Sterling Configure, Price, Quote

Solutions Guide

Release 9.0

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Sterling Commerce
An IBM Company

Contents

Overview of the Sterling Configure, Price, Quote Solution

A Configure, Price, Quote (CPQ) system enables users to quickly configure, price, quote, and order the right products and services.

Sterling Commerce provides an out-of-the-box CPQ solution, Sterling Field Sales. The Sterling Field Sales application enables users to manage opportunities and quotes effectively, which in turn, helps users to close business deals more efficiently. Opportunity management involves the creation and management of an opportunity and its associated quotes through the life cycle of the opportunity, until the opportunity is either won or lost. Quote management involves the management of quotes that are associated with an opportunity.

An opportunity acts as a container for holding a quote or related alternative quotes that are to be presented to a customer. A quote, on the other hand, is a commercial document that allows a customer to see a predetermined set of products, their quantity, predetermined price, and delivery date. Note that a quote is always associated with an opportunity.

In Sterling Field Sales, you can store all the information you require during the quoting process, including customer details, information about products and the adjustment made to the price of products, and the payment terms and shipment terms that will be used in the order if the quote is converted to an order.

In addition to opportunity and quote management, Sterling Field Sales enables you to search for a product, opportunity, or quote. You can search for a product, view the details of the product, and verify the product's availability. You can also search for an opportunity or quote, and view its details.

Overview of Sterling Field Sales for Integration with Salesforce.com

Salesforce.com, a leader in cloud computing, offers a complete set of Customer Relationship Management (CRM) applications that are used by current and potential customers of Sterling Commerce. Many Sterling Commerce customers who have Salesforce.com accounts want the Quote functionality provided by Sterling Commerce to be integrated with the Opportunity functionality provided by Salesforce.com.

To provide customers with this combined functionality, Sterling Commerce offers an out-of-the-box integration solution that allows the Sterling Field Sales application to be used from within Salesforce.com. It enables customers using Salesforce.com to work on Salesforce.com opportunities in the **Opportunities** tab, and the associated Sterling Field Sales quotes in the **Sterling Quotes** tab, which is a custom Salesforce.com tab provided by Sterling Commerce. This seamless integration solution provides customers with a feeling of working in only Salesforce.com when they transition between the applications.

The integration solution provides single sign-on capability, so that users accessing Sterling Field Sales from Salesforce.com enter their user name and password in only Salesforce.com. If authentication is successful, they are automatically logged in to Sterling Field Sales.

To enable the integration of Sterling Field Sales with Salesforce.com, Sterling Commerce created a new tab, **Sterling Quotes**, in Salesforce.com. When this tab is selected, the Sterling Field Sales application is invoked and the Quotes home page is displayed, enabling users to work on quotes as they would normally do in a non-integrated Sterling Field Sales application. The difference is when working in integrated mode, the opportunity functionality is no longer available from Sterling Field Sales; this functionality is available from the **Opportunities** tab instead.

Opportunities are managed from the **Opportunities** tab in Salesforce.com. To enable users to view a list of the Sterling quotes that are associated with an opportunity, Sterling Commerce added a new related list, **Sterling Quotes**, to the Opportunity Detail screen in Salesforce.com. The primary quote for an opportunity is identified by a check mark, and the products that are contained in the primary quote are displayed in the **Products** related list on the same opportunity screen. When a user clicks the quote name in the **Sterling Quotes** related list, the user is taken to the Sterling Field Sales application. The related list also contains a **New Sterling Quote** button, which enables a user to create a new quote for the opportunity.

Note: A user cannot change the primary quote for an opportunity from the **Sterling Quotes** related list of the Opportunity Detail screen in Salesforce.com. The user must perform this action from the **Mark as Primary** related task of the Quote Details screen in Sterling Field Sales.

The following diagram illustrates the data flow between Salesforce.com and Sterling Field Sales when a quote is created or modified.
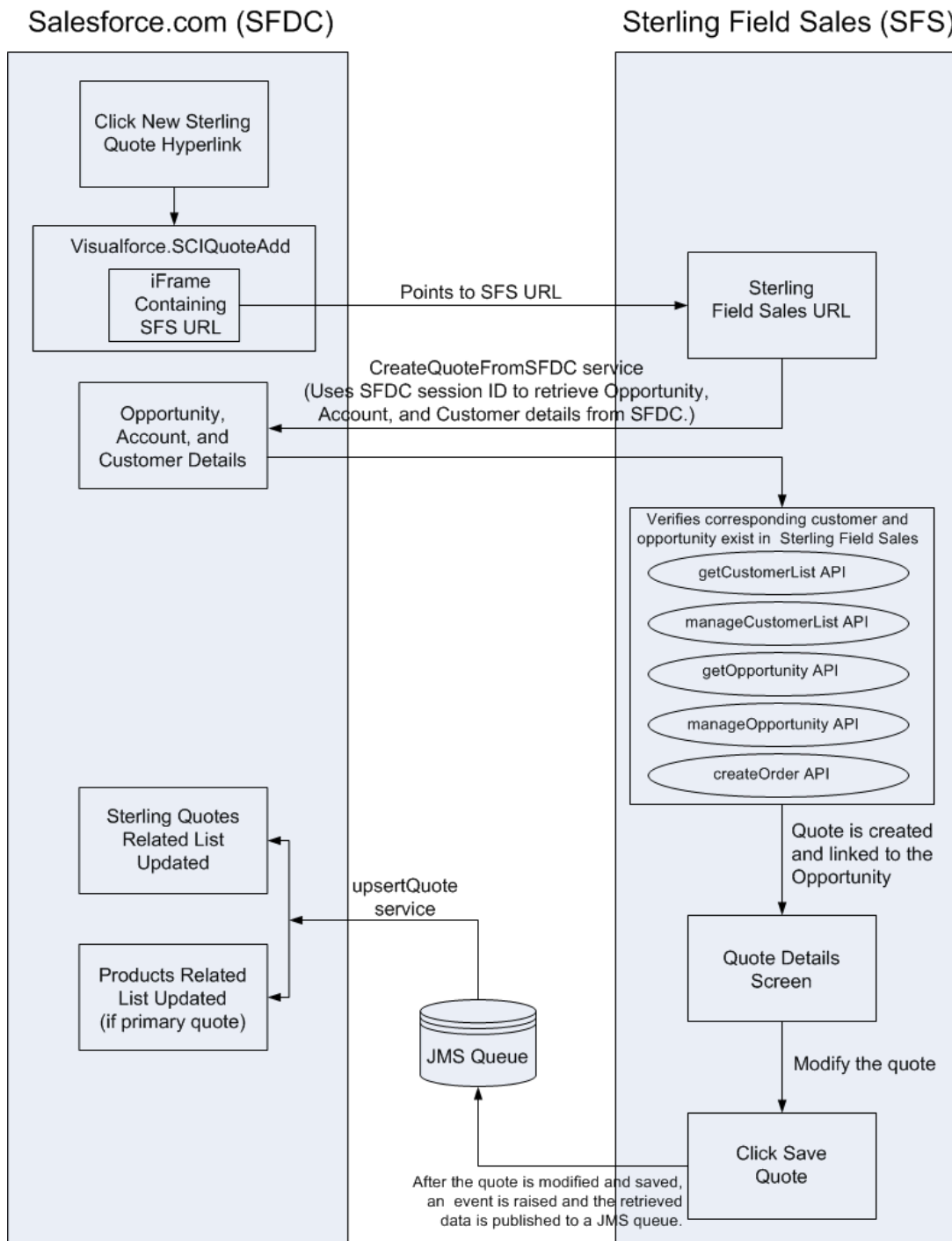
Setting Up Sterling Field Sales for Integration with Salesforce.com

The following describes the prerequisites and sequential steps for setting up Sterling Field Sales for integration with Salesforce.com.

Prerequisites

Before you can set up Sterling Field Sales in Salesforce.com, you must have completed the following:

- Installed Selling and Fulfillment Foundation, Release **9.0,** and HF 9 or higher.
- Installed Sterling Field Sales, Release **9.0**, and HF 2 or higher.
- Created an account with Salesforce.com, with an Enterprise or Unlimited license.
- Ensured sufficient space in your Salesforce.com account to install the Sterling Configure, Price, Quote (CPQ) Managed Package. The amount of space is based on your customer account type.
- Understood Salesforce.com terminology and methodology.
- Enabled products and price lists feature for your Salesforce.com account.
- Used only the Standard pricebook for the Sterling CPQ application.

Note: The supported browsers for the integration of Sterling Field Sales with Salesforce.com consist of only those browsers that are supported by both applications. Sterling Commerce recommends that you use Mozilla Firefox.

Task List for Setting Up Sterling Field Sales for Integration with Salesforce.com

To set up Sterling Field Sales for integration with Salesforce.com, perform the following sequential tasks:

Task	Refer to
1. In Salesforce.com, install the Sterling CPQ Managed Package.	"Installing the Sterling CPQ Managed Package in Salesforce.com" subtopic in Configuring Salesforce.com for Integration with Sterling Field Sales
2. In Salesforce.com, generate and consume WSDL classes.	"Generating and Consuming Salesforce.com WSDL Classes" subtopic in Configuring Salesforce.com for Integration with Sterling Field Sales
3. In Salesforce.com, locate the custom WebService URL.	"Accessing the Custom WebService URL" subtopic in Configuring Salesforce.com for Integration with Sterling Field Sales
4. Configure Sterling properties in the `customer_overrides.properties` file.	"Configuring Sterling Properties" subtopic in Configuring Sterling Field Sales for Integration with Salesforce.com
5. In Salesforce.com, configure the Sterling parameters.	"Setting Up Sterling Parameters in Salesforce.com" subtopic in Configuring Salesforce.com for Integration with Sterling Field Sales

Task		Refer to
6.	Load the factory setup (reference implementation) for Salesforce.com integration.	"Loading Factory Setup Data for Salesforce.com Integration" subtopic in Configuring Sterling Field Sales for Integration with Salesforce.com
7.	Modify JMS values for installed services.	"Modifying JMS Values for Installed Services" subtopic in Configuring Sterling Field Sales for Integration with Salesforce.com
8.	Include the third-party libraries using the install3rdParty tool.	"Including Third-Party Libraries Using the install3rdParty Tool" subtopic in Configuring Sterling Field Sales for Integration with Salesforce.com
9.	Configure single sign-on in Sterling.	"Configuring Single Sign-On in Sterling" subtopic in Configuring Sterling Field Sales for Integration with Salesforce.com
10.	In Sterling Field Sales, implement the sample bundle override file.	"Implementing the Sample Bundle Override File in Sterling Field Sales" subtopic in Configuring Sterling Field Sales for Integration with Salesforce.com
11.	Build and deploy the EAR file.	*Sterling Field Sales: Deployment Guide*
12.	Pre-populate all Sterling products into Salesforce.com as Product2 and Pricebook2 entries (for the company's Standard pricebook).	"Pre-populating all Sterling Products in Salesforce.com" subtopic in Configuring Salesforce.com for Integration with Sterling Field Sales
13.	Perform post-installation recommendations.	Post Installation

Configuring Sterling Field Sales for Integration with Salesforce.com

This topic describes the various configurations that must be performed in Sterling Field Sales to successfully integrate Sterling Field Sales with Salesforce.com.

Configuring Sterling Properties

To successfully integrate Sterling Field Sales with Salesforce.com, you need to configure the following Sterling properties in the `<INSTALL_DIR>/properties/customer_overrides.properties` file:

Property	Description
To enable Salesforce.com authentication, configure the following properties for each enterprise:	
yfs.ycd.sfdc.<EnterpriseCode>.userid	The user ID for communication with Salesforce.com.
	Note: A WebService user must first be created in Salesforce.com. Refer to the subtopic, Creating a WebService User.
yfs.ycd.sfdc.<EnterpriseCode>.password	The password for communication with Salesforce.com.
yfs.ycd.sfdc.<EnterpriseCode>.url	The URL for communicating with Salesforce.com for custom WebServices.
	Note: This is not the same URL as the login URL.
	For additional information about accessing the custom WebService URL, refer to the subtopic, Accessing the Custom WebService URL.
To view the Sterling Field Sales online help from Salesforce.com:	
yfs.ycd.sfdc.online.doc.url	The URL to view Sterling Field Sales online help. For example:
	`yfs.ycd.sfdc.online.doc.url=http://www.sterling commerce.com/FieldSalesDoc/HomePage.htm`
	Note: You can specify a different URL location, if desired.

Where the <EnterpriseCode> is the Sterling enterprise code that you want to be integrated with Salesforce.com.

For additional information about overriding properties using the `customer_overrides.properties` file, refer to the *Selling and Fulfillment Foundation: Properties Guide.*

Loading Factory Setup Data for Salesforce.com Integration

To load the factory defaults for Salesforce.com integration, run the following command from the `<INSTALL_DIR>/bin` directory:

For Windows:

```
.\sci_ant.cmd -f ycd_load_defaults.xml sfdcintegration -logfile <logfile>
```

For Linux/UNIX:

```
./sci_ant.sh -f ycd_load_defaults.xml sfdcintegration -logfile <logfile>
```

Note: Ensure that the `<INSTALL_DIR>` environment variable is set up correctly.

For details on loading factory setup data, refer to the *Sterling Selling and Fulfillment Suite: Applications Installation Guide.*

Modifying JMS Values for Installed Services

For the integration of Sterling Field Sales with Salesforce.com, Sterling Commerce provides the following out-of-the-box services:

- PostToQueue
- PostQuoteToQueue
- PostQuoteChanges
- PostChangedQuote
- PostWSQuotes

After you run the factory setup for Salesforce.com integration, you need to modify the JMS values for each of these services so that messages are posted to the applicable JMS queue for your application server. You can access these services from the Applications Manager by navigating to
Application > Application Platform > Process Modelling > General Process Type > SFDCSynchorization (Services)

For detailed information about how to configure services, refer to the *Selling and Fulfillment Foundation: Application Platform Configuration Guide.*

Including Third-Party Libraries Using the install3rdParty Tool

Prior to installing the third-party libraries, ensure that runtime utilities are configured for the selected application servers.

Using the install3rdParty tool, include the following third-party libraries into the application classpath:

- sfdcintegration.jar, which is located at `<INSTALL_DIR>/runtime/jars/COM_Addin/9.0_9.0`
- axis.jar, which must be downloaded from `http://ws.apache.org/axis/`
- commons-discovery.jar, which must be downloaded from `http://ws.apache.org/axis/`
- commons-net.jar, which must be downloaded from `http://ws.apache.org/axis/`
- jaxrpc.jar, which must be downloaded from `http://ws.apache.org/axis/`
- wsdl4j-1.5.1.jar, which must be downloaded from `http://ws.apache.org/axis/`
- saaj.jar, which must be downloaded from `http://ws.apache.org/axis/`
- JAR file generated from WSDL classes

Note: You must use Apache Axis version 1.4 while including the third-party libraries.

The syntax to the install3rdParty tool:

- For Windows:

  ```
  .\install3rdParty.cmd vendorName vendorVersion <-d | -j | -l |-p | -r
  > filelist [-targetJVM EVERY | NOWHERE | DCL | APP |AGENT |
  [-uninstall]
  ```

- For Linux/UNIX:

  ```
  ./install3rdParty.sh vendorName vendorVersion <-d | -j | -l |-p | -r
  > filelist [-targetJVM EVERY | NOWHERE | DCL | APP |AGENT |
  [-uninstall]
  ```

Note: You must use the **EVERY** parameter as the target JVM for adding the third-party JAR files to all the dynamic classpath files.

For details on using the install3rdParty tool, refer to the *Selling and Fulfillment Foundation: Installation Guide*.

Configuring Single Sign-On in Sterling

You can configure single sign-on so that users accessing Sterling Field Sales from Salesforce.com do not have to log on multiple times when navigating in Salesforce.com. Users enter their user name and password in Salesforce.com only, and if authentication is successful, when they access Sterling Field Sales, they are automatically logged in to Sterling Field Sales.

Note: Sterling Commerce strongly recommends that you set the session timeouts to be the same in Salesforce.com and Sterling Field Sales.

Sterling Commerce provides the YCPSSOManager interface for single sign-on. The YCPSSOManager is used to authenticate users when they log into Sterling applications. Refer to the javadocs for additional information about the YCPSSOManager interface.

Note: If user authentication is configured outside of Salesforce.com and Sterling Field Sales, you need to create a custom implementation of the YCPSSOManager.

Sterling Commerce provides a sample implementation file, `SFDCSingleSignOn`, which is a class that implements the YCPSSOManager. `SFDCSingleSignOn` is located in the `<INSTALL_DIR>/reference/SFDCSingleSignOn.java` directory, and it provides a sample implementation of how you can configure single sign-on when integrating Sterling Field Sales with Salesforce.com. You need to determine if you can use this out-of-the-box class file as is, or if you need to modify it to create your own custom implementation. If you have already implemented YCPSSOManager, ensure that you update the existing code appropriately.

Notes:

- If you create your own custom implementation, you must ensure to include a call to the SFDCIntegrationUtils.setSessionParams(request) method, which adds the Salesforce.com session information into the Sterling Field Sales session.
- You must ensure that the user exists in both the Salesforce.com system and the Sterling system, and that the user's login ID is the same in both systems. The permissions that are set in the Sterling user record ensure that the user can access only the information to which the user is entitled.

- When you create user records in the Sterling system, you must ensure that the passwords on these user records are secure to prevent unauthorized users from accessing the system.

To enable single sign-on, you must configure the following properties in the `yfs.properties` file:

- `yfs.security.singlesignon.enabled=Y`
- `yfs.login.singlesignon.class`
  - To use the sample class provided out-of-the-box by Sterling Commerce:

    `yfs.login.singlesignon.class=com.sterlingcommerce.sample.SFDCSingleSignOn`
  - To use a custom class:

    `yfs.login.singlesignon.class=<Custom_Class>`
- `yfs.login.singlesignon.checkuser=Y`
- `yfs.authentication.type.class`

  Set this property to point to the class that you have configured in the `yfs.login.singlesignon.class` property.

For additional information about these properties and about overriding properties using the `customer_overrides.properties` file, refer to the *Selling and Fulfillment Foundation: Properties Guide.*

The single sign-on class must be implemented and the class should be included in the **APPDynamicclasspath.cfg** file using the install3rdParty tool. For information about installing third-party libraries, refer to the topic "Installing Third-Party JAR Files" in the *Selling and Fulfillment Foundation: Installation Guide*.

For additional information about configuring single sign-on, refer to the sample implementation class, `SFDCSingleSignOn.java,` located in the `<INSTALL_DIR>/reference/` directory.

Sample Implementation

Sterling Commerce provides a sample implementation file, `SFDCSingleSignOn,` that performs basic user authentication between Sterling Field Sales and Salesforce.com. If you use this sample implementation, you can optionally configure the `yfs.ycd.sfdc.<EnterpriseCode>.org.access` property in the `<INSTALL_DIR>/properties/customer_overrides.properties` file. This property enables you to define which Salesforce.com organizations have access to which Sterling enterprises for a Sterling Field Sales deployment. If you use this property, you need to obtain the Salesforce.com organization codes that are used to populate the property value. To obtain the Salesforce.com organization codes (IDs):

1. Log in to your Salesforce.com account.

2. Click **Setup** in the top panel of Salesforce.com.

3. The Setup screen is displayed. In the left panel of the Setup screen, select **Administration Setup -> Company Profile -> Company Information.**

4. The Salesforce.com Organization ID is displayed in the organization's profile on the right of the screen.

For additional information about how the `SFDCSingleSignOn` file works, refer to the `SFDCSingleSignOn` class located in the `<INSTALL_DIR>/reference/SFDCSingleSignOn.java`

directory. For additional information about overriding properties using the `customer_overrides.properties` file, refer to the *Selling and Fulfillment Foundation: Properties Guide*.

To use the sample implementation file, `SFDCSingleSignOn`, provided by Sterling Commerce, you need to compile it and then include it in the application CLASSPATH. The following JARs are required to compile the class:

- sfdcintegration.jar
- axis.jar
- platform_afc.jar
- platform_uifwk_ui.jar
- sfs_ui.jar
- WSDL generated classes
- JAR for the WebService that you are using

Implementing the Sample Bundle Override File in Sterling Field Sales

Sterling Commerce and Salesforce.com use different terms when referring to customers. The term "Customer" is used in the Sterling Field Sales application, whereas the term "Account" is used in Salesforce.com. To eliminate these terminology discrepancies, and help provide an integrated look and feel when using Sterling Field Sales from Salesforce.com, Sterling Commerce recommends that you change the literals in the Sterling Field Sales application so that they match the naming conventions used in Salesforce.com.

To help you implement consistent terminology in Sterling Field Sales and Salesforce.com, Sterling Commerce provides an out-of-the-box sample bundle override file, `sfdc_customer_bundle.js.sample`, which is located in the `<INSTALL_DIR>/repository/eardata/sfs/war/integration/sfdc/resources` directory. This file contains a list of the Sterling Field Sales bundle entries that you need to change so that occurrences of "Customer" are changed to "Account" in the Sterling Field Sales application when accessed from Salesforce.com. You can use the sample provided in `sfdc_customer_bundle.js.sample` to create your own bundle file, and subsequently register this bundle file in the Sterling Field Sales application code.

For detailed information about how to customize and implement bundle files, refer to the *Sterling Field Sales: Customization Guide*.

Configuring Salesforce.com for Integration with Sterling Field Sales

This topic describes the various configurations that must be performed in Salesforce.com to successfully integrate Sterling Field Sales with Salesforce.com.

Note: If you plan to use multicurrencies, you must submit a request to Salesforce.com to activate multicurrencies for your Salesforce.com account. In addition, for every currency that you support in Salesforce.com, you must ensure that the same currency code exists in Sterling Field Sales, and the enterprise that you are integrating with uses these currencies.

Pre-populating all Sterling Products in Salesforce.com

In Salesforce.com, Product2 and Pricebook2 entries for the Standard Price Book must be pre-populated with all the Sterling Commerce products, and a price for each product, that can be used in Sterling Field Sales quotes. Pre-population of products and prices is essential; otherwise, errors will occur when quote summary data is transmitted from Sterling Field Sales to Salesforce.com.

Sterling Commerce products and prices are not automatically pre-populated in Salesforce.com. It is the customers' responsibility to populate Product2 and Pricebook2, and to ensure that whenever a change is made to a product or price in Sterling Field Sales, the change is synchronized in Salesforce.com. For example, if you add an item to the Catalog in Sterling Field Sales, you need to add the same item to Product2 in Salesforce.com. Similarly, if you change the price of an item in Sterling Field Sales, you need to update Pricebook2 in Salesforce.com to reflect the new price.

For an overview of how data flows between Sterling Field Sales and Salesforce.com, refer to the diagram in the topic "Overview of Sterling Field Sales for Integration with Salesforce.com".

Installing the Sterling CPQ Managed Package in Salesforce.com

To install the Sterling CPQ Managed Package in Salesforce.com:

Note: You must have an administrator account to install this package.

1. Obtain the Sterling CPQ Managed Package installation URL and password for your Salesforce.com account:

   a. Enter the following URL in the address bar of your browser:

      https://customer.sterlingcommerce.com/group/sterling/support_center

      In the Sterling Commerce Customer Center screen, enter your e-mail address and password.

   b. From the **Product Support** section in the left panel, select **Selling & Fulfillment Suite -> Selling & Fulfillment Suite (9x & Above) -> Product Updates & Downloads -> Sterling Field Sales**. The Patches or HotFixes - Release Field Sales 9.0 screen is displayed.

   c. Open the CPQPackageAccess.txt file to obtain the Sterling CPQ Managed Package installation URL and password for your Salesforce.com account.

2. Enter the Sterling CPQ Managed Package installation URL in the address bar of your browser.

3. In the Salesforce.com login screen that is displayed, enter the user name and password of your administrator account, and click **Login**.

4. The force.com Package Installer page is displayed, which contains Package Installation Details and prompts you for a password. Enter the Sterling CPQ Managed Package installation password that you obtained in step 1, and click **Submit**.

5. The **Package Installation Details** screen is displayed, showing the contents of the Sterling CPQ Managed Package. Click **Continue**.

6. The **Step 1: Approve Package API Access** screen is displayed. Keep the default values that are provided, and click **Next**.

7. The **Step 2: Choose security level** screen is displayed. By default, the security level is set to **Grant access to admins only**. If you need access to other profiles, select the applicable security level. Click **Next**.

   Note: The two profiles, Sales User and Integration User, provided in the Sterling CPQ Managed Package are for future use only. Do not use these profiles.

8. The **Step 3: Install Package** screen is displayed. Click **Install**.

9. When the installation completes, the **Install complete** page is displayed. Click **Deploy Now**.

10. From the **Deploy Package** page, click **Deploy**. The **Package Details** screen is displayed.

Note: If you encounter an error during the installation, refer to the topic "Troubleshooting the Sterling CPQ Managed Package Installation".

Generating and Consuming Salesforce.com WSDL Classes

Web Service Definition Language (WSDL) classes must be downloaded from Salesforce.com and used to generate classes for communicating seamlessly with Sterling FieldSales. Generation of WSDL classes must be done as part of the installation.

To download the standard Salesforce.com Partner WSDL:

1. Log in to Salesforce.com as the administrator.

2. Navigate to **Setup ->App Setup -> Develop -> API**.

3. Click the **Generate Partner WSDL** link.

4. The WSDL XML file is displayed. Save the XML file with the extension "wsdl" to a local directory. For example, Partner.wsdl.

To download the Sterling CPQ Managed Package WebService WSDL:

1. Log in to Salesforce.com as the administrator.

2. Navigate to **Setup ->App Setup -> Develop -> Apex Classes**.

3. A table listing all the Apex classes is displayed. On the "SciQuotingHelper" Apex class row, click the **WSDL** link. The WSDL XML file is displayed.

4. Save the XML file with the extension "wsdl" to a local directory. For example, SCIQuotingHelper.wsdl.

To generate the WSDL classes and consume them in Sterling Field Sales, do the following for each of the two WSDL files downloaded:

Note: You must use Apache Axis version 1.4.

1. Generate the Java source code files. For details on generating Java source code files, refer to the *Web Services API Developer's Guide* on Salesforce.com.

2. Compile the Java source code files into a JAR file.

3. Include the JAR file in the Sterling Field Sales application classpath using the install3rdParty tool.

Note: If you encounter problems generating WSDL classes, refer to the topic "Troubleshooting the Sterling CPQ Managed Package Installation".

Accessing the Custom WebService URL

To transmit quote summary data successfully back to Salesforce.com, the account-specific URL to use for making calls to the custom WebService in Salesforce.com must be known by the Sterling Field Sales system.

To locate the custom WebService URL for your Salesforce.com account:

1. Log in to your Salesforce.com account.

2. In the header panel of Salesforce.com, click the **Setup** hyperlink.

3. The force.com screen is displayed. From the tree in the force.com side panel, select **App Setup -> Develop -> Apex Classes**.

4. The Apex Classes window is displayed in the work area. Click the **WSDL** hyperlink located to the left of the SciQuotingHelper class name.

5. The SciQuotingHelper XML file is displayed. Search for the `soap:address` element in the SciQuotingHelper XML file. The `location` attribute of this element contains the custom WebService URL for your Salesforce.com account.

   To enable the transmission of quote summary data back to Salesforce.com, you must add this custom WebService URL to the `ycd.sfdc.<Enterprise>.url` Sterling property.

Setting Up Sterling Parameters in Salesforce.com

Sterling Commerce has added a new tab, **Sterling Parameters**, in Salesforce.com. From this tab, you must configure the Sterling Commerce parameters that are required to successfully integrate Sterling Field Sales with Salesforce.com.

Note: Sterling Commerce does not support multiple Sterling Parameters records. Only one Sterling Parameters record can exist at a time.

To configure Sterling Parameters in Salesforce.com:

1. Log in to your Salesforce.com account.

2. In the tab bar of Salesforce.com, click the **All Tabs** icon.

   Note: This may appear as a plus sign (+) or a right arrow (->).

3. The All Tabs screen is displayed. Click the **Sterling Parameters** tab.

4. The Sterling Parameters Home page is displayed. In the **Recent Sterling Parameters** related list, click the **New** button. The New Sterling Parameter screen is displayed.

5. Enter a value for each parameter, as described in the following table:

Parameter	Description
Sterling Parameter Set	Enter a name for this set of Sterling parameters.
SCI Server URL	This parameter is used when constructing the URLs for the Salesforce.com iFrames. The URL indicates where the Sterling Field Sales application is deployed.
	Enter the URL prefix for Sterling Field Sales. For example:
	`http://10.10.46.218:7025/sfs/sfs/container/`
	Note: The Sterling Field Sales system must be inside the DMZ and accessible from Salesforce.com.
Enterprise Code	This parameter is used when creating or opening objects in Sterling Field Sales. The enterprise code specifies the enterprise for which opportunities and quotes are created. The default value is DEFAULT.
	Enter the enterprise code. For example: `Enterprise-B`
SFS iFrame Height	Specifies the height of the iFrame that is used to display Sterling Field Sales from the **Sterling Quotes** tab of Salesforce.com. The default value is 600px.

> **Note:** A valid value must be entered for each parameter.

6. Click **Save**. The name of the Sterling parameter set will appear in the **Recent Sterling Parameters** related list of the **Sterling Parameters** tab.

Edit Sterling Parameters

You may have a specific business need that requires you to modify the Sterling parameters. For example, if the enterprise that integrates with Salesforce.com changes, you must modify the Enterprise Code in the Sterling Parameter Detail screen.

Note: When you change any of these Sterling parameters, be aware that existing data in either Sterling Field Sales or Salesforce.com may no longer be valid or accessible.

To edit an existing Sterling parameter set:

1. Log in to your Salesforce.com account.

2. In the tab bar of Salesforce.com, click the **All Tabs** icon.

   Note: This may appear as a plus sign (+) or a right arrow (->).

3. The All Tabs screen is displayed. Click the **Sterling Parameters** tab.

4. The Sterling Parameters Home page is displayed. In the **Recent Sterling Parameters** related list, click the name of the Sterling parameter set that you want to modify.

5. The Sterling Parameter Detail screen for the selected parameter set is displayed. To modify the parameter values, click the **Edit** button.

6. The Sterling Parameter Edit screen is displayed. Enter the modified values and click **Save**.

Delete Sterling Parameters

The Sterling Parameter Detail screen contains a Delete button. However, if you delete a set of Sterling parameters, the integration of Sterling Field Sales with Salesforce.com will no longer work. You will need to create a new set of Sterling parameters.

Note: Sterling Commerce does not support the **Clone** button on the Sterling Parameter Detail screen. Only one Sterling Parameters record can exist at a time.

Adding IP Address of the Sterling Field Sales Server

In addition to setting up Sterling Commerce parameters in Salesforce.com, you also need to add the IP address of the Sterling Field Sales server to the Salesforce.com account's trusted server list, as follows:

1. Click **Setup** in the top panel of Salesforce.com.

2. The Setup screen is displayed. In the left panel of the Setup screen, select **Administration Setup -> Security Controls -> Network Access**.

3. The Network Access screen displays the list of IP address ranges from sources that your organization trusts. Click the **New** button to add the IP address of the Sterling Field Sales server to the Salesforce.com account's trusted server list.

Creating a WebService User

You need to create a WebService user in Salesforce.com.

Note: After creating a WebService user, you need to add the user's ID and password to the `yfs.properties_ycd_ext.in` file. For additional information about configuring the `yfs.ycd.sfdc.<EnterpriseCode>.userid` and `yfs.ycd.sfdc.<EnterpriseCode>.password` properties, refer to the topic, Configuring Sterling Properties.

To create a WebService user:

1. Click **Setup** in the top panel of Salesforce.com.

2. The Setup screen is displayed. In the left panel of the Setup screen, select **Administration Setup -> Manage Users -> Users**.

3. The All Users screen is displayed. Click **New User**.

4. In the User Edit screen, enter the user details.

   Notes:

   ⸍ The profile that the user is assigned to must have Read/Create/Edit access on the SciQuote object, Read/Edit access on the Opportunity object, and Read access on Pricebook2 and Product2.

   ⸍ The profile needs to have been granted access to the WebService class. This is accomplished by selecting **Setup -> App Setup -> Develop -> Apex Classes -> Security** (SciQuotingHelper row).

5. Click **Save**.

Post Installation

To successfully display quotes associated to opportunities in Salesforce.com, Sterling Commerce suggests that you perform the tasks described in this topic.

Set Session Timeouts

Set the session timeout in Sterling Field Sales to be the same as the session timeout in Salesforce.com to prevent unauthorized users from being able to access the system.

Note: If you set the session timeout for Sterling Field Sales to be greater than the default session timeout (6000 seconds) in the Sterling YFS_USER table, you need to update the YFS_USER table so that it reflects the same session timeout value that you specified for Sterling Field Sales; otherwise, the Sterling Field Sales session will time out after 6000 seconds.

Add the Sterling Quotes Related List to the Opportunity Layout

You can add the **Sterling Quotes** related list (SciQuote object) to the Opportunity Detail layout either by using the pre-packaged layout or by manually adding the related list to the appropriate layout.

Using the Pre-Packaged Layout

To add the **Sterling Quotes** related list to the Opportunity Detail screen using the pre-packaged layout:

1. Click **Setup** in the top panel of Salesforce.com.

2. The Setup screen is displayed. In the left panel of the Setup screen, select **App Setup -> Customize -> Opportunities -> Page Layouts**.

3. The Opportunity Page Layout screen is displayed. Click the **Page Layout Assignment** button. The Page Layout Assignment screen is displayed.

4. Click the **Edit Assignment** button.

5. The Edit Page Layout Assignment screen is displayed. For each profile that you want to modify the layout for:

   a. Select the row that contains the Profile.

      Note: You can select multiple rows for assignment at once.

   b. From the **Page Layout To Use** drop-down list, select the layout that you want to assign.

      Note: The pre-packaged layouts are identified by **(Installed Package: Sterling CPQ package)** at the end of the layout name.

6. Click **Save**.

Manually Adding the Related List to the Appropriate Layout

To manually add the **Sterling Quotes** related list to the Opportunity Detail screen:

1. Click **Setup** in the top panel of Salesforce.com.

2. The Setup screen is displayed. In the left panel of the Setup screen, select **App Setup -> Customize -> Opportunities -> Page Layouts**.

3. The Opportunity Page Layout screen is displayed. Click the **Edit** hyperlink located next to the layout that you want to customize.

4. Click the **Related Lists** hyperlink located in the left pane of the Opportunity Layout panel.

5. Drag and drop the **Sterling Quotes** box from the right pane of the Opportunity Layout panel to the position on the layout where you would like it to appear.

6. Click the wrench icon in the **Sterling Quotes** related list.

7. The Related List Properties - Sterling Quotes screen is displayed. In the **Columns** pane, select and order the columns that you want displayed in the list. Optionally, you can also set the **Sort By:** parameter. In the **Buttons** pane, ensure that the **New** check box is enabled. Click **OK**.

8. If necessary, repeat steps 6 and 7 for the **Products** related list.

9. Click **Save** in the editor.

10. A message to confirm your changes is displayed. Click **Yes**.

Set Security Permissions on Sterling Components

Security is enabled based on the Profile in Salesforce.com. You need to enable access to the Sterling Commerce components for the Profiles intended for use by non-System Administrator users who will be working with Sterling quotes.

Notes:

- The Administrator must ensure that the permissions for all components are set consistently. If this is not done, users may not have visibility into the necessary objects, or they may encounter error messages when clicking hyperlinks or performing other operations.

- Object-level permissions can only be set on custom Profiles, not standard Profiles. Refer to the Salesforce.com documentation for details about how to use the Clone operation to create a custom profile based on a standard profile.

Tabs and Objects

To set permissions for Tabs and Objects:

1. Click **Setup** in the top panel of Salesforce.com.

2. The Setup screen is displayed. In the left panel of the Setup screen, select **Administration Setup -> Manage Users -> Profiles**.

3. The User Profiles screen is displayed. For each applicable profile:

   a. Click the **Edit** hyperlink located next to the profile that you want to edit.

   b. The Profile Edit screen is displayed. In the **Tab Settings** section, set the **Sterling Quotes** permission to **Default On**. Also, leave the **Sterling Parameters** permission as **Tab Hidden.**

   c. In the **Custom Object Permissions** section, set the **Sterling Parameters** to **Read**. Also, set the **Sterling Quotes** to **Read, Create, Edit, Delete**.

      Note: You may choose to leave **Delete** disabled, because the provided link routes to only an error page. However, to exercise all of the documented functionality, **Delete** must be enabled.

   d. Verify if the permissions in the Standard Object Permissions section are correct.

   e. Click **Save**.

Visualforce Pages

To set permissions for Visualforce pages:

1. Click **Setup** in the top panel of Salesforce.com.

2. The Setup screen is displayed. In the left panel of the Setup screen, select **App Setup -> Develop -> Pages.**

3. The Visualforce Pages screen is displayed. For each of the Visualforce pages supplied in the integration package:

   a. Click the **Security** hyperlink located next to the page to be modified.

   b. Move all profiles that should have access to Sterling Quotes from the **Available Profiles** box to the **Enabled Profiles** box.

   c. Click **Save**.

Custom Web Service API

To set permissions for the custom web service API:

1. Click **Setup** in the top panel of Salesforce.com.

2. The Setup screen is displayed. In the left panel of the Setup screen, select **App Setup -> Develop -> Apex Classes.**

3. The Apex Classes screen is displayed. Click the **Security** hyperlink located next to the SciQuotingHelper class.

4. Move all profiles that should have access to Sterling Quotes from the **Available Profiles** box to the **Enabled Profiles** box.

5. Click **Save**.

Enable the Discount Field of the OpportunityLineItem

The **Discount** field on the OpportunityLineItem field that is provided out-of-the-box is not visible by default. To enable the display of this field:

Note: This task must be performed once for each Salesforce.com account.

1. Click **Setup** in the top panel of Salesforce.com.

2. The Setup screen is displayed. In the left panel of the Setup screen, select **Administration Setup -> Security Controls -> Field Accessibility.**

3. The Field Accessibility screen is displayed. Select **Opportunity Product**.

4. The Opportunity Product screen is displayed. Select **View by Fields**.

5. From the **Field:** drop-down list, select **Discount**.

6. For each Profile that you plan to use:

    a. Click the **Hidden** hyperlink in the **Field Access** column.

    b. In the **Field-Level Security:** section, enable the **Visible** check box.

    c. Click **Save**.

Add Commonly-Used Tabs to the Tab Bar (Optional)

To add commonly-used tabs to the Tab bar:

1. In the tab bar of Salesforce.com, click the **Show All Tabs** icon.

    Note: This may appear as a plus sign (+) or a right arrow (->).

2. Click the **Customize My Tabs** button.

3. Select **Sterling Quotes** from the **Available Tabs** pane and place it in the desired location in the **Selected Tabs** pane.

4. Repeat step 3 for any other tabs that you use that are not yet displayed in the Salesforce.com tab bar.

5. Click **Save**.

Integrating Quotes with Salesforce.com

This topic describes the quote functionalities that have changed when using Sterling Field Sales from Salesforce.com.

Limitations of Using Sterling Field Sales from Salesforce.com

This topic describes the limitations when using Sterling Field Sales from Salesforce.com.

Salesforce.com Limitations

The following Salesforce.com limitations apply when using Sterling Field Sales from Salesforce.com:

- Sterling Commerce cannot control the order of the displayed products in the **Products (Standard Price Book)** related list of the Opportunity Detail screen in Salesforce.com. As a result, a bundle parent item and bundle component items will not be displayed together.

- The **Products (Standard Price Book)** related list of the Opportunity Detail screen displays **Edit** and **Del** (delete) hyperlinks. However, if you click these hyperlinks, any changes that you make to the products are not propagated into Sterling Field Sales. To edit a product line item, users must navigate to the Quote Details screen in Sterling Field Sales.

- The number of concurrent threads for a given session should not exceed 10 because of Salesforce.com resource restrictions.

- Salesforce.com does not support Sterling Commerce users who have access to multiple enterprises.

- When a user changes a contact for an opportunity in Salesforce.com, the contact is not automatically updated for the Sterling Quotes.

- Salesforce.com does not use unit of measure (UOM) as a differentiator in a catalog. Consequently, the Sterling catalog should not have products with the same ID but different UOMs, because this will cause confusion when viewing the product list for a Salesforce.com Opportunity.

- The maximum size of the quantity field provided out-of-the-box by Sterling Field Sales exceeds the maximum size of the quantity field in Salesforce.com. For a quote, if a user enters a line item quantity that exceeds the maximum quantity allowed for a line item in Salesforce.com, an error will be displayed. Typically, this scenario would not occur, because extremely large quantities of an item would generally be sold in cases or pallets.

Sterling Field Sales Limitations

The following Sterling Field Sales limitations apply when using Sterling Field Sales from Salesforce.com. These limitations may be resolved in future releases.

- Sterling Commerce does not support customizing Sterling Field Sales in a multi-enterprise scenario, where one enterprise has customizations and the other enterprise has different extensions or no customizations.

- Sterling Commerce does not support IsPersonAccount in Salesforce.com, which determines if an account is a business account or a consumer account. Currently, Sterling Commerce creates only business users when Sterling Field Sales is used with Salesforce.com.

- Customers cannot configure validation rules or triggers on the Opportunity, OpportunityLineItem, or SciQuote objects that contain validation logic that is *more restrictive* than what is allowed in Sterling Field Sales. In addition, customers cannot configure validation rules or triggers with logic that is a direct contradiction to algorithms specified by Sterling Commerce. If such validation rules or triggers are configured, an exception is displayed.

Viewing the Quote Home Page from Salesforce.com

The Quote Home page is the first screen that is displayed when a user selects the **Sterling Quotes** tab in Salesforce.com. It comprises of a **Home** panel and a **Dashboard** panel; the panels assist the user in performing certain tasks or viewing information.

To display the Quote Home page in Salesforce.com, Sterling Commerce has created a new dashboard, which overrides the default Quote Home page provided by Salesforce.com. The new dashboard points to a new Sterling Field Sales Quote Home page, which has been modified from the standard Quote Home page in Sterling Field Sales. Although the two home pages look similar, the Quote Home page in Salesforce.com has limited functionality as opportunities are managed in Salesforce.com instead of Sterling Field Sales.

The Quote Home page displayed in Salesforce.com still provides the **Find Quote** and **Find Product** hyperlinks that enable a user to search for quotes and products. However, the following hyperlinks have been removed from this page:

- **New Opportunity** - This functionality is available from the **Opportunities** tab in Salesforce.com.
- **Find Opportunity** - This functionality is available from the **Opportunities** tab in Salesforce.com.
- **New Quote** - To ensure that a quote is created only when an opportunity already exists, a new quote can be created only:
  - From the Opportunity Detail screen in Salesforce.com
  - When in the context of an existing quote in Sterling Field Sales, using the Copy As Alternate task

Additionally, when using the Search functionality, users can search for only quotes in Sterling Field Sales; users can no longer search for opportunities in Sterling Field Sales. To search for opportunities, the user must navigate to the **Opportunities** tab in Salesforce.com.

Creating a Quote from Salesforce.com

A quote is a document that allows a prospective customer to see a predetermined set of items and quantities at a predetermined price, to be delivered on a specific date. A sales representative must be able to create quotes that can be used to store all the information that is required during the quoting process, including customer details, information about the items and the adjustments made to the price of items, and the payment terms and shipment terms that will be used in the order if the quote is converted to an order.

When using Sterling Field Sales from Salesforce.com, a quote can be created only if an opportunity already exists to which a new quote can be linked. New quotes are created from the Opportunity Detail screen in Salesforce.com.

Notes:

- In a multicurrency Salesforce.com organization, all quotes associated with an opportunity must have the same currency as the opportunity.

- Sterling Commerce has created a trigger, `CurrencySciQuoteCheckTrigger`, which prevents a multicurrency organization from changing an opportunity's currency if one of more quotes exist for the opportunity.

Sterling Commerce has created a custom Sterling Quote (SciQuote) object, which has a Master-Detail relationship to the Salesforce.com Opportunity object. The object stores summary information about a quote in Sterling Field Sales; a record is created when a quote is created in Sterling Field Sales, and the record is updated when the quote is updated in Sterling Field Sales. Because of the Master-Detail relationship, Sterling Quotes can appear as a Related List on the Opportunity Detail page.

The Sterling Quotes related list contains a create quote button, **New Sterling Quote**. When this button is clicked, a Sterling Visualforce page, VisualforceSCIQuoteAdd, is displayed in Salesforce.com. The Visualforce page has an iFrame, which contains a source URL that points to the Sterling Field Sales application. The processing of the URL in Sterling Field Sales invokes a strut that executes the CreateQuotesFromSFDC service. When the service has completed executing, the Sterling Field Sales screen is displayed within the iFrame.

The CreateQuotesFromSFDC service uses the SessionID to connect to Salesforce.com and retrieve the details of the opportunity, account, and customer for the new quote. The service then calls the following sequence of API calls to ensure that a corresponding customer and opportunity exist in Sterling Field Sales:

1. The getCustomerList API is called to verify if a customer exists in Sterling Field Sales with the same ID as the CustomerID and CustomerContactID in Salesforce.com.

2. If a matching customer ID does not exist in Sterling Field Sales, the manageCustomer API is called to create a customer.

   Note: The time zone on a user's records must be the same in both Sterling Field Sales and Salesforce.com.

3. The getOpportunityList API is called to verify if the opportunity exists in Sterling Field Sales.

4. If the opportunity does not exist in Sterling Field Sales, the manageOpportunity API is called to create an opportunity.

5. Finally, the createOrder API is called to create the new quote and link the quote to the opportunity.

When a new quote is successfully created, the Sterling Field Sales user interface is invoked and the quote that was created is displayed in the **Customer** tab of the Quote Details screen. This screen differs slightly when accessing it from Salesforce.com as opposed to accessing it directly from Sterling Field Sales. When the screen is accessed from Salesforce.com, the screen is automatically pre-populated with the customer's data. The only customer data that can be modified from this screen is the contact. Note, however, that a new contact cannot be created from this screen. At this point, the sales representative can enter or change the name of the quote. Additionally, the sales representative can mark the quote as the primary quote for the opportunity by clicking the **Mark as Primary** related task in the Quote Details screen.

If an error occurs during quote creation, an error page will be displayed in Sterling Field Sales, and the error message will explain why the quote could not be created.

For a graphical overview of how data flows between Sterling Field Sales and Salesforce.com, refer to "Overview of Sterling Field Sales for Integration with Salesforce.com".

Viewing Quote Details from Salesforce.com

A sales representative may sometimes want to view a quote's summary, such as the quote's status, the items added to the quote, and so on. For example, after a sales representative has presented a quote to a customer, if the customer neither accepts nor rejects the quote for a considerable period of time, the sales representative may want to know the quote's expiration date so that the user can follow up with the customer.

Sterling Commerce has added a related list, **Sterling Quotes**, to the Opportunity Detail screen in Salesforce.com. The **Sterling Quotes** related list contains a list of all quotes that are associated with the opportunity. When a user clicks the quote name in this related list, a Sterling Visualforce page, VisualforceSCIQuoteView, is displayed in Salesforce.com. The Visualforce page has an iFrame, and existing Sterling Field Sales logic is used to display the Sterling Field Sales Quote Summary screen inside the iFrame. The Quote Summary screen that is accessed from Salesforce.com is identical to the Quote Summary screen that is accessed directly from Sterling Field Sales, except that the opportunity attributes are not displayed when accessing this screen from Salesforce.com.

In the Quote Summary screen, a user can view the details of a quote such as the quote name, status, the details of the customer for whom the quote was created, the items that have been added to the quote, and so on.

Modifying a Quote from Salesforce.com

After a quote is created, a sales representative may have to modify the details of a quote, such as the name of the quote, expiration date, contact details, item quantities, payment terms, and shipment terms. For example, if a customer wants to change the carrier service that is to be used to transport the items after a quote is converted to an order, a sales representative may have to specify a different carrier service.

Sterling Commerce has added a related list, **Sterling Quotes**, to the Opportunity Detail screen in Salesforce.com. The **Sterling Quotes** related list contains a list of all quotes that are associated with the opportunity. When the user clicks the **Edit** hyperlink located next to the quote name in this related list, a Sterling Visualforce page, VisualforceSCIQuoteEdit, is displayed in Salesforce.com. The Visualforce page has an iFrame, and existing Sterling Field Sales logic is used to display the Sterling Field Sales Quote Details screen inside the iFrame. The Quote Details screen that is accessed from Salesforce.com is similar to the Quote Details screen that is accessed directly from Sterling Field Sales. The only modification is where the user is taken when the **Opportunity Name** hyperlink is clicked from this screen.

In the Quote Details screen, a user can modify the details of a quote, such as the name of the quote, expiration date, contact details, item quantities, payment terms, and so on. Additionally, a user can mark a quote as the primary quote for the opportunity by clicking the **Mark as Primary** related task in the Quote Details screen.

Deleting a Quote from Salesforce.com

Sterling Commerce has added a related list, **Sterling Quotes**, to the Opportunity Detail screen in Salesforce.com. The **Sterling Quotes** related list contains a list of all quotes that are associated with the opportunity. Next to each Sterling quote name is a **Del** (delete) hyperlink.

Sterling Commerce is not supporting the function of deleting a quote from Salesforce.com. Therefore, Sterling Commerce recommends that you hide this hyperlink by removing the **Delete** access permission for the Sterling Quote in all Profiles. If you do not hide the hyperlink and a user clicks the **Del** hyperlink next to the name of a quote in the **Sterling Quotes** related list, a Sterling Visualforce page, VisualforceSCIQuoteDelete, is displayed in Salesforce.com. The Visualforce page has an iFrame that displays a new integration error page, which is stored in Sterling Commerce, and has the look and feel of a Salesforce.com error page. The error on this page will state that the action of deleting a quote cannot be performed when using Sterling Field Sales from Salesforce.com.

Returning to the Opportunity Detail Screen from Sterling Quote Screens

When using Sterling Field Sales from Salesforce.com, opportunities are created and stored in Salesforce.com instead of Sterling Field Sales. As a result, when a user accesses information about an opportunity, the information is retrieved from the Salesforce.com system instead of Sterling Field Sales.

The primary information panel of quote screens in Sterling Field Sales contains an **Opportunity Name** field, which displays the name of the opportunity to which the quote belongs. When a user clicks on the opportunity name hyperlink, the user is taken to the corresponding opportunity in the Opportunity Detail screen in Salesforce.com. To enable this, Sterling Commerce has used javascript to always set the frame to be the top frame in which the URL for the opportunity details of the selected opportunity is entered.

Note: When using Sterling Field Sales from Salesforce.com, opportunity attributes (Anticipated Close Date, Owner ID, and Co-Owner ID) are not displayed in the Quote Summary screen.

Viewing the Quote List on the Opportunity Detail Screen in Salesforce.com

The Opportunity Detail screen for an opportunity, which is accessed by selecting an opportunity from the Opportunities Home page in Salesforce.com, can be configured to display a **Sterling Quotes** related list. The related list displays the Sterling Field Sales quotes associated with that opportunity, and selected information about each quote. In addition, a check mark visually identifies the primary quote for the opportunity. Whenever a quote is saved, the **Sterling Quotes** related list in Salesforce.com is updated to reflect the changes.

A user can create or edit a quote from the **Sterling Quotes** related list.

* Create a new quote

  When a user clicks the **New Sterling Quote** button, a Sterling Visualforce page, VisualforceSCIQuoteAdd, is displayed in Salesforce.com. The Visualforce page has an iFrame, which contains a source URL that points to the Sterling Field Sales application. The processing of the URL in Sterling Field Sales invokes a strut that executes the CreateQuotesFromSFDC service. When the service has completed executing, the Create Quote screen is displayed inside the iFrame.

* Edit a quote

  When a user clicks the **Edit** hyperlink located next to a quote, a Sterling Visualforce page, VisualforceSCIQuoteEdit, is displayed in Salesforce.com. The URL inside the iFrame of the

Visualforce page points to the Quote Details screen in Sterling Field Sales, enabling the user to modify the details of the quote, such as product information, payment terms, and shipment terms.

By default, the **Sterling Quotes** related list displays the last five quotes that were modified. If additional quotes are associated with the opportunity, a user can access these quotes as follows:

- View five additional quotes for the opportunity

  When a user clicks the **Show 5 more >>** hyperlink, the **Sterling Quotes** related list is expanded to display five additional quotes.

- View all quotes for the opportunity

  When a user clicks the **Go to list >>** hyperlink, a list of all quotes associated with the opportunity is displayed in the **Sterling Quotes** tab.

Note: As part of the integration, Sterling Commerce does not support deleting a quote from Salesforce.com. Therefore, Sterling Commerce recommends that you hide the **Del** hyperlink in the **Sterling Quotes** related list of the Opportunity Detail screen. If you do not hide the hyperlink and a user clicks the **Del** hyperlink located next to a quote in this related list, a Sterling Visualforce page, VisualforceSCIQuoteDelete, is displayed in Salesforce.com. An error message is displayed in the iFrame of the Visualforce page, informing the user that deleting a quote is not a supported action. Instead, users can abandon a quote by viewing the quote details and selecting the Abandon Quote task.

To display the **Sterling Quotes** related list in the Opportunity Detail screen in Salesforce.com, Sterling Commerce has created a quote summary object in Salesforce.com to hold the primary information for each quote created for the opportunity. The following fields in the quote summary object are used to display the list of quotes:

Salesforce.com Field Label	Salesforce.com Field Name	Sterling Field	Value
Sterling Quote Name	Name	/Order/@OrderName	Name of the quote in Sterling Field Sales,
Opportunity Id	OpportunityId	/Order/Opportunity/@OpportunityID	Salesforce.com Opportunity Id to which this quote is associated.
Order Header Key	OrderHeaderKey	/Order/@OrderHeaderKey	Order Header Key for the quote object in Sterling Field Sales.
Primary	Primary	/Order/Opportunity/@PrimaryQuoteKey **Note:** Sterling Commerce is not mapping this value, but verifying if this value matches the OrderHeaderKey for the quote; and, if so, the Primary flag is set to True.	Flag to indicate if the quote is the primary quote for the opportunity in Sterling Field Sales.
Value After Discounts	QuoteValueAfterDiscounts	/Order/OverallTotals/@GrandTotal	Net value for the quote in Sterling Field Sales.

Salesforce.com Field Label	Salesforce.com Field Name	Sterling Field	Value
Value Before Discounts	QuoteValueBeforeDiscounts	/Order/OverallTotals/@GrandTotal - (/Order/OverallTotals/@GrandCharges - /Order/OverallTotals/@GrandDiscount)	Total value for the quote in Sterling Field Sales before discounts are applied.
Status	Status	/Order/@OverallStatus If that does not exist, then use: /Order/@Status	Status on the quote in Sterling Field Sales.
Discount (%)	TotalDiscountPercent	(/Order/OverallTotals/@GrandCharges - /Order/OverallTotals/@GrandDiscount) Divided by: (/Order/OverallTotals/@GrandTotal - (/Order/OverallTotals/@GrandCharges - /Order/OverallTotals/@GrandDiscount)) Times 100	Percentage discount on the quote in Sterling Field Sales.
Last Modified Timestamp	SciLastModifiedDate		The date and time that the record was last modified in Sterling Field Sales.

Viewing the Products List on the Opportunity Detail Screen in Salesforce.com

The Opportunity Detail screen for an opportunity, which is accessed by selecting an opportunity from the Opportunities Home page in Salesforce.com, displays a **Products** related list. The products displayed in this related list are derived from the line items of the primary quote for the associated opportunity. For each product, the related list displays selected information about the product. Whenever the primary quote for an opportunity is saved in Sterling Field Sales, the products in this related list are updated to reflect the changes.

Note: When a quote is saved in Sterling Field Sales, and if one or more products in the saved quote does not exist in Salesforce.com, an error is thrown and no aspects of the saved quote will be uploaded into Salesforce.com.

To display the list of products for the primary quote in the **Products** related list of the Opportunity Detail screen, Sterling Commerce is using an existing Opportunity Product object in Salesforce.com.

Note: Sterling Commerce recommends that you remove the **Add Product**, **Edit All**, and **Choose Price Book** buttons from the Opportunity Product object. You can do this either by using one of the pre-packaged layouts provided by Sterling Commerce, or by making the changes to your own layouts. If these buttons are not removed and are used to modify data, the quote data in Salesforce.com will not be in sync with the quote data in Sterling Field Sales. Users can, however, use the **Sort** button to rearrange the displayed order of products in the **Products** related list.

The following table lists the subset of product object fields that are used to display the products in the **Products** related list:

Salesforce.com Field Label	Salesforce.com Field Name	Sterling Field	Value
Opportunity Id	OpportunityId	/Order/Opportunity/@OpportunityID	Opportunity Id that quote (containing the line item) is associated to.
Product	Description (Not directly an OpportunityLineItem field; arrived at from line item as PricebookEntry. Product2.Name).	/Order/OrderLines/OrderLine/Item/@ItemID	Product Id of the product.
Quantity	Quantity	/Order/OrderLines/OrderLine/@OrderedQty	Quantity for the line.
Discount	Discount	For bundle items that have `IsLinePriceForInformationOnly=Y`: 0.0 -(/Order/OrderLines/OrderLine/LineOverallTotals/@Charges - /Order/OrderLines/OrderLine/LineOverallTotals/@Discount) Divided by (/Order/OrderLines/OrderLine/LineOverallTotals/@Extended Price) Times 100 **Note:** If the computed discount percentage is negative, the discount percentage is set to 0.	Percentage discount on the line.
Total price	TotalPrice	For bundle items that have `IsLinePriceForInformationOnly=Y`: 0.0 /Order/OrderLines/OrderLine/LineOverallTotals/@LineTotal	Extended discount price for the line.
Sales Price	UnitPrice		Unit Price field populated with the Unit Price before discounts for the line item.

Note: The products field is populated by taking the Description value and comparing it against the price book mapping in Salesforce.com.

Synchronizing Customers and Products

Whenever a change is made to a customer in Salesforce.com or a product in Sterling Field Sales, the data must be synchronized in these applications. However, synchronization of data between Sterling Field Sales and Salesforce.com does not happen by default. You must implement your own synchronization of the data.

For example, if a user modifies customer details in Salesforce.com, the updated customer details are not automatically populated in the Sterling Field Sales records. Similarly, if a user changes the price of a product in Sterling Field Sales, the updated price is not automatically populated in the pricebook in Salesforce.com. You must implement your own synchronization of data between Sterling Field Sales and Salesforce.com to prevent the occurrence of errors or a mismatch of data.

Note: If you add or remove a product in Sterling Field Sales, you must ensure that the product is added or removed in Salesforce.com before you create or update a quote; otherwise, quote synchronization from Sterling Field Sales to Salesforce.com will fail.

Synchronizing Sterling Field Sales Quotes in Salesforce.com

Whenever a change is made to a quote and saved in Sterling Field Sales, the change must be published in the associated opportunity of Salesforce.com. For example, a user may add a line item or change the discount for a line item in the primary quote, and those changes need to be reflected in the associated Opportunity Detail screen of Salesforce.com.

To enable the transmission of data for a quote from Sterling Field Sales to Salesforce.com, Sterling Commerce has implemented the following events:

- `ORDER_CREATE.0015.ON_SUCCESS`
- `ORDER_CHANGE.0015.ON_SUCCESS`
- `ORDER_CHANGE.0015.ON_ORDER_RELEASE_STATUS_CHANGE`
- `SEND_FOR_APPROVAL.ON_APPROVAL_STATUS_CHANGE`
- `CHANGE_OPPORTUNITY.ON_SUCCESS`

Note: By default, Sterling Commerce has configured these events for DEFAULT organization, which is Hub organization.

The `ORDER_CREATE.0015.ON_SUCCESS` event is invoked whenever a user creates and subsequently saves a quote in Sterling Field Sales. Similarly, the `ORDER_CHANGE.0015.ON_SUCCESS` event is invoked whenever a user changes and subsequently saves the modified quote in Sterling Field Sales. When invoked, these events retrieve the data that needs to be transmitted to Salesforce.com from the modified quote. For a primary quote, the opportunity Id to which the quote is associated, as well as the following quote summary information and line item information, is synchronized in Salesforce.com:

- Quote summary information (for display in the **Sterling Quotes** related list of the Opportunity Detail screen):
  - Quote name
  - Order header key
  - Whether or not the quote is a primary quote
  - Value after discounts
  - Value before discounts

- Status
- Discount (%)
- Last modified timestamp

- Line item information (for display in the **Products** related list of the Opportunity Detail screen):
  - Product Id of the product (transmitted as the line Description)
  - Quantity for the order line
  - Percentage discount on the order line
  - Extended discounted price for the order line

  The unit price before discounts for the line item is calculated by Salesforce.com, based on the quantity, percentage discount, and extended discounted price attributes passed to Salesforce.com.

For a non-primary quote, the opportunity Id to which the quote is associated and the quote summary information is synchronized in Salesforce.com.

If you want to define a different set of data to be transmitted to Salesforce.com, you must customize the XSL translations, custom Java code, condition, and event templates in the Sterling Commerce events described in this topic. The out-of-the-box custom Java code and conditions are located in `<INSTALL_DIR>/reference` folder. For more information about event templates, refer to *Selling and Fulfillment Foundation: Customizing APIs* Guide.

The retrieved data from the Sterling Field Sales quote is published to a JMS queue, which compiles the data that needs to be transmitted to Salesforce.com. For example, it compares the opportunity's primary quote key with the quote key on the order. If the keys are different, the quote is not the primary quote. In such a scenario, the input is compiled to send only the summary information to Salesforce.com. If the keys are the same, the quote is the primary quote, and the input is compiled to send both summary information and line item information to Salesforce.com. Additionally, if the quote is a primary quote, the PostWSQuotes service calculates the discounts to be applied to the line items.

You can configure the JMS queue to suit your business requirements. However, Sterling Commerce recommends that you configure the integration server to run as often as possible, so that the data is kept in sync between Sterling Field Sales and Salesforce.com.

Note: As a result of Salesforce.com limitations, the maximum thread count that you can configure for the JMS queue is 10 threads.

The PostWSQuotes service subsequently passes the data to the `upsertQuote` WebService, which is a custom WebService in the SCIQuotingHelper class provided by Sterling Commerce. When the `upsertQuote` WebService call completes successfully, the associated Opportunity Detail screen in Salesforce.com displays the updated information for the quote; that is, the quote is updated in the **Sterling Quotes** related list and, if the quote is a primary quote, the product details are also updated in the **Products** related list.

Notes:

- The quote information in Salesforce.com is updated only if the timestamp on the transmitted Sterling quote record has a later date and time than the timestamp in the existing Salesforce.com database record, or if a quote is transitioning from a non-primary quote to a primary quote.

- An exception is thrown if the timestamp on the sciQuote object matches the timestamp on the equivalent record in the Salesforce.com database and the update is not a result of a quote transitioning from non-primary to primary.

The `ORDER_CHANGE.0015.ON_ORDER_RELEASE_STATUS_CHANGE` event is invoked whenever the status of a quote has changed in Sterling Field Sales. The configuration of this event is similar to the `ORDER_CREATE.0015.ON_SUCCESS` and `ORDER_CHANGE.0015.ON_SUCCESS` events. Upon successful transmission of the status change from Sterling Field Sales to Salesforce.com, the updated status of the quote is displayed in the **Sterling Quotes** related list of Salesforce.com.

The Sterling Commerce WebService calls that accomplish this data synchronization need to be authenticated in Salesforce.com. To enable this authentication, the following properties must be configured in the `yfs.properties_ycd_ext.in` file for each enterprise that you want to integrate with Salesforce.com, where <EnterpriseCode> is the Sterling enterprise code that you want to integrate with Salesforce.com:

- `ycd.sfdc.<EnterpriseCode>.url`
- `ycd.sfdc.<EnterpriseCode>.userid`
- `ycd.sfdc.<EnterpriseCode>.password`

Customizing Sterling Field Sales Integration with Salesforce.com

Sterling Commerce provides an out-of-the-box custom integration of Sterling Field Sales in Salesforce.com. However, you may want to customize this integration to suit your business requirements.

As a general rule, you can make any customizations to the Salesforce.com user interface that are permitted by the Salesforce.com architecture. You can extend the standard Salesforce.com objects, by adding additional custom fields and using those fields in the Salesforce.com screens. Similarly, you can customize the custom Sterling objects in Salesforce.com by adding additional custom fields and using those fields in the Salesforce.com screens. You can also customize Sterling Field Sales as you would normally. Additionally, you can customize custom WebServices that are provided by Sterling Commerce to transfer data between the two systems. The only restriction happens when you have a multi-tenant configuration. For example, consider adding a new field to both Salesforce.com and Sterling Field Sales.

In a single-tenant configuration, you can add a new field to both Salesforce.com and Sterling Field Sales and sync them together. To add a new field:

1. Add the new custom field to both the Salesforce.com object and the Sterling Field Sales object.

2. Download the new WSDL for the custom WebService.

3. Generate the new Salesforce.com client Java classes from the WSDL.

   For example, if you add a new custom field to a Salesforce.com opportunity screen, you need to customize the CreateQuotesFromSFDC class so that the custom field is also published in the applicable Sterling Field Sales screen. Similarly, if you add a new custom field to a Sterling Field Sales screen, you need to customize the ManageWSQuotes class so that the custom field is also published in the applicable Salesforce.com screen.

4. Include the newly-generated Java classes in your CLASSPATH.

5. Modify the out-of-the-box CreateQuotesFromSFDC, PostToQueue, PostQuoteToQueue, PostQuoteChanges, PostChangedQuote, and PostWSQuotes event services provided by Sterling Commerce, as applicable, to read the additional parameter that was added.

- CreateQuotesFromSFDC - This service is invoked by the struts layer to create a quote in the Sterling Field Sales application. It uses the SessionID to connect to Salesforce.com and retrieve the details of the opportunity, account, and customer for the new quote. It then calls a sequence of API calls to ensure that a corresponding customer and opportunity exist in Sterling Field Sales.

- PostToQueue - This service is called when either the `ORDER_CREATE.0015.ON_SUCCESS` event or `ORDER_CHANGE.0015.ON_ORDER_RELEASE_STATUS_CHANGE` event is raised. It posts the provided XML file to a JMS queue (SFDCSyncQueue), and the XML file is subsequently picked up by the upsertQuote service.

- PostQuoteToQueue - This service is called when the `CHANGE_OPPORTUNITY.ON_SUCCESS` event is raised. It manipulates the incoming XML file to form a standard input for the consuming PostWSQuotes service.

- PostQuoteChanges - This service is called when the `ORDER_CHANGE.0015.ON_SUCCESS` event is raised. It manipulates the incoming XML file to form a standard input for the consuming PostWSQuotes service.

- PostChangedQuote - This service is called when the `SEND_FOR_APPROVAL.ON_APPROVAL_STATUS_CHANGE` event is raised. It manipulates the incoming XML file to form a standard input for the consuming PostWSQuotes service.

- PostWSQuotes - This service consumes the messages in the JMS queue. It compares the opportunity's primary quote key with the quote key on the quote to determine the data that is compiled and transmitted to Salesforce.com.

  Note: This service is invoked by an integration server. The out-of-the-box integration server name for this service is SFDCQuotesServer. To start the integration server, run the following command from the `<INSTALL_DIR>/bin` directory:

  For Windows:

  `startIntegrationServer.cmd SFDCQuotesServer`

  For Linux/UNIX:

  `./startIntegrationServer.sh SFDCQuotesServer`

However, if additional logic is required when adding a new field in a single-tenant configuration, you will not be able to use the out-of-the-box WebServices provided by Sterling Commerce. To add a new field in this scenario, you can either create a new WebService, or use the Salesforce.com Partner WSDL WebServices.

In a multi-tenant configuration, you can have one enterprise that integrates with Salesforce.com and one enterprise that does not. When creating logic that should appear only in Sterling Field Sales when in integrated mode versus non-integrated mode, or vice versa, you can use the JavaScript method "sc.sfs.core.context.AppContext.getEmbeddedAppCode()", where the value is SFDC when embedded in Salesforce.com. Similarly, if you are writing mashups or struts on the server side, you can use the JavaScript method "com.sterlingcommerce.sfs.core.utils.SFSUtils.getParentAppContext(SCUIContext)" to get this same value.

In a multi-tenant configuration, Sterling Commerce does not support the customization of only one enterprise with Salesforce.com. For example, consider the following Sterling Commerce multi-tenant configuration, where Enterprise-A maps to a SFDC-1 account in Salesforce.com, Enterprise-B maps to a SFDC-2 account in Salesforce.com, and you add a custom field to SFDC-1 but not to SFDC-2. When you add the custom field to SFDC-1 in Salesforce.com, the Java classes must be added to the CLASSPATH in Sterling Commerce. However, Java files for both accounts must reside in the same CLASSPATH in Sterling Commerce, which is not possible because the Java files are different from each Salesforce.com account. As a result, Enterprise-B will get exceptions when trying to integrate with Salesforce.com because the classfile being used does not work with the account being accessed. If, however, both Salesforce.com accounts have the exact same customizations, both enterprises can support the customizations. This limitation only occurs when the customizations are different for each account in Salesforce.com.

For additional information about customizing Salesforce.com, refer to the Salesforce.com documentation. For additional information about customizing Sterling Field Sales, refer to the *Sterling Field Sales: Customization Guide*.

Handling Session Timeouts

Single sign-on is implemented when using Sterling Field Sales with Salesforce.com. It enables users to enter their user name and password in Salesforce.com only, and if authentication is successful, when they access Sterling Field Sales, they are automatically logged in to Sterling Field Sales.

A user working in this integrated environment has two different sessions, a Sterling Field Sales session and a Salesforce.com session, each of which has its own session timeout limit. However, because Sterling Field Sales is run inside an iFrame that is embedded inside the Salesforce.com application, Salesforce.com is not aware of any user activity, such as entering items on a quote, that is occurring in the Sterling Field Sales session. As a result, the Salesforce.com session will timeout when its session timeout limit has been reached, regardless of any activity that may be occurring in Sterling Field Sales. This results in the user having to reauthenticate when they want to access the **Sterling Quotes** tab in Salesforce.com again.

To prevent the Salesforce.com session from timing out when a user is actively working in Sterling Field Sales, but does not interact with Salesforce.com, Sterling Commerce has implemented a 14-minute loop in Sterling Field Sales. As soon as Sterling Field Sales is invoked from Salesforce.com, a session timer starts counting down in the Sterling Field Sales user interface. If activity has occurred in Sterling Field Sales during the 14-minute period, a request is sent to inform Salesforce.com that the user is actively using Sterling Field Sales and to reset the session timer in Salesforce.com. The Sterling Field Sales session timer is subsequently reset to 14 minutes, and the loop begins again. If, however, there is no activity in Sterling Field Sales during this 14-minute period, the Salesforce.com session will timeout as usual, and the user will need to reauthenticate to access Salesforce.com again.

Note: The minimum session timeout that can be set in Salesforce.com is 15 minutes. To ensure that Salesforce.com is notified of Sterling Field Sales activity before this session timeout period is reached, Sterling Commerce has implemented a 14-minute session timer in Sterling Field Sales.

When a user logs out of Salesforce.com, the Sterling Field Sales session can still remain open for a period of time. To prevent a different user from logging into Salesforce.com and using the existing open session, Sterling Commerce verifies the session IDs of each user request. If the session IDs do not match, the existing session is terminated and a new session is created for the new user.

Note: Sterling Commerce strongly recommends that you set the session timeouts to be the same in Salesforce.com and Sterling Field Sales to prevent unauthorized users from accessing the system.

To ensure that users are automatically redirected to the Salesforce.com login screen after a Sterling Field Sales session times out, the system verifies if a cookie already exists for the Sterling Field Sales session. If a cookie exists, the system uses a javascript to always set the frame to be the top frame, and modifies the login window to be the Salesforce.com login window.

Implementing the Sterling Parameter Detail Screen in Salesforce.com

The Sterling Parameter Detail screen, which is accessed from the **Sterling Parameters** tab in Salesforce.com, enables an administrator to configure the Sterling Commerce parameters that are required to successfully integrate Sterling Field Sales with Salesforce.com.

To display the Sterling Parameter Detail screen in Salesforce.com, Sterling Commerce has created a new Sterling Parameter custom object, `Sterling_Parameter__c`, which contains the following:

- SFS iFrame Height parameter, which controls the amount of vertical space allocated for Sterling Field Sales to appear in the **Sterling Quotes** tab of Salesforce.com
- Parameters used to build URLs, which are used in the iFrame of Visualforce pages to access Sterling Field Sales screens

To ensure that only one Sterling Parameter object exists, Sterling Commerce has created a trigger, `SingletonSterlingParameterTrigger`, that prevents the insertion of a new Sterling Parameter object if one already exists.

The new `SterlingParameterExtension` class created by Sterling Commerce makes the Sterling Parameter data available to the Visualforce pages that use it, enabling a page to access the data via merge fields when composing the Sterling Field Sales URL.

Troubleshooting the Sterling CPQ Managed Package Installation

Depending on your configuration, you may encounter errors when installing the Sterling CPQ Managed Package in Salesforce.com. If you need help in determining the resolution to a problem, contact either Salesforce.com or Sterling Commerce.

The following subtopics describe various errors that you may encounter and any relevant corrective actions you should take.

Unable to Execute Test Cases During Installation

Problem Description

An error occurs while running test cases during the installation.

Probable Solution

Install the managed package again by selecting the "Ignore Apex test failures that may cause the installed application not to function properly" check box. This will install the package, and you should be able to run the application. However, Sterling Commerce strongly recommends that you investigate and resolve the underlying problem.

Additional Resource

If you need assistance with determining the underlying problem, contact either Salesforce.com or Sterling Commerce.

Unable to Generate WSDL Classes

Problem Description

If you have added a large number of extensions to an object and you have exceeded the maximum number of parameters allowed by Java for a method, which is 255 fields, you will not be able to compile the Java files generated from the WSDL file.

Probable Solution

To resolve this issue, you can reduce the number of attributes for the object in the WSDL file to only those attributes that are required for the integration of Sterling Field Sales with Salesforce.com.

Note: When reducing the number of attributes, you must not remove the following required fields:

- All fields that are provided out-of-the-box by Salesforce.com
- All fields that are provided out-of-the-box by Sterling
- Any fields used to extend the Sterling Field Sales for Salesforce.com integration

Additional Resource

If you need further assistance, contact either Salesforce.com or Sterling Commerce.

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