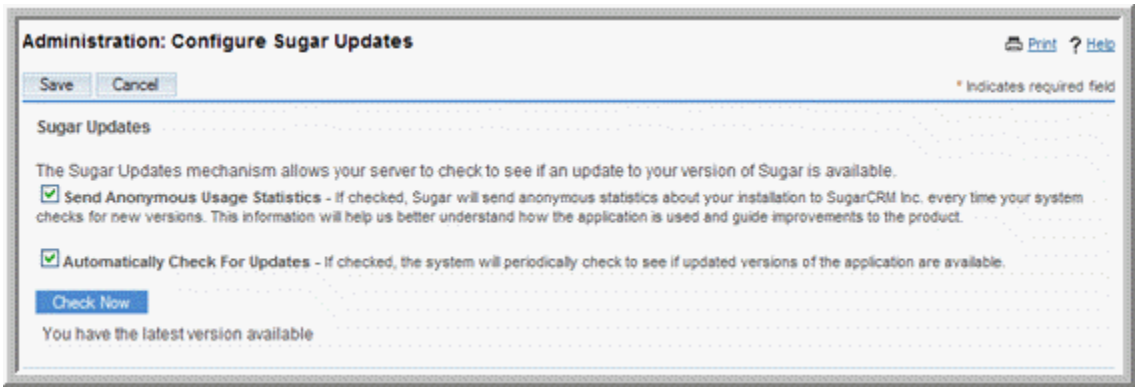
Use this option to access the SugarCRM forums, search FAQs (Frequently Asked Questions), download the latest Sugar version, buy network subscription, log into the network, file bugs, research reported bugs, and request new features.



The SugarCRM forums cover discussions on a broad range of topics such as setting up the Sugar application and FAQs (Frequently Asked Questions). If you want to participate in the discussions, you will need to register your organization with SugarCRM, Inc. However, you can view postings on any of the Sugar forums without registering your organization.

Sugar Updates

Use this option to check automatically or manually for Sugar updates.By default, the option to automatically check for updates is enabled.



If you choose to check for Sugar updates automatically, you will be notified when new Sugar versions or updates are available.

To perform a manual check, uncheck the **Automatically Check for Updates** option and click **Check Now**. If you already have the latest version, the message "You have the latest version available" displays at the bottom of the panel.

Online Documentation

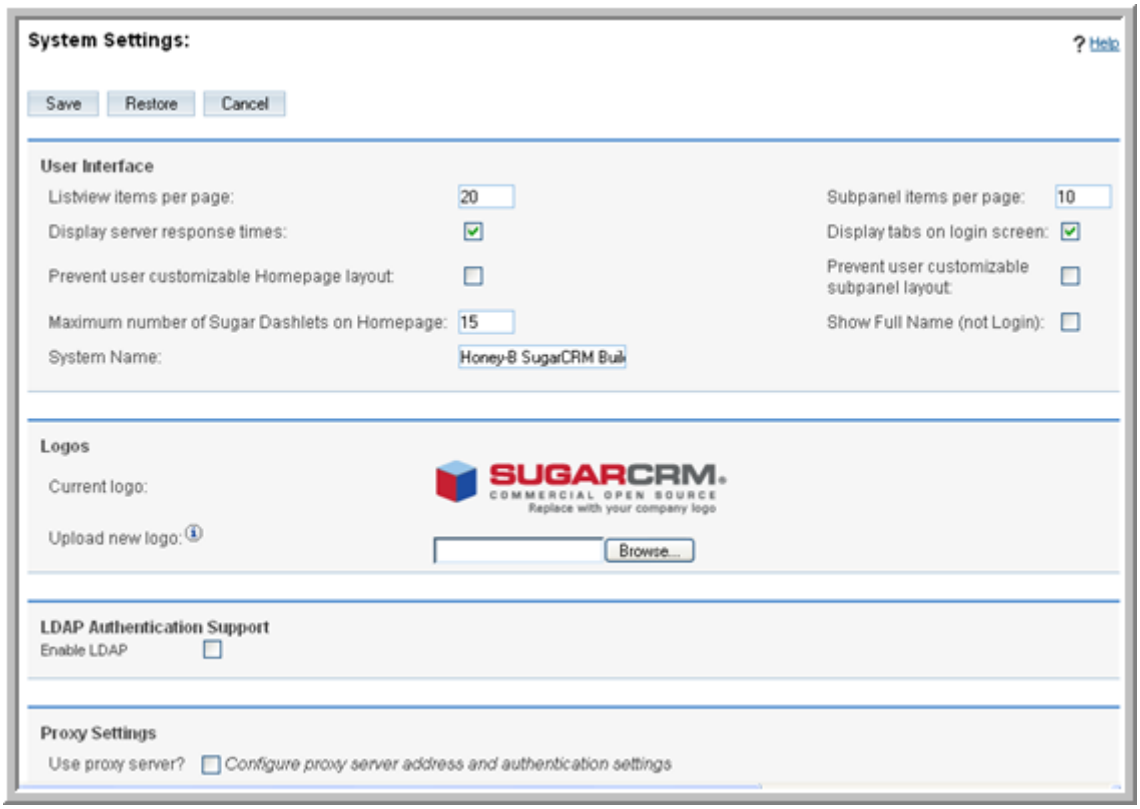
Use this option to view and download PDF copies of available documentation on installing and using the Sugar application and plug-ins.

System

The options listed under this section allow you to configure system-wide settings that apply to all users in your organization.

System Settings

Use this option to configure the system-wide settings according to your organization's specifications. Users can override some default settings, such as the datetime format, on their My Accounts page.



User Interface

Use this sub-panel to configure the user interface.

1. Configure the following fields:

   Listview items per page. Enter the maximum number of records you want displayed in the list view. The system paginates lists that contain more than the specified number of records.

   Display server response times. By default, the footer on every page displays the time taken to respond when users attempt to perform an action, such as logging in or opening an item, in Sugar. Deselect this box if you do not want to display the response time.

   Prevent user customizable Homepage layout. Select this box if you want to prevent users from moving Sugar Dashlets on the Home page. However, users can still create additional Sugar Dashlets.

   Maximum number of Sugar Dashlets on Homepage. Enter the maximum number of Sugar Dashlets you want displayed on the Home page. Users will not be able to add more than the number of Sugar Dashlets that you specify. The default value is 15.

   Subpanel items per page. Enter the maximum number of records you want displayed in the List View. The system paginates lists that contain more than the specified number of records.

Display tabs on login screen. By default, the Login page displays the Sugar module tabs on the Login page. Deselect this box if you do not want to display these tabs on the Login page.

Prevent user customizable subpanel layout. Select this box if you want to prevent users from dragging and dropping sub-panels to a different location in their Detail View layout.

Show Full Name (not Login). Select this box if you want the full name for users displayed instead of their login names.

2. To save the settings, click **Save**.
3. To restore the default settings, click **Restore**; to exit the page without saving your changes, click **Cancel**.

Logos

You can upload your organization's logo to display in the Sugar User Interface.

To upload logos

1. Configure any of the following fields:

   Current logo. Displays your current organization's logo that displays in the User Interface.

   Upload new logo. Enter the path to the location of the logo that you want to upload from your local machine. Or, click **Browse** to navigate to the location of the logo on your local machine. The dimension should be 212 X 40, with the standard transparent background color, in PNG or JPG format.

2. To save the settings, click **Save**.
3. To restore the previous settings, click **Restore**; to exit the System Settings page without saving your changes, click **Cancel**.

LDAP and Active Directory Authentication Support

If your organization has implemented LDAP or Active Directory authentication, you can also enable authentication in Sugar. When your users attempt to log into Sugar, the application authenticates them against your LDAP directory or Active Directory. If authentication is successful, the user is allowed to log into Sugar. If you are using LDAP with SOAP, you will need to specify the encryption key for the system and forward the key to your users.

If your users are using the Sugar Plug-in for Microsoft Outlook, they will need to enter this key number in Outlook. The Sugar Plug-in for Microsoft Outlook uses this key to encrypt user passwords before forwarding them to Sugar for authentication. Sugar decrypts the password with the same key and forwards the user names and passwords to the LDAP server for authentication. If authentication is successful, the users are allowed to access Sugar through the Sugar Plug-in for Microsoft Outlook.

To enable authentication

1. In the LDAP Authentication Support sub-panel, select the **Enable LDAP** box and enter the following information:

Server. Enter the LDAP server name.

Port Number. Enter the server's port number.

Base DN. Enter the base DN name.

Bind Attribute. Enter the attribute name that is used to bind the user's name in LDAP.

Login attribute. Enter the attribute name that is used to search for the user in LDAP.

Authenticated User. Enter the user name.

Authenticated Password. Enter the user's password.

Auto Create Users. Select this option check the Sugar database for the user name and add it if it does not exist in the database.

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.

2. To save the settings, click **Save**.
3. To restore the previous settings, click **Restore**.
4. To exit the System Settings page without saving your changes, click **Cancel**.

Proxy Settings

If you are using a proxy server to connect to the Internet, you will need to enter the information here to allow the system to check for Sugar updates.

1. Configure the following fields:

   Use proxy server. If you want to connect to the Internet through a proxy server, select this option.

   The system displays fields to specify the proxy host and port number.

   Proxy Host. Enter the name of the proxy server host

   Port. Enter the port number for the proxy host.

   Authentication. Select this box if you want to enable proxy authentication to allow Sugar to connect to the company's proxy server.

   User Name. Enter the user name.

   Password. Enter a password for the user.

2. To save the settings, click **Save**.
3. To restore the previous settings, click **Restore**.
4. To exit the System Settings page without saving your changes, click **Cancel**.

SkypeOut

Select this option to allow users to click a phone number field to make calls through Skype.

To enable Skype

1. Select the **Enable SkypeOut integration** box.

2. To save the setting, click **Save**.
3. To restore the previous setting, click **Restore**.
4. To exit the System Settings page without saving your changes, click **Cancel**.

Mail Merge

If you have installed the Sugar Plug-in for Microsoft Word, this option allows you to perform a mail merge with Word documents. For example, you can merge contact information from Sugar with form letters created in Microsoft Word.

1. Select the **Enable mail merge** box.
2. To save the setting, click **Save**.

   To restore the previous setting, click **Restore**. To exit the System Settings page without saving your changes, click **Cancel**.

Advanced

1. Select any of the following advanced configuration options:

   Validate user IP address: Select this option to validate, for security purposes, the IP addresses of users who log into Sugar.

   Log slow queries. Select this option to log the system's slow responses to user queries in the *sugarcrm.log* file. This information is for performance tuning investigation.

   Maximum upload size. Enter the maximum file size, in bytes, that users are allowed to upload.

   Note: The upload size is also dependent on PHP's upload settings.

   Portal Session Timeout. Enter the maximum time, in seconds, for a SugarPortal session. The session will timeout when the time limit is reached.

   Log memory usage. Select this option to record memory usage in the *sugarcrm.log* file.

   Slow query time threshold. Specify the threshold, in milliseconds, that defines slow queries. Queries that take longer than the threshold time are logged in the *sugarcrm.log* file. This information is for performance-tuning investigation.

   Display stack trace of errors. When you select this option, if an error occurs when users are running the application, the system displays where the error occurred in the application's stack trace. This information is for debugging purposes.

   Developer Mode. Select this option to disable caching so that you can immediately view changes made to language, vardefs, and template files.
2. To save the settings, click **Save**.
3. To restore the previous settings, click **Restore**; to exit the System Settings page without saving your changes, click **Cancel**.

Logger Settings

The Sugar Logger logs events that occur in the Sugar application. By default, the logs are written to *sugarcrm.log* in the Sugar root directory.

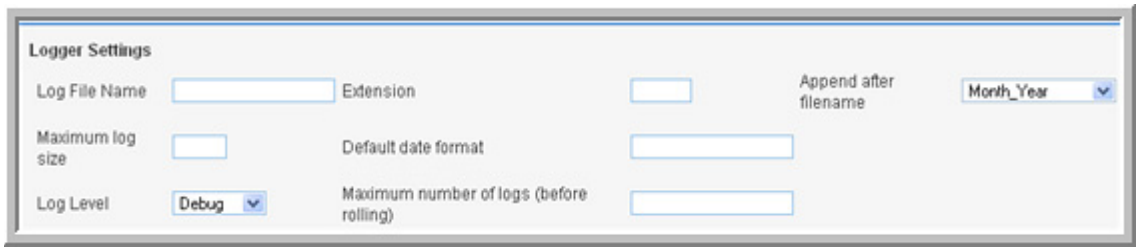
When you upgrade to Sugar 5.1, Sugar automatically parses your Logger settings from the *log4.php* properties file of your previous Sugar version and populates the Logger Settings sub-panel with the information.

You can, however, change the settings if necessary.

The logging levels are as follows:

- **debug**: Logs events that would help to debug the application.
- **info**: Logs informational messages.
- **warn**: Logs potentially harmful events.
- **error**: Logs error events in the application.
- **fatal**: Logs severe error events that leads the application to abort. This is the default level.
- **security**. Logs events that may compromise the security of the application.
- **off**. The logger will not log any events.

When you specify a logging level, the system will create log files for the specified level as well as higher levels. For example, if you specify `'Error'`, the system creates log files for `'error'`, `'fatal'`, and `'security'`.



To configure Logger settings

1. In the Logger Settings panel, enter the following information:

   Log File Name. Specify a name for the log file.

   Extension. Enter the file extension. The default is .log.

   Append After File Name. From the drop-down list, select a time period to append to the file name. This makes it easier to identify the log that you want to view.

   Maximum Log Size. Specify the maximum size of the log file in MegaBytes (MB). The default is 10MB.

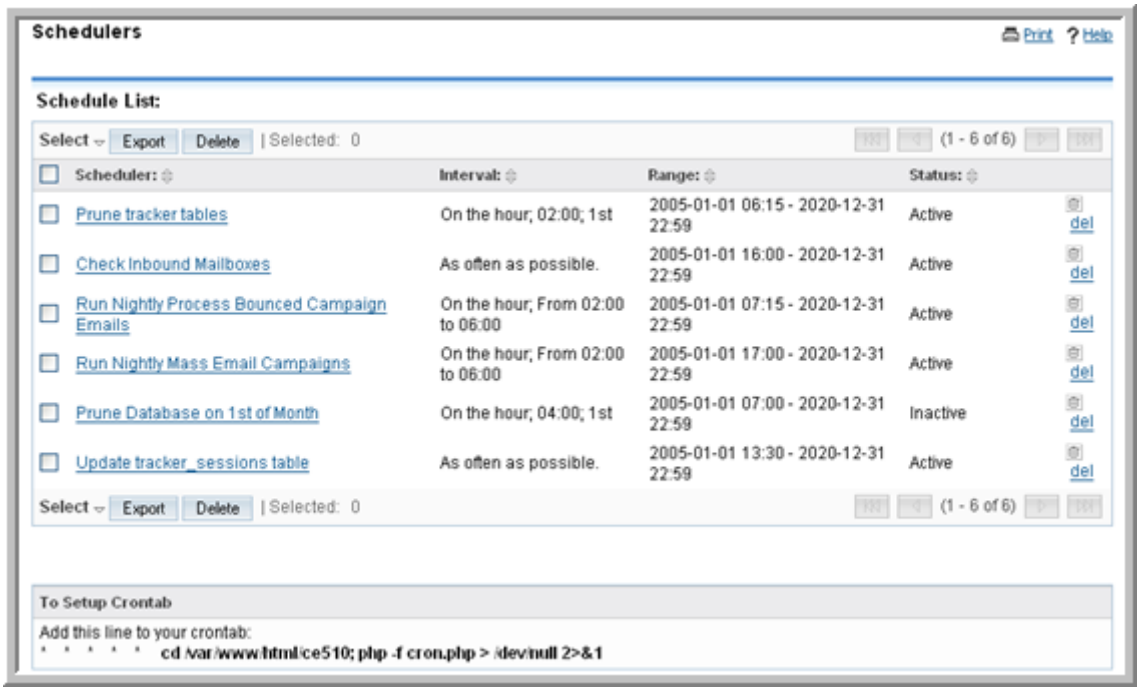
   Log Level. From the drop-down list, select the event level that you want to capture in the log file. The default is fatal.

   Default Date Format. Enter the default date format for the log file. This format must be supported by strftime. The default is %c.

Maximum Number of Logs. Specify the maximum number of log files to save. When the number of log files exceed this limit, Sugar deletes the log file that was created first. The default is 10 logs.

Scheduler

Use this option to schedule jobs such as monitoring email in-boxes and dispatching campaign emails.



The Scheduler integrates with external UNIX systems and Windows systems to run jobs that are scheduled through those systems. You can schedule the following types of jobs:

Prune Tracker Tables. This job deletes older activity data.

Check Inbound Mail Accounts. This job monitors inbound emails in active mail accounts that you set up using the Inbound Email option in the Email panel of the Admin page.

Run Nightly Process Bounced Campaign Emails. This job polls any mail account in which, the "Possible Actions" parameter is set to "Bounce Handling". This is an essential component of monitoring mass email campaigns.

Run Nightly Mass Email Campaigns. This job processes the outbound email queue for your organization's mass campaign emails.

Prune Database on 1st of Month. This job reads all the tables in your Sugar database, finds records that have been soft-deleted (deleted = 1), creates a large SQL file, and physically deletes those records on the 1st of every month. It is mostly a performance job, and is not essential to the use of Sugar. The backup files are placed in *cache/backups* with time-stamped filenames.

Update Tracker Session Tables. This job sets the status of timed-out sessions.

Configuring Settings for Scheduler Jobs

For UNIX and Linux systems, you will need to add a new cronjob to your Crontab. For Microsoft Windows, you can use the Task Scheduler.

Unix and Linux Systems

To add a new cronjob to your crontab

1. At the command prompt, type `crontab -e`.
2. Enter the following line to your crontab:

   ```
   *   *   *   *   * cd /path/to/sugar/crm; php -f cron.php >
   /dev/null 2>&1
   ```

3. Ensure that the `/path/to/` is correct for your instance.
4. Save your changes and close.

If you encounter problems, do the following:

1. Determine who the Apache server runs as.

   In a properly configured virtual host environment provided by your host, Apache will run as your Login user ID for files in your virtual directory. If you are unsure, contact the Customer Service department for your host.

   a. Search for a file named *httpd.conf*. Typically, this file is located in the */etc* folder. It will vary with the distribution.

   b. Open the file using a text editor and locate a line that starts with "User". The word(s) that follow it directly is the name of the User that Apache will run as on your system.

2. Determine the capabilities of your PHP installation.

   The Sugar Scheduler is designed to work with PHP and its extensions; specifically the database connector, the IMAP libraries, and the cURL libraries.

   Ensure that the PHP binary (php-cli or just php) is available and has those libraries available.

   Search for the PHP binary as follows:

   a. Type `which php`. On most correctly configured PHP installations, you will find the binary in */usr/bin or /usr/local/bin*. If so, move on to Step 3.

      Or

   b. Type `find / -name php`. Typically, this command will return a long list. Parse through the list to find an executable file named *php*.

   c. If you cannot find the PHP binary, scroll down to the *Troubleshooting Tips* at the end of this section and read item No. 2.

3. Create a *cronjob* for the Apache user

   a. Type `crontab -e -u` [the Apache user].

   b. Enter the following line to your crontab:

      ```
      *   *   *   *   * cd /path/to/sugar/crm; php -f cron.php >
      /dev/null 2>&1
      ```

c. To fine tune this job, change the first two "*". The first is the "Minutes" value, the second is the "Hours" value.

For example, to run the cronjob every 3 minutes, enter:

```
"*/3   *   *   *   *   cd /path/to/sugar/crm; php -f
cron.php > /dev/null 2>&1
```

4. Test the crontab line as follows to confirm that your system is ready to run:
   a. At a terminal prompt, copy and paste the command for your cronjob, and run it; the logic here is that if the command will execute successfully when run manually, the crontab will be able to execute successfully as well.
   b. If your cronjob looks as follows:

```
*  *  *  *  *  cd /var/www/html/sugarcrm; php -f cron.php
> /dev/null 2>&1
```

   type the command from "cd.." to "2&>1" into a terminal and press Enter.
   c. If any errors occur, refer to **"Troubleshooting Tips" on page 31**.
5. Save your changes and close.

Microsoft Windows (2000, XP, Server) Systems

Set up the Windows batch file as follows:

1. Create a batch file that will execute all the necessary commands.
2. Enter the following paths in the batch file:
   - *cd c:\path\to\your\sugarinstance*

     This folder should contain the *cron.php* file.
   - *c:\path\to\your\php.exe -c c:\windows\php.ini -f cron.php*
3. Run the batch file from a command prompt to ensure that the output has no errors.
4. If you encounter problems, do the following:
   a. Determine which PHP binary to use based on your PHP version.

      PHP 4.x

      If your system has a 4.x version of PHP, the PHP-CGI binary is named php.exe and is typically located in the root folder of your PHP install folder. To allow it to interact with the dynamic libraries, specify the location of the *php.ini* file. This can vary from system to system. If you are unsure, assuming that *php.exe* is located in *c:\php*, enter the following command at the command prompt:

      ```
      c:\php\php.exe -r phpinfo();
      ```

      The system will identify the *php.ini* file and its location.

      PHP 5.x

      If your system has a 5.x version of PHP, the PHP-CGI binary is named *php-cgi.exe* (*not* php-cli.exe) and is typically located in the root folder of your PHP install folder. To allow it to interact with the dynamic libraries, specify the location of the *php.ini* file. This can vary from system to system. If you are unsure, enter the command described above.

      The system will identify the *php.ini* file and its location.

5. Create the batch file.
   a. Click Scheduler in the Systems panel of the Admin page.

      At the bottom of the default screen, you will see the contents of the commands you need to add to a batch file.

   b. Open *notepad.exe*, copy and paste what Sugar's recommendation into a blank file.

   c. Change the Save As Type to "dropdown to All Files *.*. " and save it as a .bat file.

   Note: This is only a recommendation. It may not work for your particular instance. Check the folder paths because they are often the cause for problems with the Scheduler.

6. Test the batch file.
   a. From the command prompt, navigate to the folder where you saved the batch file.

   b. Enter the full name of the batch file to execute it.

   c. Note and correct any reported errors, usually related to paths that cannot be found.

7. Create a scheduled task.
   a. Click **Start** and navigate to Control Panel/Scheduled Tasks/Add Scheduled Task.

   b. Go through the Wizard, browse to the batch file you just created, and select it.

   c. Schedule a daily job, and ensure that you select **Open advanced properties for this task when I click finish**.

   d. On the Advanced Properties page, navigate to the Schedule tab and then click **Advanced**.

   e. Check off Repeat task to enable the fields below it, and select **Every Minute** or specify the interval you think is appropriate.

8. Save your changes and close the Wizard.

To schedule a job

1. In the Shortcuts menu of the Scheduler home page, click **Create Scheduler**.
2. In the Basic Setup sub-panel, enter the following information:

   Job Name. Enter a name for the job.

   Status. From the drop-down list, select **Active** to run the job at the specified intervals; select **Inactive** if you only want to save the job schedule information but not run the job.

   Job. Select a job from the drop-down list. The OR field is not used.

   Interval. Specify the time interval to check for new scheduled jobs.

   The default is every one minute daily.

3. For advanced options, click the **Advanced Options** link below the Job field.

The Advanced Options sub-panel displays below.

4. Enter information for the following fields:

   Execute If Missed. Select this box to run any jobs that the scheduler missed.

   Date & Time Start. Click the Calendar icon and select the start date for the job; select the time, in hours and minutes, from the adjacent drop-down list.

   Date & Time End. Click the Calendar icon and select the end date for the job; select the time, in hours and minutes, from the adjacent drop-down list.

   Active From. From the drop-down list, select the time, in hours and minutes, when the job becomes active.

   Active To. From the drop-down list, select the time, in hours and minutes, when the job becomes inactive.

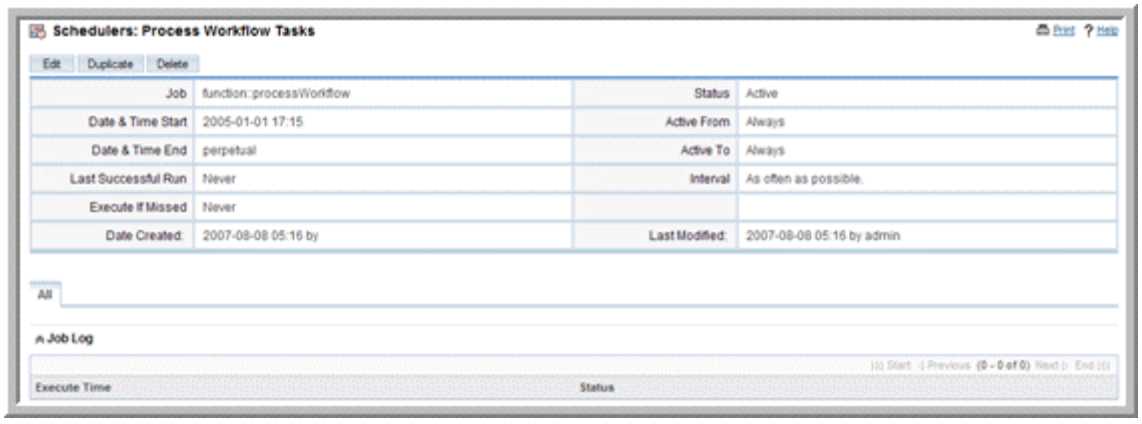
5. Click **Save** to create the job; click **Cancel** to exit the page without creating the job.
6. To export one or more scheduler definitions in a .csv file format to a local machine, select them from the list and click **Export**.

To manage scheduled jobs

1. In the System sub-panel of the Admin page, click **Scheduler**.

   The Schedule List page displays on the page.

2. Select any job from the job list to view its settings or the Job log. You can edit, duplicate, or delete the settings. You can also delete a job by clicking the del icon corresponding to the job in the Schedule list.



3. To edit the settings, click **Edit**.
4. Make the necessary changes and click **Save** to update the settings; click **Cancel** to exit the page without saving your changes.

Troubleshooting Tips

Linux

1. The Sugar Scheduler fails to run even though the *cron.log* file shows that the crontab is triggering the new job.
   - The Apache user's PATH does not include the location of the PHP binary.

- Change the crontab entry to include the FULL path to the PHP binary as shown below:

```
* * * * * /usr/local/bin/php -f cron.php > /dev/
null 2>&1
```

- The Apache user's PATH does not include the location of the *php.ini* file, and thus the external libraries (such as *mod_mysql* and *mod_imap*) are unavailable at run time.
  - Change the crontab entry to include a PHP switch to explicitly define a php.ini to use as shown below.

```
* * * * * php -c /path/to/your/php.ini -f cron.php
> /dev/null 2>&1"
```

2. No PHP binary found or it is broken.
   - Change the mechanism by which your cronjob calls Sugar's *cron.php*.
     - Determine if this is an option at this time by finding either “curl” or “wget” on your system. This is done with the commands “which curl” and “which wget”.

       If you use *cURL*, your crontab entry should look as follows:

```
* * * * * curl --silent http://yourdomain/
yoursugarcrminstance/cron.php
```

       If you use *wget*, your crontab entry should look like:

```
* * * * * wget -q http://yourdomain/
yoursugarcrminstance/cron.php
```

Note: Both *curl* and *wget* have numerous switches that do not always map to different versions on different platforms. Experiment in the terminal until you find the “perfect” line, and add it as the line for your crontab entry.

Windows.

1. The most common problem is that the PHP binary does not have the proper libraries available at run time. As a result, it cannot make calls to your database or to your Email server. To force PHP to be aware of these libraries, it needs to access the *php.ini* file, which in turn tells it where to find everything that is available.
   a. Locate the *php.ini* file: if you are unsure, run the following command:

```
phpinfo();
```

      The system identifies the *php.ini* file and its location.
2. The second most common breakage is incorrect paths to the extensions that PHP needs; a map is useless if the information is bad.
   a. Open *php.ini* in your favorite text editor.
   b. Find the section named “Paths and Directories”.
   c. The pertinent entry is “`extension_dir`”.
   d. Keeping in mind that this file piggybacks on Window's $PATH$ variable, double-check the paths listed.

e. Correct any errors - sometimes giving an absolute path solves hard-to-diagnose problems, for example, full path listing from c:\... onwards.

   Necessary extensions are disabled.

f. Open your *php.ini* file in a text editor.

g. Find the section named “Dynamic Extensions”.

h. Scroll to the Windows-specific list.

i. Make sure that the necessary extensions are uncommented (no “;” preceding the line). The bare minimum for Sugar Scheduler to run is to have php_curl, your database connector, typically php_mysql (for PHP5), and php_imap.

j. Test the batch file again.

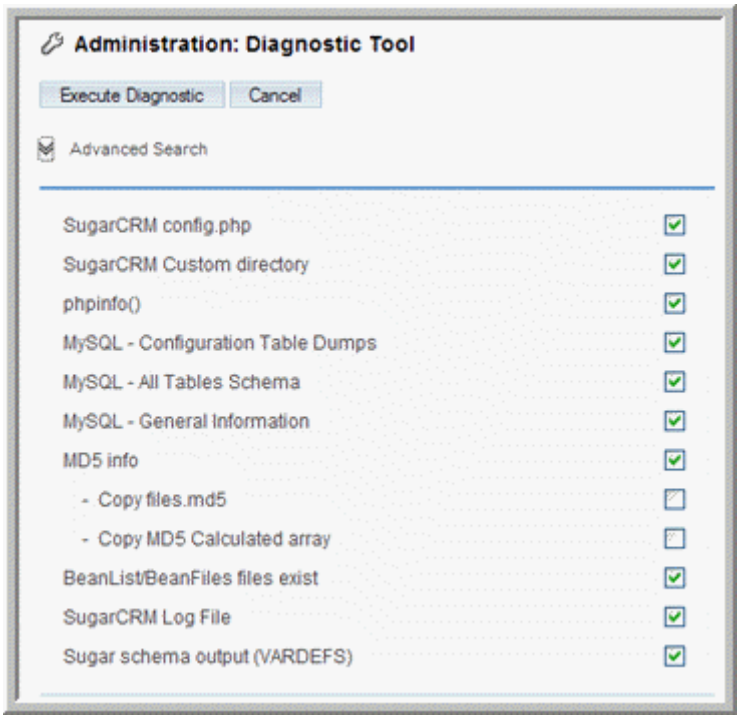
Diagnostic Tool

Use this option to capture system configuration for diagnostics and analysis. The diagnostic tool pulls up system information and stores it in a zip file on the server for download. When you send a help request to Customer Support, you can attach the file because it summarizes all the basic information required to resolve the problem.

To capture system configuration

1. On the Diagnostic Tool page, click **Execute Diagnostic** to run the tool.
2. To capture specific configuration information, click the **Advanced** link below the **Execute Diagnostic** button.

   The system displays a list of system configuration files. By default, the system captures configuration information for all the selected files.



The system performs the following actions of these files:

SugarCRM Config.php - Copies the *config.php* file from the root directory after replacing the DB password with asterisk for security purposes.

SugarCRM Custom directory - Copies the custom directory to a Zip file to enable Customer Support to know what has been customized through the Layout Editor.

phpinfo() - Executes `phpinfo` and stores it in a file.

MySQL - Configuration Table Dumps - copies a few tables from the database and replaces sensitive information with asterisk for security purposes.

MySQL - All Tables Schema - writes the schema for all tables to an HTML file.

MySQL - General Information - Pulls up some general information, like MySQL version, character sets, etc.

MD5 info - Runs md5 checks on all files in the sugar directory and compares it against a stock Sugar installation's md5s. This enables Customer Support to learn which, if any, files have been manually customized.

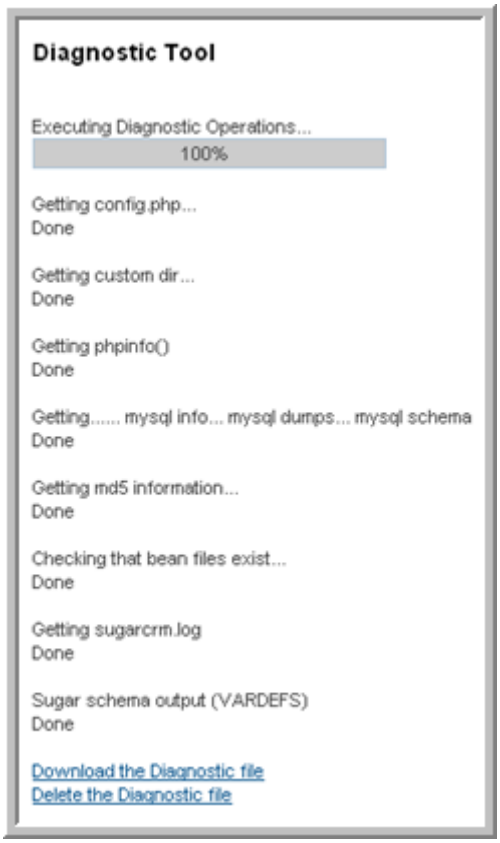
BeanList/BeanFiles files exist - If a custom module has been loaded, and the author did not define these references correctly, it can cause problems. This action checks all the references to ensure they are correct.

SugarCRM Log file - copies the log file.

Sugar schema output (VARDEFS) - copies the Sugar database schema.

3. Deselect the ones you do not want to view and then click **Execute Diagnostic**.

   The system creates a Zip file that contains the captured configuration information.



4. To view the file, click the **Download the Diagnostic file** link at the bottom of the page; to delete the file, click the **Delete the Diagnostic file** link.
5. If you choose to download the file, the File Download dialog box displays on the page. To view its contents, click **Open**, and click the file you want to view. To save the Zip file contents, click **Save**, and select a location on your local machine.

Upgrade Wizard

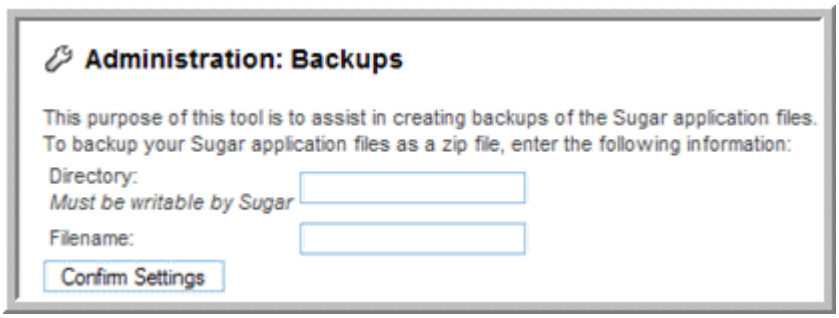
When you obtain the Sugar upgrade .zip file from Sugar, you can save it to your local machine and upload it into Sugar using the Upgrade Wizard. For more information, see the *Sugar Upgrade Guide*.

Backups

Use this option to backup the Sugar configuration files. Note that this option does not backup the database.

To backup Sugar configuration files

1. Click the **Backups** option in the System sub-panel on the Admin page.

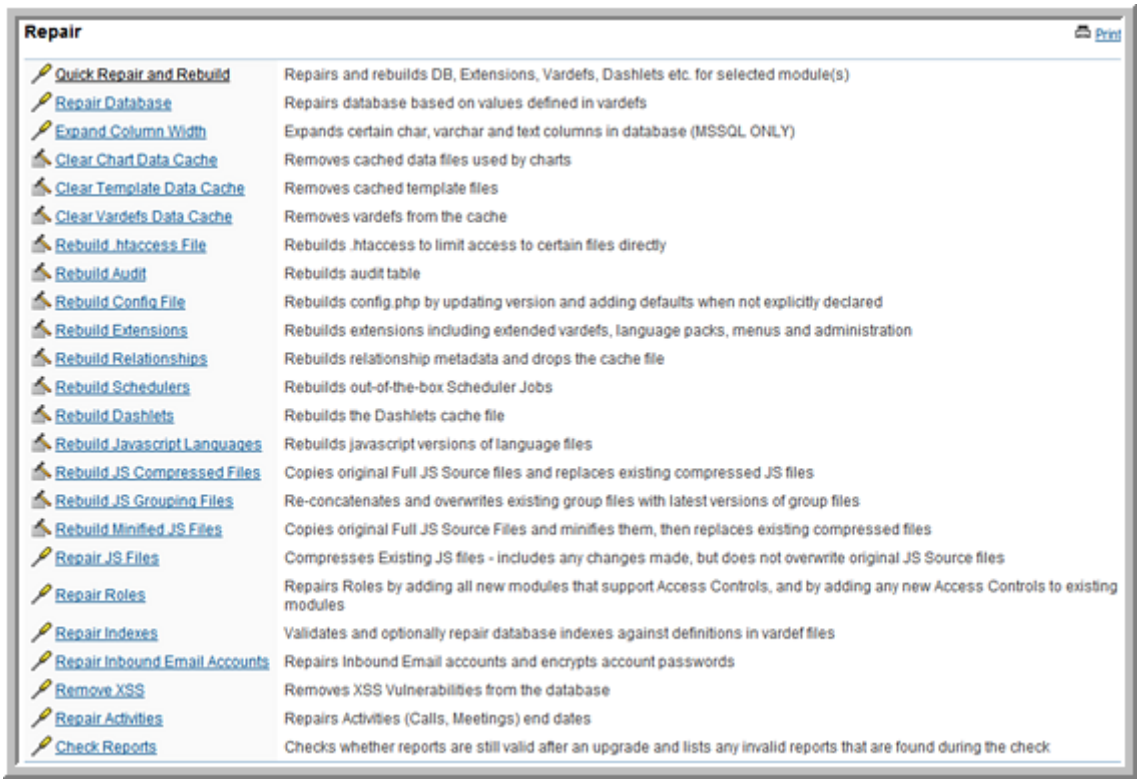


2. In the Directory field, specify a directory that is writable by the same user as the Apache process.
3. In the Filename field, enter a file name for the Zip file including the .zip extension.
4. To ensure that backup can be performed, click **Confirm Settings**.
5. Click **Run Backup** to create the .zip file of your Sugar application files.

Note: To backup your database information, refer to your database vendor's documentation.

Repair

Use this option to upgrade and rebuild data from a previous version of Sugar for the current version of the program. You also use this option to convert a Sugar installation to offline mode.



The upgrade options include:

Quick Repair and Rebuild: Repairs and rebuilds the database, extensions, vardefs, Sugar Dashlets, and so on for selected modules. Click this option, select the modules you want to repair, and click **Repair**.

Repair Database: This option is applicable to MYSQL databases only. It repairs your Sugar database based on values defined in the vardefs. You can choose to display the SQL that will be executed on the screen, export it, or execute it.

Expand Column Width. For MSSQL, expands certain char, varchar and text columns in database.

Clear Chart Data Cache: Removes cached data files that charts use.

Clear Template Data Cache: Removes cached template files. Click this option, select the modules you want to repair, and click **Repair**.

Clear Vardefs Data Cache: Removes vardefs from the cache. Click this option, select the modules you want to repair, and click **Repair**.

Rebuild .htaccess file: Rebuilds the *.htaccess* file to limit access to certain files directly.

Rebuild Audit: Rebuilds the audit table.

Rebuild Config File: Rebuilds the *config.php* file by updating the version and adding defaults when not explicitly declared. Click this option to check the file and if, necessary, click **Rebuild**.

Rebuild Extensions: Rebuilds extensions including extended vardefs, language packs, menus, and administration

Rebuild Relationships: Rebuilds relationship metadata and drops the cache file.

Rebuild Schedulers: Rebuilds your out-of-the-box Scheduler Jobs. Click this option and then click **Rebuild**.

Rebuild Sugar Dashlets: Rebuilds the cache file for Sugar Dashlets.

Rebuild Javascript Languages: Rebuilds Javascript versions of language files.

Rebuild JS Compressed Files: Copies original Full JS Source files and replaces existing compressed JS files.

Rebuild JS Grouping Files: Re-concatenates and overwrites existing group files with latest versions of group files.

Rebuild Minified JS Files: Copies original Full JS Source Files and minifies them, then replaces existing compressed files.

Repair JS Files: Compresses Existing JS files - includes any changes made, but does not overwrite original JS Source files

Repair Roles: Repairs roles by adding all new modules that support access control as well as any new access controls to existing modules.

Repair Indexes: Validates and, optionally, repairs database indexes against definitions in *vardef* files.

Repair Inbound Email Accounts: Repairs Inbound Email accounts and encrypts account passwords.

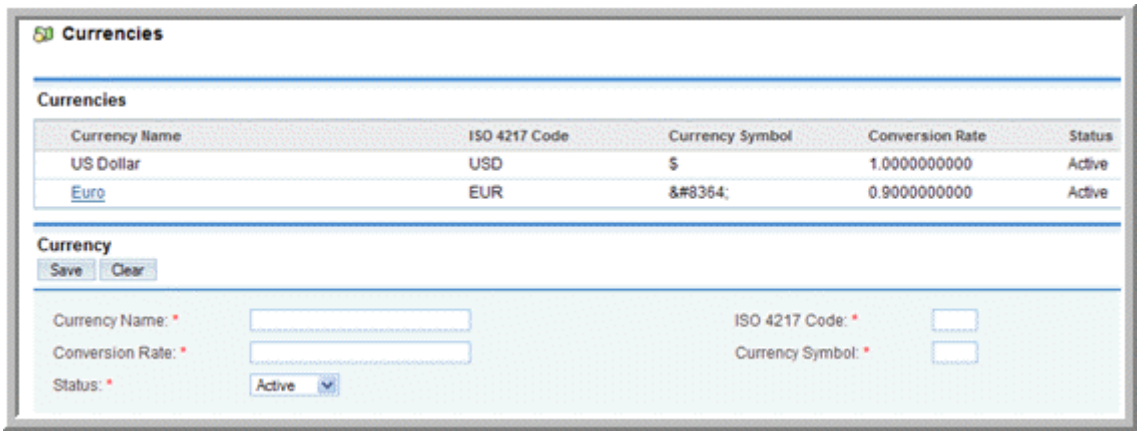
Remove XSS: Removes XSS Vulnerabilities from the database. Click this option, select a module, and click **Execute**. If any XSS strings are found, the system lists them in the Object(s) found field below.

Repair Activities: Repairs Activities (Calls, Meetings) end dates.

Enable/Disable Seed Users: Enables or disables seed users populated during demo installation. Click this option, and if the seed users are enabled, click **Deactivate** to disable them. If the seed users are disabled, click **Activate** to enable them.

Currencies

Use this option to specify a default currency and the rate.

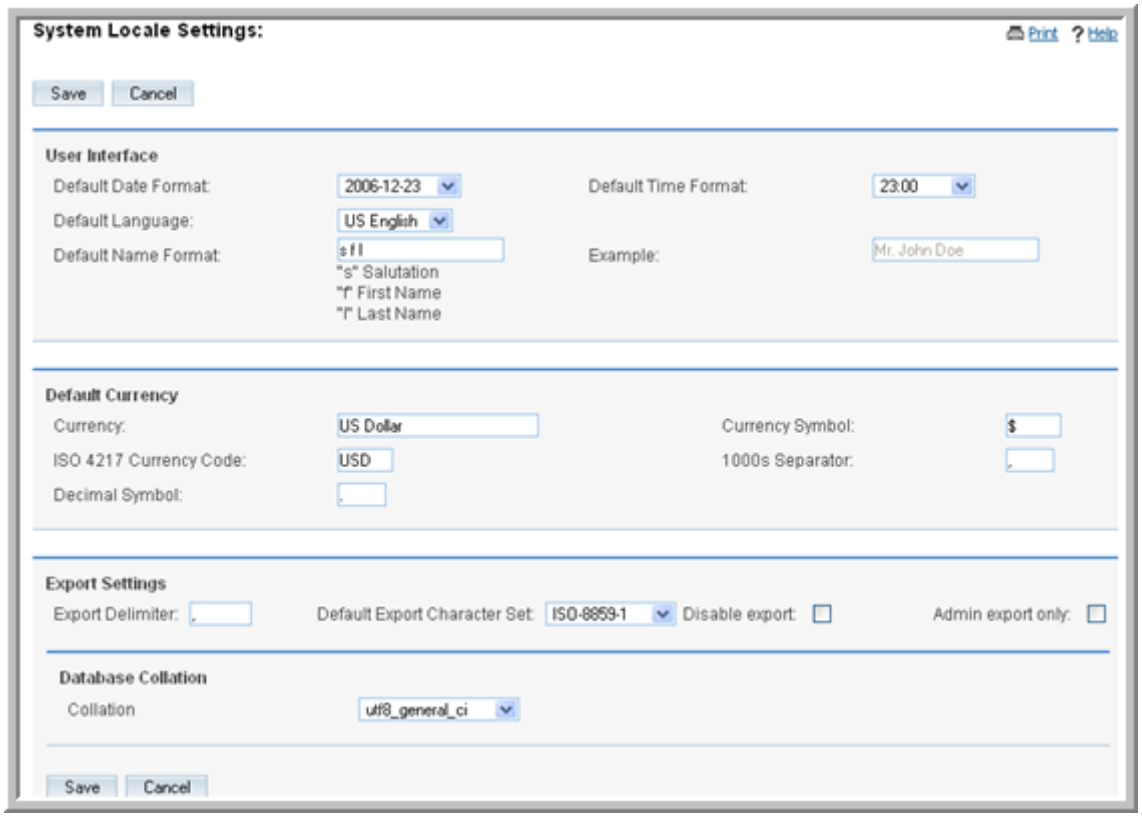


For each new currency that you define, enter the name, symbol (for example, $), conversion rate to the US $, the currency code (such as CDN for the Canadian dollar). Set the Status to Inactive if you do not want users to use this currency for transactions.

Note: To display the Euro symbol in charts, you will need to install Macromedia Flash8.

System Locale Settings

Use this option to set system-wide default formats for date, time, language, name, and currency. If you are using MySQL, you can also specify the collation order for records in the application.



User Interface

Default Date Format. From the drop-down list, select a date format for all records. Users can override the default format by setting a different date format in their My Account page.

Default Time Format. From the drop-down list, select a time format to display in all records such as Cases. Users can override the default format by setting a different time format in their My Account page.

Default Language. From the drop-down list, select the default language for the Sugar User Interface. Users can select a different language from the login page, provided they have installed the appropriate language pack.

Default Name Format. Enter the default salutation and name format to display in list views and detail views. You can specify any combination of salutation first name, and last name. For example: Mr. John Smith, Mr. Smith, or John Smith. Users can override the default format by setting a different time format in their My Account page.

Default Currency

Use this sub-panel to override the default currency that you set during installation. On the My Accounts page, users can override the default currency that you specify in this panel.

Currency. Enter the name of the currency that your organization uses to conduct business.

Currency symbol. Enter the symbol for the currency.

ISO 4217 Currency Code. Enter the ISO code for the currency.

1000s Separator. Specify a delimiter to separate thousands when users specify a numeric value for the amount.

Decimal Symbol. Specify a default decimal symbol.

Export Settings

Use this panel to specify export settings such as the delimiter used to separate data in export files and the default character set used to export data from Sugar. The settings you specify here apply to all users in the organization. However, users can define a different default export character set on their My Account page to export data from Sugar.

This character encoding is also used when importing data into Sugar.

By default, Sugar uses UTF-8 to store data and CP1252 to export data. For locales that use character encoding other than CP1252, you must specify the appropriate default character set. This ensures that the character set used by the Sugar system to create the exported file is mapped to the correct character set on the user's machine. For example, MS Windows uses SJIS in Japan. So, for users in this locale, you will need to select SJIS as the default export character set.

By default, both users and administrators can export files from Sugar. However, you can prevent users from exporting files.

Export Delimiter. Specify the delimiter, such as a comma or a period, to use while exporting data.

Default Export Character Set. The default is CP 1252. For locales other than US and Western Europe, select the appropriate character set from the drop-down list.

Disable export. Select this option if you want to prevent end users and users with administrative privileges from exporting data.

Admin export only. Select this option to allow only users with administrative privileges to export data.

Database Collation

This sub-panel displays only if you are using the MYSQL database. You can select the desired collation order from the drop-down list. The default is `utf8_general_ci`.

To save the settings, click **Save**; to exit the page without saving your changes, click **Cancel**.

Users

Use this sub-panel to manage users and roles for your organization.

User Management

Use the User Management option to create, edit, activate, and deactivate users in Sugar. You can create a regular Sugar user, an administrator, a group user, or a portal-only user.

A *Sugar user* can access and use Sugar modules but does not have administrative privileges.

An *administrator* is a Sugar user who has administrative privileges in Sugar to perform tasks such as creating users.

A *group user* is a bucket that is used for inbound emails, and does not count toward the number of Sugar licenses that you purchase for your organization. For example, when you create a group mail account for Support, a group user named Support is created to handle customer support issues. Users can then distribute the emails to other users from the group inbox. Users can create a group user with the User Management option or when you create a group for inbound emails as described in **"Inbound Email" on page 53**.

A *portal-only user* is used by portals created in Sugar to access the system. Portal users do not count towards the number of Sugar licenses that you purchase for your organization.

When you create a user, by default, the system creates a regular Sugar user unless you specify Administrator, Group User, or Portal Only User.

You can activate the Offline Client status for any user to allow that individual to use the Sugar application on their local machines without connecting to the Sugar server. For more information on the Offline Client, see the *Sugar Offline Client Installation Guide*.

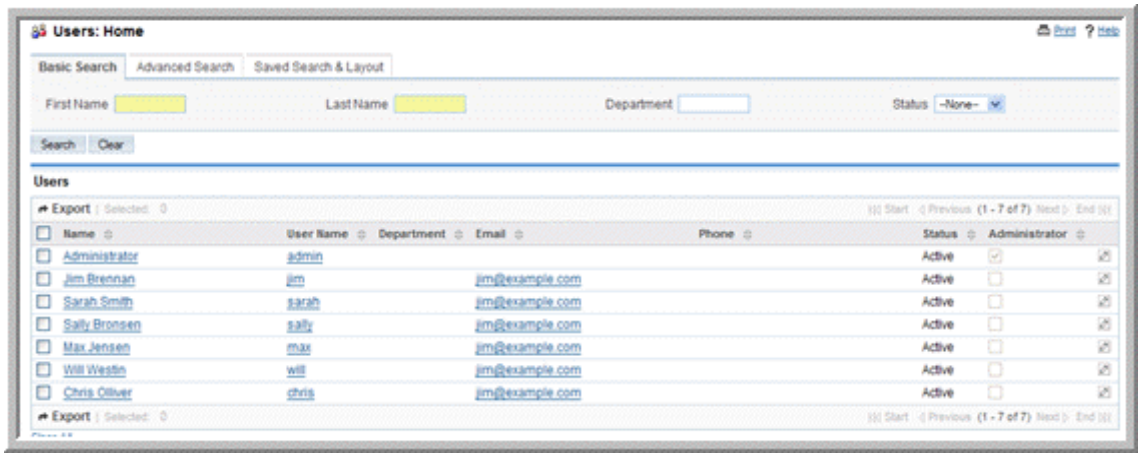
After you create an regular Sugar user, administrator, or portal-only user, the user name displays in the list on the Users Home page and the employees list on the Employees Home page. Group user names display in the users list as group users and does not display in the employees list.

You can assign users to roles depending on the tasks they perform for the organization.

Note: You cannot delete users but you can deactivate them. Inactive users do not count towards the number of Sugar licenses you purchase for your organization.

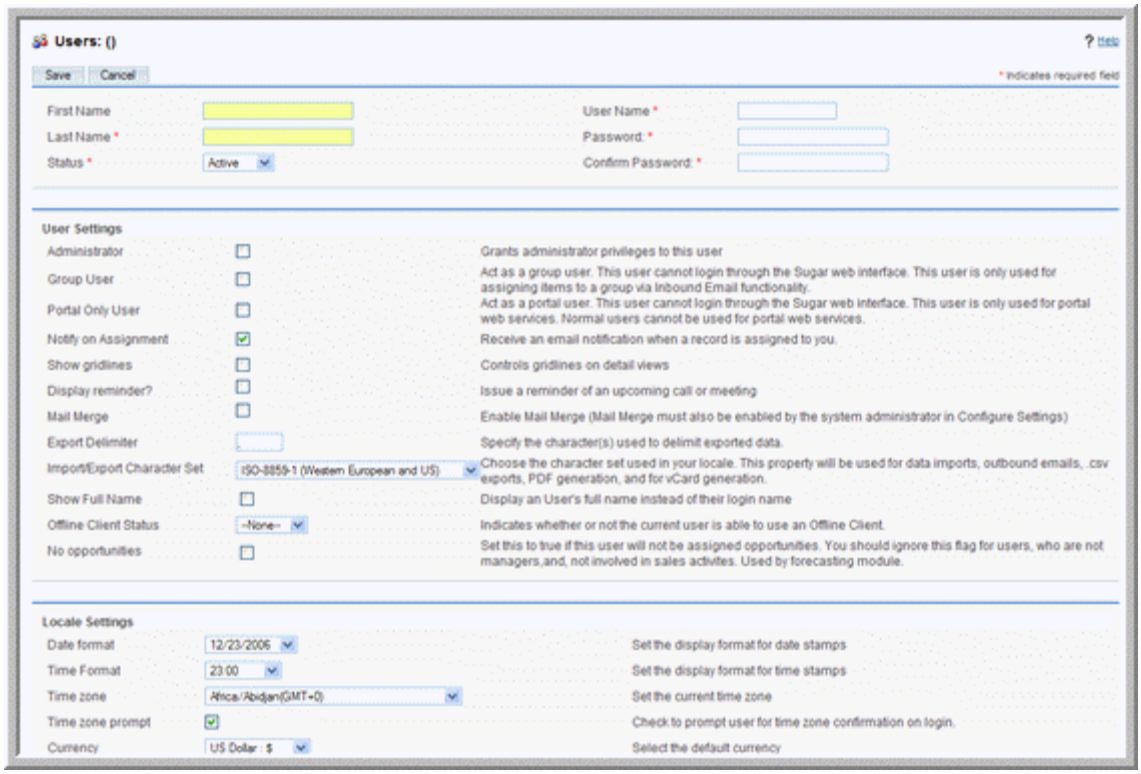
To create a user

1. In the Users sub-panel of the Administration Home page, click **User Management**.



The Users Home page displays on the page.

2. In the Shortcuts menu, click **Create New User**.



3. On the Users page, enter the following information:
   a. In the top sub-panel, enter the user name, the login name and password, and the user status.
   b. In the User Settings sub-panel, select the appropriate option to specify whether the user is an administrator, an end-user, a group user, or a portal-

only user. If you do not select any of these options, the system creates an end-user.

You can enable Email notifications to the user when a record is assigned to that person. You can also enable automatic reminders for upcoming meetings and calls. If the user has access to the Sugar Plug-in for Microsoft Word, you can enable the Mail Merge option.

c. The Locale Settings sub-panel displays the default values for the date and time format, the time zone, decimal symbol, and currency values as specified on the System Settings page. However, you can change these values for individual users if necessary.

d. In the User Information sub-panel, specify whether the user is still active, terminated, or on a leave of absence, the title, department, phone numbers, IM (Instant Messenger) type and ID. You can add comments in the Notes field, if necessary.

e. In the Address Information sub-panel, specify the user's home address.

f. In the Calendar Options sub-panel, you can enter a Publish Key to prevent others from publishing the user's calendar without authorization.

g. In the Layout Options sub-panel, you can limit access to Sugar modules by granting the user access only to specific modules, depending on the tasks that the user needs to perform. By default, the user has access to all the modules. To hide a module from the user's view, move the module tab to the Hide Tabs list using the arrow buttons. Similarly, to display a module to a user, move it from the Hide Tabs list to the Display Tabs list.

To apply these settings to all users, move the modules from the Hide Tabs list to the Remove Tabs list.

To move up a module, select the module in the Display Tabs list and click the up arrow; to move down the module, click the down arrow.

Use the Number of tabs box to specify the maximum number of module tabs to display in the User Interface. Similarly, specify your preference for number of sub-tabs, sub-panel tabs, and sub-panel links. You can also specify the placement of the Last Viewed links and the Shortcuts menu.

From the Navigation Paradigm drop-down list, select Modules if you want each module to be displayed as a separate tab, or select Grouped Modules to group them into categories such as Sales, Marketing, and Collaboration.

h. In the Email Options sub-panel, you can set one or more email addresses for the user's mail accounts. You can further specify whether an email address is the user's primary email address or whether it will be used for an automated response to email. You will also need to specify an email client from the drop-down list. For more information on setting up and configuring emails, see the *Sugar Community Edition User Guide.*

4. To create the user, click **Save**; click **Cancel** to exit the page without saving your changes.

5. To change the user password, click **Change Password**, enter the new password, and save it.

After you create the user, the system adds the user name to the user list on the Users Home page. You can now assign the user to roles.

To assign roles to a user

1. Select the user from the Users list to view the detail page.
2. To assign a role to the user, click **Select** in the Roles sub-panel and select one or more roles that you want to assign to the user.

   The user is assigned to the role and the role is now listed in the Roles sub-panel.

To manage user information

- To update the status of some or all users, use the Mass Update panel on the Users Home page as described in "Editing and Deleting Multiple Records in the *Sugar Community Edition User Guide*.
- To view a user's details, click the user's name in the Users list.
- To edit user details, click **Edit** on the detail page, change the information as needed, and click **Save**.
- To duplicate the user details, on the detail page, click **Duplicate**, edit the information as necessary, and click **Save**. The following field values are not duplicated: Publish key, Layout options, Email addresses, User settings, and Locale settings.
- To change the user password, click **Edit** on the detail page and then click **Change Password**. Enter the new password, and click **Save**.
- If you re-configured your User Preferences settings, Homepage, or Dashboard, and you want to reset it to default values, click the appropriate button.

Role Management

A role defines a set of permissions to perform actions such as viewing, editing, and deleting information. By default, users have access to all Sugar modules. Roles enable you to control user actions in Sugar by restricting access to modules.

For example, if you want to prevent a group of users in your organization from having access to the Opportunities module, you can create a role that restricts access to this module. When you assign this role to an engineer, that individual will no longer be able to access the Opportunities module. Or, you may want to assign junior sales representatives to a role that allows them to view and edit opportunities, accounts, and contacts but prevents them from deleting these records.

Users are affected only if roles that are assigned to them. That is, users who are not assigned a role can, by default, access and take any action in any module. Each user can be assigned zero, one, or multiple roles. Each role can be assigned to zero, one, or multiple users.

An Admin user, by default, has administrator rights for all modules and records. You cannot restrict these privileges with roles.

All changes to roles such as changing role definitions, assigning, or revoking roles take effect for users assigned to the roles upon a new login session after the change has been made.

Creating Roles

When you create a role, you specify the modules that the role can access, the user type such as end-user or administrator, and the actions that they can perform.

Access Type options are as follows:

- Enabled: permits the user to view the module.
- Disabled: hides the module from the user's view.
- Not Set: leaves the setting unchanged.

Privileges are as follows:

- Delete: Delete records in the module. If None is selected, the Delete button is disabled on the detail page.
- Edit: Users can edit records in the module. If None is selected, the Edit button is disabled on the detail page. Additionally, the user cannot use the Mass Update panel to update records for the module.
- Export: Export record data in the module. The Export link located at the top of List Views is removed when this privilege is not available to the user.
- Import: Import record data in the module. The Import link in the navigation bar does not appear when this privilege is not available.
- List: Users can view list of records in the module or in a sub-panel but cannot edit them. Users are unable to access the module's list view when this privilege is not available.
- View: Users can view the detail page of records in the module.

  Action options are as follows:

  - All: all users who are assigned to the role can perform the action.
  - Owner: Only the user who is assigned to the record can perform the action. If there is no assigned user, then the user who created the record can perform the action.
  - None: prevents all users assigned to the role from performing the action.
  - Not Set: leaves the setting unchanged.

When a user is assigned multiple roles, the roles definitions are merged and the more restrictive settings prevail. For example, if a user is assigned to two roles pertaining to one module where one role grants administrator access and the other grants end-user access, then user has only end-user access. In this case, the end-user access overrides the role with the administrative access because it is more restrictive.

A special case is the "Not Set" value in a role definition. You can use "Not Set" to ensure that a role does not affect a particular setting. This allows simple roles to be constructed and then combined to achieve the desired security level.

For example, if users are assigned to both the following roles:

Role A, where User Type = Admin and Export (action) = None

Role B, where User Type = Normal and Export (action) = All

Then, users can only see records that are assigned to them. But they cannot export the data.

If you change the User Type to Not Set:

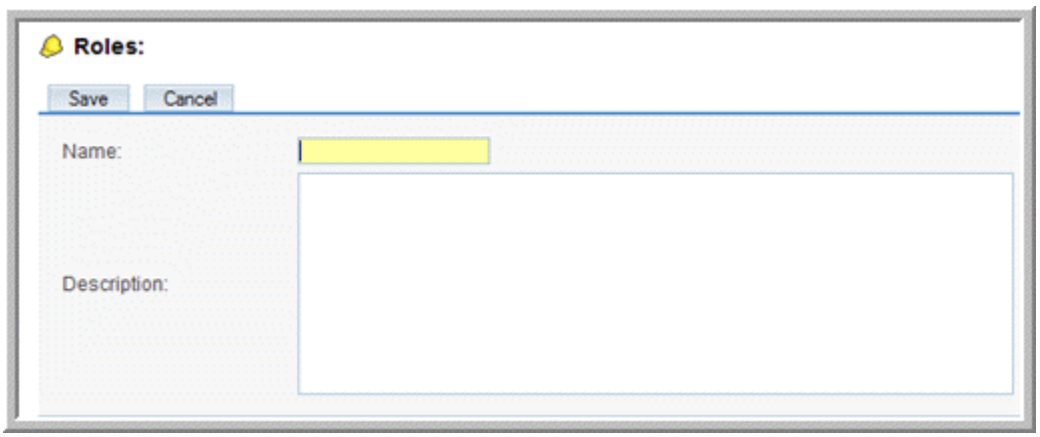
Role A, where User Type = Admin and Export (action) = All

Role B, where User Type = Not Set and Export (action) = None

Then the user can see all records in the module but cannot export the data.

To create a role

1. In the Shortcuts menu of the Roles Home page, click **Create Role**.



2. Enter a name and description for the role.

   All the Sugar modules along with the associated properties and actions are listed below in table format. You use this table to disable/enable modules or grant/deny permissions to perform specific actions.

3. Click **Save** to create the role.

   The Edit View of the role displays a list of available modules along with the action type.

4. To specify access to a module, double-click the Access field corresponding to that module, and from the drop-down list, select **Enabled**; to deny access to the module, select **Disabled**.

5. To specify the user type, double-click the User Type field corresponding to the module and select **Normal** to specify end-user privileges or **Admin** to specify administrator privileges.

6. To set role permissions for a module, such as editing or deleting records, double-click the appropriate Action field corresponding to the module, and select one of the following:

   All: allows all users of the specified user type to delete a record in the module.

   Owner: allows only the record owner to delete the record.

   None. Prevents all users of the specified user type from deleting records in the module.

Actions are as follows:

- Delete: Delete records in the module. If None is selected, the Delete button is disabled on the detail page.
- Edit: Edit records in the module. If None is selected, the Edit button is disabled on the detail page. Additionally, the user cannot use the Mass Update panel to update records for the module.
- Export: Export record data in the module. The Export link located at the top of List views is removed when this privilege is not available to the user.
- Import: Import record data in the module. The Import link in the navigation bar does not appear when this privilege is not available.
- List: List views of records in the module. The user is unable to access the module's list view when this privilege is not available.
- View: View records in the module. The user is unable to access the module detail view when this privilege is not available.

7. To create the role, click **Save**; click **Cancel** to exit the page without saving your changes.

To assign users to a role

1. In the role's Edit View, scroll down to the Users sub-panel and click **Select**.
2. Select users from the Users list and click **Select** again.

   The system assigns the selected users to the role. Alternatively, you can also assign users to a role in the User Settings sub-panel of the User Management page. Role restrictions do not apply to Admin users.
3. Click **Save**.

To manage roles

1. To view the role details, click the role name on the Role home page.
2. To edit the role, on the detail page, click **Edit**, revise the information, and click **Save**.
3. To duplicate the access control information, on the detail page, click **Duplicate**, enter a new name for the role, and then click **Save**. Note that the users list associated with the role is not duplicated.
4. To delete the role, on the detail page, click **Delete**.
5. To view access permissions for a specific user, in the Shortcuts menu, select **List Roles by User** and select the user from the adjacent drop-down list.
6. To remove a user, in the Users sub-panel, click the Remove (rem) icon corresponding to the user name.

To view roles for a user

1. In the Shortcuts menu of the Roles home page, click **List Roles by User**.
2. Select the user from the drop-down list.

The page displays details of the user's privileges for each module. The restrictions are then merged and the more restrictive settings across all roles are assigned to the user. You cannot change any of the privileges because they are associated with the role.

Emails

Use this sub-panel to manage inbound and outbound emails for your organization. The Email panel on the Administration page displays options to configure mail settings, setup mail accounts to route inbound emails, and manage the email queue.

Email Settings

Use this option to set the default settings for outbound and inbound emails.

For outbound emails, this includes the following:

- Default notification settings that specify the "From" name and address for notification emails that are sent to users when record are assigned to them.
- The defaults for the Mail Transfer Agent, email format, and the email client for outbound emails.

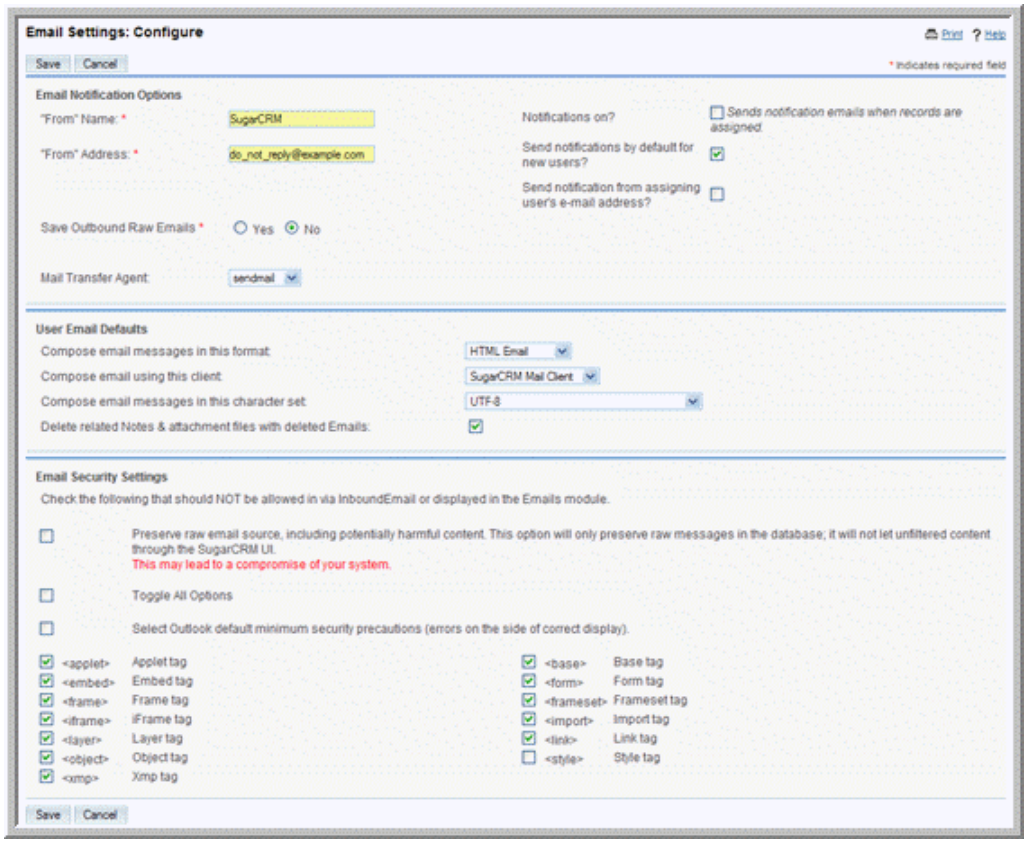
In the Emails module, users can override some mail settings that you configure on this page such as the email format and the character set used when composing emails.

For inbound emails, you can specify whether you want to preserve emails' raw source or not. Not preserving the raw source prevents compromising your system.

You can select tags, such as applets and frames, that you want stripped from incoming emails. When you do this, the system checks incoming emails for the specified tags and removes them before displaying the email in the application. The email is stored in the Sugar database, so you can choose to preserve the raw email source in the database without stripping any of the specified tags. However, this action may compromise your system.

To configure email settings from the Administration page

1. In the Email Settings sub-panel of the Administration page, click **Email Settings**.



2. In the Email Notification Options sub-panel, enter information for the following fields:

   From Name. Enter the name of the sender.

   From Address. Enter the sender's address.

   Notifications on? Select this option to send an email notification to users when a record for any of the following modules is assigned to them:

   Accounts

   Contacts

   Opportunities

   Leads

   Meetings

   Calls

   Tasks

   Cases

   Bugs

   Quotas

   Campaigns

Send Notifications by default for new users? Select this option to send an email notification to new users when you create their record in the User Management page.

Send Notifications from assigning user's email address? Select this option to send notifications from the email address of the user when responding to an assigned record.

Save Outbound Raw Emails. Select **Yes** to preserve the email source in the database; or else select **No**.

Mail Transfer Agent. From the drop-down list, select either Sendmail or SMTP as the Mail Transfer Agent for your outbound emails.

If you select SMTP, enter the following information:

SMTP Server. Enter the SMTP mail server's address.

SMTP Port. Enter the mail server's port number.

Use SMTP Authentication? Select this option if the mail server requires authentication to send out the email; enter your username and password for the email account in the **SMTP Username** field and the **SMTP Password** field respectively.

Enable SMTP over SSL. Select this option if you are using the POP3 protocol and the mail server requires SSL.

To add Google's Gmail server, click **Prefill Gmail Defaults**.The system fills in the SMTP Server and SMTP Port fields with the Gmail server address and port number respectively.

3. In the User Email Defaults sub-panel, select the following information:

   Compose email messages in this format: Select HTML email or Plain Text email from the drop-down list.

   Compose email using this client: The default is the SugarCRM mail client, but you can select an external mail client such as Microsoft Outlook.

   Compose email messages in this character set: Select the appropriate character set from the drop-down list. The default character set is ISO-8859-1.

   Delete related Notes & attachment files with deleted Emails: Select this box to delete notes and attachments that are related to the deleted emails.

4. In the Email Security Settings sub-panel, specify the following information:

   Preserve Raw Email Source. Select this option to preserve raw messages in the database but prevent unfiltered content through the Sugar User Interface.

Note: If you want to preserve the raw source of incoming emails, ensure that you select that option on the Inbound Email page as well. In case of a conflict, the option you select on the Inbound Email page will override your selection on the Emails Settings page.

Toggle all options. Check this box to strip all the listed tags from inbound emails. To strip some of the listed tags, you can uncheck this box and then select individual tags.

Select Outlook Default Minimum Security Precautions. Select this option if you do not want to strip the Style tag, which is used by Outlook.

5. To save your email settings, click **Save**; click **Cancel** to exit the page without saving your changes.

Configuring Email Settings for Campaigns

You can specify email settings for email campaigns from the Campaigns module or from the Administration Home page.

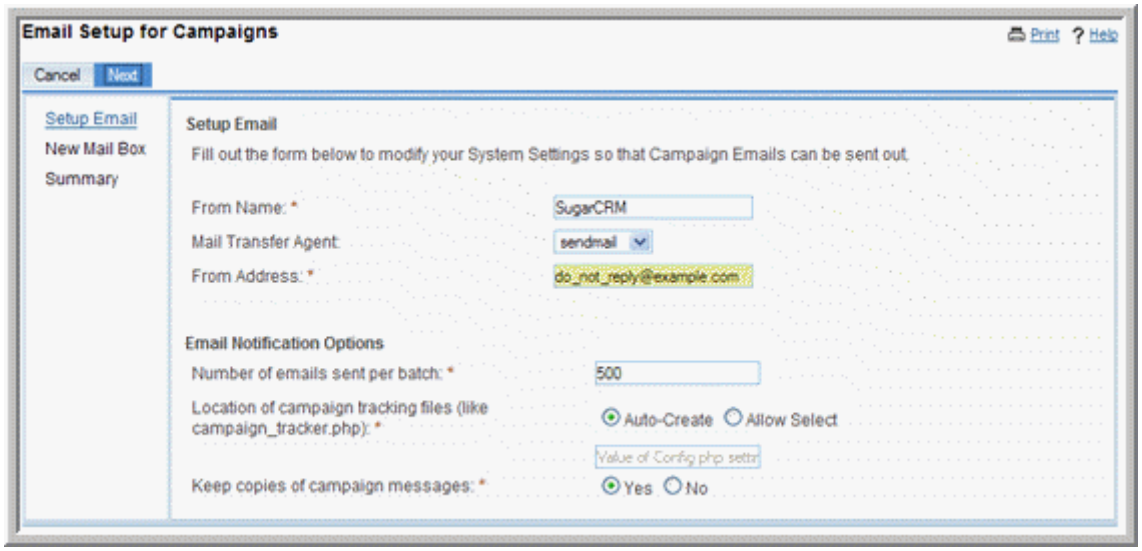
By default, the system stores copies of the campaign email that was sent to each target in the Sugar database. As a result, the database contains duplicate copies of the same email. This not only takes up space but also slows down performance. To enhance performance, you now have the option of storing only one campaign email in the Sugar database. You can map this email to all the campaign targets instead of storing duplicate copies for each target. You can set this option when you configure the email settings from the Campaigns module. However, when you select this option, you will lose some information such as the timestamp.

For information on campaigns, see the *Sugar Community Edition User Guide*.

To configure email settings for email campaigns

1. To configure email settings from the Campaigns module, log into Sugar as the administrator, and click **Email Setup** in the Shortcuts menu of the Campaigns Home page.

   The screenshot below displays the Email Setup for Campaigns page in the Campaigns module.



2. The Setup Email section, displays the default values for the following. You can enter new values, if needed:

   From Name. The name of the sender.

   Mail Transfer Agent. The default protocol, which is sendmail. You can change this to SMTP from the drop-down list.

From Address. The email address for the sender.

Note: The name, address, and Mail Transfer Agent values that display on this page reflect the default values set on the Email Settings page. These values do not display on the Campaign Email Settings page that you access from the Administration Home page. Any changes that you make to the information on this page will be reflected in the Email Settings page.

If you select SMTP, enter the following information:

SMTP Server. Enter the name of the SMTP server.

SMTP Port. Enter the SMTP port number.

SMTP Password. Enter the SMTP password.

Use SMTP Authentication. Select this box to use SMTP authentication.

SMTP Username. Enter the SMTP user name.

In the Email Notification Options section, enter the following information:

Number of emails sent per batch. Enter the maximum number of emails to send per batch.

Location of campaign tracking files. Campaign tracking files log responses from campaign targets.

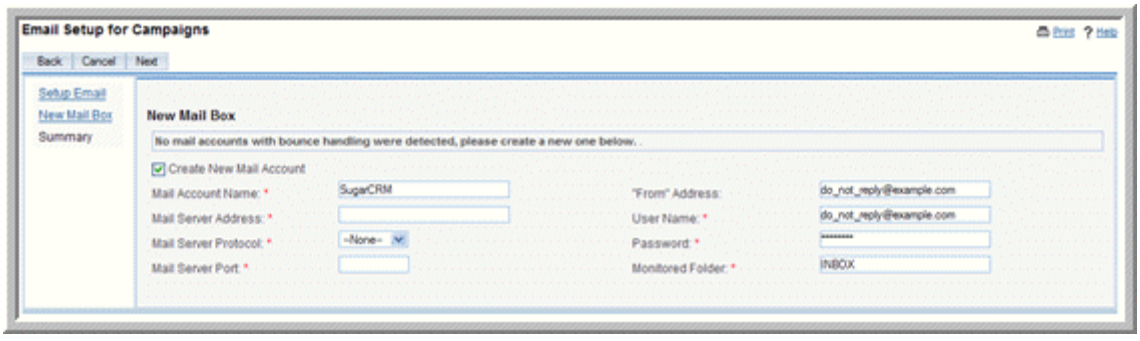
If you are running Sugar on an external network, select Default and accept the default location. If you are running Sugar on your internal network, move the *Campaign_tracker2.php*, *Removeme.php*, and *image.php* files from the Sugar root directory to a directory on your public Website so that you can track the responses of your campaign targets.

To specify the location of these campaign tracking files, select User Defined and enter the path in the field below.

Keep copies of campaign messages. To save a copy of campaign message in the Sugar database, select **Yes**. If not, select **No**.

3. Click **Next**.

   The page displays the Bounce Handling mail account, if one already exists. If not, the screen displays the New Mail Box form, which you can use to create a Bounce Handling mail account.



4. Select **Create New Mail Account** to create a mail account to receive bounced emails.

5. Enter the mail account information as described in **"To set up a Group mail account" on page 55** and click **Next**.

   The system displays a summary page that lists the specified settings.

6. Click **Save** to save the settings and create a bounce-handling inbox; to navigate back to the previous screen, click **Back**; to go back to the Campaigns Home page without saving any of the specified information, click **Cancel**.

Inbound Email

Use this option to create a Group mail account to view emails from an external email server and share them with multiple users for necessary action. When you receive emails that are addressed to your organization but not to any particular user, you can route it 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 users.

Using Group Folders. You can create a stand-alone Group folder in the Emails module that not associated with a Group mail account. You can manually move emails from an external email server into the group folder and distribute them among users. However, in order to automatically import emails into Sugar and route them to a Group folder, you must associate a Group mail account with the Group folder. When you associate a Group mail account with a Group folder, you can specify an action to generate cases from imported emails and automatically assign them to users for resolution.

Typically, you create group folders in the Emails module. However, you can create a Group folder and associate it Group folder with a Group mail account from the Inbound Email Setup page when you are in the process of creating or editing the account. For information on creating a Group folder, see **"To create and edit Group folders from the Emails module" on page 57**.

To help make a decision on whether to use Group mail accounts, Group folders, or both, use the recommendations listed below. For more information on Group folders, see "Email Folders" in the *Sugar Community Edition UserGuide.*

Group Mail Account without Group Folder	Group Mail Account with Group Folder
Can import emails manually into the Sugar database as needed. This option is recommended if: • The mail server does not have a powerful spam filter and you want to avoid importing spam emails. • You do not have enough database storage space to store a large number of emails. • If you are creating the account to store bounced campaign emails.	Can import emails into the Sugar database automatically through a batch process. This option is recommended if: • The mail server has a powerful spam filter to help you prevent importing spam emails. • You have enough database storage space to store a large number of emails. • If you are creating the account to automatically create cases and assign them to users.

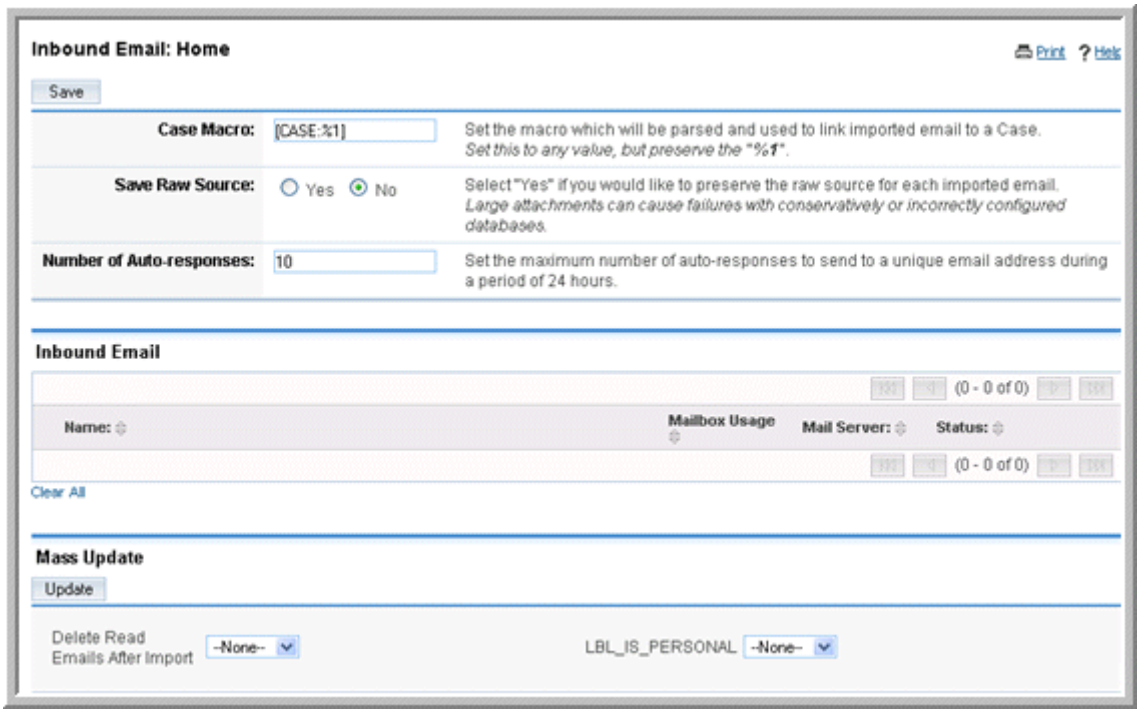
Creating Cases from Emails. Sugar can automatically generate cases from inbound emails. However, in order to do this, you must associate the Group folder with a Group mail account and select the "Create Case" action. When the case is created, it is assigned to a user and an email notification is sent out to that individual. The email's Subject line is copied to the case's Subject line and the body is copied as the case description. The email for which the case was created is also listed in the History sub-panel of the case's Detail View.

Optionally, you can use the Create Case Reply template to set up an automated response notifying senders that a case has been created to resolve their issue. The email contains the number of the newly created case in the Subject line. The case number format follows the Case Macro setting.

You can also use the Auto-reply template to automatically notify senders that you received their email.

To configure inbound emails

1. In the Email sub-panel of the Administration Home page, click **Inbound Email**.



2. Specify the following information:

   Case Macro. This field imports an email and associates it with a case based on the Subject line. When users send an email from the detail page of a case, the case number appears in the Subject field of the email. The Case Macro field displays the default Case Macro string. To customize it, you can change CASE to a different word but you must preserve the rest of the string.

   Save Raw Source. Select **Yes** to preserve the raw email source for imported emails in the database without stripping any of the specified tags. For more information, see **"Email Settings" on page 48**.

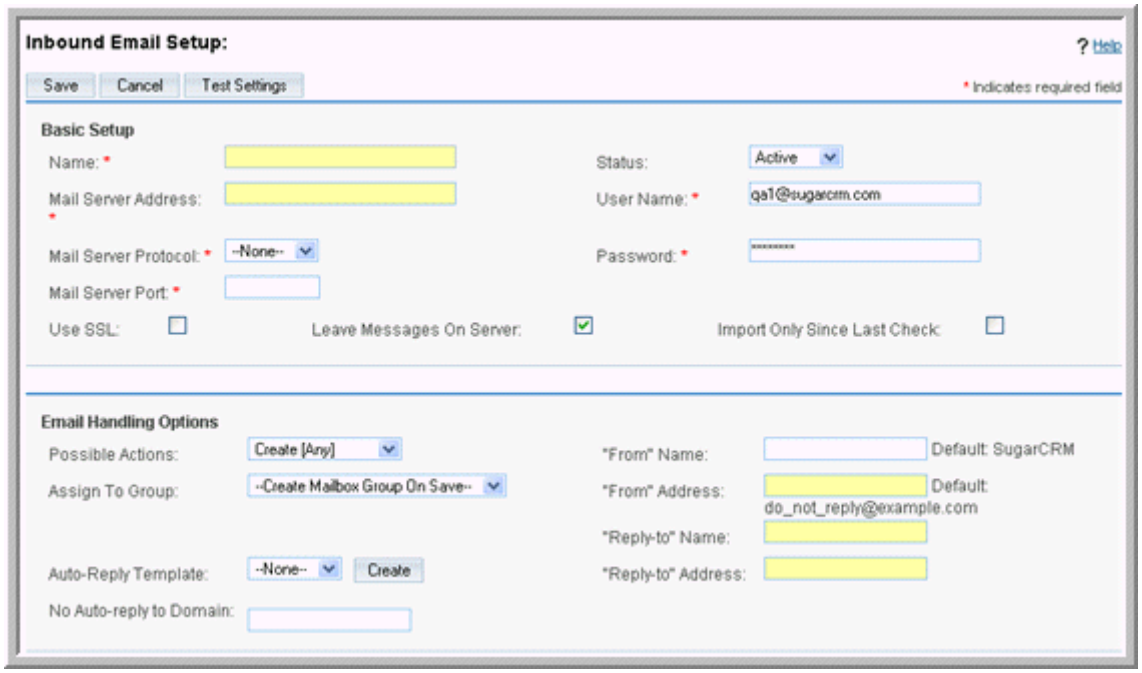
Number of Auto-responses. Use this field to specify the maximum number of automated responses to send to a specific email address during a period of 24 hours.This prevents an endless loop in the event that the email recipient has set up an out-of-office responder. If not, when Sugar receives the automated response, it responds with automated response, thus causing an endless loop.

3. Click **Save**.

To set up a Group mail account

1. In the Shortcuts menu of the Inbound Email home page, click **Monitor New Mail Account**.

The Inbound Email Setup page displays on the screen



2. In the Basic Setup sub-panel, enter information for the following fields:

   Name. Enter the user's name, or an alternate name for the mail account.

   Mail Server Address. Enter the address of the external mail server.

   Mail Server Protocol. From the drop-down list, select either IMAP or POP3.

   When you select IMAP, additional fields display on the screen to select a Monitored folder, a Trash folder, and a Sent folder.

   Monitored Folders. Click **Select** and select the folders that you want users to be able to access from the Emails module. The default folder is "Inbox". To select multiple folders, hold down the Shift key or the Ctrl key. When you create an account for an external mail account such as Yahoo or Google, you must ensure that you are using their mail server protocol.

Note: If you use the default "Inbox" folder value to access a Google mail account, you will be able to view emails in all the folders in your Google mail account because Google does not have a folder named Inbox. To

view only specific folders from your Google mail account, ensure that you select them in the Monitored Folders list.

Trash Folder. Click **Get Trash Folder** to add a trash folder to the Emails module. Select the Trash folder from the Folders' list, and click **OK**.

Sent Folder. Click **Get Sent Folder** to add a folder to store outbound emails in the Emails module. Select the folder from the Folders' list, and click **OK**.

Mail Server Port. Enter the server port number.

Status. From the drop-down list, select **Active** to activate the Group mail account or **Inactive** to deactivate it. Users cannot view emails from a deactivated account.

User Name. Enter the username to access the mail server.

Password. Enter the user's password.

Use SSL. Select this box to use Secure Socket Layer (SSL) when connecting to the mail server.

3. In the Email Handling Options sub-panel, enter information for the following fields:

Assign To Group Folder. If you want to assign a Group folder to the mail account, select an existing email group from the drop-down list or click **Create** to create one as described in **"To create and edit Group folders from the Emails module" on page 57**.

Note: Only the team assigned to the Group folder has access to the emails routed to the folder. If the team selected in the Assign to Team field is different from the team assigned to the Group folder, it will not be able to access emails in the Group folder.

Possible Actions. Optionally, you can select an action that the user is permitted to perform. If you assigned a Group folder, you can select **Create Case**. You can select **Bounce Handling** to use the mail account for handling bounced emails from campaigns.

To automatically create cases from inbound emails, select **Create Case**. When you select this option, you will need to specify how the emails are distributed in the Distribution Method field. You can select Round-Robin or Least-Busy. With the Round-Robin option, the system distributes cases evenly amongst all users within the specified team. With the Least-Busy option, the system distributes cases to the least busy user within the team assigned to the Group folder.

If you run campaigns and want to create an inbox to route bounced campaign emails, select **Bounce Handling**. 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.

Create Case Reply Template. Optionally, you can use the Create Case Reply template to set up an automated response notifying email senders that a case has been created to resolve their issue. The response contains the system-generated

case number in the Subject line of the email. The body of the email for which the case was created displays below the template text.

Auto-Reply Template. Optionally, use this template to set up an automated response notifying email senders that you received their email. From the drop-down list, select an existing template, or click **Create** to create a new one.

If both templates are selected, Sugar will respond to the sender with the Create Case Reply template instead of the Auto-Reply template.

For information on creating email templates, see "Creating Email Templates" in the *Sugar Community Edition User Guide*.

From Name. Enter the name of the user who is sending out the email.

From Address. Enter the email address of the user.

Reply-to Name. Enter a name to receive bounced emails.

Reply-to Address. Enter an email address for bounced emails.

No Auto-reply to Domain. To exclude a domain from receiving the automatic email response, enter the domain name.

It is common to specify your organization's domain to prevent auto-replies from being sent to your organization's members.

Assign to Group Folder. To route emails to an existing group folder, select an existing one from the drop-down list or create a new folder as described in **"To create and edit Group folders from the Emails module" on page 57**.

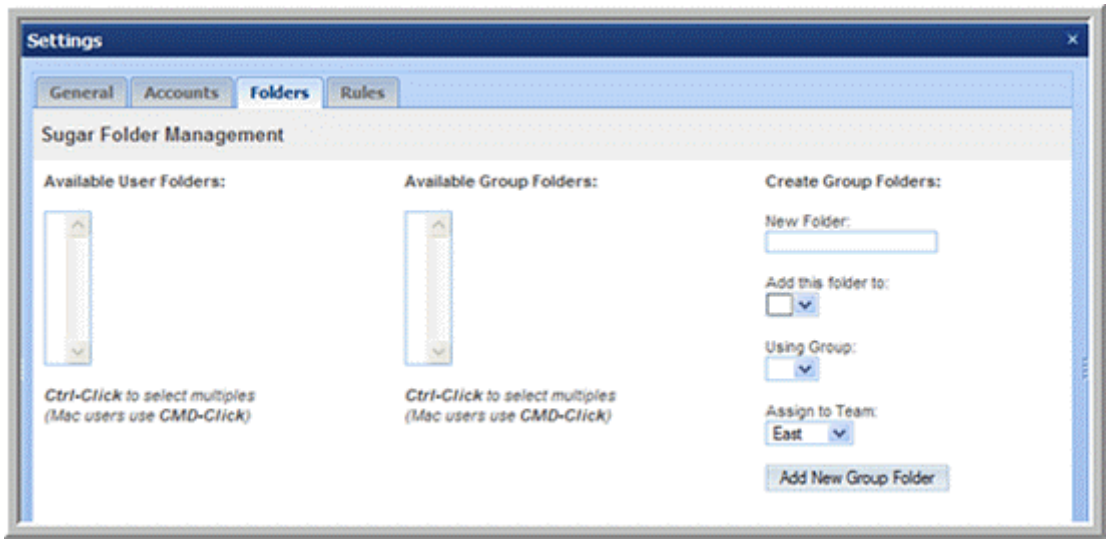
4. Click **Test Settings** to ensure that the settings are accurate.
5. Click **Save** to save the settings.

   The system creates the mail account and displays its detail page.

To create and edit Group folders from the Emails module

1. In the Emails module, click **Settings**.
2. In the Settings window, click the **Folders** tab.

Existing user folders and Group folders display on this tab.



3. Beneath the Edit Group Folder drop-down list, enter information for the following fields:

   New Folder. Enter a name for the Group folder.

   Add this folder to. If this is the first group folder that you are creating, select **None**. If you already have one or more group folders and want to create a sub-folder, select the parent folder from the drop-down list.

   Assign to Group. Select a group from the drop-down list.

4. Click **Add New Group Folder** to create the folder.

   The new folder displays in the Assign to Group Folders drop-down list.

To edit a Group folder

1. To edit a Group folder from the Emails module, select it from the Edit Group Folder drop-down list in the Settings window, make the necessary changes, and click **Save**.
2. To edit a Group folder from the Inbound Email Home page, in the Edit View of the associated Group mail account, click the **Edit** button adjacent to the Assign to Group Folder field; make the necessary changes, and click **Save**.

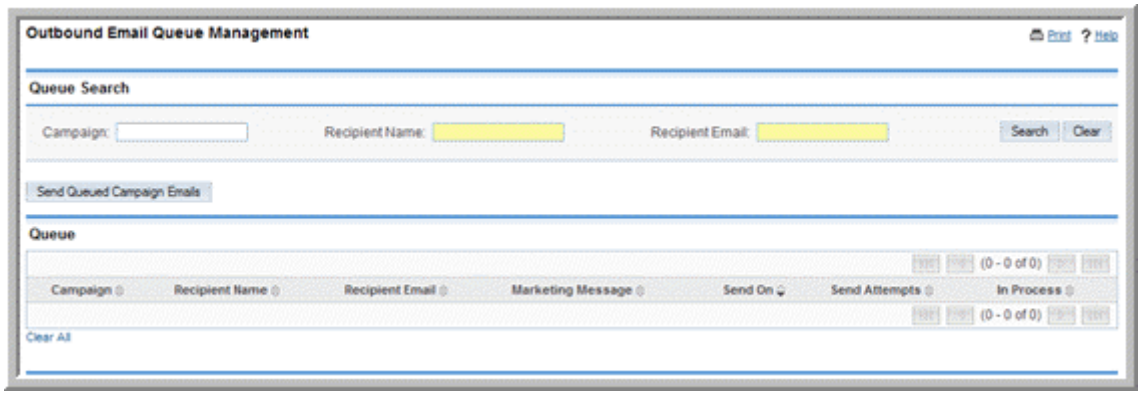
To manage monitored mail accounts

- To view the details of a mail account, click its name in the Inbound Email home page.
- To edit the account, click **Edit**, revise the information, and click **Save**.
- To duplicate the account, click **Duplicate**. The system creates a new mail account and displays the Edit page. You can edit the details and click **Save** to create a new account.
- To delete a mail account, select it and click **Delete**; to delete multiple mail accounts, select them on the Inbound Email home page and click **Delete**.

Manage Email Queue

Use this option to view, send, and delete mass campaign emails that are in the queue for dispatch. The system sends out the email only after the start date/time has passed. After a campaign email has been processed, you can view its status in the Campaign module. The system tracks statistics such as the Sent date and number of times an email delivery was attempted.

Use the Scheduler to run nightly mass email campaigns as well as monitor bounced campaign emails. For more information on scheduling email mailings, see **"Scheduler" on page 27**.



To manage queued emails

1. To send out campaign emails, select the campaign in the Queue sub-panel below and click **Send Queued Campaign Emails**.

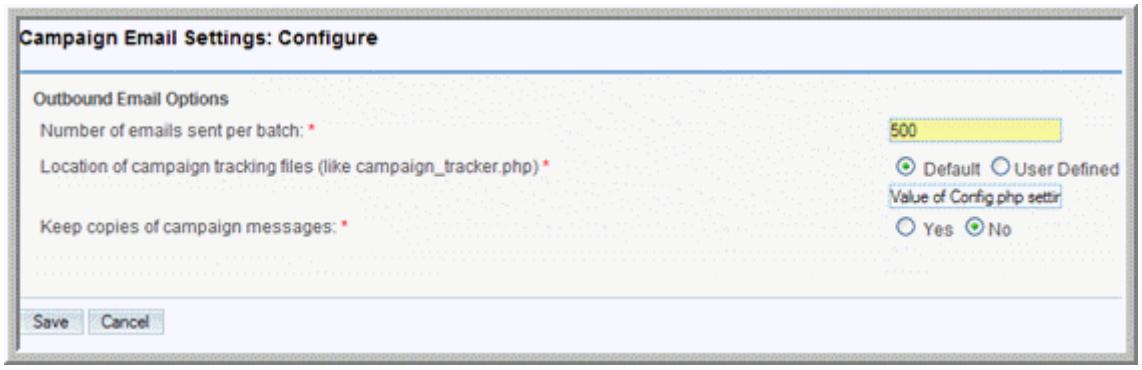
   You can select more than one campaign at a time.

2. To delete campaign emails, select the campaign in the Queue sub-panel below and click **Delete**; click **OK** to confirm the deletion.

3. To search for a specific campaign, enter the campaign name, or recipient name, or recipient address in the Search fields above and click **Search**; click **Clear** to clear the search fields.

Campaign Email Settings

Use this option to specify outbound email settings for email campaigns.



To specify campaign Email settings

1. **Number of emails sent per batch**. Enter the number of campaign emails to send out in a batch every time the scheduled job runs.
2. **Location of campaign tracking files**. You can specify the location of campaign tracking files in this panel. Campaign tracking files log the responses from the campaign targets.

   If you are running Sugar on an external network, select **Default** and accept the default location.

   If you are running Sugar on your internal network (for example, *http:/ privatemachine/sugar/index.php)*, move *Campaign_tracker2.php*, *Removeme.php,* and *image.php* files from the Sugar root directory to a directory on your public Website (for example, *http://mycompany.com*) so that you can track the responses of your campaign targets. To specify the location of these campaign tracking files, select **User Defined** and enter the path in the field below.

   When a target opens the campaign email or clicks an embedded image, the action is logged in the *Campaign_tracker2.php* file or the *image.php* file respectively. When a target opts out of the campaign, the action is logged in the *Removeme.php* file.
3. **Keep copies of campaign messages**. Specify whether you want to store a copy of every email that is sent out to the campaign targets or if you want to keep only one copy. Select **Yes** to keep copies of every email. The default is **No**.

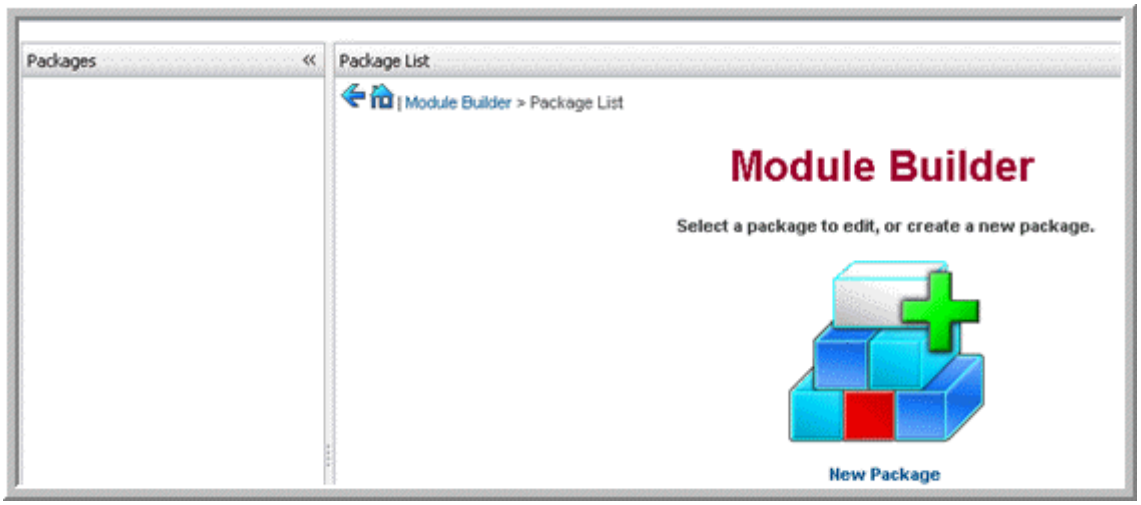
Developer Tools

The Developer tools sub-panel displays options to build new modules and customize existing ones. The Module Builder enables you to build custom modules and Studio enables you to customize existing modules. To create relationships between modules, see **“Creating Relationships” on page 80**.

After you build a module in Module Builder, you can deploy the module directly within the current instance or you can use the Module Loader to install it in another Sugar instance. For more information, see **“Module Loader” on page 85**.

Module Builder

Use the Module Builder to create custom modules.



The process of creating a custom module is as follows:

1. Create a package to house the new module. You can create one or more modules within a package.
2. Create a module using one of the following templates that Sugar provides for you.

   Basic. This template provides basic fields such as ID, Date Entered, and Created By. Use this template to create a module from scratch.

   Company. This template provides organization-specific fields such as Company Name, Industry, and Billing Address. Use this template to create a module that is similar to the Accounts module.

   File. This template provides document-specific fields such as File Name and Document Type. Use this template to create a module that is similar to the Documents module.

   Issue. This template provides case and bug-specific fields such as ID, Description, and Created By. Use this template to create a module that is similar to the Cases module or Bug Tracker module.

   Person. This template provides individual-specific fields such as salutation, title, name, address, and phone number. Use this template to create a module that is similar to the Contacts module or the Leads module.

   Sale. This template provides opportunity-specific fields such as Lead-Source and Probability. Use this template to create a module that is similar to the Opportunities module.

Note: The Sale template is a replacement for the Chance template, which existed in 5.1RC. Before you upgrade to 5.1GA, you need to delete all Chance-based modules. You can re-create them as Sale-based modules after the upgrade.

3. Create new fields, if necessary. You can also rename default fields from the template.

Note: Apart from field names, you cannot edit other field properties in a template. However, you can duplicate the fields and save them with a different name to customize them. You can choose which fields appear in the module layouts.

4. Customize page layouts for List View, Edit View, Detail View, Sub-panels, Search form, and Sugar Dashlets, if necessary.
5. Create relationships between the new module and other modules, if needed. A Sugar module, typically, has multiple relationships with other Sugar modules. When you create a custom module, you can define its relationship with other Sugar modules.
6. Save the package and distribute it.

   You can choose one of the following options to distribute the package:

   - **Publish**. This option is designed for distribution to specific users or customers. The system creates a zip file, which you can save on your local machine. You can then email it to one or more individuals who can use the Module Loader to upload the zip file into their Sugar instance.

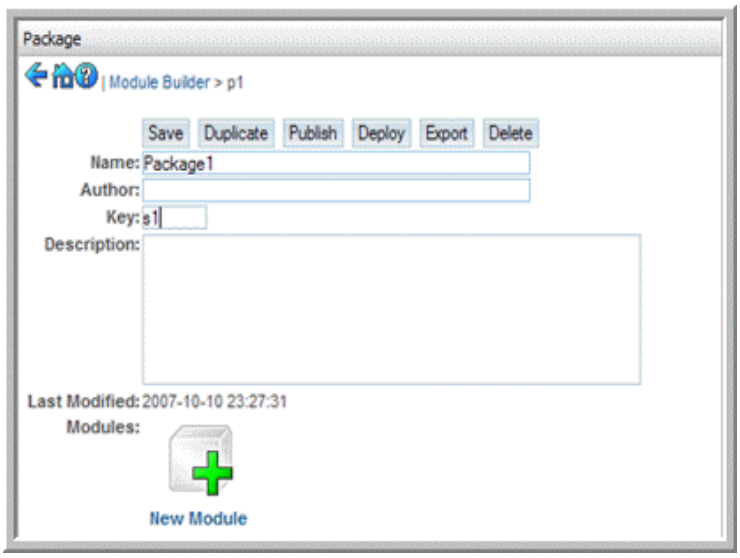
     After the module is installed through Studio, you can add or remove fields and make other changes to a published module.
   - **Deploy**. This option is designed to install the custom module on your Sugar instance and make it available to users in your organization. Through Studio, you can add or remove fields and make other changes to a deployed module.
   - **Export**. This option is designed for distribution to developers. The system creates a zip file, which you can save on your local machine and email to other developers. Using the Module Loader, developers can install it on their Sugar instance and customize it further in Module Builder if necessary. The package is visible only in Module Builder and, hence, only administrators can access it until it has been deployed.

To create a package

1. In the Developer Tools sub-panel, click **Module Builder** to view the Module Builder page.
2. Click **New Package**.

   The Package page displays on the screen.
3. Enter a name for the package and click **Save**.

The system refreshes the page and displays options to duplicate, publish, deploy, export, and delete the package.



4. Enter information for the following fields:

   Author. Enter your name as the creator of the package.

   Key. Enter an alphanumeric key to distinguish modules with similar names. The system will prefix all class names, directories and tables names with this key.

   Description. Enter a brief description of the package.

5. Click **Save** to create the package; to delete the package, click **Delete**.
6. After you save the package, if you want to create a copy, click **Duplicate**.

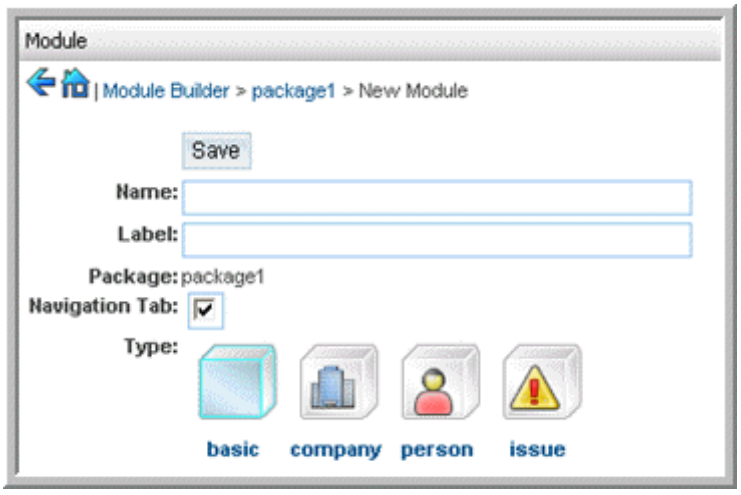
   The system appends a "1" to the package name and saves it as a new package.

7. To publish the package after saving it, click **Publish**.
8. To deploy the package on your Sugar instance after saving it, click **Deploy**.
9. Click **Export** to save the package as a zip file on your local machine.

To create a module

1. Click the **New Module** icon on the Package page.

The Module page displays on the screen



2. Enter information for the following fields:

   Module Name. Enter a name for the module.

   Label. Enter a name for the module that you want displayed in the Sugar User Interface.

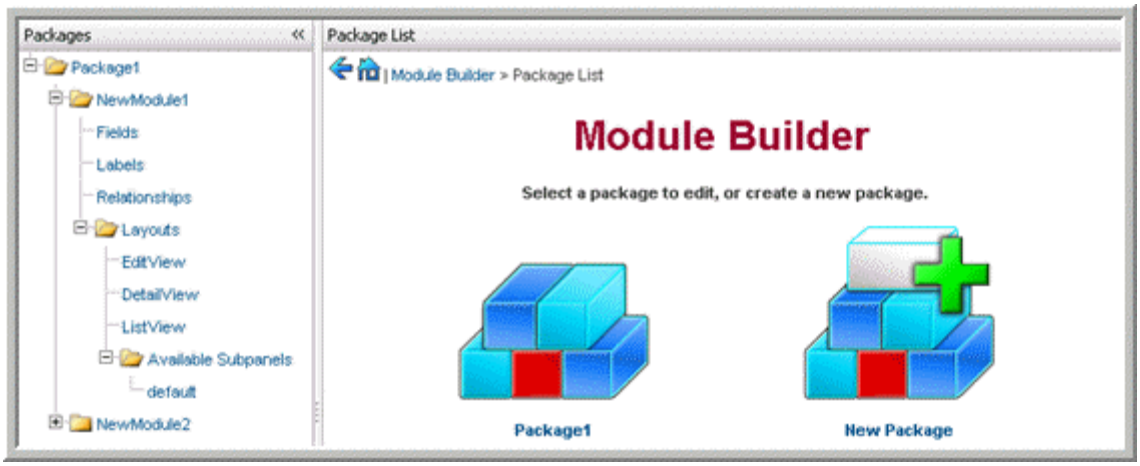
   Importing. Selecting this option to allow data import into the module.

   Navigation Tab. By default, this option is enabled to create a tab for the module that is identical to other Sugar module tabs.

   Type. Click a template to select it for your module

3. Click **Save** to save the module and add it to the package.

   The system refreshes the page to display the selected template. The new module is nested within the package listed in the Packages panel on the Module Builder home page.



The Packages panel on the left lists all the modules you create within a package. Default fields, labels, layouts, sub-panels, and relationships from the selected template are nested under the module. You can click them to view their details.

You can also edit the default layouts, add new fields, and create relationships with other Sugar modules.

For information on customizing a layout or the Search form, see **"Editing the Layouts" on page 71**. For information on creating new fields, see **"To add custom fields" on page 68**. For information on defining relationships, see **"Creating Relationships" on page 80**.

To edit Sugar Dashlets

1. On the custom module page, click **View Layouts**. Alternatively, click **Layouts** in the Packages panel on the left.

2. Click **Sugar Dashlet**.

   You can edit the List View and the Search form for Sugar Dashlets.

3. To edit the List View, click **Sugar Dashlet List View** and follow the procedure described in **"To edit List View" on page 73**.

   To edit the Search form, click **Sugar Dashlet Search** and follow the procedure described in **"To edit the Search form" on page 75**.

To distribute or install a package

1. In Module Builder, select the package and click **Publish**, **Deploy**, or **Export**.

   When you select Publish or Export, the system saves it as a zip file that you can export to your local machine and distribute as needed. When you select Deploy, the system installs all the custom modules in the package on your Sugar instance.

2. When you choose Publish or Export, select **Save to Disk** and click **OK**.

   Use the Module Loader to upload the file from your machine into Sugar and install the module. For more information, see **"Module Loader" on page 85**.

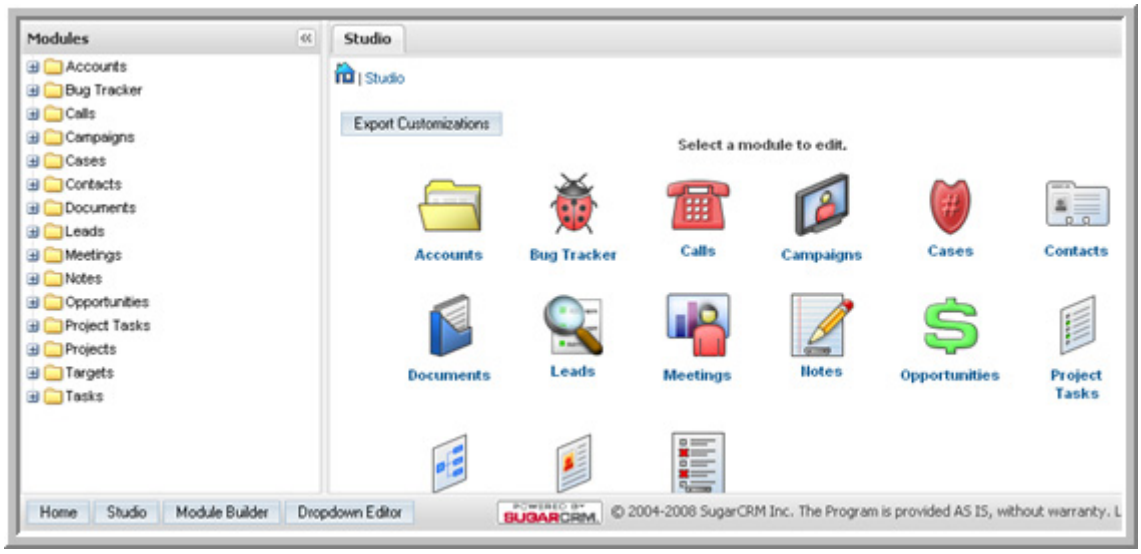
Deleting Packages

You can delete a package if necessary. When you delete a package, all the files that it contains are also deleted. If you delete a package after it has been deployed, you can uninstall the deployed package using the Module Loader. When you uninstall a package, you have the option of retaining or removing the database tables.

You do not need to delete a package before you install a newer version. The files from the new version will override any existing files from the earlier package. That is, any updates that you made to the package before re-deploying will override files from the earlier package.

Studio

Studio enables you to customize modules by adding new fields, editing existing fields, field labels, page layouts, sub-panels, and Quick Create forms. You can export a customized module to your local machine and upload in into another Sugar instance using the Module Loader.



The Studio home page displays a list of existing modules in the left panel. These include the default Sugar modules as well as any custom modules that have been deployed. The associated fields, labels, layouts, and sub-panels for each module are grouped within the module. You can click the Plus sign (+) preceding the module name to view them. The right panel displays the same information in the form of icons. You can click a module in either panel to drill down to its fields, labels, layouts, and sub-panels.

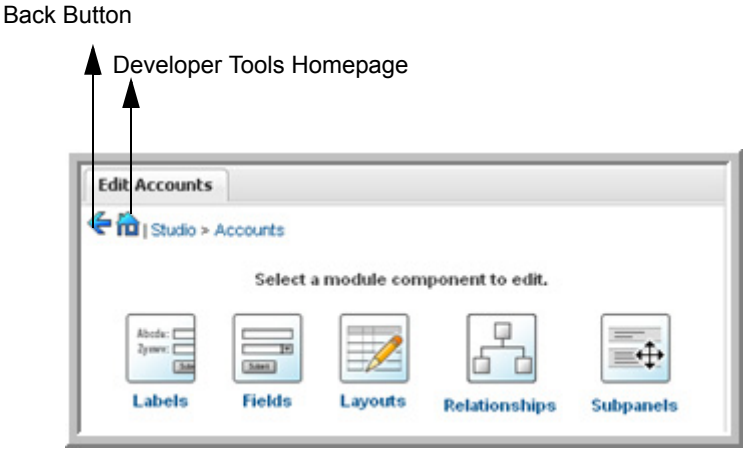
The bottom of the page displays buttons to the Developer Tools' Home, Studio, Module Builder, and the Dropdown Editor.

Editing a Module

You can create and edit custom fields, drop-down lists, and field labels. You can also edit the default layout and sub-panels. After you complete editing the module, the updated version will not available to other user until you publish it. You can use Studio to make changes to a published module.

To edit a module

1. In Studio, select the module that you want to edit.



   The screen above illustrates the Accounts module.

2. Select from the following options**:**

   Labels: Select this option to edit field labels. For more information, see **"Editing Field Labels" on page 67**.

   Fields: Select this option to create and edit custom fields. For more information, see **"To add custom fields" on page 68**. Select this option to edit and create drop-down lists. For more information, see **"Creating and Managing Drop-down Lists" on page 77**.

   Layouts: Select this option to edit the List View, Detail View, Edit View, Search form, and Quick Create form. For more information, see **"Editing the Layouts" on page 71**.

   Relationships: Select this option to view existing relationships and create new ones between modules. After you create a relationship, you will need to deploy it to make it available to users. For more information, see **"Creating Relationships" on page 80**.

   Subpanels: Select this option to edit one or more of the module's sub-panels. For more information, see **"To edit a sub-panel" on page 79**.

3. Click **Save** to save your changes.

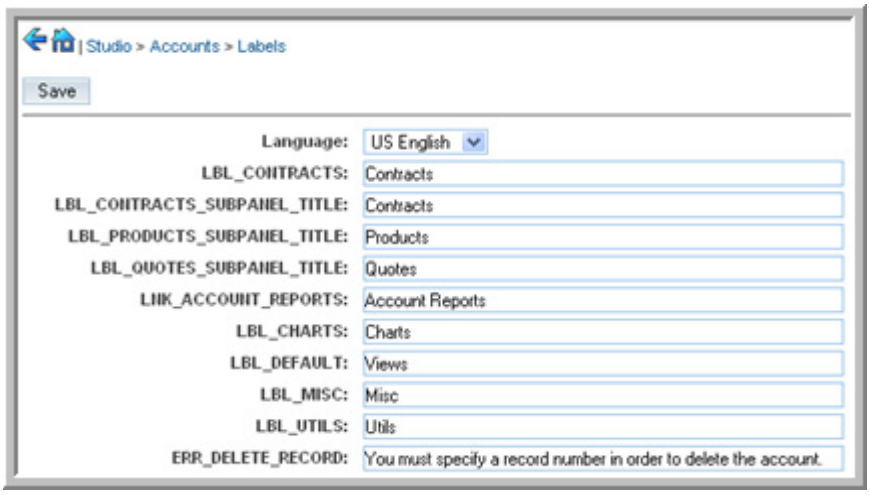
Editing Field Labels

Every field in a module has an label that displays in the Sugar User Interface. You can change the default field labels for all the language packs that you have installed.

To change field labels

1. Select the module and click **Labels**.

A list of existing database fields and the labels to which they are mapped displays on the page.



2. If you want to select a different language pack, select the appropriate one from the list of pre-installed language packs in the Language drop-down menu.
3. Select the label that you want to edit and enter the new name.
4. Click **Save**.
5. To navigate back to a different module or to Studio, click the appropriate breadcrumb above the Save button.

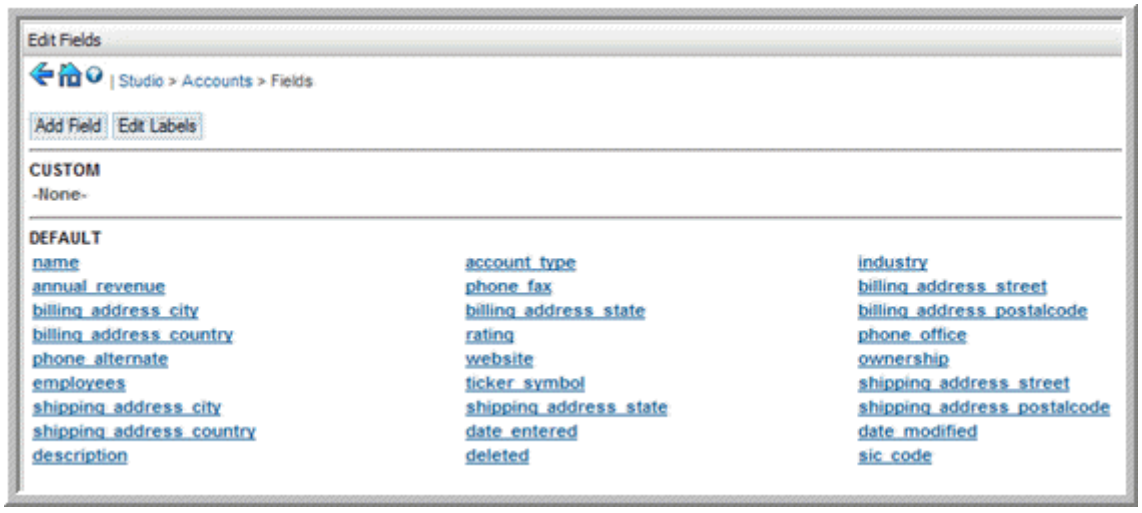
Creating and Managing Custom Fields

You can add custom fields to any module in Sugar. When you add a custom field, the application adds the field to the appropriate database table and stores the generated metadata. You can then add the fields to the desired layout, such as Edit View and Detail View. For custom modules, you can create fields in the Module Builder. Use Studio to edit a custom module after it has been published.

To add custom fields

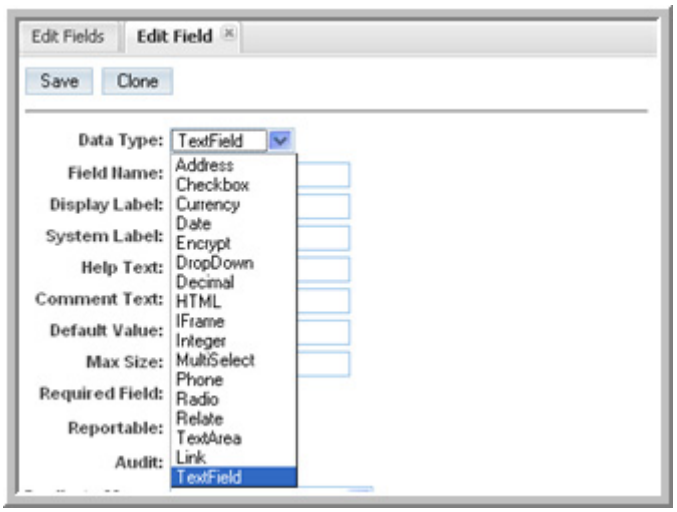
1. To add a new custom field to a module, select the module and click **Fields**.

   The page displays the current default fields that Sugar provides as well as any existing custom fields.



2. Click **Add Fields**.

   The Field Editor displays the field types as shown below:



   The information that you need to specify varies depending on the selected data type.

3. In the Field Editor, enter values for the following:

   Data Type. From the drop-down list, select one of the data types listed below.

   - **Text Field**. Creates a text field for fields such as first name and last name.
   - **Address**. Creates fields for street, city, postal, state, and country.
   - **Checkbox**. Creates a checkbox.
   - **Currency**. Creates a field to enter an currency. The system automatically creates a field of the currency type if the field does not exist.
   - **Date**. Creates a field to enter a date.
   - **Encrypt**. Creates a field, for example, a Password field, whose value is stored in an encrypted format in the Sugar database.

- **DropDown**. Creates a drop-down list. For more information on drop-down lists, see **"Creating and Managing Drop-down Lists" on page 77**.
- **Decimal**. Creates a field to specify the precision past the decimal point.
- **HTML**. Creates an HTML field to display HTML snippets.
- **IFrame**. Creates an IFrame field. For more information, see **"Embedding Links and IFrames in a Layout"**.
- **Integer**. Creates a field to specify positive or negative numbers. You can specify a range with the min and max value fields.
- **MultiSelect**. Creates a drop-down list to select multiple values.
- **Flex Relate**. Creates a field and a drop-down list from which you can associate a related record. You can add only one Flex Relate field to a module. Hence, this option does not display in the Data Type drop-down list if you attempt to add it to a module that already contains a Flex Relate field.
- **Phone**. Creates a field to enter a phone number.
- **Radio**. Creates a radio button.
- **Relate**. Creates a field to associate a record with another record. You can add multiple Relate fields to a module.
- **Text Area**. Creates a field for a block of text.
- **Link**. Creates a field that links to a URL. For more information, see **"Embedding Links and IFrames in a Layout"**.

Depending on the data type that you select, you will need to specify values for some of the fields listed below.

- **Field Name**. Enter a name for the field. The system adds it to the Sugar database.
- **Display Label**. The system uses the field name as the label that will display in the Sugar User Interface. You can enter a new value if needed.
- **System Label**. The system automatically creates and displays the value that will be stored in the Sugar database.
- **Help Text**. Enter descriptive text for the field. This text displays when the user points the cursor at the field.
- **Comment Text**. Enter additional comments, if needed, about the field.
- **Default Value**. Enter a default value for the field, if necessary.
- **HTML.** This box display when you select the HTML data type. Enter the HTML code in this box.
- **Max Size**. Enter the maximum number of characters that the field can contain.
- **Mass Update**. This box displays when you select the DropDown data type or the Date data type. For information on creating a drop-down list, see **"To create a drop-down field" on page 77**.
- **Min Value**. This field displays if you select the Integer data type. Enter a minimum value during data input.

- **Max Value**. This field displays when you select the Integer data type. Enter a maximum value during data input.
- **Precision**. This field displays when you select the Decimal data type. Enter the number of digits you want to express the precision for the fractional part of the number.
- **Required Field**. Check this box to specify that users must enter a value for the field when creating a record.
- **Audit**. Check this box to display field values when a user clicks the **View Audit Log** link.
- **Importable**. From the drop-down list, select one of the following:

  Select **Yes** to enable users to import a value into the field.

  Select **No** to prevent users from importing a value into the field.

  Select **Required** to make it a required field during import.
- **Duplicate Merge**. From the drop-down list, specify one of the following options for the Duplicate Merge functionality on a record's detail page.
  - Enabled: The field can be used as a filter, and will be a default filter field.
  - Disabled: This field cannot be selected as a filter.
  - In Filter: This field will be available to be used as a default filter.
  - Default Selected Filter: This is a filter field by default.
  - Filter Only: This field can be selected as a filter to search for identical fields during a duplicate merge operation. However, you cannot merge the values into a single field.

4. Click **Save** to create the field.

   The new field is listed in the Custom section. The system appends the field name with '_c' to indicate that it is a custom field.

To manage fields

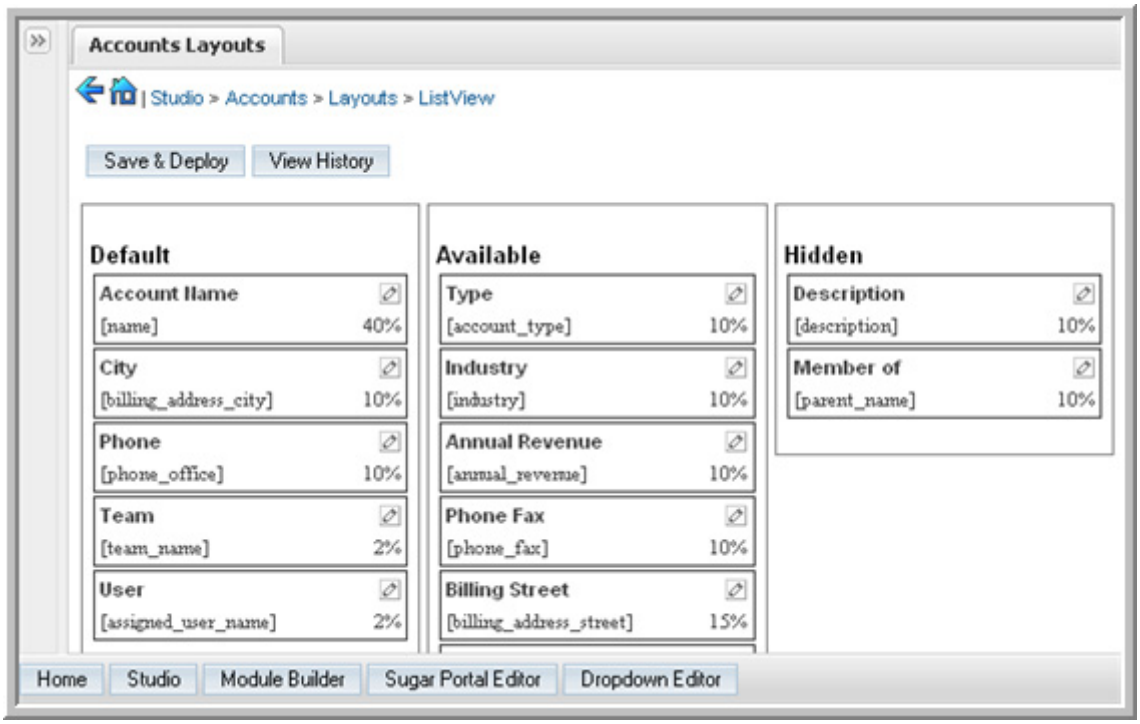
1. To edit a field, select it from the list to display its details in the Field Editor.
2. Make the necessary changes and click **Save**.
3. To duplicate the field, click **Clone**, enter a new name, and click **Save**.
4. To delete the field, click **Delete**.
5. Click **Save** to update the field.

Editing the Layouts

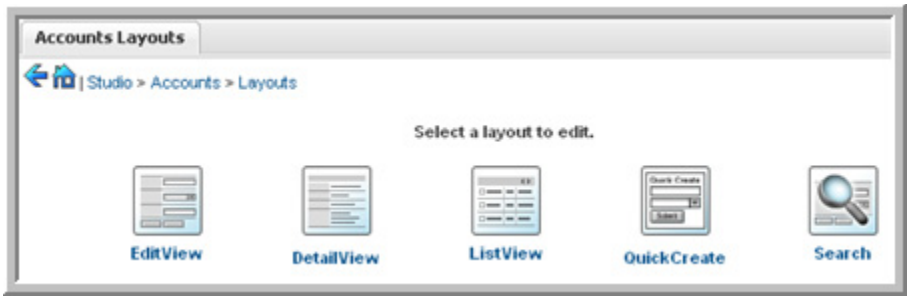
You can edit the layouts for List View, Detail View, Edit View, sub-panels, Search form, and Quick Create form. You can remove existing fields and add new ones to a layout. You can also rearrange the current layout and change the tabbing order of the fields.

When you select List View, the system displays separate columns of fields that are currently displayed in the view, fields that are available for display, and hidden fields.

You can click and drag a field from one column to the other depending on what you want to display to users.



When you select Edit View or Detail View, the system displays the various sections of the current layout, along with the fields in each section. You can click and drag a field to a different location within the layout.



The Quick Create form enables users to create a related record from the detail page of a record. For example, you can create a contact from the Contacts sub-panel on an account's detail page. In Studio, you can customize the Quick Create form by removing some fields. You can also add additional fields, if necessary.

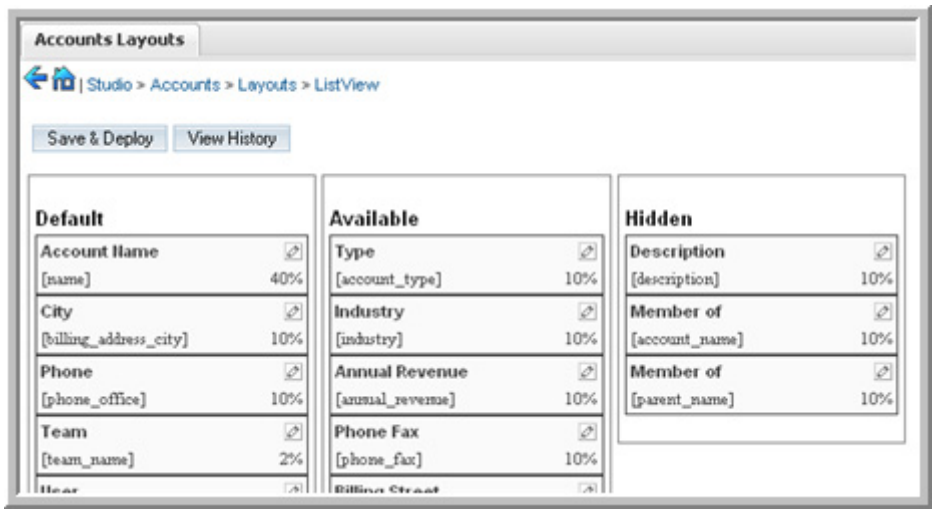
In the Edit View, Detail View, and Quick Create forms, you can also change the order in which the user can tab from field to field on a page. For example, when users create a new account, they can tab from the Account Name field to the Website field and so on. You can change the tabbing order to so that users tab from Account Name to email.

The breadcrumbs to navigate back to Studio display above. The Toolbox stores fields that are not currently displayed in the layout. It also provides new rows to add to the view and a list of available fields that you can add.

To edit List View

1. Select **Layouts** and then select **List View**.

   The List View page displays on the screen. The Default column lists fields that are currently displayed in the User Interface. The Available column lists fields that are available to users through advanced search. Users can search for and add any of these fields that they want to view in the search results. The Hidden column lists fields that you do not want users to view when they perform an advanced search.

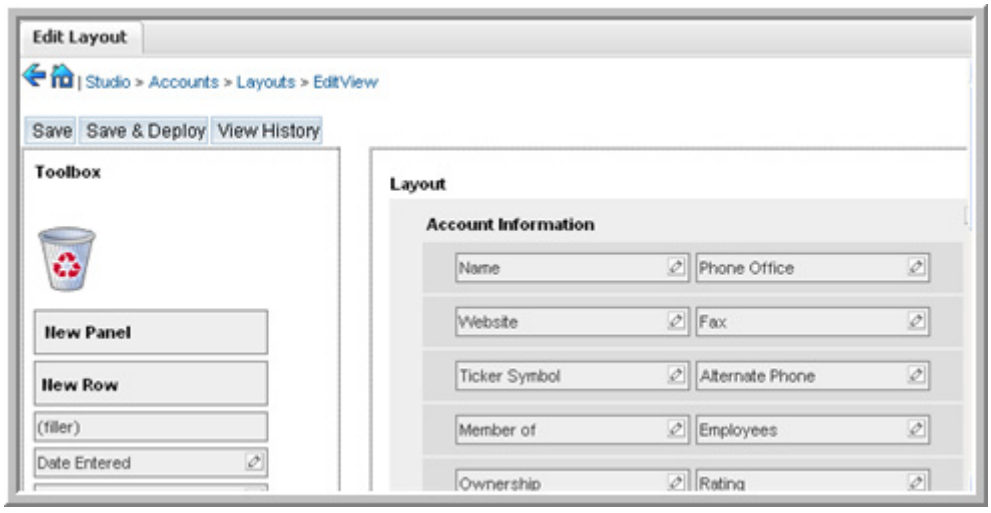


2. To display a field in List View, select and drag the field from the Available or Hidden columns and drop it into the Default column.
3. To remove a field from List View, select and drag the field from the Default column and drop it in the Available column.
4. To hide a field from users, drag it from the Default or Available column and drop it in the Hidden column.
5. Click **Save & Deploy** to display the updated List View in the User Interface.
6. Click **View History** to view a list of previous changes along with the date and time of each change.
   a. To preview the changes made at a particular time, click the adjacent **Preview** button.
   b. To restore the previous version of the List View, click the adjacent **Restore** button.

To edit Detail View, Edit View, and Quick Create forms

1. Select the module in Studio.
2. Select **Layouts** from the list of module components.
3. Select Detail View, Edit View, or Quick Create as appropriate.

The Edit View page is shown below.



4. To remove an existing field, drag it to the Recycling Bin icon in the Toolbox.

   The field is removed from the layout but is not deleted from the system.

5. To replace an existing row in the layout with another one, drag the new field from Available Fields and drop it on the field that you want to replace.

6. To add placeholders for additional fields or to replace fields with blank fields, drag the filler row under New Row and drop it into the view. You can then drag a field from the Toolbox into the filler row.

7. To create a new panel or a new row, drag New Panel or New Row into the Current Layout.

   A new panel or a new row contain two blanks fields. To add additional fields to the panel or row, drag New Panel or New Row into the panel.

8. To enter or edit a field label, click the **Edit** icon within the field and enter the label in the Properties panel; click **Save** to create the label.

9. To move a field to a different location, drag it to the desired location on the page.

10. To edit the tabbing order, click the **Edit** icon within the field and enter a numeric value in the Tab Order field of the Properties panel; click **Save**.

    The tabbing order for each field is represented by numbers such as 1, 2, and 3. You can change one or more numbers to change the order in which users tab to those fields.

11. Click **Save** to save your changes.

12. Click **Save & Deploy** to display the updated view in the Sugar User Interface.

13. Click **View History** to view a list of previous changes along with the date and time of each change.

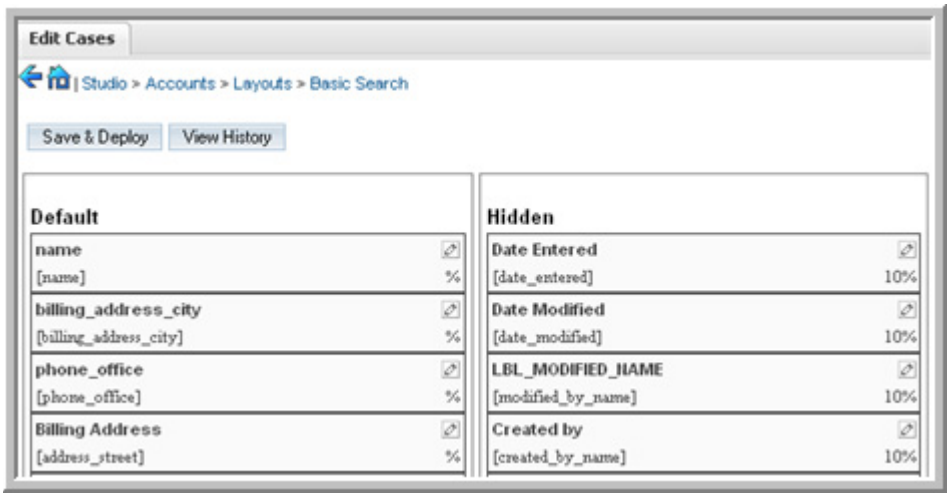
    a. To preview the changes made at a particular time, click the adjacent **Preview** button.

    b. To restore the previous version of the view, click the adjacent **Restore** button.

To edit the Search form

1. In Layouts, click **Search**.
2. To edit the Basic Search form, click **Basic Search**; to edit the Advanced Search form, click **Advanced Search**.

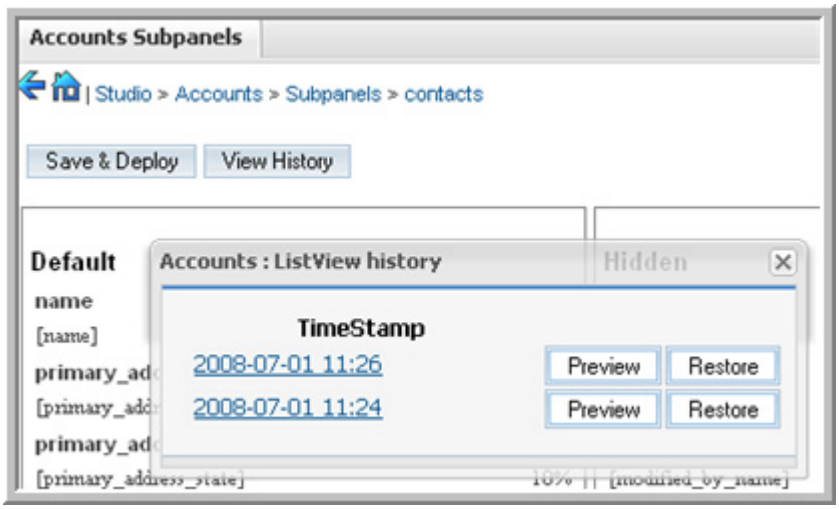
   The fields in the current Search form are listed in the Default column and the available fields are listed in the Hidden column.



3. To remove an existing field from the search form, drag it from the Default list to the Hidden list.
4. To add a field to the search form, drag it from Hidden column to the Default column.
5. To save your changes, click **Save & Deploy**.

To preview and restore changes

1. Click **View History** to view a list of timestamps for changes that were made to a layout, a Search form, or a sub-panel.



2. To preview the changes for a timestamp, click the adjacent **Preview** button.

The Preview page provides a Restore button that you can use to restore the layout. Alternatively, click a timestamp to restore the layout that existed before the changes made at that time.

Embedding Links and IFrames in a Layout

A Link field allows you to store a URL in a record such as a customer's Website or a link to a related internal or external system. The URL can either be entered as a normal field in an edit view, or it can be dynamically generated based on other fields in the record.

For example, you could automatically generate a link to a google map of an accounts address. To do this, click the **Generate URL** check box and insert the following in the Default Value field:

```
http://maps.google.com/?q=
```

Next, select billing_address_postalcode from the drop down above the Default Value field and click the **Insert Field** button.

The default value now reads:

```
http://maps.google.com/?q={billing_address_postalcode}
```

You can also embed a view of the Website itself in the layout rather than as a link by using the IFrame field. IFrames support regular URLs as well as generated URLs.

You cannot edit generated URLs in a record's Edit View. You can only change them in the Module Builder or Studio. You can edit regular URLs in a record's Edit view.

To embed a manually entered URL

1. From the Data Type drop-down list, select **IFrame** or **Link**.
2. Enter a name for the field.
3. Enter the desired max size.
4. If using an IFrame, enter the desired height in pixels for the view.
5. Click **Save** to create the field.

To embed a dynamically generated URL

1. From the Data Type drop-down list, select **IFrame** or **Link**.
2. Enter a name for the field
3. Click the **Generate URL** checkbox.
4. Insert the base URL into the Default Value field.
5. Select a field you wish to include in the URL from the dropdown and click I**nsert Field**.
6. Click **Save** to create the field.

Creating and Managing Drop-down Lists

Most modules display at least one drop-down field containing a list of values from which users can make a choice. For example, when users create an account, they can choose a specific industry type and an account type in the respective drop-down fields.

As the administrator, you can create and edit values in all of the drop-down fields in the system to suit your organization's needs. You can also create new drop-down fields for a module.

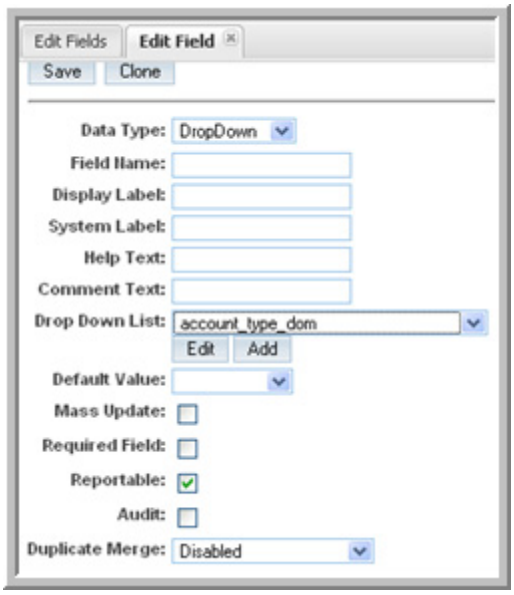
To create a drop-down field

1. Select the module and click **Fields**.

   The existing fields in the module display on the page.

2. Click **Add Field**.

1. From the Data Type drop-down list, select **DropDown**.



2. Enter values for the following:

   Field Name. Enter a name for the drop-down list.

   Display Label. Enter a label name for the field to display in Sugar.

   System Label. The field label in the Sugar database displays in this field.

   Help Text. Enter descriptive text for the field. This text displays when the user points the cursor at the field.

   Comment Text. Optionally, enter a descriptive comment about the new field. The comment displays only in Studio and Module Builder.

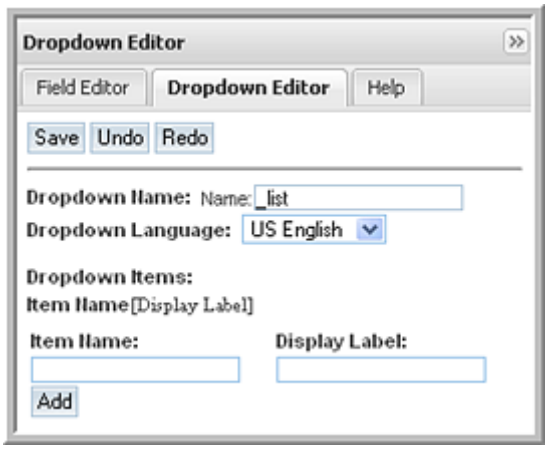
   Drop Down List. The available drop-down lists are displayed here. You can select an existing drop-down list and edit it to suit your needs.

   To add a new drop-down list, do the following:

   a. Click **Add**.

The system displays the Dropdown Editor tab in the Field Editor.

The display label appears in the User Interface and the item name is stored in the Sugar database.



b. The Dropdown Name field displays the name that you specified.

c. From the Dropdown Language list, select a pre-installed language pack of your choice.

d. Enter an item for the drop-down list in the Item Name field.

e. Enter a display label name to display in the User Interface and click **Add**.

To add additional items, click **Add** and repeat the process.

f. Click **Save** to save the list.

The system displays the new drop-down list on the Properties tab.

To undo your changes, click **Undo**; to redo your changes, click **Redo**

g. On the Properties tab, click **Save** to save the drop-down list.

The new drop-down list displays under the module name in the center panel.

To use an existing drop-down list, do the following:

a. Select an existing drop-down field listed under the module.

b. In the Field Editor, click **Edit**.

The existing items display in the list.

c. To change an item's display label, click the corresponding **Edit** icon and enter the new label.

d. To remove an item, click the corresponding **Delete** icon.

e. To add new items, click **Add**.

f. Click **Save** to save your changes.

g. To undo your changes, click **Undo**.

h. To redo your changes, click **Redo**.

i. On the Properties tab, click **Save** to save your changes.

The creation of the drop-down list and its values is now complete. The new drop-down is now listed in the Drop-down Editor.

Default Value. Select an existing value from the drop-down list as the default for this drop-down list.

Mass Update. Checkmark this box to enable users to use the Mass Update functionality to update this field value.

Required Field. Checkmark this box to make this a required field.

Audit. Check this box to track changes to the field values and display the changes when a user clicks the **View Change Log** link.

Importable. From the drop-down list, select whether the field value can be imported or not.

Duplicate Merge. From the drop-down list, specify one of the following for the duplicate record merging functionality in modules such as contacts and accounts:

Disabled: This field cannot be used to merge records.

Enabled: This field can be used to merge records.

In filter: This field can be used as a filter when merging records.

Default selected filter: This field is the default filter when merging records.

Filter only: This field can be used only as a filter to merge records.

3. Click **Save**.

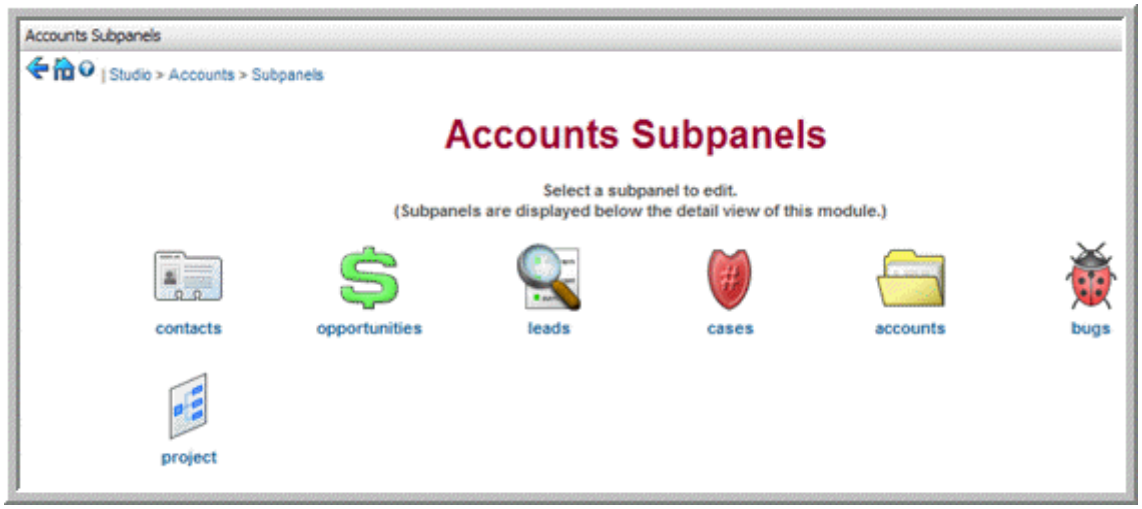
Editing Sub-Panels

Every record's Detail View display sub-panels listing related records from other modules. You can add or remove fields for these sub-panels depending on the information that you want to display to users.

To edit a sub-panel

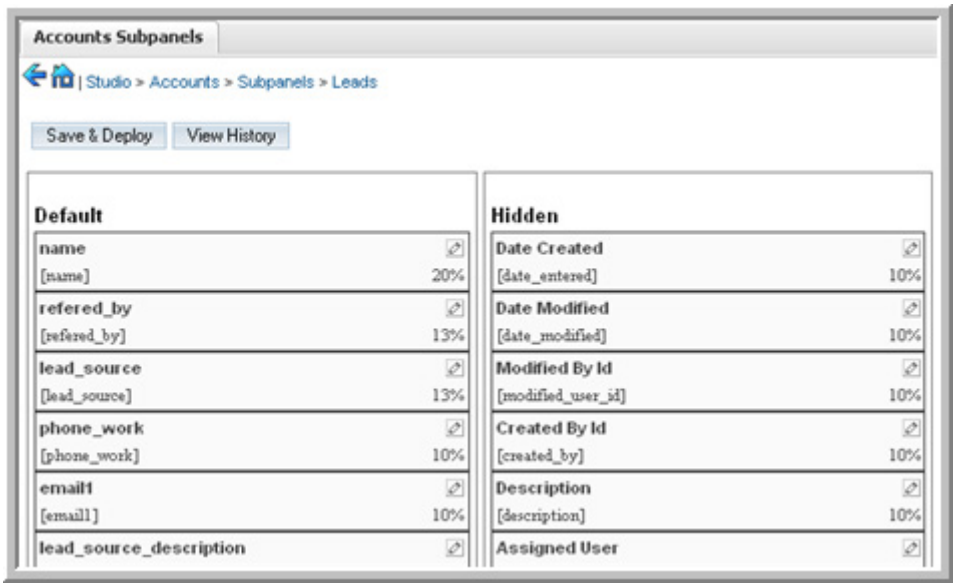
1. Select the module and then click **Subpanels**.

   The sub-panels for the selected module displays on the page.



2. Select the sub-panel that you want to edit.

The page displays the list of default fields and a list of fields that are available for display.



3. To add a field to the sub-panel, select it from the Hidden column and drag it to the Default column.
4. To remove a field from the sub-panel, select it from the Default column and drag it to the Hidden column.
5. To save and display your changes in the module, click **Save & Deploy**.
6. To view a list of timestamps for changes that were made to the sub-panel, click **View History**. For more information, see **"To preview and restore changes" on page 75**.

Creating Relationships

Typically, a Sugar module has relationships with other Sugar modules. For example, Accounts is related to Contacts, Leads, Opportunities, and several other modules. Related records from these modules display in fields or sub-panels on an account's detail page. You cannot edit these pre-defined relationships.

In Module Builder, you can create relationships between undeployed modules, and between undeployed modules and deployed modules. However, you cannot create relationships between deployed modules. If you want to change a relationship after you have deployed the module, you can redefine or delete the relationship and then re-deploy the module package.

In Studio, you can create relationships only between deployed modules. After you deploy a relationship in Studio, you cannot change it.

You can create one relationship at a time. When you create a relationship for a module, it is considered to be the primary module and the module that you relate it with is the related module. Depending on the relationship type, the relationship is expressed with sub-panels and Related-to fields. When you create a new relationship between two modules, the system automatically creates the necessary sub-panels, related-to fields, and metadata relationships.

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.

In Module Builder, you can select Activities as the related module but not its sub-modules such as Tasks, Calls, and Meetings. The relationship is automatically reflected in these sub-modules.

In Studio, you can select a sub-module of Activities when you create a relationship. So, when you select Activities as a related module in the Module Builder, you can use Studio to further define the relationship for its sub-modules.

Relationship Types. The three relationship types are as follows:

One-to-one: In this relationship, records in the primary module and the related module are uniquely related to each other. For example, an account can be associated with only one contact and a contact can be associated with only one account. This account value will display in the contact's detail page and the contact value will display on the account's detail page.

One-to-many: In this relationship, records in the primary module can have relationships with many records in the related module. For example, an account can be associated with many contacts, and many contacts can be associated with the same account. The Detail View of Accounts will display a Contacts sub-panel, and the Detail View of Contacts will display a Related-to field containing a link to the related account.

Many-to-many: In this relationship, records in both the primary module and the related module can have relationships with multiple records in each module. For example, an account can be associated with many bugs, and a bug can be associated with many accounts. The Accounts Detail View will display a Bugs sub-panel. Similarly, the Bugs Detail View will display an Accounts sub-panel.

The type of relationship that you can create depends on your choice of primary and related modules. This is because only a module with sub-panels can have a one-to-many or a many-to-many relationship with another module. A sub-panel is needed to show all the related records from the other module.

For example, with Accounts as the primary module and Knowledge Base as the related module, you can create only a one-to-one relationship between them. This is because Knowledge Base lacks a sub-panel and, therefore, Accounts cannot display related records from Knowledge Base. However, if Knowledge Base is the primary module and Accounts is the related module, you can create a one-to-many relationship between them because Accounts has sub-panels and, therefore, Knowledge Base can display related records from Accounts.

If you are creating a relationship between a custom module and a Sugar module, then you can choose any relationship type because all custom module types include at least one sub-panel.

Sub-panel Types. Sugar provides many sub-panel types for your use. When you create a relationship that involves sub-panels, Sugar displays all sub-panel types available for that module for your selection. A sub-panel can display different sets of

fields depending on the primary module to which it is related. For example, there are several different types of Contacts sub-panels. The Contacts sub-panel that appears under Accounts contains different fields than the Contacts sub-panel that appears under Cases.

The Default type of sub-panel contains the most commonly used fields in the module. Every module has a Default type that contains a set of fields to display as a sub-panel. Select Default if you want to display the most commonly used fields in the sub-panel in the relationship that you create.

For example, if you create a one-to-many type of relationship between Calls and Accounts, you can select a sub-panel type for the Accounts sub-panel in the Calls Detail View. To use a sub-panel consisting of the most commonly used fields from Accounts, select the Default sub-panel type; to use the Accounts sub-panel from the email's Detail View, select ForEmails.

You can create relationships in Module Builder as well as in Studio. However, there are some differences, which are noted in the table below:

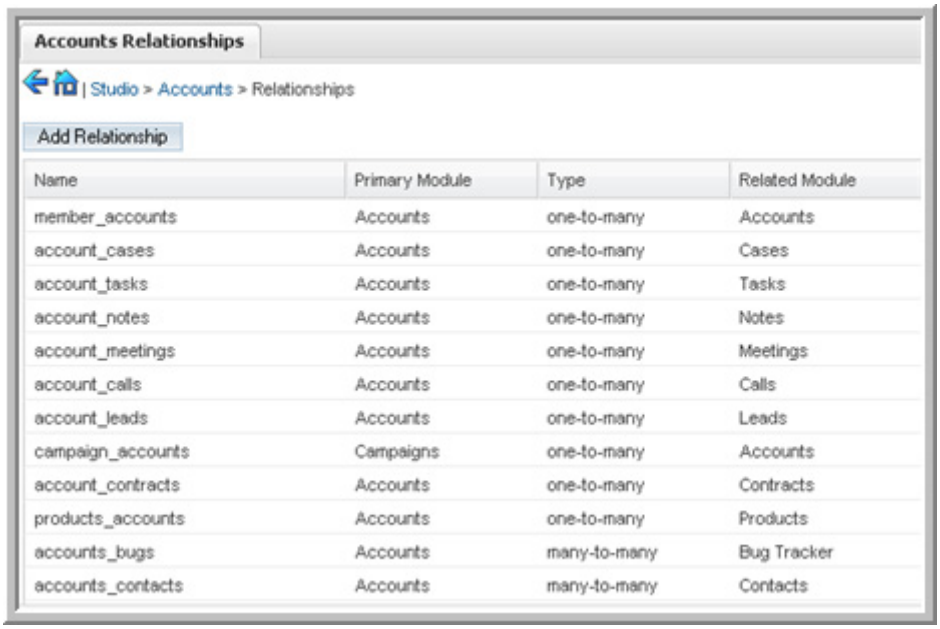
Relationship in Module Builder	Relationships in Studio
You can create relationships with other Sugar modules as well as other modules within any undeployed package.	In Studio, you can create relationships only between deployed modules.
If you want to change a relationship after you have deployed the module, you can redefine or delete the relationship and then re-deploy the module package.	You cannot change a relationship after you deploy it.
You can select Activities as the related module but not its sub-modules such as Tasks, Calls, and Meetings. But the relationship is automatically reflected in these sub-modules.	You can select a sub-module of Activities when you create a relationship. So, when you select Activities as a related module in the Module Builder, you can use Studio to further define the relationship for its sub-modules.

To create a relationship

1. On the module's page, click **View Relationships**.

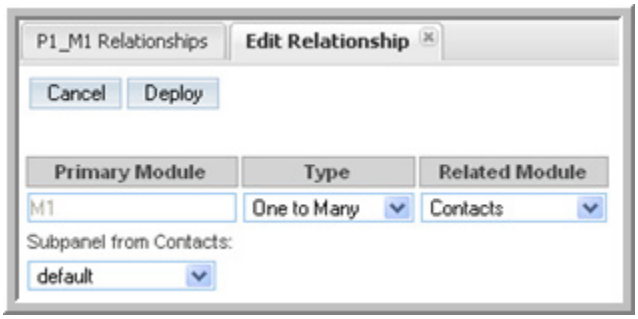
   A list of existing relationships for the primary module display on the page.

The screenshot below displays existing relationships for the Accounts module.



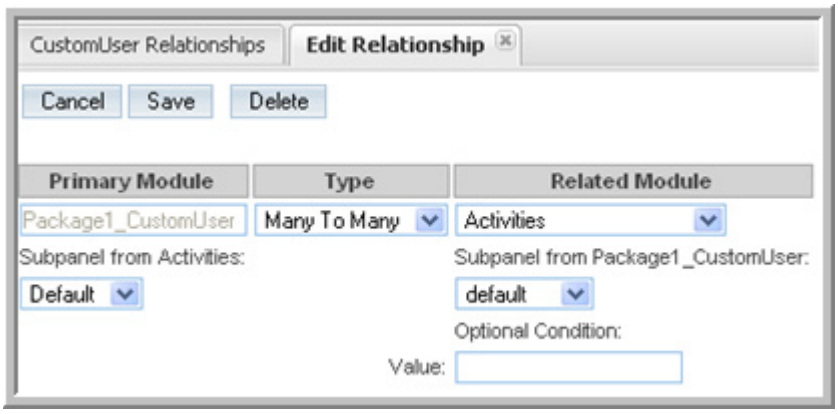
2. To create a relationship, click **Add Relationship**.
3. Select the relationship type from the Type drop-down list.

   If you select a One-to-Many relationship, you will have the option to choose a sub-panel for the primary module. This is the sub-panel of the related module that will display on the detail page of the primary module.



   The options in the Subpanel drop-down list varies depending on the related module that you select.

If you select a Many-to-Many relationship, shown below, you will have the option to select sub-panels for the primary module as well as the related module.



4. From Related Module drop-down list, select the module you want to relate to the primary module.
5. From the Subpanel field for the related module, select the sub-panel type that you want displayed on the detail page of the primary module.
6. From the Subpanel field for the primary module, select the sub-panel that you want displayed on the detail page of the related module.
7. Click **Save** to create the relationship.

   The new relationship displays under the Add Relationship button in the middle panel. It is appended with an asterisk to denote that it is a custom relationship.

To manage a relationship

1. To edit a relationship in Module Builder, click its name in the Relationships list to view it in the Edit Relationship tab; make the necessary changes and save it.

   You cannot edit or delete relationships in Studio.
2. In Module Builder, to delete a relationship, click the **Delete** button.

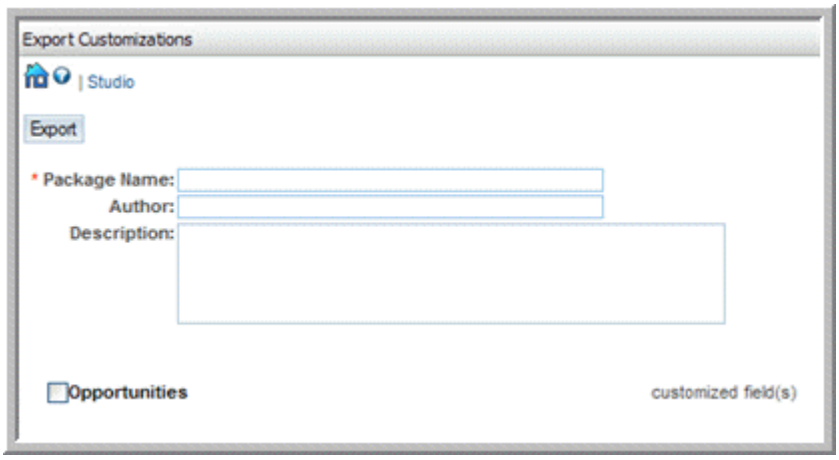
Publishing Customized Modules

To publish a module after you customize it in Studio, you will need to export it as a zip file to your local machine and then upload it from your machine into Sugar using the Module Loader.

To publish a customized module

1. On the Studio home page, click **Export Customizations**.

The Export Customizations page displays the customized modules and indicates the area of customization. The screen shown below indicates that Opportunities module contains one or more customized fields.



2. Enter the following information:

   Package Name. Enter a name for the export package. The package will contain the customized modules that you select.

   Author. Enter your name as the author.

   Description. Enter a brief description of the package.

3. Select the modules that you want to export.

4. Click **Export**.

   The system creates a zip file and displays a dialog box that allows you to open the file or save it to a disk.

5. Select **Save to Disk** and click **OK**.

   On MS Windows, the system saves it in the Downloads directory.

You can upload the file into Sugar using the Module Loader. For more information, see **"Module Loader" on page 85**.

Module Loader

Use the Module Loader to install Sugar modules, custom modules, upgrades, language packs, Sugar Dashlets, and themes.

You can create custom modules in the Module Builder. A custom module is contained within a package. When you deploy the package, it becomes available to other users in your organization. When you publish or export the package, you can save it as a zip file on your local machine and then use the Module Loader to upload them it into Sugar. For more information on creating packages, see **"Module Builder" on page 61**.

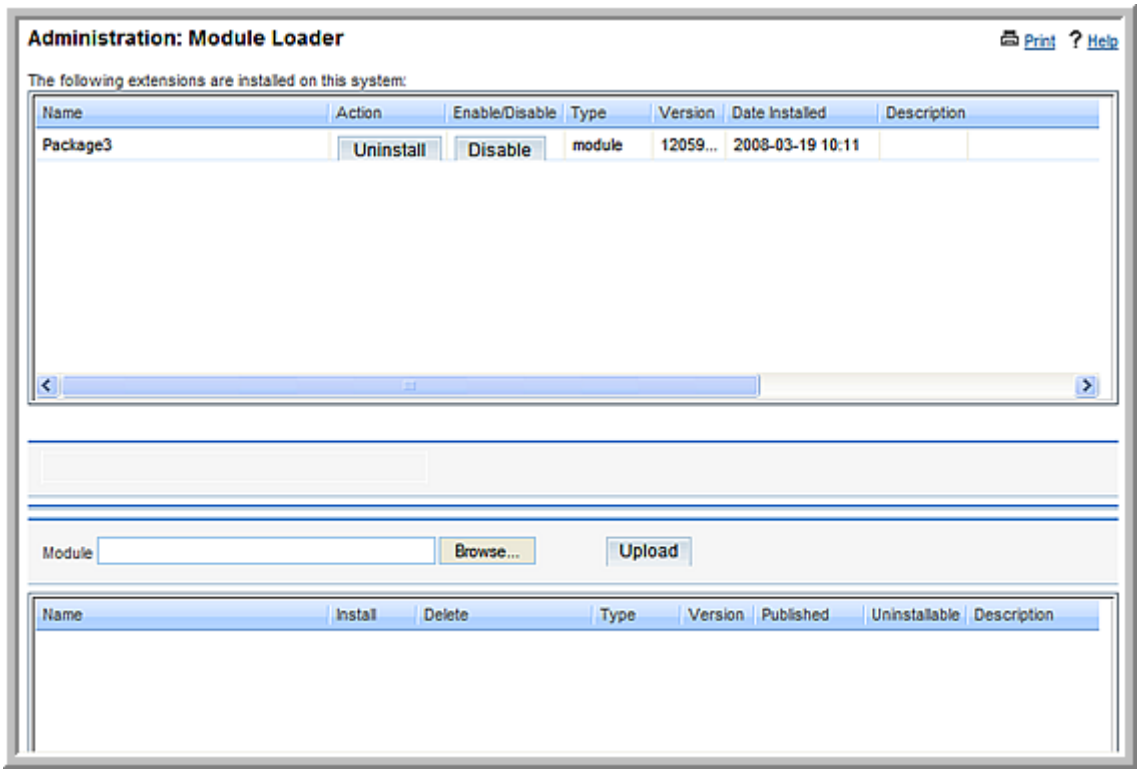
If you delete a package in Module Builder after it is already installed or deployed, you can uninstall the deployed module in the Module Loader. You can also disable installed modules through the Module Loader.

To install a module

1. In the System sub-panel of the Administration Home page, click **Module Loader**.

   If you deployed the package, it is listed in the top panel and has already been made available to other users in your organization. You can uninstall it or disable it by clicking the appropriate button.

2. Click **Browse** to navigate to the location of the module's .zip file on your local machine.



3. Select the file and then click **Open**.

   The path to the zip file displays in the Module field.

4. Click **Upload**.

   The uploaded module displays in the bottom panel.

5. Click **Install**.

   The license agreement displays on the screen.

6. Select **Accept** to accept the agreement and then click **Commit** to install the module.

   If the installation is successful, the system displays a message stating that the module installed successfully.

7. To go back to the Module Loader page, click **Back to the Module Loader**.

   The new module tab is now visible to all users.

To disable and enable a module

1. To disable a module, click the **Disable** button adjacent to the module's name.

   The Sugar License Agreement displays on the page.
2. Click **Accept** to accept the agreement.
3. Click **Commit**.

   After the module has been disabled, Sugar displays a message stating that the module has been disabled.
4. Click **Back to Module Loader**.

   The Enable button displays adjacent to the module's name.
5. To enable the module, click **Enable**.

To uninstall a module

1. In the Module Loader, click the **Uninstall** button corresponding to the module's name.

   The system displays a message stating that the module is ready to be uninstalled and displays options to remove or retain the database tables that were created for the new module.
2. To remove the tables from the database, select **Remove Tables**; if not, select **Do Not Remove Tables**.
3. Click **Commit** to uninstall the module; click **Cancel** to retain the module.

   The module is removed from Sugar.
4. To remove an existing field, drag it to the Recycling bin.

   The field is removed from the view but is not deleted from the system.
5. To replace an existing row in the view with another one, drag the new field from the left panel and drop it on the field that you want to replace.
6. To add placeholders for additional fields, drag New Row and drop it into the view. You can then drag a field from the Available Fields into the empty row.
7. Click **Save** to save your changes.
8. Click **Save and Deploy** to make it available to all users in your organization.

Configuring Module Tabs

By default, all the module tabs are displayed when a user logs into Sugar. However, you can choose which module tabs to display when users log into Sugar. You can also choose the order in which these tabs are arranged in the Sugar User Interface.

By default, users can also configure module tabs on their My Account page. However, the user cannot display module tabs that the administrator hides. Administrators can deselect the Allow users to configure tabs check box if they do not want users to make any changes.

Note: You cannot hide the Home tab.

To configure module tabs

1. In Developer Tools, select **Configure Tabs**.

   The Configure Tabs page displays all the tabs in the Display Tabs list.

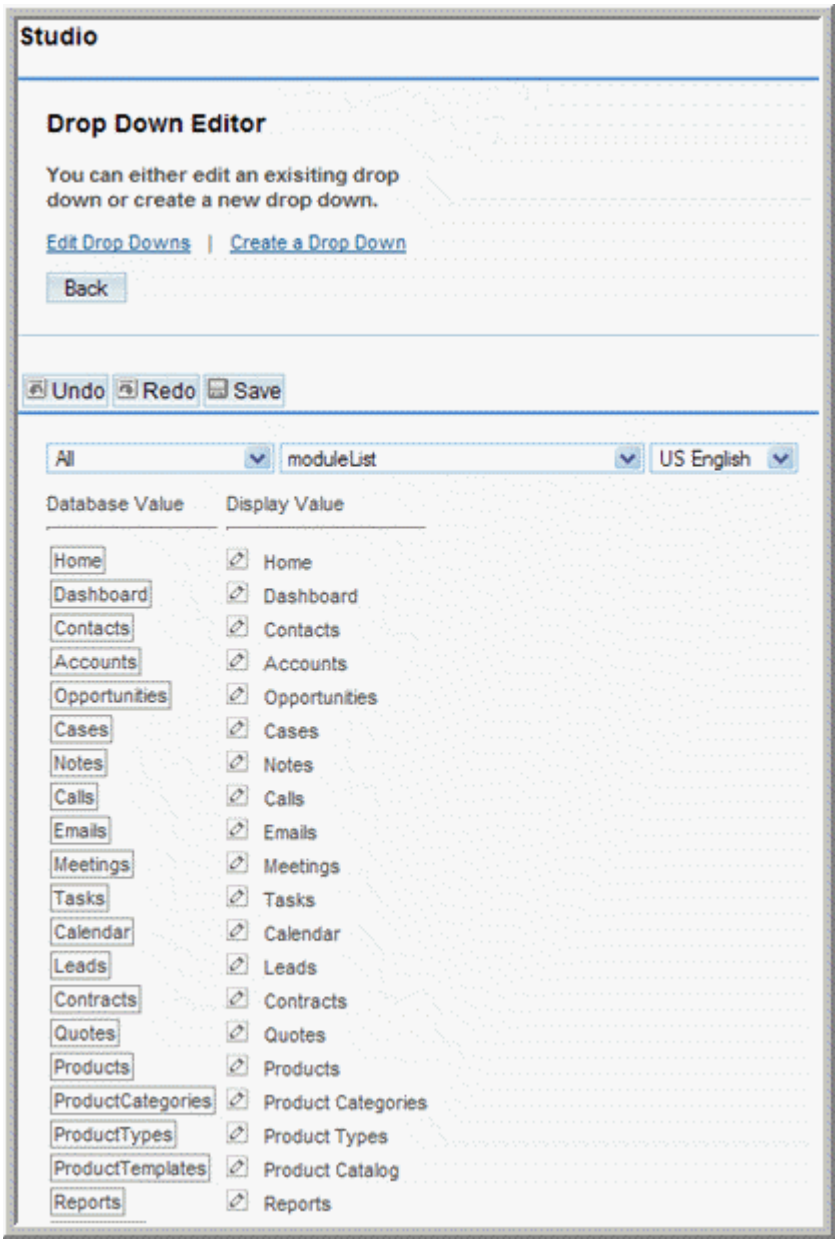
2. To hide a tab, select it in the Display Tabs column, and drag and drop it into the Hide Tabs column.
3. To rearrange the order in which the tabs are displayed, drag and drop the tabs to the desired positions.
4. To disallow users from configuring the tabs, deselect the Allow users to configure tabs option.
5. Click **Save** to save the configuration; click **Cancel** to exit the page without saving your changes.

Renaming Tabs

You can rename the module tabs that display in Sugar.

To rename tabs

1. In Developer Tools, select **Rename Tabs**.



   The tab labels and the corresponding database values display on the page. From the drop-down list displayed above the tab labels, you can select the language to display the tab.

2. Click the label that you want to edit and replace it with the new value.
3. Click **Save** to save your changes; click **Undo** to revert to the previous value; click **Redo** to go back to your change.

Configuring Group Tabs

By default, the system displays individual module tabs when users log into Sugar. However, you can use the Configure Group Tab option to organize specific individual tabs as a group tab. For example, you can group contacts, leads, and opportunities under Sales and cases, bug tracker, under Support. You can add the same module to multiple group tabs. For example, Contacts can be part of Sales as well as Marketing. When users click a group tab, they can access the module tabs associated with it.

Note: Only the Sugar theme supports the Configure Group Tab option.

The system provides following group tabs:

- Home
- Sales
- Marketing
- Support
- Activities
- Collaboration
- Tools

The following screenshot illustrates individual module tabs.

The following screenshot illustrates group tabs and the module tabs grouped under the Activities group tab.

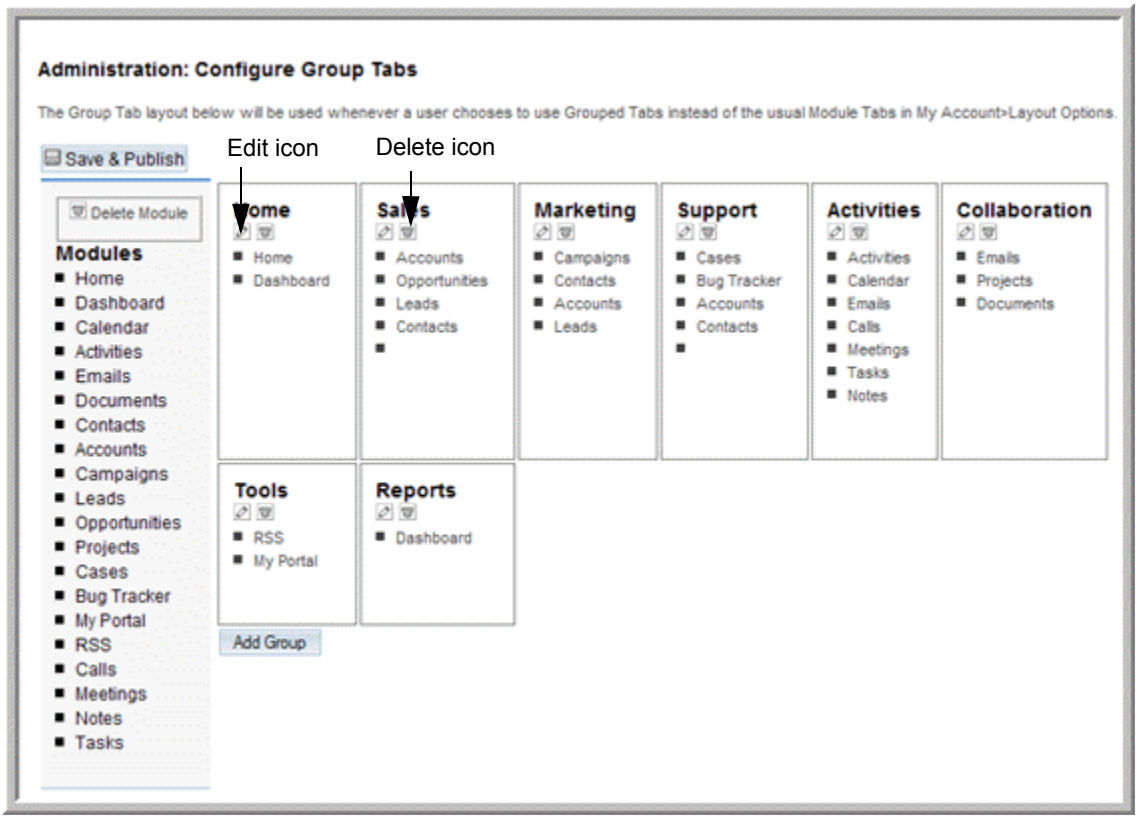
You can change the labels for any of these tabs and also add new group tabs, if needed.

Users have the ability to change to grouped tab or ungrouped tab configuration on their My Account page.

To configure and manage group tabs

1. In Developer Tools, click **Configure Group Tabs**.

The default group tabs display on the page. The associated module tabs are listed below each group tab



2. To edit the name of a group tab, click the Edit icon, enter the new name in the text field, and click **Save**.

   The group tab displays the new name.

3. To remove a module tab from a group tab, place the cursor on the name and drag it to the Delete Module box on the left.

   The module no longer displays under the group tab.

4. To add a module to a group tab, select it from the Modules list on the left, drag it, and place it just below the Edit and Delete icons.

   Under a group tab, you can rearrange the order of the module tabs by selecting a tab name and dragging it to a different location in the list.

5. To save your changes and make it available for users in the Sugar User Interface, click **Save & Deploy**.

To add a new group tab

1. Click **Add Group**.

   A New Group box displays on the page.

2. To name the new group tab, click the **Edit** icon, enter the name in the text field, and click **Save**.

3. To add a module tab under the new group tab, select it from the Modules list and drop it in the group, below the Edit and Delete icons.

To save your changes and make it available for users in the Sugar User Interface, click **Save & Deploy**.

Creating and Managing Portals

Adding portal sites in Sugar enables the system to provide a single interface for multiple applications and Web sites. You can add new module tabs that can link to any Website you choose, thus enabling Sugar to become a single interface focus for its users. This is commonly used to include emails, forums, or other Web-based applications.

A portal site can be either of two types: Personal or Global. While both administrators and users can create portals, there are some differences that are noted below:

- Users can only create personal portals that are not shared with other users, while administrators can create both personal and global portals. Global portals can be viewed by all users in the organization.
- Users can display portal sites only in the Shortcuts menu, but administrators can display portals as a tab and in the Shortcuts menu.
- Any personal portal that a user creates is listed on the administrator's Portal Home page, but an administrator's personal portal is not listed on the user's Portal Home page.

For information on creating a portal, see *Sugar Community Edition Guide*.

Bug Tracker

Use this sub-panel to maintain a list of releases for your product. This list will be available in the Release drop-down box that is displayed when reporting a new bug in the Bug Tracker module.

To create a release

1. On the Administration Home page, click **Releases** in the Bug Tracker sub-panel.
2. On the Releases Home page, click **Create**.

3. In the Release sub-panel that displays below the list, enter information for the following fields:

   Release Version. Enter the version number of the release.

   Status. From the drop-down list, select **Active** to display the name in the Release drop-down list.

   Order. Enter a number to specify the order in which the release is displayed in the drop-down list.

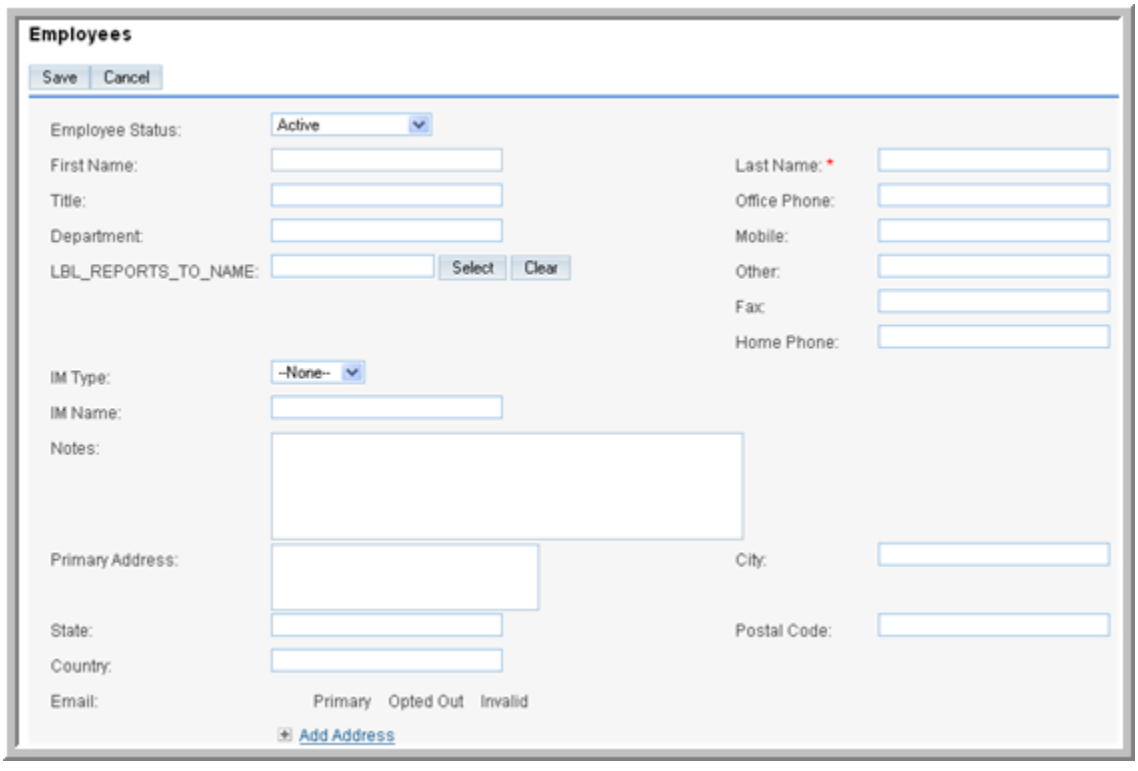
4. To add the release to the list, click **Save**.
5. To add another release to the list, click **Save and Create New**.

Creating Employees

As an administrator, you can convert an employee into a user and specify the username and password for the employee. You can also edit employee details such as home address, email address, and phone number.

To create an employee

1. Log into Sugar as an administrator.
2. Click the **Employees** option located at the top right-hand corner of the page.
3. In the Shortcuts menu of the Employees Home page, click **Create Employee**.



4. On the Employees page, enter information for the following fields:

   First Name. Enter the employee's first name.

Last Name. Enter the employee's last name.

Employee Status. From the drop-down list, select one of the following:

Active: Select this option to specify a current employee of your organization.

Terminated: Select this option if the employee is no longer working for your organization.

Leave of Absence: Select this option if the employee is going to be absent from work for an extended period of time.

Title. Enter the employee's official title.

Department. Enter the name of the department to which the employee belongs.

Reports to. Enter the name of the employee's supervisor.

Office Phone. Enter the employee's office phone number.

Mobile. Enter the employee's cell phone number.

Other. Enter an alternative phone number for the employee, if any.

Fax. Enter the fax number for the employee.

Email. Enter the email address for the employee.

Home Phone. Enter the home phone number for the employee.

Other Email. Enter an alternative email address for the employee, if any.

IM Type. From the drop-down list, select the type of Instant Messenger service that the employee has.

IM Name. Enter the employee's user name for the IM service.

Notes. Enter any comments concerning the employee.

Primary Address. Enter the employee's primary address.

City. Enter the name of the city.

State. Enter the name of the State.

Postal Code. Enter the zip code of the address.

Country. Enter the name of the country.

5. Click **Save** to create the employee record; click **Cancel** to exit the page without saving your changes.

To manage employee records

- To search for an employee, use the Search sub-panel located above the Employees list.
- To view an employee's details such as the title and contact information, click the employee name in the list.
- To email an employee, click the user's email address to open Microsoft Outlook and create the email.
- To export employee records, select them from the list, click **Export** and follow the process detailed in "Exporting Data" in the *Sugar Community Edition User Guide*.

- To edit the status of multiple employees, use the Mass Update panel as described in "Editing and Deleting Multiple Records" in the *Sugar Community Edition User Guide*.
- To edit an employee's record, on the detail page, click **Edit**, update the information, and click **Save**.
- To duplicate a record, on the detail page, click **Duplicate**, modify the information if needed, and click **Save**. Duplication is a convenient way of creating a new employee. You can change the information in the duplicate record to create the new employee.

  Note: You cannot delete an employee record.

- To go back to the Employees Home page from a detail page, click **Employees** in the Shortcuts menu.

To convert an employee into a user

1. On the employee's detail page, click **Create User**.
2. Specify a user name to enable the employee to log into Sugar.
3. Click **Change Password**, specify a password for the user name, and click **Save**.
4. Send an email notification to the employee with the username and password information.

Advanced Configuration Options

The advanced configuration options listed below enable you to exercise tighter control over user actions in your Sugar instances.

Locking Down the Upgrade Wizard

If you are managing multiple instances of the Sugar application and you want to maintain complete control over the Sugar instances, you can lock down the Upgrade Wizard to ensure that no user with administrative privileges can upgrade any of them. To lock down functions on the Administration page

1. Navigate to the *config.php* file in the Sugar root directory.
2. Set the following parameter to `true` as below:

   ```
   $sugar_config['admin_access_control']=true
   ```

3. Save the file.

Locking Down the Module Loader

In order to ensure that users with administrative privileges do not load sub-standard modules into Sugar, you can lock down the Module Loader and direct them to load modules from a location of your choice.

To lock down the Module Loader

1. Navigate to the *config.php* file in the Sugar root directory.
2. Set the following parameter to `true` as below:

   ```
   $sugar_config['file_access_control']=true
   ```
3. Save the file.

Configuring Default Permissions for Sugar Files on Linux

If you are running Sugar on Linux platform, you can control ownership and accessibility to all Sugar files and folders by configuring default user and group permissions.

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' => 02770,
'file_mode' => 0660,
'chown' => 'apache',
'chgrp' => 'apache',
),
```

For `dir_mode,` you may see a value of 1528, which is the decimal equivalent of the octal value 02770. For `file_mode` you may see a value of 432 which is the decimal equivalent of octal value 0660.

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