Sterling Multi-Channel Selling Solution

Administration Guide

Release 8.0.1

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Preface

Welcome to the Sterling Multi-Channel Selling Solution. This *Administration Guide* provides step-by-step information for administering the Sterling Multi-Channel Selling Solution. Before reading this guide, verify that the system is up and running and has passed the basic connectivity tests outlined in the *Sterling Multi-Channel Selling Solution Implementation Guide*.

Audience

You should be familiar with information systems and with basic network and database concepts. Channel administrators, user administrators, storefront administrators, and partner administrators should have a basic understanding of the Sterling Multi-Channel Selling Solution before starting their tasks.

Availability

This guide is also provided as online help. Click the Sterling Multi-Channel Selling Solution **Help** button to view this guide using your web browser.

Conventions

Throughout this guide, we will use the following conventions shown in Table 1, "Conventions", on page viii:

TABLE 1. Conventions

Type	Convention
File names	**Sample.txt**
Paths and directory names	**/top_level/next_level/next_level/destination_directory/**
Sample code	`public void method(String s)`
Values to be provided	`<value supplied by developer>`

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CHAPTER 1 *Introduction*

This guide provides a comprehensive manual for administering the Sterling Multi-Channel Selling Solution. This chapter covers the following topics:

- "Managing the Sales Channel" on page 2

- "Using Storefronts" on page 8

- "Users, Roles, and Functions" on page 15

- "Administering the Product Catalog" on page 21

- "Guided Selling" on page 22

- "Using the Visual Modeler" on page 22

- "Setting Prices for Products" on page 22

- "Shipping Charge Administration and Calculation" on page 32

- "Service Contracts" on page 34

- "Sales Contracts" on page 37

- "Product Reviews" on page 38

- "Payment Processing and Gift Card and Credit Card Transactions" on page 38

- "Using Carts" on page 40

- "Serving Promotions" on page 41
- "Customer Service" on page 44
- "Leads Management" on page 49
- "Customer Segmentation Management" on page 54
- "Campaigns Management" on page 56
- "Mailing Lists Management" on page 57
- "Program Management and Payment Accounts" on page 57
- "Task Management" on page 59
- "Inventory and Demand" on page 60
- "Localizing the Sterling Multi-Channel Selling Solution" on page 60
- "Franchise Model and Suppliers" on page 61
- "Configuring the Sterling Multi-Channel Selling Solution" on page 62

Terminology

Two types of users access the Sterling Multi-Channel Selling Solution:

- *enterprise users* manage enterprise data such as products, price lists, and partner profiles. Enterprise users belong either to the tenant enterprise or to the storefront partner of a storefront.

- *customer users* buy products from the enterprise. Customer users belong to customer partners of the tenant enterprise or to customer partners of a storefront.

The Sterling Multi-Channel Selling Solution supports creating storefronts. A storefront is a fully functional e-commerce site that is a child enterprise of the main (tenant) enterprise. The users of a storefront partner are the enterprise users for that storefront. In general, employees of the storefront organization log in as storefront enterprise users.

The tenant enterprise and its storefront partners are enterprises within the Sterling Multi-Channel Selling Solution.

Managing the Sales Channel

Your sales partners are the heart of the sales channel and so it is important to maintain partner information as accurately as possible. At least one employee of the

enterprise, known as the *channel administrator*, is responsible for managing your sales partners information.

Partner Profiles

CHAPTER 7, "Channel Administration" describes the tasks you use to manage your channel partners.

The *channel administrator* uses the Partner Profile pages to provide the information required to integrate the partner with your Sterling Multi-Channel Selling Solution. The information is maintained using the **Sterling Commerce Activity** application and the information is stored in the Knowledgebase.

The information you provide includes:

*   whether the partner is a distributor, reseller, Original Equipment Manufacturer (OEM), Retailer, systems integrator, or system partner,

*   the customer type,

*   whether the partner is gold, silver, or platinum level.

This information becomes important when you define your price lists. For example, when you define a price list, you can define pricing rules that enable special prices for partners who have a particular level or customer type. See "Making Price Lists Available to Customers" on page 28 for more information.

Profile Hierarchy

Partner companies may be divided into complex organizational structures. For example, a partner may comprise management companies, divisions, locations, and departments, or complex structures such as franchises and retail outlet chains. You can mirror these complex structures by creating a hierarchy belonging to a partner.

For example, in in the following figure, Partner A comprises four divisions: three immediately below it in the hierarchy and a fourth division that is a child of Division A3.
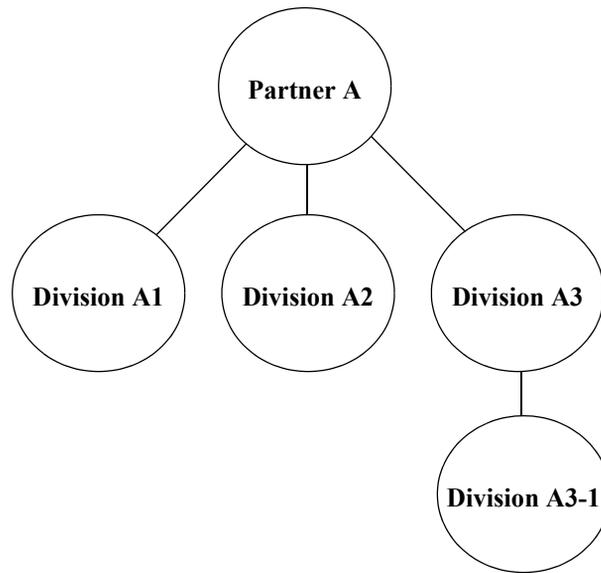
FIGURE 1. Partner Hierarchy

You can set up a profile for each of these entities that reflects the hierarchy. Create the Partner A profile first. Within the Partner A profile, use the **Hierarchy** tab to create a profile for each of Partner A's divisions: A1, A2, and A3. Use the Hierarchy tab for Division A3 to create a profile for its division, Division A3-1.

The hierarchy structure supports an unlimited number of nodes.

See CHAPTER 7, "Channel Administration" for a step-by-step description of the tasks involved.

Partner Users

In addition to creating and maintaining profiles for each partner in the sales channel, the *channel administrator* creates one partner user with the profile administrator function for each customer partner. This partner user is the partner administrator who creates the other customer partner users for their organization.

Partner administrator*s* can log into the enterprise site to maintain partner information. They can create customer partner users and modify their partner profile as necessary.

In addition to the *User* user type, partners can be assigned another user type: *ProcurementUser*. The ProcurementUser user type is assigned to a user that is created to facilitate punchin from an external system. See the *Sterling Multi-Channel Selling Solution Implementation Guide* for more information about punchin from an external system.

Profile Statuses

Every profile and every partner user has a status: they determine what partner users can do. See "User Statuses" on page 19 for more details about user statuses.

Profile statuses are as follows:

- Open: no restrictions on the activities of a partner user.

- On Hold: partner users can log in, but they cannot place orders.

- On Credit Hold: partner users can log in, but they cannot place orders on account. They can still place orders on credit cards.

- Closed: partner users cannot log in. If a business relationship ends, then you can set the partner status to Closed.

Functionally, On Hold and On Credit Hold have the same effect, but the intention is that you use On Credit Hold to manage issues associated with orders being bought on account whereas On Hold should be used for more general business issues.

Inheriting Status

When a partner is a child of another partner, the effective status of the child partner is inherited from the profile status of the parent. For example, suppose that Partner B is the child of Partner A, and that the status of Partner B is Open. If you set the status of Partner A to On Credit Hold, then even though you have not changed the status of Partner B, the effective status of Partner B is inherited to be On Credit Hold. Consequently, Partner B users cannot place orders.

The profile status of a parent overrides a the profile status of a partner if the profile status of the parent is more restrictive: In the example above, if the profile status of Partner A is set to Closed, then the effective profile status of Partner B is also Closed, irrespective of the profile status of Partner B.

Order Approvals

You can set a business rule that sets spending limits for partner users. Along with the limits, you define approvers for these users who can approve orders above the

spending limit. For the approver name, you must enter a valid username within the same hierarchy as the user for whom you are establishing the spending limit.

Note:	You must enter both a spending limit and an approver for the approval process to take effect.

These users, in turn, have their own spending limits and their own approvers. See "To Create a User" on page 240 for instructions on creating a partner user.

When a user places an order whose value is above their spending limit, the designated approver can accept or reject the order. If the approver accepts the order, but if the order value is above their spending limit, then the order moves to the designated approver for that person, and so on until an appropriate level is reached. At that point, the order is finally placed.

Proxy for Approvals

When you create or modify a user, you can designate that user as being a proxy for approvals for certain users. You enter the usernames in a Proxy for Approvals field in the user profile. When you do so, you are designating that the user defined by the profile can approve any orders for which the users listed in the Proxy for Approvals field are approvers.

Moving Users Between Levels in a Partner Hierarchy

Occasionally, in a partner hierarchy, a user belonging to a partner needs to be moved between levels in a hierarchy. For example, a user in one division is transferred to another division. Typically, this is something a partner administrator would do. If necessary, however, the enterprise administrator can perform this function. See "To Move Users Between Levels in a Profile Hierarchy" on page 194.

Functions Assigned to a Moved User

If you move a user between two node levels of a partner hierarchy, then the functions assigned to the user before the move are retained. If you move a user from the partner level to a node level (or the reverse), then the functions assigned to the user revert to the default functions assigned at the destination.

Carts and Orders

Moving a user does not move any carts, orders, and so on, associated with the user. When you move a user to another level in the partner hierarchy, notify the administrator for the level from which the user has been moved. The administrator for that level can recover these carts, orders, and so on, using the steps described in "To Recover Carts" on page 262.

Associating Products with Partners

The users associated with a partner must be able to order products in the product catalog. Price lists enable users to order products. A price list consists of a list of products and is assigned to one or more partners. In this way, the user sees the products in the price lists assigned to the partner.
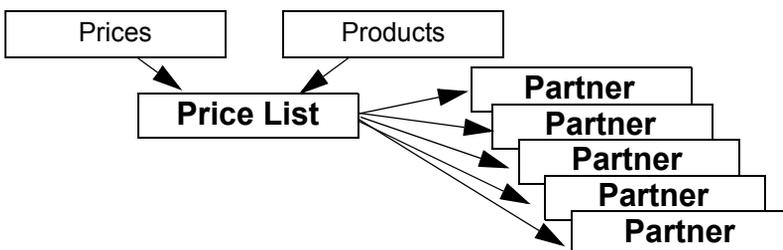
FIGURE 2. Products, Prices, and Partners

See "Setting Prices for Products" on page 22 for a more detailed discussion about price lists and pricing.

Applying Discounts and Special Prices to Partners

The price list assignment to partner also enables you to maintain special prices for certain partners. You use conditional rules to define certain prices depending on certain qualities of the partner (for example, membership level, and so on.). See "Setting Prices for Products" on page 22 for a more detailed discussion of conditional pricing.

Viewing Quote Activity for a Partner

You can get an idea of the products that customers are buying by examining the business activity on your Sterling e-commerce site. After the *channel administrator* adds partners to the Sterling Multi-Channel Selling Solution, you can search for one or more partners and view the carts created by their customers. See "To View Cart Activity for Selected Profiles" on page 204.

Exporting Partner Information

From within Sterling Profile Manager, you can also search for one or more partners, then select them for downloading to a tab-delimited text file. This enables you to open the files in a spreadsheet application, or even email the information as necessary.

Account Limits

You can set up a partner so that its users can place orders on account. See "Payment Options" on page 175. You can also set an account limit on a partner. Initially, their outstanding credit is set to the same amount. When users of this partner place orders on account, the amount of their order is subtracted from the outstanding credit of their partner. If the outstanding credit falls below zero, then the current order is placed on hold, and subsequent orders placed on account are also placed on hold.

Orders placed on hold can be approved by users that have been assigned the Finance function. Partner users can continue to place orders by credit card, but they cannot place any more orders on account until the outstanding credit is increased above zero again.

The outstanding credit amount can be increased by posting XML messages into the Sterling Multi-Channel Selling Solution. Contact your Sterling Commerce representative for details.

Using Storefronts

Some of your selling partners may not have the infrastructure to maintain their own e-commerce Web site. You can create storefronts for your partners. The storefronts provide a complete e-commerce environment within which your partner can do almost all of the same things that you can do within the enterprise. Storefronts have their own URLs, look-and-feel, administrator users, customers, and so on. Storefront administrators manage their customers and partners, price lists, promotions, orders, define and administer customer segments, access customer service functions, and so on, just as tenant enterprise administrators can. Storefront product data can be shared with the enterprise product catalog and orders placed at the enterprise can be brokered from the enterprise to child storefronts.

Each storefront is created with a "storefront partner": the partner that represents the enterprise running the storefront. For example, suppose you want to create a storefront for an organization called Anderel. When you create the storefront, you provide details for the Anderel partner profile within the storefront. Anderel employees can log in as users of this storefront partner and act as enterprise administrators within their storefront. We refer to these users as storefront administrators.

Storefront Administrator Tasks

Administrators of each storefront perform administration tasks to manage their sites. These tasks correspond to the equivalent enterprise administration tasks. The chapters in this guide that cover general enterprise administration also apply to storefront administrators.

Storefront administrators can perform nearly all of the same tasks for their storefront that tenant administrators can perform for the enterprise, including:

- Managing business rules for their storefront

- Performing user administration for their storefront

- Creating and managing storefront partners for their storefront

- Setting prices for their storefront

- Managing system properties for their storefront

- Assigning and unassigning feature types to feature categories that they manage for their storefront

- Assigning and unassigning features to the products that they manage for their storefront

- Defining customer segments for marketing campaigns for their storefront

- Defining acceptable payment methods for their storefront such as credit cards and gift cards

Storefront administrators cannot modify parts of the product catalog or perform catalog administration tasks that affect the entire enterprise. This means that they cannot perform the following tasks:

- Managing features with Sterling Product Manager

- Setting up guided selling with Sterling Advisor

- Performing product import/export

- Performing search administration

- Creating or modifying models using the Sterling Visual Modeler

Storefront Hierarchy

Storefront administrators at any level can create child storefronts. Over time, a hierarchy of storefronts can develop: the tenant storefront, the storefronts that tenant administrators create, the storefronts that storefront administrators of these

storefronts create, and so on. With the exception of the tenant storefront, each storefront has one *parent* storefront, and may have zero or more child storefronts.

• The ancestors of a storefront refers to the parent storefront of the storefront, the parent of that parent, and so on up the hierarchy up to and including the tenant storefront.

• The descendants of a storefront refers to the child storefronts of the storefront, the child storefronts of these children, and so on.

Skins

A skin is a way to determine the look-and-feel of a storefront. The skin comprises a logo (a GIF file), and a cascading stylesheet. Together, these determine some aspects of the user experience as users access the storefront. One skin is created when an enterprise administrator creates the storefront: they specify the string for the URL and this becomes part of the URL that is used when users access the storefront.

Users access a storefront using a URL such as the following:

```
http://server:port/Sterling/en/US/enterpriseMgr/matrix
```

The last component of the path ("matrix" in this case) is used to determine which skin of which storefront the user is accessing.

A storefront administrator can create more than one skin for their storefront: they must specify the URL string, and optionally a GIF image and cascading stylesheet, for each skin they want to create. For example, the enterprise administrator creates a storefront for Anderel, and they specify the URL string as "anderel". To begin with, Anderel storefront administrators and end-users will access the Anderel storefront using a URL that looks like this:

```
http://server:port/Sterling/en/US/enterpriseMgr/anderel
```

If an Anderel storefront administrator logs in, and creates a new skin with the URL string "anderelStore" for their storefront, then both storefront administrators and end-users can access the Anderel storefront using:

```
http://server:port/Sterling/en/US/enterpriseMgr/anderelStore
```

Depending on the differences between the cascading stylesheets used for the two skins, users will experience a different look-and-feel depending on which of the two skins they use to enter the Anderel storefront.

Storefront Data

In general, any data that is created within a storefront (either by storefront administrators or by storefront end-users) is separate from data of the enterprise storefront. In particular, data created within a storefront cannot be seen from any other storefront. However, note that the following data is "shared" between the enterprise and storefronts:

• Product data: Enterprise product data is visible as read-only data to storefront administrators. Storefront administrators can view enterprise product details and add enterprise products to storefront price lists. Storefront end-users can buy enterprise products provided that they meet the standard access criteria (using product entitlements and price lists defined at the storefront level).

Enterprise administrators can open a product category to one or more storefront partners (see "To Enable Access Control" on page 368) immediately below them. When they do so, storefront administrators who have been granted access can create products and child product categories within this product category.

- Products created will be visible as read-only to storefront administrators of any ancestor storefronts, and will be visible as read-only to storefront administrators of any descendant storefronts.

- Product categories created will be visible as read-only to the storefront administrators of any ancestor storefronts. The storefront administrators at this level can open the product category to child storefront partners immediately below them in the storefront hierarchy.

This same principle is applied to product data that child storefronts of a storefront create. At any level within a hierarchy of storefronts, storefront administrators have full access to product data created at their level, and they have read-only access to product data created at ancestor and descendant storefronts.

• Enterprise administrators can see storefront price lists. This is so they can assign storefront price lists to enterprise partners for the purposes of supplier order-brokering.

Storefront Users

Storefront users can belong to one of the following categories:

• User: This is the storefront administrator who is responsible for performing the various functions within the storefront. Storefront

administrators must have the appropriate access privileges to perform their functions.

- ERP Administrator: The ERP Administrator user type represents users of back-end ERP systems. The ERP Administrator is responsible only for functions related to messaging, such as updating orders. For security reasons, such users have limited access privileges and can execute only specific message requests from the ERP system. They cannot log into the system through the UI.

- Default XML Identity: This is the default user in the event that an incoming XML request posted to http://<server>:<port>/<application name>/amsg/<storefront name> does not contain any information to identify the user. A Default XML Identity user has restricted access privileges based on the entitlement configuration.

  To enable the system to identify the Default XML Identity user, you must perform the following tasks:

  - Set the "Should the system enable and default to a configured 'DefaultXMLUser' identity when no user information is specified?" system property to true. To set the system property, navigate from the System Administration panel of the home page to System Services, then the XML Messages category.

  - Set the "Username of default identity for XML messages" system property to the username of the Default XML Identity user. To set the system property, navigate from the System Administration panel of the home page to System Services, then the XML Messages category.

Attention:	You can only specify a user that you created with the Default XML Identity user type. Otherwise, the system throws an exception at the time of creation of the credentials associated with the user.

When you create storefront users, you must assign them a username and a password. As you create users, you must also assign access privileges to them by assigning one or more functions. You can also set a preferred locale for each user. See "Localizing the Sterling Multi-Channel Selling Solution" on page 60 for more information. Note that if you are creating a Default XML Identity user, you do not need to assign a password, functions, or locale to the user.

Storefront Partners

Storefronts are created by an administrator of either the enterprise or an existing storefront. When an enterprise administrator creates a storefront, they provide profile information for the "storefront partner" and a URL that will be the access point for all users entering the storefront.

Customers and Their Users

A customer is any partner created by an enterprise administrator (tenant or storefront). As described earlier ("Managing the Sales Channel" on page 2), the enterprise administrator creates customer partners in their sales channel.

- Tenant administrators create a partner administrator for each customer partner who, in turn, creates partner users. These users log in to the enterprise tenant site using the usernames and passwords assigned to them by the partner administrator.

- Similarly, storefront administrators create customer partners in *their* sales channel. They create a partner administrator for each such partner who, in turn, creates partner users. These users log in to the storefront site using the usernames and passwords assigned to them by their partner administrator.

Products, Pricing, and Product Availability

Storefront partners must keep their product and pricing information current in the Sterling Multi-Channel Selling Solution. Storefront administrators create products through Sterling Product Manager. When they create a product, they assign a product ID that will be a reference in the enterprise product catalog. Through Sterling Pricing, they create and maintain price lists for these product IDs as well as for enterprise product IDs. The storefront administrator identifies partners of the enterprise to whom the storefront administrator wants to assign the price lists (that is, to whom the storefront administrator wants to make the products on those price lists available). Since only the enterprise administrator can assign price lists to enterprise partners, the storefront administrator notifies the enterprise administrator to assign the lists to these enterprise partners.

After the storefront administrator notifies the enterprise administrator to assign the lists to specified enterprise partners, we recommend that partners identify the availability of the product for their own product IDs ("Product Availability File" on page 14). Partners can also provide a file that maps the enterprise product IDs to their own product IDs ("Product Mapping File" on page 14).

Product Availability File

After storefront administrators create the products and price lists, then ensure that their price lists are assigned, we recommend that they provide product availability information for their own product IDs.

Note:	A product for which no availability information is provided is displayed to the end-user with an available quantity of zero.

Storefront administrators provide availability by creating a file with the availability information, then uploading it. As described in "Product Availability File Format" on page 1130, the file includes such information as warehouse location, availability, and restock quantity. Storefront administrators can create an availability file using their preferred text editor. Alternatively, if they create the data using a spreadsheet other than Microsoft Excel, they can export the data as a tab-delimited file. Follow the instructions provided by the spreadsheet application for further details.

Once the file is uploaded, partners can modify the availability information in one of two ways:

- Download the file, modify the current entries or add new ones, then upload the modified file.

- Update individual availability information from within the Sterling Multi-Channel Selling Solution.

Product Mapping File

Partners can create a product mapping between the enterprise product ID and their own product ID. Product mappings may be uploaded to the Sterling Multi-Channel Selling Solution in a product mapping file. The format of the file is a tab-delimited file as described in "Product Mapping File Format" on page 1129. They can use their preferred text editor to create or modify the file. Alternatively, if they create the data using a spreadsheet other than Microsoft Excel, they can export the data as a tab-delimited file. Follow the instructions provided by the spreadsheet application for further details.

Note:	Providing a Product Mapping file is optional. The product ID of the partner displays to the end-user along with the enterprise product ID. If no mapping is provided, only the enterprise product ID is displayed.

Once the file is uploaded, partners can modify the mapping information in one of two ways:

- Download the mapping file, modify the current entries or add new ones, then upload the modified file.

- Update individual mapping information from within the Sterling Multi-Channel Selling Solution.

Users, Roles, and Functions

Users perform functions within the Sterling Multi-Channel Selling Solution. To perform their functions, users must have appropriate access privileges. First, assign the functions within your organization to administer the various parts of your e-commerce site. Next, create the users that perform these functions and assign appropriate access privileges to those users.

The tasks for this purpose are presented in CHAPTER 6, "User Administration".

Organizational Functions

Assign the following functions in your organization:

- *Accounts Receivable Representative*: Manages invoices for the e-commerce site.

- *Business Rules Manager*: Controls the business rules for the e-commerce site.

- *Channel Administrator*: Creates and maintains the profiles for each partner and creates a partner administrator for each profile. The partner administrator is an employee of a partner who is responsible for creating and maintaining their own partner users.

- *Commerce Administrator*: Monitors all cart activity at the e-commerce site or Sterling Partner.com partner site.

- *Customer Service Representative (CSR)*: Creates and updates orders on behalf of customers, monitors orders, and monitors any product return requests. Typically, products returns have internal rules that guide whether to approve or reject a return. When a decision must be made manually, the CSR has the authority to make that decision.

- *Enterprise Lead Administrator*: Creates and assigns leads to one or more partners. The enterprise lead administrator also closes the lead.

- *Promotion Administrator*: Manages promotions.

- *Product Administrator*: Manages all the products at the enterprise site: sets the correct prices for the products and associates them with the appropriate partners.

- *Sales Manager*: Manages the sales representatives and delegates leads to them.

- *Sales Representative*: Handles leads that are delegated to them.

- *System Administrator*: Maintains the system configuration using the System Administration module.

- *User Administrator*: Creates and maintains all the users at the e-commerce site.

Creating Users

The *user administrator* is the person at the Sterling Multi-Channel Selling Solution installation responsible for adding users to the system and giving them access to the areas appropriate for them to perform their function. In general, user administrators do not have any privileges associated with partners. In particular, they cannot create partner users (the only enterprise employees who can create partner users is the *channel administrator*).

When you create users, you must assign them a username and password. The username you assign must be unique. Each username is checked for uniqueness when the user is created: if the username is already in use, then the user administrator must choose a different username. When a user is deleted from the Sterling Multi-Channel Selling Solution, their username is not: once a username is in use, it can never be reused.

As you create users, you must also assign access privileges by assigning one or more functions.

You can also set a preferred locale for each user. See "Localizing the Sterling Multi-Channel Selling Solution" on page 60 for more information.

Assigning Functions

In the Sterling Multi-Channel Selling Solution, *entitlement functions and roles* explicitly define the access that users have to business objects and the functions they can perform, such as updating users or creating price lists. These functions and roles are listed in the **Entitlements.xml** configuration file which is read by the Sterling Multi-Channel Selling Solution server on startup. The file comes with several entitlement functions and roles pre-defined (see "Pre-defined Functions" on page 17), but you can customize access by editing this configuration file to create more roles and edit the privileges of existing roles.

Roles are grouped into functions: functions are intended to correspond quite closely to the business functions within an organization: finance, sales, and so on. Each

function has a label: the label displays in the browser when you perform user administration.

It is important to distinguish these *entitlement functions* from the *organizational functions* described earlier. Any person in your organization may have one or more organizational functions that they perform to complete their job responsibilities: system administrator, product manager, sales manager, and so on. These may or may not correspond to the entitlement functions defined in the Sterling Multi-Channel Selling Solution.

Consequently, the entitlement functions defined in your implementation of the Sterling Multi-Channel Selling Solution may serve as "umbrella" roles that cover more than one organizational function. For example, to provide them with the proper access, you may need to assign the same entitlement function to the *channel administrator* and the *user administrator*. At implementation time, your system integrators determine appropriate groupings of organizational functions into entitlements functions. These entitlement functions are defined in the **Entitlements.xml** configuration file.

However, note that only those roles present in the access policies and access control lists (ACLs) or in the **Entitlements.xml** file have any effect on the privileges users have. Refer to the *Sterling Multi-Channel Selling Solurtion Reference Guide* for more information.

Pre-defined Functions

The **Entitlements.xml** configuration file that is implemented with the Sterling Multi-Channel Selling Solution comes with the following pre-defined functions:

TABLE 1. **Pre-defined Enterprise Functions**

Function/Label	Description of Access
EnterpriseProgramManagement/ Program Management	Includes Pricing, Product, Model, Coupons, Service Contracts, Advisor, and Promotion Management. Also includes reporting, job scheduling, and editing of system properties and business rules.
EnterpriseFinancials/Financials	Includes the ability to remove Credit Holds from Partners, Users and Orders. Also includes the ability to view and edit invoices.
EnterpriseCommerce/Commerce	Includes the ability to create carts, place orders, create quotes and manage service contracts on behalf of customers.

TABLE 1. Pre-defined Enterprise Functions (Continued)

Function/Label	Description of Access
EnterpriseSales/Sales	Includes the ability to work with opportunities and proposals as well as being able to create carts, quotes, and orders.
EnterpriseSalesExecutive/ Sales Executive	Adds the ability to act as sales manager to the EnterpriseSales function. Sales managers assign opportunities to other users and can also work opportunities themselves.
EnterpriseLeadAdministratorSales/ Lead Administration	Can manage leads for the enterprise.
EnterpriseBasicAdministration/ Basic Profile Maintenance	Performs limited user and profile administration at or below their node. Can only assign functions to other users that they have.
EnterpriseAdministration/ Profile Administration	Performs full user and profile administration at or below their node. You must ensure that at least one enterprise user has the EnterpriseAdministration function.

For partners, the following table summarizes their functions:

TABLE 2. Pre-defined Partner Functions

Function/Label	Description of Access
PartnerProgramManagement/ Program Management	Includes Pricing, Product, Promotion Management. Also includes creation of email templates, SKU and availability management.
DirectFinancials/Financials	The ability to view and edit invoices.
DirectCommerce/Commerce	Includes the ability to create carts, place orders and create quotes.
DirectCommerceExecutive/ Commerce Executive	Includes the ability to create carts, place orders, perform order approvals, and create quotes.
Commerce	Includes the ability to create and transfer carts.
DirectSales/Sales	Includes the ability to work with leads and opportunities apart from being able to create carts, quotes, and orders.

<center>TABLE 2. **Pre-defined Partner Functions (Continued)**</center>

Function/Label	Description of Access
DirectSalesExecutive/Sales Executive	Includes the ability to work with opportunities apart from being able to create carts, quotes, and orders.
Sales	Includes the ability to work with leads and opportunities as well as being able to create and transfer carts.
Sales Executive	Includes the ability to work with leads and opportunities apart from being able to create and transfer carts.
PartnerBasicAdministration/ Basic Profile Maintenance	Performs limited user and profile administration at or below the node.
PartnerAdministration/ Profile Administration	Performs full user and profile administration at or below the node.
StorefrontCustomerBasicAdministration/Basic Profile Maintenance	Performs limited user and profile administration at the node. Can only assign functions to other users that they have.
StorefrontCustomerAdministration/ Profile Administration	Performs full user and profile administration at the node.

Managers

Users can be marked as managers. Managers are entitled to navigate to child nodes of their node to perform the same tasks as they can at their own node. They can also view and modify the activity of other users at their node. For example, an enterprise user with the Commerce function and marked as a manager can navigate to a child node in the enterprise hierarchy and view the orders created by EnterpriseCommerce users at the child node.

An enterprise user who is a manager can access all the accounts assigned to their enterprise node and nodes below this node. That is, managers do not have to explicitly draw accounts from the pool of accounts assigned to their node: they can work on any account assigned to their node.

User Statuses

Every user has a status. The status of the user and the profile status of their partner determine what the partner user can do. See "Profile Statuses" on page 5 for more details about partner profile statuses.

The following are the possible user statuses:

- Open: no restrictions on the activities of a user.

- On Credit Hold: users can log in, but they cannot place orders on account. They can still place orders on credit cards.

- On Hold: users can log in, but they cannot place orders.

- Closed: users cannot log in.

When you set a user status to closed, or if their effective status becomes closed because you close their partner, this does not affect the carts, orders, returns, and other objects that the user has been working on. These remain in their current status until another partner user or enterprise user changes them.

Note that only partner users can be assigned the On Credit Hold and On Hold statuses. Only enterprise users with the Financials function can set partner users on On Credit Hold status. An enterprise user can re-open an On Hold partner user, but only enterprise users with the Financials function can re-open On Credit Hold partner users.

Inheriting Status

Each user belongs to a partner, and the effective status of a user is inferred from their user status and the effective status of their partner. For example, suppose that User 1 is a partner user of Partner B and that the effective status of Partner B is Open. If the status of User 1 is Open, there is no restriction on the activities of the user. If you change the profile status of Partner B to On Hold, then even though you have not changed the status of User 1, their effective status changes to On Hold, and so they can log in, but they cannot place orders.

Suppose that Partner B is the child of Partner A, and that the status of Partner B is Open. If you set the status of Partner A to On Credit Hold, then even though you have not changed the status of Partner B, the effective status of Partner B is inherited to be On Credit Hold. Consequently, the effective status of Partner B users is On Hold, and so they cannot place orders.

The status of a partner overrides the status of a user if the partner status is more restrictive: In the example above, if the status of Partner B is set to Closed, then the effective status of User 1 is also Closed, irrespective of the status of User 1.

User Preferences

Partner users have *user preferences*: these are properties that influence the user experience as they use the Sterling Multi-Channel Selling Solution. In general, users will manage their own preferences through their user profile, but it is possible for their partner administrators to manage preferences for a user.

User preferences include:

- Cart view: offers a choice between a simple and a complex view of each shopping cart.

- Cart mode: offers a choice between a single cart or multiple carts. If a multiple cart user switches his preference to single cart, all his existing carts are hidden.

User preferences are set up as part of the implementation of the Sterling Multi-Channel Selling Solution, and so your installation may have more user preferences.

Administering the Product Catalog

Your product catalog organizes all your products into product categories that reflect the way in which you want to present your products to your customers. Grouping your products into categories can help customers find products quickly.

Products can be of the following types:

- Hard goods: physical products such as cell phones and appliances.

- Soft goods: conceptual products such as software, warranties, service plans, maintenance contracts, and license agreements.

Soft goods can be duration-based, meaning that they are in effect for a specific period of time. For example, a cell phone service plan might have a 2-year duration, or an extended warranty might be valid for a period of 5 years after purchase.

Products may include components of various types. For example, a cell phone product bundle might include the cell phone and a choice of service plans.

Products may include fixed-price gift cards. Storefront administrators enable gift card transactions from the **Commerce** tab of their Organization Profile page by setting up a gift card payment gateway, then enabling gift cards as a payment method. You define gift cards as products in your product catalog in the same way that you define other types of products.

You can define a product as an assembly and provide a parts diagram to help customers learn what your product provides. You can define a product as a service item and provide options to help customers choose the service contract that best meets their needs. You can assign features and resources to products to help product comparison and to provide additional information such as data sheets and product photographs. In addition, you can enable customers to search for products by their product ID, name, and other attributes.

You can designate shipping options for a product, such as being ineligible for in-store pick-up, not shippable, or not eligible for a shipping discount.

See "Administering the Product Catalog" on page 65 for a complete introduction to the concepts involved in administering the product catalog.

Guided Selling

If your catalog is large or complex, then you want to help customers select products that most exactly meet their needs. Using the Sterling Multi-Channel Selling Solution, you can create a series of pages that interactively ask customers about the sorts of products they are looking for: for example, the usage they plan for the product, the performance characteristics they require, or specific features that they need. As customers respond to these questions, you can ensure that each customer sees only those products that meet their requirements and at any time customers can compare products to see which best fits what they are looking for.

See CHAPTER 4, "Introduction to Sterling Advisor" for a complete overview of Sterling Advisor.

Using the Visual Modeler

Complex products may need to be configured before they can be bought by customers and they have optional components that customers can configure based on their needs. The Sterling Multi-Channel Selling Solution provides the ability for you to create models that define the configurable options of a product and to associate the products with these models. In doing so, you can provide a seamless experience for customers between selecting and configuring their product selections.

See "Using the Sterling Visual Modeler" on page 82 for a complete introduction to the Visual Modeler and its concepts.

Setting Prices for Products

An integral part of an e-commerce system is to display accurate and up-to-date prices to customers as they select products on your Web site. The Sterling Pricing application provides a graphically intuitive user interface to maintain prices for products through your Web browser. See CHAPTER 19, "Pricing Administration" for the tasks associated with pricing.

All products have a one-time price: the price that the user pays when the product is ordered or shipped. If the product is a service contractible item, there may be additional, or auxiliary, prices as well, such as a monthly fee for a service plan or a charge for a maintenance contract or extended warranty. Product bundles that include both hard and soft goods, such as a cell phone package that includes a service plan, might include a one-time price for the phone as well as auxiliary prices for activation, a recurring monthly service charge, late fees, overage fees, and cancellation charges. Auxiliary prices can be defined during implementation of your Sterling Multi-Channel Selling Solution, before you create the knowledgebase (the preferred method), or they can be added to an existing knowledgebase. See the *Sterling Multi-Channel Selling Solution Implementation Guide* chapter Customizing Sterling Pricing for more information.

Bear in mind the distinction between list prices and extended prices:

- List price: this is the unit price for an item. It does not take into account volume discounts, special pricing rules, or anything else that may affect the price that the user pays.

- Extended price: this is the price that the user pays for a given line item. It depends upon the list price, quantity bought, and pricing rules.

For example, in the following line item, the first price displayed is the list price ($9.95), and the second price is the extended price.

```
Product ID    List Price    Quantity      Extended Price
MXWS-1000     $9.95         120           $1194.00
```

The precision to which prices are displayed is controlled by system properties. See "Application Settings" on page 1082 for more information.

Price Lists

The Sterling Multi-Channel Selling Solution uses price lists to manage the access that customers have to products and to display appropriate prices to each customer. A price list is a combination of products and prices. The process for creating price lists is as follows:

1. Create products.

   See "Administering the Product Catalog" on page 21.

2. Create the price list and assign products to the list.

    Enter basic information about the price list such as effectivity dates, and so on. During creation, you decide which products you want to assign to the price list, depending on criteria such as customer type, and so on. See "To Create a Price List" on page 676.

    Each price list has a supplier ID associated to it. The supplier ID is used to determine how price lists are used when calculating the price to be displayed to a user as follows:

    •   If you associate a supplier ID of "1", the price list is an *enterprise price list* and is used to price products when users access the enterprise as direct commerce users.

    •   If you associate a supplier ID of a partner, then the price list is used to price products if the partner is selected as the supplier of the product, or if a cart is transferred to the storefront of a supplier, or when a storefront customer user logs into the storefront.

    •   If a product is on price lists that belong to more than one supplier, then no price is displayed until the user has selected which supplier they want to supply the product. Instead, a range of prices is displayed. The user is prompted to select a supplier in order to get a firm price from the price lists of that supplier.

    If a partner administrator creates a price list, the supplier ID is pre-populated as a read-only field. If an enterprise administrator creates a price list, then they can accept the default supplier ID which is "1". They can choose to enter the partner key of any partner: if they do this, then the price list is used when the partner is selected as the supplier for a product.

3. Set prices for the products.

    You can set the prices by category or by individual product. You can also set special prices by creating special pricing rules for product categories or for individual products. These rules make a price conditional on qualities belonging to a partner or order. See "Conditional Pricing" on page 687.

4. Assign the price list to one or more partners.

    This is how you enable customers to see products. When users log into the Web site, they see only the products on price lists associated with their partner. See "To Assign a Price List to a Profile" on page 197.
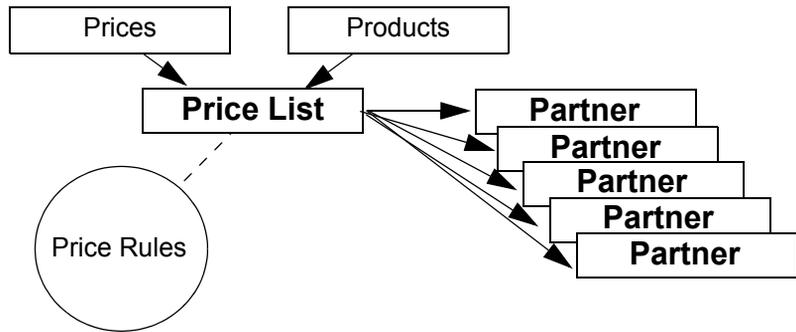
FIGURE 3. Products, Prices, and Partners

Price List Line Item Effectivity Dates

You can set effectivity dates at the line item level. By default, the price of a line item is effective for the effective period of the price list. However, if you override the price list effectivity dates by specifying effectivity dates at the line item level, then you can specify a special price for a particular period. This means that the same product ID can be present more than once on the same price list. If a product ID shows up more than once, then its price is derived by taking the lowest of the effective prices.
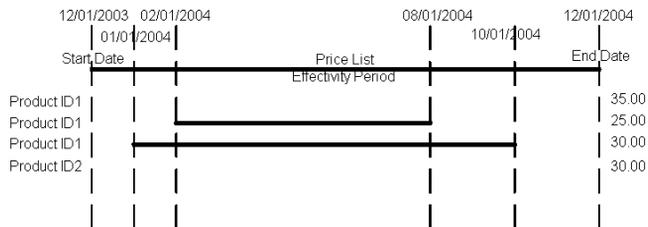
FIGURE 4. Price List Line Item Effectivity Dates

In an example, illustrated by the Figure "Price List Line Item Effectivity Dates" on page 25, a price list is effective from 12/01/2003 through to 12/01/2004. One product ID, ProductID1, is listed three times:

• the first entry defines a price of $35.00 and does not define effectivity dates and so its effectivity dates are taken to be the same as the price list effectivity dates.

- the second entry defines a price of $25.00 and effectivity dates from 02/01/2004 to 08/01/2004.

- the third entry defines a price of $30.00 and is effective from 01/01/2004 to 10/01/2004.

The following table provides prices for ProductID1 on various dates.

TABLE 3. **Price List Line Item Effectivity Dates Example**

Date	Price
11/15/2003	Price not available from this price list: the price list is not effective
12/02/2003	$35.00: only the first entry is effective
01/03/2004	$30.00: the first and third entries are effective and the third provides the lowest price
05/16/2004	$25.00: all three entries are effective and the second provides the lowest price
09/20/2004	$30.00: the first and third entries are effective and the third provides the lowest price
11/02/2004	$35.00: only the first entry is effective

Note that throughout this time period, ProductID2 continues to be priced at $30.00.

How Prices are Calculated

This section describes how prices are calculated when they are displayed to a user.

1. First, the list of appropriate price lists is determined:

   a. Start with the list of all active, effective price lists.

   b. Reduce this set to the price lists that are assigned to the user's partner.

   c. If the user is shopping at a storefront, reduce this set to only those whose supplier ID is the storefront's partner key.

   d. Reduce this set by considering only price lists that match the user's current selection of customer type and currency.

2. Using this list, calculate the lowest available price taking into account price list line item effectivity dates and any conditional pricing rules on each price list. If more than one price list contains the same lowest available one-time price for a given supplier and product, then compare the associated auxiliary prices for

that product and return the one-time price for that product from the pricelist that contains the lowest associated auxiliary prices.

Entitlement and Pricing

If your company uses its own pricing engine to determine prices, instead of the Sterling Multi-Channel Selling Solution pricing engine, then you can set a business rule to "Entitlement Only" instead of "Entitlement and Pricing". When you set the rule for entitlement only, you still add products to price lists. You still assign the price lists to partners, but only as a means of determining which products the partner is entitled to view and purchase. You do not use the price lists to assign prices to the products since the prices are derived from your company's own pricing engine. See the *Sterling Multi-Channel Selling Solution Implementation Guide* for information about configuring your system to get prices from an external source.

Price Lists and Products

You create and maintain price lists from within the Price List Detail page in the Pricing Administration module. The first step is to populate the list with products. You must decide what kind of products should be included in this list.

You add products to the list by moving through a product hierarchy of product categories and products. You can either select a category and assign all the products to the list, or you can select individual products from the category. When you are done adding products from one category, you can move on to another category, and so on until you have added all the products you want.

The Product List Detail frame (where your selections are displayed) displays one category of products at a time. As you click another category, the frame will refresh itself. If the price list already contains products from that category, then the products will appear in the Product List Detail frame.

Assigning Prices

The previous section described how products are assigned to price lists. Once you have assigned products to lists, you assign the prices to the products. You assign prices in two ways: a default price that applies if none of the conditions are met, and a price applied by determining if certain conditions are met.

Note:	The number of decimal places supported by Sterling Pricing is a configurable parameter. See "Setting Prices for Products" on page 682 for more information.

Assigning Default Prices

You assign default prices in the Price List Detail frame using one or both of the following methods:

- You assign category price information. In this case, you assign all the products in the category on the price list the same category price information.

- You assign price information to individual products within each category on the price list.

The price information includes a list price, auxiliary prices (if any), a +/- discount percentage, and a +/- absolute amount. You can use one or both of the above-named methods. For example, an easy way to assign prices might be to assign category price information, then modify individual products in the category as necessary.

Creating Conditional Prices

In addition to the default prices, you can create conditional prices dependent on one or two factors relating to partners or orders. For example, you can set price information that applies only if the partner's membership level is gold and the order quantity is between 5 and 10 units.

You can create rules that apply to all the products on the price list within a product category. You can create rules that apply only to a specific product within a category. You can create multiple rules for a category or product. In a case where a customer satisfies more than one rule, the lowest price applies.

Making Price Lists Available to Customers

Once you have created the price lists, making them available to customers is a two step process. The first step is to make the price list "active" by checking the Active box on the Price List Detail page. Once you have done that, the second step is to assign the price list to one or more partners. "To Assign a Price List to a Profile" on page 197 describes the step-by-step process for making price lists available.

You can assign zero or more price lists to each partner. When a customer belonging to the partner enters your Web site, the price lists determine (a) the products that the customer is able to view and (b) the prices that are displayed when the customer adds products to a cart.

You can assign an inactive price list to a customer. That is, you can assign a price list whose Active box is not checked. Inactive price lists have no effect on the customer's buying experience until you activate them by checking the Active check box.

Each price list has a unique currency associated with it and a unique customer type. Using the price lists, you can determine that not all products are available in a particular currency. Similarly, not all products are sold to a particular customer type.

When a customer first logs in, they are assigned an initial customer type and currency based on their partner. You can let customers change either the currency or customer type or both as they navigate through your Web site. If you do so, then bear in mind that the prices that they see can change.

Making Price Lists Sharable with Child Profiles

If one of your profiles is a parent in a hierarchy of profiles, then you can assign price lists to the parent so that those price lists are automatically assigned to any profiles below the parent in the hierarchy. For example, in Figure 5 on page 29, Partner A is parent to Partner B and Partner C. Partner C is parent to Partner D and Partner E. If you assign a price list to Partner A and mark that price list as sharable, then that price list is automatically assigned to Partner B and Partner C and, in addition, to Partner D and Partner E.
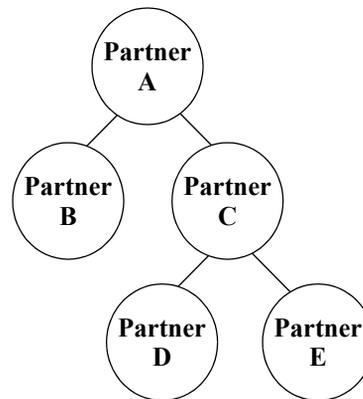
FIGURE 5. Sharable Price Lists

When assigning price lists to the child partner of a parent, you will notice a dollar sign ($) next to any list that is shared with the parent (and therefore automatically assigned to the child). However, you can still assign that price list to the child and mark it as sharable. This guarantees that the price list will still be assigned to the child (and to its children), even after the assignment is removed from the parent.

Assigning Price Lists to the AnonymousUserPartner

The AnonymousUserPartner is a partner profile that come predefined with the Sterling Multi-Channel Selling Solution. The existence of this partners enables anonymous users to "log in" and select products. Note that the user does not realise that they have been logged in: this happens invisibly to the user so that session can be maintained as they navigate through the Sterling Multi-Channel Selling Solution.

When an anonymous user logs in, they see prices and products determined by the price lists assigned to the AnonymousUser Partner. If an enterprise administrator changes the assignment of price lists to the AnonymousUserPartner, then the changes take effect immediately. As new anonymous users "log in", they see prices determined by the new assignment. Existing anonymous users, that is users already browsing the product catalog anonymously at the time the assignment is changed, will continue to see the old prices.

Price Lists Managed by Partners

Partner administrators can also create and maintain price lists for any products to which their partner has access. These products include products maintained by the partner (see "Categories and Products Managed by Partners" on page 77) as well as products created by enterprise administrators

Note:	Partner administrators can create price lists, but cannot assign price lists to partners. When a partner administrator creates a price list, it is automatically assigned a supplier ID whose value is the partner key.
	Only enterprise administrators can assign the price lists to partners. When they have created a price list, partner administrators should notify an enterprise administrator.

See CHAPTER 9, "Administration Performed by Partner Users" for more information.

Enterprise Master Price List

When you implement the Sterling Multi-Channel Selling Solution, an Enterprise Master Price List is automatically created and automatically assigned to the enterprise. This price list provides prices for reporting purposes, but it can also be assigned to profiles just like any other price list.

Use the Enterprise Master Price List to contain all the products in your product catalog. When you create a new product, or when you import new products into your catalog, add these new products to the Enterprise Master Price List (in addition to any other assignable price lists). Using a single price list also simplifies

reporting: you do not have to determine the correct price list to use for reporting purposes.

The currency of the Enterprise Master Price List is referred to as the *Enterprise currency*. If it is being used as the reporting price list, it is used in reports in which values are calculated, but where no currency has been specified.

Determining Currency and Price For A Customer

At any moment that an end-user is accessing the system, the system uses the fact that there is a current currency and customer type associated with the user's session. This combination of current currency and customer type determines the prices that the user sees as they browse the product catalog, as well as the currency and customer type that are associated with a commerce object such as a cart, wish list, registry, and so on, when it is created by the user. A user can change their current currency and customer type at any time from their home page.

The following describes the logic that determines the currencies and customer types that are available to a user:

1. The system retrieves the effective price lists that are assigned to the user's partner.

2. From the list of effective price lists, the system identifies all of the currencies that are on at least one of the price lists, and identifies all of the customer types that are on at least one of the price lists.

3. These currencies and customer types are displayed to the user for selection when the user navigates to their home page or when they wish to change settings in one of their commerce objects.

Note:	Some commerce objects do not allow you to change their customer type once they have been created.

The following describes the logic that determines the currency and customer type that are current when a user first logs in:

1. The system retrieves the effective price lists that are assigned to the user's partner.

2. From the list of effective price lists, the system takes the first price list retrieved and sets the user's current currency and customer type to match the currency and customer type of this price list.

Note:	The retrieval of price lists is not fully sorted, and so the identity of the first price list may change from one login to the next.

Shipping Charge Administration and Calculation

You can create and manage rules and coupons to associate shipping charge discounts with cart order total tiers, and to associate shipping surcharges with specific line items within a cart. You access shipping charge administration functionality from the Pricing Administration panel of the home page. You assign shipping charge rules and coupons at the storefront level: the rule and coupon names must be unique within each storefront.

The following types of shipping rules govern shipping charge discounts and surcharges:

- Shipping Charge Order Total: these rules operate at the cart level to provide discounts on shipping charges based upon order total. Discounts can be a fixed amount, a percentage, or a flat fee shipping charge. You can attach the Shipping Charge Order Total rule to customer segments, and specify the shipping types, products, or product categories.

- Item Shipping Surcharge: these rules operate at the line item level to associate a shipping surcharge with items with a specified feature. Surcharges apply only to items that are shippable and are not flagged for in-store pickup.

   For example, suppose that you want to charge an additional flat fee for shipping oversized items such as refrigerators. You can create a feature type called Oversized, then create an Oversized: refrigerators feature and associate it with all the refrigerators. When you create the item shipping surcharge rule, you attach the surcharge by selecting the Oversized: refrigerators feature.

   When the rule applies to a product in the cart, the system multiplies the surcharge by the quantity of the product being purchased and adds the resulting amount to the shipping charge.

Shipping Price Calculation

Shipping rates can be modified by shipping charge rules and coupons, so the Sterling Multi-Channel Selling Solution pricing engine performs the shipping rate calculation separately from the cart pricing calculation after the cart pricing calculation is complete.

The general steps are as follows:

1. Obtain the basic shipping charge:

a.   If the order is split among several suppliers or the cart/order has no total price, do not calculate a shipping charge.

b.   Calculate the shippable order total: deduct the extended prices of all line items that are not shippable, or that are flagged for in-store pickup, from the original order total.

c.   Calculate the displayed shipping charge, which is the value that displays as the shipping cost in the cart. (Other amounts display as adjustments.) Use the order address state to look up the shipping charge percentage. If there is no shipping charge percentage, set the charge to zero. If there is a shipping charge percentage, calculate that percentage of the shippable order total.

d.   Add item-level shipping charges to the displayed shipping charge. Add information about each surcharge applied to the Item Level Adjustments list.

You now have the basic shipping charge.

2.   Factor in shipping charge rules and coupons.

a.   Deduct the extended price of all those items flagged as "Not eligible for shipping discounts" from the original order total. This is the order total rule base.

b.   Calculate the percentage of the order total that the order total rule base represents, then calculate that percentage of the basic shipping charge. The result is the discountable shipping charge. The remainder of the basic shipping charge is the undiscountable shipping charge.

c.   Determine if any shipping charge order total rules or coupons in the cart are triggered by the order total rule base. If more than one rule is triggered, apply each in turn to the discountable shipping charge to determine which one produces the lowest shipping charge. The resulting lowest shipping charge is the discounted shipping charge. Add the information about the selected rule/coupons to the Order Level Adjustments list.

d.   Add together the undiscountable shipping charge and the discounted shipping charge. The result is the calculated shipping charge.

e.   Compare the calculated shipping charge with the basic shipping charge obtained earlier. If the basic shipping charge is less than the calculated shipping charge, return the displayed shipping charge plus the Item Level Adjustments. If the calculated shipping charge is less, return the displayed

shipping charge plus the item Level Adjustments plus the Order Level Adjustments.

See CHAPTER 20, "Advanced Pricing Administration" for information about shipping charge administration.

Service Contracts

You can create and manage service products using the Sterling Multi-Channel Selling Solution. Service products comprise components that enable the maintenance and tracking of service contracts. For example, a cell phone service product might comprise:

- A cell phone associated with a one-time price.

- A choice of duration-based service plans with options such as the number of anytime minutes, night and weekend minutes, and features such as call forwarding, 3-way calling, text messaging, and music downloads.

- Auxiliary prices for the service plans such as activation fees, recurring monthly service fees, overage and late charges, and cancellation fees.

Products created as service items in the Product Master and associated with a maintenance model are referred to as service contractible items.

Detailed information about service contracts is available in CHAPTER 21, "Managing Service Contracts".

Creating Service Products

The following are general steps for creating service products.

1. In the Visual Modeler, create at least one maintenance model. The maintenance model will be used to manage the maintenance of service contracts after an order has been placed. The service maintenance model may be shared among several service contractible items.

2. Create a product using the Product Master. Check the Service Item checkbox and attach a maintenance model to the product.

Note:	Checking the Service Item checkbox and attaching a maintenance model distinguish service contractible items from other products.

3. Assign the one-time price and (optionally) auxiliary prices to the product.

   You can assign prices using either the **Prices** tab of the Product Master or using Sterling Pricing.

4. Optionally create the selling model in the Visual Modeler. If the product is simple (for example, it does not require configuration by the user) it requires only a maintenance model.

   a. Create rules and constraints for the service product options, as applicable.

   b. Attach service contract properties to the appropriate model objects. For information about service contract properties, see "Service Contract Properties" on page 720.

   c. Set auxiliary price types if appropriate. You can also set auxiliary price types using Sterling Pricing. See "Managing Price Lists" on page 676 for more information.

5. Associate the maintenance and, if the service product is configurable, the selling model(s) with the service product.

6. Make the service product available:

   a. In the Product Master, assign the Released status and rebuild the product indexes.

   b. In the Visual Modeler, compile the model.

See "Product Administration Tasks" on page 371 for more information about creating service products. See CHAPTER 19, "Pricing Administration" for more information about assigning prices to products using Sterling Pricing. See CHAPTER 12, "Product Administration" for more information about creating products and assigning one-time and auxiliary prices using the Product Master.

Purchasing Service Products

The following are the general steps for ordering service products.

1. The user shops for a product or service such as a cell phone or cell phone service plan.

2. In the Configurator, the user chooses options and, when finished, adds the service product to their shopping cart.

3. The user clicks Checkout. The order confirmation screen displays. The user optionally edits the header information, then clicks Place Order.

4. The cart is turned into an order. After the order passes any interim steps such as credit approval, the state of the order becomes Order Submitted.

5. Once the order is in the Order Submitted state, the service contract is generated and the state of the service contract becomes Pending.

    One service contract is created for each instance of a service contractible product in the order.

6. The service contract remains in the Pending state until at least one service contractible item has shipped.

7. The service contract is submitted to the backend ERP system for verification. After verification is complete, the service contract is placed in the Verify Submitted state.

8. Once the service contract is accepted, it becomes Active. End users and customer service representatives can make changes to the service contract while it is in the Active state.

Accessing Active Service Contracts

End users and customer service representatives can access and, in some cases, make changes to service contracts that are in the Active state. Activities can include:

*   Viewing the service contract details or history.

*   Modifying service contract contents. The service product modeler may have created rules that restrict the modifications that end users can make to a contract, for example, preventing end users from changing service contract prices or changing the service contract end date or duration.

*   Modifying the service contract state. The service product modeler may have created rules that restrict the users who can modify the state of a service contract. For example, only customer service representatives can place a service contract on hold, or reactivate or cancel a service contract.

See "Creating Tasks From Commerce Objects" on page 990 for more information about accessing service contracts.

Administering Service Products

Enterprise administrators can run cron jobs to send email notifications and create CSR tasks for service contracts at certain events:

*   The Service Contracts Task Notification job creates a CSR task when a service contract nears expiration. You can configure the number of days prior to expiration that the job should be run. The default is 30 days.

- The Service Contracts Expiration Job searches for service contracts for which the latest end date is past, moves these service contracts to the Expired Submitted state, and updates the header level NextEndDate and FinalEndDate dates.

- The Service Contracts to ERP job retries the transmission of failed service contracts-related messages to the backend ERP system.

Enterprise administrators can recover service contracts from deleted users and transfer service contracts from the Service Contract Workspace Tab.

See CHAPTER 40, "Job Scheduling Administration", for more information.

Sales Contracts

You can create *sales contracts* for your partners. Sales contracts are pre-approved carts which specify prices and quantities for customers. When you create a sales contract, you specify the partner for which it is intended, and users from this partner can make use of the contract while the contract is effective. See "Sales Contracts" on page 1049 for details on sales contract-related tasks.

Workflow to Manage Sales Contracts

The following describes the basic sales contracts management flow:

1. An enterprise user creates a sales contract. Enterprise users must be assigned the Commerce function to be able to create sales contracts. As the enterprise user creates the sales contract, they specify the target partner, and this is saved as part of the header information of the sales contract. The header information also determines the start and end dates for the sales contract, some other contractual information, and the offer expiry date: this is the date by which the partner must accept the sales contract.

2. Having created the sales contract header, the enterprise user then builds up the line items of the sales contract. These comprise product IDs, quantities, and prices. Each line item is a commitment that the designated partner can buy that product ID for the specified price.

3. Once the sales contract is created, the enterprise user submits the contract to the designated partner. The contract is in the Pending state: orders cannot yet be placed from the contract, but the designated partner now has access to the contract.

4. Before partner users can use the contract, it must be accepted by the partner. Only partner users who have been assigned the Financials function can accept

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contracts. A Financials partner user must accept the sales contract before the offer expiry date. Once a sales contract is accepted it is in the Active state.

5. Once the sales contract has been accepted, then any Commerce partner user from the designated partner can use the contract to create orders.

Product Reviews

End-users can submit product reviews to provide feedback to you and other customers about their experience with a product and its capabilities. End-users must be assigned the Product Reviewer function to write reviews.

A product review comprises:

* Title

* Rating: A numerical rating from 1 (bad) to 5 (good).

* Pros: a summary of what is good about a product.

* Cons: a summary of what is bad about a product.

* Review: a detailed description of the user's experience of the product.

After a user submits a product review, the review is visible to other end-users who view the product's detail page.

Product Review Administrators are enterprise users who are assigned the Product Review Administration function. Product Review Administrators can hide reviews from end-users and reject inappropriate reviews.

Payment Processing and Gift Card and Credit Card Transactions

Sterling Multi-Channel Selling Solution supports credit card and gift card transactions. Storefront administrators define the acceptable payment methods for their storefront and set up payment gateways to handle the transactions.

Consumers can split their payments among multiple payment methods. For example, they can specify one or more gift cards to pay for a purchase, then specify one or more credit cards to cover any remaining amount. Consumers can specify up to seven payment methods. When customers specify a mix of gift cards and credit cards for payment, the payment amount is charged against the gift cards first, then the credit cards.

The customer can check their gift card balance before they submit payment.

The charge sequence is:

1. Gift cards in the order entered, using the available balance of each gift card

2. Credit cards and accounts in the order entered, using the specified maximum charge amount

Note that the maximum charge amount is different from the credit limit on a credit card.

The charge sequence continues until the full value of the order is charged. The last non-gift card specified receives the charge for the balance of the order, even if the balance exceeds the specified maximum charge amount. If the Sterling Multi-Channel Selling Solution handles the credit card authorization and the amount charged on a credit card exceeds the credit card limit, credit card authorization fails.

Payment Gateways

To support credit card and gift card transactions, you must specify the payment gateways to use to process each transaction. Authorization of credit cards and gift cards is processed outside the Sterling Multi-Channel Selling Solution. A payment processor such as CyberSource provides the external service through which the credit card or gift card information is passed to capture transactions and to pass back authorization and transaction codes.

Each partner, including the enterprise and storefront partners, can set up a payment gateway for credit cards and a payment gateway for gift cards. This includes specifying the payment processor, the merchant ID for the partner, and the location of the merchant key (used to identify the merchant with the payment processor). Out of the box, the Sterling Multi-Channel Selling Solution provides the following gift card gateway options:

• None: no gift card payment processor

• Test Gateway: a stub for testing purposes

See "To Set Up a Credit Card Payment Gateway" on page 201 for information about setting up a credit card payment gateway. See "To Set Up A Gift Card Payment Gateway" on page 202 for information about setting up a gift card payment gateway. See the *Sterling Multi-Channel Selling Solution Implementation Guide* for information about creating custom credit card and gift card payment gateways.

Payment Transactions

Enterprise users can review payment transactions, and they can make manual adjustments. See CHAPTER 35, "Payment Transactions" for more information.

Using Carts

Carts

A cart is the basic unit of e-commerce. Customers and partner employees purchase items by placing them into a cart and then either placing the cart as an order or transferring the cart to a storefront for processing or ordering. Multiple items can be placed in a cart, and items can be added and removed from a cart before transferring it. Depending on the capabilities of the distributor site, a cart can be modified on the storefront even after the transfer has occurred.

Customers and partner employees can purchase items by directly adding them from the product catalog to a cart or by selecting items from a wish list, template, or registry and then adding them to a cart.

Each line in the display of a cart is a cart line. *Parent lines* are displayed for items that carry prices whereas *child lines* display subsidiary items. Both parent and child line items are priced for configured products. However, the child line items are not priced for assemblies.

Enterprise users of the Sterling Multi-Channel Selling Solution can view information about the cart activity on their system. By doing so, they can monitor commerce activity on their Web site.

Item List Types

Users can create and maintain the following types of lists of items:

- Wish List: A wish list is a list of items that a user wants someone else to purchase for him. A wish list can be shared among users.

- Template: A template is a list of items that a user purchases frequently. Templates cannot be shared among users. Users can purchase items only from their own templates and to do so, they must first copy the items to their cart and then place the order.

- Registry: A registry is a list of items that a user may want someone else to purchase for him for special occasions, such as the birth of a baby or a wedding. Registries can be of two types: Baby Registry and Wedding Registry. Users can have more than one registry of each type but not more

than one active registry of each type at any given time. Registries can be shared among users.

Department Sorting of Items

Customers and partner users can sort the items in a wish list, template, or registry, by the features assigned to the items. To enable this, the enterprise administrator must create features under the Department feature type and assign the features to items. When a user selects **Department** from the **Sort On** drop-down list in the Wish List, Template, or Registry Detail page, the items in the list are sorted according to the features assigned to them. For more information about creating and assigning features, see "Working with Features" on page 786.

Life Cycle of a Cart

A cart goes through the following process during its lifetime.

1. A user creates a cart and places items in it. Once a cart is created it is referred to as an *active* cart.

2. Individual items may be configured while in an active cart. Users can duplicate an active cart to create another cart. You can also delete an active cart.

3. Users can save carts as quotes: the prices saved with a quote are valid for a time that can be configured as part of system configuration. Users can also make requests for price negotiation: that is, they can submit the cart with requested prices to see if one of your customer service representatives approves the request.

4. The user can place the cart as an order. Registered users are asked to verify shipping information, while unregistered (anonymous) users are asked to register.

Serving Promotions

The Sterling Promotions application enables you to serve promotions to customers as they select products for their cart, or as they obtain price and availability information from your site. By associating promotions to products (through their product IDs), you are able to take advantage of "up-sell" or "cross-sell" opportunities that are closely related to products that the customer has selected already. The *promotion administrator* manages all information related to promotions.

Promotions Served by an Enterprise

When your installation of the Sterling Multi-Channel Selling Solution is serving as an enterprise site, it can provide cart functionality for your e-commerce site. Users can create carts in their workspace and place products in their carts prior to obtaining price and availability information or transferring the cart to a partner or ordering from your site.

You can enhance the cart environment by adding promotions. When a customer adds a product to a cart, the enterprise server can display a "sale" icon next to the item to indicate that a promotion is available for this line item.

Promotions Served by a Partner

When the Sterling Multi-Channel Selling Solution is installed at an enterprise that responds to price and availability requests, it can respond to price and availability requests received from enterprise servers. Typically, the response to the request is a price and availability reply message that provides a price element and an availability element for each line item in the request. You can, however, enhance a price and availability reply message by associating promotions with certain products. When the enterprise site displays the price and availability information to the customer, a "sale" icon indicates that a promotion is available for this line item.

Promotions as Viewed by a Customer

Promotions are served up dynamically: they are not tied to particular pages or templates in the Sterling Multi-Channel Selling Solution. As soon as you create and configure a promotion (by associating it with products), then the promotion is available to be served up to a customer. Similarly, any changes that you make to a promotion can take effect immediately. Alternatively, you may specify a range of effectivity dates so that a promotion is served only for some pre-defined period of time.

In addition, promotion controls are used to determine which promotion(s) (if any) are to be displayed as part of a cart display. Promotion controls associate a promotion with one or more products and determine when a particular promotion is served.

Each promotion is indicated by a "sale" icon next to a product ID in a customer's cart. By moving the mouse over the icon, a small piece of text is displayed describing the promotion.

Clicking the icon opens a new browser window showing the promotion to the customer. The customer can click on **Previous** and **Next** to view additional promotions associated with the products contained in the customer's cart.

In addition, for promotions served by an enterprise server, the customer can click **Add to List** and immediately add the promotion item to the cart. This functionality is available if you have configured the promotion with the optional properties: Add to List Product and Add to List Quantity. See "To Create or Duplicate a Promotion" on page 765. This button is not available on partner promotions.

Promotions Implementation

A promotion comprises three general parts: promotion content, promotion control, and promotion event.

Promotion Content

The content of a promotion is principally a promotion identifier, the promotion URL or an image file that displays the promotion, and the short description of the promotion.

Promotion Control

Promotion controls are used to determine which promotion is to be displayed in response to a price availability request line item. Each promotion control includes a priority level, a date range, the product with which to associate the promotion, and a flag that indicates whether or not the promotion is enabled.

The Sterling Multi-Channel Selling Solution determines at runtime which promotion, if any should be associated with each line item. The Sterling Multi-Channel Selling Solution selects promotions based on the following rules.

For the Enterprise Site:

1. The Sterling Multi-Channel Selling Solution selects the enabled promotion controls whose Product ID field matches the Product ID of the cart line item, and for which the current date falls within the date range of the promotion controls.

2. The system filters those promotions that do not apply to the customer. The system considers only those promotions that match customers who belong to segments that are associated with the promotion.

3. The system filters out all promotions that do not match the customer's current presentation locale.

4. From these promotion controls, the system selects the promotion(s) with the highest priority.

5. If this choice results in multiple promotions, the system selects one promotion at random from the matching promotions.

6.   The Sterling Multi-Channel Selling Solution serves the selected promotion.

Promotion Event

A promotion event is one of the following types:

- A hit is defined as when a promotion is available to be viewed. For example, when a customer add a product to the cart and that product has a promotion associated with it, a promotion icon appears with the line item.

- A view is a promotion event where the customer clicks on the promotion icon next to a line item in either a cart or in Sterling Advisor and actually displays the promotion.

- An Add to List promotion event involves a customer clicking **Add to List** in the promotions window.

For an implementation of the Sterling Multi-Channel Selling Solution installed at a partner site, a promotion event is created each time a promotion is served in a price and availability reply. Principally, this comprises the date, the identity of the recipient of the promotion, and the promotion identifier.

Customer Service

Customer service representatives are enterprise users that have been assigned the EnterpriseCommerce function (the Commerce role). This function is designed to let enterprise users help customers with tasks such as placing orders, modifying or cancelling orders, requesting returns, and approving submitted quotes.

Users with the Commerce role must have at least the Anonymous User Partner account assigned to them. This also allows users with the Commerce role to access shared wish lists and registries.

Note that enterprise users can be assigned this function in addition to other functions, so, for example, it is possible for an enterprise user to act as both a profile administrator and as a customer service representative.

Once a customer has placed an order, the customer service representative monitors order activity and monitors any line item returns and evaluates them as necessary.

Order Management

Customer service representatives can create carts and place orders on behalf of customers. Once a customer has placed an order, the customer service representative can display and modify information about the order. This includes line item information (such as quantities and prices), service contract information,

and addresses. For example, the original order quantity might have warranted a price break; a change in quantity might mean the price break is no longer relevant.

The representative can also define specific information for a line item, for example a shipping address for a specific line item. The customer service representative can add line items to an order. See CHAPTER 29, "Customer Service" for a description of the tasks. The customer service representative can also view the history for the line items on a specific order.

Sometimes customers are unable to place orders for products, for example, their computer system is down. Customer service representatives can create orders on behalf of registered users. From the Sterling Multi-Channel Selling Solution home page, they can see the products, price lists, address books, and so on, from the standpoint of the customers for whom they are creating the orders.

Account Management

You can manage customer service representatives and their managers so that each customer service representative manages a specified set of partners, known as their accounts. Before a user at a node of the enterprise hierarchy can be assigned an account, the account must be assigned to that node. Customer service representatives can assign themselves accounts from their available pool of accounts or they can be assigned accounts by their manager.

When a user is assigned an account, they can view the commerce activity of all users who belong to the account. If they have the appropriate functions (such as Finance and so on), then they can view the corresponding activity, such as invoices and so on, of all their account users. However, if they have not been assigned the account, then they cannot see this activity.

Managers at an enterprise node can automatically see all of the commerce activity of account users of accounts assigned to that node, but other enterprise users can only see the activity if they have been explicitly assigned the account. By default, all partners are assigned to the root node of the enterprise hierarchy. Consequently, any manager at the enterprise node can view the commerce activity of any partner.

Returns Management

Whenever a customer returns items from an order, the Sterling Multi-Channel Selling Solution has internal rules that decide automatically whether the return request will be approved or not. Where a decision cannot be made automatically, the customer service representative can access a list of return requests and review the return requests manually. See CHAPTER 29, "Customer Service" for a description of the tasks.

Quotes Management

When partner users create a cart, they can either place the order with the prices as supplied by the price lists, or they can enter their own, requested prices and submit this for price negotiation.

The customer service representative can display a list of quotes, and view the submitted quote detail. The customer service representative can reject the requested prices, or they can modify the quantity and price as necessary and then accept the quote, at which point the quote becomes an orderable quote that can be turned into an order. Once the submitted quote has been converted to an orderable quote, the end user can either remove the quote or convert the quote to an order.

See "Working with Quotes" on page 894 for the tasks involved.

Service Contracts Management

Service contracts provide the means for tracking and managing duration-based items such as license agreements, maintenance agreements, service agreements, and warranties. After a customer buys a product that is associated with a duration-based item, both the customer service representative and the customer can view the details of the service contract, its history, and, if the service contract is active, modify it. The customer service representative can also place the service contract on hold (suspend service), re-activate the service contract, and extend an expired contract.

See "Creating Tasks From Commerce Objects" on page 990 for a description of the tasks.

Invoice Management

Invoices are created by posting XML messages to the Sterling Multi-Channel Selling Solution. See the *Sterling Multi-Channel Selling Solution Implementation Guide* for information about how to implement invoice management. CHAPTER 37, "Invoice Administration" covers all the enterprise tasks associated with invoice management and "Invoice Administration by Partners" on page 282 covers the partner tasks associated with invoices.

Each invoice may or may not be associated with an existing order in the Sterling Multi-Channel Selling Solution. If there is an associated order, users can view the invoice from the order page and can navigate to the order from the invoice (if their entitlements permit this: see "Access to Invoices" on page 48).

A single order can have more than one associated invoice: for example, the enterprise may generate one invoice for each line item in an order.

Two groups of users work most closely with invoices:

- Financials enterprise employees: these users work for the enterprise and are responsible for ensuring that invoices are paid by their customers and that disputes regarding invoices are handled quickly. These users can view and modify all invoices in the Sterling Multi-Channel Selling Solution. Typically, these users are referred to as accounts receivable users.

- Financials customer employees: these users work for partners of the enterprise and are responsible for ensuring that invoices are paid by the customers and to initiate any disputes regarding the payment of invoices. These users can view and modify all invoices owned by users that belong to their partner. Typically, these users are referred to as accounts payable users.

Invoice Statuses

Each line item of an invoice has two statuses: the customer's view of the status, and the enterprise's view of the status, as shown in the following table.

TABLE 4. Invoice Line Item Statuses

Customer Status	Enterprise Status
New	New
Paid	Payment Received
Disputed	Disputed

The entire invoice has a status that provides a summary of the line item statuses, as shown in the following table:

TABLE 5. Invoice Status

Invoice Status	Combination	
	Customer Status	Enterprise Status
New	New	New
Partially Paid	Paid, but not for all lines	Payment Received, but not for all lines

TABLE 5. Invoice Status

Invoice Status	Combination	
	Customer Status	**Enterprise Status**
Paid	Paid for all lines	Any
Disputed	Disputed on at least one line	Any

Access to Invoices

Invoices created in the Sterling Multi-Channel Selling Solution can be viewed by appropriate users of both customers and the enterprise, as described in this section.

Invoice Ownership

- The ownership of invoices associated with an order in the Sterling Multi-Channel Selling Solution is inferred from the associated order.

- The ownership of invoices not associated with an order in the Sterling Multi-Channel Selling Solution is set to the user key of the ERPAdministrator user (used to authenticate the inbound post). Enterprise Financials employees can view and modify the invoice, but no customer users can view or modify the invoice.

Viewing and Modifying Invoices

The owner of an invoice can always view an invoice.

Financials employees of the customer may view an invoice to verify or modify its customer status at the enterprise or to contest some aspect of its payment.

Financials employees of the enterprise may view any invoice for any customer to verify or modify its enterprise status or customer status.

Credit and Debit Memos

You can associate *memos* with invoices: these are financial adjustments to invoices. Typically, you use these to record changes made to invoices as a result of negotiations made between invoice parties (the enterprise and the partner to whom the invoice has been submitted).

A credit memo is used to reduce the amount owed on an invoice. A debit memo is used to increase the amount owed. See "Memo Administration" on page 1073 for more information on the tasks associated with invoice memos.

Leads Management

You can manage sales leads that become available to your company. Using Sterling Leads, you can create a lead and assign the lead to one or more of your partners as well as possibly to your own sales team. Using the Sterling Multi-Channel Selling Solution, sales representatives work the lead and can convert their opportunities into orders. CHAPTER 30, "Sterling Leads" covers all the tasks associated with lead management and "Opportunity Administration by Partners" on page 263 covers all the tasks associated with opportunities.

Users must be assigned the Sales function to work as sales representatives. Users must be assigned the SalesExecutive function to work as sales managers: that is, to delegate opportunities to other sales representatives.

Opportunity

When an enterprise lead administrator creates a lead (see "To Create a Lead" on page 991), they provide contact information (such as the contact's name, address, and so on) and they can indicate what products the contact is interested in. Having created the lead, the lead administrator can assign the lead to one or more partners: each partner is free to work the lead as they see fit. It is also possible to assign a lead to the enterprise partner: this gives enterprise sales managers and sales representatives the opportunity to work the lead.

When a lead administrator assigns a lead to a partner, an opportunity is created. An opportunity contains all the contact information from the lead and the list of products that the contact has expressed interest in. Partner users work on opportunities as follows:

- First, the partner sales manager accepts the opportunity.

- The sale manager then delegates the opportunity to one of their sales representatives.

- Then the sales manager or delegated sales representative works on the opportunity. When a partner sales representative works on an opportunity, they do not change the lead itself, only their opportunity copy of it.

The enterprise lead administrator can view partner activity for each lead by viewing each of the opportunities generated from the original lead. One opportunity is created for each assignment of a lead to a partner, and so if a lead is assigned to five partners, then five opportunities are created. Each of the partner sales representatives who works on an opportunity cannot see the other opportunities for that lead and so they work independently of each other.

Functions

The following entitlement functions are relevant in lead management:

- EnterpriseLeadAdministratorSales: this is an enterprise function. Enterprise users assigned this function can create leads and assign leads to partners (including the enterprise itself).

- EnterpriseSalesExecutive, DirectSalesExecutive: these functions can be assigned to enterprise and partner users. Users with these functions are responsible for accepting or declining opportunities that are assigned to their partner and for delegating opportunities to other partner users who have been assigned the Sales function.

- EnterpriseSales, DirectSales: these functions can be assigned to enterprise and partner users. Users with these functions can be delegated opportunities and work with them to create proposals and orders from them.

Contacts

When a lead is created by the lead administrator, they enter contact information for the person represented by the lead. Each lead must have at least one contact. When a lead is assigned to a partner, the contact information is passed to the opportunity, and so a partner sales representative can contact the contact person to ascertain more precisely the person's needs.

More than one contact can be associated with a lead. One of these must designated as the primary contact, and in lists of leads or opportunities this is the name that is displayed for each lead. If you delete the primary contact, then the first of the remaining contacts is made the primary contact.

Proposals

When a lead is created by the lead administrator, a cart is created with the lead: the lead administrator can choose to add products to the cart to indicate the products that the contact is interested in. This cart is known as a *proposal*. When a lead is assigned to a partner, an opportunity is created: this is a copy of the lead created by the lead administrator, and it contains a copy of the proposal as it was created by the lead administrator.

When a sales representative works on an opportunity, they can use the associated proposal to add (or remove products) and to make adjustments to the prices of products as they think appropriate for their sale. The sales representative can also make new proposals associated with the same opportunity, or they can create a new proposal which is associated to a new opportunity, not an existing one.

When a sales representative wants to show a proposal to a contact, they can use proposal templates to determine the look-and-feel of the proposal. Templates are XSL files can be used that transform an XML representation of the proposal into an HTML page or PDF file. See "Print Templates Tab" on page 238 for a description of how partner administrators can maintain proposal templates.

Proposal Template Format

The format of a proposal template must be a valid XSL file. It must be capable of generating a valid PDF file from the XML representation of a proposal. See "Proposal Templates" on page 1123 for an example proposal template.

Assigning Functions for Managing Leads

As described in "Managing the Sales Channel" on page 2, the Sterling Multi-Channel Selling Solution has a function called *EnterpriseLeadAdministratorSales*. The person who manage functions in your enterprise assigns the function of *EnterpriseLeadAdministratorSales* to the person responsible for managing leads. This function gives this person, the *Enterprise Lead Administrator*, access to the Sterling Leads application, including full capability for managing leads on the enterprise server.

As described in "Partner Users" on page 4, the enterprise *channel administrator* user creates, for each partner, a *partner administrator* user. This partner user usually creates the other partner users for their partner.

- For each partner, the partner administrator can assign the SalesExecutive function to one or more of their partner users. This partner user becomes the *partner sales manager*: this user is responsible for accepting or declining leads assigned to the partner by the enterprise. Once they have accepted a lead, then they can delegate the opportunity to one of their sales representatives.

- The partner administrator can assign the Sales function to one or more of their partner users: such users can have opportunities delegated to them, and they can work the opportunities to create proposals and turn them into orders.

Creating the Leads through the User Interface

As sales and marketing activities (that is, phone calls, trade shows, and so on) generate sales leads, as *Enterprise Lead Administrator*, you add these sales leads to Sterling Leads. As described in "Creating and Modifying Leads" on page 991, you can either create the leads manually, with the user interface, or you can upload the

leads from a file. See "Uploading Leads Using an XML File" on page 52 for information about uploading leads.

When you create the leads manually, you enter such general information as the territory and customer type to which the lead belongs. You can also define the partner type (distributor, OEM, etc.) and partner level (platinum, gold, and so on) to which the lead should be assigned. When you assign leads automatically (see "Assigning Leads" on page 52) or when you want to display only recommended partners, the Sterling Multi-Channel Selling Solution uses this information to determine the recommended partners.

Uploading Leads

You can upload leads as described in:

• "Uploading Leads Using an XML File" on page 52

The Automatic assign uploaded leads to their fixed recommended partners business rule determines whether uploaded leads are automatically assigned to partners. See "Automatic assign uploaded leads to their fixed recommended partners" on page 1088.

Uploading Leads Using an XML File

You can create leads by uploading them using an XML file. The XML file must conform to the DTD provided by **debs_home/Sterling/WEB-INF/dXML/4.0/ LeadCreateListRequest.dtd**. See "To Upload a Lead" on page 993 for the steps you perform to upload the file. Before uploading the file, the Job Scheduler Message URL system property must be set to point to the Sterling Multi-Channel Selling Solution. See "Job Scheduler Settings" on page 1079 for more information.

You must provide authentication information in the XML file by entering your username and password in the UserLogin and UserAuthenticator elements respectively. If the XML file is invalid, then an error message is displayed.

Assigning Leads

Once the leads have been added to Sterling Leads, the leads are assigned to one or more of the enterprise's channel partners and optionally to the enterprise partner. This can be done manually, or it can be done automatically by setting a business rule (see "Recommended Partners and the Business Rule" on page 53).

You can do automatic assignment when you assign multiple leads simultaneously from the Leads Management List. You select the leads from the list, then click a

browser button to perform automatic assignment. Sterling Leads uses the business rule setting to determine the recommended partners for assigning the lead.

Note:	Recommended partners must also have a *SalesExecutive* function assigned to one of their partner users.

As described in "Assigning Leads" on page 1004, you have several options when assigning leads manually. You can assign them on a lead-by-lead basis when you create or modify the lead, or you can assign multiple leads simultaneously from a list of leads. You can choose from among all the partners, or you can click a browser link that enables you to choose only from recommended partners determined by a business rule setting.

Recommended Partners and the Business Rule

When you assign leads automatically, or when you want to show only recommended partners, Sterling Leads uses the business rule setting to determine the recommended partners. See also "Lead Management Recommended Partner Search Attributes" on page 1088.

The business rule works this way. When you set the rule, you can choose one to four attributes (partner type, partner level, territories, and customer type) to use when recommending a partner to a lead. You can also choose to use none of the attributes. Each lead is assigned these attributes when the lead is created. Each partner is assigned one or more of these attributes when the partner is created in Sterling Profile Manager (see "Managing the Sales Channel" on page 2). The system recommends (or automatically assigns) a partner to a lead whose attributes (as defined in the business rule) match the same attributes in the lead.

For example, suppose the business rule is set to use partner type and territories when recommending partners. A lead is assigned the attributes OEM (as partner type) and North America (as territory). When you request to display only recommended partners, only partners that have the partner type "OEM" *and* the territory "North America" will be displayed (not one *or* the other). Likewise, when you are doing automatic assignment, the system automatically assigns the lead only to partners that have the partner type "OEM" AND the territory "North America".

Working the Leads

A *Partner Sales Manager* can accept or decline the opportunities assigned to their partner by an *Enterprise Lead Administrator*. The *Partner Sales Representatives* work with the contacts to determine which products the contact is interested in. The *Partner Sales Representatives* can browse the product catalog, or search for products, just as if they were filling a cart.

Converting Leads to Orders

When a *Partner Sales Representatives* has worked with the contact to select the desired products, the *Partner Sales Representatives* can click a button that converts the proposal to a an order.

Closing a Lead

At some point, the *Partner Sales Manager* will close the opportunity. An *Enterprise Lead Administrator* can view partner activity for a lead and notice when an opportunity has been closed. At this point, the *Enterprise Lead Administrator* can choose to close the lead on the enterprise side.

Customer Segmentation Management

Customer segments are storefront-specific groups of users and/or organizations that share certain attributes or behaviors. Segment definition enables you to target marketing campaigns directly to the users who are most likely to be interested in the products or promotions, and to assign special pricing rules or coupons to products offered in segment marketing campaigns.

Users who are members of a particular segment share attributes that you specify, such as income and education level, interests, or place of residence, as well as certain behaviors, such as buying particular types of products. You create marketing campaigns to target specific customer (or market) segments and set prices that apply to those segments.

Segments and segment names are storefront-specific and are not shared among storefronts.

Segment Administration and User Functions

You access the Segment Administration page from the home page. Your user function within the Sterling Multi-Channel Selling Solution determines the segmentation-related information you can access. You must be a storefront administrator assigned the Marketing Manager - Segmentation function to be able to see the Segment Administration panel on the home page.

Segment Administration Tasks

Segment administrators perform the following tasks:

- Create segments
- Delete segments

- Copy segments

- Check where segments are used

- Update segment status

- Define segment criteria based on user behavior, user attributes, or fields in user profiles

- Enter the behavioral criteria to use to process a segment and determine its membership

- Manage segment configuration options such as the number of users to show in the segment processing results

- Combine segments to create composite segments

- Upload lists of users to define segment membership

- Process segments and examine segment membership to check the results

- Publish a segment to a production system

- Import and export segments

How Segments Apply to Users

A marketing activity applies to a given user if the user belongs to the user list of a segment that is associated with the activity.

After you define a segment, you submit the segment definition for processing. Segment calculation scripts resolve the criteria into a list of users. The result must be published to a production system so that it is available for use in marketing activities. Segment membership calculation and publication are generally handled as batch processes to minimize performance impacts.

As users register for your site, become active or inactive, or change attributes in their user profiles, they may fit criteria for new segments or become ineligible for membership in certain segments. Segment re-calculation at regular intervals keeps your user list current. You can set the frequency with which to re-calculate the membership of a segment.

There are situations in which users become eligible or ineligible for segment membership between calculation intervals. The system handles such situations as follows:

- If a user belongs to an active segment at the time of segment membership calculation, but afterwards becomes ineligible for the segment, the user

continues as a member of the segment until the next time membership is calculated.

- If a user becomes eligible to belong to a segment because of a change in the circumstances or behavior of the user, or because the user or the segment is new, the user is not added to the segment until the next time membership is calculated.

- When a new user registers on your e-commerce site, the registration process determines the segments to which that user belongs. The user has immediate access to the promotions, pricing rules and coupons to which she is entitled.

See CHAPTER 10, "User Attributes Administration", for information about creating and managing user attributes. See CHAPTER 11, "Customer Segment Administration", for information about administering and managing customer segments.

Campaigns Management

The Sterling Campaigns module enables you to create email marketing campaigns to send targeted email messages to specific lists of recipients. You can create the lists of recipients by associating mailing lists with campaigns. You create mailing lists by uploading email addresses and their associated information from files or by associating one or more customer segments with a mailing list.

The email messages are created through the administration UI and are scheduled for delivery using a cron job. See CHAPTER 31, "Sterling Campaigns" for more information.

Campaigns and Locales

When you create a campaign, you specify its content as an HTML page that is sent to recipients. You can create an HTML page for each locale supported by the Sterling Multi-Channel Selling Solution. When the campaign is executed, users receive the appropriate HTML page based on their preferred locale.

Recipients are already users defined in the Sterling Multi-Channel Selling Solution. They all have a preferred locale defined in their user profile and this is what is used to determine which HTML page is used.

Recipients whose email addresses are uploaded in files may or may not have a locale specified in the file. If they do, then this locale is used to determine which HTML page is used. If they do not, then they are assumed to have the default

system locale as their preferred locale, and so they are sent the HTML page for the default system locale, if one has been defined.

Mailing Lists Management

The Sterling Multi-Channel Selling Solution provides the ability to create and manage mailing lists to be used in marketing campaigns. You create mailing lists either by uploading a file containing a list of email addresses and associated information, or by associating one or more customer segments with the mailing list. See "Mailing Lists" on page 1020 for more information.

Program Management and Payment Accounts

The Sterling Multi-Channel Selling Solution provides the capability to manage marketing programs using MDF and Co-op funds. Enterprise channel executives (enterprise users assigned the Channel Executive function) can create programs and activities associated with the programs, and then enterprise account managers can assign the programs to some all or all of their accounts. See CHAPTER 32, "Sterling Partner Programs" for more information about these tasks.

Partners who are assigned programs can participate in their assigned programs by initiating activities as described in the program's marketing plan. They can make requests for funds by submitting pre-approval requests for activities, and then claims once they have completed the activities. For example:

1. A partner is assigned a program. The partner's marketing manager looks at the program activities, decides which activities to perform, and submits a preapproval request for each activity.

2. The enterprise marketing manager or channel executive reviews the preapproval request, determines how much money should be allocated to the request, and allocates funds from the partner's account to the preapproval. This puts the funds on hold so that they cannot be assigned to other claims or preapproval requests.

3. Once the request is approved, the partner's marketing manager performs the marketing activity. Once the activity is complete, the marketing manager submits a claim against the preapproval request for all or part of the funds.

4. The enterprise marketing manager or channel executive reviews the claim and allocates funds to it, reverses the hold on the amount of the claim, and places the claim amount on hold for that claim. If the claimed amount is less than the preapproved amount, then the balance of the preapproved amount remains on

hold. The amount allocated may be different from the amount submitted for the claim.

See "Program Administration by Partners" on page 285 for more information.

Each partner has payment accounts for MDF and Co-op funds: these are maintained through the partner profile for the partner. You can add and remove funds from these accounts to manage activities undertaken by your partners, and claims made against activities can be used to remove funds from accounts as the claims are made.

Programs

A program represents a general marketing plan such as the launch of a new product. Typically, a program may have several associated activities such as press releases, print campaigns, direct mail, and so on that your partners can undertake.

A program has a start date and an end date that determine within which time the associated activities must take place.

A program can be assigned to one or more partners. When you assign a program to a partner, you make it possible for the partner to start making claims against their payment accounts for activities.

Activities

An activity is a specific component of a program. A program can have one or associated activity. When a partner participates in a program, they do so by undertaking one or more of the activities that make up the program, and they make claims against the activities as they plan and execute the activities.

Payment Accounts

An essential part of program management is to manage the funds that partners can spend on their program activities. The Sterling Multi-Channel Selling Solution enables you to create payment accounts for each partner: each payment account is of MDF type or Co-op type, and you can create more than one payment account of each type for a partner.

When a marketing executive partner user makes a claim against a program activity, the money must be allocated by the enterprise channel executive from one or more of the partner's payment accounts.

Co-op Accounts

Co-op accounts can be denominated in a currency such as US dollars, or you can choose to use points as a virtual currency to manage them. All Co-op accounts for

all partners are denominated in this currency. You can upload updates to the Co-op accounts which result in more funds being assigned to the accounts. When you do so, the Co-op Percentage and Co-op Account Maximum fields in the partner profile are used to calculate by how much the account is increased.

The CoopAccountsUsePoints business rule is used to specify this: set the value of this rule to "True" to use points, otherwise set it to "False".

Approval Requests and Claims

The process of making a claim is a two-step process:

1. Approval Request

2. Claim

Approval Request

When a partner is planning an activity that is part of a program, they consider the anticipated costs, and decide whether to make a full or partial claim against a payment account. If they choose to do so, then they must first submit an approval request against the activity.

The approval request is submitted to the enterprise and a channel executive can choose to approve or deny the request. If they approve the request, then funds are deducted from the available balance of one or more payment accounts: the channel executive can choose how to allocate the approved request across one or more payment accounts. If the approval request is denied, then no claims can be made against the request, but a new request can be submitted.

Claim

Once a partner has had an approval request approved and has completed the corresponding activity, they submit a claim against the approval request. The channel executive can choose to approve or deny the claim. If the claim is approved, then the channel executive specifies how the funds should be deducted from the payment accounts.

Task Management

You can create tasks for yourself and colleagues: these are the jobs that you might think of as being on a "to do list". You can create a task manually or some tasks are generated by the system when a particular event occurs, such as a user placing an order that exceeds their account limit. CHAPTER 36, "Task Management" covers all the tasks associated with task management.

When a task is first created, you can associate a list of "watchers" to the task. Watchers can view the task, and if they want to, can take ownership of a task. Once a watcher has taken ownership of a task, then they can perform associated actions such as approving the associated order. The task owner can mark the task as completed.

Sometimes a task can involve two or more people. Once a task owner has completed their part of a task, they can re-assign the task to another user. This user becomes the owner of the task, and then they can work on it: either to complete the task or to work on it and then to pass it on.

Inventory and Demand

Maintaining enough inventory to meet demand is an important part of business. Being able to forecast that demand enables you to maintain the right amount of inventory. The Sterling Multi-Channel Selling Solution provides you with the tools to track your partners' inventory and to forecast demand.

Reseller Forecasting

Enterprises can make use of the Sterling Multi-Channel Selling Solution to forecast demand for their products through their sales channel. By requiring resellers to submit periodic forecasts, the enterprise can aggregate these demand signals to gain a clear picture of future demand.

Resellers can submit forecasts in the form of a tab-delimited text file through their browser interface to the Sterling Multi-Channel Selling Solution. Resellers can create these tab files using a text editor or by exporting the data from a database or a spreadsheet. If the reseller uses a spreadsheet, they must first save the spreadsheet as a CSV file before uploading the file to the Sterling Multi-Channel Selling Solution.

In general, the enterprise is responsible for specifying when forecasts should be submitted by their resellers. This release supports the submission of quarterly forecasts.

Localizing the Sterling Multi-Channel Selling Solution

The Sterling Multi-Channel Selling Solution's user interface can be localized and displayed in multiple languages.

You can set a default system locale to specify the language in which to display information across the user interface. This locale takes effect after you restart the servlet container. For more information, see CHAPTER 38, "Enterprise System Administration". You can also set a preferred locale for each user in their user profile. The locale takes effect the next time the affected user logs in.

The locales are defined using ISO-639 language codes and ISO-3166 country codes. You can define the names that will be displayed for these codes for each locale throughout the Sterling Multi-Channel Selling Solution. See "Locale Settings" on page 1077.

By default, the Sterling Multi-Channel Selling Solution performs a binary sort for all database operations. You can localize this sort according to the system locale or the user-specified locale, whichever is in effect, by setting the "Use Localized Sorting" property in System Administration to "true" (see CHAPTER 38, "Enterprise System Administration").

Franchise Model and Suppliers

This release supports a franchise model of doing business: in this model, your enterprise may not be the supplier for all the products that are sold on your e-commerce Web site. Instead, you can specify that certain partners in your system are suppliers for products: when customers start to place an order at your e-commerce Web site, the order is broken into subsidiary orders: one for each supplier of products in the cart: this is the *order-brokering* process.

You can associate suppliers to each product, so that when customers buy products from your Sterling Multi-Channel Selling Solution, their orders are split up and sent to each supplier as orders that should be fulfilled by them. In this model, the following features are supported:

- suppliers: every partner created in the system can be used as a supplier. In general, think of suppliers primarily as storefront partners and external partners capable of processing messages notifying them of the creation of an order.

- products: you can associate a supplier to a product by adding the product to a price list owned by the partner. When orders are placed, this product and any others associated with the same supplier are split into an order that is sent to the partner.

- price lists: every price list has a supplier ID associated with it. The supplier ID is used to determine if the price list is used to price products as follows:

- Every price list is used in determining prices that users see as they shop at the enterprise. If price lists that belong to more than one supplier all have the same product on them, then a range of prices is displayed to the user, and the user must select a supplier from those that offer prices on the product.

- Price lists whose supplier ID is set to the value of a Partner.com or storefront partner are used when a user obtains prices from the partner or when a storefront customer is shopping at the storefront partner.

Enterprise administrators can change the value of price list supplier IDs at any time. If a partner administrator creates a price list, then the supplier ID is set automatically to the partner key of the partner administrator and it cannot be changed by the partner administrator.

Configuring the Sterling Multi-Channel Selling Solution

The properties of the Sterling Multi-Channel Selling Solution are defined in a set of configuration files and in the Knowledgebase. When the servlet container is started, the Sterling Multi-Channel Selling Solution loads and accesses the configuration files in order to determine Sterling Multi-Channel Selling Solution settings. (See the *Sterling Multi-Channel Selling Solution Implementation Guide* for more information about the configuration files.)

System properties for each enterprise (tenant and storefronts) are managed in the CMGT_SYS_PROPERTIES database table: for each storefront default values are populated when the storefront is first created. When a system property is changed through the Web UI, then the new value is stored in the table.

After implementation, you can modify the settings using the System Administration page and the Business Rules Manager.

Site System Administration

Site system administration is performed by site system administrators. Site system administrators access the Sterling Multi-Channel Selling Solution through the site administration URL, which is of the form:

```
http://server:port/Sterling/en/US/enterpriseMgr/admin
```

The default login ID is admin, password admin. Site system administrators manage properties that are common to all storefronts, such as logging. See CHAPTER 41, "Site System Administration" for more information.

Enterprise System Administration

Enterprise system administration manages enterprise-level (either tenant or storefront) settings in the Sterling Multi-Channel Selling Solution. For example, you can specify the email settings in the System Properties page.

You can only modify system configuration settings if you have the appropriate access role. In the reference implementation provided with the Sterling Multi-Channel Selling Solution, only users with the Program Management function can access the System Administration pages. These users access the Sterling Multi-Channel Selling Solution through an enterprise administration URL which is of the form:

```
http://server:port/Sterling/en/US/enterpriseMgr/matrix
```

Enterprise system administrators manage properties that are specific to their enterprise: changes that they make do not affect other enterprises. See CHAPTER 38, "Enterprise System Administration" for more information.

Business Rules

Business Rules define the behavior of the Sterling Multi-Channel Selling Solution. For example, this includes punchin and punchout specifications, the behavior of imports and exports, cluster configuration, and other product management specifications. These business rules are specified in the properties files of the Sterling Multi-Channel Selling Solution, and are managed through the business rule administration interface. See CHAPTER 39, "Business Rules Administration" for the tasks involved in Business Rules management.

Job Scheduling

You can create cron jobs for different activities in the Sterling Multi-Channel Selling Solution. There are storefront-level and enterprise-level cron jobs. Each storefront manages its own set of cron jobs. Only enterprise administrators can manage the enterprise level cron jobs. See CHAPTER 40, "Job Scheduling Administration" for more details.

You can schedule system-level or application-level cron jobs to run according to a specific frequency between a certain date and time range.

Note:	When a job is run using the Job Scheduler, its execution status is recorded. On occasion a job may execute successfully but the status is recorded as "Timed Out".

There are the following types of cron jobs:

• System cron jobs, such as cache cleaning

• Application cron jobs, such as importing/exporting, sending product expiration notice emails, or synchronizing the Sterling Multi-Channel Selling Solution product catalog with a fulfillment system.

Enterprise and storefront administrators can create only application cron jobs. Only tenant administrators can create system cron jobs.

Introduction to Product Administration

This chapter provides a detailed description of the concepts involved in product administration in the Sterling Multi-Channel Selling Solution. This includes:

Administering the Product Catalog

The Sterling Product Manager provides a central location for creating, maintaining, and managing product information in the Sterling Multi-Channel Selling Solution. CHAPTER 12, "Product Administration" describes the tasks associated with managing the product catalog.
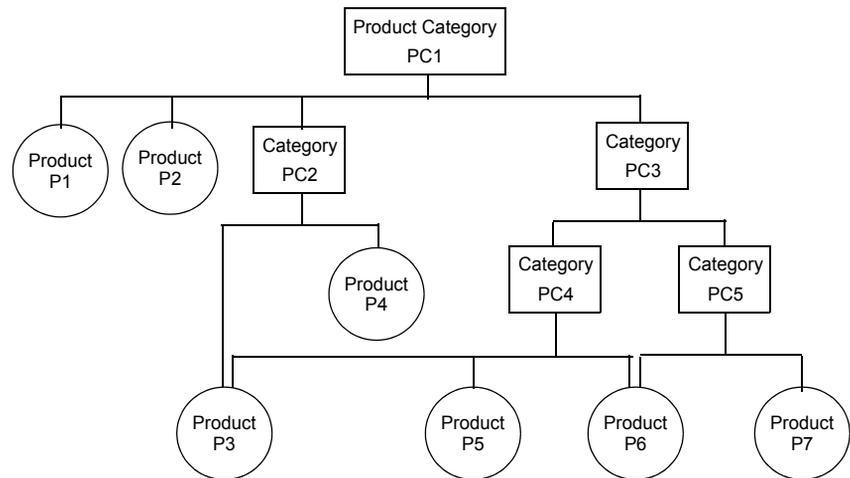
FIGURE 6. Categories and Products

Categories and Products

The basic structure of the Sterling product catalog consists of product categories and products. A product category is a collection of products with similar attributes. A product identifies a uniquely purchasable item within a category. Each product has a unique product ID: this must be unique in the Sterling Multi-Channel Selling Solution. Some characters are not allowed in product IDs. See "Product Administration Tasks" on page 371 for more details.

When you create a product, you can assign the product to an appropriate category, or create the product unassigned (to be assigned later). You can also nest a category within another category. The Sterling Multi-Channel Selling Solution allows products and categories to exist at the same level, as shown in Figure 6 on page 66. You can:

- create an arbitrarily deep nesting of categories and products.

- assign products to categories at any level of the product hierarchy.

- assign products to multiple product categories. (As shown in Figure 6 on page 66, Product P3 belongs to both Category PC2 and PC4, and Product P6 belongs to both Category PC4 and PC5.)

Guidelines for Creating a Product Catalog

The guidelines for a reasonable product catalog are:

- *Levels of Product Hierarchy*: an average depth of 4 levels and a maximum of 7 levels

- *Products per Product Category*: an average of 50 products and a maximum of 400 products

- *Number of Categories*: an average of 100 Product Categories and a maximum of 250 Product Categories

- *Number of Products*: an average of 5,000 products and a maximum of 100,000 products

Note:	The Sterling Multi-Channel Selling Solution will still work beyond the maximum numbers described here. However, there will be a degradation of usability and performance.

Creating Categories and Products

You can create products and either assign them to parent categories or leave them unassigned. Begin creating your product catalog by creating product categories and the product category hierarchy. See "To Create a Product Category" on page 355 for details.

After creating product categories, use one of the following methods to create the products for your catalog:

- Import product categories and products into your catalog from an outside source as described in "Importing Products" on page 414.

 During the import task, you will select the root category for the imported product categories and products.

- Follow the process in "To Create a Product" on page 372.

 When you create the product (either assigned to a parent category or as unassigned), you define effectivity dates for the product, units of measure, and so on. You can designate the type of product (normal, configurable, assembly, and aggregated) and you can also assign features to the product.

After creating a product within an initial category, you can assign a product to multiple categories. See "To Assign or Remove Products" on page 363.

Product Statuses

Products in your implementation of the Sterling Multi-Channel Selling Solution can have a life cycle in which they are first created and prepared by administrators, then released so that they can be bought by customers, and then at the end of their

life made unorderable. You manage product life cycles using the product status field. The product status field can have the following values:

- In Creation: products with this status can be seen by enterprise users, but not by end-users. They can be added to price lists, associated with promotions, used to create models, and so on.

  You create a product with the In Creation status so that you can prepare it for release but prevent end-users from seeing it until you are ready to release it. Once you have moved a product from the In Creation status to one of the other statuses, then you cannot move it back. You can delete products while they have this status.

- Not Orderable: products with this status can be seen by enterprise users and end-users. They can be added to price lists, associated with promotions, used to create models, and so on. End-users can view products in this status, add them to carts, and configure them, but carts that contain products with this status cannot be placed as orders.

- Released: products with this status can be seen by enterprise users and end-users. They can be added to price lists, associated with promotions, used to create models, and so on. End-users can view products with this status, add them to carts, configure them, and place orders which include them.

- Blocked: products with this status can be seen by enterprise users; they can be added to price lists, associated with promotions, used to create models, and so on. End-users cannot see these products as they browse the product catalog, search for products, and so cannot add such products to carts and orders. However, if the product is already in a cart, then the end-user can see the product there, but they cannot turn the cart into an order.

  The main use for the Blocked status is to prevent end-users from buying the product. You can move a product to the Blocked status, and then subsequently delete the product once you have processed any current orders that contain the product. You can delete products while they have this status.

Products Sold Separately

Certain products are only meaningful in the context of a main item being purchased. For example a five-year warranty should only be purchased as a component to a configured solution. In previous releases of the Sterling Multi-Channel Selling Solution, these products could be added as main items. You can check a box when you create a product that identifies the product as not sellable as

a separate item, that is, the product can be added as a component of a configurable product or a line item in an assembly, but cannot be sold separately. If this box is not checked, you can add the product as a component and the product can be sold as a separate item as well.

In-Store Pickup of Products

You can specify whether or not a product that is ordered from your e-commerce site can be picked up at a "bricks and mortar" store. Administrator users enable in-store pickup of products by setting the Enable In-Store Pickup business rule to True. The default value is False.

Certain products can not be picked up from a store, such as products that are sold infrequently and therefore are not kept in stock. You specify that a product cannot be picked up from a store by checking the Not Eligible for In-Store Pickup check box when you create or modify a product.

Customers specify in-store pickup options when they place their orders. They click the Pickup button on their Shopping Cart page and enter their zip code in the **Zip Code for Store Pickup** field. When they click **Checkout**, the Store Pickup page displays and they can choose the store(s) from which to pick up their products. Their zip code and the values in the following business rules determine their choices:

- Distances available for in-store pickup search: the distance choices presented in the **Stores Within:** drop-down list.

- Default distance for in-store pickup search: the distance that displays as the default choice in the **Stores Within:** drop-down list.

- Distance unit of measure for in-store pickup: the type of distance, such as kilometers or miles.

- Enable Future Pickup: whether or not to allow users to choose a store that has back-ordered the product. If this rule is set to false, stores that have back-ordered the product do not appear in the **Select A Store** drop-down list. If this rule is set to true, stores that have back-ordered the product do appear in the **Select A Store** drop-down list with the date that the product is expected to be back in stock, and the user can choose a date on which to pick up the product. If the store does not carry the product at all, it does not appear in the **Select A Store** drop-down list.

- Maximum number of pick-up stores: the maximum number of stores to display for the customer's pick-up choices.

Customers make pickup choices line by line: if a particular product is not available at one store, the customer can pick another a store that has it in stock. If they prefer, they can click a link on the Store Pickup page, **Click here and we'll find them for you**, to allow the system to present the three best pickup options for them.

Administrator users determine customers' choices using several Orders category business rules. See CHAPTER 39, "Business Rules Administration", for details.

The Sterling Multi-Channel Selling Solution must be integrated with an order fulfillment system such as Sterling Distributed Order Management to allow display of available stores.

Service Products

You can specify that a product is a service product. In most respects, service products behave as most products do, but there is one difference when a service product is configurable. It depends on the setting of the Use Configuration Prices for Service Products? business rule as follows.

When you create a model for a configurable product, you can price option items in the model in one of two ways: either by associating a product with the option item, and pricing the corresponding product using price lists, or by attaching a price to the option item directly. See "Working with Display Properties" on page 644 for a description of how prices can be set for models, option classes, and option items using the Price display property.

When you configure a product, the underlying model may get prices for items from the Sterling Pricing engine or it may get prices from the model itself. When the end-user finishes configuring their product, they return to their cart with the configured product with prices from their configuration session.

- If the Sterling Quotes business rule called Use Configuration Prices for Service Products? is set to true, then prices set in the Sterling Configurator session are preserved as the user continues their shopping.

- If the Sterling Quotes business rule called Use Configuration Prices for Service Products? is set to false, then prices set in the Sterling Configurator session are not preserved as the user continues their shopping. Prices are retrieved from the Sterling Pricing engine just as they are for non-service products.

Aggregated Products

You can create *aggregated products*. An aggregated product is a product that comprises a collection of products, each of which shares essential characteristics with the others, but each of which differs from the others in minor but significant

ways. Since they share essential characteristics, the individual products would not be separate products in a product category.

For example, an enterprise might have an aggregated wire product which comprises a number of individual wire products each of which differs from the other only in length, gauge, or color. You would not create a product category, since these are not different products. Each wire product is technically the same product, differing only in color, gauge, or length. You would not create an assembly, since these are not individual parts of a larger product. You can, however, create an aggregated product that would contain the same wire products, each of which differs only in color and/or length.

There are two ways to assign products to an aggregated product. You can create products as part of the aggregated product, or you can assign existing products to the aggregated product. If you assign an existing product to the aggregated product, then the existing product no longer is assigned to the product categories to which it was currently assigned. It becomes part of the product category to which the aggregated product belongs. Any features assigned to the product remain assigned provided that they are consistent with the assignment of feature types to the product category in which the aggregated product is assigned.

Feature Management in Sterling Product Manager

You can manage features both in Sterling Product Manager and in Sterling Advisor.

Features, Feature Types, and Feature Type Groups

The following figure shows the feature hierarchy in the Sterling Multi-Channel Selling Solution.

```
Feature Type Group
    ├── Feature Type
    │       ├── Feature
    │       └── Feature
    ├── Feature Type
    │       ├── Feature
    │       └── Feature
    └── Feature Type
            ├── Feature
            └── Feature
```
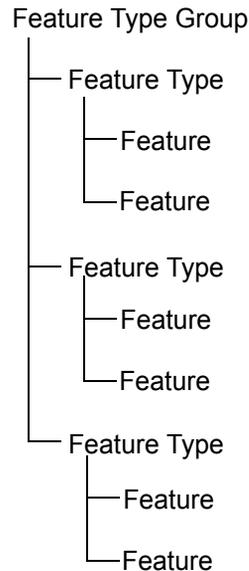
FIGURE 7. Feature Hierarchy

Features are characteristics of products. For example, a company that sells computers might offer a laptop that comes in four colors, has a 17" monitor, a 2.4GHz processor, a 260GB hard drive, a wireless card, a writable CD drive, a DVD drive, and an ergonomic keyboard. Each of these characteristics is a feature.

Feature types are collections of features. Usually these are features that are in some way related to each other, and so form a logical "type" of feature. To continue the previous example, the company that sells computers offers computers with several different processor speeds. Customers can buy computers that come with processors of 1.2GHz, 2.1GHz, 2.4GHz, and 3.0GHz. 1.2GHz, 2.1GHz, 2.4GHz, and 3.0GHz are features that could be grouped into a feature type named "Processor Speed". Other feature types might include "Monitor Size", "Available Memory (RAM)", "Hard Drive" and "Internet Connectivity".

Feature type groups provide a means of grouping feature types. Using the same example, some feature types that relate to a computer's performance are processor speed, hard drive, and available memory. The company might decide to attribute the feature type group "Performance" to these feature types.

Features and the Sterling Multi-Channel Selling Solution

When a customer uses the guided selling experience, they answer questions in a questionnaire. These answers comprise features that are created and assigned to products in Sterling Product Manager. When the customer answers a question, the screen displays the products to which the answer (feature) has been assigned.

To provide these questions and answers, one or more enterprise users create a questionnaire using Sterling Advisor. They use features and feature types to define attributes of products to help customers find the products they want. By assigning features and feature types, you define how the product selection and product comparison tools work.

Creating and Assigning Feature Types and Features

You create the feature types and features using the Feature Management panel in Sterling Product Manager or the **Sterling Advisor Administration** link from the Sterling Multi-Channel Selling Solution home page.

You can assign features to products by assigning features to the product category to which the product belongs. In this case, the feature is automatically assigned to all the products in a category. You can also assign features to products on a product-by-product basis.

You can assign features to a product when you are modifying a product, or you can assign a feature to one or more products when you are modifying the feature.

When you assign a feature type to a category, the features belonging to that type are available to be assigned to the products in that category as well as products in subcategories of the category. When you assign individual features to a category, those features are automatically assigned to all the products within the category and within subcategories of the category. This is referred to as *power assignment*. In Release 6.4 and higher, you can also mark the feature for *inheritance* so that as new products are added to the product category, then the feature is automatically assigned to the new products.

Feature Effectivity

In some cases, features may only be effective (available to customers) during a given time period. This is *feature effectivity*. For example, the computer company described in the previous sections may currently offer a model of desktop computer with processors of 1.2GHz, 2.1GHz, and 2.4GHz. However, as the marketplace changes, and demand for higher processor speeds increases, the company may decide to change the set of processors from which their customers are permitted to choose. Starting in the next financial quarter, the same desktop model will only be available with processors of 2.4GHz and 3.2GHz. When the company's Sterling

Advisor administrator creates these features, they can set an effectivity for each feature, specifying that until a certain date (the last date of the quarter) the feature 1.2GHz will be available, but that after that date it will no longer be available, and that before a certain date (the first day of the next quarter) the feature 3.2GHz will not be available, but after that date, it will be available.

Managing Assemblies

An assembly is a product that refers to a set of items (products and text items) that together form the assembly. For example, a laptop may actually comprise a laptop computer, a docking station, a monitor, and a warranty. In this example, three of the items in this assembly are products, while the fourth item (the warranty) is a text item. The assembly is used to enable a customer to order all four items as a single product.

Note:	You must define a product as an Assembly before you can define its structure.

Assemblies have the following sub-component types:

- Bundle: a bundle consists of several components, such as products, provided services, physical kits, or other bundles. Delivery service cannot be part of a bundle. Line items in a bundle can be shipped separately.

- Physical kit: a physical kit is maintained as a single item and consists of a number of components that must be ordered and shipped together. For example, a digital imaging kit can consist of a digital camera, printer, and laptop with high-end graphics capabilities.

- Dynamic physical kit: a dynamic physical kit is similar to a physical kit, except that the line items to be shipped are decided upon at the time the order is placed.

When you create a product as an assembly, there is an **Assembly** tab that enables you to add the items that make up this assembly. When you define the product, you will be able to select products from the product hierarchy

See "To Define the Parts in an Assembly" on page 401 for the tasks involved in creating an assembly.

You can also create a hot spot for each part in a parts diagram image of an assembly. When an end-user displays the assembly, the end-user can order one or more parts in the assembly by clicking on their respective hot spots. The hot spot can be any spot in the image: you can make a hot spot out of a callout designation for the part, or you can make the image of the part itself as the hot spot.

Managing Configurable Products

When you create a product, you choose from one of these types: normal, assembly, configurable, or aggregated. A configurable product refers to a product which is customized at the time of purchase by the end-user by making a series of selections. For example, the product catalog contains a product called a "Bicycle", but the "Bicycle" does not exist as a single selectable item. Rather, the "Bicycle" represents a model created by a modeler (using the Sterling Visual Modeler); that is, a series of choices. The "Bicycle" can have one of four frame types, three wheel types, and so on. The customer selects the frame type, wheel type, and so on, at the time of purchase, and therefore defines the product at that time.

Note:	Before you create a configurable-type product in Sterling Product Manager, a corresponding model must be created using the Sterling Visual Modeler. See "Using the Sterling Visual Modeler" on page 82 for more information about the Sterling Visual Modeler.

You can also create pre-configured products. In some cases, your company might have a need for products that are pre-configured. For example, the product "Bicycle" can be configured with a number of different selections. However, you might notice that your end-users select a specific configuration most of the time. In other cases, you might notice that they begin with a certain set of common selections before they achieve the configuration they want.

For these cases, you create pre-configured products. When you create a product as a configurable type, that product has an extra tab, a **Configuration** tab. A button in this tab enables you to select the configuration for this pre-configured product.

When your end-users select this product from the catalog, they can either buy the pre-configured product as is or use the pre-configured product as a base which they can then reconfigure to their specifications.

See "Managing Pre-Configured Products" on page 411 for the steps involved.

Superseding One Product with Another

The Sterling Multi-Channel Selling Solution supports the ability for one product to supersede one or more products: that is, you can specify that a product has become obsolete and that references to it should be referred to another product. A product is obsolete if the current date is out of the range of its effectivity dates. In order to specify supersession, you must specify both the superseded product and the superseding product.

Note:	A product can be superseded by only one product. By contrast, one product can supersede many products.

The Sterling Multi-Channel Selling Solution only checks whether a product has been superseded if the current date is out of the range of the product's effectivity dates.

If the superseding product is itself obsolete, then the Sterling Multi-Channel Selling Solution checks whether there is a superseding product for the obsolete superseding product. In this way, you can create a chain (series) of products each of which supersedes a preceding product. You can view the supersession stack for a product through the **Supersession** tab.

Note:	The Sterling Product Manager application only manages the supersession relationship between products. Product obsolescence is only checked during commerce activities of the Sterling Multi-Channel Selling Solution

For example, if product A is superseded by product B and product B is superseded by product C, then the supersession chain for product A is both product B and product C. When you click on the **Remove Chain** for product A, the link is only broken between product A and the supersession chain. Product A is no longer superseded by any product but product B *is still superseded* by product C.

See "Superseding a Product" on page 399 for the tasks involved in supersession.

Moving Products to Another Category

You can move products from one category to another, as described in "To Move a Product to Another Category" on page 364. One of the potential problems in doing this is "feature mismatch", that is, the features assigned to the product may not have corresponding feature types in its new parent category. A user interface enables you to reconcile this mismatch by manually adding the missing feature types to the new parent category. This automatically adds the features belonging to the feature type. If you do not add a feature type, then the type's features are automatically unassigned from the product. See "Feature Types and Features" on page 118 for a description of feature types and features and their relationships to products categories and products.

Exporting Product Data

You can export product data (including product categories, products, feature types, and features) as either a dXML, cXML, RosettaNet, or xCBL file and send it to selling partners such as resellers, distributors, OEMs, and Net Markets. "Exporting the Product Catalog" on page 423 describes the tasks.

You include list price data for the products by selecting a price list that contains the products in the export set.

> **Note:** Only list price information is exported. The export does not include any conditional pricing that might be part of the price list.

The file is stored, by default, in the *debs_home*/**Sterling**/**catalogexport/** directory. You can rename the **catalogexport** directory, but the new directory *must* be located in the *debs_home*/**Sterling/** directory. See the *Sterling Multi-Channel Selling Solution Implementation Guide* for the location of the *debs_home* directory.

Once you have created the export set, you have the option of exporting the set immediately or clicking a button to display a screen that enables you to schedule a cron job to export at regular intervals. See "To Export the Catalog Using a Cron Job" on page 430.

Exporting Aggregated Products

If you include an aggregated product (see "Aggregated Products" on page 70) in an export set, then the products that comprise the aggregated product are automatically included in the export set.

Importing Product Data

When you have large amounts of product data that you want to add to the Sterling Multi-Channel Selling Solution, you can import a catalog as an import set in dXML format. See "Importing Products" on page 414 for a description of the process. During the process, you define an insertion point, that is, a place in the product category hierarchy, a parent category within which you want to place the products.

You can provide pricing information with the imported products as follows. A price list can be associated to an import set: when the products in the dXML file are imported, pricing information in the dXML file is used to add products to the price list or to update prices if they are already on the price list.

Categories and Products Managed by Partners

In some cases, your partners might carry products in addition to yours that they want to make available through your catalog. The partner administrator for such partners can create and maintain product categories and products in the catalog within certain "open" categories.

When the enterprise administrator creates a product category, that category is, by default, "closed" to partners. Partner administrators cannot create categories or products within a "closed" category. Using an interface in Sterling Product Manager, the enterprise administrator chooses the partners for whom this category

is "open". The enterprise administrator can also close categories to a partner, whether the category is created by the enterprise administrator or the partner administrator.

Product Suppliers

The products in your product catalog may be supplied by your enterprise or by one or more of your partners. When you or one of your partners put a product on a price list, then the partner that owns the price list is the supplier for that price list. If the price list is assigned to a partner, then, implicitly, you are expressing the fact that the partner that owns the price list can act as the supplier of the products on the price list to the partner to whom the price list is assigned.

For example, suppose that Price List 1 is owned by the enterprise and suppose that Product X is on this price list. If Price List 1 is assigned to Partner A, then users of Partner A can buy Product X and the enterprise can supply it. If Price List 2 is owned by the Anderel partner and Product X is also on Price List 2, then if Price List 2 is also assigned to Partner A, then users of Partner A can also select Anderel as the supplying partner of Product X before they place their order.

Product Entitlements

Product entitlements manages users' access to products. See CHAPTER 13, "Product Entitlement" for more information about the tasks associated with product entitlement.

Each product entitlement comprises one or more *product entitlement items*. A product entitlement item is a list of products. If a product entitlement is assigned to a partner, the users belonging to that partner can see the products included in the product entitlement: that is, listed on one or more of the product entitlement items that make up the product entitlement. However, note that you can mark each product entitlement item for *inclusion* or *exclusion*: if a product entitlement item is marked for exclusion, then the products on its list of products are excluded from partners to whom the product entitlement is assigned.

A product entitlement item can be expressed in several different ways:

- as a price list: all products on the price list are on the product entitlement item.

- as a feature: all products assigned the feature are on the product entitlement item.

- by product category: all products in a product category are on the product entitlement item.

Item Precedence

The order in which items are evaluated on a product entitlement is important: a product is included or excluded depending on whether the last item which references it is marked to include or exclude. For example, suppose that a product entitlement PE1 is defined as having two product entitlement items PEI1 (defined as products having feature F) and PEI2 (defined as products in product category PC). Suppose that product P is effectively on both product entitlement items: that is, it belongs to the product category PC and has feature F. If PEI1 is marked for inclusion and PEI2 is marked for exclusion, and if the order of evaluation is PEI1 followed by PEI2, the effect of product entitlement PE1 is to *exclude* product P. So if PE1 is assigned to a partner, the users of that partner will be excluded from seeing product P. Note that if more than one product entitlement is assigned to a partner, you must also consider assignment precedence: see "Assignment Precedence" on

Assignment Precedence

You can assign zero or more product entitlements to a partner. If the same product appears on more than one product entitlement assigned to a partner, it is possible that a product is *included* on one product entitlement and *excluded* on another. This conflict is resolved by ordering the product entitlements so that the last product entitlement evaluated takes precedence.

For example,suppose the following:

- Product A is listed on three product entitlements: PE1, PE2, and PE3.

- Product entitlements PE1, PE2, and PE3 are all assigned to a Partner A.

- The product entitlements are in precedence order 1, 2, and 3, respectively.

- Product A is *included* on PE1 and PE2, and *excluded* on PE3.

The result is that Product A is excluded because the last product entitlement evaluated, PE3, excludes Product A.

Suppliers

Each partner, including the enterprise, can create product entitlements, but only enterprise users can assign product entitlements to partners. If you assign entitlements from different suppliers to partners, then note that these entitlements work independently of each other as follows.

Entitlements are evaluated on a *per* supplier basis: that is, by taking the set of product entitlements owned by each supplier and evaluating them according to the rules described above. If the entitlements for supplier A result in a product P being visible to users of a partner, and if the entitlements for supplier B result in the same product being excluded, then the net result is that the users can see product P. However, the prices that they see will still depend on what price lists have been assigned to their partner.

Inheritance

Product entitlements assigned to a partner can be inherited by a child node of that partner. The Sterling Multi-Channel Selling Solution evaluates inherited product entitlements before the product entitlements assigned directly to the child partner. Product entitlements assigned directly to the child partner can override inclusions or exclusions inherited from product entitlements assigned to the parent partner: the more specifically a product entitlement is assigned, the greater influence it has.

Pricing

The separation of product entitlement from price lists means that there is a possibility that a user will be entitled to see a product, but there will be no price available. For backward compatibility with earlier releases, as well as to ensure consistency, you can run the Sterling Multi-Channel Selling Solution in a mode in which price lists are automatically treated as product entitlements. You do this by setting a business rule as described in "Using Price Lists for Product Entitlement" on page 80.

If you do not run in this mode, ensure that you manage both prices and product entitlements as you add new products to your product catalog, and as new partners are created.

Using Price Lists for Product Entitlement

When the Create Product Entitlement Based on Pricelist business rule is set to "True", whenever a price list is created a corresponding product entitlement is created. When the price list is assigned to a partner, then the corresponding product entitlement is assigned to the partner. In this mode, it should always be true that whenever a user can see a product, they have a price for the product.

Managing Availability Information

You can use the Sterling Multi-Channel Selling Solution to manage availability information regarding your products. This includes:

- Inventory

- Warehouse locations

- Restock dates

- Restock quantities

- Estimated delivery date

This information is used when customers request availability information as they place orders. Your partners can also maintain availability information: see CHAPTER 14, "Managing Availability Information" for more information.

Inventory Availability and Estimated Delivery Date

You can manage how inventory availability information is obtained and estimated delivery date is calculated when users view the product detail page or the shopping cart page, or when they place an order. You do this by setting the Availability Data Access Method system property. To set the system property, navigate from the System Administration panel of the home page to System Services, then the Commerce Manager category, then the General sub-category, and choose one of the following options:

- Static: inventory availability information is obtained from the static database tables, and estimated delivery date is not calculated.

- System Initiated Real-Time: inventory availability information is obtained using a real-time availability check call to the Sterling Multi-Channel Fulfillment Solution (when the supplier is the current storefront) and/or static database tables (when the supplier is not the current storefront), and estimated delivery date is calculated automatically.

- On Demand Real-Time: a Check Availability button is displayed on the Catalog Detail or Commerce page. When the user clicks the button, inventory availability information is obtained using a real-time availability check call to the Sterling Multi-Channel Fulfillment Solution (when the supplier is the current storefront) and/or static database tables (when the supplier is not the current storefront). While estimated delivery date is calculated on the Checkout page if the user clicks the Check Availability button, it is calculated automatically when the user places the order regardless of whether the user clicks the Check Availability button or not.

> **Note:** Inventory availability and estimated delivery date information will be displayed only if the Check Availability system property and the user's Availability preference are set to true.

The inventory availability and estimated delivery date information is displayed according to the value the Availability Text Display is set to in the Preferences tab of the User Detail page.

Note:	Before you choose System Initiated Real-Time or On-Demand Real-Time, you must make sure that the Sterling Multi-Channel Selling Solution is integrated with the Sterling Multi-Channel Fulfillment Solution. For more information about integrating the Sterling Multi-Channel Selling Solution with the Sterling Multi-Channel Fulfillment Solution, see the *Sterling Selling and Fulfillment Solution Integration Guide*.

Displaying the Product Catalog

You can manage how your customers view the catalog as follows:

- "Associating Display Styles with Product Categories" on page 82

- "Customizing the Look-and-Feel of Catalog Pages" on page 82

- "Using the Sterling Visual Modeler" on page 82

Associating Display Styles with Product Categories

You can manage which display style is used when users view product categories. By selecting different styles for different product categories, you can determine how products are displayed as end-users view their categories. Two display styles are provided as out-of-the-box styles: you can customize these styles or add new styles. See "To Change the Display of a Product Category" on page 370.

Customizing the Look-and-Feel of Catalog Pages

When customers point their browsers to your Web site, the pages that they see are rendered from JSP pages. These pages can be customized to reflect the way in which you want the customers to navigate your product catalog. See the *Sterling Multi-Channel Selling Solution Developer Guide* for further information about customizing your implementation of Sterling Multi-Channel Selling Solution.

Using the Sterling Visual Modeler

A configurable product is a product that offers a number of different options from which a customer can select before buying the product. The choice of options or available combinations of options may be constrained by technical or marketing concerns so that customers can only choose certain combinations of options in configuring their purchase.

In the Sterling Multi-Channel Selling Solution, a product is made configurable by marking it as configurable in the product catalog and by associating with it a model that provides the information about options and the possible combinations of options.

- Sterling Visual Modeler is the application used to create models.

- Sterling Configurator is the application used to display configurable products to customers.

Note:	Sterling Mobile Configurator is a Sterling Commerce, Inc. product designed to enable customers to buy configurable products when they do not have Web access to the Sterling Multi-Channel Selling Solution. It provides the ability to configure products using the product models on a standalone PC.

Configurable products enable a customer to start with a basic model, then move through a series of selections, option items, to configure the product to their specific needs. You create configurable products using Sterling Product Manager, but before you can do that, a product modeler must use the Sterling Visual Modeler to create a corresponding model.

Terminology

TABLE 6. Sterling Configurator Terminology

Term	Definition
Ancestor	The entities which precede an entity in a hierarchical chain, back to the root model group. The ancestral chain.
Sterling Configurator	The Sterling Multi-Channel Selling Solution application that enables a company to specify the possible available configurations of their products and enables customers to select the configuration that best meets their needs.
Constraint Table	A means of specifying which selections of option items are compatible with each other. Constraint tables provide a simple way to manage the selections that end-users can make as they configure a product.
List	An object that allows the Sterling Configurator to validate a selected item by virtue of it being part of a list.
Model	A configurable combination of product options. Rules can be added to models to restrict the choice of combinations.
Model Group	In the Model hierarchy, a model group is a collection of models, option class groups, option item groups, or even other model groups.

TABLE 6. **Sterling Configurator Terminology (Continued)**

Term	Definition
Option Class Group	An option class group is a collection of option classes or nested option class groups that represent entities that can be reused without change in any number of models and option classes. See "Groups and Sub-Models" on page 87 for more information.
Option Item Group	An option item group is a collection of option items that can be reused in any number of option classes or option class groups in any number of models.
Option Class	An option class is a collection of option items, option class groups, option item groups, or other option classes that have a common purpose.
	An option class is a configurable part of a model. For example, an engine is a configurable part of a car. The option items in the engine option class are 4-cylinder, 6-cylinder, and 8-cylinder.
Option Item	An option item is a member of an option class or an option item group and is an orderable part or service for a model. Typically, an option item is associated with properties.
Property	A property is a descriptive element used as the basic entity for rule creations. Properties are associated with models, option classes and option items.
	A quantity or attribute of an item that indicates interdependencies (for example, a property could be "uses 5 MB of memory" or "provides 5 expansion slots").
Rule	A constraint that is attached to some part of a model hierarchy to enforce a technical requirement or business rule.
Sub-Model	A model that is used as part of another model.
Sterling Visual Modeler	The data modeling tool used to create and maintain models.

Model Group Hierarchy

A model, with its option classes, option items, option class groups, and option item groups, represents all of the possible valid configurations for a single saleable product. Every model created in the Sterling Visual Modeler belongs to a model group.

A model group is a way of grouping similar model groups, models, option class groups, and option item groups. At the top-level of the model group hierarchy is the root model group. Each model group belongs to a parent model group, except for

the top-level, root model group which has no parent. Figure 8 on page 85 shows an example of the model group hierarchy.

```
Root Model Group
    ├── Model Group 1
    └── Model Group 2
            └── Model Group 2.1
                    ├── Model 2.1.1
                    ├── Model 2.1.2
                    ├── Option Class Group 2.1.3
                    └── Option Item Group 2.1.4
            ├── Option Class Group 3
            ├── Option Item Group 4
            └── Model 5
```
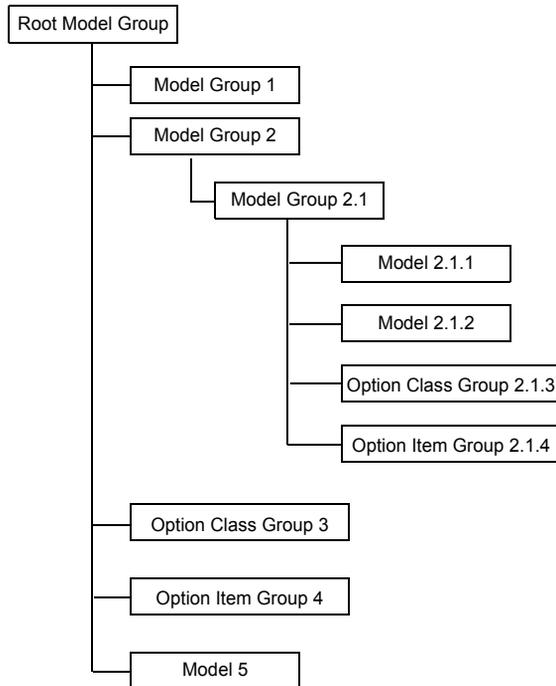
FIGURE 8. Model Group Hierarchy

Associating a Product with a Model, an Option Class, or Option Item

Using the Sterling Visual Modeler, you can select a product, created with Sterling Product Manager, and associate it with a model, an option class, or option item. You do this to associate the entity with the price determined for the product using the price lists created with Sterling Pricing. As the end-user configures the product, Sterling Configurator uses either the price of the product associated with the model or the accumulated prices of the products associated with the option classes or option items.

You might have an option item that represents a saleable product. For example, you might have an option class that represents a selection of graphics cards. Each option item represents a different graphics card. When you modify each option item (in

this case, each graphics card), you can associate each graphics card with a product. In this way, you can associate a price with each graphics card (through the price lists created with Sterling Pricing).

Note that if you do associate a product with an option item, then end-users will see this option item only if the associated product is on one of the price lists assigned to their partner.

See "Setting Prices for Products" on page 22 for information about pricing. For information on associating a product with a model, see "To Associate a Product with a Model, Option Class, or Option Item" on page 517.

How the Sterling Visual Modeler Works

Properties define the characteristics of models, option classes, and option items. Rules are defined using properties to constrain customer selections and determine whether or not a configuration is valid. The Sterling Configurator uses the model to guide customers choices so that they can configure a Build-to-Order (BTO) product. When an end-user chooses an option item, a rule can be subsequently triggered by a property attached to that option item.

For example, a Mountain Bike model may consist of the following option classes: frame, forks, and wheels. Weight is a property defined for the model and attached to every option item in the model. Each item in each Mountain Bike option class is assigned a weight property value; that is, each frame has a weight, each fork has a weight, and each wheel has a weight. After the customer makes choices about a frame, fork, and a wheel, the sum of all the individual weights total the entire weight of the bike.

By defining a weight rule the modeler can specify that the entire weight of the Mountain Bike should not be over 15 kilograms. The modeler can also specify in the rule a message that will be displayed to the customer if the weight is exceeded.

Therefore, in Sterling Configurator, when a customer chooses an option item such as a frame, fork, or wheel, the Sterling Configurator uses the rule to determine the total weight value by adding the weights of all chosen option items associated with the weight property. If the total weight of all the option item(s) is over 15 kilograms, then the customer is presented with a message stating the recommended weight is exceeded and the customer should choose another option item in one or more of the option classes.

Creating a Tab-Based User Interface

You can arrange your end-user interface in the form of a series of tabs. First you enable a tab-based UI by selecting the Tab-based UI display template when you set

the display properties for the model. Once you have enabled the tab-based UI, you create the top-level option classes or option class groups that make up your model. Next you access the **Tabs** tab within your selected model and create the tabs. As you create the tabs, you populate them with the one or more of the top-level option classes or option class groups that you have created.

Note:	By top-level is meant those option classes or option class groups at the top of the model group hierarchy, directly below the model.

An option class can be attached to zero or more tabs. See "Working with a Tabbed User Interface" on page 554 for step-by-step instructions on creating a tabbed user interface.

Option Classes and Option Items

An option class is a configurable part of a model consisting of option items and nested option classes that have a common purpose.

An option item is a member of an option class. The option item can either be an orderable part or an intermediate selection in the process of determining an orderable part. Typically, properties are associated with option items.

For example, if a car is a configurable product, then an engine is a configurable part of the car. Thus, you could create a model called "car", and "engine" would be an option class in the model. The option items in the engine option class are 4-cylinder, 6-cylinder, and 8-cylinder.

Groups and Sub-Models

A option class group or an option item group enables you to reuse option classes and option items in more than one place in a model group without having to recreate the same items over and over again as you need them. You can create a single group (created at the model group level), add option classes (with their option items) to the group and then "attach" the group, as needed in the required locations. For example, several models might have the same support choices (the same warranty selections, the same hardware support choices). Rather than create these new for each model as two option classes, the same two option classes, you could create these option classes once as part of an option class group, then attach the group to each model that requires these option classes.

If the elements of a group (option classes, option items) need new properties attached to them, or if the elements need existing properties modified, then you need only modify the group in the place where you originally created it. The modifications will be reflected in the group throughout its "attached" locations.

Figure 9 on page 88 shows different examples of groups. As illustrated in that example, you can also nest groups within other groups.
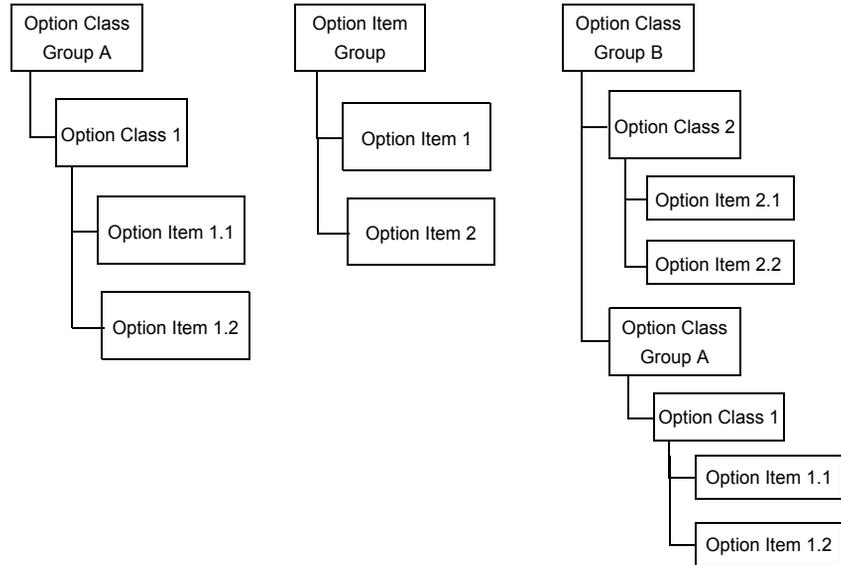
FIGURE 9. Option Class Groups and Option Item Groups

A model can be used both as stand-alone and as part of another model. When used as part of another model, the model is referred to as a sub-model.

The following table shows which groups can be attached to which elements in the Sterling Multi-Channel Selling Solution.

TABLE 7. Attaching Groups

Groups To Be Attached	Attach to Model?	Attach to Option Class Group?	Attach to Option Class?
Models	No	Yes	Yes
Option Class Groups	Yes	Yes	Yes
Option Item Groups	No	No	Yes

Properties

A property is a characteristic that in some way describes a model, option class, or option item.

When you define a property, you can define it either as a part of a model group or as part of a specific model. In the case of a property defined for a model group, the property is then available to be attached to any model, option class, or option item in the hierarchy beneath the model group for which it was created. In the case of a property defined for a model, the property is available exclusively to the model itself, as well as option classes and option items within the model hierarchy.

TABLE 8. Defining and Attaching Properties

	Model Group	Model	Option Class	Option Item	Option Class Group	Option Item Group
Define	Yes	Yes	No	No	No	No
Attach	No	No	Yes	Yes	No	No

For example, in Figure 10 on page 90, property X is defined in Model Group A and property Y is defined in Model A1. Property X can be attached to Model A1 and Model A2, as well as any models in Model Group B, such as Model B1. However, the property cannot be attached to Model C which is not a child of Model Group A. Property Y is defined in Model A1 and therefore cannot be attached to either Models B1, A2, or C.
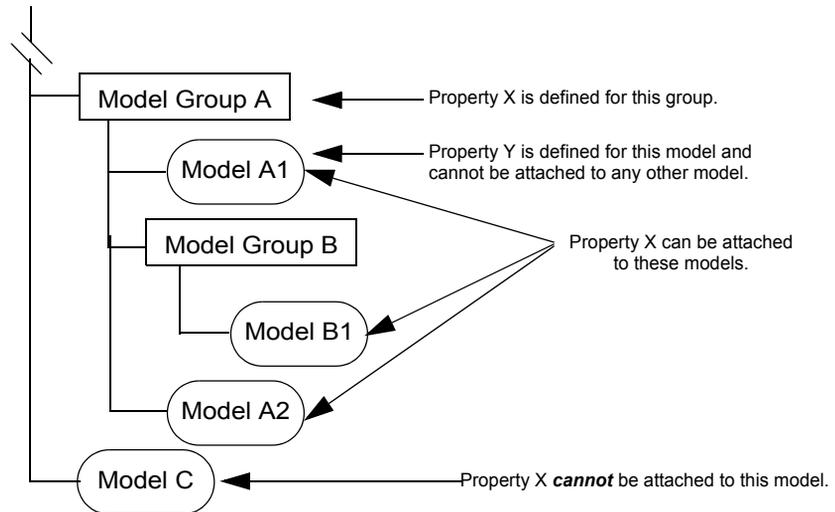
FIGURE 10. Property Attachment in the Model Group Hierarchy

Note:	The catalog of properties that you build up using the Sterling Visual Modeler can become extensive very quickly, so before defining a new property, take care to check that there is not an existing property that will suit your needs.

When you define a property, the name you give it should be descriptive of the property being represented. The property name must be unique within the model group.

Using Properties

As a modeler, you determine the value of a property when the property is attached. When you create a property, you can also define a default value for that property. Then, when you assign that property to a model, option class, or option item, the property has the default value unless you choose to override it. For example, you can assign the value of 8 when assigning the weight property to one of the bike forks but assign the value of 10 when assigning the weight property to a different bike fork.

Note:	You *must* set up properties for each option class and option item that is included in a validity check *and* triggers an option item expansion.

In another example, a model for a configurable computer requires a different amount of RAM for different types of software. Thus, this model needs to have a property called "memory_required". When you attach this property to different

software option items in the model, you determine the value of RAM memory required for the individual software. At the same time, RAM itself is an option class, and the amounts of RAM that the customer can order are the option items in that class. Therefore, there needs to be a corollary property called "memory_ordered". You may set a value for this property or it may be a calculated value triggered by a rule based on a quantity input by the customer.

Naming Properties

Take care to name properties so that you avoid confusing properties that should be kept distinct. For example, if you use Weight as a property name, then there may be situations in which you need to distinguish between the weight of items from two different option classes.

Attaching Properties to Option Items

The option item to which a property is attached may be any component of an orderable item that has the characteristic represented by the property. For example, as a modeler, you can attach the weight property to a frame since the frame has a specific, defined weight. The property value must be consistent with the property type entered when the property was defined. In other words, you cannot assign a value of "blue" to a property with the type Number. The property must be of type String in order to assign the value "blue". Depending on the property type, the value may represent either the quantity of the property represented (*numeric*), a specific instance of the property (*character*), or a *list* of many instances of the property.

Display Properties

As a modeler, you use display properties to control the model elements on the HTML page displayed to the customer by the Configurator Engine. See "Working with Display Properties" on page 644.

Lists

You use a list to enter and maintain lists of property values for a specific property. It is possible to define multiple choices by using a list. By comparison, number and string property types define a single value.

You use lists in the Sterling Configurator when you have a property with multiple values. For example, a modeler can use a list property type for a property called *days of the month*. The values in this property list are 1, 2, 3, and so on, with the last value 31. For this particular property, the list is the appropriate property type.

Note:	The list name should be descriptive of the items contained in the list, and the property list value is a specific value in the list.

You can also use lists to define the selection of option items during product configuration. You do this by creating a list of items and then creating a rule stating that an item is either valid or invalid with the items on the list.

For example, we have three bike models: Mountain Bike, Racing Bike, and Dirt Bike.

1. Create three lists, one for each bike (Table 9).

TABLE 9. Lists for Different Bike Models

Bike model	List property	List values
Mountain Bike	MtnBikeWheelsAllowed	Mavic mountain wheels
		Shimano mountain wheels
Racing Bike	RacingBikeWheelsAllowed	Mavic racing wheels
		Shimano racing wheels
Dirt Bike	DirtBikeWheelsAllowed	Mavic dirt wheels
		Shimano dirt wheels

2. Create a property of type list called "WheelsAllowed".

3. Attach the WheelsAllowed property to each bike model.

   a. Attach the WheelsAllowed property to the Mountain Bike model with the value "MtnBikeWheelsAllowed".

   b. Repeat step a for the Racing Bike and Dirt Bike models using the values in Table 9.

4. Create a property of type character called "WheelsOrdered".

5. Create a rule with the following condition.

TABLE 10. Entries to Define Wheels Rule

Field	Value
Function	Value
Property	WheelsOrdered
Operator	in
Function	list
Property	WheelsAllowed
If not specified	Ignore

6. Attach this rule to the Mountain Bike, Racing Bike, and Dirt Bike models.

The same rule is attached to three different models, but the value of the WheelsAllowed property is specific for each model. That is, for the Mountain Bike model, the MtnBikeWheelsAllowed list is used, whereas for the Racing Bike model, the RacingBikeWheelsAllowed list is used. Similarly, the DirtBikeWheelsAllowed list is used for the Dirt Bike model.

Rules in Sterling Visual Modeler

Rules are essential to the Sterling Visual Modeler. They determine which instances of a model are valid. By defining and attaching rules to appropriate places in the model hierarchy, you ensure that customers may select only combinations of options items that are compatible or suitable. In doing so, you ensure that customers are offered the best shopping experience possible.

Each time a model is validated (for example, each time a user make a pick of an option item), the rules are fired. Some rules may evaluate to false: these are said to fail, whereas if a rule evaluates to true, then it is said to succeed.

A rule consists of one or more fragments and an action. The action can consist of either message actions (messages that will be displayed), an expansion action (items that will be added), or an assignment action (properties that will be assigned).

Rules enable the Configurator Engine to guide a customer through the configuration experience by offering additional explanations and checking the selected options to ensure a correctly built product. The rule can also check when certain conditions will provide expansion, that is, provide a customer with additional option items in the configured solution.

Rules can be simple: a particular option item must not weigh more than 100 grams. Rules can be complex: one option item must not weight more than 100 grams OR another option item must not weigh more than 50 grams AND the material must be steel.

Rules result in some kind of action being performed. A rule can check to see if some condition prevails and then display a message action as a result. An example of this would be a check on the total weight of a bike resulting in a warning message that the bike is over a weight limit.

Rules can result in expansion actions. Based on a rule, additional selections can be provided for a customer. For example, a rule can decide if additional memory is needed and how much.

Rules can result in assignment actions. Based on the calculations in a rule, a value can be assigned to a designated property.

You can choose to design rules that display messages when a model instance fails to satisfy a rule or when a model instance satisfies the rule. You can also adjust the severity of the message.

Defining and Attaching Rules

You define rules at the model group level or the model level depending on how the rules will be used. For example, if you want to attach the rule to any element in the model group hierarchy, then you define the rule at the root model group level. If you want to limit the use of a rule only to elements within a certain model group (or to elements in sub-groups within that group), then you define the rule only at that model group level. Likewise, if you want a rule for localized use by the elements in a particular model, then you define the rule at the particular model level.

TABLE 11. Defining and Attaching Rules

	Model Group	Model	Option Class	Option Item	Option Class Group	Option Item Group
Define	Yes	Yes	No	No	No	No
Attach	No	Yes	Yes	Yes	No	No

Attaching Rules

Once you have defined a rule, you attach the rule to some level in the model (or group) structure. Where you attach the rule in the structure determines when the rule is fired (see "Rule Firing" on page 101). By attaching a rule to a model, you ensure that the rule is processed to validate the model. A rule may be attached to any number of models (including sub-models). You can also attach rules at the option class and option item level, if the rule is specific to that level.

The point at which you attach a rule determines where messages will be displayed to end-users as they configure the product, and it determines when, in the order of rule-firing, the rule is fired.

Rule Fragments

A rule fragment is a component of a rule and comprises a function and property joined by an operator to another function and property (or sometimes a literal

value). The function determines a value for a property. Table 12 on page 95 lists the functions supported by the Sterling Visual Modeler.

Note:	The functions listed here are the standard functions. The list of functions can be customized for your installation. See the *Sterling Multi-Channel Selling Solution Developer Guide*.

TABLE 12. **Function Definitions**

Function	Definition
checkwslookup	Checks that the correct properties exist to invoke a Web service.
childsum	Sum of the specified property values defined at this node and any of the node's children (and recursively down to children of child nodes and so on).
count	Counts the number of objects (selected option items, models, or groups) having the specified property.
isselected	Returns true if the option item is selected; otherwise returns false.
length	Returns the length of a string property.
list	Used with the operators "in" and "not in" to check if a property value is included or not included in a specified list of values.
literal	Exact match of the literal value.
lookup	Used to look up values specified by name from a properties file: the **lookupValues.properties** configuration file. A string property containing the key is used to find the entry in the property file. This entry defines the properties for this key and the values that each of these properties should be set to when the function is invoked. For example: suppose the following is defined in the properties file: Color=blue,green,red Color.blue=#0000FF Color.green=#00FF00 Color.red=#FF0000 Then if the lookup(Color) function is invoked, the corresponding properties blue, green, and red will be attached at the appropriate node.
max	Returns the maximum property value from all selected items having the specified property.

TABLE 12. Function Definitions (Continued)

Function	Definition
min	Returns the minimum property value from all selected items having the specified property.
parent	This function walks up the tree from the current location to see if the property has been defined anywhere at or above the current location. For example, if the rule is attached at an option item level, then the property will be looked for on the option item itself. If it is not defined there, then the option class to which the option item belongs will be looked at to see if the property is defined there.
parentlength	
path	
propval	Returns the value of a property even if the option item has not been selected.
rawpath	
sum	Sum of the property values from all selected items having the specified property.
value	Uses the property value for comparison. If multiple items exist on the order with the given property, then the maximum value is used.
wslookup	Invokes a specified Web service by calling its handler class. use this in conjunction with the checkwslookup function.

Operators tie rule fragments together and define the fragments' relationship within the rule. Table 13 on page 96 lists the operators supported by the Sterling Visual Modeler.

TABLE 13. Operators

Operator	Description
!=	Not equal to
<	Less than
<=	Less than or equal to
=	Equal to
>	Greater than
>=	Greater than or equal to
in	In the specified list

TABLE 13. **Operators**

Operator	Description
not in	Not in the specified list
contains	The specified list contains a specified value or result

For example, the rule "value(wheels selected) >= max (wheels required)" means: "the number of wheels selected in the configuration must be greater than or equal to the maximum number of wheels required by the configuration; otherwise this rule fails".

Single Fragments, Multiple Fragments, and Nested Fragments

A single fragment can consist of either of the following:

• Two properties and their functions combined with an operator.

• A property, its function, an operator and a literal value.

For example, a rule that has a single fragment might read: Quantity of wheels ordered = Quantity of wheels required. In this example, Quantity of wheels ordered is the first half of the fragment with the property, wheels ordered, and the function, count (quantity). The second half of the fragment, Quantity of wheels required, has the property, wheels required, and the function is also count (quantity). The operator is equals ("=").

Single fragments can be linked together to form *multiple fragments* using Boolean operators, AND, OR, ANDNOT, ORNOT.

For example, we can use the preceding single fragment and add another single fragment to form a rule with multiple fragments (multiple lines in the Sterling Visual Modeler):

Quantity of wheels ordered = Quantity of wheels required

AND

Type of front wheels = Type of rear wheels

You can build complex rules such as:

(FragmentA AND (FragmentB OR FragmentC))

See "Fragments" on page 600 for examples of simple levels of fragments and nested levels of fragments.

If Not Specified

A property can have an unspecified value. If a property is not assigned to an object which is part of the current configuration (a valid option item is not selected), then the value for that property is defined as "not specified".

When creating a rule, you can select from four results for a fragment when the property is not specified:

- Rule is true: The entire rule and all its fragments evaluates to true.

- Rule is false: The entire rule and all its fragments evaluates to false.

- Fragment is true: Treat the fragment result as a success, and move on to evaluate the next fragment.

- Fragment is false: Treat the fragment result as a failure.

Triggering the Rule: Success or Failure

When you create a rule, you can specify whether action results if the rule succeeds or fails. For example, you can specify that the rule will be triggered on "failure". In this case, if the rule evaluates to "true", then nothing is done. No message is displayed; if the rule involves expansion, no expansion occurs.

Rules and Messages

Messages are used to help guide a user toward correct configuration choices. The rule message text may be up to 2000 characters in length.

For each message action, you can specify one of three types of messages.

TABLE 14. **Types of Rule Messages**

Message Type	Definition
Suggest	Suggest messages create a message for the user indicating that a rule has failed or passed. These types of messages provide details about the suggestion (for example; "You may want to add more memory"). The configuration can continue.
Warn	Warn messages are similar to Suggest messages. The configuration can continue.
Error	Error messages prevent further configuration until the error has been cleared.

Expansion

Expansion means that, based on a rule formula, additional items are added to the model configuration. The result of a rule formula is the starting point to determine which option item(s) is expanded and included in the product configuration.

Note:	Properties can be used to create rules that will calculate, based on a user choice, the correct parts to expand on a model with additional option items.

The modeler can use rule formulas to create rules that calculate or determine the result of a rule. In general, rule formulas are based on values associated with properties. For example, a modeler can use a rule formula to compare the property quantity ordered by a customer with the quantity required for the model. The rule formula calculates the difference, if there is one, and can automatically expand the model to include the option items that are needed to match the required quantity.

Numerical rule formulas must be valid mathematical expressions. A rule formula combines mathematical notation with Sterling Multi-Channel Selling Solution functions, operators, properties, and literal values to produce a value that is then measured against a minimum and maximum value to determine what and how much should be expanded. (Ranges are used only if a rule formula has been entered.)

FIGURE 11. Memory Requirements Rule

The following example illustrates a business situation where creating an expansion rule formula is useful. A customer orders a workstation. The first fragment of the rule references a property called MX75_Mem_Auto_Select and is set to YES. The second fragment references two properties: MX75_Mem_Ordered and MX75_Mem_Required. If the MX75_Mem_Auto_Select is set to YES, and if the customer orders less memory (MX75_Mem_Ordered) than required (MX75_Mem_Required), then the rule formula result is used to expand the configuration to include the right amount of necessary memory. The customer is prevented from ordering an invalid workstation.

In this rule, a rule formula would be written as in Figure 11 on page 100. If the customer orders 64 MB of memory and the memory required is 128 MB, then the rule formula returns a result of 64. This result is evaluated against the min/max

ranges for results and finds that 64 falls within the range of a minimum of 64 and a maximum of 128. According to the table, when this happens, a quantity of 128MB of memory is selected (expanded).

Assignment

Another type of action that can result from a rule is Assignment. In this case, the Modeler can define a rule that results in a value (based on the rule formula) being assigned to a property designated by the modeler.

Rule Firing

The Sterling Configurator processes rules by a two step process. Within each level in a model hierarchy, it processes rules according to the order defined by the modeler when rules are attached to that level. See "To Modify a Rule" on page 588 for the steps to sequencing rules.

Within the model hierarchy itself, Sterling Configurator follows a process called "depth first traversal". At any node in the structure, Sterling Configurator traverses down through that node's children to the lowest level, then traverses back, firing rules as it goes.
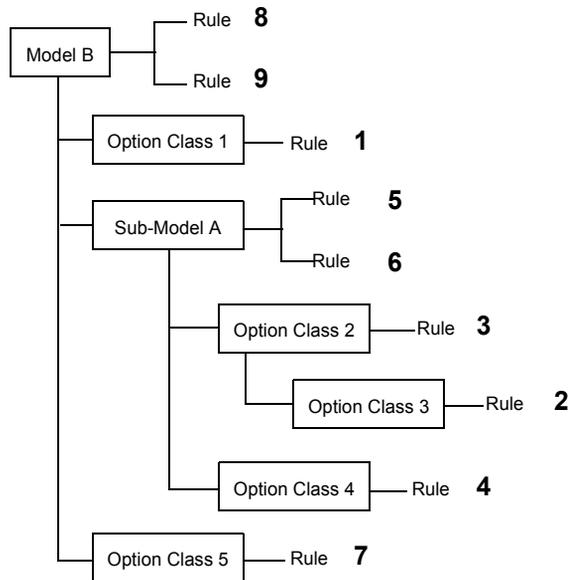
FIGURE 12. Rule Firing

For example, in Figure 12 on page 101, Sterling Configurator starts at the top and checks for any children, then traverses down to the first node. At this first node (Option Class 1), Sterling Configurator checks for children. Since none are found, Sterling Configurator fires any rules attached to this option class, in this case only one (**1**).

Sterling Configurator proceeds to the next node (Submodel A) and finds two children (Option Class 2 and Option Class 4). Option Class 2 has a child (Option Class 3) so Sterling Configurator traverses to that node. Since Option Class 3 has no children, Sterling Configurator fires the rules attached to Option Class 3 **(2)**, then traverses back up the structure to the parent, Option Class 2, and fires the rule (**3**) attached at that node.

Sterling Configurator traverses to the next child of SubModel A, Option Class 4. Finding no children there, the rule attached to Option Class 4 (**4**) is fired. At this point, Sterling Configurator traverses to the parent, Submodel A, and fires the rules attached to that level (**5** and **6**).

Now, Sterling Configurator moves to the next node (Option Class 5) and, finding no children, fires the rule attached to Option Class 5 (**7**). Having fired all the rules attached to the children, Sterling Configurator now traverses back to the parent (Model B) and fires the rules attached to the parent (**8** and **9**).

Managing Option Constraints

When customers select certain option items, you might want to prohibit them from making other selections. For example, a car dealer might want to constrain certain interior colors of a car from being sold with certain exterior colors. Likewise, combinations of option items might constrain the selection of other option items. For example, if Option A and Option B are selected, then Option C is not a valid choice.

You can create these constraints by creating a constraint table for a particular model. The constraint table consists of two or more columns each of which represents an option class containing choices (option items) which may or may not be valid with the choices in the other columns. The constraints are defined by one or more constraint rows in the table. When you create the table, you can include a message (error, warning, or suggestion) that is displayed.

FIGURE 13. Option Constraints

The above figure shows a set of option constraints for the car example. When translated into a model for the customer, this table means that the customer's choices for Exterior Color and Interior Color must match a set of choices in one of the constraint rows: for example, Black and Silver, or Red and Green are valid choices, but not Black and Green.

You can also define a constraint row so that the choices for one column are not valid with the other columns. In this case, you want to constrain the customer's choices from matching any combination of items in an invalid row.

See "Option Constraints" on page 622 for more information about constraint tables.

Testing and Compiling the Model

As you create your model, you can test the model as you go along. Once you have created the model, you can easily click a button to compile the model into an XML file.

Copying and Embedding

You can copy or embed entities in the model group hierarchy. To copy an entity (model group, model, and so on) means to make a duplicate of a single entity (in the case of an option item) or of an entity and its structure (in the case of a model group, model, or option class group or option item group) within another location in the hierarchy. To embed an entity is to make a duplicate of the structure of an entity. For example, to embed a model is to take the model's structure and duplicate that

structure (option classes, groups, and so on) within a destination in the model group hierarchy. Copying or embedding is performed at different location in the Sterling Visual Modeler interface. See the individual tasks related to copying or embedding in CHAPTER 16, "Using the Visual Modeler" for more information.

When you are copying or embedding, attached properties follow certain rules:

- If properties attached to the item being copied or embedded are not defined anywhere among the ancestors of the destination, then the property is defined locally.

- Where there is a conflict between a property attached to an item being copied or embedded and a property attached to the destination, the property attached to the item being copied or embedded is dropped.

  Figure 14 on page 105 shows a model group hierarchy before and after embedding. In this example, you are embedding Option Class Group 1 (OCG1) under Model 1 (MOD1). In OCG1, Property P1 (defined in Model Group 1 as INT) is attached to Option Class 1 (OC1). After embedding, a conflict will exist since, In MOD1, Option Class 3 (OC3) also has a Property P1 (defined in MG2.1 as STRING). Sterling Visual Modeler resolves the conflict by dropping the P1 attachment to the newly embedded OC1.

P1 defined as INT

Root Model Group

P1 defined as STRING

Root Model Group

MG1   MG2   MG1   MG2

MG1.1   MG2.1   MG1.1   MG2.1

OCG1   MOD1   OCG1   MOD1

OC1   OC3   OC1   OC3

P1 attached

OI 1.1   P1 attached   OI 1.1   OC1

OC2   OC2   OI 1.1

Property Attachment P1 of type INT will be dropped

OC2

Before   After
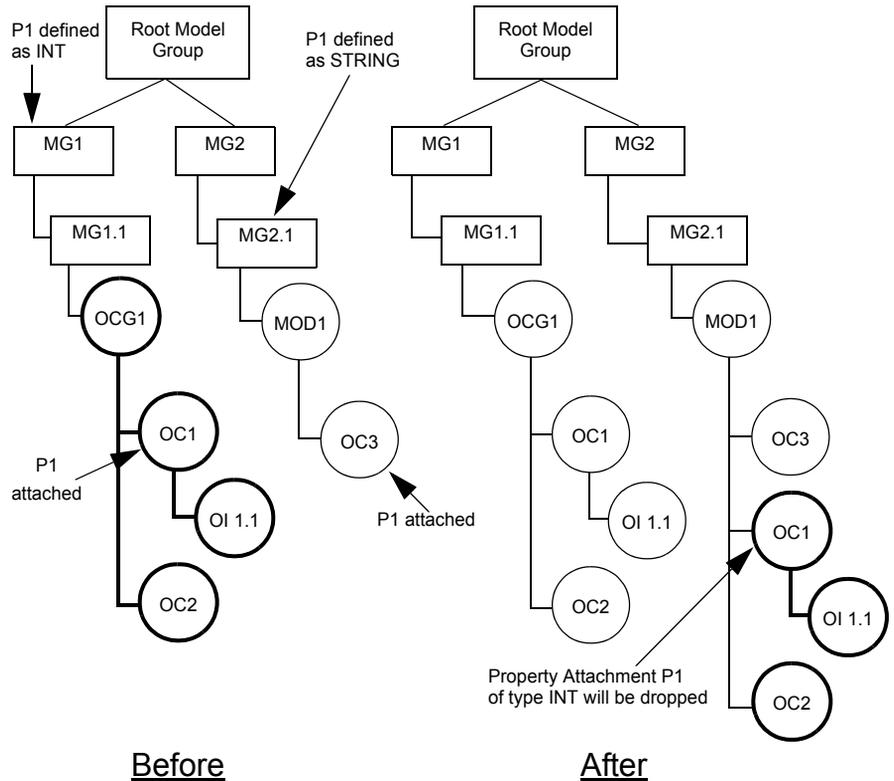
FIGURE 14. Property Conflict During Embedding

Importing and Exporting

You can import or export model groups or models in the form of **XML** files. When you import, you can choose to import a model group or model to a specific destination or you can import the model group or model with its structure relative to its original root model group. This means that, rather than choosing a destination model group, the model group or model will be placed relative to the destination root model group in the same position relative to its original root model group without compromising the integrity of the destination (existing paths, and so on).

For example, in Figure 15 on page 106, Model **MOD1** (located in Model Group **MG2.1** which is located in **MG2**) is being imported into **MG2** on the right. It is being imported relative to the root model group. In the destination hierarchy, there

is indeed a Model Group **MG2**. However, there is no Model Group **MG2.1** within the destination **MG2**. During import, the process will recreate the original structure relative to the root by creating a new Model Group, **MG2.1**, in the destination. This is correct since it will not compromise any models already existing under **MG2**.
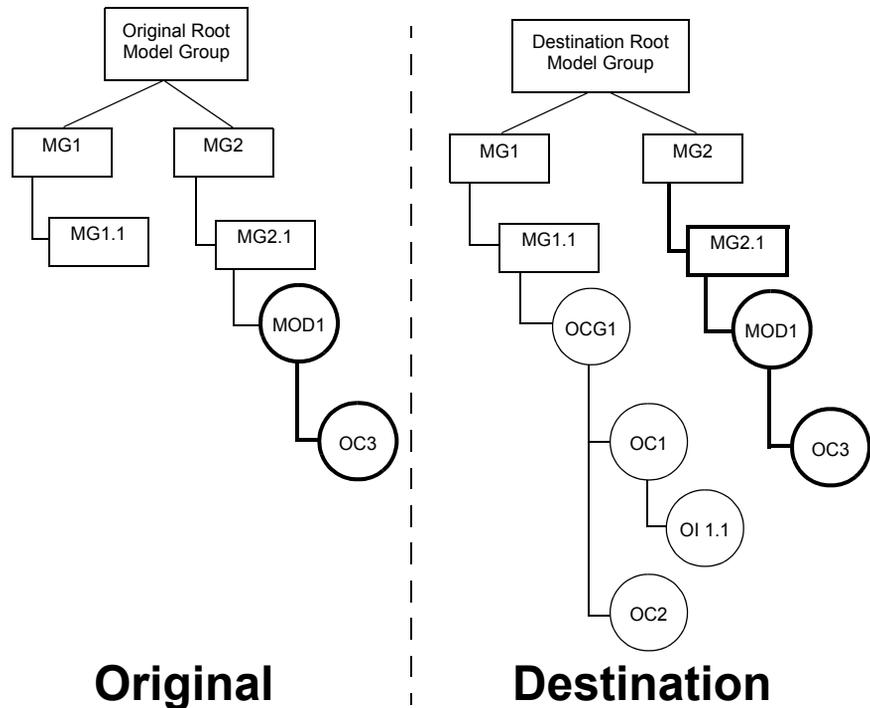
FIGURE 15. Importing Relative to the Root Model Group I

In Figure 16 on page 107, Model **MOD1** (located in Model Group **MG2.1** which is located in **MG2**) is being imported into **MG2** on the right. It is being imported relative to its original root under **MG2.1**. In the destination hierarchy, there is indeed a Model Group **MG2**. However, there is no Model Group **MG1A**. To create **MG1A** above the existing **MG2** would compromise the integrity of any entities within **MG2**. In this case, therefore, the process satisfies the import requirements by creating a new branch: **MG1A**, **MG2**, **MG2.1**, and the imported **MOD1** with **OC3**.
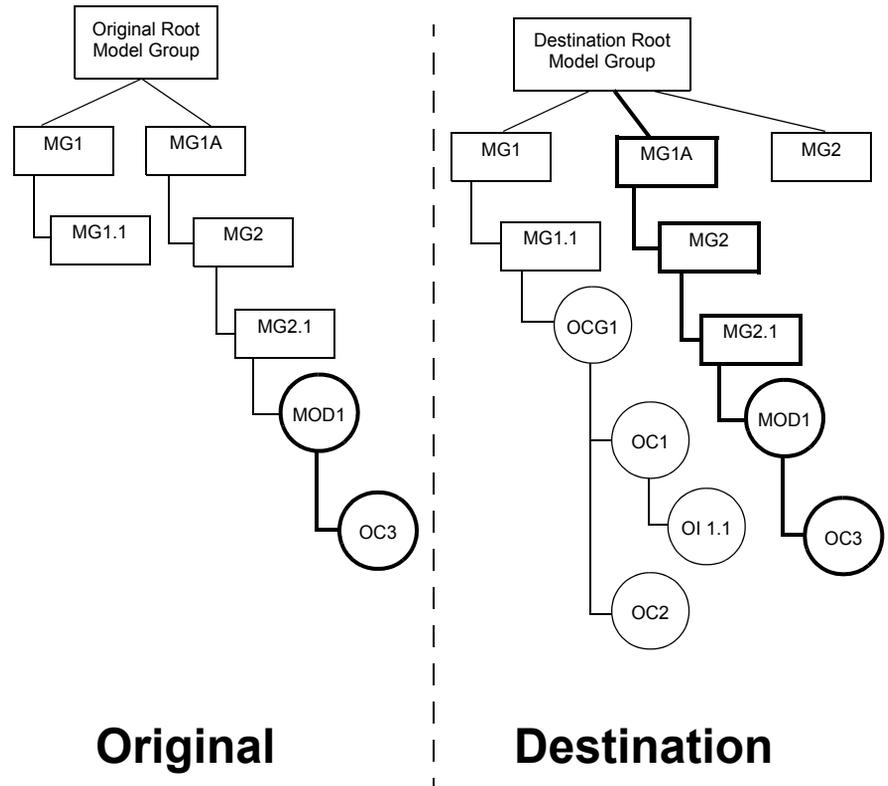
FIGURE 16. Importing Relative to the Root Model Group II

Properties, Rules, Lists, Option Groups, and Sub-Models

When you import entities, the process handles properties, rules, lists, and option groups differently, depending on whether you are importing a structure as relative to its original root, or whether you are importing to a specific location without regard to its original root.

When you import a structure relative to its original root, the process handles these items in the following manner:

- Properties, Rules, and Lists

  The process examines the ancestral chain of the destination for the definitions of the entities. If they are found, then you are prompted as to whether you want to overwrite or not overwrite the entities with the

definitions of the attached entities. The entities need not be defined in the same location as in the imported structure. If the definitions are not found in the destination, then the process creates them in the same location in the destination as in the original.

- Option Class Groups, Option Item Groups, and Sub-Models

  At the destination, the process examines the path in the destination:

  - If the path in the original exists in the destination, and if a definition of the item already exists at the same location as in the original, then you are prompted to either overwrite or not overwrite the definition.

  - If the path in the original exists in the destination, but if a definition of the item does not exist at the same location as in the original, then the item is created at the same location in the path.

  - If the same path does not exist, then the path is created and the item is created at the same location in the path.

When you import a structure to a specific destination, the process handles properties, rules, lists, and groups in the following manner:

- Properties, Rules, and Lists

  The process examines the ancestral chain of the destination for the definitions of the entities. If the definitions are found, then you are prompted as to whether you want to overwrite or not overwrite the entities with the definitions of the attached entities. The entities need not be defined in the same locations in the destination as in the imported structure. If the definitions are not found in the destination, and if the structure does exist, then the entity is created at the same location in the structure as in the original. If the location does not exist, then the entity is created as part of the immediate parent to the structure being imported.

- Option Class Groups, Option Item Groups, and Sub-Models

  At the destination, the process examines the path in the destination:

  - If the path in the original exists in the destination, and if a definition of the item already exists at the same location as in the original, then you are prompted to either overwrite or not overwrite the definition.

  - If the path in the original exists in the destination, but if a definition of the item does not exist at the same location as in the original, then the item is created at the same location in the path.

- If the same path does not exist, then the location is created and the item is created at the same location in the path. For example, in Figure 17 on page 109, **MOD1** is being imported into **MG2**. **MOD1** has an option class group attached which is defined at **MG2.1**. **MG2.1** does not exist under **MG2**. Therefore **MG2.1** is created under **MG2**, the option class group is created at **MG2.1** and the **MOD1** is imported under **MG2**.

Original | **Destination**
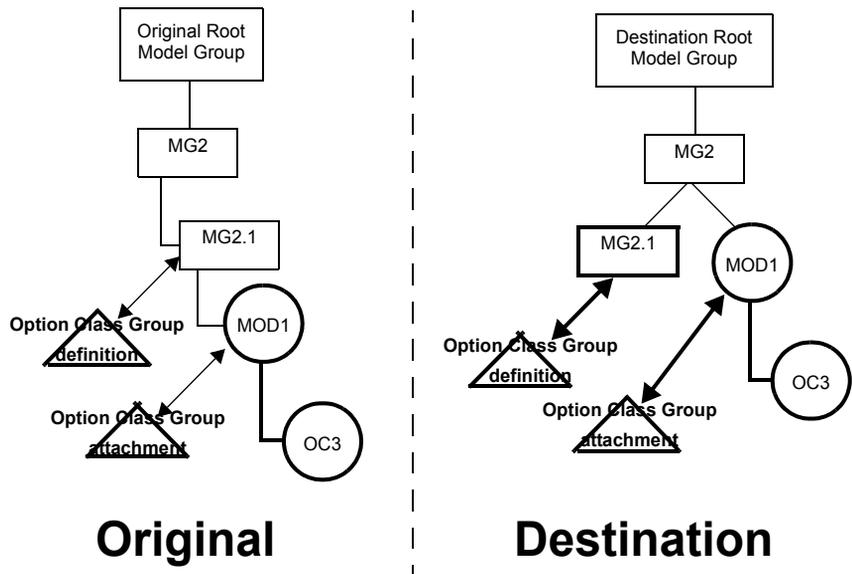
FIGURE 17. Importing to a Specific Location - Groups and Sub-Models

Searching

You can search the model hierarchy for entities that contain property names or property values that you specify as parameters for the search. You can use the entire hierarchy for your search, or you can limit your search to model groups, models, option classes, option items, or rules. You can also limit your search to the currently selected model group, model, option class group, or option item group. See "Searching" on page 636 for more information.

Reporting

You can run a report on any of the models created with the Sterling Visual Modeler. You define the criteria that the report will include:

- Definitions: rule, list, and property

- Model hierarchy: display settings, attached properties, attached rules, whether groups will be expanded, whether complete paths will be shown

- Constraint tables

Administration Interface

This chapter provides a guide to using the Web UI to administer the Sterling Multi-Channel Selling Solution. See CHAPTER 5, "Administration Interface in Sterling Advisor" for a description of the Sterling Advisor administrative interface.

This chapter covers the following topics:

- "Accessing the Administration Interface" on page 111

- "General Navigation Tips" on page 112

- "Search Capabilities" on page 115

Accessing the Administration Interface

To begin an administration session, you access the Sterling Multi-Channel Selling Solution enterprise home page by pointing your browser to the home page URL. The URL is provided by your system administrator and has the following form:

```
http://<server>:<port>/en/US/Sterling/enterpriseMgr/matrix
```

You login with a username and password provided by your system administrator.

Once you have accessed the Sterling Multi-Channel Selling Solution home page, the home page displays links to the various modules as shown below. The modules that appear depend on the entitlement functions assigned to you. See "Managing the Sales Channel" on page 2 for an overview of entitlement functions.

FIGURE 18. Sterling Multi-Channel Selling Solution Home Page

General Navigation Tips

The Sterling Multi-Channel Selling Solution user interface is designed to be simple and intuitive. In general, pages served up by the Sterling Multi-Channel Selling Solution have the same basic structure:

• an upper navigation bar

• a content panel which is either a list or a detail page

The following figure shows a sample page.

FIGURE 19. Pricing Administration List Page

Navigation Bar

The navigation bar has general navigation links, as shown in the following figure..
On the right, buttons enable you to access the online help and to log out.

FIGURE 20. Navigation Links

The **About** link is used to ascertain the Release version of the Sterling Multi-
Channel Selling Solution.

FIGURE 21. About Link

Content Panel

The content panel displays the primary information to assist you in your task. It is used to display a list of search results (as shown in Figure 19 on page 113), the details of a partner profile, shopping carts, and so on. List pages sometime contain check boxes next to each line that enable you to select one or more items for applying one of the actions you can perform on the items. You can click the Select All check box at the top of the column to select all the items on the current page. (Note that this does not select items on any page other than the current page.)

Some applications use a multi-panel frame consists of a navigation panel on the left and a content panel on the right. The panel on the right often consists of one or more tabbed panels. The multi-panel frame is used to display product management screens (as shown in Figure 22 on page 115) or screens used to manage Sterling Advisor information.

Note	See CHAPTER 5, "Administration Interface in Sterling Advisor" for information about the Sterling Advisor interface.

When the content frame appears as a multi-panel frame, the Navigation Panel on the left provides access to items in the form of a directory tree.

In some cases, this consists of a product hierarchy. You can either click on a product category to see the products within the category, or click on the triangle next to the product category to see child product categories within the parent. In Product Administration (shown in Figure 22 on page 115), if you click on the product category, then you not only see the products in the category, but you also see information about the product in the Content Panel to the right.

In the case of Sterling Advisor, the navigation panel appears as a hierarchy of folders. Folders can contain sub-folders, items, or both. See CHAPTER 5, "Administration Interface in Sterling Advisor" for more information about using the Sterling Advisor interface.
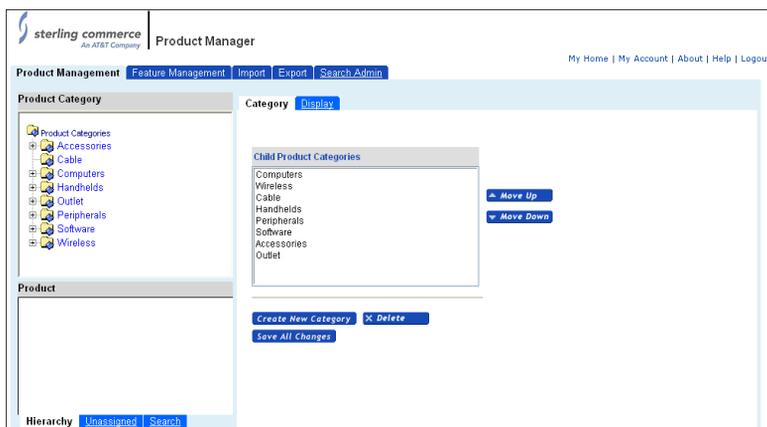
FIGURE 22. Product Manager Page

The Content Panel sometimes appears as a list to which you can assign products. In other cases, it provides detailed information about an item selected in the Navigation Panel. In many cases, it appears as a series of tabbed panels, each of which provides different types of information. When you create certain items, for example a partner, you must remember to enter information in the appropriate panels.

Search Capabilities

The Sterling Multi-Channel Selling Solution offers advanced search capabilities through its administration interface. You can search for most objects, such as users, partners, orders, and so on by specifying one or more attributes.

You can use wild card characters such as "*" to help you in your search. Bear in mind that "_" is treated as a single wild card character. For example, if you search for "C_a*", then the results will include matches to "Craftsman", "Chapel Hill", as well as to "C_anchor".

CHAPTER 4 *Introduction to Sterling Advisor*

The Sterling Advisor application enables your customers to identify a product or set of products in which they are interested. Once identified, products can be compared, configured (if necessary), and purchased. By creating an appropriate questionnaire, you greatly simplify your customers' process of buying your products while enhancing the overall customer experience.

This chapter first discusses the concepts involved in creating an effective questionnaire, then walks you step-by-step through the creation process.

Attention:	Sterling Advisor will not work unless you create and activate a search index. See "Administering Advanced Search" on page 435 for more information.

This chapter covers the following topics:

- "Feature Types and Features" on page 118

- "Resources and Resource Types" on page 118

- "Questions and Answers" on page 118

- "Questionnaire Pages" on page 121

- "Rules in Sterling Advisor" on page 122

- "The Sterling Advisor Questionnaire" on page 122

Feature Types and Features

Feature types and features are characteristics of products that you use when you create a questionnaire in Sterling Advisor. These form the answers to questions posed by the customer during the guided selling experience.

See "Feature Management in Sterling Product Manager" on page 71 for an explanation of these elements.

Resources and Resource Types

Resource is the term used to describe an electronic media attribute that you can associate with a business object. Resources can be of many kinds: URLs, image files, sound files, and text files to name a few. You can assign any or all of these media to any of your business objects (except rules and resource types). When an entity is displayed (for example, in a questionnaire), the resource can be displayed or accessed along with it. For example, you assign a resource (an image) to a feature (a processor). During the guided selling experience, the end-user sees the processor as a selection and also sees the image of the processor.

How resources appear to your customers is up to you. You can have resources displayed directly in pages generated by the Sterling Advisor. Alternatively, resources can be links to other pages, or even other applications. Note that you must customize your JSP files to display resources.

Each resource is a member of a specific *resource type*. Resource types are business objects that you create in Sterling Advisor Administration.

Questions and Answers

Questions are business objects that define the conditions that will narrow down a customer's search for products. The answers to these questions are associated with features used to filter down the resulting product list.

Questions

Questions posed to a customer in a questionnaire enable you to help the customer to find product(s) that match the customer's needs. Questions are reusable on multiple questionnaire pages.

We suggest that you start with general questions to help limit a customer's choices, then write more specific questions. For example, if a customer is purchasing a dishwasher, then the general question, "Do you want a portable or under-counter dishwasher?" should be asked before the more specific question, "Do you want your dishwasher to have heating capability?" particularly if portable models do not offer heating capability.

It is helpful to think of each question as a single question and its collection of possible answers. This collection of a question and its answers are displayed on a questionnaire page as a *palette*. Figure 23 on page 119 shows an example palette that presents two questions and their answers.

FIGURE 23. Sample Palette

Within Sterling Advisor, questions consist of properties, answers and (optionally) resources. The properties of a question are:

- Name

    This is the name you give to the question for internal use. It is not displayed to customers. The name is used in the Navigation panel, and needs to be unique; for example, "Heating Function".

- Question Text

    This is the text of the question as your customer sees it; for example, "Do you want your dishwasher to have heating capability?".

- Description

  This is your description of the question for internal use. Use this field to briefly describe the question so that you and other Sterling Advisor administrators understand the purpose of the question; for example: "This question determines whether the customer wants the dishwasher to heat the water. If customers answer 'Yes', then filter products based on whether they have one of the heating features.".

- Control Type

  What kind of control will be assigned to the answers. These are the possible selections:

  - Radio button controls only permit the customer to select one answer to the question. Selecting one radio button automatically deselects any other radio buttons for that question.

  - Check box controls permit the customer to select zero or more answers to the question.

  - Drop-down list controls only permit the customer to select one answer to the question.

- Filter Logic

  You can select either AND or OR. If you select AND, then products will only be matched if they have features associated with all of the answers selected to this question. If you select OR, then products will be matched if they have features associated with at least one of the answers selected to this question.

Answers

In the questionnaire, answers are the response to the conditions posed by a question. Within Sterling Advisor, answers are child objects of questions, and have the following properties:

- Name

  This is the name you give to the answer for internal use; for example: "Yes to Heating".

- Answer Text

  This is the text of the answer as your customer sees it; for example, "Yes".

- Description

  This is your description of the answer for internal use. Use this field to briefly describe the answer so that you and other Sterling Advisor administrators understand the purpose of the answer; for example: "If customers answer 'Yes', then filter for products that have one of the heating features.".

- Filter Logic

  You can select either AND or OR. If you select AND, then products will only be matched if they have all of the features associated with this answer. If you select OR, then products will be matched if they have at least one of the features associated with this answer.

In addition, answers have both features and (optionally) resources assigned to them. The assignment of features to answers is crucial to the creation of the questionnaire, for it is this assignment that enables the Sterling Advisor to find products based upon the answers your customers select in your questionnaire.

Questionnaire Pages

Questionnaire pages are containers for questions. Your primary task in creating a questionnaire page is to define the questions it will display.

You will set one of your questionnaire pages to be the *start page*: the first page displayed in your questionnaire. In addition, the questionnaire includes an *end page*. The end page is the page that appears when your customers reach the end of the questionnaire. This is defined as the state when there are no more rules to test against the state. When customers reach this page, their product list is as refined as it can be, based on the decisions they have made. This page shows the refined product list as well as a summary of the questions and answers on which the list is based.

You can also define a template JSP page to render the questionnaire page (to supersede the default JSP page).

Rules in Sterling Advisor

In the Sterling Advisor, rules are logical expressions with an IF/THEN syntax, and their definition determines what happens when your customers use your questionnaire.

> **Note:** Sterling Advisor rules are distinct from the rules in Sterling Visual Modeler. For an explanation of rules in Sterling Visual Modeler, see "Rules in Sterling Visual Modeler" on page 93.

The definition of a rule includes its name, description, IF clause, THEN clause, and priority.

The *name* of a rule is the designation you give the rule for internal use only. The name of the rule is used in the Sterling Advisor Administration Navigation panel, and must be unique.

The *description* of a rule is for internal use only, and is optional. You may choose to give a rule any description you like, or none at all.

The *IF clause* defines the state that must exist in order for the rule to be executed. In the Sterling Advisor, *state* is a special term that defines at any moment which questionnaire page the customer is viewing, what facts have been specified, and which rules have been executed. The state must satisfy all of the arguments in a rule's IF clause in order for the rule to be executed.

The *THEN clause* defines what action the Sterling Advisor will take when the rule is executed.

Priority determines the order in which rules are tested against the current state. Rules with a smaller numerical value are tested before rules of larger value.

The Sterling Advisor Questionnaire

The concepts discussed in the previous sections are used to create the collection of questionnaire pages known as the Sterling Advisor questionnaire. The remainder of this chapter contains a discussion of the design and creation of a questionnaire.

The Sterling Advisor questionnaire is used to ask each customer questions to determine their business needs. As a customer enters their answers, the Sterling Advisor filters out products that do not meet the customer's requirements. By reducing the set of possible product choices, you can reduce the customer's purchase decision to choosing from a small number of acceptable products, all of which meet the customer's stated requirements.

The responses to each question serve to restrict the list of acceptable products from the list of available products. If you use multiple questions, then they are used to filter out available products that do not meet *all* the requirements selected. The list of acceptable products can also serve as the starting point for the product comparison tool.

Each questionnaire comprises a set of questionnaire pages or Web pages that are displayed to the customer. A questionnaire page is made up of one or more *questions*. Each question is associated with one or more questionnaire pages. A question is displayed on a questionnaire page with one or more possible *answers*. This grouping of a question and its answers on a questionnaire page is a palette. A question has one or more answers that are displayed on the palette.

Answers are used to specify the features that are used to filter the list of available products once a user has made their selections on the questionnaire page. Each answer has one or more *features* assigned to it. Since features are also assigned to products (this is done in the Sterling Product Manager), answers are indirectly connected to products. When a customer selects an answer, only those products that have the features assigned to that answer are included in the resulting list of products.

About the Questionnaire

In the Sterling Advisor, a questionnaire is a collection of questions and answers integrated with a set of rules that, when applied to your list of products, generate a refined product set.

How the Questionnaire Works

There are two ways to look at how the questionnaire works: how your customers experience it, and how it works for you.

Customer Experience

From your customers' point of view, the questionnaire is a series of one or more Web pages containing questions and answers. By answering the questions, your customers identify which of your products interest them.

Administrator Experience

You create the questionnaire pages that make up your questionnaire, decide what questions and answers should appear on each questionnaire page, and write the rules that determine how the questionnaire behaves.

Components of the Questionnaire

There are several components that make up the questionnaire. Each of these components serves a specific purpose. They are:

- *Features* are assigned to products. The Sterling Advisor uses them to differentiate between products.

- *Feature types* are categories of features.

- *Feature type groups* are attributes of feature types.

- *Questionnaire pages* are the pages that make up your questionnaire. Each questionnaire page displays one or more questions.

- *Questions* are the building blocks of questionnaire pages.

- *Answers* are possible responses to the question text posed by a question. The *Answers* frequently consist of the *Features* assigned to a product.

- *Resources* are supplemental media that can be assigned to any entity. Commonly, resources include such things as photographs, data sheets, product or feature descriptions, white papers, and URLs.

- *Resources types* are categories for resources.

- *Rules* are the logic behind the questionnaire. They are used to determine actions based on customer decisions.

Note that even though the questionnaire is used to identify products, products are not managed by the Sterling Advisor, but rather by the Sterling Product Manager. Features can be created in both Sterling Advisor Administration and Sterling Product Manager: they are assigned to answers using Sterling Advisor Administration, and are assigned to products using Sterling Product Manager. Features are thus assigned both to answers (in Sterling Advisor Administration) and to products (via the Sterling Product Manager).

Rules for Creating the Questionnaire

Sterling Advisor will work effectively assuming a reasonable product catalog. See "Guidelines for Creating a Product Catalog" on page 66 for the guidelines for creating a product catalog. The guidelines for creating a reasonable questionnaire are as follows:

- The Product list presented on each Sterling Advisor page should not exceed 50 products to ensure reasonable performance and make the number of available choices intelligible to the end user.

- Questionnaires should contain between 40 rules and 100 rules.

- Questionnaires should have between 20 and 100 Sterling Advisor Questionnaire Pages.

Note that these are not absolute limits for what the Advisor product can handle. These limits are meant as guidelines for the size and characteristics of a set of product information under which Sterling Advisor operates most effectively.

Rules in the Sterling Advisor

Defining the right rules is the key to building the questionnaire, because rules determine how the questionnaire behaves. To understand this, you need to understand what the questionnaire is doing in Sterling Advisor.

Rules are statements you create that are designed to determine questionnaire behavior and identify a set of criteria used to filter the product list. A rule comprises an IF clause and a THEN clause. If the state satisfies the IF clause, then the THEN clause is executed. An example of a rule is:

```
IF Questionnaire Page = 1 AND Question1 = D
    THEN Questionnaire Page = 2
```

This rule translates to: if the customer is on questionnaire page 1 and selects answer "D" in question 1, and then clicks **Next**, then display questionnaire page 2.

Terminology

To understand rules, you need to be familiar with the following terms:

- State

  The *state* defines where the customer is within the questionnaire. It is a combination of which questionnaire page they currently see, which choices they have made thus far, and which rules have been executed. As customers progress through the questionnaire, the Sterling Advisor updates the state.

- Session

  Whenever a customer logs into the Sterling Multi-Channel Selling Solution, they begin a *session*. When they launch the questionnaire, the Sterling Advisor begins to store the state of the questionnaire within the session. State information is kept in the session as long as the customer remains within the questionnaire. Once they leave the questionnaire, their state is lost. If the customer subsequently returns to the questionnaire, then they automatically return to the start page.

- Rule Priority

  Priority determines the order in which rules are tested against a state. Each time you create a rule, you assign a priority to it. Specific ways to use rule priority are discussed in the section "Rule Priority" on page 129 and also in the section "Rule Authoring Tips" on page 131.

- Rule Testing

  When a customer clicks **Next**, the Sterling Advisor *tests* each rule against the current state. When the state satisfies a rule, Sterling Advisor executes that rule.

- Rule Satisfaction and Execution

  When the Sterling Advisor tests a rule against the current state, it compares the state to the "IF" clause of the rule. If the state meets the requirements of the rule, then the state is said to *satisfy* the rule. If the state satisfies the rule, then Sterling Advisor *executes* the rule. Note that when a rule has been executed, the fact that it has been executed becomes part of the state. Rules that have already been executed are not tested against the state again in the same session.

- Facts

  Facts are the elements of rules that can be used to filter the product list. In the example:
  ```
  IF Questionnaire Page = 1 AND Question1 = D
     THEN Questionnaire Page = 2
  ```
  "Question1 = D" is a fact.

- Product List

  The *product list* is the list of all products that meet the current state. Each time the customer clicks **Next**, the Sterling Advisor updates the current state. Sterling Advisor then uses the facts in the updated state to filter the product list.

- Start Page

  The *start page* can be any one of the questionnaire pages you create, or it can be a URL. When you set a questionnaire page as the start page, you designate it to be the questionnaire page that all customers see first. This will be used unless the start state URL is used.

- End of the Questionnaire

  When your customers reach a point in the questionnaire where there are no more questionnaire pages to display, and thus no more questions to be answered, they reach the end of the questionnaire. At this point, the Sterling Advisor displays the end page with the message "No More Questions". The page also contains the refined list of products as well as a list of the questions and answers that resulted in the final list.

Rule Execution

Sterling Advisor operates the questionnaire based on an evolving state. Each time the customer clicks **Next**, Sterling Advisor tests unexecuted rules against the state, one at a time in the order of their priority. When the state satisfies a rule, Sterling Advisor executes the rule's THEN clause. If the rule's THEN clause includes facts, then these facts are added to the state. What happens next depends on the rule:

- If the rule's THEN clause defines the next questionnaire page to display, then Sterling Advisor stops testing rules and displays that questionnaire page.

- If the rule's THEN clause does not define the next questionnaire page, then Sterling Advisor continues testing rules against the updated state, starting with the next rule in order of priority. This process continues until Sterling Advisor executes a rule that defines the next questionnaire page.

Once Sterling Advisor begins to test rules against the current state, the testing process continues until a rule is executed that brings the user to a new questionnaire page. If no such rule exists (that is, if there are no more questionnaire pages to display), then Sterling Advisor automatically displays the "end" page.

If a customer:

- Uses either the **Previous Questionnaire Page** button or their browser's **Back** button to go to a previous page in the questionnaire, the state reverts to what it was on that page.

- Makes a combination of selections that result in an empty product list, Sterling Advisor displays a page informing the customer that there are no products that meet their search criteria.

Rule Construction

Rules are logical statements you create in Sterling Advisor Administration. Rules have the following key elements:

IF clause	The *IF clause* determines when the rule is executed. When the rule is tested against the state, the IF clause is compared to the state. The rule is only executed if the current state satisfies all of the arguments in the IF clause.
THEN clause	The *THEN clause* determines what action the Sterling Advisor will take when the rule is executed. These actions are adding facts to the state, which questionnaire page to display next, and whether or not to display specific answers.
Priority	*Priority* determines the rule's place in the sequence of rules to be tested against the state.

The syntax of a rule is:

```
IF
    <arguments that must be satisfied by state>
THEN
    <results of rule execution>
```

The IF clause and the THEN clause are composed of the following kinds of arguments:

One "Questionnaire page" argument	Both the IF clause and the THEN clause can include a questionnaire page. In an IF clause, a questionnaire page defines which questionnaire page the customer must be viewing in order for that rule to be satisfied. In a THEN clause, a questionnaire page defines which will be the next questionnaire page to be displayed.
One or more AND modifiers	AND arguments refine clauses and can only be used with question facts. In an IF clause, an AND argument adds an additional requirement for a state to satisfy the rule. In a THEN clause, an AND argument determines that an answer is selected.
One or more AND NOT modifiers	An AND NOT argument is the same as an AND argument, except that it specifies that an answer not be selected. In an IF clause, this means that the state cannot satisfy the rule unless that specific answer is not selected. In a THEN clause, using AND NOT specifies that an answer that would normally appear on the page will not be displayed.

Table 15 on page 129 shows some examples of rules and the behavior they define:

TABLE 15. Sample Rules and Translations

Rule Syntax	Translation
| ```
IF
Questionnaire Page = Alpha
THEN
Questionnaire Page = Beta
``` | Execute this rule only if the customer is on questionnaire page Alpha. When they click **Next**, display questionnaire page Beta. |
| ```
IF
Question 1 = 600MHz
THEN
Questionnaire Page = Gamma
``` | Execute this rule only if the customer has selected 600MHz in Question 1. When they click **Next**, display questionnaire page Gamma. |
| ```
IF
Questionnaire Page = Alpha
AND Question 1 = 600MHz
THEN
Questionnaire Page = Delta
``` | Execute this rule only if the customer is on questionnaire page Alpha and has selected 600MHz in Question 1. When they click **Next**, display questionnaire page Delta. |
| ```
IF
Questionnaire Page = Alpha
AND Question 1 = 600MHz
THEN
Questionnaire Page = Delta
AND Question 2 = 128MB
``` | Execute this rule only if the customer is on questionnaire page Alpha and has selected 600MHz in Question 1. When they click **Next**, display questionnaire page Delta with the answer 128MB in Question 2 selected. |
| ```
IF
Questionnaire Page = Alpha
AND Question 1 = 600MHz
THEN
Questionnaire Page = Delta
AND NOT Question 2 = 128MB
AND NOT Question 2 = 192MB
``` | Execute this rule only if the customer is on questionnaire page Alpha and they have selected 600MHz in Question 1. When they click **Next**, display questionnaire page Delta, but do not display the answers 128MB and 192MB in Question 2. |

Note that while both the IF clause and the THEN clause must each have at least one argument, it is not necessary for either clause to have a questionnaire page specified.

Rule Priority

Priority is an integer value you assign to a rule, used to determine in which order rules will be tested by the Sterling Advisor against the state. The smaller the number, the higher priority the rule has. Rules of higher priority are tested before rules of lower priority. Thus, a rule of priority 4 will be tested against the state after a rule of priority 2, and before a rule of priority 6.

Consider the following rules, listed in the order in which they were created:

```
RuleA: IF Questionnaire Page = A
    THEN Questionnaire Page = B
RuleB: IF Questionnaire Page = A AND Question1 = Z
    THEN Questionnaire Page = E
RuleC: IF Questionnaire Page = A AND Question1 = X
    THEN Questionnaire Page = C
RuleD: IF Questionnaire Page = A AND Question1 = Y
    THEN Questionnaire Page = D
```

In this example, if a customer reaches questionnaire page A, then there are four possible questionnaire pages they might see next. Which page they see depends on the choice they make in questionnaire page A. However, if the Sterling Advisor tests the rules in the order shown, then the customer will *always* go to questionnaire page B: because RuleA is always satisfied when a customer is on questionnaire page A.

In actuality, the rules author needs to have the Sterling Advisor test each of the other rules in the list before it tests RuleA. So the author assigns priorities to the rules:

```
RuleA: (priority 30)
RuleB: (priority 20)
RuleC: (priority 10)
RuleD: (priority 18)
```

The priorities assigned to these rules may seem arbitrary, but they determine the order in which the rules will be tested against the state. The Sterling Advisor will now test the rules in this order:

```
RuleC: IF Questionnaire Page = A AND Question1 = X
    THEN Questionnaire Page = C
RuleD: IF Questionnaire Page = A AND Question1 = Y
    THEN Questionnaire Page = D
RuleB: IF Questionnaire Page = A AND Question1 = Z
    THEN Questionnaire Page = E
RuleA: IF Questionnaire Page = A
    THEN Questionnaire Page = B
```

The result is that the customer goes to questionnaire page B only if they have not selected X, Y, or Z.

Note that when you assign priorities to rules, you don't have to number them sequentially. Since priorities must be integer values, it is often a good idea to intentionally leave gaps. Thus, if you had intended to assign priorities such as 1, 2 and 3, then consider assigning priorities of 10, 20, and 30 instead.

Note that if you assign the same priority to multiple rules, then the Sterling Advisor will test those in alphanumeric order by rule name. For example:

You have created 12 rules. Listed in order of their creation, their names and priorities are:

```
RuleA: Priority 10
RuleB: Priority 20
RuleC: Priority 30
RuleD: Priority 40
RuleE: Priority 50
RuleF: Priority 35
RuleG: Priority 45
RuleH: Priority 25
RuleI: Priority 7
RuleJ: Priority 30
RuleK: Priority 20
RuleL: Priority 27
```

Note that the syntax of rules is not relevant to the order in which the Sterling Advisor tests them against the state. The *name* you give to a rule *is* relevant, in that if two or more rules have the same priority, then the Sterling Advisor tests those rules against the state in alphanumeric order. Thus, these rules would be tested in the following order:

```
RuleI: Priority 7
RuleA: Priority 10
RuleB: Priority 20
RuleK: Priority 20
RuleH: Priority 25
RuleL: Priority 27
RuleC: Priority 30
RuleJ: Priority 30
RuleF: Priority 35
RuleD: Priority 40
RuleG: Priority 45
RuleE: Priority 50
```

The use of priorities is discussed further in the section "Rule Authoring Tips" on page 131.

Creating the syntax of a rule and determining its priority are only part of the process of creating a rule. For a complete description of the process, see "To Create a Rule" on page 830.

Rule Authoring Tips

The example shown in "Rule Priority" on page 129 is only one case where the rules author needs to create rules in a specific way to achieve the necessary result. There are a few instances where specific construction and ordering of rules may be required. The tips that follow show you how to handle some potential problems.

Creating Default Rules

As you create your rules, you should keep in mind one characteristic of the Sterling Advisor: once it begins testing rules against the current state, it continues to do so *until it executes a rule that causes it to display a new questionnaire page*. If there is no such rule, then the Sterling Advisor jumps to the end page and ends the questionnaire.

This functionality can be useful, since it helps streamline the product selection process. On the other hand, if you accidentally omit or delete a rule that you need, then a customer that makes the "wrong" choice bypasses the remainder of the questionnaire and winds up at the end page.

One way to avoid this is to create a default rule for each questionnaire page in the questionnaire, defining what the next questionnaire page needs to be if no other rule is executed from the questionnaire page. The syntax for such a default rule is:

```
IF Questionnaire Page = <qpage1>
   THEN Questionnaire Page = <qpage2>
```

Assign this rule the lowest priority of all of your rules, to ensure that any answer-specific rule that might be satisfied by the state is executed before this rule. Thus, this rule will only be executed if there is no other rule satisfied by the state.

Note:	Once this rule is executed, then it cannot be re-used.

Note that the design of your questionnaire will determine whether or not you have need of these default rules. In some cases, jumping directly to the end of the questionnaire may be considered a desirable thing.

Using AND NOT Arguments to Disable Answers

There may be instances when one of your questions affects another, and an answer your customer chooses on one questionnaire page needs to limit the available answers on a subsequent questionnaire page. Consider this example:

You have two questions, one for processor speed and another for available memory.

- The processor speed question appears on questionnaire page 1, and asks "What speed should your computer's processor be?" Its answers are 400MHz, 500MHz,or 600MHz.

- The available memory question is displayed on questionnaire page 2, and asks "How much available memory do you need?" Its answers are 128MB RAM, 192MB RAM, 256MB RAM, or 512MB RAM.

Your company offers computers that have:

- 400MHz processors and can have either 128MB or 192MB of RAM.

- 500MHz processors and can have 192MB, 256MB, or 512MB of RAM.

- 600MHz processors and can have 256MB or 512MB of RAM.

When your customers see questionnaire page 1, they will choose one of the available processor speeds. Depending on which processor speed they choose, some of the answers of the available memory question should not be displayed on questionnaire page 2. You need to write a series of rules such that:

- If a customer chooses 400MHz on questionnaire page 1, then they will only be able to select either 128MB or 192MB on questionnaire page 2.

- If a customer chooses 500MHz on questionnaire page 1, then they will only be able to select either 192MB, 256MB, or 512MB on questionnaire page 2.

- If a customer chooses 600MHz on questionnaire page 1, then they will only be able to select either 256MB or 512MB on questionnaire page 2.

This translates to three rules:

1.	<pre>IF
	Questionnaire Page = 1
	AND processor speed = 400MHz
	THEN
	Questionnaire Page = 2
	AND NOT available memory = 256MB
	AND NOT available memory = 512MB</pre>

2.	<pre>IF
	Questionnaire Page = 1
	AND processor speed = 500MHz
	THEN
	Questionnaire Page = 2
	AND NOT available memory = 128MB</pre>

3.	<pre>IF
	Questionnaire Page = 1
	AND processor speed = 600MHz
	THEN
	Questionnaire Page = 2
	AND NOT available memory = 128MB
	AND NOT available memory = 192MB</pre>

Creating these rules ensures that questionnaire page 2 will display only those answers that are appropriate, based on the customer's selection on questionnaire page 1.

Designing the Questionnaire

The process of creating your questionnaire has two stages: design and construction. This section addresses how you design your questionnaire. The following section, "Building the Questionnaire" on page 144, describes the construction stage.

Design is the more complex of these two stages, and is likely to require more thought. Building the questionnaire is a matter of implementing the decisions and concepts you arrive at during the design stage.

In order to design your questionnaire, you need to do two things. First you need to make some basic decisions about how you want your questionnaire to work for your customers. This is described in the section "Conceptual Design of the Questionnaire" on page 134. Then you need to lay out the questionnaire you want to build. This is discussed in section "Laying Out the Questionnaire" on page 136. Once you arrive at a blueprint: that is, once you have designed the questionnaire, then you are ready to build it.

Note:	Before you begin designing your questionnaire, you must ensure that your product catalog has already been defined in the Sterling Product Manager.

Conceptual Design of the Questionnaire

There are a few steps in the conceptual design of your questionnaire. As you progress through these steps, you determine the form that the questionnaire will eventually take. These steps are:

*   Identifying your products and their features

    Use the Sterling Product Manager to generate a complete list of your company's products, and use this list to generate a list of product features. This list of features does not need to include every feature in every product, but it does need to include the features that can help distinguish between products.

*   Categorizing your features

    Once you have identified your features, you need to group the features into a hierarchy.

*   Determining the look and feel you want your questionnaire to have

    You need to decide how you want your questionnaire to look. This includes such things as how many questions should appear on each page of the questionnaire.

Identify Your Products

You base your design on your list of products and the list of features these products represent. The questionnaire is used to identify products, and it uses features to do it. Thus, the logical place to start is by making a list of your company's products. You can get this list from the Sterling Product Manager. Then you use your product list to identify your feature list.

Your company may carry a large product line, and this product line might change frequently. As a result, you may need to periodically redesign your questionnaire to take these changes into account.

Identify and Categorize Your Features

Once you have a complete list of your products, you can use this list to identify the features you will use in your questionnaire. Features are important because:

• You create your questions based on your features.

   Since the questionnaire distinguishes between products by how their feature sets differ, you need to create questions that can isolate specific features.

• Your customers will compare products based on their features.

   One of the capabilities of the Sterling Advisor is to display a comparison of two or more products. This comparison is based on the features you define.

Once you have created your list of features, you need to categorize them. That is, you need to group them into a hierarchy where each feature is a member of a specific feature type.

The process you follow to identify and categorize your features is described in more detail in "An Example of Questionnaire Design" on page 136.

Determine the Look and Feel You Want

Sterling Advisor Administration gives you a great deal of freedom in determining how your questionnaire will be organized. In particular, you can decide how many questionnaire pages will make up the questionnaire, as well as how many questions will appear on each questionnaire page. This in turn defines the customer experience.

You might decide that a customer would rather answer all possible questions on a single page, and go from that page to their final product list. This approach would only require you to create a single questionnaire page within your questionnaire.

On the other hand, you might decide that each questionnaire page should have only one question to answer, providing a wizard-like experience for your customer. In this case, you would need to create a questionnaire page for each of your questions.

These two cases are the extremes, and it is more likely that you will create a questionnaire that falls somewhere between the two. Most administrators choose to design a questionnaire that has a reasonable number of questionnaire pages, with a few questions assigned to each questionnaire page.

Whichever approach you choose to take, you need to decide ahead of time the general appearance and behavior you want your questionnaire to have.

Laying Out the Questionnaire

Once you have listed your feature hierarchy and made a preliminary decision about how you want your questionnaire to appear, you need to lay the questionnaire out. The layout is a kind of tree diagram of the questionnaire that you create before you actually build the questionnaire. This layout shows each of the questionnaire pages that will be in the questionnaire, as well as the questions and answers that will appear on each questionnaire page. The layout needs to show the path from one questionnaire page to the next, as well as which products are identified by each path in the diagram. To do this, you will:

- Use your list of features to determine what questions and answers you need to create. The features can represent possible answers to the questions.

- Write questions (and their answers) that map to specific features.

- List the questionnaire pages that will contain these questions.

- Create a story board that shows the questionnaire.

Each of these tasks is illustrated in the following example.

An Example of Questionnaire Design

This example is based on a fictional company called Matrix Solutions, and shows how their questionnaire might be built.

List the Products

The first step in creating the questionnaire is to list the products. Matrix sells desktop computers, and these are the models they offer:

- Matrix7480 Desktop

- Matrix7490 Desktop

- Matrix7500 Desktop

- Matrix7510 Desktop

- Matrix7520 Desktop

- Matrix7540 Desktop

- Matrix7550 Desktop

- Matrix7600 Desktop

Use the Features to Determine the Answers to the Questions

The next step is to identify the kinds of features that can be used to distinguish between models. These are:

- Processor

- RAM

- Hard Drive

- Connectivity

Each of these computers has additional features, but these features differ enough between models that they can be used to create the questionnaire. Table 16 on page 137 shows each of the models and their features.

Note that in many cases a model shows several values for a single feature. This means that the customer may choose any of these values for that model.

TABLE 16. **Matrix Solutions Desktop Models and their Features**

Model	Processor	RAM	Hard Drive	Connectivity
Matrix7480	400MHz	128MB	4.0GB	56K Internal Modem
			6.1GB	
Matrix7490	400MHz	128MB	4.0GB	56K Internal Modem
	450MHz	256MB	6.1GB	
			8.2GB	
Matrix7500	400MHz	128MB	4.0GB	56K Internal Modem
	450MHz	192MB	6.1GB	56K Wireless Internal Modem
	500MHz	256MB	12GB	

TABLE 16. **Matrix Solutions Desktop Models and their Features (Continued)**

Model	Processor	RAM	Hard Drive	Connectivity
Matrix7510	450MHz 500MHZ 550MHz	128MB 256MB 512MB	6.1GB 8.2GB 12GB	56K Internal Modem 56K Wireless Internal Modem Ethernet
Matrix7520	550MHz 600MHz	512MB	6.1GB 8.2GB 12GB 16GB	56K Internal Modem Cable Modem DSL Ethernet
Matrix7540	600MHz	512MB	8.2GB 12GB 16GB	56K Internal Modem 56K Wireless Internal Modem Cable Modem DSL Ethernet
Matrix7550	600MHz 650MHz 700MHz	256MB 512MB	8.2GB 12GB 16GB	56K Internal Modem Cable Modem DSL Ethernet
Matrix7600	650MHz 700MHz	512MB	12GB 16GB 20GB	56K Internal Modem 56K Wireless Internal Modem Cable Modem DSL Ethernet

Creating a table like this is very useful. It does more than simply list each product and its features—it also identifies the feature types that need to be created as well as some of the questions and answers. The feature types are Processors, RAM, Hard Drive, and Connectivity and they correspond to four questions:

- The Processor question: "How fast do you want the processor in your computer to be?" The possible answers for this question are:

  - 400MHz

  - 450MHz

  - 500MHz

- 550MHz

- 600MHz

- 650MHz

- 700MHz.

- The Available Memory question: "How much available memory do you need your computer to have?" This question's answers are:

  - 128MB

  - 192MB

  - 256MB

  - 512MB.

- The Hard Drive question: "How much disk space do you need?" Its answers are:

  - 4.0GB

  - 6.1GB

  - 8.2GB

  - 12GB

  - 16GB

  - 20GB

- The Connectivity question: "How will you connect to the Internet (if at all)?" Its answers are:

  - 56K Internal Modem

  - 56K Wireless Internal Modem

  - Cable Modem

  - DSL

  - Ethernet

These questions indicate specific features, and so can quickly determine which of Matrix' models is appropriate for a customer. In addition, the administrator building Matrix Solutions' questionnaire added the following questions:

- The Computer Experience question asks "How experienced a computer user are you?" Its answers are:

  - Novice

  - Somewhat Experienced

  - Very Experienced

  - Expert

- The Computer Use question asks "What will you use your computer for?" Its answers are:

  - Data Analysis

  - Graphics/Multimedia

  - Programming

  - Internet

  - Email

  - Games

  - Word Processing

These questions are more general in nature. Rather than isolating a single feature, each of the answers implies a collection of features. Customers that identify themselves as experts or plan to use their computers for data analysis are likely to require high speed processors, more available RAM, and larger hard drives. Customers that are somewhat experienced or plan to use their computers for word processing may not need as much processor speed or disk space.

List the Questionnaire Pages

The next step is to make a list of the questionnaire pages and lay them out in sequence.

Matrix Solutions chooses to limit each questionnaire page to no more than three questions. They decide to create the following questionnaire pages:

- QP1 is the first questionnaire page in the questionnaire, and displays the Computer Experience Question

- QP2 displays the Computer Use question.

- QP3 displays the Connectivity question.

- QP4 displays the Processor question, the Hard Drive question, and the Available Memory question.

Matrix' administrator lays out the questionnaire as follows:

- Customers begin at QP1, and are asked how experienced they are. Regardless of which answer they choose, they go to QP2.

- At QP2, customers are asked how they will use their computer. Which page they see next depends on which answer they choose.

  - If they choose "Internet", then they go to QP3.

  - If they choose any other use, then they go to QP4.

There are now two paths to the questionnaire.

- If the customer has been directed to QP3, then they are asked how they will connect to the Internet. When they choose an answer, they go to QP4.

- If the customer has been directed to QP4, then they are asked three questions:

  - How fast a processor they want

  - What size hard drive they want

  - How much RAM they want

  The customer may answer any of the questions or all of them. Regardless of the answers they choose, there are no more questions to be answered. As a result, the Sterling Advisor displays a questionnaire page that shows only the resulting product list.

Figure 24 on page 142 shows the query page flow.

FIGURE 24. Questionnaire Layout

Identify the Rules

The last design step is to identify the rules that need to be created to ensure that the questionnaire behaves correctly. The layout can be used to identify the rules.

- The questionnaire automatically starts at QP1. This does not require you to create any rules, but you need to set QP1 as the start page in the Sterling Advisor. (See "To Set the Start Page" on page 811.)

- If the customer selects either "Novice" or "Somewhat Experienced" on QP1, then the answers "Data Analysis" and "Programming" need to be disabled on QP2. This requires Rules 1 and 2.

- Regardless of what the customer selects on QP1, the next page they see is QP2. To ensure this, you need to create Rule 3.

- At QP2 there are two possibilities. If the customer chooses "Internet", then they are directed to QP3. This is Rule 4.

- If they choose any of the other answers on QP2, then they go to QP4, which is defined by Rule 5.

- If the customer arrives at QP3, then they are asked how they plan to connect to the Internet. Regardless of which answer the customer chooses at QP3, the next questionnaire page is QP4. This is defined by Rule 6.

- Once the customer completes QP4, they have completed the questionnaire. By intention, there are no rules satisfied by the state at QP4, so the Sterling Advisor will bring the customer to the end page.

Table 17 on page 143 shows these rules.

TABLE 17. Rules in Matrix Solutions' Questionnaire

Rule	Syntax	Priority
1	IF Computer Experience = Novice THEN NOT Computer Use = Data Analysis AND NOT Computer Use = Programming	10
2	IF Computer Experience = Somewhat Experienced THEN NOT Computer Use = Data Analysis AND NOT Computer Use = Programming	10
3	**IF** Questionnaire Page = QP1 **THEN** Questionnaire Page = QP2	30
4	**IF** **Computer Use = Internet** **THEN** **Questionnaire Page = QP3**	20
5	IF Questionnaire Page = QP2 THEN Questionnaire Page = QP4	30
6	IF Questionnaire Page = QP3 THEN Questionnaire Page = QP4	30

Consider the priorities assigned to these rules. Rules 1 and 2 have a priority of 10, Rule 4 has a priority of 20, and Rules 3, 5, and 6 have a priority of 30. This means that the Sterling Advisor tests Rules 1 and 2 before any of the others. Because the Sterling Advisor tests rules of the same priority in alphanumeric order by name, Rule 1 is tested before Rule 2. Since neither Rule 1 nor Rule 2 specifies a next questionnaire page, Rule 4 is tested next. If Rule 4 is not satisfied by the state, then the Sterling Advisor goes on to test Rule 3, then Rule 5, then Rule 6.

Keeping the Customer in Mind

As you create your layout, you should keep the customer experience in mind. Some helpful guidelines are:

- Start your questionnaire with a questionnaire page that has only one or two questions that focus on the customer, rather than on your products.

  Using questions like this can help you classify your customers and define the paths that the questionnaire can take. An example might be to ask "How experienced a computer user are you?" This question leads to two different questionnaire paths, one for experienced users who will be interested in powerful, cutting edge computers, and another for less experienced users who may not want or need as much computing power.

- Move from general questions to more specific ones.

  It is often a good policy to reserve your most specific questions for questionnaire pages that appear later in the questionnaire.

- Try not to show your customers redundant questions or questionnaire pages.

  While you may need to assign a question to multiple questionnaire pages, your customer will prefer to see (and answer) each question only once. Note that if your customer answers the same question more than once, then they may accidentally create a situation where none of your company's products meet their specified requests.

This completes the design phase. Your questionnaire is likely to be more complex than the example illustrated here. However, if you follow the design process as it has been described, then you will have little trouble building your questionnaire.

Building the Questionnaire

Once you have designed your questionnaire, you are ready to build it. The tasks you perform in building your questionnaire are listed in order in the section that follows.

Questionnaire Construction Tasks

There are several tasks you need to perform in building your questionnaire, and performing these tasks in the right sequence can help prevent both omissions and redundancies, as well as shortening the process. "An Example of Questionnaire Design" on page 136 provides a detailed description of how to design a

questionnaire. You may find it useful to refer to this example before building your own questionnaire.

The tasks you perform to build a questionnaire are:

•   Use the Sterling Product Manager to create your product catalog hierarchy.

    The product list you created when you designed your questionnaire needs to be defined in the Sterling Product Manager. The products themselves need to be organized into an n-tier hierarchy of product categories and products. See:

    •   "To Create a Product Category" on page 355.

    •   "To Create a Product" on page 372.

•   Use the Sterling Product Manager to create your feature hierarchy

    Create the feature hierarchy that you developed while designing your questionnaire. You will need to create feature type groups, feature types, and features. See:

    •   "To Create a Feature Type Group" on page 777.

    •   "To Create a Feature Type" on page 782.

    •   "To Create a Feature" on page 787.

•   Use the Sterling Product Manager to assign features to products

    Once you have created both the product hierarchy and the feature hierarchy, you need to build relationships between products and features. Feature types can be associated only to product categories, while features can be assigned to both product categories and to individual products. See:

•   Use Sterling Advisor Administration to create the questions and answers you identified in your layout. See:

    •   "To Create a Question" on page 813.

    •   "To Create an Answer" on page 818.

•   Use Sterling Advisor Administration to assign features to your answers.

    Refer to your questionnaire layout to ensure that you make all of the necessary feature assignments. See:

    •   "To Assign a Feature to an Answer" on page 824.

- Use Sterling Advisor Administration to create the questionnaire pages that you identified in your questionnaire layout. See:

    - "To Create a Questionnaire Page" on page 802.

- Use Sterling Advisor Administration to create your rules. Your layout shows the rules you need to create, and their priority. See:

    - "To Create a Rule" on page 830.

- Use Sterling Advisor Administration to create the resource types you expect to apply to any of your entities. See:

    - "To Create a Resource Type" on page 792.

- Use Sterling Advisor Administration to assign resources to your entities. See:

    - "To Assign a Resource to an Entity" on page 797.

Once you have created your business objects, your questionnaire is complete.

Administration Interface in Sterling Advisor

Sterling Advisor Administration is a browser-based application that enables you to create an interactive questionnaire designed to guide your customers to the products that best suit their needs. This chapter describes the Sterling Advisor Administration interface and presents examples of how to build a questionnaire.

See CHAPTER 3, "Administration Interface" for general interface and navigation information about the Sterling Multi-Channel Selling Solution.

This chapter covers the following topics:

- "Basic Sterling Advisor Administration Page" on page 147
- "Types of Content Panels" on page 151
- "Create Object Panels" on page 151
- "Tabbed Panels" on page 152

Basic Sterling Advisor Administration Page

To access Sterling Advisor Administration, log into the Sterling Multi-Channel Selling Solution, and on the home page, click **Advisor Flows & Questionnaires** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page. This displays the Sterling Advisor Administration page.

FIGURE 25. Sterling Advisor Administration Page

The page has two parts, or panels. The left-hand panel is the Navigation Panel, while the right-hand panel is the Content Panel which displays the content relevant to your location within the Navigation Panel.

About the Navigation Panel

The Navigation panel provides navigation access to the questionnaire in the form of a directory tree. For example:

- Folders can contain subfolders, items, or both.

- Clicking a folder (the icon next to the underlined link) expands the structure beneath that folder. Clicking the folder again causes it to contract.

- Clicking either a folder or the underlined link next to a folder in the Navigation Panel causes the Content Panel to display content appropriate for that link.

Figure 25 on page 148 shows how the Sterling Advisor Administration page looks whenever you connect to Sterling Advisor Administration.

There are several folders displayed: Feature Type Groups, Feature Types, Questions, Questionnaire Pages, Rules, and Resource Types. These represent the various components of the questionnaire.

Each of these folders has sub-folders, and can be expanded, as shown in Figure 26 on page 149:

FIGURE 26. Example Sterling Advisor Administration Page

In this example, the Navigation Panel shows the Feature Types folder expanded to display all existing feature types. The Accessories Included feature types has also been expanded, displaying all of the features (AC Adapter, Battery, and so on) that have been created within that feature type.

All of the folders in the Sterling Advisor Administration Navigation Panel follow a similar hierarchy. For example, the Questions folder has the list of existing questions beneath it, while each individual question has the list of its answers beneath it. The hierarchies are as follows:

- Feature Type Groups > All existing feature type groups

- Feature Types > All existing feature types > All existing features

- Questions > All existing questions > All existing answers

- Questionnaire Pages > All existing questionnaire pages

- Rules > All existing rules

- Resource Types > All existing resource types

Use the Navigation Panel to navigate within Sterling Advisor Administration.

About the Content Panel

As you use the Navigation Panel, the Content Panel changes to reflect where you are in the application. Each of the content panels serves a different purpose.

FIGURE 27. Sterling Advisor Administration Page with Content Panel

In Figure 27 on page 150, the right-hand panel is the Content Panel. Note that:

• The top of the panel shows you where you are in the application (>Feature Types>Monitor Size).

• The panel has a **Save All Changes** button in the lower left corner.

Changes that you make in a content panel are *not* automatically saved to the database; they are only saved when you click **Save All Changes**. If you leave a content panel (or even change tabs within a content panel) without first clicking **Save**, then your changes are lost.

Note that Create Object Panels are the exception to this rule. They do not have a **Save** button. Instead, they have a **Create** button, which automatically saves your changes.

• Some content panels have tabs across the top.

Different tabs allow you to perform different tasks. The number of tabs varies between content panels.

The various kinds of content panels you see in Sterling Advisor Administration are described in more detail in the following sections.

Types of Content Panels

As you use Sterling Advisor, each content panel deals with a different kind of object. These are:

•   List panels display all of the existing objects of that type.

•   New object panels are used to create new business objects.

•   Tabbed panels let you manage the attributes of business objects

All of the Sterling Advisor content panels fall into one of these basic panel types.

List Panels

When you select a top-level link, a List Panel appears that shows all of the objects that exist under that heading. Clicking any of these links brings you to a list panel.

FIGURE 28. Example of a List Panel

All list panels include links that allow you to create and delete objects. Some list panels also allow you to order the subobjects that appear in the list. Those list panels that allow you to order subobjects have **Move Up** and **Move Down** buttons to facilitate the ordering process.

Create Object Panels

Create Object panels allow you to create new business objects in your questionnaire. Each kind of business object has its own creation panel. You access

the creation panel by clicking the Create button on that object's list panel. For example, to create a question, click **Questions**, then click **Create Question**. The New Question Panel displays as shown in the following figure.

FIGURE 29. New Question Panel

Each type of business object has unique attributes, and so the Create Object panels differ from object type to object type. However, they all follow the same pattern.

Tabbed Panels

Tabbed panels enable you to manage the properties of business objects. These properties include the name and description given to the business object, as well as the definition of that object's relationships with other business objects. The following figure shows an example of a tabbed panel.

FIGURE 30. Example of a Tabbed Panel

In tabbed panels, different tabs serve different functions. These may differ from business object to business object, but as a rule:

- General tabs allow you to manage an object's basic properties such as its name and description.

- Assignment tabs allow you to assign an object to another object.

- Resources tabs allow you to assign one or more resources to an object.

General Tabs

General tabs enable you to manage an object's basic properties, such as an object's name and description, as well as more specific information unique to a particular business object. For example, part of the general information that relates specifically to a questionnaire page includes how many columns the questionnaire page should display. The following figure shows an example of the General tab.

FIGURE 31. Example of a General Tab

Assignment Tabs

Assignment tabs allow you to manage the relationships among business objects. For example, you use the Assign Questions tab of the Questionnaire Page Detail Panel to assign specific questions to the questionnaire page. The following figure shows an example assignment tab.

FIGURE 32. Example of an Assignment Tab

Resources Tabs

Resources tabs allow you to assign resources to business objects. Resources tabs are the same, regardless of business object. The following figure shows an example resources tab.

FIGURE 33. **Example of a Resources Tab**

CHAPTER 6   *User Administration*

This chapter covers tasks performed to manage users in the Sterling Multi-Channel Selling Solution: See "Managing Users" on page 157 for the tasks performed by Enterprise employees or the employees of a Sterling Partner.com partner. See CHAPTER 9, "Administration Performed by Partner Users" for the tasks performed by employees of a partner.

"Users, Roles, and Functions" on page 15 contains an overview of user administration in the Sterling Multi-Channel Selling Solution.

This chapter covers the following topics:

- "Managing Users" on page 157

- "Defining Functions and Roles" on page 164

Managing Users

The *user administrator* (an enterprise employee with enterprise user management responsibilities) performs the following tasks:

- "To Create a New Enterprise User" on page 158

- "To Modify an Enterprise User Profile" on page 161

- "To Delete an Enterprise User" on page 161

- "To Search for an Enterprise User" on page 162
- "To Search for Any User" on page 162
- "Defining Functions and Roles" on page 164

Note that enterprise profile administrators can also create partner profiles and partner users for partners. See "To Create a New Partner User" on page 189 for more information on creating partner users.

To Create a New Enterprise User

1. Click **System Users** in the System Administration panel on the Sterling Multi-Channel Selling Solution enterprise home page. The User List page displays.

FIGURE 34. User List Page

2. On the User List page, click **Create User**. If this button is not visible, then you do not have the access privileges to create a new user.

FIGURE 35. User Detail Page: New User Tab

3. On the User Detail page, enter the details of this new user. Note the following:

- • Username: This username must be unique throughout the Sterling Multi-Channel Selling Solution.

- • Password: Use letters and numbers from the keyboard with no spaces or other punctuation. Out of the box, passwords must have at least 8 characters, including at least one digit and one alphabetic character.

- • User Functions: Select those functions that this user will perform by checking the appropriate check boxes. The list of functions that display is determined at implementation time.

- • User Type: Select the type of user you want to create from the drop-down list. You can create one of the four types of users: User, Procurement User, ERP Administrator, and Default XML Identity.

Attention:	Do not select the ERPAdministrator user type or the Default XML Identity user type for standard users. An ERP Administrator user cannot log in through the Web user interface. A Default XML Identity user is specific to storefronts and is the default user in the event that an incoming XML message request, that is routed to a specific anonymous XML message URL, does not contain any information to identify the user. A Default XML Identity user cannot log in through the Web user interface.

- • Preferred Locale: Select the preferred locale which will apply when the user logs in. The drop-down list displays the names for the supported locales.

4. Enter any other pertinent details.

5. Click **Save**.

After you save the basic information for a new user, the User Detail page displays with new tabs.

FIGURE 36. User Detail Page: Info Tab

6. You can update information on the Info tab and click **Save**. In particular, you can now set a maximum on the number of accounts that can be assigned to this user.

7. You can manage the assignment of accounts to this user. Note that if the user is assigned the Commerce function, you must assign at least the Anonymous User Partner account to them. This also allows users with the Commerce function to access shared wish lists and registries. See "Assigning Accounts to Users" on page 222 for more details.

8. You can also make notes regarding this user by clicking the Notes tab.

FIGURE 37. User Detail Page: Notes Tab

To Modify an Enterprise User Profile

You can change user profile information for another enterprise user or partner user if you have the right level of entitlement access to the user.

Attention: Do not change the username or password of the Anonymous User user.

---

1. Click **System Users** in the System Administration panel on the Sterling Multi-Channel Selling Solution enterprise home page. The User List page displays.

2. On the User List page, click the link to the user whose profile you wish to modify. The User Detail page displays. If you cannot see the user whose details you want to update, then you can search for the user.

3. On the User Detail page, modify user details as appropriate.

4. Click **Save All and Return to List**.

To Delete an Enterprise User

1. Click **System Users** in the System Administration panel on the Sterling Multi-Channel Selling Solution enterprise home page.

2. On the User List page, click **Delete (X)** in the Actions column next to the user you wish to delete.

   The user is deleted from the Sterling Multi-Channel Selling Solution. However, note that the username that belonged to this user is still present in the system. No new user can re-use this username.

To Search for an Enterprise User

1. Click **System Users** in the System Administration panel on the Sterling Multi-Channel Selling Solution enterprise home page.

2. Select one of Username, First Name, Last Name, from the drop-down list, and enter the full or partial string for the search. You can use "*" as a wild card character.

   For example, if you select First Name and enter "An*", then you will find all enterprise users whose first name begins with "An" such as Andrew and Anne.

3. Click **Go**.

FIGURE 38. User Search Results Page

To Search for Any User

You can view the user details for any user in the Sterling Multi-Channel Selling Solution. If you have the appropriate function, then you can also modify user details or delete them from the Sterling Multi-Channel Selling Solution. Note that in general, the administration of partner users should be left to partner administrators for each partner.

You can use the Search for User by Name panel to perform a quick search for a user, or you can use the advanced search capabilities as follows:

1. Click **Advanced Search** in the Search for User by Name panel.

FIGURE 39. User Advanced Search Page

2. Enter search criteria and click **Submit**.

    The search results page displays the users that match your search criteria.

FIGURE 40. User Search Results Page

3. Click the link to the user that you were looking for.

Defining Functions and Roles

Functions and roles are defined using the **Entitlements.xml** file. Defining a function or role requires that you specify the functionality that you wish the function or role to perform. Refer to the *Sterling Multi-Channel Selling Solution Reference Guide* for more information.

CHAPTER 7 *Channel Administration*

This chapter describes the tasks required to administer the channel in the Sterling Multi-Channel Selling Solution, including your sales partners and storefronts. The enterprise employee who acts as the *channel administrator* can create, modify, and delete partner profile information. See "Profile Administration Tasks" on page 179. The partner employee who acts as partner administrator can maintain the partner profile once it has been created by the channel administrator. See "Profile Administration for Partners" on page 229 for this information. "Managing the Sales Channel" on page 2 contains an overview of partner administration in the Sterling Multi-Channel Selling Solution.

This chapter covers the following tasks:

- "To Search for a Profile" on page 179

- "To Export Profile List Information" on page 181

- "To Create a New Profile" on page 182

- "To Create a Profile as a Child of a Parent Profile" on page 185

- "To Move a Child Profile to Another Parent" on page 186

- "To Create Profile Addresses" on page 187

- "To Delete Profile Addresses" on page 188

- "To Create a New Partner User" on page 189

Profile Detail Page

You maintain partner profile information on the Profile Detail page. The Profile Detail page provides a straightforward means to administer the information you need to work effectively with your partners. The information is organized by tabs that group related information:

FIGURE 41. Profile Detail Page: Info Tab

The tabs are:

- Info Tab

- Addresses Tab

- Detail Tab

- Business Tab

- Hierarchy Tab

- Commerce Tab

- Assigned To

- Pricelists Tab

- Product Entitlements Tab

- Attributes Tab

- Notes Tab

Info Tab

This tab displays key partner information:

- Profile name: the display name for this profile. Profile names do not have to be unique. However, in several places in the user interface, profiles are listed by profile name. Distinguishing two profiles with the same name in

any list of profile names can be confusing. Use a naming convention that ensures that profile names are effectively unique.

- Main telephone: the main telephone number of the partner.

- Main facsimile: the main facsimile number for the partner.

- Profile type: Each profile must be assigned a *type*. The choice of types is determined at the time of the implementation of the Sterling Multi-Channel Selling Solution. To make a profile available for selection as a distributor, you must select "Distributor" in the Profile Type drop-down list.

- Profile level: profiles can be assigned to one of several levels, such as Platinum, Gold, or Silver. If your implementation uses such a system, then select the correct level for this partner.

- XML Message version: the XML version is required to send messages to this partner's server.

- Login/Password required (for distributor partners only): if you check this box, a username and password is required to allow the enterprise employee to access the distributor's site.

- Company website address: the main home page for this profile. Although this field is not required, you must provide a Web site address if you wish the partner to be contacted through the Partner Selector function.

- Organization Email: the email address for the company. Although this field is not required, you must provide an Email address if you wish the partner to be contacted through the Partner Selector function.

- Distributors: each partner can have a business relationship with one or more distributors to place orders and obtain price and availability information. For the current profile, select those distributors with whom the partner has a business relationship. The list of profiles whose names are displayed in the drop-down list is determined by those profiles whose whose type is "Distributor".

Note:	In previous releases, the list of distributors was used to determine which distributors could be used for price-and-availability requests. In this release, this information is for display only.

- Message URL: This field is required if the partner needs to send or receive Sterling Multi-Channel Selling Solution XML messages (such as price

and availability checks and cart transfers). This field represents the URL to which messages for this partner are sent to or received from.

If you are creating a profile for a storefront partner, then the entry follows the format:
`http://<servername:port>/Sterling/msg/<partner name URL>`

• Custom field #1, Custom field #2, and so on: these fields can be customized to suit individual information needs.

• Profile Status: this panel enables you to change the status of the profile. See "Profile Statuses" on page 5 for more information on profile status.

FIGURE 42. Profile Status Panel

• Accounts: this panel provides access to the payment accounts used by the partner to manage their program activities.

FIGURE 43. Accounts Panel

> This panel gives you access to the payment accounts for the partner: MDF and Co-op accounts. The Co-op % and Co-op Account Maximum fields are used to calculate how uploaded updates to Co-op accounts are added to the available balances in the accounts.

Addresses Tab

This tab displays the sold-to, ship-to, and bill-to addresses provided by the partner.

FIGURE 44. Profile Detail Page: Addresses Tab

Detail Tab

This tab contains business information about the profile.

FIGURE 45. Profile Detail Page: Detail Tab

The Detail tab contains the following fields:

- Organization ID: This ID is used by the enterprise to identify each organization uniquely with whom they do business.

- Year founded: used for information only.

- Revenue: Estimates for this year's and next year's revenues.

- Fiscal year end month: used for information only.

- Number of employees: used for information only.

- Dun and Bradstreet ID: this ID must uniquely identify the partner in the commercial world.

- Services: this sub-tab provides information about the services that this partner offers.

FIGURE 46. Services Sub-tab

- Skills: this sub-tab provides information about the skills and skill levels that this partner is assessed to have.

FIGURE 47. Skills Sub-tab

Business Tab

This tab contains information relating to the business relationship between your enterprise and the current profile. Only enterprise employees who are channel administrators have the authority to modify information on this tab.

The information on this tab is for informational purposes only and has no effect on any other part of the Sterling Multi-Channel Selling Solution. The information comprises:

- Product categories: select one or more product categories to show categories of products that the partner may sell.

- Territories: select one or more territories for this partner.

- Customer types: select one or more customer types (vertical markets) for this partner.

- Contracts: there may be several business agreements between your enterprise and this partner. This sub-tab provides basic information about each agreement.

FIGURE 48. Profile Detail Page: Business Tab and Contracts Sub-tab

Hierarchy Tab

The Hierarchy tab enables you to manage a profile hierarchy. You can use this tab to create a complex organizational structure. For example, you can create management companies, divisions, locations, and departments. Then, by navigating down through the hierarchy of "children", you can create and view "children" within "children" to an infinite number of levels. See "Profile Hierarchy" on page 3 for more information.

FIGURE 49. Profile Detail Page: Hierarchy Tab

Commerce Tab

Use this tab to specify the payment options and shipping options that this partner plans to support. The selected options display to users when they edit the order header information before placing an order. If this is a storefront profile, use this tab to upload the storefront logo and skin. See "Storefront Administration" on page 211 for more information.

The following are the supported type of payment options:

• Credit card

• Gift card

• Account

Support for credit card and gift card payment requires that you set up payment gateways. Before you set up a credit card or gift card payment gateway for a partner, the partner must have a business relationship with a payment processor. This generally involves establishing a merchant ID with the processor and obtaining a merchant key which is used to authenticate the merchant at the payment processor. The key must be stored on the file system accessible by the Sterling Multi-Channel Selling Solution.

FIGURE 50. Profile Detail Page: Commerce Tab

Payment Options

You must select at least one of Credit Card, Account or Gift Card: if you do not, customers placing a split order to this partner will not be able to complete their order.

FIGURE 51. Payment Options Panel

The available options are determined by entries in the CMGT_LOOKUPS table whose LOOKUP_TYPE is set to "PaymentType", "CreditCardType" or "GiftCardType". These entries are usually created at implementation time.

You can set up a credit card payment gateway and a gift card payment gateway for your partner profile. This involves selecting a payment processor and providing the

merchant details for your partner. See "To Set Up a Credit Card Payment Gateway" on page 201 for information about setting up a credit card payment gateway. See "To Set Up A Gift Card Payment Gateway" on page 202 for information about setting up a gift card payment gateway.

Shipping Options

You must select at least one of these options: if you do not, then customers placing a split order to this partner will not be able to complete their order.

FIGURE 52. Shipping Options Panel

The available options are determined by entries in the CMGT_LOOKUPS table whose LOOKUP_TYPE is set to "ShippingMethod". These entries are typically created at implementation time.

Pricing Options

Use this panel to specify if this partner maintains their pricing information remotely. Prices are retrieved using the Message URL specified on the Info tab (see "Info Tab" on page 167).

FIGURE 53. Pricing Options Panel

If you check the **Are prices stored remotely?** check box, then you can also specify how long prices may be cached on the Sterling Multi-Channel Selling Solution before needing to be retrieved again.

Assigned To

You use this tab to see which enterprise users have been assigned to this partner.

FIGURE 54. Profile Detail Page: Assigned To Tab

Pricelists Tab

You use the Pricelists tab to assign price lists to this partner.

FIGURE 55. Profile Detail Page: Pricelists Tab

Product Entitlements Tab

You use the Product Entitlements tab to assign product entitlements to this partner. You can also manage the order in which the product entitlements are evaluated.

FIGURE 56. Profile Detail Page: Product Entitlements Tab

Attributes Tab

You can use this tab to view and assign attributes that have been pre-defined as available for assignment to the partner during the partner's creation and profile maintenance.

FIGURE 57. Profile Detail Page: Attributes Tab

Notes Tab

You can make notes as you work on partner profiles using the Notes tab.

FIGURE 58. Profile Detail Page: Notes Tab

Profile Administration Tasks

All of the tasks described here are initiated by an enterprise administrator.

To Search for a Profile

You can perform searches on your existing profile to access a given profile.

> **Note:** In the case of a profile hierarchy (see "Profile Hierarchy" on page 3), you can only search for the profile at the top-level of the hierarchy.

1. To perform a quick search, enter the profile name in the Profile Name text field of the Search for Organization by Name panel, and click **Go**. You can use "*" as a wild card. For example, searching for "Af*" will find "Affine Systems", "AffinityNet", and so on.

FIGURE 59. Search for Organization by Name Panel

You can perform a more advanced search by clicking **Advanced Search**. The Profile Search page displays.

FIGURE 60. Profile Search Page

2. Click **Search** to view all the profiles, or enter search criteria and click **Search**.

You can use the asterisk (*) in your searches. For example, "Ander*" in the Profile Name field will find any profile whose name begins with "Ander". Likewise, "*erel" will find any profile whose name ends in "erel".

The list of profiles satisfying your search criteria is displayed.

FIGURE 61. Profile List Page

3. In the displayed list, find and click the name of a profile to display the Profile Detail page for that partner.

    If the list is too long to efficiently locate the profile or if the profile is not in the list, then you can return to the main search page and attempt a new search.

On the Profile List page, you can also click the check box next to a profile and then do one of the following:

*   Export a list of selected profiles. See "To Export Profile List Information" on page 181.

*   Click **View Account Activity** to view cart activity for selected partners. See CHAPTER 28, "Cart and Commerce Administration" for additional information.

To Export Profile List Information

There may be times when you want to review profile information offline or using an analysis tool such as a spreadsheet. You can export profile information as a text file for this purpose.

1. Using the Search for Organization by Name panel, enter search criteria to help you locate a profile or set of profiles. You can specify criteria to limit the scope of the search as described in "To Search for a Profile" on page 179.

   The Profile List page is displayed. It presents all of the profiles that meet your search criteria.

2. Select those profiles whose details you wish to export by checking the check boxes next to each profile.

   You can click **Select All** to select all the profiles on the current page.

3. Click **Export List**.

   A new browser window is displayed showing the selected profile data in text format.

You can save this file to your machine. When you open this saved file in a spreadsheet application, you must specify that it has been created in a tab-delimited format.

If the file has been generated by a UNIX installation of the Sterling Multi-Channel Selling Solution, then the file has UNIX end-of-line characters. This means that some Windows text-editing applications such as Notepad may display the file as one continuous line. You can still open the file as a spreadsheet.

To Create a New Profile

Perform this task to create a profile either as a standalone profile (no child profile, no parent profile) or as the top-level profile in a profile hierarchy. To create a child profile of a parent in a profile hierarchy, use "To Create a Profile as a Child of a Parent Profile" on page 185.

1. Click **Go** in the Search for Organization by Name panel on the Sterling Multi-Channel Selling Solution home page.

2. Click **Create Profile** on the Profile List page.

   The Profile Detail page displays.

FIGURE 62. Profile Detail Page: Create Tab

3. At the **Create** tab, enter the pertinent profile information.

See "Info Tab" on page 167 for a description of these fields. At a minimum, you must enter information in the fields marked (*).

> **Note:** Although the Organization website address and the Organization Email address are not required, you must provide these if you wish the partner to be contacted through the Partner Selector function.

You must enter at least one address and define the address as Sold-to, Bill-to, or Ship-to by checking the appropriate boxes.

Enter an Organization ID: this should be a unique identifier for the profile.

4. Click **Save**.

Once you have saved the required information for the new profile, then you can continue through the other profile tabs to enter additional information.

5. (Optional) For enterprise nodes, on the **Info** tab, you can specify the maximum number of users of this node who can be assigned to a particular account.

6. (Optional) At the **Addresses** tab, enter additional sold-to, bill-to, and ship-to addresses for the profile.

    a. Create a new address by clicking **New**, or duplicate an existing address by clicking **Duplicate**.

    b. Enter the pertinent address information.

    c. Define the address as Sold-to, Bill-to, or Ship-to by checking the appropriate box.

    d. Define the address as the default Sold-to, Bill-to, or Ship-to address by checking the appropriate box.

7. (Optional) At the **Detail** tab, enter pertinent information. You can specify what services and skills the profile offers by using the Services and Skill sub-tabs.

    At minimum, you must enter information in the fields marked (*).

8. (Optional) At the **Business** tab, enter the product categories, territories, and approved customer types (vertical markets).

9. (Optional) At the **Hierarchy** tab, create any desired profile hierarchy.

    See "To Create a Profile as a Child of a Parent Profile" on page 185.

10. (Optional) At the **Logo** tab, upload the logo that will appear on the partner's storefront. Typically, the task of uploading a logo is done by a partner administrator of each partner who is enabled for Sterling Partner.com.

11. Save the information you have entered.

12. If you want to assign price lists to this profile, then click the Pricelists tab. See "To Assign a Price List to a Profile" on page 197 for more details.

13. You can add notes about this partner by clicking the **Notes** tab.

You can create partner users for the new partner by clicking **View Partner Users**.

14. You can assign attributes available for assignment to this partner by clicking the **Attributes** tab. See "To Assign an Attribute to a Profile" on page 200 for more details.

To Create a Profile as a Child of a Parent Profile

Perform this task if you want to create a profile as part of an existing profile hierarchy. Typically, you do this if you are creating an organizational hierarchy for a partner to match its organization into departments or divisions.

1. Click **Organization Lookup** in the Channel Management panel on the Sterling Multi-Channel Selling Solution home page.

2. Search for the top-level profile within whose hierarchy you want to create the child.

    See "To Search for a Profile" on page 179. The list of profiles satisfying your search criteria is displayed.

3. Find the profile in the search results list, then click their name to be taken to the Profile Detail page.

4. Click the **Hierarchy** tab.

FIGURE 63. Profile Detail Page: Hierarchy Tab

5. Find the profile that you want to be the parent.

> **Note:** Skip this step if you want the child profile to be child to the top-level, parent profile.

a. Find and click the parent profile in the list of child nodes.

b. Click **Go To Child**.

    This displays the Profile Detail page for the child.

    c.   Click the **Hierarchy** tab for the child.

    d.   Repeat these steps until you find the appropriate node in the hierarchy.

6.   When you find the desired parent profile, click **Create Child**.

    This displays the Profile Detail page for the new partner. Notice that certain information (for example, Profile type) is copied from the parent profile.

7.   Enter the information for the partner.

    See "To Create a New Profile" on page 182.

8.   Save the information you entered.

    •   Click **Save All** to save the information and remain at the Profile Detail page.

    •   Click **Save All and View Partner Users** to save the information and view the partner users for this partner. See "To Create a New Partner User" on page 189 for further information about creating partner users.

    •   Click **Save All and Return to List** to save the information and display the Profile List.

To Move a Child Profile to Another Parent

You can move a child profile to another location in a profile hierarchy. For example, you might want to re-arrange the divisional organization of a profile hierarchy if the partner undergoes a re-organization.

1.   Search for the profile that is the parent in the hierarchy.

    See "To Search for a Profile" on page 179.

2.   In the Profile Detail page, click the **Hierarchy** tab.

3.   In the Hierarchy tab (Figure 49 on page 174), navigate the hierarchy until you find the child that you want to move.

4.   Click on the child you want to move.

5.   Click **Move Child**.

    This displays a list of the other nodes to which you can move the child.

FIGURE 64. Move Child Popup Window

6. Click **Move**.

The child becomes a child of the selected parent.

To Create Profile Addresses

1. Click **Organization Lookup** in the Channel Management panel on the Sterling Multi-Channel Selling Solution home page.

2. Search for a profile.

   Enter the profile name, or enter search criteria such as the profile type or the first few letters of their name, then click **Search**, or click **Show All** to view all the profiles.

   The list of profiles satisfying your search criteria is displayed.

3. Find the profile in the list, then click their name to be taken to the Profile Detail page.

4. Click the **Addresses** tab.

FIGURE 65. Profile Detail Page: Addresses Tab

5. Create a new address by clicking **New**, or duplicate an existing address by clicking **Duplicate**.

6. Enter the pertinent address information.

7. Define the address as Sold-to, Bill-to, or Ship-to by checking the appropriate box.

    When you check the appropriate box, a check box appears that enables you to define the address as the default.

8. Save the information you entered.

    •   Click **Save All** to save the information and remain at the **Addresses** tab.

    •   Click **Save All and View Partner Users** to save the information and view the partner users for this profile. See "To Create a New Partner User" on page 189 for further information about creating partner users.

    •   Click **Save All and Return to List** to save the information and display the Profile List.

To Delete Profile Addresses

1. Search for the profile who has the address you want to delete.

    See "To Search for a Profile" on page 179.

2. Find the profile in the list, then you can click their name to be taken to the Profile Detail page.

3. Click the **Addresses** tab.

4. Find the address you want to delete by clicking **Next** or **Previous**.

5. Click **Delete** to delete the address.

6. Click **Save All**.

To Create a New Partner User

In general, each partner is responsible for managing the partner employees who may log in to the Sterling Multi-Channel Selling Solution. These people are known as partner users. See "Partner Users" on page 4 for further information.

When a profile is created, the channel administrator should create at least one partner user with partner administrator privileges so that this partner administrator may manage their profile and users for that partner: you do this by assigning the user the Profile Administration function.

1. Click **Organization Lookup** in the Channel Management panel on the Sterling Multi-Channel Selling Solution home page.

2. Find the profile for whom you want to create the user.

    See "To Search for a Profile" on page 179.

3. From the list of search results, click the profile.

4. On the Profile Detail page, click **View Users**.

FIGURE 66. Partner User List Page

5. On the User List page, click **Create User**.

FIGURE 67. Create User Page

6.   Enter a username in the **Username** field.

   All usernames must consist of standard keyboard characters. Do not use punctuation marks or spaces in a username. Usernames in the Sterling Multi-Channel Selling Solution must be unique within a storefront, so your first choice of username may be in use. If a username is in use, then a dialog box prompts you to try again with a different username.

7.   Enter a password for this new user. The system verifies that the same password has been entered in both fields. Out of the box, passwords must have at least 8 characters, including at least one digit and one alphabetic character.

8.   If this user is to be a partner user with the partner administrator function, then check the **Profile Administration** check box.

9. Select the attributes you want to assign to this user from the drop-down lists in the **Attributes** panel.

10. Enter any other required information (indicated with an asterisk (*)), as well as any optional information you want to enter.

11. Click **Save**.

When the User Detail page is re-displayed, additional tabs are available.

FIGURE 68. Partner User Detail Page: Info Tab

12. Optionally, enter a spending limit and designate one or more approvers if the user exceeds the spending limit. See "Order Approvals" on page 5 for more information.

Note:	The fields for spending limits and approvers appear only if this feature has been enabled. This is done with a business rule. See CHAPTER 39, "Business Rules Administration".

13. Click **Save**.

14. Click the **Addresses** tab to enter the addresses.

FIGURE 69. Partner User Detail Page: Addresses Tab

You can create as many addresses as you like for the user.

15. Click the **Preferences** tab to set user preferences for the user.

FIGURE 70. Partner User Detail Page: Preferences Tab

16. You can assign attributes that are available for assignment to this user by clicking the **Attributes** tab.

FIGURE 71. Partner User Detail Page: Attributes Tab

17. You can make notes about this user by clicking the **Notes** tab.

FIGURE 72. Partner User Detail Page: Notes Tab

18. Contact the partner to let them know that a partner user has been created.

To Move Users Between Levels in a Profile Hierarchy

Perform this task if you want to move one of your partner's users between the partner nodes in their profile hierarchy. In general, you can only move users to

nodes to which you have access: typically, this means that you can move users to your node or to nodes below your node.

Note:	Moving a user does not move any carts, orders, and so on, associated with the user. When you move a user to another level in the partner hierarchy, notify the administrator for the level. The administrator for the level can recover these lists, orders, and so on, using the steps in "To Recover Carts" on page 262.

1. Click **Organization Lookup** in the Channel Management panel on the Sterling Multi-Channel Selling Solution home page.

2. Find the partner that contains the user you want to move.

   See "To Search for a Profile" on page 179.

3. From the list of search results, click the partner that contains the user.

4. Find the user you want to move.

   If the user belongs to the top level in the partner hierarchy, then click **View Partner Users** on the Profile Detail page. This displays the User List page (Figure 74 on page 196).

   If the user belongs to a level below the top level:

   a. Click the **Hierarchy** tab on the Profile Detail Page.

FIGURE 73. Profile Detail Page: Hierarchy Tab

   b. Find and select the level that contains the user you want to move.

c. Click **Go To Child**.

This displays the Partner Profile Detail Page for that partner. If the user you want belongs to a level below this one, then repeat these steps until you reach the desired level.

d. Click **View Partner Users** to display the User List Page for that level.

FIGURE 74. Partner User List Page

5. In the User List page, find the user you want to move.

6. Click the **Move** icon in the Actions column.

This displays a window with a selection of levels in the profile hierarchy. The levels are displayed as fully-qualified paths. For example, in Figure 75 on page 196, the first selection is AffinityNet East, a division of AffinityNet. The third selection is AffinityNet West - San Jose, a division of AffinityNet West, which is itself a division of AffinityNet.

FIGURE 75. Level Selection Window

7. Click the radio button next to the level to which you want to move the user.

   If you move a user between two node levels of a profile hierarchy, then the functions assigned to the user before the move are retained.

Note:	Moving a user does not move any carts, orders, and so on, associated with the user. When you move a user to another level in the partner hierarchy, notify the administrator for the level. The administrator for the level can recover these lists, orders, and so on, using the steps in "To Recover Carts" on page 262.

8. Click **Move**.

   The user is moved to the selected level.

After you move a user, you should inform the partner (or the node) administrator so that they can examine and modify the information as necessary. This ensures that the information is correct for the new location. For example, the addresses (ship-to, bill-to, and so on) might need to be corrected for the new location.

To Modify an Existing Profile

Over time, your relationship with a partner may change and profile information will need to be updated as contacts and addresses change. As channel administrator, your responsibility is to keep profile information up-to-date by modifying the profile.

As a channel administrator, you can create, modify, and delete partner users. However, once a profile administrator has been created, primary responsibility for partner user administration rests with the partner administrators.

1. Search for the profile as described in "To Search for a Profile" on page 179 and click their name to display their Profile Detail page.

2. Enter the revised information in the appropriate fields.

3. As you enter the information, click **Save** to save the information that you have entered so far.

To Assign a Price List to a Profile

As a channel administrator, you can assign the appropriate price lists to a profile.

1. Click **Organization Lookup** in the Channel Management panel on the Sterling Multi-Channel Selling Solution home page.

2. Search for a profile.

   Enter the profile name, or enter search criteria (you can use an asterisk to perform a wildcard search), then click **Search**, or click **Show All** to view all the profiles.

3. Click on the profile name to display the Profile Detail page.

4. Click the **Pricelists** tab.

FIGURE 76. Available Price Lists for a Partner

5. Click in the check box next to the appropriate price list(s).

6. If you want this price list to be automatically assigned to any profiles beneath this partner in the profile hierarchy, then check the box in the Sharable column.

   A dollar sign ($) designates any list that is shared with a parent (and therefore automatically assigned to the current partner). However, you can still assign that price list to the child and mark it as sharable. This guarantees that the price list will still be assigned to the child (and to its children), even after the assignment is removed from the parent.

   See "Making Price Lists Sharable with Child Profiles" on page 29 for an explanation of sharable price lists.

7. Click **Update**.

   The selected price lists are assigned to that partner.

To Assign a Product Entitlement to a Profile

As a channel administrator, you can assign the appropriate price lists to a profile.

1. Click **Organization Lookup** in the Channel Management panel on the Sterling Multi-Channel Selling Solution home page.

2. Search for a profile.

    Enter the profile name, or enter search criteria (you can use an asterisk to perform a wildcard search), then click **Search**, or click **Show All** to view all the profiles.

3. Click on the profile name to display the Profile Detail page.

4. Click the Product Entitlements tab. The list of product entitlements currently assigned to partner is displayed.

FIGURE 77. Current Product Entitlements for a Partner

5. Click **Assign...**.

FIGURE 78. Product Entitlement Picker Window

6. Search for the product entitlement(s) that you want to assign. Click on their names to add them to the list box.

7. Click **Done**.

    The Product Entitlements tab is re-displayed with the added product entitlements.

8. If you want to make the product entitlement(s) inherited by child nodes of this partner, then check the Sharable check box.

9. Click **Save**.

    The selected product entitlements are assigned to the partner.

To Assign an Attribute to a Profile

As a channel administrator, you can assign the appropriate attributes to a profile. You can assign only those attributes that have been specified as available for assignment during your partner's registration and profile maintenance.

1. Click **Organization Lookup** in the Channel Management panel on the Sterling Multi-Channel Selling Solution home page.

2. Search for a profile.

   Enter the profile name, or enter search criteria (you can use an asterisk to perform a wildcard search), then click **Search**, or click **Show All** to view all the profiles.

3. Click on the profile name to display the Profile Detail page.

1. Click the **Attributes** tab.

FIGURE 79. Available Attributes for a Partner

2. Select values from the drop-down list next to the attributes you want to assign to the partner.

3. Click **Save**.

   The attributes are assigned to the partner.

To Set Up a Credit Card Payment Gateway

1. Display the Profile Detail page.

2. Click the **Commerce** tab.

3. Click **CC Payment Gateway**. The Credit Card Payment Gateway Setup page displays, similar to the following figure.

FIGURE 80. Credit Card Payment Gateway Setup Page

4. Select the appropriate payment processor radio button. The available options are determined during implementation. See the *Sterling Multi-Channel Selling Solution Implementation Guide* for more information.

5. Select the appropriate CV Number Check radio button.

6. Enter the payment gateway information as required. Check the *Sterling Multi-Channel Selling Solution Implementation Guide* for the appropriate values for your payment gateway. At the time of writing, the following values are correct for a CyberSource payment gateway:

    •   Target API Version: 1.7

7. Click **Save**.

To Set Up A Gift Card Payment Gateway

1. Display the Profile Detail page.

2. Click the **Commerce** tab.

3. Check the Gift Card check box.

4. Click **GC Payment Gateway**. The Gift Card Payment Gateway Setup page displays, similar to the following figure.

FIGURE 81. Gift Card Payment Gateway Setup Page

5. Select the appropriate gateway from the Payment Processing Options drop-down list.

   The available options are determined during implementation. See the *Sterling Multi-Channel Selling Solution Implementation Guide* for more information.

6. Enter any required information for the gift card payment gateway.

7. Click **Save**.

To Remove Support For Gift Card Payments

1. Display the Profile Detail page.

2. Click the **Commerce** tab.

3. Uncheck the Gift Card check box.

4. Click **GC Payment Gateway.** The Gift Card Payment Gateway Setup page displays, similar to the following figure.

FIGURE 82. Gift Card Payment Gateway Setup Page

5.   Select None from the Payment Processing Options drop-down list.

6.   Click **Save**.

To View Cart Activity for Selected Profiles

Once you have completed a search and displayed a list of profiles, you can view cart activity for selected profiles. Note that you must have the Commerce function to do this.

1.   Search for and display the list of profiles whose activity you want to view.

     See "To Search for a Profile" on page 179. This displays a search results list.

FIGURE 83. Profile List Page

2. Check the box next to each profile whose activity you want to view.

3. Click **View Commerce Activity**.

FIGURE 84. Product Lists Page: Active Tab

4. Find the cart you want to view.

5. Click the link in the Name column to display the detail for a cart.

FIGURE 85. Cart Detail Page

Payment Accounts

This section describes how to manage payment accounts for a partner.

To Create an MDF Payment Account

1. Navigate to the partner profile for whom you want to create a payment account.

2. In the Accounts panel, select MDF from the View Accounts Details drop-down list.

3. Click **Go**.

    The MDF Account List page displays.

FIGURE 86. **MDF Account List Page**

4. Click **New Account**.

    The New MDF Account page displays.

FIGURE 87. **New MDF Account Page**

5. Enter details for the new MDF account as follows:

    a. Account Name:

    b. Description:

    c. Currency:

    d. Starting Balance:

    e. Available Date:

  f. Expiration Date:

  g. Program Name:

  h. Activity Name:

6. Click **Create**.

  The MDF Account Detail page displays.

FIGURE 88. MDF Account Detail Page

7. You can add or remove funds from this account as described in "To Add Funds to a Payment Account" on page 211 and "To Remove Funds From a Payment Account" on page 211.

To Create an Co-op Payment Account

1. Navigate to the partner profile for whom you want to create a payment account.

2. In the Payment Accounts panel, select Co-op from the View Accounts detail drop-down list.

3. Click **Go**.

The Co-op Account List page displays.

FIGURE 89. Co-op Account List Page

4. Click **New Account**.

The New Co-op Account page displays.

FIGURE 90. New Co-op Account Page

5. Enter details for the new Co-op account as follows:

a. Account Name: A unique name for the account.

b. Description: Provide a description of the account.

c. Currency: The currency in which funds will be maintained.

d. Starting Balance: The starting balance for the account.

e. Available Date: When the account can begin to be used.

f. Expiration Date: When the account stops being usable for funds.

g. Base Amount: The amount on which the funds should be calculated.

h. Currency: The currency in which the base amount is defined.

When the account is created, the base amount and percentage will be used to calculate the amount that should be put in the Co-op account. If the base amount currency is different from the account currency, then the calculated amount will be converted into the account currency. The currency conversion rates are stored in the CMGT_CURRENCIES database table.

6. Click **Create**.

The Co-op Account Detail page displays.

FIGURE 91. Co-op Account Detail Page

7. You can add or remove funds from this account as described in "To Add Funds to a Payment Account" on page 211 and "To Remove Funds From a Payment Account" on page 211.

To Add Funds to a Payment Account

You can add funds to a payment account as follows.

1. Navigate to the payment account detail page.

2. In the Update Account Balance panel, click the **Add Funds** radio button.

3. Enter the amount you wish to add.

4. (Optional) Enter a reason for the addition.

5. Click **Post**.

   The Payment Account Detail page is re-displayed with the updated available balance.

To Remove Funds From a Payment Account

You can remove funds from a payment account as follows.

1. Navigate to the payment account detail page.

2. In the Update Account Balance panel, click the **Remove Funds** radio button.

3. Enter the amount you wish to remove.

4. (Optional) Enter a reason for the removal.

5. Click **Post**.

   The Payment Account Detail page is re-displayed with the updated available balance.

Storefront Administration

When you create a storefront, you create a partner profile that serves as the enterprise partner within the storefront. This partner is the storefront administrator partner and users who belong to this partner are *storefront administrators*.

To Create a Storefront

1. Click **Go** in the Search for Organization by Name panel on the Sterling Multi-Channel Selling Solution home page.

2. Click **Create Storefront** on the Profile List page.

   The Organization Detail: New Profile page displays.

3. Enter basic information for the storefront administrator partner as you would do for any other partner. * denotes required fields.

4. Enter a skin URL for the new storefront. This should be a simple string and must be unique within the Sterling Multi-Channel Selling Solution. For example, you can use "anderel" or "storefront". This string will be used in URLs used to access the storefront. For example:

```
http://server:port/Sterling/en/US/enterpriseMgr/anderel
```

5. Click **Save**.

To Create Storefront Administrators And Users

You must create at least one user to act as the first storefront administrator for the new storefront. See "To Create a New Partner User" on page 189 for details. Notify the organization for whom you have created the storefront and provide them with their new storefront URL and their storefront administrator userid.

To Provide Access To The Catalog For A Storefront

After you create the storefront and a storefront administrator, you provide the storefront with access to the product catalog. You provide access to the product catalog logged into the tenant enterprise as an enterprise administrator.

1. On the home page, click Product Master. The Product Management page displays.

2. Click the product category to which you want to provide access. The **General** tab displays the name and description of the category.

3. Click the **Access Control** tab.

4. Click **Selected Open**. A list of storefronts displays.

5. Click the name of the storefront you just created, then click **Add**.

6. Click Save All Changes.

Repeat the process for each category you want to open to the storefront. When you finish, notify the storefront administrator to allow him or her to set up price lists and products for the storefront.

To Create and Assign A Price List To A Storefront

Storefront administrators manage price lists for their storefront. You log in to the storefront as a storefront administrator to create and manage price lists for the storefront. See "To Create a Price List" on page 676 and "Setting Prices for Products" on page 682 for details.

1. Click Price Lists in the Pricing Administrator panel of the home page. The Price Lists page displays.

2. Click **New Price List**. The **Edit Header** tab of the New Price List page displays.

3. Fill in the price list header information. Note that the Supplier field is set to the storefront. Click the **Active** check box to activate the price list.

4. Click **Create**. The New Price List page re-displays with the name of the price list and several new tabs.

5. Click **Assign Products**. The **Assign Products** tab displays.

6. Search for the products to assign to the storefront price list. You can search by category, by product ID, or you can click the "..." button to browse products.

7. Click **Search**. The page re-displays with the list of products.

8. Assign prices to the listed products, click the Assign check box, then click **Assign**.

You make price lists available to your customers by assigning them to your partners.To enable visitors to your storefront to browse storefront products, assign the price list to the Anonymous User:

1. On the storefront home page, click **Go** in the Search for Organization by Name panel.

2. Click the AnonymousUserPartner link. The Organization Profile page displays.

3. Click the **Pricelists** tab. The Assign Price Lists page displays with the price lists available to the storefront.

4. Click the Assign check box. Click the Sharable check box if the storefront should be able to share the price list.

5. Click **Save**.

See "Assigning Price Lists to Partners" on page 691 for more information.

The system does not recognize a new or modified price list until a tenant enterprise administrator re-generates the product index. Notify the enterprise administrator when you create a new price list so that he or she can re-generate the product index and enable your customers to see the most current price lists for your storefront. See "To Build a New Index" on page 437 for details.

To Create a Skin

1. Navigate to your organization profile.

2. Click the Commerce tab.

3. Click **Create New Skin**.

FIGURE 92. New Skin Page

4. Enter the URL string for the new skin.

5. Click **Save**.

   The Edit Skin page displays.

FIGURE 93. Edit Skin Page

6. You can upload an image to use to brand the storefront skin, and you can upload a cascading stylesheet to use with the storefront skin.

7. Click **Save**.

Managing the Enterprise Profile

In addition to managing partner profiles, some enterprise users are responsible for managing the enterprise profile (that is, the profile of the tenant or storefront partner). Almost all of the profile fields are the same as for partner profiles, and so are covered in their respective sections above. However, some fields are used only by enterprise profiles and child nodes. This section documents these fields.

Info Tab

For enterprise profiles, an additional field is displayed:

- Max Reps Per Account: enter the maximum number of users belonging to this profile that may be assigned to any particular partner profile account.

Commerce Tab

You can manage the skins for the tenant and storefront partners. See "To Create a Skin" on page 213 for more information.

Current Accounts

Use this tab to assign partners to each node of the enterprise. This allows you to manage which partner accounts are managed by which enterprise nodes.

Account Administration

This chapter describes the tasks associated with managing accounts in the Sterling Multi-Channel Selling Solution. These include assigning accounts to nodes in the enterprise hierarchy and assigning accounts to users of these nodes. "Account Management" on page 45 contains an overview of account administration in the Sterling Multi-Channel Selling Solution.

This chapter covers the following topics:

Overview

Account management is the general task of ensuring that the right enterprise users can work with the right partners. It enables enterprise users to use the Sterling Multi-Channel Selling Solution to work with their partner users by creating orders on their behalf, working with their quotes, and so on. In this release of the Sterling Multi-Channel Selling Solution, account management is done by creating a hierarchy of profile nodes within the enterprise partner, creating users at these nodes, and then assigning other non-enterprise partners, known as accounts, to these nodes. Then, enterprise users at these nodes can be assigned to the accounts

assigned to their node, and each enterprise user will then be able to work with a small number of partner accounts.

For example, consider the following enterprise hierarchy of node and users:

FIGURE 94. Example Enterprise Hierarchy

Suppose that there are two non-enterprise partners, Partner A and Partner B, and suppose that you set up the following assignment of these partners to the enterprise nodes and users as follows:

TABLE 18. Account Assignment to Nodes and Users

Node	Assignment to Node	User[a]	Assignment to User
Root	Partner A Partner B	user0a*	Partner A Partner B
		user0b	Partner A

TABLE 18. **Account Assignment to Nodes and Users (Continued)**

Node	Assignment to Node	User[a]	Assignment to User
Node 1	Partner A Partner B	user1a*	Partner A Partner B
		user1b	Partner A
		user1c	Partner B
Node 2		user2a*	
		user2b	
Node 3	Partner A	user3a*	Partner A Partner B[b]
		user3b*	Partner A Partner B[c]
		user3c	Partner A
		user3d	
Node 1-1	Partner A	user11a*	Partner A
		user11b	Partner A
Node 1-2	Partner B	user12a*	Partner B
		user12b	
Node 3-1	Partner B	user31a	Partner B
		user31b	

    a. In this table, manager users are marked with an "*".

    b. This is inferred from the assignment of Partner B to Mode 3-1.

    c. This is inferred from the assignment of Partner B to Mode 3-1.

This table says that both Partner A and Partner B are assigned to the root enterprise node. Partner A is also assigned to Nodes 1, 3, and 1-1. Partner B is also assigned to Nodes 1, 1-2, and 3-1. Note that because user3a and user3b are managers, they are also assigned Partner B because Partner B has been assigned to a child node, Node 3-1.

As a result, you can assign Partner A to any of the users of Nodes 1, 3, and 1-1, but you do not have to assign it to all users of these nodes. For example, user3c has been assigned Partner A, but user3d has not. If user3d logs in to the Sterling Multi-Channel Selling Solution, then they will not be able to view commerce information

generated by Partner A users. Depending on the functions assigned to user3c, this user will be able to view orders, quotes, and so on belonging to Partner A users.

Managers

Manager users are assigned all accounts that have been assigned to their node. They can also assign accounts to other users at their node. See "To Assign an Account to a User" on page 222.

Drawing Accounts from Pool

Enterprise users can pro-actively assign themselves accounts by drawing them from the pool of accounts that have been assigned to their node. You can specify a limit to the number of accounts that a user can have at any one time. See "To Draw Accounts from the Pool" on page 224.

Assigning Accounts to Enterprise Nodes

Before you can assign an account to a user, you must assign the account to the enterprise node to which the user belongs.

To Assign an Account to an Enterprise Node

1. Log in as an enterprise user: you must be a user with write access to the target enterprise node to which you want to assign the account.

2. Navigate to the partner profile page for the target enterprise node, and click the **Assign Accounts** tab.

FIGURE 95. Profile Detail Page: Assign Accounts Tab

3. Check one or more check boxes next to the partners that you want to assign to this node.

4. Click **Assign**.

To Unassign an Account from an Enterprise Node

1. Log in as an enterprise user: you must be a user that has write access to the target enterprise node to which you want to assign the account.

2. Navigate to the partner profile page for the target enterprise node, and click the **Current Accounts** tab.

FIGURE 96. Profile Detail Page: Current Accounts Tab

3. Check one or more check boxes next to the partners that you want to unassign from this node.

4. Click **Unassign**.

Assigning Accounts to Users

Before assigning an account to an enterprise user, make sure that you have assigned the account to their enterprise node. See "Assigning Accounts to Enterprise Nodes" on page 220.

To Assign an Account to a User

1. Log in as an enterprise user: you must be a user that has write access to the target user to which you want to assign the account.

2. Navigate to the user profile page for the target user, and click the **Assign Accounts** tab.

FIGURE 97. User Detail Page: Assign Accounts Tab

3. Check one or more check boxes next to the partners that you want to assign to this user.

4. Click **Assign**.

To Unassign an Account from a User

1. Log in as an enterprise user: you must be a user that has write access to the target user to which you want to assign the account.

2. Navigate to the user profile page for the target user, and click the **Current Accounts** tab.

FIGURE 98. User Detail Page: Current Accounts Tab

3. Check one or more check boxes next to the partners that you want to unassign from this user.

4. Click **Unassign**.

To Draw Accounts from the Pool

1. Log in as an enterprise user.

2. Navigate to your user profile page, and click the **Draw Accounts From Pool** tab.

   The **Draw Accounts From Pool** tab does not appear if the user is a manager. This is because an enterprise user who is a manager can access all accounts assigned to their enterprise node and nodes below this node.

FIGURE 99. User Detail Page: Draw Accounts From Pool Tab

3. Check one or more check boxes next to the partners that you want to assign to yourself.

4. Click **Draw From Pool**.

To Return Accounts to the Pool

1. Log in as an enterprise user.

2. Navigate to your user profile page, and click the **Current Accounts** tab.

FIGURE 100. User Detail Page: Current Accounts Tab

3. Check one or more check boxes next to the partners that you want to return to the pool.

4. Click **Decline**.

CHAPTER 9

Administration Performed by Partner Users

This chapter covers all of the tasks that employees of Sterling Multi-Channel Selling Solution partners perform to maintain their data at the enterprise installation of Sterling Multi-Channel Selling Solution. These tasks are of two types: tasks performed by any partner administrator, and tasks exclusive to an administrator of a partner enabled for Sterling Partner.com.

The following are tasks performed by any partner administrator:

- "Profile Administration for Partners" on page 229
    - "To Maintain Your Profile" on page 229
    - "To Create a Profile in Your Partner Hierarchy" on page 230
    - "To Upload Your Logo File" on page 235
    - "To Create a Forecast File" on page 233
    - "To Upload a Forecast File" on page 233
    - "To Create a Template Group" on page 238
    - "To Upload a New Proposal Template" on page 239
- "User Administration for Partners" on page 240
    - "To Create a User" on page 240
    - "To Create a User at Another Level in a Profile Hierarchy" on page 246

Only users that have the Profile Administration function may perform these tasks. For each partner, the enterprise administrator must create at least one user with the Profile Administration function. If the partner is the top-level in a partner hierarchy, then the partner administrator for that partner must create at least one user with the Profile Administration function for each child partner in the hierarchy.

The Sterling Multi-Channel Selling Solution enterprise administrator is responsible for providing each partner with a URL that brings a partner employee to their Sterling Multi-Channel Selling Solution home page.

Profile Administration for Partners

When an administrator user creates a new partner, they are responsible for creating the partner profile. The partner profile provides basic contact information and defines the business relationship between the enterprise and partner. The administrator must also create at least one partner user who will be the profile administrator. The profile administrator is responsible for adding and modifying information held in the partner profile. The profile administrator cannot modify certain fields that remain the responsibility of the enterprise profile administrators.

The Sterling Multi-Channel Selling Solution enables partners to create and maintain a partner hierarchy. For each partner (node) in the hierarchy, the profile administrator must create at least one partner user who will be the node profile administrator. The node profile administrator is responsible for adding and modifying information held in the partner profile for their specific node.

To Maintain Your Profile

1. Log in to the server at the enterprise site by clicking the appropriate portal link on the Sterling Multi-Channel Selling Solution home page and entering your login information.

   Typically, this link is created for partners by the enterprise administration team, and they need to let you know what this link is.

2. Click the link to your profile. In the reference implementation, you do this by clicking the **Update Your Organization Profile** link on the partner home page.

   The Profile Detail page displays.

FIGURE 101. Organization Profile Detail Page

3. Enter and modify the organization profile information. You cannot modify some fields that are maintained by the enterprise channel administrators.

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

To Create a Profile in Your Partner Hierarchy

1. Access the Profile Detail page using the steps described in "To Maintain Your Profile" on page 229.

2. Click the **Hierarchy** tab.

FIGURE 102. Organization Profile Detail Page: Hierarchy Tab

3. Find the profile that you want to be the parent.

> **Note:** Skip this step if you want the child partner to be a child of the top-level, parent partner.

   a. Find and click the parent profile in the list of child nodes.

   b. Click **Go To Child**.

      This displays the profile tabs for the child.

   c. Click the **Hierarchy** tab for the child.

   d. Repeat these steps until you find the appropriate node in the hierarchy.

4. When you find the desired parent profile, click **Create Child** or **Create Customer**.

   • If you want to create profile for a part of your business organization such as a department or division, then click **Create Child**. Users created under this profile are treated like other partner users: they can log into the enterprise site.

   • If you want to create a profile to represent a customer organization, then click **Create Customer**. Users created under this profile can only enter your storefront: they cannot log into the enterprise site.

   This displays the partner profile tabs for the new partner. Notice that certain information (for example, partner type) is copied from the parent partner.

5. Enter and modify the profile information. You cannot modify some fields that are maintained by the enterprise channel administrators.

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

Forecast Tab

This tab is used by partners to provide detailed forecasts of their sales activities. See "Inventory and Demand" on page 60 for an overview of reseller forecasting in the Sterling Multi-Channel Selling Solution.

Note:	The **Forecast** tab is available only to partners. Storefronts do not have access to the **Forecast** tab.

Before resellers can submit forecasts, the enterprise must specify the interval each forecast should cover and when forecasts should be submitted by resellers to the enterprise. The enterprise must specify the start and end date of their financial year and the start and end date for each quarter.

For example, if the enterprise has a financial year that begins in June of each year, then Quarter 1 of Year 2001 covers the period from June 1, 2000 to August 31, 2000, Quarter 2 covers the period from September 1, 2000 to November 30, 2000, and so on.

There are two steps involved in submitting a forecast:

*   "To Create a Forecast File" on page 233

*   "To Upload a Forecast File" on page 233

Forecast File

The format of a forecast file is as follows:

*   Exactly one header line that comprises quarter and year separated by a *tab*.

*   One body line for each product included in the forecast.

For example:

```
12005
OMDT-7490120
OMDT-7500240
OMDT-75100
OMWS-7600100
OMWS-76101000
```

This example supplies the forecast for the first quarter of the 2005 financial year. You must create the forecast using the enterprise's product IDs for each product. The quantity must be a positive integer or zero ("0").

You can create a forecast file in Excel spreadsheet format, or you can create a forecast file using your preferred text editor. If you create the data using a spreadsheet other than Microsoft Excel, then you can simply export the data as a tab-delimited file. Follow the instructions provided by your spreadsheet application for further details.

> **Note:** You must take care to ensure that your forecast file follows this *tab-delimited* format exactly. Make sure that no lines precede the header line.

To Create a Forecast File

1. Access the Partner Profile Detail page using the steps described in "To Maintain Your Profile" on page 229.

2. Click the **Forecast** tab.

FIGURE 103. Partner Profile Detail Page: Forecast Tab

3. Click **in Excel format** for the information to be displayed in an Excel spreadsheet.

    The Microsoft Excel application is opened in a browser window and the information is displayed in an Excel spreadsheet. Use the Excel program to save or print the forecast information.

4. On your local machine, make the appropriate updates to the forecast file.

Once you have created the forecast file, then you are ready to upload the file to the Sterling Multi-Channel Selling Solution.

To Upload a Forecast File

Having created a forecast file, you must upload it to the enterprise server. You can use the Sterling Multi-Channel Selling Solution browser interface to do this as follows:

1. Log into the Sterling Multi-Channel Selling Solution.

2. Navigate to your Partner Profile Detail page.

3. Click the **Forecast** tab.

4. Enter the forecast file by completing one of the following:

   • Enter the path to the forecast file on your local machine.

   • Click **Browse...** and navigate to the forecast file on your local machine. Click **Open**.

5. Click **Upload**.

Commerce Tab

Use this tab to specify payment options and shipping options that you want to support. The selected options are displayed to customers when they are editing the order header information before placing an order.

1. Access the Partner Profile Detail page as described in "To Maintain Your Profile" on page 229.

2. Click the **Commerce** tab.

FIGURE 104. Partner Profile Detail Page: Commerce Tab

3. Update the Payment Options and Shipping Options as appropriate.

4.   Click **Save**.

Payment Options

You must select one or both of Account or Credit Card: if you do not, then customers placing a split order will not be able to complete their order.

Shipping Options

You must select at least one of these options: if you do not, then customers placing a split order will not be able to complete their order.

Pricing Options

If your price lists are stored remotely, then check the Are prices stored remotely? checkbox. To retrieve price lists on a regular basis, specify the price list expiry time, in hours. Leave the expiry time field blank if prices should never expire.

Storefront Skins

Storefront administrators can specify the storefront look and feel, or skin, that is presented to customers when they log in to the storefront, including a logo and a cascading style sheet (CSS) file that can be used to manage the look-and-feel of your storefront pages. If you are enabled for Sterling Partner.com, then the logo is displayed automatically on the Web pages. Otherwise, the enterprise must customize the Web pages to display the logo.

To Upload Your Logo File

1.   As a storefront administrator, access the storefront Partner Profile Detail page by logging in to your storefront, then clicking the **View Your Organization Profile** link under the **System Administration** panel. The storefront URL is similar to ***http://<server>:<port>/Sterling/en/US/enterpriseMgr/ <your_storefront>***.

2.   Click the **Commerce** tab.

FIGURE 105. Partner Profile Detail Page: Create New Skin (Commerce Tab)

3.   To create a new skin:

   a.   Click the **Create New Skin** button. The **New Storefront Skin** page
        displays:

FIGURE 106. New Storefront Skin Page

   b.   Enter the name to be used in the URL that customers will use to access this
        skin. For example, the name of the Allnet skin is allnet. To access the
        Allnet skin, customers enter the standard URL, similar to **http://**

> *<server>:<port>/***Sterling/en/US/enterpriseMgr,** and then append the name of the skin, **allnet**:
>
> ```
> http://<server>:<port>/Sterling/en/US/enterpriseMgr/allnet
> ```
>
> c. Click **Save**. The Edit Skin Choices page displays, similar to the following figure:

FIGURE 107. Edit Skin Choices Page

4. Select the logo file.

    There are two ways to select the file:

    •   Click **Browse...** and select the appropriate filename.

Attention: The logo file must be 181x41 pixels to display properly.

    •   Enter the filename (including the path) in the Logo URL or Uploaded File Path field.

5. Click **Upload**.

6. Click **Preview** to preview the logo. The logo displays in a separate **Logo Preview** window.

7. If you want to upload a CSS file, then click **Browse...** next to the Upload a Stylesheet (CSS) File to Server text field, and select the CSS file on your local system.

8.   Click **Upload**.

9.   Click **Save**.

Print Templates Tab

As a user with the Sales Executive function, use this tab to manage the templates used to generate proposals. See "Proposals" on page 50 for more information about proposals. You can create groups of templates and upload templates that your sales representatives can use when they are presenting proposals to contacts.

Templates are XSL files: before your sales representatives can use them, you must upload them to the Sterling Multi-Channel Selling Solution so that they can be selected when a sales representative is creating a proposal.

Templates are organized by groups: for example, you may choose to organize them so that all the PDF files are in one group whereas HTML templates are in another.

To Create a Template Group

1.   Click the Print Templates tab.

     You only see this tab if you have been assigned the Sales function.

FIGURE 108. Partner Profile Detail Page: Print Templates Tab

2.   Enter a name for the new group.

3.   Click **Create Group**.

     The new template group is created.

To Upload a New Proposal Template

Before you upload a template, make sure that it conforms to the XSL style that you want, and check that you know where it is stored on your local file system. See "Proposal Templates" on page 1123 for an example of a proposal template.

1. Click the Print Templates tab.

2. Click the link to the group within which you want to add the proposal template.

FIGURE 109. Partner Profile Detail Page: Create Template

3. Enter a brief description of the new template so that your sales representatives will know when to use it.

4. Click **Browse...**.

5. In the File Upload window, navigate in your local file system to the location of the template file. Select the file and click **Open**.

   The File text field is populated with the path to the template file.

6. Select the locale for which the template should be used.

7. Specify whether the template is to be used to generate PDF files or some other format of proposal. By default, only PDF files are supported.

8. Click **Upload Template**.

   The file is uploaded to the Sterling Multi-Channel Selling Solution. You can see it listed with the other templates in its group.

User Administration for Partners

When a profile is first created, the enterprise channel administrator must create at least one partner user with the profile administrator function. This *profile administrator* manages the partner employees who may log into the Sterling Multi-Channel Selling Solution users for that partner.

The profile administrator can create a hierarchy of profiles (see "To Create a Profile in Your Partner Hierarchy" on page 230). The profile administrator can create users at the partner level (called partner users), and users at any level in the hierarchy (called node users). At each level in the hierarchy, the profile administrator must create at least one user with the profile administrator function called the node administrator. The node administrator can create and maintain users only at their own specific node.

Users (either partner or node) who do not have the administrator function assigned to them can view and modify their partner profile information. However, they cannot assign functions to users. If spending limits is activated, then they cannot modify spending limits and the approver list.

Partner users have access to any level in the hierarchy. *Node users* are limited to the node for which they were created.

This release supports *user preferences*: these control the user some aspects of the user experience as they use the Sterling Multi-Channel Selling Solution. Typically, users will manage their own preferences, but as a partner administrator you can set a user's preferences if you wish.

To Create a User

Perform this task if you are a profile administrator creating a partner user, or if you are a node administrator creating a user within your own level in the partner hierarchy.

1. Log into the server at the enterprise site by clicking the appropriate portal link on the Sterling Multi-Channel Selling Solution home page.

    Typically, this link is created for partners by the enterprise administration team, and they need to let you know what this link is.

2. Click the link to your user accounts. In the reference implementation, you do this by clicking **Update User Accounts** on the partner home page.

   This displays the User List page.

Note:	You can also access the User List page from your Profile Detail page. To do this, click **View Users**.

FIGURE 110. User List Page

3. On the Partner User List page, click **Create User**.

FIGURE 111. Partner Create New User Page

4. On the Partner User Detail page, enter information in the required fields (marked with an asterisk (*)).

    All usernames must consist of standard keyboard characters. Do not use punctuation marks or spaces in a username. All usernames in the Sterling Multi-Channel Selling Solution must be unique so your first choice of username may be already taken. If so, try again with a different username.

    Select the type of user you want to create. Consider the following:

    • When you are creating users for a partner, you can also assign a Procurement Type user type. Users of this type can facilitate punch-in from an external system.

    • When you are creating users for a storefront, you can also assign the Default XML Identity user type. The system assumes the Default XML Identity user as the default user if an incoming XML message request does not contain any information to identify the user. You can assign the Default XML Identity user type only if the appropriate configuration is set up. For more information about setting up the configuration for the

Default XML Identity user, see the *Sterling Multi-Channel Selling Solution Implementation Guide*.

Select the functions that you want this user to perform. If you are assigning the profile administrator function to this user, check the **Profile Administration** check box.

Select the preferred locale which will apply when the user logs in. The drop-down list displays the names for the supported locales.

Select the attributes you want to assign to this user from the drop-down lists in the **Attributes** panel.

5. Enter any additional pertinent information.

6. Click **Save**.

When the User Detail page re-displays, new tabs are available.

FIGURE 112. Partner User Detail Page: Info Tab

7. If you are creating users for a partner:

• Enter a spending limit and designate one or more approvers if you want to limit the user from placing orders above a certain amount.

Note:	The fields for spending limits and approvers appear only if this feature has been enabled. This is done with a business rule. See CHAPTER 39, "Business Rules Administration" for information about accessing business rules.

For the approver name, enter a valid username within the same hierarchy as the user for whom you are establishing the spending limit.

You must enter both a spending limit and an approver for the approval process to take effect.

See "Order Approvals" on page 5 for more information.

• (Optional) Enter one or more usernames in the Proxy for Approvals field.

These must be valid usernames within the same hierarchy as the user. This field enables the user defined by the profile to approve any orders for which the listed users are approvers.

8. Click **Save**.

9. Click the **Addresses** tab to enter the addresses.

FIGURE 113. Partner User Detail Page: Addresses Tab

10. Click the **Preferences** tab to set user preferences for the user.

FIGURE 114. Partner User Detail Page: Preferences Tab

11. You can assign attributes to this user by clicking the **Attributes** tab. You can assign only those attributes that have been pre-defined as available for assignment to the user during the user's registration and profile maintenance.

FIGURE 115. Partner User Detail Page: Attributes Tab

12. You can enter notes about this user by clicking the **Notes** tab.

FIGURE 116. Partner User Detail Page: Notes Tab

Once you have created the user, contact the relevant person to let them know that a partner user has been created for them.

To Create a User at Another Level in a Profile Hierarchy

Perform this task if you are a partner administrator creating a user for one of the child partners in the partner hierarchy. Node administrator*s* should use the procedure described in "To Create a User" on page 240.

1. Access the Profile Detail page as described in "To Maintain Your Profile" on page 229.

FIGURE 117. Profile Detail Page

2. Click the **Hierarchy** tab.

FIGURE 118. Hierarchy Tab

3. Find the partner for whom you want to create users.

    a.   Find and click the partner in the list of child partners.

    b.   Click **Go To Child**.

        This displays the Profile Detail page for the selected partner. Notice that the Partner Level and Partner Type fields are read only.

    If the partner is at a lower level, then click the **Hierarchy** tab and repeat these steps until you find the appropriate node in the hierarchy.

4.   When you display the Profile Detail page for the desired partner, click **View Partner Users**.

    This displays the users for that specific node level.

5.   Click **Create User**.

    This displays the Partner User Detail page.

FIGURE 119. Partner User Detail Page

6. On the Partner User Detail page, enter the information in the required fields (marked with an asterisk (*)).

    All usernames must consist of standard keyboard characters. Do not use punctuation marks or spaces in a username. All usernames in the Sterling Multi-Channel Selling Solution must be unique so your first choice of username may be already taken. If so, try again with a different username.

    Select the functions that you want this user to perform. To assign the Profile Administration function to this user, check the **Profile Administration** check box.

    Select the preferred locale which will apply when the user logs in. The drop-down list displays the names for the supported locales.

7. Enter additional information, as appropriate.

8. Click **Save**.

9. If you are creating users for a direct commerce partner, then enter a spending limit and designate one or more approvers if the user exceeds the spending limit. See "Order Approvals" on page 5 for more information.

> **Note:** The fields for spending limits and approvers appear only if this feature has been enabled. This is done with a business rule. See CHAPTER 39, "Business Rules Administration".

10. Click **Save**.

11. Click the **Addresses** tab to enter addresses for the user.

12. Contact the relevant person to let them know that a partner user has been created for them.

To Modify a User

Perform this task if you are a profile administrator modifying a partner user, or if you are a node administrator modifying a user within your own level in the partner hierarchy.

> **Attention:** If you are a partner administrator of a storefront partner, then you must not change the username or password of the Anonymous User of the storefront.

1. Log into the server at the enterprise site by clicking the appropriate portal link on the Sterling Multi-Channel Selling Solution home page.

    Typically, this link is created for partners by the enterprise administration team, and they need to let you know what this link is.

2. Click the link to your user accounts. In the reference implementation, you do this by clicking **Update User Accounts** on the partner home page.

    This displays the Partner User List page.

Note:	You can also access the Partner User List page from your Partner Profile Detail page. To do this, click **View Users**.

FIGURE 120. Partner User List Page

3. On the User List page, click the username for the partner user whose details you wish to modify.

FIGURE 121. User Detail Page

4. On the Partner User Detail page, modify the appropriate details for this partner user and click **Save**.

To Modify a User at Another Level in the Partner Hierarchy

Perform this task if you are a partner administrator modifying a user belonging to one of the child partners in your partner hierarchy. Node administrato*r*s should use the procedure described in "To Modify a User" on page 249.

1. Access the Profile Detail page as described in "To Maintain Your Profile" on page 229.

FIGURE 122. Profile Detail Page

2. Click the **Hierarchy** tab.

FIGURE 123. Profile Detail Page: Hierarchy Tab

3. Find the profile that has the user you want to modify.

    a. Find and click the profile in the list of child profiles.

    b. Click **Go To Child**.

        This displays the Hierarchy page for the selected partner.

    If the partner is at a lower level, then click the **Hierarchy** tab and repeat these steps until you find the appropriate node in the hierarchy.

4. When you display the Hierarchy page for the desired partner, click **View Users**.

    This displays the users for that specific node level (Figure 124 on page 253).

FIGURE 124. User List Page for a Specific Child Node

5. Click the user name of the user you want to modify.

    This displays the Partner User Detail page for the child partner user.

6. Modify the appropriate details for this partner user.

7. Click **Save**.

To Move a User from the Top Level in a Profile Hierarchy

Perform this task if you are a partner administrator moving a partner user from the top level to another level in the partner hierarchy. If you want to move a user from a

lower level in the partner hierarchy, then see "To Move a User from a Level Below the Top Level in a Profile Hierarchy" on page 255.

Note:	Moving a user does not move any carts, orders, and so on, that belong to the user. To recover these items after you move a user, follow the steps in "To Recover Carts" on page 262.

1. Log into the server at the enterprise site by clicking the appropriate portal link on the Sterling Multi-Channel Selling Solution home page.

   Typically, this link is created for partners by the enterprise administration team, and they need to let you know what this link is.

2. Click the link to your user accounts. In the reference implementation, you do this by clicking **Update User Accounts** on the partner home page.

   This displays the Partner User List page.

Note:	You can also access the Partner User List page from your Profile Detail page. To do this, click **View Users**.

FIGURE 125. Partner User List Page

3. On the User List page, find the user that you want to move.

4. Click the **Move** icon.

   A window displays with a selection of levels in the partner hierarchy. The levels are displayed as fully-qualified paths.

Choose the Node that the User should belong to.

○ DataSolve

Move   Cancel

FIGURE 126. Level Selection Window

5. Click the radio button next to the level to which you want to move the user.

   If you move a user between two node levels of a partner hierarchy, then the functions assigned to the user before the move are retained. If you move a user from the partner (top) level to a node level (or the reverse), then the functions assigned to the user revert to the default functions assigned at the destination.

6. Click **Move**.

   The user is moved to the selected level.

After a user is moved, the profile administrator (or the node administrator of the level to which they are moved) should examine and modify the information as necessary. This ensures that the information is correct for the new location. For example, the addresses (ship-to, bill-to, and so on) might need to be corrected for the new location. See "To Modify a User" on page 249 or "To Modify a User at Another Level in the Partner Hierarchy" on page 251.

To Move a User from a Level Below the Top Level in a Profile Hierarchy

Perform this task if you are a profile administrator moving a partner user from the top level to another level in the partner hierarchy. If you want to move a user from the top level in a partner hierarchy, then see "To Move a User from the Top Level in a Profile Hierarchy" on page 253.

> **Note:** Moving a user does not move any carts, orders, and so on, that belong to the user. To recover these items after you move a user, follow the steps in "To Recover Carts" on page 262.

1. Access the Profile Detail page as described in "To Maintain Your Profile" on page 229.

FIGURE 127. Profile Detail Page

2. Click the **Hierarchy** tab.

FIGURE 128. Profile Detail Page: Hierarchy Tab

3. Find the partner that has the user you want to move.

   a. Find and click the partner in the list of child partners.

   b. Click **Go To Child**.

      This displays the Profile Detail page for the selected partner. Notice that the Profile Level and Profile Type fields are read only.

   If the profile is at a lower level, then click the **Hierarchy** tab and repeat these steps until you find the appropriate level in the hierarchy.

4. When you display the Profile Detail page for the desired node, click **View Users**.

   This displays the users for that specific level (Figure 129 on page 257).

FIGURE 129. Users for a Specific Level

5. Find the username of the user you want to move.

6. Click the **Move** icon.

   A window displays with a selection of levels in the partner hierarchy. The levels are displayed as fully-qualified paths. For example, in Figure 130 on page 258, the first selection is AffinityNet, the top level in the hierarchy. The third selection is AffinityNet West - San Jose, a division of AffinityNet West, which is itself a division of AffinityNet.

Choose the Node that the User should belong to.

○ DataSolve

Move Cancel

FIGURE 130. Level Selection Window

7. Click the radio button next to the level to which you want to move the user.

    If you move a user between two node levels of a partner hierarchy, then the functions assigned to the user before the move are retained. If you move a user from the partner (top) level to a node level (or the reverse), then the functions assigned to the user revert to the default functions assigned at the destination.

8. Click **Move**.

    The user is moved to the selected level.

After a user is moved, the profile administrator (or the node administrator of the level to which they are moved) should examine and modify the information as necessary. This ensures that the information is correct for the new location. For example, the addresses (ship-to, bill-to, and so on) might need to be corrected for the new location. See "To Modify a User" on page 249 or "To Modify a User at Another Level in the Partner Hierarchy" on page 251.

To Delete a User

Perform this task if you are a partner administrator deleting a partner user, or a node administrator deleting a node user below you in the partner hierarchy. You can also use this task if you are a node administrator deleting a user within your own level in the partner hierarchy. See "Profile Hierarchy" on page 3 for an explanation of the parent-child node concept.

1. Log into the server at the enterprise site by clicking the appropriate portal link on the Sterling Multi-Channel Selling Solution home page.

    Typically, this link is created for partners by the enterprise administration team, and they need to let you know what this link is.

2. Click the link to your user accounts. In the reference implementation, you do this by clicking **Update User Accounts** on the partner home page.

   This displays the Partner User List page.

Note:	You can also access the Partner User List page from your Partner Profile Detail page. To do this, click **View Users**.

FIGURE 131. Partner User List Page

3. Click **Delete** in the Actions column next to the partner user you wish to delete from the system.

4. A dialog box asks you to confirm deletion: click **OK** to continue.

   The User List page is re-displayed and the deleted user is not listed.

To Delete a User at Another Level in the Profile Hierarchy

Perform this task if you are a partner administrator deleting a user belonging to one of the child profiles in your partner hierarchy. Node administrator*s* should use the procedure described in "To Delete a User" on page 258.

1. Access the Partner Profile Detail page as described in "To Maintain Your Profile" on page 229.

2. Click the **Hierarchy** tab.

FIGURE 132. Profile Detail Page: Hierarchy Tab

3.   Find the profile that has the user you want to delete.

     a.   Find and click the partner in the list of child profile.

     b.   Click **Go To Child**.

          This displays the Partner Profile Detail page for the selected partner
          (Figure 133 on page 261).

     If the profile that you are looking for is at a lower level, then click the
     Hierarchy tab and repeat these steps until you find the appropriate node in
     the hierarchy.

FIGURE 133. Partner Profile Detail Page: Node Level

4. When you display the Partner Profile Detail page for the desired profile, click **View Users**.

    This displays the users for that specific node level (Figure 134 on page 261).

FIGURE 134. Users for a Specific Node

5. Click **Delete** in the Actions column next to the partner user you wish to delete from the system.

6. A dialog box asks you to confirm deletion: click **OK** to continue.

   The User List page is re-displayed and the deleted user is not listed.

To Recover Carts

A deleted partner user might have one or more active carts. The profile administrator can display these carts and delete them or transfer them to other existing partner users.

1. Log into the Sterling Multi-Channel Selling Solution at the enterprise site by clicking the appropriate portal link on the Sterling Multi-Channel Selling Solution home page.

   Typically, this link is created for partners by the enterprise administration team, and they need to let you know what this link is.

2. Click the link for updating user accounts.

   This displays the User List page (see Figure 135 on page 262). You can also access this page from the Partner Profile Detail page. Click **View Users**.

FIGURE 135. User List Page

3. Click **List Recovery** to display the lists to be deleted or transferred.

FIGURE 136. **List Recovery Page**

4. Check one or more boxes next to the list numbers to select the lists for deletion or transfer.

   You can click the Name to display the contents of the cart. You can add to or modify the cart as necessary.

5. You can do one of the following:

   • Click **Delete** to delete the selected list(s).

   • Select a user from the drop-down list, then click **Transfer to**.

Opportunity Administration by Partners

Enterprise lead administrators create leads so that they can assign the leads to their sales partners. They become sales opportunities that partners can close. Leads can only be assigned to a partner if one of the partner users of that partner has been assigned the Sales Executive function: we sometimes refer to these users as sales managers. In general, it is the responsibility of a profile administrator to ensure that at least one of their partner users has been assigned the Sales Executive function.

Only one of your partner users can be assigned the Sales Executive function. To change who performs this function, navigate to the user profile for the new sales manager, and add the Sales Executive function to them: this action automatically removes the function from the old sales manager.

When a lead administrator assigns a lead to a partner, an *opportunity* is created: it is a copy of the lead and it contains all of the contact information and product list information contained in the original lead.

Each partner sales manager can accept or reject the opportunities assigned to their partner. If they accept an opportunity, then they can work the opportunity themselves or they can delegate the opportunity to *partner sales representatives*: partner users who have been assigned the Sales function.

Proposals are product lists associated with an opportunity. When a lead is first assigned to a partner, the product list associated with the lead is copied to the opportunity, so that an opportunity always has at least one proposal associated with it. Sales managers and sales representatives can create new proposals: these can be associated with an existing opportunity or you can create a new proposal that is associated with a new opportunity. See "To Create a New Proposal by Copying an Existing Proposal" on page 280 and "To Create a New Proposal and New Opportunity" on page 280.

To Create Partner Sales Representatives

To create Partner Sales Representatives, you create partner users and assign them the Sales function. See "User Administration for Partners" on page 240 for information about creating and modifying partner users.

To Accept an Opportunity

Only users who have been assigned the Sales Executive function can accept or decline opportunities.

1. Log in to the server at the enterprise site by clicking the appropriate portal link on the Sterling Multi-Channel Selling Solution home page.

    Typically, this link is created for partners by the enterprise administration team, and they need to let you know what this link is.

2. Navigate to your Account Activity page, then click the Opportunities tab.

    The Opportunities tab for the Account Activity page displays (Figure 137 on page 265).

3. Find the opportunity that you want to accept. You can view its detail by clicking its link.

FIGURE 137. Opportunities List Page for Partners

4. Click **Accept** for that opportunity.

   The icons disappear and the Detail Status column shows "Accepted".

To Decline an Opportunity

1. Log into the server at the enterprise site by clicking the appropriate portal link on the Sterling Multi-Channel Selling Solution home page.

   Typically, this link is created for partners by the enterprise administration team, and they need to let you know what this link is.

2. Click the link to take you to your opportunities. In the reference implementation, click **Opportunity & Proposal Activity** in the Commerce Tasks panel.

   This displays the Opportunities tab for the Account Activity page (Figure 137 on page 265).

3. Find the opportunity that you want to decline.

FIGURE 138. Opportunities List Page for Partners

4. Click **Decline**.

The Opportunity Decline pop-up window displays.

FIGURE 139. Opportunity Decline Popup

5. Enter a reason for declining the opportunity.

6. Click **Decline**.

The opportunity is removed from the Opportunities tab.

To Delegate an Opportunity

Only users who have been assigned the Sales Executive function can delegate
opportunities. You must first accept an opportunity (see "To Accept an
Opportunity" on page 264) before you can delegate it. You can delegate

opportunities only to users who have been assigned the Sales Executive or Sales function.

1. Log into the server at the enterprise site by clicking the appropriate portal link on the Sterling Multi-Channel Selling Solution home page.

    Typically, this link is created for partners by the enterprise administration team, and they need to let you know what this link is.

2. Click the link to take you to your opportunities. In the reference implementation, click Account Activity on your Partner Home page and then click the Opportunities tab.

    This displays the Opportunities tab for the Account Activity page (Figure 137 on page 265).

FIGURE 140. Opportunities List Page for Partners

3. Find the opportunity that you want to delegate.

4. Click the check box next to the opportunity.

    No check box indicates that the opportunity has not yet been accepted or declined. You must accept an opportunity before you can delegate it. See "To Accept an Opportunity" on page 264.

5. Repeat the last two steps for each opportunity you want to delegate.

6. Click **Delegate**.

    A pop-up displays.

FIGURE 141. Delegate Opportunity Popup

7. Select a user from the drop-down list. Only users who have been assigned the Sales Executive or Sales function are listed.

8. Click **OK**.

To Add or Modify General Opportunity Information

Only partner users who have been assigned the Sales Executive or Sales function can work on opportunities.

- Users who have the Sales Executive function can work on any opportunity assigned to their partner and which have been accepted.

- Users who have the Sales function can work on any opportunity assigned to their partner and which have been accepted by the Sales Executive user and delegated to the user.

If you are a user who has not been assigned either the Sales Executive or Sales function, then you will not see the Opportunities tab in your workspace.

1. Log into the server at the enterprise site by clicking the appropriate portal link on the Sterling Multi-Channel Selling Solution home page.

   Typically, this link is created for partners by the enterprise administration team, and they need to let you know what this link is.

2. Click the link to take you to your opportunities. In the reference implementation, click **Opportunity & Proposal Activity** in the Commerce Tasks panel.

   This displays the Opportunities tab for the Account Activity page (Figure 142 on page 269).

FIGURE 142. Opportunities List Page for Partners

3. Find the opportunity you want to modify.

    An opportunity must be accepted before you can modify it. See "To Accept an Opportunity" on page 264.

4. Click the opportunity name.

    This displays the opportunity page.

FIGURE 143. Opportunity Detail Page: Edit Properties Tab

5.   Modify the desired information.

   Some fields are read-only and can only be modified by the *Enterprise Lead Administrator.* You can use the calendar widget (to the right of the Expected Close Date field) to select a date for that field.

6.   Click **Save**.

To Prepare a Proposal for a Contact

The primary purpose of an opportunity is to help you close business with the opportunity contact. Often you do this by preparing a proposal to offer to the contact: this comprises a list of products with your prices so that you can send this to the contact.

1.   Navigate to your workspace.

2.   Click the **Proposals** tab.

3.   Click the link to the proposal that you want to work on.

4.   Add and configure products on the product list as the contact requests them.

5. For each line item, the price that you would pay to buy the line item from the enterprise is displayed in the Extended Price column as the first price you see.

6. Enter numbers into the Uplift and Discount fields. A revised extended price is calculated each time you click **Calculate** or **Save**.

   The revised extended price is calculated as follows:

   Extended Price x (100 + Uplift%) x (100 - Discount%)

   For example, if the original extended price is $50.00 and you enter an uplift of 15% and a discount of 5%, then the revised extended price is:

   $50 x (115%) x(95%) = $54.62.

   Clicking **Calculate** does not save the uplift or discount percentages whereas **Save** does.

7. You can review the Total prices and margins for the proposal in the Summary panel.

| Percent Discount: **6%** | Total Price: **$5,168.41** |
| Absolute Discount: **$321.81** | Total Margin: **$356.91** |

FIGURE 144. Proposal Summary Panel

   The Total margin is calculated as the difference between the total of the revised extended prices and the total of the extended price: it is the difference between the price that you are offering the contact and what you would have to pay for this cart.

8. You can view a printable version of this proposal by clicking **Print View**.

FIGURE 145. Print Proposal Preparation Page

9. Select a template to use to generate the proposal. These templates have been previously uploaded by your sales manager. See "To Upload a New Proposal Template" on page 239.

10. Select the proposal items that you want to include in the view and enter text that you want to accompany the proposal.

FIGURE 146. Proposal Field Selection

11. Click **Print View**.

A new browser window opens up to display a printable form of the proposal. Note that this window displays the discounts offered on each line item, but not the uplifts.

12. If you want, you can click **Save** to save a copy of the proposal template settings with the proposal.

To Create an Order from an Opportunity

1. Log into the server at the enterprise site by clicking the appropriate portal link on the Sterling Multi-Channel Selling Solution home page.

Typically, this link is created for partners by the enterprise administration team, and they need to let you know what this link is.

2. Click the link to take you to your opportunities. In the reference implementation, click **Opportunity and Proposal Activity** in the Commerce Tasks panel.

This displays the Opportunities tab for the Account Activity page (Figure 147 on page 274).

3. Find the opportunity for which you want to add products.

An opportunity must be accepted before you can add products. See "To Accept an Opportunity" on page 264.

FIGURE 147. Opportunities List Page for Partners

4.   Click the opportunity name.

The opportunity detail page displays.

FIGURE 148. Opportunity Detail Page: Edit Properties Tab

5. Click **Manage Proposals**.

   The Product List tab displays.

FIGURE 149. Opportunity Detail Page: Manage Proposals Tab

6. Add products using the Catalog Search panel at the top left-hand corner of the page.

   You can add products in one of the following ways:

   • Click **Advanced Search** to browse through the catalog and add products.

   • Enter Product IDs and click **Go** to add products by entering specific product IDs.

   As you add products, they appear in the product list. When you are finished adding products to the cart, then click the **Cart** link.

FIGURE 150. Opportunity Detail Page: Manage Proposals Tab with Product

7. Decide whether to convert any of the current "below the line" (BTL) items to "above the line" items. Below the line items are not included when you convert the proposal into an order.

8. Click **Convert to Order** when you are ready to convert the proposal to an order.

To Add Notes About An Opportunity

1. Log into the server at the enterprise site by clicking the appropriate portal link on the Sterling Multi-Channel Selling Solution home page.

   Typically, this link is created for partners by the enterprise administration team, and they need to let you know what this link is.

2. Click the link to your opportunities.

   This displays the Opportunities tab for the Lists page (Figure 151 on page 277).

3. Find the opportunity for which you want to add notes.

   An opportunity must be accepted before you can add notes. See "To Accept an Opportunity" on page 264.

FIGURE 151. Opportunity List Page for Partners

4. Click the opportunity name.

   This displays the opportunity detail page.

FIGURE 152. Opportunity Detail Page: Edit Properties Tab

5. Click **Add Notes**.

   This displays the Add Notes tab.

FIGURE 153. Opportunity Detail Page: Add Notes Tab

6. Enter the note text.

7. Click **Add Note**.

To Close an Opportunity

As partner sales manager or sales representative, it is your responsibility to close opportunities when you are no longer working on them. Closing opportunities enables the enterprise to review how well partners perform in closing leads and how valuable the opportunities to their partners.

When you close an opportunity, you must mark it as a Win or a Loss. This helps the enterprise determine how successful partners are in transacting business.

1. Log into the server at the enterprise site by clicking the appropriate portal link on the Sterling Multi-Channel Selling Solution home page.

   Typically, this link is created for partners by the enterprise administration team, and they need to let you know what this link is.

2. Click the link to your opportunities.

   This displays the Opportunities tab for the Lists page (Figure 151 on page 277).

3. Click the link to the opportunity that you want to close.

4. In the Status drop-down list, select "Closed".

5. If the opportunity is being closed as a Win, then enter a value in the Expected Revenue field. Be sure to use the value as expressed in the Enterprise currency (for example, US dollars).

6. Click **Save**.

FIGURE 154. Close Opportunity Window

7. Enter a note regarding the reason for winning or losing the opportunity.

8.   Click **Win** or **Loss**.

     The opportunity is closed and becomes read-only in your workspace.

To Create a New Proposal by Copying an Existing Proposal

If you copy an existing proposal, then it is created with all of the same opportunity information of the original proposal.

1.   Log into the server at the enterprise site by clicking the appropriate portal link on the Sterling Multi-Channel Selling Solution home page.

     Typically, this link is created for partners by the enterprise administration team, and they need to let you know what this link is.

2.   Click **Account Activity**.

3.   Click the **Proposals** tab.

FIGURE 155. Proposals List Page

4.   In the list of proposals, find the proposal that you want to copy and click the link to its detail page.

5.   On the Proposal Detail page, click **Save as New**.

     A new proposal is listed. You can work this proposal just as you can the original proposal.

To Create a New Proposal and New Opportunity

If you copy an existing proposal, then it is created with all of the same opportunity information of the original proposal.

1. Log into the server at the enterprise site by clicking the appropriate portal link on the Sterling Multi-Channel Selling Solution home page.

   Typically, this link is created for partners by the enterprise administration team, and they need to let you know what this link is.

2. Click **Account Activity**.

3. Click the **Proposals** tab.

FIGURE 156. Proposals List Page

4. Click **New**.

   The New Proposal page displays.

FIGURE 157. New Proposal Page

5. Enter a name for the new proposal and contact information.

6. Click **Save**.

   The new proposal and opportunity is created. The Product List tab of the opportunity is displayed.

Invoice Administration by Partners

Partner users who have been assigned the Financials function can manage invoices for their partner. Other partner users can view the invoices associated with their orders, but they cannot change the status of invoices.

To View an Invoice

1. Click the **Invoices** tab on your Account Activity page.

FIGURE 158. Partner Account Activity Page: Invoices Tab

2. Click the link of the invoice whose detail you want to view. The Invoice Detail page displays.

FIGURE 159. Partner Invoice Detail Page

3. You can update the customer status of any invoice line by selecting the appropriate status from the drop-down list and clicking **Update**. The status of the invoice is updated by applying the rules described in "Invoice Statuses" on page 47.

4. You can view the history of an invoice line item by clicking **History**. The Invoice Line Item History page is displayed.

FIGURE 160. Invoice Line Item History Page

Program Administration by Partners

When a program is assigned to your partner, you can submit preapproval requests and claims for activities. You must submit preapproval requests for each program activity that you participate in, and the preapproval request must be approved before you can submit claims against the request. Partner users must be assigned the Marketing Executive function to be able to perform these tasks.

To Submit a Preapproval Request

You submit preapproval requests against specific program activities. You can submit more than one request against the same program activity.

1. Click **Partner Programs** on your home page.

   The Program List page displays.

FIGURE 161. Program List Page

2. On the Program List page, click the link to the appropriate program.

   The **Program Detail** page displays.

FIGURE 162. Program Detail Page

3.　Click the **Activities** tab.

　　The Activities List page displays.

FIGURE 163. Activities List Page

4.　On the Activities List page, click the link to the appropriate activity.

　　The Activity Detail page displays.

FIGURE 164. Activity Detail Page

5. On the Activity Detail page, click **Create Preapproval Request**.

    The Preapproval Request page displays.

FIGURE 165. Preapproval Request Page

6. Enter the preapproval request details as required for this activity.

7. Click **Save**.

8. Click **Submit Request**.

To Submit a Claim

Before you can submit a claim against a program activity, you must have submitted a preapproval request for the program activity, and the request must have been approved by the enterprise. You can submit only one claim against each preapproval request.

1. Click **Partner Program Preapprovals and Claims** on your home page.

    The Claim List page displays.

FIGURE 166. Claim List Page

2. On the Claim List page, click the link to the appropriate preapproval request.

    Note that the preapproval request must be approved by the enterprise administrator before you can create a claim against it.

FIGURE 167. Create Claim Page

3. On the Preapproval Request Detail page, click **Create Claim**.

FIGURE 168. Claim Detail Page

4.   Enter the basic claim details.

5.   Click **Save**.

6.   Click **Submit Claim**.

Managing Inbound Orders

Storefronts are set up so that they can receive inbound orders from their partners: these partners may be partners of the enterprise or they may be customer partners of the storefront. In either case, a profile administrator can log in and view these inbound orders and perform some basic administration as described in this section.

To View Inbound Orders

1.   Log in to your storefront home page.

2.   Click **Account Activity**.

3.   Click the **Orders** tab.

FIGURE 169. Partner Account Activity Page: Orders Tab

4. If the inbound order is listed on this page, then click the link to it. You can search for the inbound order or navigate through the paginated list of inbound orders to find it.

5. On the Inbound Order Detail page, you can accept the order.

User Attributes Administration

This chapter describes the administration and management of user attributes for market segmentation purposes. See "Customer Segmentation Management" on page 54 for an overview of market segmentation and attribute management in the Sterling Multi-Channel Selling Solution.

This chapter covers the following tasks:

- "Attribute Management Interface" on page 294

  - To Access the Attribute Manager Page

- "Attribute Group Administration Tasks" on page 295

  - To Create an Attribute Group

  - To Modify an Attribute Group

  - To Delete an Attribute Group

- "Attribute Administration Tasks" on page 297

  - To Create an Attribute

  - To Modify an Attribute

  - To Delete an Attribute

  - To Define Allowed Values for an Attribute

- To View User Assignments for an Attribute
- To Assign an Attribute to a User
- To Modify the Values of an Attribute Assigned to a User
- To Unassign an Attribute from a User
- To View Organization Assignments for an Attribute
- To Assign an Attribute to an Organization
- To Modify the Values of an Attribute Assigned to an Organization
- To Unassign an Attribute from an Organization
- To View Attribute Usage
- "User/Organization Profile Attribute Administration Tasks" on page 310
  - To Access the User or Organization Profile Attributes List Page
  - To Add an Attribute to User or Organization Profile Attributes List
  - To Delete an Attribute from User or Organization Profile Attributes List
  - To Specify Attribute Availability for Assignment to User
- "Importing and Exporting Attributes" on page 312
  - To Import an Attribute
  - To Export an Attribute

Attribute Management Interface

This section describes the attribute management interface.

To Access the Attribute Manager Page

1. Click **Attribute Management** in the User/Profile Attribute Administration panel on the Sterling Multi-Channel Selling Solution home page.

   The Attribute Manager page displays.

FIGURE 170. Attribute Manager Page

In the Attribute Manager page, the upper left panel provides a navigation panel to navigate the attribute group hierarchy and to select individual attribute groups. The right panel is used to display the details of a selected attribute group.

Attribute Group Administration Tasks

This section contains the tasks related to managing attribute groups.

To Create an Attribute Group

1. Click **Attribute Management** in the User/Profile Attribute Administration panel on the Sterling Multi-Channel Selling Solution home page.

   The Attribute Manager page displays.

2. To create an attribute group under the root attribute group, click **New Attribute Group**.

3. To create an attribute group in an attribute group below the root attribute group:

   a. Navigate to and select the parent attribute group under which you want to create the new attribute group.

      The **Attribute Groups** tab displays.

FIGURE 171. Attribute Management panel: Attribute Groups tab

    b.   Click **New Attribute Group**.

4.   Enter a name and description for the new attribute group.

5.   Click **Save All Changes**.

To Modify an Attribute Group

1.   Click **Attribute Management** in the User/Profile Attribute Administration panel on the Sterling Multi-Channel Selling Solution home page.

    The Attribute Manager page displays.

2.   Navigate to and select the attribute group that you wish to modify.

    The **Attribute Groups** tab displays the name and description of the attribute group.

3.   Enter a new name and description for the attribute group.

4.   Click **Save All Changes**.

To Delete an Attribute Group

1.   Click **Attribute Management** in the User/Profile Attribute Administration panel on the Sterling Multi-Channel Selling Solution home page.

    The Attribute Manager page displays.

2. Navigate to and select the parent attribute group that contains the attribute group you want to delete.

    The **Attribute Groups** tab displays the name and description of the parent attribute group, and the list of child attribute groups.

3. Select the attribute group you want to delete from the list of child attribute groups, and click **Delete**.

Note:	You cannot delete an attribute group if any attribute under its hierarchy is assigned to a user or organization. When you delete an attribute group, all child attribute groups and attributes under it are also deleted.

4. Click **Save All Changes**.

Attribute Administration Tasks

This section contains the tasks related to managing attributes defined for an attribute group.

To Create an Attribute

1. Click **Attribute Management** in the User/Profile Attribute Administration panel on the Sterling Multi-Channel Selling Solution home page.

    The Attribute Manager page displays.

2. Navigate to and select the attribute group for which you want to create an attribute.

3. Click the **Attributes** tab.

    The right panel displays two sets of fields: one called New Attribute for defining new attributes, and the other called Defined Attributes that shows the attributes that are currently defined for the selected attribute group.

FIGURE 172. Attribute Management Panel: Attributes Tab

4. Enter a name for the attribute in the upper right panel.

5. Select the type of attribute from the drop-down list.

- **Number:** use this for any attribute whose value is determined by a number.

- **String**: use this for any attribute whose value is expressed as a word or phrase.

6. Enter a description for the attribute.

7. Click **Add**.

   The newly-added attribute appears among the defined attributes in the lower right panel.

To Modify an Attribute

1. Click **Attribute Management** in the User/Profile Attribute Administration panel on the Sterling Multi-Channel Selling Solution home page.

   The Attribute Manager page displays.

2. Navigate to and select the attribute group for which you want to modify an attribute.

3. From the list of attributes defined for the selected attribute group in the lower left panel, select the attribute that you want to modify.

    The **Attribute Detail** tab of the Attribute Manager page displays.

FIGURE 173. Attribute Manager Page: Attribute Detail Tab

4. You can do one or more of the following to modify the details of the selected attribute:

    a. Enter a new description for the attribute.

    b. Add, modify, or delete the allowed values for the attribute. See "To Define Allowed Values for an Attribute" on page 300.

5. Click **Save All Changes**.

To Delete an Attribute

1. Click **Attribute Management** in the User/Profile Attribute Administration panel on the Sterling Multi-Channel Selling Solution home page.

    The Attribute Manager page displays.

2. Navigate to and select the attribute group for which you want to delete an attribute.

3. Click the **Attributes** tab.

4. From the list of defined attributes, select the attribute that you want to delete.

5. Click the **Delete** icon in the Action column next to the attribute you want to delete.

    The attribute along with all of its allowed values is deleted from the list of defined attributes.

Note:	You cannot delete an attribute that is currently assigned to a user or organization.

To Define Allowed Values for an Attribute

1. Click **Attribute Management** in the User/Profile Attribute Administration panel on the Sterling Multi-Channel Selling Solution home page.

    The Attribute Manager page displays.

2. Navigate to and select the parent attribute group of the attribute for which you want to define allowed values.

3. From the list of defined attributes in the lower left panel, select the attribute for which you want to define allowed values.

    The **Attribute Detail Tab** of the Attribute Manager page displays.

FIGURE 174. Attribute Detail Tab: String

FIGURE 175. Attribute Detail Tab: Numeric

4. You can use the **Attribute Detail** tab to modify the description of an attribute and define the allowed values for a string or numeric attribute. To modify the name or description of an attribute, see "To Modify an Attribute" on page 298.

    a. To define allowed values for a string attribute, perform one or more of the following steps:

    •   To add an allowed value, enter a new value and display value for the attribute and click **Add**.

Note:	You cannot enter a value that is currently existing within the attribute.

    The new value appears among the list of allowed values defined for the attribute.

    •   To delete an allowed value, select the value you want to delete from the list of allowed values and click the **Delete (X)** button.

    •   To modify an allowed value, perform the following steps:

        •   Select the value you want to modify from the list of allowed values and enter a new display value.

        •   Click **Save All Changes**.

Note:	You cannot modify or delete an allowed value for a string attribute if the allowed value is in use.

b. To define allowed values for a numeric attribute, perform one of the following steps:

• Click the **Allowed Values** radio button and enter the allowed values as discreet comma-separated values (for example, 1,4,6,9,10), a range of values (for example, 0-20), or a combination of both (for example, 1,4-6, 9, 11,20). Click **Save And Return.** The **Attribute Detail** page displays.

Note:	Clicking the **Allowed Values** radio button disables the Min, Max and Step text boxes.

• Click the **Min-Max/Step** radio button and enter the allowed values as a minimum value, a maximum value and a step between the two (for example, 2.0-10.0/2). Click **Save And Return**. The Attribute Detail page displays.

Note:	Clicking the **Min-Max/Step** radio button disables the **Allowed Values** text box.

To View User Assignments for an Attribute

1. Navigate to the Attribute Detail page of the attribute for which you want to view the users it has been assigned to.

2. Click the **User Assignment** tab.

   The User Attribute Assignment page displays.

FIGURE 176. User Attribute Assignment Page

You can use the User Attribute Assignment page to perform one or more of the following tasks:

• To assign an attribute to one or more users.

See "To Assign an Attribute to a User" on page 303.

• To modify the values of the attribute assigned to users.

See "To Modify the Values of an Attribute Assigned to a User" on page 305.

• To unassign an attribute from a user.

See "To Unassign an Attribute from a User" on page 306.

To Assign an Attribute to a User

You can assign attributes to a user during the user's registration or profile maintenance. The steps in this task describe how to assign an attribute to a user from the User Attribute Assignment page (See "To View User Assignments for an Attribute" on page 302).

1. Navigate to the User Attribute Assignment page of the attribute you want to assign to a user.

2. Click the **Assign...** button.

The **Hierarchy** tab of the User Picker displays.

FIGURE 177. User Picker

3. Browse the hierarchy and select the user(s) you want to assign the attribute to or click the **Search** tab to search for the appropriate user(s).

4. Click **Done** to assign the attribute to the user(s) or click **Delete** to unassign the attribute from the user(s).

   The User Attribute Assignment page re-displays with the list of user(s) you have just selected.

FIGURE 178. User Attribute Assignment Page: Assignments

5. Enter or select a value from the drop-down list in the **Value** column next to the user.

Note:	The drop-down list in the Value column appears only if there are allowed values defined for the attribute. See "To Define Allowed Values for an Attribute" on page 300.

6. Click the **Delete (X)** button next to the user to unassign the attribute from the user.

7. Click **Save**.

    The User Attribute Assignment page re-displays with the complete list of user(s) the attribute is assigned to.

To Modify the Values of an Attribute Assigned to a User

1. Navigate to the User Attribute Assignment page of the attribute for which you want to modify the values. See "To View User Assignments for an Attribute" on page 302.

2. Select appropriate values for the attribute from the drop-down list in the **Value** column next to the user.

3. Click **Save**.

To Unassign an Attribute from a User

1. Navigate to the User Attribute Assignment page of the attribute you want to unassign. See "To View User Assignments for an Attribute" on page 302.

2. Click the **Delete (X)** button next to the user you want to unassign the attribute from.

To View Organization Assignments for an Attribute

1. Navigate to the Attribute Detail page of the attribute for which you want to view the organizations it has been assigned to.

2. Click the **Organization Assignment** tab.

   The Organization Attribute Assignment page displays.

FIGURE 179. Organization Attribute Assignment Page

You can use the Organization Attribute Assignment page to perform one or more of the following tasks:

- To assign an attribute to one or more organizations.

  See "To Assign an Attribute to an Organization" on page 307.

- To modify the values of an attribute assigned to organizations.

  See "To Modify the Values of an Attribute Assigned to an Organization" on page 308.

• To unassign an attribute from an organization.

To Assign an Attribute to an Organization

You can assign attributes to an organization during the organization's creation or profile maintenance. The steps in this task describe how to assign an attribute to an organization from the Organization Attribute Assignment page (See "To View Organization Assignments for an Attribute" on page 306).

1. Navigate to the Organization Attribute Assignment page of the attribute you want to assign to an organization.

2. Click the **Assign...** button.

   An **Organization Picker** displays.

FIGURE 180. Organization Picker

3. Search for the organization you want to assign the attribute to by entering the name of the organization and clicking **Search,** or click **Show All** to view the list of all organizations.

4. Select the organization(s) you want to assign the attribute to and click **Done** to assign the attribute to the organization(s), or click **Delete** to unassign the attribute from the organization(s).

   The Organization Attribute Assignment page re-displays with the list of organization(s) you have just selected.

FIGURE 181. Organization Attribute Assignment Page: Assignments

5. Enter or select a value from the drop-down list in the **Value** column next to the organization.

Note:	The drop-down list in the Value column appears only if there are allowed values defined for the attribute. See "To Define Allowed Values for an Attribute" on page 300.

---

6. Click the **Delete (X)** button next to the organization to unassign the attribute from the organization.

7. Click **Save**.

   The Organization Attribute Assignment page re-displays with the complete list of organization(s) the attribute is assigned to.

To Modify the Values of an Attribute Assigned to an Organization

1. Navigate to the Partner Attribute Assignment page of the attribute for which you want to modify the values. See "To View User Assignments for an Attribute" on page 302.

2. Enter an appropriate value for the attribute or select a value from the drop-down list in the **Value** column next to the user.

3. Click **Save**.

To Unassign an Attribute from an Organization

1. Navigate to the Partner Attribute Assignment page of the attribute for which you want to modify the values. See "To View User Assignments for an Attribute" on page 302.

2. Click the **Delete** (**X**) button next to the organization you want to unassign the attribute from.

3. Click **Save**.

To View Attribute Usage

You can view the segments where an attribute is used.

1. Navigate to the Attribute Detail page of the attribute for which you want to view the segments where it is used.

2. Click the **Segment Usage** tab.

    The Segment Usage tab of the Attribute Manager page displays showing the list of segments where the attribute is used.

FIGURE 182. Attribute Manager Page: Segment Usage Tab

User/Organization Profile Attribute Administration Tasks

This section contains the tasks related to management of profile attributes for a user or organization.

To Access the User or Organization Profile Attributes List Page

1. Click **User/Organization Profile Attributes** in the User/Profile Attribute Administration panel on the Sterling Multi-Channel Selling Solution home page.

   The User/Organization Profile Attributes List page displays with two tabs: one called User where you can specify which attributes should be available for assignment to a user during registration and profile maintenance, and the other called Organization where you can specify which attributes should be available for assignment to an organization during its creation or profile maintenance.

FIGURE 183. User/Organization Profile Attributes List Page

To Add an Attribute to User or Organization Profile Attributes List

1. Navigate to the User/Organization Profile Attributes List page. See "To Access the User or Organization Profile Attributes List Page" on page 310.

2. You can add more attributes to the list of user or organization profile attributes.

3. Click **Assign...** from the User tab to add more user profile attributes or the Organization tab to add more organization profile attributes.

An **Attribute Picker** displays.

FIGURE 184. Attribute Picker

4. Browse the attribute hierarchy and select the destination attribute.

5. Click **Done**.

The attribute displays in the list of user or profile attributes.

To Delete an Attribute from User or Organization Profile Attributes List

1. Navigate to the User/Organization Profile Attributes List page. See "To Access the User or Organization Profile Attributes List Page" on page 310.

2. Click **Delete (X)** in the Actions column next to the attribute that you wish to delete.

The attribute is deleted from the Profile Attributes list.

To Specify Attribute Availability for Assignment to User

You can specify which attributes should be available for assignment during a user's registration.

1. Navigate to the User Profile Attributes List page. See "To Access the User or Organization Profile Attributes List Page" on page 310.

2. Check the check box in the **Self Register** column next to the attribute you want to make available to the user for assignment during the user's registration.

3. In the **Seq** column, enter a number for each of the attributes to indicate the order in which they should be displayed to the user.

4. Click **Save**.

Importing and Exporting Attributes

You can import or export attributes and attribute groups so that you can review them or make modifications offline. You can export attributes and attribute groups in the form of an XML file to a specified location on your machine. You can then import the updated attributes or attribute groups later into the Sterling Multi-Channel Selling Solution.

To Import an Attribute

1. Click **Import Attributes** in the User/Profile Attribute Administration panel on the Sterling Multi-Channel Selling Solution home page.

    The Attribute Import page displays.

FIGURE 185. Attribute Import Page

2. Enter the file name of the file that contains the attributes and attribute groups that you wish to import or click the **Browse...** button to search for the file, and click **Import Now**.

    Once the import is completed, the import summary displays.

To Export an Attribute

1. Click **Export Attributes** in the User/Profile Attribute Administration panel on the Sterling Multi-Channel Selling Solution home page.

   The Attribute Export page displays.

FIGURE 186. Attribute Export Page

2. Enter the name of the export file.

3. Click the **Export All** radio button if you wish to export all attributes and attribute groups.

4. Click the **Export selected groups and attributes** radio button if you wish to export only the selected groups and attributes.

   You can either select an attribute or attribute group to export or remove the selected attributes or attribute groups that are displayed in the list box.

   a. To select an attribute or attribute group, click **Select**.

      An **Attribute Picker** displays.

FIGURE 187. Attribute Picker

- Browse the attribute hierarchy until you find the destination attribute or attribute group.

- Select the destination attribute or attribute group.

- Click **Done**.

  The selected attribute or attribute group appears in the list of selected attributes and attribute groups in the list box.

b. To remove an attribute or attribute group, select the attribute or attribute group from the list, and click **Remove**.

  The selected attributes and attribute groups disappear from the list box.

5. Click **Export**.

  The export creates an XML file which you can save in a directory on your local machine.

Example

This section describes an example of how to define user and organization attributes.

Defining User/Organization Attributes

Attributes are assigned to users and/or organizations for the purpose of grouping them into segments so they can be targeted for specific marketing activities. For example, users with an annual income of $50,000-$75,000 who are married and have 1-2 children can be grouped together and targeted for a particular marketing activity.

In the above example, the user attributes are:

- Income level

- Marital status

- Number of children

You define allowed values for the attributes and assign them to users or organizations. In the above example, the values assigned to the attributes are:

- $50,000-$75,000

- Married

- 1-2

In this example, the general steps to define the user attributes are:

- Create an attribute group called User Attributes. See "To Create an Attribute Group" on page 295.

- Create the following attributes under the attribute group just created:

    - Income level

    - Marital status

    - Number of children

    See "To Create an Attribute" on page 297.

- Define the following values for the attributes:

    - Income level: $50,000-$75,000

    - Marital Status: Married

- Number of children: 1-2

See "To Define Allowed Values for an Attribute" on page 300.

- Assign the attributes to the appropriate user. See "To Assign an Attribute to a User" on page 303.

CHAPTER 11   *Customer Segment Administration*

This chapter describes the administration and management of customer segments. Segments are storefront-specific groups of users or organizations that share certain attributes or behaviors. Segment definition enables you to target marketing activities directly to the users who are most likely to be interested in the products or promotions, and to assign special prices or coupons to products offered in segment marketing campaigns.

See "Customer Segmentation Management" on page 54 for an overview of market segmentation in the Sterling Multi-Channel Selling Solution.

User attributes must be defined before you can define segments. See CHAPTER 10, "User Attributes Administration" for information about creating and managing user attributes.

For information about using segments with specific activities, see:

- CHAPTER 20, "Advanced Pricing Administration" for information about associating customer segments with pricing rules and coupons.

- CHAPTER 22, "Sterling Promotions Administration" for information about associating customer segments with promotional activities.

- CHAPTER 31, "Sterling Campaigns" for information about using customer segments to create mailing lists.

This chapter covers the following topics:

Terminology

The following terminology applies to customer segments:

- Customer segment: a group of users or organizations that meet a specified set of criteria.

  To define a segment, segment administrators either:

  - associate a set of criteria with the segment, then determine which users meet the criteria, or

  - upload the list of users who are members of the segment.

  You attach segment definitions to marketing activities to ensure that the activities reach users who are most likely to be interested in a particular promotion or campaign.

- Segment criterion: a criterion that you associate with a segment to define the membership of that segment.

- Regular segment: a segment built from user attribute criteria such as income level, gender, and zip code, and that can include other segments as part of its definition. You use logical operators to combine the various criteria and segments.

- Behavioral/historical calculation (BHC): A specialized criterion based on user behaviors and historical data, such as viewing a specified product within a specified timeframe, or on purchase history, such as ordering a specified product within a specified timeframe.

- Behavioral/historical segment (BHS): a segment containing a BHC. To combine a BHC with other criteria or segments, you place the BHC in a segment of its own, and then combine that segment with other types of criteria or segments.

- Upload segment: A segment that you define by uploading users directly, rather than by specifying criteria.

Overview

A segment is a group of consumer users or users who are members of customer/partner organizations that meet a specific set of criteria. The criteria can be any or all of the following:

- Profile data

- Attributes such as age bracket and income level

- Behavioral and historical criteria. These behavioral and historical criteria can be based either on individual user actions, such as the products browsed during a specified time period by a user, or the sum of actions of all users belonging to an organization, such as the number of items ordered by an organization during a specified time period.

Storefront administrators with the segment administrator role can combine segments to create complex segment definitions, import and export segments, manage the frequency with which segments are processed and published, and manage the segment lifecycle. Storefront administrators with the marketing manager - campaigns user function can attach segments to marketing activities such as promotions, pricing rules, coupons, and email campaigns. The enterprise administrator controls and manages the process that automatically regenerates and publishes segments.

Types of Segments

The following are the types of segments you can define:

- Regular segment: a composite segment that can include attributes, fields from user and/or organization profiles, and other segments, separated by logical operators. Regular segment is the default segment type.

- Upload segment: a segment defined by uploading a list of users.

- Behavioral segment: a segment defined by a behavioral/historical calculation (BHC). A behavioral segment is defined by one behavioral criterion, but you can combine several behavioral segments in a regular segment to create complex definitions.

Types of BHCs

There are two types of BHCs: user-based BHCs and organization-based BHCs. This means that when defining a behavioral segment, behavioral and historical criteria can take into consideration either individual user actions or the sum of actions of all users belonging to the same organization. BHCs consider only order-

based organization behaviors and not catalog browsing or cart abandonment by users. Organization-based BHCs do not take into consideration the actions of users belonging to the AnonymousUserPartner or the RegisteredUserPartner.

Segment Lifecycle

Segments can be in one of the following states:

- In Creation: the initial segment state is In Creation. You can modify In Creation segments and calculate their membership, but you cannot attach them to marketing activities or publish them for general use. You can delete segments while they are in the In Creation state.

- Active: segments in the Active state are ready for production. They can be attached to marketing activities and published for general use. You cannot delete active segments: this prevents accidental negative affects to your marketing activities or losing your work. You cannot modify the criteria for segments in the Active state. When Active segments expire, they automatically move to the End of Life state.

- Inactive: segments in the Inactive state can be modified and you can calculate segment membership on-demand to test membership results. While segments are inactive, membership evaluation is disabled and they cannot be published. You can attach Inactive segments to marketing activities, but the members of those segments are not included in the marketing activities until the segment status is set to Active or Obsolete. You cannot delete Inactive segments: this prevents accidental negative affects to your marketing activities or losing your work. When Inactive segments expire, they automatically move to the End of Life state.

- Obsolete: segments in the Obsolete state are being phased out. The system continues to evaluate the membership of Obsolete segments, but they cannot be attached to new marketing activities and you cannot change their criteria. When obsolete segments expire, they automatically move to the End of Life state.

- End of Life: segments in the End of Life state can be copied and their membership lists exported, but they are otherwise unusable. You can delete segments when they are in the End of Life state.

The system sets the In Creation and End of Life states. As segment administrator, you determine when a segment becomes Active, Inactive, or Obsolete. To move a segment from Active, Inactive, or Obsolete to End of Life, set the expiration date of the segment to today or earlier. The system then sets the status of that segment to End of Life, and you can delete it.

Segment Criteria

To define a segment, you specify the criteria required for segment membership. Criteria can be inclusive or exclusive. Inclusive criteria includes users who have the specified criteria. Exclusive criteria excludes users who have the specified criteria. You can enter criteria only if the segment status is In Creation or Inactive.

If you plan to specify exclusive criteria, you must also specify inclusive criteria. If you specify only exclusive criteria, no users will be selected.

The types of segment criteria are:

- Fields from user and organization profiles, such as job title or partner level

- User and organization attributes

- User and organization purchase history

- Behavioral and historical information tracked during user sessions

- Other regular segments

- A combination of any or all criteria types

You can combine segment criteria to define complex market segments. Logical operators define the relationships among the specified criteria. For example, you can define a segment as follows:

- Users who abandoned a cart containing a desktop in the last month, AND

- Users who have not purchased an accessory in the last two weeks, AND

- Users who are over 30, AND

- Users who make over $60,000 a year

Segment Definition Process

One way to begin defining a segment is to state the characteristics, or attributes, of the users you want (or do not want) to include in a segment, for example, in a sentence. You can then specify criteria based on the attributes in your statement.

For example, suppose that you want to target a marketing activity to users who are 40 or older with incomes of $50,000 or more and who live in California. The user attributes are:

- Age

- Income

• State

Your segment criteria specify the values the attributes must have, and the relationships among them. In this example, the values the attributes must have are as follows:

• Age >= 40

• Income >= $50,000

• State = California

Each attribute-value statement is a criterion.

You want to include only those users who share all these criteria, so the relationships among the criteria are as follows:

• Age >= 40 AND

• Income >= $50,000 AND

• State = California

These criteria are all user attributes: none involve behavior tracked during user sessions such as products browsed, or historical information such as when the user browsed the products. Since there are no behavioral or historical criteria, you define this segment as a regular segment.

You enter criteria one at a time. You can enter an unlimited number of criteria.

You can also define a segment using behavioral and historical criteria. Such a segment is called a behavioral segment.

For example, suppose that you want to target a marketing activity to users who have not ordered anything in the last 15 days. The BHS that you create will have the following details:

• Behavior Group: User orders

• Behavioral Criterion: Number of orders by user

• BHC Inputs: Number of orders, Timeframe

  The values the BHC Inputs must have are as follows:

  • Number of orders=0

  • Timeframe=last 15 days

Segment Calculation Scripts

After you enter criteria to define a segment, segment calculation scripts calculate segment membership. The Sterling Multi-Channel Selling Solution provides a number of segment calculation scripts out-of-the-box that enable you to easily enter criteria and process calculations. Your Sterling Multi-Channel Selling Solution implementers may provide custom segment calculation scripts as well. Since these pre-scripted segment calculations use behavioral or historic information, they are called behavioral/historic calculations or BHC's.

BHC's are organized into groups to make it easy to find and use them. For example, all BHCs that use orders-related criteria to calculate membership are in the Orders group. To use the User Orders BHC, you choose the Orders group, then User Orders. You then specify criteria appropriate to the User Orders BHC.

See the *Sterling Multi-Channel Selling Solution Implementation Guide* for information about creating custom BHC's.

The Sterling Multi-Channel Selling Solution calculates segment membership based upon the specified criteria. Since processing the calculation can be resource-intensive, processing is generally done in batch mode when system activity is low.

Segment Activation

After segment calculation completes, you attach the segment to one or more marketing activities. You can then activate the segment by publishing the results to the production system. You can publish results on demand, or publish results automatically using business rules and cron jobs.

Segmentation Cron Job Operations Administration

Sterling Multi-Channel Selling Solution provides the following segmentation cron jobs:

- Reprocess Segments: recalculates segment membership

- Nightly Segments Build: builds all segments

You can also create the ResetBuildStatus cron job to reset the Nightly Segments Build cron job if it appears to have hung in the IN PROCESS state.

Ensure that the Reprocess Segments cron job runs first, followed by the Nightly Segments Build cron job. This ensures that segment membership is current. See "Segment Cron Job Management" on page 346 for information about how to set up the segment cron jobs.

System administrators who are responsible for managing the segmentation cron jobs perform the following tasks:

- Review the status of the reprocess segments and nightly segment build cron jobs.

  If the segment build was successful, no further action is required.

- If the segment build cron job failed:

  - Search for failed segments using the advanced search by build status in the segment list

  - Fix the failed segments or mark them as inactive

  - Re-run the nightly build cron job (can be manually initiated after the segments are fixed

  - Confirm that the build ran successfully

- If the segment build cron job has been running indefinitely and is in the IN PROCESS state:

  - Create the ResetBuildStatus cron job if it does not already exist. See "ResetBuildStatus Cron Job" on page 325 for more information.

  - Run the ResetBuildStatus cron job.

  - Re-run the ReprocessSegments cron job.

  - Re-run the Nightly Segments Build cron job.

If you do not re-run the Reprocess Segments and then the Nightly Segments Build cron jobs, the system continues to use the previously published build. Your activities that depend on segments will continue to run, but they will use members of the segments as defined when the segment was last successfully published so your information could be out of date.

See "Segment Cron Job Management" on page 346 for information about monitoring and troubleshooting segmentation cron jobs. See CHAPTER 40, "Job Scheduling Administration" for more information about the segmentation cron jobs.

ResetBuildStatus Cron Job

The ResetBuildStatus cron job resets the status of the Nightly Segment Build cron job if the Nightly Segment Build cron job's status is IN PROCESS. If the Nightly Segment Build's status is IN PROCESS, the ResetBuildStatus cron job also resets the build status of individual segments that are also IN PROCESS. This cron job

does not stop the Nightly Segment Build or the build of individual segments that are in process: it only resets their status. Run this cron job manually if your Nightly Segment Build appears to be hung in the IN PROCESS state.

You create and manage the ResetBuildStatus cron job as a System administrator who is responsible for managing the segmentation cron jobs.

To Create the ResetBuildStatus Cron Job

1. On the home page, click the **Job Scheduler** link in the System Administration panel. The List of Cron Jobs page displays.

2. Click the **Create New Cron Job** button. The Create New Cron Job page displays.

3. Enter the following information:

   - Job Name: ResetBuildStatus

   - Program: com.comergent.apps.segmentengine.bizAPI.ResetBuildStatusCron

   - Username: the system administrator user name

   - Password: the system administrator password

4. Check the **Active** check box.

5. Click **Save All Changes**.

Segment Administration

There are the following types of segment administration:

- Segment Management: requires the Marketing Manager- Segmentation role

- Segment Cron Job Management: performed by system administrators

Segment Management

You manage segments from the Segment Administration page, available in the Segmentation Panel on the home page.

FIGURE 188. Segmentation Administration Panel

Note that if you do not have the Marketing Manager - Segmentation role, you will not see the Segment Administration panel.

To access the Segment Administration page, click the Segment Management link in the Segment Administration panel on the home page: The Customer Segmentation List page displays a list of segments, similar to the following figure.

FIGURE 189. Customer Segmentation List Page

Storefront administrators with the segment administrator role perform the following tasks to manage segments:

- Create segments. See "To Create A Segment" on page 329.

- Enter regular segment criteria. See "To Enter Regular Segment Criteria" on page 330.

- Enter BHS criteria. See "To Enter Behavioral/Historical Segment (BHS) Criteria" on page 337.

- Enter upload segment criteria: upload lists of users to define segment membership. See "To Create An Upload Segment" on page 338.

- Process segments and examine segment membership to check the results. See "To Calculate Segment Membership" on page 339.

- Determine how often to refresh segment membership. See "To Set or Update Membership Calculation Frequency" on page 341

- Update segment status. See "To Update A Segment Header" on page 341.

- Copy segments. See "To Copy A Segment" on page 343

- Check segment usage. See "To Check Where A Segment Is Used" on page 343.

- Delete segments. See "To Delete A Segment" on page 344.

- Manage segment configuration options such as the number of users to show in the segment processing results.

- Combine segments to create composite segments. See "To Enter Regular Segment Criteria" on page 330.

- Publish a segment to a production system. See "To Publish A Segment" on page 340.

- Import segments. See "To Import A Segment" on page 345.

- Export segments. See "To Export A Segment" on page 346.

To Create A Segment

1. On the Customer Segmentation List page, click **New**. The Segment Header page displays, similar to the following figure.

FIGURE 190. Segment Header Page

2. Enter the segment header information:

   - Name (required). Names must be unique within the storefront.

   - Description (optional).

   - Start date (required). Default is the current date.

   - End date (required). Must be greater than the current date.

   - Segment Status (set automatically). The system sets the segment's initial status to In Creation.

   - Segment Type (required). Possible types are:

     - Regular

     - Upload

   • Behavioral

   Regular segment is the default segment type.

3. Click **Create** to create the new segment. The Segment Detail page displays with the name of the new segment, similar to the following figure.

FIGURE 191. Segment Detail Page

   If the segment type is Regular or Behavioral, the **Criteria** and **Membership** tabs display. If the segment type is Upload, only the **Membership** tab displays.

4. To enter criteria for Regular or Behavioral segments, click the **Criteria** tab. See "To Enter Regular Segment Criteria" on page 330 to learn how to enter regular segment criteria. See "To Enter Behavioral/Historical Segment (BHS) Criteria" on page 337 to learn how to enter BHS criteria.

5. To calculate segment membership, click the **Membership** tab. See "To Calculate Segment Membership" on page 339.

To Enter Regular Segment Criteria

1. Click the **Criteria** tab of the Segment Detail page. The Regular Segment Criteria page displays, similar to the following figure.

FIGURE 192. Regular Segment Criteria Page

The page consists of two panels:

- Include users who have: define a segment by including users who have the specified criteria. Choose All of these to include users who have all of the specified criteria. Choose Any of these to include users who have one or more of the specified criteria.

- Exclude users who have: define a segment by excluding users who have the specified criteria. Choose All of these to exclude users who have all of the specified criteria. Choose Any of these to exclude users who have one or more of the specified criteria.

2. Choose the criterion type from the Criterion Type drop-down list. Criterion types include:

- User Attribute

- Organization Attribute

- User Profile Field

- Organization Profile Field

- New Behavioral Segment

- Segment

You can add one or more criteria of each type. You can create complex
segments by adding other Regular segments and/or Behavioral/Historical
Segments to the current Regular segment.

3. To add User Attribute criteria:

a. Choose User Attribute from the Criterion Type drop-down list, and click
New.

The Add Criteria page displays, similar to the following figure.

FIGURE 193. Add Criteria: User Attribute

b. Click **Select**. An Attribute Picker pop-up displays, similar to the following
figure.

FIGURE 194. Attribute Picker

    c.   Choose the attribute from the Attribute Picker, then click **Done**.

        The system fills in the Criteria page attribute fields based on the picked attribute.

    d.   Enter the desired values or choose allowed values from a drop-down list.

    e.   Choose an operator from the Operator drop-down list.

    f.   Click **Add** to add the criterion to the Regular segment.

4.   To add Segment criteria:

    a.   Choose Segment from the Criterion Type drop-down list, and click **New**.

        A Segment Picker pop-up displays, similar to the following figure.

FIGURE 195. Segment Picker Pop-Up

    b.   Choose the segment from the Segment Picker, then click **Done**.

5.   To add User Profile or Organization Profile Field criteria:

    a.   Choose User Profile Field or Organization Profile Field from the Criterion Type drop-down list, and click **New**.

        The Add Criteria page displays, similar to the following figure.

FIGURE 196. Add Criteria: User/Organization Profile Field

> b. Choose a Field Name from the drop-down list.
>
> c. Choose an allowed value from the drop-down list.
>
> d. Choose an operator from the Operator drop-down list.
>
> e. Click **Add** to add the criterion to the Regular segment.

6. To add Behavioral-Historical Criteria (BHC's):

> You cannot add behavioral criteria to a Regular segment directly. You include behavioral criteria by adding a Behavioral-Historical Segment (BHS).
>
> a. Choose New Behavioral Segment from the Criterion Type drop-down list, and click **New**.
>
> The New Behavioral Segment page displays, similar to the following figure.

FIGURE 197. New Behavioral Segment Page

> b. Enter the BHS header information in the General Info panel.
>
> c. Use the drop-down lists in the Behavioral Criteria Information panel to choose the BHC to add.
>
>   The BHC Input panel displays. The information you see in the BHC Input panel depends on the contents of the BHC.
>
> d. Enter the BHC information in the BHC Input panel.
>
> e. Click **Create** to save the BHC as a BHS and add it to the Regular segment criteria. The page redisplays with the name of the new behavior segment that you just created.

7. Click **Save** to save the new Regular Segment when you finish entering criteria.

You can now calculate the membership for the new Regular segment and view the membership list. See "To Calculate Segment Membership" on page 339 for more information.

Note that you cannot perform on-demand membership calculation for behavioral segments. The two cron jobs Reprocess Segments and Nightly Segments Build must be executed to enable you to see new information in behavioral segments. When you process regular segments that include behavioral segments, the membership information is not up to date until the cron jobs run.

To Enter Behavioral/Historical Segment (BHS) Criteria

1. Click the Criteria tab of the Segment Detail page. The Behavioral Segment Criteria page displays, similar to the following figure.

FIGURE 198. Behavioral Segment Criteria Page

2. Choose the Behavior Group from the drop-down list.

   The available groups depend upon your implementation.

3. Choose the Behavioral Criterion (the name of the BHC) from the drop-down list. The list consists of BHCs that are classified as part of the behavior group that you chose in the previous step.

   The BHC Input panel displays. The information you see in the BHC Input panel depends on the BHC definition.

4. Enter BHC criteria in the BHC Input panel.

5. Click **Save** to save the new BHS.

You cannot initiate behavioral segment membership calculation on demand. The two cron jobs Reprocess Segments and Nightly Segments Build must be executed to enable you to see new membership information in behavioral segments.

To Create An Upload Segment

You create upload segments by specifying an upload list file: a file containing the list of users and their related information. You then upload that file. The upload list file is expected to have the following format:

```
<First Name>,<Last Name>,<Email Address>
```

There are no spaces between the fields in the upload list file. Users in the upload list file must be users of your storefront.

For example, an upload list file could include the following entry for the user Brent Wells, whose email address is bwells@rmdsolutions.com:

```
Brent,Wells,bwells@rmdsolutions.com
```

1. On the Customer Segmentation List page, click **New**.

   The Customer Segmentation Header page displays.

FIGURE 199. Customer Segmentation Page

2. Enter the Upload Segment header information.

3. Choose Upload from the Segment Type drop-down list.

4. Click **Create**.

   The Segment Detail page displays with the **Membership** tab.

5. Click the **Membership** tab. The **Membership** tab of the Segment Detail page displays, similar to the following figure.

FIGURE 200. Upload Segment: Membership Tab

6. In the User List Upload panel:

    a. Enter your username and password.

    b. Enter the name of the upload list file, or click **Browse...** to browse to the file location.

    c. Click **Upload**.

    d. When upload is complete, view the membership list by clicking **View Users**.

7. Assign the segment to a marketing activity. See CHAPTER 20, "Advanced Pricing Administration", CHAPTER 22, "Sterling Promotions Administration", or CHAPTER 31, "Sterling Campaigns" for more information.

8. In the Publish Segment panel, enter your username and password, then click **Publish** to publish the segment.

To Calculate Segment Membership

Set up segment membership calculation from the **Membership** tab of the Segment Detail page. To avoid performance issues, set up the calculation as a batch process that the system runs during off-peak hours.

The **Membership** tab is similar to the following figure.

FIGURE 201. Segment Detail Page: Membership Tab

From the **Membership** tab, you can set up the segment calculation frequency and start date. A cron job runs the segment calculation process. See CHAPTER 40, "Job Scheduling Administration", for details about setting up the segmentation cron jobs.

1. Click the **Process** button to start the calculation process immediately.

2. Click **Check Result** to see the results of the calculation.

3. To see the results of the calculation, click the **View Users** button. You can set the number of users to show using the Maximum number of segment members shown business rule. See CHAPTER 39, "Business Rules Administration", for more information.

4. If the calculation takes too long or there is an indication that the backend processing server crashed, click the **Reset Build Status** link to reset the status and try again.

See "Segment Cron Job Management" on page 346 for information about managing segmentation cron jobs.

To Publish A Segment

You publish segment membership calculation results from the segment's **Membership** tab. The **Publish** button becomes available after a segment is

assigned to one or more marketing activities. Click **Publish** to make the membership calculation results available to the production system.

To Set or Update Membership Calculation Frequency

Set the calculation process frequency for a segment from the Processing Frequency panel of the segment **Membership** tab. You specify that the calculation process should update at specific intervals, for example, every 2 days.

1. Enter the start date. The default is the current date.

2. Enter a numeric value in the text box. This value determines the update interval.

3. Choose an update type from the drop-down list. This value determines the interval type, for example, days. The default frequency is every week.

4. Click **Save**.

Update Segments

This section describes how to update existing segments.

To Update A Segment Header

Segment Administrators can update segment header information. The information you can update depends upon the segment's status. You can never change the segment type.

To update segment header information, click the name of the segment on the Customer Segmentation List page. The Segment Detail page displays.

The Segment Detail page includes **Save**, **Copy**, and **Usage** buttons:

•   Use the **Save** button to replace the segment with the updated information.

•   Use the **Copy** button to create a copy of the segment with the information you just updated.

•   Use the **Usage** button to see where the segment is used, for example, to see the complex segment definitions that include this segment. This button displays only if the segment status is In Creation.

The following table shows the segment header fields and segment status that allows changes for each field. If segment status is different from the status listed, the header field is read-only.

TABLE 19. Segment Header Fields and Change Status

Header field	Okay to change when segment status is...
Name	In Creation, Active, Inactive
Description	In Creation, Active, Inactive
Start Date	In Creation, Inactive
End Date	In Creation, Inactive
Status	In Creation, Active, Inactive, Obsolete

The Update tabs that display depend upon the segment type:

- For regular or Behavioral segments, the **Criteria** and **Membership** tabs display.

- For Upload segments, only the **Membership** tab displays.

Click **Save** to save your changes and replace the segment.

Click **Copy** to create a copy of the segment with the changes you made. See "To Copy A Segment" on page 343 for information about copying segments.

To Update an Upload Segment

1. On the Segment Management page, click the name of the Upload Segment that you want to update. The Segment Detail page displays.

2. Update the segment header information as appropriate, then click **Save**.

3. Click the **Membership** tab. The Membership page displays.

4. Click **Process**. An Upload Picker pop-up displays with a list of user list files.

5. Choose the user list file with which to update the Upload Segment, then click **Upload**.

6. On the Segment Detail page, click **Check Result**. When processing completes, the page displays an upload summary in the Calculation Result panel. Click **View Users** to see the Upload Segment user list.

To Copy A Segment

1. On the Customer Segmentation List page, click the name of the segment that you want to copy. The Segment Detail page displays.

2. Click the **Copy** button. The Copy Segment page displays, similar to the following figure.

FIGURE 202. Copy Segment Page

3. Enter a unique name for the copied segment.

4. Choose whether or not to attach the original segment's activities to the copied segment. Choose Yes if you want to attach the activities of the original segment, or No if you do not want to attach the activities of the original segment.

5. Click Copy to create the copied segment.

When the copy process completes, the Segment Detail page redisplays with the copied segment in Inactive status.

Check Segment Usage and Delete Segments

This section explains how to check where a segment is used and how to delete segments that have not been combined with other segments.

To Check Where A Segment Is Used

Segments can be combined with other segments to define complex customer segments. To ensure that you can delete a specific segment without affecting other segments, check that other segments do not depend on it as part of a complex segment definition.

1. On the Customer Segmentation List page, click the name of the segment whose usage you want to check. The Segment Detail page displays.

2. Click the **Usage** button. A Segment Usage pop-up window displays, similar to the following figure.

FIGURE 203. Segment Usage Pop-Up Window

The window consists of the following panels:

• Segmentation Information: the segment header information

• Other Segments that use this segment: how the segment is referred to by other segments

• Activities that use this segment: the marketing activities to which the segment is attached

To Delete A Segment

Users with the Segment Administrator role can delete a segment only if the segment's status is In Creation or End State.

1. On the Segment Management page, click the check box next to the segment(s) you want to delete.

2. Click **Delete**.

Importing and Exporting Segments

You can import and export segments to facilitate migration, upgrade, and synchronizing segments among systems. You must have the Segment Administrator role to import and export segments.

Segment import and export is synchronous. Segment status is irrelevant to segment export.

User attributes must exist and must be consistent on the exporting/importing systems. As segment administrator, you maintain the consistency of attributes on the systems for which you are responsible.

When you export a segment that depends upon other segments, those segments are exported as well as the selected segment. If several segments depend upon the same segments, those segments are exported only once.

To Import A Segment

1. In the Segment Administration panel on the home page, click Import Segments. The Import Segments page displays, similar to the following figure.

FIGURE 204. Import Segments Page

2. Enter the name of the file to import, or click **Browse...** to select the XML export file to import.

3. Click **Import Now** to start the import process.

The import process runs in a separate pop-up window.

Segments that are new to the importing system have the status In creation. Segments on the importing system with In Creation or Inactive status are overwritten. Segments with other statuses are skipped.

When the import process completes, an Import Summary pop-up window appears. Statistics include:

• Number of imported segments

• Number of successfully imported segments

• Number of segments whose import failed and their names

• Number of segments skipped and their names

• Warnings about any user attributes that do not exist on the importing system

To Export A Segment

1. In the Segment Administration panel on the home page, click Export Segments. The Export Segments page displays, similar to the following figure.

FIGURE 205. Export Segments Page

2. Enter the name of a file to contain the exported segments in the export file name field. The format of the file name is *<filename>*.xml, where *<filename>* is the name you entered in the export file name field. The file format is XML.

3. Choose the export type:

    *   Export All exports all segments.

    *   Export Selected Segment(s) exports only the segments you select from a Segment Picker pop-up.

4. Click **Export** to start the export process.

The export process runs in a separate pop-up window. When the export process completes, a File Download pop-up window appears. Click **Save** to save the export file.

Segment Cron Job Management

System administrators who are responsible for managing segmentation-related cron jobs perform the following tasks:

*   "To Set Up the Segmentation Cron Jobs" on page 347

*   "To Review the Segment Build Status" on page 348

*   "To Search For Failed Segments" on page 348

*   "To Mark Segments As Inactive" on page 348

*   "To Re-run the Segment Build" on page 349.

The system has an automated process that re-generates and publishes the segments regularly. The frequency at which the process runs is set by your system administrator, but it typically runs nightly. You can also publish segments manually from the segment membership tab.

The system publishes segments only if all segments with status of Active or Obsolete re-generate successfully. If any segment fails, the system logs an error and continues with the re-generation process, but it does not publish any of the segments. The reason is that compound segments may include the failed segment, and compound segments cannot be published if one of the segments they depend upon has failed.

The system updates and publishes segments at intervals that you specify for the segment's update frequency. If you do not see the users that you expect to see in a segment, check the update frequency to find out when the segment is scheduled to be updated.

To Set Up the Segmentation Cron Jobs

Site system administrator users set up the segmentation cron jobs. The default Sterling Multi-Channel Selling Solution system administrator username and password is admin/admin.

To set up the segmentation cron jobs:

- Ensure that the system administrator user or the user assigned to run the cron jobs has the Marketing Manager - Segmentation role. See CHAPTER 6, "User Administration" for more information.

- Ensure that the username/password for running the segmentation cron jobs is correct.

- Ensure that the segmentation cron jobs are active.

Perform these tasks after installing the Sterling Multi-Channel Selling Solution or updating or migrating from a previous release.

1. Log in as a system administrator.

2. Ensure that the user has the Marketing Manager - Segmentation role. See CHAPTER 6, "User Administration" for more information.

3. Navigate to the List of Cron Jobs page from the Job Scheduler link of the System Administration panel.

4. Click the numbered Cron Job List link for the Nightly Segments Build cron job. The Edit Cron Job Configuration page displays.

5. Click the Active checkbox in the Cron Job Information panel.

6. Check the username and password in the Cron Job Type panel. Update the information if necessary**.**

7. Click **Save All Changes**.

   Repeat steps 2 through 6 for the Reprocess Segments cron job.

8. On the List of Cron Jobs page, click the Run Cron Job icon first for the Reprocess Segments cron job, then the Nightly Build Segments cron job.

To Review the Segment Build Status

1. As system administrator, click the Job Scheduler link in the System Administration panel. The List of Cron Jobs page displays.

2. In the Actions column, click the Show History icon of the Nightly Segments Build cron job. The Cron Job History page displays.

3. Examine the Cron Job History page and note the Execution Status. If the Execution Status is Success, all segments re-generated successfully. If the Execution Status is Failed, search for the failed segments from the Customer Segmentation List page of the Segmentation Administration panel and resolve any issues that caused the failure, or mark the failed segments as Inactive until the issues can be resolved.

To Search For Failed Segments

You must have the Marketing Manager - Segmentation role to be able to see the Segmentation Administration panel.

1. Navigate to the Customer Segmentation List page.

2. In the Find: panel, select Build Status from the first drop-down list. A second drop-down list displays.

3. Select Fail from the second drop-down list.

4. Click Search.

5. The list of failed segments displays.

To Mark Segments As Inactive

1. Navigate to the Customer Segmentation List page, then click the link for the segment whose status you want to change to Inactive. The segment **Header** tab displays.

2. In the General Information panel, select Inactive from the Segment Status drop-down list.

3. Click **Save**.

To Re-run the Segment Build

You can re-run the segment build in one of the following ways:

• As system administrator, navigate to the List of Cron Jobs page and click the Run Cron Job icon first for the Reprocess Segments cron job, and then for the Nightly Segments Build cron job.

• As segment administrator, navigate to the **Membership** tab for the failed segment and click the **Process** button. See "To Calculate Segment Membership" on page 339 for more information.

Upload Segment Considerations

This section describes special considerations for handling upload segment failures.

If you decide to re-upload a list while a segment is active, confirm that the upload was successful. If the upload failed, fix it by the end of the day or change its status to Inactive to avoid problems with the automated segment publishing process.

The system allows you to re-upload the membership list for your segment while it is still active so that you can continue using the previous membership list while you work on an updated list. The updated list takes effect when it is published.

If the automated segment build process fails, the system continues to use the previously published build. Your activities that depend on segments will continue to run, but they will use members of the segments as defined when the build last ran successfully, so your information could be out of date.

You can avoid the outdated membership information problem in one of the following ways:

• Fix the failed upload segment while its status is Active or Obsolete before the automated process runs.

• If you do not have time to fix the failed upload segment before the automated process runs, change its status to Inactive and then fix the failed upload segment.

• Copy the failed upload segment to a new segment and make the changes to the copied version as follows:

1. In the Copy Segment panel of the Copy page, click the Yes radio button for the question Copy activities attachments?

2. Click **Copy**.

3. Re-upload the list in the copied segment.

4. When the upload is successful, change the status of the copied version to Active, then click **Save**. Change the status of the old version to Inactive, then click **Save**.

CHAPTER 12 *Product Administration*

This chapter covers the tasks associated with managing basic product information. "Administering the Product Catalog" on page 65 provides an overview of how product administration works.

- • To Copy a Product

- • To Modify a Product

- • To Delete a Product

- • To Assign Products as Children to an Aggregated Product

- • To Unassign Child Products from an Aggregated Product

- • To Find and Select a Product in the Navigation Panel

- • "Pricing Products" on page 392

  - • To Change Prices for a Product

  - • To Change All Prices for a Product

- • "Related Products" on page 396

  - • To Relate One Product to Another

  - • To Remove a Product Relationship

- • "Superseding a Product" on page 399

  - • To Supersede a Product

  - • To Remove a Superseding Product

- • "Managing Assemblies" on page 400

  - • To Define the Parts in an Assembly

  - • To Modify a Line Item in an Assembly

  - • To Define or Relocate Hot Spots in a Parts Diagram

  - • To Delete a Hot Spot

  - • To Delete an Item from an Assembly

- • "Managing Pre-Configured Products" on page 411

  - • To Pre-configure a Configurable Product

  - • To Delete a Configuration for a Pre-Configured Product

- • "Importing Products" on page 414

  - • To Create an Import Set

  - • To Delete an Import Set

- • To Import a Catalog Immediately

- • To Import a Catalog Using a Cron Job

- • "Exporting the Product Catalog" on page 423

  - • To Create an Export Set

  - • To Add or Remove Categories and Products from the Export Set

  - • To Add Feature Types and Features to an Export Set

  - • To Delete an Export Set

  - • To Export the Catalog Immediately

  - • To Export the Catalog Using a Cron Job

- • "Product Availability" on page 432

- • "Using the Hierarchical Entity Chooser" on page 432

  - • To Select Products from the Product Hierarchy

  - • To Search for Products in the Hierarchical Entity Chooser

- • "Administering Advanced Search" on page 435

  - • To Build a New Index

  - • To Build an Index Incrementally

  - • To Activate an Index Set

  - • To Change the Index and Search Settings

  - • To Update Dictionary Definitions

Product Management Interface

This section describes the product management interface.

To Access the Product Manager Page

1. Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

   The Product Management tab of the Sterling Product Manager page displays.

FIGURE 206. Product Manager Page

The Product Manager page provides these tabs:

- **Product Management**: used to manage product categories and products. This means creating and modifying product categories and products (either assigned to categories or unassigned), assigning domains to products, as well as features and resources. This also includes superseding one product with another, and the definition of assemblies.

- **Feature Management**: used to create the features that will be assigned to products and used when creating questionnaires in Sterling Advisor. See CHAPTER 15, "Managing Features in Sterling Product Manager"

- **Import**: used to manage the import of data into the Knowledgebase.

- **Export**: used to manage the export of product information including products, feature types, features, resources, and prices.

- **Search Admin**: used to manage search indexes: their creation and deletion, and setting the active search index.

Note:	Partner administrators do not have access to the **Import**, **Export**, and **SearchAdmin** tabs.

In the **Product Management** tab display, the upper left panel provides a navigation panel to navigate the product category hierarchy and to select individual product categories. When you select a product category, the products belonging to that

category appear in the lower left panel. The right panel is used to display the details of a selected category or product.

Product Category Administration Tasks

To Create a Product Category

> **Note:**   Partner administrators can only create categories within categories they have created or within categories to which they have been given access by the *enterprise administrator.*

1.   Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

    The Product Management tab of the Sterling Product Manager page displays.

FIGURE 207. Product Management Tab

2.   To create the category under the root category, click **Create New Category**.

3.   To create the category in a category below the root category:

    a.   Navigate to and select the parent category under which you wish to create the new product category.

        The content panel displays the details of the selected category.

b. Click the **Category** tab.

The **Category** tab displays a list of the current child product categories for this product category.

FIGURE 208. Product Management Panel: Category Tab

c. Click **Create New Category**.

FIGURE 209. Category Tab Displaying Fields for New Category

4. Enter a name and description for the new product category.

5. Click **Save All and Return to List**.

The parent category's **Category** tab re-displays with the new product category added.

Follow the instructions in "To Modify a Product Category" on page 357 to perform the following tasks:

• Assign products to the category.

• Assign features types to the category.

When you assign features to products in the category, you can choose from among the features in the assigned feature types.

• Assign features to the category.

These features are automatically assigned to all the products in the category.

• Assign resources.

• Provide access for one or more partners for inserting new products.

To Modify a Product Category

1. Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

   The Product Management tab of the Sterling Product Manager page displays.

2. Navigate to and select the product category that you wish to modify.

   The **General** tab displays the name and description of the category.

Attention:	Make sure you click **Save All Changes** to save your changes before you move on to another tab.

FIGURE 210. Product Category Detail: General Tab

3. To associate an image with the product category, perform the following steps:

   a. Click **Upload** next to the Image URL text field.

Product Manager Upload

Category ID: 1000   Category Name: Computers   `Close`

Image URL:

[   ] Browse...

`Upload` `Clear`

FIGURE 211. Product Manager Upload Window

   b. Click **Browse...**. In the File Upload window, navigate to the image file you want to upload.

   c. Click **Upload**.

   d. Click **Save Changes**.

   If you have a Content Manager server set up to serve images, you can navigate to the image by clicking **Browse Content Manager...**. The Sterling Product Manager ContentManager URL business rule specifies location of the Content Manager. The ContentManager URL has the form:
   `http://server:port/docushare`

4. Click the **Category** tab to display the child product categories of the current product category selected in the navigation panel.

   • You can create a new child product category ("To Create a Product Category" on page 355).

   • You can delete one of the existing child product categories ("To Delete a Product Category" on page 367).

   • You can modify the order in which the product categories are displayed to the customer by moving the child categories up and down.

5. Click **Save All Changes** to save your changes before you move to the next tab.

6. Click the **Product** tab to display a list of the products currently assigned to this product category.

   See "To Assign or Remove Products" on page 363.

7. Click **Save All Changes** to save your actions before you move to the next tab.

Note:	If you assigned a product to a category, and if that product was previously assigned to another category, then the product might have features that have no corresponding feature type in the current product category. The tab will display fields that enable you to reconcile the mismatch. You must reconcile these features to the new category. See "To Reconcile Feature Mismatch" on page 366.

8. Click the **Feature Type** tab to associate feature types to product categories.

FIGURE 212. Product Category Detail: Feature Type Tab

9. To assign a new feature type to the product category, click **Assign...**. Using the Hierarchical Entity Picker, select the feature types you want to assign and click **Done**. When you associate a feature type with a category, you make it possible to assign features belonging to the feature type to all products in the product category.

    Click the **Delete** button next to a feature type to remove a feature type.

10. Click the **Feature** tab to assign features to (or unassign features from) *all the products* in the product category and its sub-categories.

FIGURE 213. Product Category Detail: Feature Tab

From the Feature tab, you can perform the following actions:

a. Create a new feature within a feature type that is already assigned to the product category. Click the **Create and Assign Feature** button next to the feature type. In the Create and Assign New Feature pop-up window, enter information about the new feature and click **Save**.

b. Assign an existing feature within a feature type that is already assigned to the product category. Click the **Assign Feature** button next to the feature type. In the Assign Feature pop-up window, select the feature(s) and click **Assign**.

c. Remove the assignment of a feature from the product category. Click the **Delete** button next to the feature.

d. Remove all assigned features from this product category. Click **Unassign All**.

11. You can use power assignment to assign features to all products within a product category. Using power assignment does not assign the feature to the product category itself, so if a new product is added to the product category it does not inherit the feature.

    To assign features to all the products within the product category, use power assignment as follows:

    a. Click **Power Assign...**.

b. Using the Hierarchical Entity Chooser window, select one or more features from the feature hierarchy.

c. Click **Done**.

d. A dialog box is displayed to confirm that the selected features are assigned to the products in the product category.

12. You can unassign features from all products within a product category as follows:

a. Click **Power Unassign...**.

b. Using the Hierarchical Entity Chooser window, select one or more features from the feature hierarchy.

c. Click **Done**.

d. A dialog box is displayed to confirm that the selected features are unassigned from the products in the product category.

Any action you take in the **Feature** tab is automatic. You do not have to save changes before you move to the next tab.

Note:	Later, if you add additional products to this product category, then you need to assign the feature to each new product individually, or again do a macro (global) assignment to all the products and subcategories in a product category through this **Feature** tab.

FIGURE 214. Product Management: Feature Tab

13. Click the **Resource** tab to assign resources to the product category and its subcategories.

    See "Resources and Resource Types" on page 118 for more information about resources.

    • To assign a resource, select the appropriate resource type, click **Assign**, and enter or change the details (Table 20 on page 363).

Note:	Unlike features, assigning a resource to a product category *does not* assign the resource to all products and subcategories within that product category. The resource is assigned only to the selected product category itself.

    • To unassign a resource, select the appropriate resource type and click **Unassign**.

    • To modify a resource, click on the resource in the list of Assigned Resource Types and edit the appropriate fields.

14. Click **Save All Changes** to save your actions before you move to the next tab.

TABLE 20. Resource Fields

Field	Description
Type	Resource type. For example, white paper, product image, data sheet, URL, and so on.
Value	Location of the resource. For example, the URL address or the path to a resource.
Label	Optional. For example, the image caption, the title of a data sheet or white paper, and so on.
Description	Your comments about this resource.

15. Click the **Access Control** tab to enable or disable partner access (if any) to this category.

    By enabling access, you allow the partner administrator for the enabled partner to create categories and products within this category. See "To Enable Access Control" on page 368 for a description of the procedure.

16. Click **Save All Changes** to save your actions before you move to the next tab.

To Assign or Remove Products

When you modify a product category ("To Modify a Product Category" on page 357), you can assign products to or remove products from a category.

1. Click the **Product** tab.

    This displays the products currently assigned to the product category.

FIGURE 215. Product Management: Product Tab

2. To assign products, click **Assign** to display the Product Browser window.

   See "Using the Hierarchical Entity Chooser" on page 432 for information about finding and selecting products in the Product Browser window.

   Once you have selected the product(s), the **Product** tab is re-displayed. The products appear in the Assigned Products list box with a plus (+) sign, indicating that the product assignments have not been saved.

3. To unassign products, click the product in the Assigned Product list box, then click **Unassign**.

   A minus (-) appears next to the product in the list box, indicating that the product unassignments have not been saved.

4. Click **Save All Changes**.

The product assignments and unassignments are saved.

To Move a Product to Another Category

On occasion, you might want to simply change the product category that a product is in. You could do this by removing the product from the original product category

and then assigning the product to the new category as described in "To Assign or Remove Products" on page 363. However, you can do it more quickly as follows:

1. Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

    The Product Management tab of the Sterling Product Manager page displays.

2. Navigate to the product category that contains the product you want to move.

3. Click the **Product** tab.

FIGURE 216. Product Management: Product Tab

4. In the Assigned Product list, select the product you want to move, then click **Move...**.

A chooser displays, similar to the following figure.

FIGURE 217. Hierarchical Entity Chooser

5. Select the category to which you want to move the product.

  a. Navigate to and select the category to which you want to move the product.

  b. Click **Done**.

  The product you are moving might have features that have no corresponding feature type in the current product category. The tab will display fields that enable you to reconcile the mismatch. You must reconcile these features to the new category. See "To Reconcile Feature Mismatch" on page 366.

6. Click **Save All Changes**.

To Reconcile Feature Mismatch

When you assign products to a category (see "To Assign or Remove Products" on page 363) or when you move a product ("To Move a Product to Another Category" on page 364, the products may contain features that have no corresponding feature types in the current category. In this case, the Feature Reconciliation Panel appears, similar to the following figure.

FIGURE 218. Feature Reconciliation Panel

The Feature Reconciliation Panel contains a list of the feature types that contain the features associated with the product(s) you are assigning to the category.

1. Check the box next to those feature types you want to retain.

2. Click **Save All Changes**.

The feature types (and their features) you selected will automatically be added to the category. The features belonging to any unselected feature types will automatically be dis-associated from newly assigned products.

To Delete a Product Category

When you delete a product category, all subcategories are automatically deleted. The products assigned to the deleted category are not deleted. If the products in the category are not assigned to other categories, then they become unassigned products.

1. Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

   This displays the Product Management tab of the Sterling Product Manager page.

2. Using the Navigation Panel, navigate to and select the parent category that contains the category you want to delete.

   The **General** tab displays the details of the parent category.

3. On the detail panel, click the **Category** tab.

   The **Category** tab displays a list of the current child product categories for the product category selected in the Navigation Panel.

FIGURE 219. Product Category Detail: Category Tab

4. Select the product category you want to delete from the list of child categories.

5. Click **Delete**.

6. Click **Save All Changes**.

To Enable Access Control

Your partners can add and modify products in the Sterling Multi-Channel Selling Solution specific to their storefront organization. To do this, however, they can only add them to categories which they (storefront administrators) have created or to which they have been granted access by the *enterprise administrator.* The *enterprise administrator* uses the following procedure to grant storefront administrator*s* access to product categories.

1. Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

    This displays the Product Management tab of the Sterling Product Manager page.

2. In the Product Category frame, find and click on the product category to which you want to grant access.

3. Click the **Access Control** tab.

FIGURE 220. Product Category Detail: Access Control Tab

4.   Click the appropriate radio button.

To close the category to all partners, click **Closed**. This means only the *enterprise administrator* has access to this category. Partner administrator*s* can browse the information in this category, but they cannot add products, make changes, and so on.

To enable access to all partners, click **Open for all**.

To return ownership to the original owner, click **Owner**.

Note:	This button appears only if the category was created by a partner. If subsequently other partners were granted access to this category, then you can click **Owner** to restrict ownership to the partner who originally created the category.

To enable access for selected partners:

a.   Click **Selected open**.

This displays a frame for selecting partners (see Figure 221 on page 370).

FIGURE 221. Enabling Selected Partner Access

    b.   From the Closed Groups list box, select one or more partners.

    c.   Click **Add**.

          The partner(s) moves to the Open Groups list box.

5.   Click **Save All Changes**.

To Change the Display of a Product Category

In this release, you can manage which display style is used to present a product category to end-users. Each display style is set up as part of the implementation of your Sterling Multi-Channel Selling Solution and is defined in the **CategoryDisplayStyle.xml** configuration file. See "Category Display Style" on page 1122 for more information.

Display styles can take additional parameters: you can use these to adjust the display so that the same general display style is used for different categories, but the additional parameters adjust the display for a particular category (such as a background image or color).

By default, categories inherit the display style of their parent product category. When you set a display style for a category, you can also clear the styles used by its children, and in so you can reset all the child categories to use the parent display style.

You can manage how product categories are displayed to end-users as follows:

1.   Navigate to the product category whose display you want to change.

2. Click the **Display** tab.

FIGURE 222. Product Category Detail: Display Tab

3. For each partner level, you can specify whether the current category uses the same display style as its parent, or to use a different style.

4. If need be, you can specify additional parameters that should be passed to the display. These take the form of Name-Value pairs: for example, "DisplayImage=Workstation.gif&Background=Plain".

5. If you want to override any previously specified display styles on child product categories, then click **Clear Descendants**.

6. Click **Save**.

Product Administration Tasks

This section contains the tasks related to creating and maintaining specific products.

To Create a Product

Products are created either in the context of a specific product category or as unassigned products, not affiliated with any category.

Note:	When you create a product, you should consider adding it to the price list that is used for Sterling Analyzer: the so-called reporting price list. Only products on this price list will have prices associated with them for reporting purposes. By default, this price list is the Enterprise Master List price list.
	Depending on the setup of your Sterling Multi-Channel Selling Solution Knowledgebase, product IDs may or may not be case-sensitive. Check with your Sterling Multi-Channel Selling Solution administrator for details.

1. Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

    The Product Management tab of the Sterling Product Manager page displays.

FIGURE 223. Product Management Tab

2. Create and assign the new product.

    You can either create the product unassigned, or you can create it assigned to a product category.

    To create a product unassigned to a product category, click the **Unassigned** tab. A **New Product** tab appears.

FIGURE 224. Product Management Tab: Unassigned Products

To create the product assigned to a product category:

a. Navigate to and select the product category in the Product Category navigation frame.

b. Click the **Product** tab.

c. Click **Create New Product** to display the **New Product** tab.

Note:	Partner administrator*s* can only create products within categories they have created or within categories to which they have been given access by the *enterprise administrator.*

3. Enter a Product ID, Product Name, and Description for the new product.

Attention:	Do not use the characters "*", "<", and ">" in product IDs.

4. Select a component type.

TABLE 21. **Valid Component Types**

Component Type	Description
Normal	Most products belong to this type.
Configurable	A product is configurable if you have implemented Sterling Configurator or support the ability for a customer to punch out to a configuration application to configure this product.
	If you select this type, then the **Model** field appears. You must associate the product with a model (created with Visual Modeler), selected from the drop-down list. Note that you can only select models that have been compiled. See "Compiling a Model" on page 552 for more information.
	Partner administrators cannot create models, but they can associate products they create with models created by enterprise administrators.
Assembly	A product is an Assembly if it is made up of a number of component (sub-assembly) items each of which is a product or a plain text item (an item that can only be ordered as part of the assembly).
	Assemblies can be bundles or kits:
	Bundles consist of components such as products, provided services, physical kits, or other bundles. Delivery services cannot be part of a bundle.
	Kits are maintained as single items and consist of a number of components that must be ordered together. Kits can be physical kits or dynamic physical kits.
	See "Managing Assemblies" on page 74 for an explanation of this product type.
	If you select the Assembly option, then you can use the **Assembly** tab to specify the sub-assembly structure. See "Managing Assemblies" on page 400 for more information.
Aggregated	See "Aggregated Products" on page 70 for an explanation of this product type. See "To Assign Products as Children to an Aggregated Product" on page 387 for information on managing aggregated products.

5. To indicate that the new product is a service contractable item, click the Service Item check box. The Maintenance Model field appears. Maintenance

models enable maintaining the service contract after the customer order is placed.

To select a maintenance model for this product:

a.   Click "...". The Hierarchical Entity Chooser pop-up window displays.

b.   Navigate to the appropriate maintenance model for this service contractable item. The maintenance model can be the same as the configuration model.

c.   Select the maintenance model, then click Done.

6.   Set the status for the product. See "Product Statuses" on page 67 for more information about product statuses.

7.   Select a start and end date for the product.

8.   Click **Save Changes**.

Once you have saved the product, you can add and modify product information as appropriate. See "To Modify a Product" on page 381 for more information.

If you created the product as assigned to a parent category, then the new product appears among the list of child products for that category in the lower left Navigation Panel. If you created the product unassigned, then the product appears among the unassigned products.

If you selected "Assembly" as the component type, then the new product is preceded by an icon. For Assemblies, you must define the parts that comprise the assembly. See "Managing Assemblies" on page 400.

If you selected "Configurable" as the component type, then you can either leave the product as a generic configured product (no pre-configured items) or you can pre-select the items to be configured with the product. See "Managing Pre-Configured Products" on page 411.

If the product is an aggregated product, then you can assign child products. See "To Assign Products as Children to an Aggregated Product" on page 387.

See "To Modify a Product" on page 381 to:

•   Designate a supplier for the product.

•   Assign classification codes to the product.

•   Assign features and resources.

- Define products that will supersede this product when it reaches its expiration date.

- Define parts that are part of the product, if the product is an assembly.

To Create A Product As a Child of an Aggregated Product

See "Aggregated Products" on page 70 for an overview of aggregated products. Once you have created the aggregated product ("To Create a Product" on page 372), there are two ways to assign products to the aggregated product.

- Use the procedures in "To Assign Products as Children to an Aggregated Product" on page 387.

- Create the product as part of the aggregated product.

The steps in this task describe how to create a product as child of the aggregated product:

1. Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

   The Product Management tab of the Sterling Product Manager page displays.

2. Navigate to and select the parent category of the aggregated product. If the aggregated product is not assigned to any category, then click the **Unassigned** tab to select from a list of unassigned products.

   Once you select the parent category, the products assigned to that category appear in the product frame (lower left) of the navigation panel.

3. Select the aggregated product.

   Find and click the product from the list in the product frame. The right-hand frame displays the tabs containing information about the product, as shown in the following figure.

FIGURE 225. Aggregated Product Detail Page: General Tab

4.   Click the **Child** tab.

FIGURE 226. Product Detail Page: Child Tab

5.   Click **Create Child Product**.

FIGURE 227. Product Detail Page: New Child Product

6.   Enter a Product ID, Product Name, and Description for the new child product.

7.   Select a component type.

TABLE 22. Valid Component Types

Component Type	Description
Normal	Most products belong to this type.
Configurable	A product is configurable if you support the ability for a customer to punch out to a configuration application to configure this product.
	If you select this type, then the **Model** field appears. You must associate the product with a model (created with Visual Modeler), selected from the drop-down list. Note that you can only select models that have been compiled. See "Compiling a Model" on page 552 for more information.
	Partner administrators cannot create models, but they can associate products they create with models created by the enterprise administrator.

TABLE 22. Valid Component Types

Component Type	Description
Assembly	A product is an Assembly if it is made up of a number of sub-assembly items each of which is a product or a plain text item (an item that can only be ordered as part of the assembly). If you select the Assembly option, then you can use the **Assembly** tab to specify the sub-assembly structure. See "Managing Assemblies" on page 400 for more information.
Aggregated	A product is an aggregated product if it is used to represent a set of similar products all of which share a common set of features.

8. If the new child product is a service item, click the Service Item check box. The Maintenance Model field appears. Maintenance models enable maintaining the service contract after the customer order is placed.

    To select a maintenance model for this product:

    a. Click "...". The Hierarchical Entity Chooser pop-up window displays.

    b. Navigate to the appropriate maintenance model for this service item product. The maintenance model can be the same as the configuration model.

    c. Select the maintenance model, then click Done.

9. Set the status for the product. See "Product Statuses" on page 67 for more information about product statuses.

10. Select a start and end date for the product.

11. Click **Save Changes**.

The new product appears indented below its parent product in the lower left Navigation Panel.

FIGURE 228. **Product Detail Page: Child Product Created**

For Assemblies, you can define products and text items that comprise the assembly. See "Managing Assemblies" on page 400. For Configurable products, you can either leave the product as a generic configured product (no pre-configured items) or you can pre-select the items to be configured with the product. See "Managing Pre-Configured Products" on page 411.

Now that you have created the product, you can modify the product to:

• Assign domain codes to the product.

• Assign features and resources.

See "To Modify a Product" on page 381.

To Copy a Product

You can create a product by copying an existing product. When you copy a product, you copy its name, description, and other attributes, so after you copy the product, you must go back to modify any attributes that are different.

1. Navigate to the product category of the product that you wish to copy.

2. Click the Product tab.

3. In the list of products, select the product you wish to copy.

4. Click **Copy...**. The Copy Products window is displayed.

FIGURE 229. Copy Products Window

5. Click **Browse...** to specify the product category in which you want to create the copy.

6. Enter a new product ID for the copied product. As usual, this must be a unique product ID and so must not be the same as an existing product.

7. Click **Copy**. A message is displayed to let you know that the copy operation has been successful and then you can close the window.

8. Navigate to the new product to complete updating its information.

To Modify a Product

1. Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

   The Product Management tab of the Sterling Product Manager page displays.

2. Navigate to and select the product.

   See "To Find and Select a Product in the Navigation Panel" on page 391.

3. Select the product that you want to modify.

After you select the product, you can modify the information in one or more of the tabs described in the remaining steps.

Note:	Click **Save Changes** before you move to another tab.

FIGURE 230. **Product Detail Page: General Tab**

4.   In the **General** tab, change general information about the product and click **Save Changes**.

5.   Click the **Sales** tab.

FIGURE 231. Product Detail Page: Sales Tab

a. To denote that a product is not sellable as a separate item, click the **Cannot Be Sold Separately** check box.

See "Products Sold Separately" on page 68 for an explanation of this check box.

b. To denote that a product is not eligible for in-store pickup, check the **Not Eligible for In-Store Pickup** check box.

c. To denote that a product is not eligible for shipping discounts, check the **Not Eligible for Shipping Discount** check box.

d. To denote that a product is not shippable, check the **Not Shippable** check box.

e. Specify a quantity per unit (the default is one) and a unit of measure.

f. Specify a minimum order quantity and the lead time (in days).

g. In the Image URL field, enter the URL to an image that can be displayed with the product.

Attention:	Do not include any spaces in the image name. For example, you can enter **images/300series.gif** or **images/300_series.gif**, but not **images/300 series.gif**.

h. In the Data Sheet URL field, enter the path to a data sheet file that can be displayed with the product.

6. Click the **Domains** tab.

You can assign classification codes to or remove a classification code from a product.

a. Select the appropriate domain from the drop-down list.

b. Assign or remove a code

- To assign a code, enter a classification code for the product and click **Assign**. The classification code is added to the list of assigned classifications for the product in that domain.

- To remove a code, select the classification from the list of classification codes for the domain and click **Delete Selected**.

c. Click **Save Changes**.

7. Click the **Features** tab.

FIGURE 232. Product Detail Page: Feature Tab

- To assign features, select a feature type from the drop-down list, and then select the features from the Unassigned Features list box. Click **Add**.

Note:	If the product belongs to multiple categories, then the **Feature** tab includes an extra field called Product Category Paths. This drop-down list displays all the category paths to which the product belongs. If you select a path, then the feature type drop-down list contains the feature types for this path.

> • To unassign features, select the features in the Assigned Features list box and click **Remove**.

Note:	Users cannot unassign features belonging a category to which the user does not have access.

> Make sure you click **Save All Changes** before moving to another tab.

8. Click the **Resource** tab.

FIGURE 233. Product Detail Page: Resource Tab

> • To assign resources, select the appropriate resource type from the drop-down list, and then enter the appropriate details (see Table 23 on page 385). Click **Assign**.

TABLE 23. Resource Fields

Field	Description
Type	Resource type.
Value	Location of the resource. For example, the URL address or the path to a resource.
Label	Optional. For example, the image caption, the title of a data sheet or white paper, and so on.
Description	Your comments about this resource.

> • To unassign resources, select them in the Assigned Resources list box, then click **Unassign**.

9. Click the **Related Items** tab.

FIGURE 234. Product Detail Page: Related Items Tab

See "Related Products" on page 396 for the more information about related products.

10. Click the **Supersessions** tab.

See "Superseding a Product" on page 399 for the tasks involved in supersession.

11. Click the **Assembly** tab.

See "Managing Assemblies" on page 400 for the tasks involved in managing assembly products.

12. Click the **Prices** tab.

See "Pricing Products" on page 392 for the tasks involved in assigning prices to products, assigning products to price lists, and specifying suppliers for products.

Click **Save All Changes**.

To Delete a Product

You can delete products when you no longer wish to manage them: typically, this is when the products have reached the end of their useful life. Products can only be deleted when their status is either "In Creation" or "Blocked".

1. Navigate to the product that you wish to delete.

2. On the product detail page, verify that the product has either the In Creation or Blocked status.

3. Click **Delete**.

4. A confirmation dialog box is displayed. If you click **OK**, then the Sterling Multi-Channel Selling Solution checks that the product is not currently in use. If the product is in use (as described below), then an error message is displayed to say that the product cannot be deleted. If you want to delete the product, then you must correct the conditions preventing its deletion.

    Once the product is deleted, then it is no longer visible to enterprise users or end-users.

TABLE 24. Conditions that Prevent Deletion

Condition	Comments
Pricing	If the product is on any price list, then it cannot be deleted.
Configurator	If the product is attached to any item in a model, then it cannot be deleted.

To Assign Products as Children to an Aggregated Product

You can create a product as a child to a parent product ("To Create A Product As a Child of an Aggregated Product" on page 376), or you can create a product ("To Create a Product" on page 372), then assign the product to the parent. This task describes how to assign a product to a parent.

1. Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

    This displays the Product Management tab of the Sterling Product Manager page.

2. Navigate to and select the parent category of the aggregated product.

    If the aggregated product is not assigned to any category, then click the **Unassigned** tab to select from a list of unassigned products.

    Once you select the parent category, the products assigned to that category appear in the product frame (lower left) of the navigation panel.

3. Select the aggregated product.

   If the product is assigned to a category, then find and click the product from the list in the product frame. The right-hand frame displays the tabs containing information about the product.

4. Click the **Child** tab.

FIGURE 235. Product Detail Page: Child Tab

5. Assign the product.

   a. In the **Enter or select a child product ID** field, enter a product ID.

      You can click **Browse...** to display the Hierarchical Entity Chooser to browse or search for the product. See "Using the Hierarchical Entity Chooser" on page 432.

   b. Click **Assign**.

6. Repeat the last step for each product ID you want to assign.

7. Click **Save Changes**.

8. If there are features associated with the products, then a frame appears to select the feature types:

   a. Select feature types.

    b.   Click **Save All Changes** in the Feature Type Selection frame.

    c.   The Child tab is re-displayed.

    d.   Click **Save Changes** in the Child tab.

The newly-assigned products appear indented below the parent product in the lower left frame. If the product that is assigned to the aggregated product belonged to a category, then after assignment the product will belong to no category.

To Unassign Child Products from an Aggregated Product

1. Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

   This displays the Product Management tab of the Sterling Product Manager page.

2. Navigate to and select the parent category of the aggregated product.

   If the aggregated product is not assigned to any category, then click the **Unassigned** tab to select from a list of unassigned products.

   Once you select the parent category, the products assigned to that category appear in the product frame (lower left) of the navigation panel.

3. Select the aggregated product.

   If the product is assigned to a category, then find and click the product from the list in the product frame. The right-hand frame displays the tabs containing information about the product.

FIGURE 236. Product Detail Page: General Tab

4.   Click the **Child** tab.

FIGURE 237. Product Detail Page: Child Tab

5. In the list box, find and select the product IDs you want to unassign.

6. Click **Unassign**.

7. Click **Save Changes**.

To Find and Select a Product in the Navigation Panel

There are three ways to find products in the navigation panel: browse the unassigned products, browse products that are assigned to a category, and searching for the product.

To browse unassigned products, click the **Unassigned** tab in the navigation panel, then find and select the assembly from the list.

To browse products assigned to a category:

1. Navigate to the parent category for the product and select the parent category. The product frame displays the products associated with the parent category.

2. In the product frame of the navigation panel, select the assembly.

To search for the product, click the **Search** tab. This enables you to search the product catalog according to product ID, product name, product description, assigned feature, or assigned resource.

> **Note:** An assembly icon next to the product designates the product as an assembly.

Pricing Products

Earlier releases of the Sterling Multi-Channel Selling Solution managed pricing through the pricing administration application as described in "Setting Prices for Products" on page 682. This release also enables you to manage the prices for a product through the product management UI as described in this section. In general, the basic organization of pricing remains the same: products are priced by adding them to price lists and then assigning the prices to partners. Users see prices based on the effective price lists assigned to their partner. See "Setting Prices for Products" on page 22 for more information.

To Add a Product to a Price List

1. Using the product manager UI, navigate to the product.

2. Click the Prices tab.

FIGURE 238. Prices Tab: Maintain Prices Tab

3. Click the Assign New tab.

FIGURE 239. Prices Tab: Assign New Tab

4. For each price list to which you want to add the product, check the price list check box and enter the price for the product. Optionally, you can enter a percentage price adjustment and an absolute price adjustment.

5. Click **Assign**.

To Change Prices for a Product

You can update prices for a product through the product manager UI as follows:

1. Using the product manager UI, navigate to the product.

2. Click the Prices tab.

3. For each price list on which to modify the price, check the price list check box and enter the new price for the product on the price list. Optionally, you can modify the percentage price adjustment and the absolute price adjustment.

4. If you want to modify the conditional rules associated with this product on this price list, then click the Conditional Rules button.

   The Conditional Rules window is displayed.

FIGURE 240. **Conditional Rules Window**

5. Enter conditional rules as appropriate. See "Conditional Pricing" on page 687 for more information about conditional rules.

6. Click **Save**.

7. On the Maintain Prices tab, click **Save**.

To Change All Prices for a Product

You can use the mass update functionality of the pricing administration application through the product manager UI to update all the prices for a product as follows:

1. Using the product manager UI, navigate to the product.

2. Click the Prices tab.

3. Click the Mass Update tab.

FIGURE 241. Prices Tab: Mass Update Tab

4. Select the price lists to which you want to apply the mass update by conducting a search that retrieves those price lists and no others.

5. Click **Mass Update**.

FIGURE 242. Pricing Mass Update Window

6. Specify the change.

    a. Click **Delete** to delete the product from all the price lists in scope.

    b. Click **Update** to apply the change to all of the price lists in scope.

    See "To Set Prices for Products as a Mass Update" on page 683 for more information about the sort of changes that you can make.

Related Products

You can link products together by specifying that one product is related to another. When a customer views the product detail page for a product, they can see that the product has related products. Related products include service contracts, warranties, and so on that a customer might want to buy at the same time as the product.

We say that "product B is related to product A" or "product A has product B related to it" if when you view the product detail page for product A, you see product B listed as a related product. Note that this is not a symmetrical relationship: most of the time, the relationship is defined in one direction only.

You can relate one or more products to any product, or you can relate a product to one or more products. For example, a hardware product A may have two related service contract products B and C, and service contract product B may also be related to product D.

- When customers view the product detail page for product A, then they see both related products B and C listed.

- When customers view the product detail page for product D, then they see only related product B listed.

Types of Related Products

The following lists the types of related products:

- Complementary: when an end-user views a product detail page, these products are displayed on the Complementary items tab.

- Alternate: when an end-user views a product detail page, these products display in a list under the Alternative Selections heading.

- Competitive: this type of related product is not displayed through the out-of-the-box UI, but the information can be used to track competitive products for product managers.

- Related Categories: these display to end-users as they navigate the product catalog to help them quickly access products in related categories.

To Relate One Product to Another

If you want to relate product B to product A, then you must decide what type of relation product B has to product A.

1. Using the Product Manager UI, navigate to the product detail page for Product A.

2. Click the Related tab.

FIGURE 243. Product Detail Page: Related Items Tab

3. Click **Assign...** for the appropriate relation type.

4. Using the Hierarchical Entity Chooser, navigate to and select product B, and click **Done**.

5. Check that the correct product is listed in the list of related products.

6. Click **Save Changes**.

You can repeat Steps 2 through 5 as many times as need be to relate other products to product A.

To Remove a Product Relationship

If Product B is related to Product A, and you want to remove this relationship, then do the following:

1. Using the Product Manager UI, navigate to the product detail page for Product A.

2. Click the Related tab.

3. Identify Product B in the lists of related products and click **Delete**.

4. Click **Save Changes**.

Superseding a Product

See "Superseding One Product with Another" on page 75 for an explanation of supersession.

To Supersede a Product

After you have displayed the product you want to supersede (see "To Modify a Product" on page 381), you can use this procedures to supersede a product.

1. Click the **Supersession** tab.

FIGURE 244. Product Management Panel: Supersession Tab

2. Click **Supersede**.

    The Hierarchical Entity Chooser displays.

Attention:	This step fails if the current product is already superseded. If there is a supersession chain, then click Remove Chain to remove the chain.

---

3. Using the chooser, select the product you want to supersede, then click **Done** in the chooser window.

   See "Using the Hierarchical Entity Chooser" on page 432 for detailed instructions on using the chooser.

   After you click **Done**, the product ID of the superseding product appears in the Supersession Chain box.

FIGURE 245. Supersession Tab: Superseding Product

To Remove a Superseding Product

After you have displayed the product you want to supersede (see "To Modify a Product" on page 381), you can use this procedures to supersede a product.

1. Click the **Supersession** tab.

   The Supersession Chain field displays the superseding product (as well as any other products along the chain).

2. Click **Remove Chain**.

   The superseded product is detached from the entire supersession chain. All superseding products are removed from the supersession chain.

Note:	The relationship between any products in the supersession chain remain valid.

Managing Assemblies

When you create a product as component type "Assembly", you decide the assembly's component sub-type: either bundle (the default) or physical kit. The next step is to define the products and text items that comprise the assembly. See

"Managing Assemblies" on page 74 for information about component sub-types and defining the products and text items that comprise the assembly.

To Define the Parts in an Assembly

1. Create a product with the component type "Assembly".

   See "To Create a Product" on page 372. When you click the product in the lower-left navigation panel, you will see a new tab, the **Assembly** tab (Figure 246 on page 401).

2. Click the **Assembly** tab.

FIGURE 246. Product Management Panel: Assembly Tab

3. Add parts to the list.

   You can add parts using the Hierarchical Entity Chooser, or you can add parts manually.

   To add parts using the Hierarchical Entity Chooser:

   a. Click **Browse...** in the work area.

      This displays the chooser window. See "Using the Hierarchical Entity Chooser" on page 432 for instructions on using the chooser. The line items will fill the list automatically when you click **Done** in the chooser window.

b. For each line item, click its corresponding update icon in the Action column.

The selected line item is displayed in the fields at the bottom of the panel.

c. Enter the information as described in Table 25 on page 402.

Seq # and Quantity are required fields.

d. Click **Add/Update**.

To add parts manually:

e. Enter the information as described in Table 25 on page 402.

Seq # and Quantity are required fields.

f. Click **Add/Update**.

Attention:	You must click **Save** to add the part permanently to the assembly list.

g. Repeat these steps for each component you want to add manually.

TABLE 25. Part Information: Assembly

Field	Description
Seq #	Required. The position of the part relative to the other parts in the assembly, usually mapped to a callout number in a parts diagram.
Part Name	The product ID. If you select a product from the navigation list, then this field is auto-filled with the product ID.
	If you select "product" as the part type (see below), then you can manually type a product ID. If you select "text", then you can manually type a part name.
Description	The description of the part.
Item #	The item number represents an integral part of the assembly to which the part you are adding will belong. For example, the item number might represent a subassembly of the larger assembly. It could also represent a single item such as a warranty.
Quantity	Required. The quantity-per-assembly (the amount of the part needed in each assembly)

Field	Description
Part Type	Product (a product used to complete the assembly) or Text (a text item that is included as part of the assembly)
	If you select **Product**, then when you click **Save** the Sterling Multi-Channel Selling Solution will attempt to match the item name with a product ID in the product catalog.

4.   Click **Save**.

Once you have added the parts, you can modify the part information ("To Modify a Line Item in an Assembly" on page 403). You can also define "hot spots" within a parts diagram ("To Define or Relocate Hot Spots in a Parts Diagram" on page 404).

To Modify a Line Item in an Assembly

1.   Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

This displays the **Product Management** tab of the Sterling Product Manager page.

2.   Find and select the assembly.

See "To Find and Select a Product in the Navigation Panel" on page 391.

When you select the product, the detail information for the product appears in the content panel. A product of the "Assembly" type includes an **Assembly** tab.

3.   Click the **Assembly** tab.

The content panel displays the line items belonging to the assembly.

FIGURE 247. Assembly Tab

4. In the list of parts in the **Assembly** tab, find the item you want to modify, then click its corresponding update icon in the Action column.

   The line item information appears in the fields in the lower area of the Assembly tab.

5. As necessary, modify the information as described in Table 25 on page 402.

6. Click **Add/Update**.

To Define or Relocate Hot Spots in a Parts Diagram

A "hot spot" is a set of coordinates in an image, typically a parts diagram, that enables end-users to order parts by displaying the parts diagram and clicking on the appropriate "hot spot" in the image.

1. Display the Assembly panel as described in either "To Define the Parts in an Assembly" on page 401 or "To Modify a Line Item in an Assembly" on page 403.

FIGURE 248. Assembly Panel

2. Load an image, if necessary.

Attention: The image you load will replace any image that is currently displayed.

---

    a.   Scroll to the bottom of the parts list until you see the Image URL field.

    b.   In the Image URL field, type the URL for the image you want to load.

        The Sterling Multi-Channel Selling Solution supports any image format that can be invoked by HTML.

    c.   Click **Set Image**.

        The image is displayed at the bottom of the list of parts.

FIGURE 249. Assembly Panel with Image Loaded

3.   Click **Save**.

4.   Click **Edit Hot Spots**.

This displays the Edit Hot Spots window.

FIGURE 250. Edit Hot Spots Window

5. Create the hot spot.

   a. In the list of parts, find the part for which you want to define or relocate its "hot spot".

   b. Click the radio button at the far left of the line.

      If the part already has a designated hot spot, then two sets of crosshairs will be displayed on the image, showing the area designated for the hot spot.

   c. In the image, find the location that you want for the "hot spot".

      This can be any area you want to designate; for example, the individual part itself or a callout designation for the part.

    d.   Click in the upper left-hand corner of the hot spot.

A set of crosshairs appear in the spot you clicking (Figure 251 on page 408), designating the first set of coordinates for the hot spot. The coordinates of this spot also appear in the first set of fields at the bottom of the window.

Note:	You can also enter the coordinates manually using the fields in the lower part of the window: the first set of fields for the first set of coordinates, the second set of fields for the second set of coordinates.

FIGURE 251. Edit Hot Spots Window with Coordinates Selected

    e.   Click in the lower right hand corner of the spot.

Another set of crosshairs appear in the spot you clicking, designating the second set of coordinates for the hot spot. The coordinates of this spot also appear in the second set of fields at the bottom of the window.

    f.   Click **Set Hotspot**.

A checkmark appears in the Coords column in the list of parts, indicating that this part has a hot spot designated for it in the image.

Note:	You can click **Clear Hotspot** to clear the hot spot and start over.

6. Repeat the last step for each hot spot you want to create.

7. Click **Done** when you are done creating hot spots.

   This closes the Edit Hot Spot window and returns you to the Edit Assembly tab. A checkmark appears in the Coords column for all parts for which a hot spot is defined.

To Delete a Hot Spot

1. Display the Edit Hot Spots window as described in "To Define or Relocate Hot Spots in a Parts Diagram" on page 404.

FIGURE 252. Edit Hot Spots Window

2. In the list of parts, find the part whose hot spot you want to delete.

3. Click the radio button at the far left of the line.

   Two sets of crosshairs will appear, designating the current hotspot.

4. Click **Clear Hotspot**.

   The crosshairs will disappear. The checkmark in the Coords column will be removed.

5. Repeat the last two steps for each hot spot you want to delete.

6. Click **Done** when you are done deleting hot spots.

   This closes the Edit Hot Spot window and returns you to the Edit Assembly tab.

To Delete an Item from an Assembly

1. Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

   This displays the **Product Management** tab of the Sterling Product Manager page.

2. Find and select the assembly.

   For assigned products:

   a. Navigate to the parent category for the product and select the parent category. The product frame displays the products associated with the parent category.

   b. In the product frame of the navigation panel, select the product that is the assembly

   For unassigned products, click the **Unassigned** tab in the navigation panel, then find and select the assembly from the list.

   You can also click the **Search** tab to search the product catalog according to product ID, product name, product description, assigned feature, or assigned resource.

   When you select the product, the detail information for the product appears in the content panel.

3. Click the **Assembly** tab.

   The content panel displays the line items belonging to the assembly.

4. In the list of items at the top of the tab, find the item that you want to delete.

5. Click the **Delete** icon in the Action column.

   The item is no longer displayed in the list of items.

6. Click **Save**.

   The item is deleted from the list of items.

Managing Pre-Configured Products

When you create a configurable product, you must associate the new product with a model previously created using the Visual Modeler. You can either leave the product-model association as is, in which case it represents a generic configured product (no pre-defined configurations), or you can pre-configure the product with your own selections. These selections form the starting point for any configuration performed by the end-users.

To Pre-configure a Configurable Product

1. Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

    This displays the Product Management tab of the Sterling Product Manager page.

2. Find and select the configurable product.

    For assigned products:

    a. Navigate to the parent category for the product and select the parent category. The product frame displays the products associated with the parent category.

    b. In the product frame of the navigation panel, select the product.

    For unassigned products, click the **Unassigned** tab in the navigation panel, then find and select the product in the list.

    You can also click the **Search** tab to search the product catalog according to product ID, product name, product description, assigned feature, or assigned resource.

    When you select the product, the detail information for the product appears in the content panel.

3. In the content panel, click the **Configuration** tab.

FIGURE 253. Product Management Panel: Configuration Tab

4. Click **Configure**.

   This displays the Configuration screen.

FIGURE 254. Product Configuration Screen

5. Define the configuration.

   a. Select the items to be included in the configuration.

   b. Click **Done**.

      This re-displays the **Configuration** tab in Sterling Product Manager.

FIGURE 255. Configurable Product with Configuration

6. Click **Save Changes**.

To Delete a Configuration for a Pre-Configured Product

Note:	The steps described here refer only to deleting the configuration for the associated model. This does not delete the product itself or the product-model association.

1. Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

   This displays the Product Management tab of the Sterling Product Manager page.

2. Find and select the configurable product.

   For assigned products:

   a. Navigate to the parent category for the product and select the parent category. The product frame displays the products associated with the parent category.

   b. In the product frame of the navigation panel, select the product.

   For unassigned products, click the **Unassigned** tab in the navigation panel, then find and select the product from the list.

   You can also click the **Search** tab to search the product catalog according to product ID, product name, product description, assigned feature, or assigned resource.

   When you select the product, the detail information for the product appears in the content panel.

3. In the content panel, click the **Configuration** tab.

    The **Configuration** tab displays the items included in the current configuration (see Figure 255 on page 413).

4. Click **Delete**.

5. Click **Save Changes**.

You can either create a new configuration for the product (see "To Pre-configure a Configurable Product" on page 411) or you leave the product as a generic configured product.

Importing Products

When you have large amounts of product data that you want to add to the Sterling Multi-Channel Selling Solution, you can create an import set consisting of the categories and products you want to import. You import the products as a catalog import set in dXML format (see "Import File Properties" on page 416 for its description). You may customize parameters for an import set by using the System Administration feature.

Partners can also use this mechanism to import their catalog data. See "Importing Partner Product Information" on page 422 for more information.

You can also post updates to the product catalog into the Sterling Multi-Channel Selling Solution using the CatalogRequest message. See "Posting CatalogRequest Messages" on page 423 for more details.

To Create an Import Set

1. Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

    This displays the Product Management tab of the Sterling Product Manager page.

2. Click the **Import** tab.

FIGURE 256. Import Panel

3. Click **New...**.

FIGURE 257. Import Panel with General Tab: New Import Set

4. Enter the information for the fields listed below.

TABLE 26. Import Set Fields

Field	Description
Name	Description for the import set
Import Format	dXML_3.0 or dXML_4.0

TABLE 26. Import Set Fields (Continued)

Field	Description
Price List	If you want to import price information with the products, then select the price list to which the price information should be added or updated.
Supplier Name	The default supplier name. Select the supplier of the data only if the supplier is not specified in the file being imported.
File Name	The name of the file that contains the data being imported. You can specify the full path. If you do not specify the full path, then the system will default to the following directory ***debs_home*/Sterling/catalogexport/**.

5. Select the insertion point.

   This is the point in the product hierarchy where the imported data should be placed. To select the point, navigate through the product hierarchy until you find the location you want, then select the directory. The direction appears in the Selected Insertion Point Field.

Note:	If you do not select an insertion point, then the imported data will be placed in the root product category.

6. Click **Save**.

The General tab reappears with the new import set displayed. You can either import the file now ("To Import a Catalog Immediately" on page 419) or schedule the import ("To Import a Catalog Using a Cron Job" on page 420).

Import File Properties

When you import products using the import set mechanism, you must use an XML file that conforms to the Catalog DTD defined in the dXML message family. This section describes the rules that determine how information in this file is processed during the import process.

Note:	Make sure that the files have no formatting information that makes them invalid XML documents. If the file is not a valid XML document, then no information is imported.

The file must begin with the MessageHeader element and declare the MessageType as Catalog:

```
<dXML>
    <MessageHeader>
        <MessageType>Catalog</MessageType>
        <MessageVersion>4.0</MessageVersion>
```

```
            <MessageID/>
            <SessionID/>
            <SessionKeepAlive>30</SessionKeepAlive>
        </MessageHeader>
        <RemoteUser>
            <UserLogin/>
            <UserAuthenticator/>
        </RemoteUser>
        <Catalog>
            <CatalogHeader>
                <Description>dXML Catalog</Description>
                <DefaultSettings>
                    <Currency>USD</Currency>
                    <Language>en-US</Language>
                </DefaultSettings>
                <Supplier>
                    <Name Type="PartnerID">Datasolve</Name>
                    <SupplierID Domain="Supplier">29</SupplierID>
                    <URL/>
                    <PriceList>Datasolve Master List</PriceList>
                </Supplier>
            </CatalogHeader>
            <CatalogItems>
...
            </CatalogItems>
        </Catalog>
</dXML>
```

The Supplier element is used to identify from which supplier the catalog data is
being imported. In the case of an import of enterprise data, you should set the value
of the Type attribute to "PartnerID", and set the value of the Name child element to
the Manufacturer Name system property.

In the Catalog element, there is a child element for the CatalogItems. Each product
that is to be imported is declared using a ProductUpdate element. This can include
product and resource information for one or more locales.

```
<ProductUpdate Action="FullUpdateOrInsert">
    <Path>/Computers/Desktops</Path>
    <ProductID>MXDS-7510</ProductID>
...
</ProductUpdate>
```

You can define the following values for the Action attribute for a ProductUpdate
element:

•   Insert: use this action to add a product to the product catalog. An error is
    recorded if the product already exists in the catalog.

- FullUpdate: update all the information in the product using values provided in the import set or if nothing is specified the default value for the product. An error is recorded if the product does not exist.

- IncUpdate: update all the information in the product using values provided in the import set, but leave values already defined for other fields. An error is recorded if the product does not exist.

- FullUpdateOrInsert: if the product does not exist, then treat this in the same way as the Insert action. If it does exist, then treat this as a FullUpdate action.

- IncUpdateOrInsert: if the product does not exist, then treat this in the same way as the Insert action. If it does exist, then treat this as a IncUpdate action.

You can import pricing information for the product as part of the ProductUpdate element. This information is used to add or edit price information on the price list defined in the import set. It can include quantity tier information and this will override any quantity tier information currently specified for the product on the price list:

```
<Prices>
    <Price ListPrice="8600" PercentDiscount="100"
        AbsoluteDiscount="200"/>
    <QuantityTier From="100" To="190">
    <Price ListPrice="8000" PercentDiscount="50"/>
    </QuantityTier>
    <QuantityTier From="300">
        <Price ListPrice="70000" AbsoluteDiscount="1300"/>
    </QuantityTier>
    <QuantityTier From="400">
        <Price ListPrice="700000" AbsoluteDiscount="13000"/>
    </QuantityTier>
</Prices>
```

You can provide supplier information for products as part of the product import. This is how supplier information is processed:

1. The application will try to find out if there is a supplier defined in the importing file header. If there is one, then it will be used.

2. If there is no supplier defined in the header, then the supplier name defined in the import set will be used.

    a. If the supplier name matches the Manufacturer Name system property, then all product IDs will be regard as enterprise product IDs and imported directly.

b. If the supplier name does not match the Manufacturer Name, then the product IDs in the importing XML file will be regarded as partner product IDs, and they will be converted to enterprise product IDs using the CMGT_SKU_MAPPING database table.

3. If you do not need product ID mapping, then just make sure the value of the Name child element of the Supplier element in the dXML file matches the Manufacturer Name system property.

To Delete an Import Set

Before you delete an import set, make sure you delete any scheduled cron jobs involving the import set being deleted.

1. Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

   This displays the **Product Management** tab of the Sterling Product Manager page.

2. Click the **Import** tab.

3. Select the appropriate import set from the Import Set Name drop-down list.

4. Click **Delete**.

To Import a Catalog Immediately

1. Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

   This displays the Product Management tab of the Sterling Product Manager page.

2. Click the **Import** tab.

3. Select the appropriate import set from the Import Set Name drop-down list.

4. Click **Import Now**.

When you click **Import Now**, the screen displays the progress of your import. You can click **Result Statistics** to display import result statistics.

Also, once the import is complete, three results files are created in the directory defined by the path in the File Name field of the import set (see Table 26 on page 415):

• Import Results File

- Import Errors File

  Lists all the import records not imported.

- Import Statistics File

To Import a Catalog Using a Cron Job

1. Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

   This displays the Product Management tab of the Sterling Product Manager page.

2. Click the **Import** tab to display the Import page.

3. Click **Schedule**.

   This displays a list of the current cron jobs.

4. Click the link for the **Import Catalog** cron job.

5. This displays the Cron Job Configuration page for the Import Catalog cron job.

FIGURE 258. Cron Job Configuration Page

6. Change the information as necessary.

TABLE 27. Cron Job Configuration Page

Field	Description
Job Name	The name of the cron job
Program	The java implementation class that executes the job. You can use the predefined import cron job: **com.comergent.apps.productMgr.dataSynd.CatalogImport Cron**. Refer to the *Sterling Multi-Channel Selling Solution Developer Guide* for more information on creating cron jobs.
Command Line Arguments	The command line parameters that provide information about the job. The format is: ImportSetName=NAME, where NAME is the name of the import set you are scheduling.
Cron Job Type	Automatically set to **Application**. The displayed username and password are defaults. Enter a username and password. These are usernames and passwords for users specific to the Sterling Multi-Channel Selling Solution. The username and password you enter must have the privileges to be able to create import sets.
Start date and time End date and time	The effective start and end period between which dates and times the cron job will run. This, along with Frequency, determines when the job will run. For example, if you entered a frequency of three days, then the job will run every three days from the task start date and time until the task end date and time is reached. You can enter the same dates and times for both start date and time, in which case the job will be run only once, at a specific time.
Frequency	How often will the job be run? Every three days? Every week? Every five minutes? and so on.

7. Activate the job by checking the **Active** check box.

8. Click **Save All Changes**.

The import creates three results files in the directory defined by the path in the File Name field of the export set (see Table 26 on page 415):

• Import Results File

- Import Errors File

  Lists all the import records not imported.

- Import Statistics File

Importing Partner Product Information

Partners can use the import sets to import catalog and pricing data into the Sterling Multi-Channel Selling Solution using their own product IDs and other product information. To import a product, they must perform these steps:

1. Define a SKU mapping entry which maps their product ID to a corresponding enterprise product ID. In defining the mapping, they must specify the enterprise partner ID as the Pricing SKU Authority using the unique string for the enterprise. This is defined as the Partner.com Manufacturer Name system property. They specify the enterprise product ID as the Pricing SKU and their corresponding product ID as the Mapped SKU. For example:

   ```
   Pricing SKU Pricing SKU Authority Mapped SKU
   MX-GV15F Matrix DS-GV15F
   ```

2. Create a catalog import set that includes the product in an element along these lines. The Name element in the Supplier element must take the value defined as the External Partner ID in the partner profile for their partner: You must set the value of the Type attribute to "PartnerID".

   ```
   <Supplier Type="PartnerID">
       <Name>Datasolve</Name>
       <SupplierID Domain="InternalSupplierID">29</SupplierID>
       <URL/>
       <PriceList>Datasolve Enterprise Master List</PriceList>
   </Supplier>
   ...
   <ProductUpdate Action="FullUpdateOrInsert">
   <Path>/Computers/Notebooks</Path>
       <ProductID>DSLP-7410</ProductID>
   ...
   </ProductUpdate>
   ```

   Here the ProductID element is the partner product ID previously declared as the Mapped SKU.

   Note that you can use a legacy form of the Catalog dXML file, in which you do not specify a Type attribute in the Supplier element. However, to use this legacy form, you must upload the SKU mapping information using the legacy form of the uploaded SKU mapping, in which the SKU authority is set to the partner external Partner ID.

3. Send the catalog import file to an enterprise administrator.

4. The enterprise administrator copies the catalog import file to the standard import location on the file system: ***debs_home*/Sterling/catalogexport/**.

5. The enterprise administrator creates an import set as described in "To Create an Import Set" on page 414.

6. The enterprise administrator executes the import as described in "To Import a Catalog Immediately" on page 419 or "To Import a Catalog Using a Cron Job" on page 420.

Posting CatalogRequest Messages

You can update the product catalog by using a utility to post XML messages into the Sterling Multi-Channel Selling Solution. The XML message must conform to the CatalogRequest DTD which is defined in ***debs_home*/Sterling/dXML/4.1/CatalogRequest.dtd**. See "CatalogRequest DTD" on page 1121 for more information.

To Update the Product Catalog using CatalogRequest

1. Create an XML document that conforms to the CatalogRequest DTD and which provides the update information you want to submit. Make sure that the MessageType element has the value "CatalogRequest" and the MessageVersion element has the value "4.0".

2. Using a utility such as the LocalPost utility, post the XML document into the Sterling Multi-Channel Selling Solution using the standard message URL with "/catalogimport" appended. For example:

```
http://server:port/Sterling/msg/matrix/catalogimport
```

3. Verify that a CatalogResponse message is returned. This provides information about the status of the request.

Exporting the Product Catalog

To export products and product categories, you create an export set that defines the product and categories to be exported, the file format to be used, and the name of the file to be generated. When the set is exported, the file is generated in the selected format and stored, by default, in the ***debs_home*/Sterling/catalogexport/** directory. You can change the name of the **catalogexport** directory, but the new directory *must* be located in the ***debs_home*/Sterling/** directory. See the *Sterling*

Multi-Channel Selling Solution Implementation Guide for the location of the **debs_home** directory.

If you export catalog information and specify one of the dXML formats, then the exported XML file will conform to the DTD defined by the **Catalog.dtd** file of the corresponding dXML message family.

To Create an Export Set

1. Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

    This displays the **Product Management** tab of the Sterling Product Manager page.

2. Click the **Export** tab.

    The Export page appears.

FIGURE 259. Product Management: Export Tab

3. Click **New...**.

    The Create New Export Set panel appears.

FIGURE 260. Create New Export Set Tab

4. Enter the information for the fields listed below.

TABLE 28. Export Set Fields

Field	Description
Name	A name to describe the export set
Export Format	dhXML_1.0, dXML_4.0, or cXML_1.1
	Note that dhXML is a variation of the dXML format in which the product category hierarchy is also preserved.
Price List	The price list that contains the products in the export set. Each product in the export set must have corresponding price information. Therefore each product must be part of the selected price list.
	Note: only list price information is exported. The export does not include any conditional pricing that might be part of the price list.
Filename Prefix	A maximum of 10 characters. The filename can contain an underscore or dash, but cannot contain spaces or periods.

TABLE 28. Export Set Fields (Continued)

Field	Description
URL	This field is only available for cXML_1.1 export format.
	URL provides a link for the customer to obtain more information about the products in this export set.
Export Type	This drop-down list is only available for cXML_1.1 export format: Punchout Export or Item Add Export.
	Punchout Export enables customers to punch out to your catalog to find and order products. Item Add Export encapsulates all the product information into an export set and the customer experience is dictated by a separate catalog management system.

5. Click **Save**.

The screen re-displays the original export page with the new export set selected.

To Add or Remove Categories and Products from the Export Set

1. Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

   This displays the **Product Management** tab of the Sterling Product Manager page.

2. Click **Export** to display the Export page.

3. Select the appropriate export set from the Export Set Name drop-down list.

   The **General** tab displays the information for this set.

4. Click the **Product** tab.

FIGURE 261. Export Panel with Product Tab

5. Add a product category and products.

    a. In the navigation panel, navigate through the product hierarchy and select a product category.

       The children of this category (categories and products) display in their respective lists.

    b. In either the Product Category or the Products list, click the item you want to export.

       When you add a category, you add all the products in that category to the export set.

    c. Click **Add**.

       The selected items appear in the appropriate list on the right.

FIGURE 262. Adding Products to the Export Set

6.   Add unassigned products.

a.   Click the **Unassigned** tab in the navigation panel.

The unassigned products display in the Products list.

b.   Click the product you want to export.

c.   Click **Add**.

The selected items appear in the Products To Export list.

7.   Remove categories and products from the export set.

a.   Click the category or product in the appropriate list box.

b.   Click **Remove**.

The category or products are removed from the set.

8.   Click **Save All Changes**.

To Add Feature Types and Features to an Export Set

You can select specific features of the products in the export set that will be exported with the product.

1. Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

   The **Product Management** tab of the Sterling Product Manager page displays.

2. Click **Export** to display the Export page.

3. Select the appropriate export set from the Export Set Name drop-down list.

   The **General** tab displays the information for this set.

4. Click the **Feature Type** tab to display the Feature Type panel.

FIGURE 263. Export Panel with Feature Type Tab

5. In the Feature Types list, select the feature types you want to export, then click **Add**.

   The selected feature types appear in the Feature Types to Export list.

6. Click **Save All Changes**.

To Delete an Export Set

Before you delete an export set, make sure you delete any scheduled cron jobs that involve the export set being deleted.

1. Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

   The Product Management tab of the Sterling Product Manager page displays.

2. Click the **Export** tab.

3.   Select the appropriate export set from the Export Set Name drop-down list.

4.   Click **Delete**.

To Export the Catalog Immediately

1.   Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

     The **Product Management** tab of the Sterling Product Manager page displays.

2.   Click the **Export** tab.

3.   Select the appropriate export set from the Export Set Name drop-down list.

4.   Click **Export Now**.

When you click **Export Now**, the system starts a separate process to generate the file that is created under the filename you selected. This filename is appended with a timestamp and by default, is stored in the *debs_home*/**Sterling/htdocs/ catalogexport/** directory when the process is complete.

To Export the Catalog Using a Cron Job

1.   Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

     The Product Management tab of the Sterling Product Manager page displays.

2.   Click **Export** to display the Export page.

3.   Click **Schedule**.

     Aa list of the current cron jobs displays.

4.   Click the link for the **Export Catalog** cron job.

     The Cron Job Configuration page for the Export Catalog cron job displays.

FIGURE 264. Cron Job Configuration Page

5. Enter the information about the job.

TABLE 29. Cron Job Configuration Page

Field	Description
Job Name	The name of the cron job
Program	The java implementation class that executes the job. You can use the predefined export cron job: **com.comergent.apps.productMgr.dataSynd.CatalogExportCron**.
Command Line Arguments	The command line parameters that provide information about the job. The format is: ExportSetName=NAME, where NAME is the name of the export set you are scheduling.
Cron Job Type	Automatically set to **Application**. The displayed username and password are defaults. Enter a username and password. (The username and password you enter must have the privileges to be able to create export sets.)
Start date and time End date and time	The effective start and end period between which dates and times the cron job will run. This, along with Frequency, determines when the job will run. For example, if you entered a frequency of three days, then the job will run every three days from the task start date and time until the task end date and time is reached.
	You can enter the same dates and times for both start date and time, in which case the job will be run only once, at a specific time.
Frequency	How often will the job be run? Every three days? Every week? Every five minutes? and so on.

6. Activate the job by checking the **Active** check box.

7. Click **Save All Changes**.

Product Availability

As part of the shopping experience you offer customers, you can enable them to check for the availability of products. In the reference implementation of the Sterling Multi-Channel Selling Solution, a **Check Availability** button is provided as part of the UI that end-users see as they place orders.

Availability data for products is maintained in the CMGT_AVAILABILITY table of the Knowledgebase. See CHAPTER 14, "Managing Availability Information" for more information.

To support the check availability function, you must make sure that the message URL field of the Enterprise profile is set to the standard message URL for the Sterling Multi-Channel Selling Solution. For example, suppose that the main enterprise administration URL is:

```
http://catalog.matrix.com:1030/Sterling/en/US/enterpriseMgr/matrix
```

Then, in the Enterprise profile, set the Message URL field to:

```
http://catalog.matrix.com:1030/Sterling/msg/matrix
```

Partner administrators can maintain availability information for their products as described in CHAPTER 14, "Managing Availability Information".

Using the Hierarchical Entity Chooser

At certain points during product administration, you can use a chooser window to navigate the product catalog and select product IDs to populate fields or add products to lists. When you click the appropriate button, a Hierarchical Entity Chooser window displays, similar to the following figure.

FIGURE 265. Hierarchical Entity Chooser

To Select Products from the Product Hierarchy

In the Hierarchical Entity Chooser:

1. If the tab is not already selected, click the **Hierarchy** tab.

2. Navigate to the category that contains the product or products you want.

   When you expand the category, the products and categories assigned to the category appear in the chooser.

3. Find and click the product you want.

   The product ID appears in the list box at the bottom of the window.

4. Repeat the last two steps for each product you want to add.

   To remove a product from the list box, click on the product then click **Remove**.

5. Click **Done**.

The product or products appear in the field for which you accessed the Product Browser window.

To Search for Products in the Hierarchical Entity Chooser

This task describes procedures according to the window shown in Figure 265 on page 433.

1. If the tab is not already selected, click the **Search** tab.

FIGURE 266. Hierarchical Entity Chooser: Search Tab

2. In the Search Type drop-down list, select the search type: product name, product ID, or product description.

3. In the Search Criteria field, type the search string.

    Use an asterisk (*) to perform wildcard searches.

4. To search only among products assigned to product categories, uncheck the Unassigned check box.

5. Click **Search**.

    The chooser displays the results of the search.

6. Find and select the product(s) you want.

    The product ID(s) appears in the list box at the bottom of the window.

7. Repeat from Step 2 for each product you want to add.

    To remove a product from the list box, click on the product, and then click **Remove**.

8. Click **Done**.

The product or products appear in the field for which you accessed the Product Browser window.

Administering Advanced Search

Overview

The Sterling Multi-Channel Selling Solution provides advanced capabilities for searching for products and for creating advanced searches in other parts of the system. This section describes how this functionality is implemented. See "Supported Search Syntax" on page 444 for a description of the supported search syntax that your customers can use.

There are two components to the advanced search functionality:

*   Searching

*   Index Building

Attention:	To generate search indexes, you must enable application Cron jobs and set the message URL for Cron jobs. See "Job Scheduler Settings" on page 1079 for general information about setting cron job system properties. Update the Job Scheduler settings to support application Cron jobs and the message URL should be of the form: http://<*servername:port*>/Sterling/msg/matrix
	Note that both "Sterling" and "matrix" may be changed in your implementation of the Sterling Multi-Channel Selling Solution. In a clustered installation of the Sterling Multi-Channel Selling Solution, use the entry point to the cluster, not any particular member of the cluster.

Searching

When end-users perform a search, the search is performed against an index: the index ensures that the search engine can rapidly retrieve all the objects that meet the search criteria and can assign a *score* to each match. The score can be used to rank the results in such a way that the best matches are displayed first to a user. The search index is a set of files generated by the index building process.

The Quick Search field provides a convenient way to search for products. When a user searches for a single string, the Sterling Multi-Channel Selling Solution looks for the string in the product ID, product name, product description, and names of features assigned to the product. If the user enters two terms separated by a space,

then this is treated as an OR search: products are returned that match either term. If the user enters two terms separated by "+", then this is treated as an AND search: products are returned only if both terms occur in one of the product ID, product name, product description, and names of features assigned to the product.

Index Building

A search index is created by the index building process. Administrators initiate the building of an index or it can be automated using a Cron job. Each index entry is associated with a *weight*: these reflect the relative importance that you want to associate with the indexing fields. For example, you might want it to be more important that the occurrences of a string in product IDs is more important than in their occurrence in product descriptions. Weights are used to calculate the score for each search result: the scores reflect how well each item matches the search criteria.

At any one time, there can be one or more indexes created, but only one is the *current* index. When a user conducts a search the current index is used to retrieve the search results.

You can customize the index by:

- determining which fields in data objects are used to create the index

- specifying the weight associated with each field

The configuration parameters that control these factors are defined in the **SearchConfigurationProperties.xml** configuration file. See "To Change the Index and Search Settings" on page 440 for more information.

Administration Tasks

If your implementation of the Sterling Multi-Channel Selling Solution supports advanced search capabilities, then you can initiate the creation of a new search index and specify whether user searches should use the most recent index. You can also set the configuration parameters that determine the relative weight of occurrences of search words. See:

- "Index Building Tasks" on page 437

- "To Activate an Index Set" on page 439

- "To Change the Index and Search Settings" on page 440

- "To Update Dictionary Definitions" on page 442

You can also use XML messages to build, activate, and delete indexes. See "Using XML Messages to Manage Search Indexes" on page 442 for more information.

Index Building Tasks

Over time, you may add new products, features, data sheets, and so on to your product catalog. You may also decide that certain search characteristics are more important than others and so should be weighted differently. To reflect these changes in the advanced search functions, you must re-build the search index. You can either build a new index by re-indexing the whole product catalog or build a new index incrementally by generating a new index based on an existing index and all the product catalog changes made since the existing index was built. See:

• "To Build a New Index" on page 437

• "To Build an Index Incrementally" on page 438

You can determine how the index builders work through system properties.

To Build a New Index

1. Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

   This displays the Product Management tab of the Sterling Product Manager page.

2. Click the **Search Admin** tab.

FIGURE 267. Product Management: Search Admin tab

3. Enter your enterprise administrator password.

4. Click **Generate New**.

A new index build is initiated and a dialog box gives you the name of the log file that is generated by the build process. The index can take several minutes to build. Once the build has completed, the status of the build is recorded: if the build is successful, then you can set the operational index to this new build. See "To Activate an Index Set" on page 439.

Note:	If you initiate index building manually, then you do not have to enable application cron jobs, but you must make sure that the cron job message URL is set correctly.

Note:	If your Sterling Multi-Channel Selling Solution installation runs in a clustered environment, then ensure that you configure the cluster such that all servers in the cluster pick up new and updated files, including newly-generated index files, as soon as possible. This ensures that all servers are in sync and will serve the same information to customers accessing your site.
	Then, set the AutoReload element of the **SearchConfigurationProperties.xml** file as follows:
	`<AutoReload activated="true" reloadFilePeriod="30"/>` This activates the AutoReload function and instructs the cluster to check for updates every 30 seconds.

To Build an Index Incrementally

1. Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

This displays the **Product Management** tab of the Sterling Product Manager page.

2. Click the **Search Admin** tab.

FIGURE 268. **Product Management: Search Admin tab**

3. In the list of search indices, identify the index from which you want to incrementally build the new index.

4. Click the **Build New Set Incrementally** button in its row.

    An incremental index build is initiated and a dialog box is displayed to ley you know that the index building process has been started. The index can take several minutes to build, although typically incremental builds are relatively quick to build. The name of the index is the same as the existing index, with an appropriate version number. For example, if you build a new index incrementally from MasterIndex_600501, then the new index will be called MasterIndex_600501.1. Once the build has completed, the status of the build is recorded: if the incremental build is successful, then you can set the operational index to this new build. See "To Activate an Index Set" on page 439.

To Activate an Index Set

Once a new index build has completed, you may want to update the advanced search so that the new index is used in searches. To do this, you must set the operational index to this new build as follows:

1. Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

    This displays the **Product Management** tab of the Sterling Product Manager page.

2. Click the **Search Admin** tab.

3. In the list of current indexes, identify the index you want to use: typically, this is the most recently created index as identified by the Date column.

4. Click **Activate Index Set** in the row for the selected index set.

   The advanced search functionality is set to use the most recently activated index set. New users performing searches will have their search results generated from this new index set. Users currently performing searches will continue to use the results from their current search until they initiate a new search.

To Change the Index and Search Settings

You can customize the settings used to create an index and settings used while performing a search as follows:

1. Edit the **SearchConfigurationProperties.xml** and **CatalogDictionary.mappings** files. The meaning of the elements and attributes in this file are described below. See "Configuration File Settings" on page 440.

2. Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

   This displays the Product Management tab of the Sterling Product Manager page.

3. Click the Search Admin tab.

4. Click **Reload Search Settings**.

5. Click **Generate New**.

6. Activate the new index set as described in "To Activate an Index Set" on page 439.

Configuration File Settings

The **SearchConfigurationProperties.xml** file is used to determine how an search index set is created and how it is used in searches. A sample file is included in "Search Configuration Parameters" on page 1125.

Each index set is described in an IndexSet element. It has the following child elements:

• Locales: specifies for what locales indexes should be created. You can only specify locales that are defined in your Knowledgebase.

- SearchFields: this specifies what fields in data objects can be searched on. Each SearchField element declares an id attribute: this is the name that the search application uses to refer to the indexed field, and the key attribute references the field created by the indexing process.

    - The defaultWeight attribute is used to calculate the score for each search result: if you want a particular field to be most significant in ranking search results, then you should set its defaultWeight higher than the other search results.

    - The useDictionary attribute determines whether the search uses the dictionary mappings defined in the CatalogDictionary.mappings file. See "To Update Dictionary Definitions" on page 442 for more information about the use of dictionary terms.

- Builder: the builderClass attribute specifies which indexing class should be used to build the index. The key attribute specifies the initial part of the index string used to retrieve fields. Typically, each builder will use the following child elements:

    - IndexFields: the IndexField elements determine what fields of data objects are indexed and how they are mapped to keys in the index. The id attribute must correspond to the name of a data field of a data object and the key attribute must correspond to the key attribute declared in the SearchField element that you want to use to reference the field.

        The store attribute specifies whether the value of the field is saved with the index: setting this attribute to true simply ensures that the search operation can retrieve the value without having to restore the data object. The index attribute specifies whether the field can be used during the search operation. The tokenize attribute determines whether the value of the data field is broken down into its component tokens (such as individual words) or treated as a single string. If you set this attribute to true, then there is an index entry for each of the tokens that make up the value of the data field.

- • Builder: a builder class may invoke other builders. In building the index, the key attribute of a child builder is appended to the key attribute of its parent builder.

  For example, suppose that you have a parent builder whose key attribute is set to "product" and it declares an IndexField whose key is "id". Suppose that it also has a child builder whose key is "name" and it has two IndexField elements: "short" and "long". Then you can declare the following search fields:

```
<SearchField id="productID" key="product.id" active="true"
    defaultWeight="1"/>
<SearchField id="productShortName" key="product.name.short"
    active="true" defaultWeight="1"/>
<SearchField id="productLongName" key="product.name.long"
    active="true" defaultWeight="1"/>
```

To Update Dictionary Definitions

If a user is searching for "color", then you might want them to find items that use the terms "colour" or "hue". You specify the equivalence of search terms and words using the **CatalogDictionary.mappings** file. Each line of this file takes the form:

```
term,word,word,word,...
```

The first string is referred to as the "term"and the following words are equivalent words. You can add terms or edit terms to specify the word equivalences you want. When a search is performed, occurrences of these words are regarded as equivalent to occurrences of the term. If a user searches for the term, they will see results that contain any of the other words. For example, suppose that you have in the mappings file:

```
color,colour,hue
```

Searches for "color" will also return references to "colour" and "hue"; however, searches for "hue" will not return references to "color" and "colour" unless you have another line that reads:

```
hue,color,colour
```

Using XML Messages to Manage Search Indexes

You can perform some search-related tasks by posting XML messages into the Sterling Multi-Channel Selling Solution as follows:

1. Create an XML message for the search index action. You can generate a new index, activate an index, and delete an index using XML messages.

   You must provide user authentication information in the RemoteUser element. The user must be an enterprise user with the Program Management function.

2. Using your preferred tool, post the XML message into the Sterling Multi-Channel Selling Solution using the standard message URL, for example:

   ```
   http://server:port/Sterling/msg/matrix
   ```

   - You must use POST rather than GET.

   - Set the Content-type to "application/x-icc-xml".

   - The XML message must be the body of the request.

The following is an example of a message used to generate a new index:

```
<Comergent>
    <MessageHeader>
        <MessageType>MaintainIndex</MessageType>
        <MessageVersion>4.0</MessageVersion>
        <MessageID>1</MessageID>
        <SessionID>???Remote SessionId Unknown???</SessionID>
        <MessageTimeStamp>
            Thu Jan 22 11:25:43 PST 2004
        </MessageTimeStamp>
        <SystemCredentials>
            <SenderID>Matrix</SenderID>
            <SenderName>Matrix</SenderName>
        </SystemCredentials>
    </MessageHeader>
    <RemoteUser>
        <UserLogin>admin</UserLogin>
        <UserFullName>Not required</UserFullName>
        <UserAuthenticator>admin</UserAuthenticator>
    </RemoteUser>
    <IndexMaintenance state="INSERTED" type="BusinessObject">
        <CommandName state="INSERTED">BuildIndexFull</CommandName>
        <IndexSetName state="INSERTED">MasterIndex</IndexSetName>
        <IndexSetPath state="INSERTED">MasterIndex</IndexSetPath>
        <RunningMode state="INSERTED">Build</RunningMode>
        <EmailAddress state="INSERTED">
            changeme@changeme.com
        </EmailAddress>
        <NumberOfBuilderThreads state="INSERTED">
            1
        </NumberOfBuilderThreads>
```

```
            <ListSizePerThread state="INSERTED">200</ListSizePerThread>
            <UpdateListName state="INSERTED">None</UpdateListName>
            <StartingFrom state="INSERTED"/>
            <CheckDBUpdateList state="INSERTED">true</CheckDBUpdateList>
            <PreprocessList state="INSERTED"/>
            <Result state="INSERTED"/>
    </IndexMaintenance>
</Comergent>
```

The CommandName element can take the following values:

- BuildIndexFull

- BuildIndexIncrementalNewFromLatest

- ActivateIndex

- DeleteIndex

When you are building a new index, then you can specify whether the new index is to be activated by using the RunningMode element: this can be set to "Build" or "Build_Activate".

When activating or deleting an index set, you must specify the name of the index set using the IndexSetName element and the path to the index set files using IndexSetPath element.

Supported Search Syntax

This section describes the supported search syntax that users may use as they conduct searches. It is based on the Lucene search syntax.

As well as space-separated strings, users may also enter:

- +: this unary operator specifies that the string must be present.

- -: this unary operator specifies that the string must not be present

- AND: this binary operator specifies that the two clauses joined by the operator must both be satisfied. In its simplest form it is used to specify that two words must both be present.

- OR: this binary operator specifies that one or both clauses joined by the operator must be satisfied. In its simplest form it is used to specify that either one word or the other must be present.

Examples

This section provides examples of the uses of these operators:

- +MXWS-7600: will return any product in which the string "MXWS-7600" occurs.

- -MXLP-7410: will exclude products in which the string "MXLP-7410" occurs.

- MXWS* AND graphics: will return products in which there is a match for MXWS* and the string "graphics" occurs.

- MXLP* OR laptops: will return products in which there is a match for either MXLP* or the string "laptops" occurs.

CHAPTER 13 *Product Entitlement*

This chapter covers the tasks that enterprise or partner administrators perform to manage users' access to products.

Note:	You can set a business rule so that price lists are used to determine product entitlements. See "Create Product Entitlement Based on Pricelist" on page 1093 for more information.

See "Product Entitlements" on page 78 for an overview of product entitlements in the Sterling Multi-Channel Selling Solution.

Note:	The product entitlement rules are cached. Therefore, remember to click the **Refresh Cache** button on the Product Entitlement List page when you make changes to the product entitlement rules. This refreshes the product entitlement rule changes immediately and you do not need to regenerate the catalog index to view the changes.

This chapter covers the following tasks:

- "To Create a Product Entitlement" on page 449

- "To Modify a Product Entitlement" on page 450

- "To Delete a Product Entitlement" on page 451

- "To Assign a Product Entitlement" on page 451

- "To Unassign a Product Entitlement" on page 452

- • "To Search for a Product Entitlement" on page 453

Managing Product Entitlements

You must have the appropriate administrative functions in order to perform these tasks:

• "To Create a Product Entitlement" on page 449

• "To Modify a Product Entitlement" on page 450

• "To Delete a Product Entitlement" on page 451

• "To Assign a Product Entitlement" on page 451

• "To Unassign a Product Entitlement" on page 452

Users do not require administrative functions in order to search for product entitlements, described in "To Search for a Product Entitlement" on page 453.

To Create a Product Entitlement

1. Click **Product Entitlements** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. On the Product Entitlement List page, click **New**. The Product Entitlement Detail page displays.

FIGURE 269. Product Entitlement Detail Page: New Tab

3. On the New tab, enter the header information. See Table 30 on page 454 for a complete description of the fields on this page.

4. Click **Save**.

Define the items on the product entitlement as follows:

5. Click the **Item** tab.

6. Select the type of product entitlement and click **New**. You can specify one of the following types:

   a. Price List: all product IDs on the selected price list are on the item.

   b. Product Category: all products in the selected product category are on the item.

   c. Feature: all products that are assigned the feature are on the item.

7. The Hierarchical Entity Chooser window displays. Navigate to the appropriate price list, product category, or feature for the item. Click it, and then click **Done**.

   The selected item displays.

8. You can specify whether to use the item to include or exclude products. Check the check box next to the item and click **Include** or **Exclude**.

9. You can add more items by repeating Step 6 through Step 8 as many times as you like.

   The order of items is important: items are evaluated for inclusion and exclusion in the order displayed in the Order column: 1, 2, and so on. Thus if the first item on a product entitlement excludes a product, but a subsequent item includes it, then the effect of the product entitlement as a whole is to include the item.

10. You can change the order of items by editing the sequence number values, and then clicking **Update Order**.

To Modify a Product Entitlement

1. Search for the product entitlement. See "To Search for a Product Entitlement" on page 453.

2. On the Product Entitlement Detail page Info tab, modify the header details as appropriate.

3. For example, you can modify the starting or ending dates or the status of the product entitlement. See Table 30 on page 454 for a description of the fields.

4. Save your changes by clicking **Save**.

5. Modify the list of product entitlement items as appropriate:

   a. Click the **Item** tab.

   b. Remove items by checking their check boxes and clicking **Delete**.

   c. Change the order in which items are evaluated by editing the sequence number values for each item, then click **Update Order**.

To Delete a Product Entitlement

1. Search for the product entitlement(s) you want to delete. See "To Search for a Product Entitlement" on page 453.

2. On the Product Entitlement Search page, check the check box(es) next to the product entitlement(s) that you want to delete, and click **Delete**.

To Assign a Product Entitlement

You assign product entitlements to a partner to manage the products that the partner's users can see as they browse or search the product catalog. You can assign a product entitlement to a partner either from the Product Entitlement UI as described here or from the Sterling Profile Manager UI: see "To Assign a Product Entitlement to a Profile" on page 199.

1. Search for the product entitlement(s) you want to assign. See "To Search for a Product Entitlement" on page 453.

2. Click the product entitlement's name to display its Product Entitlement Detail page.

FIGURE 270. Product Entitlement Detail Page

3. Click the Organization tab.

4. Click **Assign...**.

5. In the Hierarchy Entity Chooser window, navigate to or search for the partner(s) to which you want to assign the product entitlement.

6. Select the partner. The partner name displays in the lower list box.

7. Repeat Step 6 for each partner to which you want to assign this product entitlement.

8. Click **Done**.

   The Organization tab re-displays and now includes the selected partner(s).

To Unassign a Product Entitlement

1. Search for the product entitlement(s) you want to unassign. See "To Search for a Product Entitlement" on page 453.

2. Click its link to display its Product Entitlement Detail page.

3. Click the Organization tab.

4. Check the check box(es) for the profile(s) you want to unassign this product entitlement from.

5. Click **Unassign**.

To Search for a Product Entitlement

1. Click **Product Entitlements** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

   The Product Entitlement List page displays.

FIGURE 271. Product Entitlement List Page

2. Search for the product entitlement(s).

   a. Enter search criteria. You can use an asterisk (*) wild card character with all criteria to perform a wild card search.

TABLE 30. Product Entitlement Search Fields

Field	Description
Name	Enter the name of the product entitlement.
Description	Search for a string in the product entitlement description.
Effective Date	You can search for product entitlements by specifying an effective date. Only those product entitlements that are effective on that date are displayed. Click the calendar icon to select the date you want.
Supplier	You can search for product entitlements by the name of the supplier.
Status	You can search for either active or inactive product entitlements.

b. Click **Search**.

The search results list displays.

Note:	Partner administrators see only the product entitlements created by partner administrators in their own organization.

3. In the list of results, find the product entitlement whose details you want to view.

4. In the Name column, click the name of the product entitlement.

The **Item** tab of the product entitlement's Product Entitlement Detail page displays.

FIGURE 272. Product Entitlement Detail Page: Item Tab

•   **Organization**: use this tab to assign the product entitlement to partners.

FIGURE 273. Product Entitlement Detail Page: Organization Tab

CHAPTER 14 *Managing Availability Information*

This chapter covers all of the tasks associated with managing availability information for your products: inventory, warehouse, and restock quantities and dates. See "Managing Availability Information" on page 80 for an overview of availability information. This chapter covers the following tasks:

You must be assigned the Program Management function to manage availability information.

Product Availability Tasks

To Upload Product Availability

Use this task to upload product availability to the database. See "Product Availability File Format" on page 1130 for the required format and an example.

1. Click **Upload and Maintain Product Inventory Information** in the SKU Mapping and Availability Administration panel on the Sterling Multi-Channel Selling Solution home page.

FIGURE 274. Partner Availability Update Page

2.   Click **Availability Upload**.

FIGURE 275. Partner Availability Upload Page

3.   Select the file that contains the products by completing one of the following:

   •   Enter the filename (including the path) in the Upload file field.

   •   Click **Browse...** and select the appropriate filename.

4.   Click **Upload**.

To Download Product Availability

1.   Click **Upload and Maintain Product Inventory Information** in the SKU Mapping and Availability Administration panel on the Sterling Multi-Channel Selling Solution home page.

2.   Click **Availability Download**.

FIGURE 276. **Partner Availability Download Page**

3.   Select the format for the products that are to be downloaded.

   •   Click **in Excel format** for the information to be displayed in an Excel spreadsheet.

Attention:	If you are using Internet Explorer 5.0 on a Windows NT 4.0 machine with cookies turned on, then you cannot download product availability information in a Microsoft Excel format. Instead, download this information in a text format.

   If you have Microsoft Excel installed, then the application is opened in a browser window and the information is displayed in an Excel spreadsheet. Use the Excel program to save or print the product information.

   •   Click **in Text format** for the information to be displayed in a text format.

   The information is displayed in text format in a browser window. Save or print the product information.

To Update Product Availability

1. Click **Upload & Maintain Product Inventory Information** in the Availability Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. Click the **Availability Update** tab.

FIGURE 277. Availability Update Tab

3. Enter a product ID and Warehouse Location in the appropriate fields.

   This field is case sensitive. You cannot use asterisks (*) to perform a wildcard search.

4. Click **Find**.

   The current availability information for that product is displayed.

5. As necessary, modify the information for the fields listed in Table 31, "Product Availability Fields", on page 460:

TABLE 31. Product Availability Fields

Field	Description
Available Quantity	Number of the products that are available for purchase.
Restock Date	Expected date of the restock.

TABLE 31. Product Availability Fields (Continued)

Field	Description
Restock Quantity	Number of products that will be restocked.
ETA	Estimated time of availability of the product to the customer.

6.   Click **Update**.

Managing Features in Sterling Product Manager

This chapter describes the tasks used to manage the feature hierarchy. "Feature Management in Sterling Product Manager" on page 71 provides a description of the feature elements, how they relate to Sterling Multi-Channel Selling Solution, and how you use Sterling Product Manager to manage them.

> **Note:** You can also manage features through the Sterling Advisor Administration user interface. See CHAPTER 23, "Managing Features in Sterling Advisor".

- • "To Delete a Feature Type" on page 481

- • "To Create a Feature" on page 482

- • "To Modify a Feature" on page 484

- • "To Modify a Feature from the Feature Type Detail Panel" on page 486

- • "To Delete a Feature" on page 489

- • "To Assign a Feature to a Product Category" on page 490

- • "To Unassign a Feature from a Product Category" on page 492

- • "To Assign a Feature to a Product" on page 493

- • "To Unassign a Feature from a Product" on page 495

- • "To Assign a Resource to an Entity" on page 496

- • "To Unassign a Resource from an Entity" on page 498

Working with Feature Type Groups

In the feature hierarchy, features belong to feature types. When you create feature types, you have the option of assigning feature types to a feature type group. When you build your feature hierarchy, create feature type groups first.

Feature types that are not assigned to a feature type group display on the Unassigned tab in the Feature Hierarchy panel.

To Create a Feature Type Group

1. Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

    The **Product Management** tab of the Sterling Product Manager page displays.

2. Click the **Feature Management** tab.

    The Feature Management panel displays.

FIGURE 278. Feature Management Panel

3. In the Feature Type Groups panel, click **Create Feature Type Group.** The New Feature Type Group panel displays.

FIGURE 279. New Feature Type Group Panel

4. In the New Feature Type Group panel, enter a name and description for this feature type group.

5. Save the new feature type group.

   Click **Save** to save the feature type group and remain at the New Feature Type Group panel (to create more groups).

   Click **Save All and Return to List** to return to the Feature Type Groups panel. The new feature type group appears in the List of Feature Type Groups list box. The new feature type group also appears in the Feature Hierarchy panel.

To Modify a Feature Type Group

1. Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

   The **Product Management** tab of the Sterling Product Manager page displays.

2. Click the **Feature Management** tab.

3. In the Feature Hierarchy Panel, click the feature type group that you want to modify. The Feature Type Group detail tabs display.

FIGURE 280. Feature Type Group Detail: General Tab

4. In the **General** tab make any necessary changes to the Name, and Description of the feature type group, and click **Save All Changes**.

5. Click the **Feature Type** tab to manage the feature types assigned to this group. You can:

   • Create feature types within this group. See "To Create a Feature Type within a Feature Type Group" on page 467.

   • Rearrange the order of the feature types currently assigned to this group. This rearranges the order of how the feature types appear to the end-user.

   • Delete a feature type. See "To Delete a Feature Type" on page 481.

   • Unassign a feature type currently assigned to this group.

6. Click the **Assign** tab to assign unassigned feature types to this group.

7. Click the **Resource** tab to assign or unassign resources.

   See "Resources and Resource Types" on page 118 for explanation of resources and resource types.

   • For each resource you want to assign, follow the procedure in "To Assign a Resource to an Entity" on page 496.

   • For each resource you want to unassign, follow the procedure in "To Unassign a Resource from an Entity" on page 498.

8. Click **Save All Changes**.

To Delete a Feature Type Group

When you delete a feature type group, the feature types belonging to the group become unassigned feature types.

1. Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

   The **Product Management** tab of the Sterling Product Manager page displays.

2. Click the **Feature Management** tab.

3. In the Feature Type Group panel, find and select the group you want to delete in the List of Feature Type Groups.

4. Click **Delete**.

   The feature type group is deleted from both the list box and the Feature Hierarchy panel.

5. Click **Save All Changes**.

Working with Feature Types

Feature types can belong to a feature type group, or they can be unassigned.

To Create a Feature Type within a Feature Type Group

You can create a feature type either as assigned to a feature type group, or as unassigned: not assigned to any feature type group. This task describes how to create a feature type assigned to a group. See "To Create an Unassigned Feature Type" on page 470 to learn how to create feature types unassigned to any group.

1. Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

    The **Product Management** tab of the Sterling Product Manager page displays.

2. Click the **Feature Management** tab.

FIGURE 281. Feature Management Panel

3. In the Feature Hierarchy Panel, find and click the feature type group within which you want to create the feature type.

    The Feature Type Group Detail tabs display.

FIGURE 282. Feature Type Group Detail: General Tab

4. Click the **Feature Type** tab.

FIGURE 283. Feature Type Group Detail: Feature Type Tab

5. Click **Create Feature Type** to display the New Feature Type panel.

FIGURE 284. New Feature Type Panel

6. Type a name and description for the new feature type in the appropriate fields.

   The Name field is the name your customers will see. The Description field is for internal use. Your customers never see this text.

7. Select the Row Type from the drop-down list.

   Row type determines how the features within the feature type will be displayed when products having this feature type are compared.

   • **Multiple Feature Row** specifies that all of the features within this feature type that apply to the product will appear in a single row of the comparison table.

   • **Single Feature Row** specifies that each feature within this feature type will have its own row in the comparison table.

8. Check **Use to compare** to include all the features associated with the feature type in any product comparisons.

   When you check this box, the **Use to compare** check box for each of its corresponding features is automatically checked.

9. Save the new feature type.

   Click **Save** to save the new type and remain at the New Feature Type panel (to create more feature types).

   Click **Save All and Return to List** to return to the Feature Types Panel. The new feature type appears in the List of Feature Types list box. The new feature type appears in the Feature Hierarchy panel.

To Create an Unassigned Feature Type

You can create a feature type either as assigned to a feature type group, or as unassigned: not assigned to any feature type group. This task describes how to create a feature type that is not assigned to any feature type group. See "To Create a Feature Type within a Feature Type Group" on page 467 to learn how to create feature types assigned to a specific feature type group.

1. Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

   The **Product Management** tab of the Sterling Product Manager page displays.

2. Click the **Feature Management** tab.

FIGURE 285. Feature Management Panel

3.   In the Feature Hierarchy Panel, click the **Unassigned** tab.

The Unassigned Feature Type panel displays.

FIGURE 286. Unassigned Feature Type Panel

4.   Click **Create Feature Type** to display the New Feature Type panel.

FIGURE 287. New Feature Type Panel

5. Type a name and description for the new feature type in the appropriate fields.

    The Name is the name your customers will see. The Description is for internal use. Your customers never see this text.

6. Select the Row Type from the drop-down list.

    Row type determines how the features within the feature type will be displayed when products having this feature type are compared.

    •   **Multiple Feature Row** specifies that all of the features within this feature type that apply to the product will appear in a single cell of the comparison table.

    •   **Single Feature Row** specifies that each feature within this feature type will have its own row in the comparison table.

7. Check **Use to compare** to include all the features associated with the feature type in any product comparisons.

    The **Use to compare** check box determines whether or not the features belonging to this type are included in a product comparison. When your customer uses your questionnaire to find products, they are free at any time to select two or more products from the product list, and compare them. When they do this, Sterling Advisor generates and displays a *product comparison table*, which lists the products and the features they have, allowing your customer to compare the products.

Note:	If you check **Use to compare** for a feature, ensure that **Use to compare** is checked for its feature type also.

8. Save the new feature type.

    Click **Save** to save the new feature type and remain at the New Feature Type panel (to create more feature types).

    lick **Save All and Return to List** to return to the Feature Types Panel. The new feature type appears in the List of Feature Types list box as well as in the Feature Hierarchy panel.

To Modify a Feature Type

1. Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

    The **Product Management** tab of the Sterling Product Manager page displays.

2. Click the **Feature Management** tab.

3. Find and select the feature type.

    If the feature type is assigned to a feature type group:

    a. Navigate the hierarchy until you find the group to which the feature type belongs.

    b. Expand the group to display the feature types by clicking the plus (+) symbol.

    c. Navigate the feature types and click on the feature type you want to modify.

        The Feature Type Detail panel displays.

    If the feature type is unassigned:

    a. In the Feature Hierarchy panel, click the **Unassigned** tab.

    b. Click the feature type you want to modify.

        The Feature Type Detail panel displays.

FIGURE 288. Feature Type Detail: General Tab

4. In the **General** tab make any necessary changes.

    •   Name and Description

        The Name is the name that your customers see. The Description is for
        internal use. Your customers never see this text.

    •   Row Type

        Row type determines how the features within the feature type display
        when customers compare products having this feature type.

        •   **Multiple Feature Row** specifies that all of the features within this
            feature type that apply to the product will appear in a single row of the
            comparison table.

        •   **Single Feature Row** specifies that each feature within this feature
            type will have its own row in the comparison table.

    •   Check **Use to compare** to include all the features associated with the
        feature type in any product comparisons.

5. Click the **Feature** tab.

   You can:

   - Create features within this type. See "To Create a Feature" on page 482.

   - Rearrange the order of the features currently assigned to this feature type.

   - Delete a feature. See "To Delete a Feature" on page 489.

   - Modify a feature. See "To Modify a Feature from the Feature Type Detail Panel" on page 486.

6. Click the **Category** tab.

   In this tab, you can:

   - View the categories to which the feature type is currently assigned.

   - Assign the feature type to a category. See "To Assign a Feature Type to a Product Category" on page 476.

   - Unassign the feature type from existing categories. See "To Unassign a Feature Type from a Product Category" on page 478.

7. Click the **Feature Type Group** tab.

   In this tab, you can:

   - Assign the feature type to a feature type group.

     If the feature type is already assigned to a group, then you can use this tab to reassign it. Otherwise, you can use this tab to assign an unassigned feature type to a feature type group. See "To Assign a Feature Type to a Feature Type Group" on page 479.

Note:	A feature type can belong to only one feature type group. When you reassign the feature type, the feature type is unassigned from its original feature type group.

   - Unassign a feature type.

     See "To Unassign a Feature Type from a Feature Type Group" on page 480.

8. Click the **Resource** tab.

   See "Resources and Resource Types" on page 118 for more information about resources.

- • For each resource you want to assign, follow the procedure in "To Assign a Resource to an Entity" on page 496.

- • For each resource you want to unassign, follow the procedure in "To Unassign a Resource from an Entity" on page 498.

9. Click **Save All Changes**.

To Assign a Feature Type to a Product Category

When you modify a feature type ("To Modify a Feature Type" on page 473), you can assign the feature type to a product category. Assigning a feature type to a product category enables you to assign the features in that feature type to the product category and to products in the product category.

Note:	You can also assign feature types to a product category through the **Product Management** tab. See "To Modify a Product Category" on page 357. By assigning the features from the **Feature Management** tab, however, you can assign a single feature type to more than one category at the same time.

1. Navigate to the feature type using the Feature Hierarchy panel.

2. Display the **Category** tab.

    See "To Modify a Feature Type" on page 473.

FIGURE 289. Feature Type Detail: Category Tab

3. Find the category you want.

    a. Click **Browse...**.

       This displays the Hierarchical Entity Chooser.

FIGURE 290. Hierarchical Entity Chooser

  b. Find the product category to which you want to assign the feature type.

   Using the Hierarchical Entity Chooser, navigate the product category hierarchy to find the product category you want. Click the plus (+) sign to expand the category to display its contents.

   When you click a product category, the chooser window re-displays with a list of nested categories (if any) within the category.

   The name of the selected category appears in the drop-down list at the top of the chooser window. As you click categories in the window, the category displays in this field. You can re-display categories you have selected by selecting the category from the drop-down list.

  c. When you find the product category you want, click the category name.

   The selected category appears in the field at the bottom of the window.

  d. Click **Done**.

  The category displays in the **Category** tab, along with the parent category path, if any.

FIGURE 291. Category Tab with Entry

4. Click **Assign**.

5. Click **Save All Changes**.

The category appears in the Assigned Categories list along with the parent category path, if any.

To Unassign a Feature Type from a Product Category

When you modify a feature type ("To Modify a Feature Type" on page 473), you can unassign the feature type to a product category.

1. Navigate to the feature type using the Feature Hierarchy panel.

2. Display the **Category** tab.

   See "To Modify a Feature Type" on page 473.

FIGURE 292. Category Tab

3. Find the category (or categories) you want in the Assigned Categories list.

4. Select the category (or categories) you want.

   You can select multiple categories using the Shift or Control key.

5. Click **Unassign**.

   The selected category (or categories) is removed from the Assigned Categories list.

6. Click **Save All Changes**.

To Assign a Feature Type to a Feature Type Group

When you modify a feature type ("To Modify a Feature Type" on page 473), you can assign an unassigned feature type to a feature type group, or you can re-assign an assigned feature type to a different feature type group.

1. Navigate to the feature type using the Feature Hierarchy panel.

2. Display the **Feature Type Group** tab.

   See "To Modify a Feature Type" on page 473.

Note:	If you are assigning a currently unassigned feature type, then the **Feature Type Group** tab appears as in Figure 293 on page 479. If you are re-assigning an assigned feature type, then the tab appears the same, but contains only **Assign** and **Cancel** buttons.

FIGURE 293. Feature Type Group Tab

3. In the List of Feature Type Groups, find the feature type group to which you want to assign the feature type.

4. Click the feature type group in the list.

5. Assign the feature type.

   If you are assigning an unassigned feature type, then you can click **Assign** or **Assign and Continue**. Click **Assign** to assign the feature type and re-display the Feature Hierarchy with the feature type displayed within its assigned feature type group. Click **Assign and Continue** to assign the feature type and continue to display the unassigned feature types.

   If you are reassigning an already assigned feature type, then click **Assign** to assign the feature type to the selected feature type group. The Feature Hierarchy is re-displayed with the feature type displayed within its newly assigned feature type group.

To Unassign a Feature Type from a Feature Type Group

When you modify a feature type ("To Modify a Feature Type" on page 473), you can unassign a feature type from its assigned feature type group.

1. Navigate to the feature type using the Feature Hierarchy panel.

2. Display the **Feature Type Group** tab.

   See "To Modify a Feature Type" on page 473.

FIGURE 294. Feature Type Detail: Feature Type Group Tab

3. Click **Unassign**.

The page re-displays. The Feature Hierarchy panel displays the unassigned feature types, now including the feature type you unassigned.

To Delete a Feature Type

Deleting a feature type automatically deletes its features as well as any assignments.

1. Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

    This displays the **Product Management** tab of the Sterling Product Manager page.

2. Click the **Feature Management** tab.

3. In the Feature Hierarchy Panel, find the feature type.

    If the feature type belongs to a feature type group:

    a. Find the group in the Feature Hierarchy panel.

    b. Click on the name of the group.

        This displays the detail for the group.

    c. Click the **Feature Type** tab.

        This displays the list of feature types belonging to this group.

FIGURE 295. Feature Type Tab

    d. In the List of Feature Types, click on the feature type you want to delete.

    e. Click **Delete**.

    If the feature type is unassigned, then temporarily assign it to a feature type group and delete it from the feature type group.

4. Click **Save All Changes**.

Working with Features

Each feature is created as a member of a specific feature type. See "Feature Management in Sterling Product Manager" on page 71 for a discussion of features and the concepts involved.

To Create a Feature

1. Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

   This displays the **Product Management** tab of the Sterling Product Manager page.

2. Click the **Feature Management** tab.

3. Find the feature type within which you want to create the feature.

   The feature type can be an assigned feature type (that is, assigned to a feature type group) or an unassigned type.

   To create the feature as part of an assigned feature type, then in the upper-left Feature Hierarchy panel, navigate to the feature type within which you want to create the feature. If you have not created the feature type, see "To Create a Feature Type within a Feature Type Group" on page 467.

   To create the feature within an unassigned feature type, click the **Unassigned** tab in the upper-left Feature Hierarchy panel. Find the feature type among the list of unassigned types. If you have not created the feature type, then see "To Create an Unassigned Feature Type" on page 470.

4. Click the feature type within which you want to create the new feature.

   The detail panel for that feature type displays.

5. Click the **Feature** tab.

FIGURE 296. Features Tab

6.   Click **Create Feature**.

     The New Feature panel displays.

FIGURE 297. New Feature Panel

7.   Enter a name and description for the feature.

     This name is the name that your customers see. The description is for internal use only. Your customers never see this text.

8.   To use this feature to compare products, check the **Use To compare** box.

     The **Use to compare** check box determines whether or not this feature is included in a product comparison. When your customers use your questionnaire to find products, they can select two or more products from

the product list and compare them. Sterling Advisor generates and displays a *product comparison table*, which lists the products and their features, allowing your customer to compare the products.

Note:	If you check **Use to compare** for a feature, ensure that **Use to compare** is also checked for its feature type.

9. Use the Start Date and End Date controls to define the effectivity of the feature.

   For features that are only effective over a specific time period, the start date defines when the feature becomes effective. The end date defines when the feature ceases to be effective.

   Feature effectivity is described in the section "Feature Effectivity" on page 73.

10. Save the new feature.

    Click **Save** to save the feature and remain at the New Feature panel.

    Click **Save All and Return to List** to save the feature and return to the **Features** tab of the Feature Types Detail Panel.

The new feature appears in the List of Features list box. The new feature appears in the Feature Hierarchy panel.

To Modify a Feature

Note:	You can also modify a feature when you modify a feature type. See "To Modify a Feature from the Feature Type Detail Panel" on page 486.

1. Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

   The **Product Management** tab of the Sterling Product Manager page displays.

2. Click the **Feature Management** tab.

3. Find and select the feature.

   If the feature belongs to an assigned feature type:

   a. Navigate the hierarchy until you find the group to which the type belongs.

   b. Expand the group to display the feature types by clicking the plus (+) symbol.

    c.   Navigate the feature types and click on the feature type to which the feature belongs.

        The features appear in the lower-left panel.

    d.   Find and click the feature you want to modify.

        The detail panel for the feature displays.

If the feature type is unassigned:

    a.   In the Feature Hierarchy panel, click the **Unassigned** tab.

    b.   Click the feature type to which the feature belongs.

        The features appear in the lower-left panel.

    c.   Find and click the feature you want to modify.

        The detail panel for the feature displays.

FIGURE 298. Feature Detail Panel

4.   In the **General** tab make any necessary changes.

   •   Name and Description

      This name is the name that your customers see. The description is for internal use only. Your customers never see this text.

   •   **Use to compare**

      The **Use to compare** check box determines whether or not this feature is included in a product comparison. When your customers use your questionnaire to find products, they can select two or more products

from the product list and compare them. Sterling Advisor generates and displays a *product comparison table* that lists the products and their features, allowing your customers to compare the products.

Note:	If you check **Use to compare** for a feature, ensure that **Use to compare** is also checked for its feature type.

- • Start Date and End Date

    For features that are only effective over a specific time period, the start date defines when the feature becomes effective. The end date defines when the feature ceases to be effective.

    Feature effectivity is described in the section "Feature Effectivity" on page 73.

5. Click **Save All Changes**.

6. Click the **Category** tab.

    You can assign the feature to or unassign the feature from a product category. When you do this, the feature is automatically assigned to all the products within the category or within any nested categories. See "To Assign a Feature to a Product Category" on page 490 or "To Unassign a Feature from a Product Category" on page 492.

7. Click the **Product** tab.

    You can assign or unassign the feature being modified to individual products within a category. See "To Assign a Feature to a Product" on page 493 or "To Unassign a Feature from a Product" on page 495.

8. Click the **Resource** tab.

    Modifying resource assignment includes assigning and unassigning resources. See "Resources and Resource Types" on page 118 for more details about resources.

    - • For each resource you want to assign, follow the procedure in "To Assign a Resource to an Entity" on page 496.

    - • For each resource you want to unassign, follow the procedure in "To Unassign a Resource from an Entity" on page 498.

9. Click **Save All Changes**.

To Modify a Feature from the Feature Type Detail Panel

You can also modify a feature from within the detail panel for a feature type.

1. Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

   The **Product Management** tab of the Sterling Product Manager page displays.

2. Click the **Feature Management** tab.

3. Find and select the feature type.

   If feature type is assigned to a feature type group:

   a. Navigate the hierarchy until you find the group to which the type belongs.

   b. Expand the group to display the feature types by clicking the plus (+) symbol.

   c. Navigate the feature types and click on the feature type you want to modify.

   The Feature Type Detail panel displays.

   If the feature type is unassigned:

   a. In the Feature Hierarchy panel, click the **Unassigned** tab.

   b. Click the feature type you want to modify.

   The Feature Type Detail panel displays.

4. Click the **Feature** tab.

FIGURE 299. Feature Type Detail: Feature Tab

5. In the List of Features list box, click the feature that you want to modify.

6. Click **Edit**.

   The Feature Detail panel for the selected feature displays.

7. In the **General** tab make any necessary changes.

   • Name and Description

     This name is the name that your customers see. The description is for internal use. Your customers never see this text.

   • **Use to compare**

     The **Use to compare** check box determines whether or not this feature is included in a product comparison. When your customers use your questionnaire to find products, they can select two or more products from the product list and compare them. Sterling Advisor generates and displays a *product comparison table*, which lists the products and their features, allowing your customer to compare the products.

Note:	If you check **Use to compare** for a feature, ensure that **Use to compare** is checked for its feature type also.

   • Start Date / End Date

     For features that are effective over a specific time period, the start date defines when the feature becomes effective. The end date defines when the feature ceases to be effective.

     Feature effectivity is described in the section "Feature Effectivity" on page 73.

8. Click **Save All Changes**.

9. Click the **Category** tab.

   You can assign the feature to or unassign the feature from a product category. When you do this, the feature is automatically assigned to all the products within the category. See "To Assign a Feature to a Product Category" on page 490 or "To Unassign a Feature from a Product Category" on page 492.

10. Click the **Product** tab.

    You can assign or unassign the feature being modified to individual products within a category. See "To Assign a Feature to a Product" on page 493 or "To Unassign a Feature from a Product" on page 495.

11. Click the **Resource** tab.

    Modifying resource assignment includes assigning and unassigning resources.

- For each resource you want to assign, follow the procedure in "To Assign a Resource to an Entity" on page 496.

- For each resource you want to unassign, follow the procedure in "To Unassign a Resource from an Entity" on page 498.

12. Click **Save All Changes**.

To Delete a Feature

1. Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

   The **Product Management** tab of the Sterling Product Manager page displays.

2. Click the **Feature Management** tab.

3. In the upper-left Feature Hierarchy panel, find and click the feature type to which the feature belongs.

   The **General** tab of the Feature Type Detail panel displays.

4. Click the **Feature** tab.

   The **Feature** tab displays.

FIGURE 300. Feature Type Detail: Feature Tab

5. In the List of Features list box, select the feature you want to delete, then click **Delete**.

   The feature disappears from the list box.

6. Click **Save All Changes**.

To Assign a Feature to a Product Category

When you modify a feature ("To Modify a Feature" on page 484), you can assign the feature to a product category. When you assign a feature to a product category, the feature is automatically assigned to the products that belong to the category.

Note:	You can assign features to a product category only if the feature type to which the feature belongs has been assigned to the product category. See "To Assign a Feature Type to a Product Category" on page 476.
	You can also assign feature types to a product category through the **Product Management** tab. See "To Modify a Product Category" on page 357. By assigning the features from the **Feature Management** tab, you can assign a single feature type to more than one category at the same time.

1. Navigate to the feature using the Feature Hierarchy and Feature panels.

2. Display the **Category** tab.

FIGURE 301. Feature Detail: Category Tab

3. Find the product category you want.

   a. Click **Browse...**.

       The Hierarchical Entity Chooser displays.

FIGURE 302. Hierarchical Entity Chooser

    b.   Find the product category to which you want to assign the feature.

         Using the Hierarchical Entity Chooser, navigate the product hierarchy to find the category you want. Click the plus (+) sign to expand the category to display its contents.

         Click a product category to display the list of nested categories (if any) within that category.

         The name of the selected category appears in the drop-down list at the top of the chooser window. As you click categories in the window, the category displays in this field. You can re-display categories by selecting the name from the drop-down list.

    c.   When you find the category you want, click the category name.

         The selected category appears in the field at the bottom of the window. (Notice that some categories are unselectable: these are displayed in black. This means that the feature type to which the feature belongs is not assigned to those categories.)

    d.   Click **Done**.

    The category displays in the **Category** tab along with the parent category path, if any.

4. Click **Assign**.

The feature is assigned to the category and to all the products in the category. The lower part of the frame displays the assignments to categories. The green and red icons indicate whether the assignment is direct or by inheritance.

FIGURE 303. Category Tab Showing Assignments

To Unassign a Feature from a Product Category

When you modify a feature ("To Modify a Feature" on page 484), you can unassign the feature from a product category.

1. Navigate to the feature using the Feature Hierarchy and Feature panels.

2. Display the **Category** tab.

FIGURE 304. Feature Detail: Category Tab

3. From the displayed list of categories, identify the category from which you want to unassign the feature.

4. Click the Unassign icon.

The feature is unassigned from the category and from all the products in the category. You can unassign the feature from all product categories by clicking **Unassign All**.

To Assign a Feature to a Product

When you modify a feature ("To Modify a Feature" on page 484), you can assign the feature to an individual product within a category.

Note:	You can assign features to a product only if the feature type to which the feature belongs has been assigned to the product category to which the product belongs. See "To Assign a Feature Type to a Product Category" on page 476.

1. Navigate to the feature using the Feature Hierarchy and Feature panels.

2. Display the **Product** tab.

FIGURE 305. Feature Detail: Product Tab

3.   Find the product you want.

a.   Click **Assign...**.

This displays the Hierarchical Entity Chooser.

FIGURE 306. Hierarchical Entity Chooser

b. Find the product to which you want to assign the feature.

Using the Hierarchical Entity Chooser, navigate the product hierarchy to find the product you want.

When you click a product category, the chooser window re-displays with a list of nested categories (if any) within the category. (Some categories are unselectable. This means that the feature type to which the feature belongs is not assigned to those categories.)

c. The name of the selected category appears in the drop-down list at the top of the chooser window. As you click categories in the window, the category displays in this field. You can re-display categories by selecting the name from the drop-down list.

d. When you find the product you want, click the product name.

The selected product appears in the field at the bottom of the window.

e. Click **Done**.

The feature is assigned to the product.

To Unassign a Feature from a Product

When you modify a feature ("To Modify a Feature" on page 484), you can unassign the feature from an individual product within a category.

1. Navigate to the feature using the Feature Hierarchy and Feature panels.

2. Display the **Product** tab.

FIGURE 307. Feature Detail: Product Tab

3. In the Assigned Products list box, find the product you want.

4. Click the **Unassign** icon.

The feature is unassigned from the product.

Assigning Resources to Feature Type Groups, Feature Types, and Features

See "Resources and Resource Types" on page 118 for an overview of resources. You create resources in Sterling Advisor, but you assign the resources in Sterling Product Manager. See CHAPTER 24, "Managing Resources in Sterling Advisor", for the tasks involved in managing resources.

To Assign a Resource to an Entity

When you modify an entity (feature type group, feature type or feature), you can assign resources.

1. Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

    The **Product Management** tab of the Sterling Product Manager page displays.

2. Click the **Feature Management** tab.

3. In the Feature Hierarchy Panel, find the feature type group, feature type, or feature to which you want to assign resources.

4. Click the link of the entity to which you want to assign a resource. The entity's detail panel displays.

5. Click the **Resource** tab.

FIGURE 308. Feature Type: Resource Tab

6. In the Unassigned Resource Types drop-down list, select the resource type you want to assign to this entity, and click **Assign**.

   • The resource type is removed from the Unassigned Resource Types drop-down list and appears in the Assigned Resource Types list box.

   • The resource type appears in the Type field.

   • The resource type's label appears in the Label field.

   • The resource type's description appears in the Description text box.

7. In the Value field, type the location of the resource you want to assign.

   The location can be :

   • A path to the file selected as the resource.

   • A URL to a Web page that displays the information for the resource.

8. (Optional) In the Label field, type the text you want to use as a label for the resource when it displays.

    When you assign a resource type, its label is automatically populated in the Label field. You can to use this label if you want. You need to overwrite the label only if you want to give the resource a label that is different from the resource type's label.

9. (Optional) In the Description field, type the text you want to use as a description for the resource when it is displayed on a questionnaire page.

    When you assign a resource type, the resource type's description is automatically populated in the Description field. You can choose to use this description if you want. You only need to overwrite the description if you want to give the resource a description that is different from the resource type's.

10. Click **Save All Changes**.

To Unassign a Resource from an Entity

1. Click **Product Master** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

    The **Product Management** tab of the Sterling Product Manager page displays.

2. Click the **Feature Management** tab.

3. In the Feature Hierarchy Panel, find the feature type group, feature type, or feature from which you want to unassign resources.

4. Click the link of the entity from which you want to unassign a resource. The entity's detail panel displays.

5. Click the **Resource** tab.

    The resource types currently assigned to the entity display in the Assigned Resource Types list box.

6. In the Assigned Resource Types list box, select the resource type you want to unassign.

    The defined value, label, and description for the resource appear in the appropriate fields.

7. Click **Unassign**.

- The resource type disappears from the Assigned Resource Types list box and appears in the Unassigned Resource Types drop-down list.

- The Value, Label, and Description fields are emptied.

8. Click **Save All Changes**.

Using the Visual Modeler

This chapter describes how to create and modify models using the Sterling Visual Modeler. See "Using the Sterling Visual Modeler" on page 82 for an overview of the modeling process.

> | Attention: | Models are compiled to XML files. Do not use the following characters in model names or in model group, property, or rule names:: "&", "/". "@", "!", and the quote characters " and '. |
> |---|---|

This chapter covers the following topics:

- "Searching the Product Catalog for a Product ID" on page 553

- "Working with a Tabbed User Interface" on page 554

Visual Modeler Interface

To access the Visual Modeler, click Configuration Models in the Product and Catalog Administration panel of the home page. The Visual Modeler page displays:

FIGURE 309. Visual Modeler Page

Visual Modeler Page Layout

The Visual Modeler page consists of three frames:

- **Model Group navigation**: This frame enables you to navigate through the model group hierarchy. It first displays the root model group: the top-level group in the model group hierarchy. See "Model Group Hierarchy" on page 84 for a more detailed explanation of the hierarchy.

  To expand a model group and display the model groups in its hierarchy, click the plus (+) sign.

- **Models and Groups**: This frame displays the models and groups that are children of the model group selected in the Model Group navigation frame.

- **Content**: This frame displays information about the model group selected in the Model Group navigation frame and consists of the following tabs:

- **General Info**: Displays the children of the model group and enables you to perform the following tasks:

  - Select, delete, and reorder children.

  - Create new model groups, new models, and new groups.

  - Upload models or model groups to the current model group.

- **Properties**: Properties define the characteristics of models, option classes, and option items. The **Properties** tab enables you to define and attach properties to any model, option class, or option item within the current model group. You can then use the property in rules that constrain customer selections and determine whether or not a configuration is valid.

  You can use a property in rules defined for any model or model group in the hierarchy below the model group for which it is defined.

- **Rules**: Rules constrain customer selections and determine whether or not a configuration is valid. The **Rules** tab enables you to define rules for the model group. You can attach rules to any models, option classes, or option items in the hierarchy below the model group for which they are defined.

- **Lists**: Lists specify values that you can use in properties. The **List** tab enables you to define lists of values that you can then use in any properties in the hierarchy below the model group for which they are defined.

Visual Modeler Toolbar

The Visual Modeler page contains a *toolbar* across the top with access to the following tasks:

- **Edit**: This enables you to edit a model, option class group, or option item group highlighted in the Models and Groups frame.

- **Compile**: This enables you to compile a model, option class group, or option item group into an XML file. See "Compiling a Model" on page 552. Only compiled models can be associated with configurable products.

- **Test**: This enables you to test a model that you are creating or modifying. See "Testing a Model" on page 550.

- **Copy**: This enables you to copy a selected entity (model group, model, option class group, and so on).

- **Import**: This enables you to import an entity into your library of entities. See "Importing Model Groups and Models" on page 631

- **Export**: This enables you to export an entity. See "Exporting Model Groups and Models" on page 633.

- **Report**: This enables you to produce a report on some entity in the model library. See "Reporting" on page 639.

- **Search**: This enables you to search for entities based on selected search parameters. See "Searching" on page 636.

Visual Modeler Detail Page

When you build a model, you use the model detail page. The detail page contains the following frames:

- **Toolbar**: Provides access to the model edit, compile, test, copy, import, export, report, and search functionality.

- **Navigation**: Enables navigating the model hierarchy. Click the plus (+) sign to expand the model or group and display the elements of the model or group: the sub-models, option classes, option items, or groups.

- **Content**: Displays information about the model selected in the Navigation frame. By navigating to a particular node in the model, you can create and update information about that node. This information is collected into the following tabs:

  - **General Info**: Displays general information about the model or group, as well as its children (if any). You can delete or re-order children in this frame. You can translate the model, assign a product ID to the model, create option classes and (for option item groups) option items, attach group, and download models.

Note:	Only the **General Info** tab appears for option class groups or option item groups.

  - **Display**: Enables you to define display properties at the model level. These properties include constant guiding text, as well as pre- and post-pick guiding text. Some display properties have default values that can be overridden by display values set at the option class or option item levels. Note that all the properties displayed on the **Display** tab can also be set by setting UI properties on the **Properties** tab. See "Working with Display Properties" on page 644 for more information about display properties and UI properties.

- **Properties**: When the current node is an option class, option class group, option item, or option item group, this tab enables you to attach properties to the node.

  When the current node is a model, this tab consists of the tabs **Attach**, **Define,** and **Input/Output**.

  Use the **Attach** tab to attach properties to the model. You can attach only those properties to which the model has access. The model has access to properties defined for the model itself or to properties defined for any model group above the model in the model group hierarchy.

  Use the **Define** tab to define new properties for use locally, in the model's structure.

  Use the **Input/Output** tab to specify the properties that the submodel requires to be passed as input from the parent model or external system, and the properties that the submodel should pass as output to be used by the parent model or external system.

- **Rules**: If the current node is a model, then this tab consists of two tabs: **Attach** and **Define**; otherwise you can use this tab to attach rules to the node. In the **Attach** tab, you can attach to the model rules to which the model has access. (The model has access either to rules defined specifically for the model or rules defined for any model group above the model in the model group hierarchy.) In the **Define** tab, you can define new rules for use locally, in the model's structure.

- **Lists**: If the current node is a model, then the lists you define here can be used locally, in any properties you define for the model.

- **Tables**: If the current node is a model, then you create constraint tables here. See "Managing Option Constraints" on page 102 for an explanation of table constraints.

- **Tabs**: If the current node is a model, then you can create a tab-based configuration for your customers here. See "Working with a Tabbed User Interface" on page 554.

- **Worksheets**: If the current node is a model, then this tab enables you to manage properties using worksheets. These provide you with a quick way to view and manage related properties and option items. See "Using Worksheets" on page 574.

To Access the Visual Modeler

1. Click **Configuration Models** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

    The Visual Modeler page displays (Figure 309 on page 502).

2. In the Models and Groups frame, click on a model or a group.

    This displays the current structure (option classes, option items, and groups) for the selected model or group. Click the plus (+) sign to the left to expand the structure of the model.

FIGURE 310. Model Structure Panel

3. Click the **Edit** icon on the taskbar.

    The detail page for the model, option class group, or option item group displays.

FIGURE 311. Model Detail Page

4. In the Navigation frame, click on the plus (+) sign to expand the model or group (see Figure 312 on page 507).

FIGURE 312. Navigation Frame

5. Click an option class.

   This displays the following tabs in the Content frame (see Figure 313 on page 508):

   • **General Info**: This tab provides general information about the selected option class. A list box displays the children belonging to this option class. You can also assign a product ID here, define a ratio for the class (the number by which the option item quantity will be multiplied to get the necessary option item quantity). You can create nested option classes and option items as well as attach groups.

- **Display**: This tab enables you to set display property values specific to the selected option class.

- **Properties**: You can associate with the option class properties to which the option class has access. (The option class has access either to properties defined specifically for the model to which the option class belongs or to properties defined for any model group above the option class in the model group hierarchy.)

- **Rules**: You can attach rules defined for the model, as well as for the model group to which it belongs (or to any ancestor model group).

6. In the Navigation frame, click the plus (+) to expand the option class.

   This displays the children of the option class: these may be option items or option classes.

FIGURE 313. Model Detail Page with Option Class Selected

7. Click an option item.

   This displays the following tabs in the Content frame (see Figure 314 on page 509):

- **General Info**: This tab provides general information about the selected option item: name and description, effectivity dates, and a field for assigning a product ID.

- **Display**: You can set display property values specific to the selected option item.

- **Properties**: You can associate with the option items properties to which the option item has access. (The option item has access either to properties defined specifically for the model to which the option item belongs or to properties defined for any model group above the option item in the model group hierarchy.)

- **Rules**: You can attach any accessible rules to the option item. (The option item has access to any rules defined at any level above it in the model group hierarchy.)

FIGURE 314. Model Detail Page with Option Item Selected

Working with Model Groups

Model groups provide you with a way of organizing related models into appropriate sections. See "Model Group Hierarchy" on page 84 for more information about how model groups relate to models, option classes, and so on.

To Create a Model Group

1. Navigate to and select the model group under which you wish to create the new model group.

   See "To Access the Visual Modeler" on page 506 for information on how to display the model group.

2. Click **New Model Group**.

   This displays the **New Model Group** tab.

FIGURE 315. New Model Group Tab

3. Enter a name and description for the new model group.

Note:	On Windows platforms, there is a 256 character limit for a fully-qualified pathname (this includes the pathname *and* the filename). Therefore, in Visual Modeler, take care not use long names for either model groups or models, particularly if you are using non-ASCII characters. When you compile a model, Visual Modeler recreates the model group structure as directories in the file system and, in the process, expands any non-ASCII characters.

4. Click **Save** or **Save and Edit** to save the new model group.

The new model group appears in the Model Groups frame. If you clicked **Save and Edit**, then the Visual Modeler page appears, ready for you to edit the new model group. See "To Modify a Model Group" on page 510.

To Modify a Model Group

1. Navigate to and display the model group you want to modify.

    See "To Access the Visual Modeler" on page 506 for information on how to display the model group.

    This displays the **General Info** tab where you can modify the name and description of the group. You can also do one or more of the following:

    •   Delete model groups, models, or groups that are children of the selected model group (see "To Delete the Children of a Model Group" on page 511).

Attention:	Click **Save All Changes** to save your changes before you leave the **General Info** tab.

    •   Create a model group as a child of this group. See "To Create a Model Group" on page 509.

    •   Create a model as a child of this group. See "To Create a Model" on page 514.

- Create either an option class group or an option item group. See "Working with Option Class Groups and Option Item Groups" on page 532.

2. Click the **Properties** tab to create or modify properties for this model group.

   See "Properties" on page 562.

> **Attention:** Click **Save All Changes** to save your changes before you leave the **Properties** tab.

3. Click the **Rules** tab to create or modify rules for this model group.

   See "Rules" on page 585.

4. Click the **Lists** tab to create or modify lists for this model group.

   See "Lists" on page 581.

To Delete the Children of a Model Group

To delete one or more children in a group (a model group, a model, an option class group, or an option item group), use the following procedure:

1. Navigate to and select the parent model group that contains the child you want to delete.

   See "To Access the Visual Modeler" on page 506 for information on how to display the model group.

2. In the list box, select one or more model groups (MG), models (M), option class groups (OCG) or option item groups (OIG) to be deleted.

   - You cannot delete a model group if the group has children. You must delete the children first.

   - You cannot delete a model if it is attached as a sub-model elsewhere in the model group hierarchy.

   - You cannot delete an option class group if it is attached to another model or option class group.

   - You cannot delete an option item group if it is attached to another model, option class group, or option item group.

3. Click **Delete**.

4. Click **Save All Changes**.

The model group hierarchy will no longer display the deleted items.

To Copy a Model Group

You can copy a model group and its components into another model group. See "Copying and Embedding" on page 103 for an explanation of this process and the effect it has on properties.

1. Navigate to and select the model group you wish to copy.

    See "To Access the Visual Modeler" on page 506 for information on how to display the model group.

2. In the taskbar, click **Copy**.

    The Copy window displays.

FIGURE 316. Copy Window for Model Groups

3. Enter the Destination Model Group.

    a. Click **Browse...**.

        A Hierarchy Browser displays.

FIGURE 317. Hierarchical Entity Chooser

    b.   Browse the model group hierarchy until you find the destination model group.

    c.   Select the destination model group.

    d.   Click **Done**.

    The model group appears in the Destination Model Group field.

4.   As desired, modify the Destination Name field.

    The name defaults to the name of the model group being copied.

5.   Click **Copy** in the Copy window.

The model group is copied to the destination model group. Properties are handled as described in "Copying and Embedding" on page 103.

Working with Models

To Create a Model

1. Navigate to and display the model group under which you wish to create a model.

   See "To Access the Visual Modeler" on page 506 for information on how to display the model group.

FIGURE 318. General Info Tab

2. In the **General Info** tab, click **New Model**.

   This displays the **New Model** tab.

FIGURE 319. Creating a New Model

3. Enter a name and description for the new model.

   If you plan to associate the model with a product ID, consider skipping this step. If the name and description match the name and description of the product ID, you can auto-fill these fields when you assign the product ID in Step 5.

Note:	On Windows platforms, there is a 256 character limit for a fully-qualified pathname (this includes the pathname *and* the filename. Therefore, in Visual Modeler, take care not use long names for either model groups or models, particularly if you are using non-ASCII characters. When you translate a model, Visual Modeler recreates the model group structure as directories in a file system and, in the process, expands any non-ASCII characters.

4. Select the Start Date and End Date for the model.

   These are the dates within which the model is available for configuration. If the current date is outside these dates, the model is not available for configuration for any product with which it is associated.

5. If applicable, assign a product ID.

   See "To Associate a Product with a Model, Option Class, or Option Item" on page 517.

6. Click **Save** or **Save and Edit** to save the new model.

   If you click **Save**, the **New Model** tab remains and the new model appears in the Models and Groups frame. You can create another model in this group.

   If you click **Save and Edit**, the Model Detail page appears with the new model in the Navigation frame. You can now add properties, rules, lists, and constraint tables for this model. You can also associate the model with a product. See "To Modify an Existing Model" on page 515.

To Modify an Existing Model

1. In the model group hierarchy, navigate and display the Model Detail page for the model you want to modify.

   See "To Access the Visual Modeler" on page 506 for information on how to display the Model Detail page.

2. In the **General Info** tab, you can do one or more of the following:

   • Modify the name, description, and/or the start and end dates.

- Delete one or more of the option classes or groups associated with the model. See "To Delete the Children of a Model" on page 517.

- Arrange the order of the children in the list.

- Assign a product to the model, or change the current product assignment.

  See "To Associate a Product with a Model, Option Class, or Option Item" on page 517.

Attention: Click **Save All Changes** to save your changes before you leave the **General Info** tab.

- Create one or more option classes. See "To Create an Option Class" on page 523.

- Attach an option class group. See "Working with Option Class Groups and Option Item Groups" on page 532.

- Modify display properties. See "Working with Display Properties" on page 644.

3. Click the **Properties** tab to define properties for or to attach properties to this model.

   See "Properties" on page 562.

4. Click the **Rules** tab to define rules for or attach rules to this model.

   See "Rules" on page 585.

5. Click the **Lists** tab to create lists for this model.

   See "Lists" on page 581.

6. Click the **Tables** tab to create or modify constraint tables.

   See "Option Constraints" on page 622.

To Delete a Model

You delete a model by finding the model group that is its parent, then deleting the model from that group. You cannot delete a model if it is attached as a sub-model elsewhere in the model group hierarchy.

See "To Delete the Children of a Model Group" on page 511 for the procedure.

To Delete the Children of a Model

Use this procedure to delete one or more option classes or groups that are children of a model:

1. Navigate to and display the Model Detail page for the model with the elements you want to delete.

   See "To Access the Visual Modeler" on page 506 for information on how to display the model.

   The **General Info** tab contains a list box showing the option classes (OC), option class groups (OCG) or option item groups (OIG) that are children to the model.

2. In the list box, select one or more objects to be deleted.

3. Click **Delete**.

Note:	Attached sub-models and groups are not deleted by this action. Only the attachment to those models and groups is removed. See "To Delete a Group" on page 547.

4. Click **Save All Changes**.

The model hierarchy no longer displays the deleted children.

To Associate a Product with a Model, Option Class, or Option Item

You can reference a model, option class, or option item to a product ID in the product catalog. If the product ID has been assigned to one or more price lists in Sterling Pricing, then this enables you to associate a price with the entity. In addition, if the item associated with a product is selected as part of a configuration, then when the user adds the configured product to their cart, the item is displayed with associated product ID and product information. See "Associating a Product with a Model, an Option Class, or Option Item" on page 85 for more information.

1. In the model group hierarchy, find the entity that you want to associate with a product ID.

   See "To Access the Visual Modeler" on page 506 for information on how to navigate the model group hierarchy.

2. In the **General Info** tab for the model, option class, or option item, click **Browse...** to search for the product ID in the product catalog.

   • The product ID must exist in the product catalog. You create the product using Sterling Product Manager. See "Product Administration Tasks" on page 371 for information about creating products.

- See "Searching the Product Catalog for a Product ID" on page 553 for help in browsing for a product ID. When you select the product ID, the product ID is displayed in the Assigned Product ID field and its product name and description are auto-filled into those fields.

- You can manually enter the product ID in the Assigned Product ID field, but the Product Name and Product Description fields are not auto-filled until you save the information.

- You can use the product name as the name of the new model. If the Name field is blank, then the field will be auto-filled with the product name. If the field has an entry already, then you will be prompted to use the product name.

- If you are modifying a model, then you can click **Product Detail** to view the details of the assigned product.

3. Click **Save All Changes**.

To Copy a Model

You can copy a model and its components into a model group. See "Copying and Embedding" on page 103 for an explanation of this process and the effect it has on properties.

1. In the Model Groups frame, navigate to and select the model group that contains the model you want to copy. The model name is displayed in the Models and Groups frame.

   See "To Access the Visual Modeler" on page 506 for information on how to navigate the model group hierarchy.

2. In the Models and Groups frame, click on the model you want to copy.

   This displays the current structure of the model.

3. Click **Copy** in the taskbar.

   This displays the Copy window.

FIGURE 320. Copy Window for Models

4. Enter the Destination Model Group.

   a. Click **Browse...**.

      This displays a Hierarchy Browser.

   b. Browse the hierarchy until you find the destination model group.

   c. Select the destination model group.

   d. Click **Done**.

      The model group appears in the Destination Model Group field.

5. As desired, modify the Destination Name field.

   The name defaults to the name of the model being copied.

6. Click **Copy** in the Copy window.

The model is copied to the destination model group. Properties are handled as defined in "Copying and Embedding" on page 103.

To Copy a Model Reference

As described in "Groups and Sub-Models" on page 87, you can re-use a model as part of another entity without having to recreate the model. You do this by attaching the model to the entity. The attachment then becomes a model reference. You can copy this model reference; that is, instead of copying the actual model, you can copy the reference to a model that is attached.

1. In the Model Groups frame, navigate to and select the model group that contains the entity with the model reference you want to copy. The entity name is displayed in the Models and Groups frame.

    See "To Access the Visual Modeler" on page 506 for information on how to navigate the model group hierarchy.

2. In the Models and Groups frame, click on the entity that contains the reference you want to copy.

    This displays the current structure of the entity.

3. Click **Edit** in the taskbar.

    This displays the **General Info** tab.

4. In the Navigation frame, find and select the model reference you want to copy.

5. Click **Copy** in the taskbar.

    This displays the Copy window.

FIGURE 321. Copy Window for Copying Model References

6. Enter the Destination Option Class.

   a. Click **Browse...**.

      This displays a Hierarchy Browser.

   b. Browse the model group hierarchy until you find the destination option class.

   c. Select the destination option class.

   d. Click **Done**.

   The option class appears in the Destination Option Class field.

7. As desired, modify the Destination Name field.

   The name defaults to the name of the model reference being copied.

8. Click **Copy** in the Copy window.

The model reference is copied to the destination option class. Properties are handled as defined in "Copying and Embedding" on page 103.

To Embed a Model

You can embed a model within an option class. See "Copying and Embedding" on page 103 for an explanation of the process and its effect on properties.

1. In the Model Groups frame, navigate to and select the model group that contains the model structure you want to embed. The model name is displayed in the Models and Groups frame.

    See "To Access the Visual Modeler" on page 506 for information on how to navigate the model group hierarchy.

2. In the Models and Groups frame, click on the model whose structure you want to embed.

    This displays the current structure of the model.

3. Click **Edit** in the taskbar.

    This displays the **General Info** tab.

4. Click **Copy** in the taskbar.

    This displays the Copy window.

FIGURE 322. Copy Window for Embedding Models

5. Enter the Destination Option Class by typing or by browsing.

   To browse for the option class:

   a. Click **Browse...**.

      This displays a Hierarchy Browser.

   b. Browse the model group hierarchy until you find the destination option class.

   c. Select the destination option class.

   d. Click **Done**.

   The option class appears in the Destination Option Class field.

6. As desired, modify the Destination Name field.

   The name defaults to the name of the model being embedded.

7. Click **Copy** in the Copy window.

Working with Option Classes and Option Items

Option classes and option items comprise configurable parts or services of a model. You can think of option classes as representing questions or components that need to be configured, while option items represent answers or choices of components. Sometimes the answer to a question can give rise to further questions. In these cases it is useful to nest option classes within other option classes to help guide a user to the configuration that best meets their needs.

To Create an Option Class

1. In the model group hierarchy, navigate to and display the model, option class group, or option class in which you want to create the option class.

   See "To Access the Visual Modeler" on page 506 for information on how to navigate the model group hierarchy.

   You can create an option class within another option class, within a model, or within an option class group.

2. To create option classes as children of the model or option class group:

   a. Click **New Option Class**.

      This displays the **New Option Class** tab.

b. Proceed to Step 4.

3. To create nested option classes:

   a. In the Navigation frame, navigate to and select the option class where you want to nest the new class.

   b. Click **New Option Class**.

   This displays the **New Option Class** tab.

   c. Proceed to Step 4.

FIGURE 323. New Option Class Tab

4. Enter a name and description for the new option class.

   If you plan to associate the option class with a product ID, then you might consider skipping this step. If the name and description match the name and description of the product ID, then you can auto-fill these fields when you assign the product ID in Step 6.

5. Define the effectivity dates by modifying the start and end dates.

   You can click the calendar icon to select the dates from a calendar.

6. If applicable, assign a product ID.

   See "To Associate a Product with a Model, Option Class, or Option Item" on page 517.

7. Click **Save** to save the new option class and remain at the **New Option Class** tab (to create additional option classes); click **Save and Edit** to save the new option class and display the option class tabs for editing.

The new option class appears in the Navigation frame. The new option class is selected, ready to be modified.

To Modify an Option Class

1. In the model group hierarchy, navigate to and display the model, option class group, or option class that contains the option class.

    See "To Access the Visual Modeler" on page 506 for information on how to navigate the model group hierarchy.

2. In the Navigation frame, find and click on the option class that you want to modify.

    This displays the **General Info** tab for the option class.

FIGURE 324. Model Detail Page with Option Class Selected

3. Modify the Name, Description, and Start and End Dates as applicable.

4. Enter a ratio in the **Ratio** field, if applicable.

    The ratio field determines the quantity of option items that are added to a customer's order. The quantity of any child item selected is multiplied by this ratio to compute the "extended" quantity of the child item. For example, a bicycle model may have a wheel option class defined with a ration of "2". When a user selects a particular wheel item from this option class, then two wheels will be added to the configured product.

    You can enter the **Ratio** as either a whole number or a decimal.

5. As applicable, modify the order of the children or delete the children.

    See "To Delete the Children of an Option Class" on page 531.

6. If applicable, assign a product ID or modify the current assignment.

    See "To Associate a Product with a Model, Option Class, or Option Item" on page 517.

7. Before you click the other tabs, click **Save All Changes**.

8. Click the **Display** tab to modify the display properties for this option class.

    See "Working with Display Properties" on page 644.

9. Click the **Properties** tab to attach properties to this option class.

    See "To Attach a Property" on page 565.

10. Click the **Rules** tab to attach rules to this option class.

    See "To Attach a Rule" on page 591.

When you have completed modifying the option class, click **Save All Changes**.

You can also create option items for this option class. See "To Add Option Items to an Option Class" on page 526.

To Add Option Items to an Option Class

1. In the model group hierarchy, navigate to the option class to which you want to add the option items.

    See "To Access the Visual Modeler" on page 506 for information on how to navigate the model group hierarchy.

2. In the **General Info** tab, click **New Option Item** to display the **New Option Item** tab.

FIGURE 325. New Option Item Tab

3. Enter a name and description for the new option item.

   If you plan to associate the option item with a product ID, then you might consider skipping this step. If the name and description match the name and description of the product ID, then you can auto-fill these fields when you assign the product ID in Step 5.

4. Define the effectivity dates by modifying the start and end dates.

5. If applicable, assign a product Id.

   See "To Associate a Product with a Model, Option Class, or Option Item" on page 517.

6. Click **Save** or **Save and Edit**.

The new option item appears in the model hierarchy in the Navigation frame.

To Copy an Option Class

You can copy an option class and its components into a model, an option class group, or another option class. See "Copying and Embedding" on page 103 for an explanation of this process and the effect it has on properties.

1. Navigate to and select the parent model group for the model or option class group that contains the option class.

   See "To Access the Visual Modeler" on page 506 for information on how to navigate the model group hierarchy.

2. In the Models and Groups frame, click on the model or option class group that contains the option class.

   This displays the current structure of the model or option class group.

3. Click **Edit** in the taskbar.

   This displays the **General Info** tab for the model or option class group.

4. In the Navigation frame, find and click on the option class that you want to copy.

   This displays the **General Info** tab for the option class.

5. Click **Copy** in the taskbar.

   This displays the Copy window.

FIGURE 326. Copy Window for Option Classes

6. Enter the destination model, option class group, or option class as follows:

    a. Click **Browse...**.

        This displays a Hierarchy Browser.

    b. Browse the model group hierarchy until you find the destination model, option class group, or option class and select it.

    c. Click **Done**.

        The model, option class group, or option class appears in the Destination Model/OCG/Option Class field.

7. Enter the Destination name.

    The name defaults to the name of the option class being copied.

8. Click **Copy** in the Copy window.

The option class is copied to the destination model, option class group, or option class. Properties are handled as defined in "Copying and Embedding" on page 103.

To Modify an Option Item

1. Find the option item that you want to modify.

    See "To Access the Visual Modeler" on page 506 for information on how to navigate the model group hierarchy.

    When you click the option item, the **General Info** tab is displayed.

FIGURE 327. Model Detail Page with Option Item Selected

2. If applicable, modify the Name, Description, and Start and End Dates.

3. If applicable, assign a Product ID.

    See "To Associate a Product with a Model, Option Class, or Option Item" on page 517.

Attention: Before you click the other tabs, click **Save All Changes**.

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4. Click the **Display** tab to modify the display properties for this option item.

    See "Working with Display Properties" on page 644.

5. Click the **Properties** tab to attach properties to this option item.

    See "To Attach a Property" on page 565.

6. Click the **Rules** tab to attach rules to this option item.

    See "To Attach a Rule" on page 591.

To Copy an Option Item

You can copy an option item into an option item group or an option class. See "Copying and Embedding" on page 103 for an explanation of this process and the effect it has on properties.

1. Find the option item that you want to copy.

    See "To Access the Visual Modeler" on page 506 for information on how to navigate the model group hierarchy.

    When you click the option item in the Navigation frame, the **General Info** tab is displayed.

2. Click **Copy** in the taskbar.

    This displays the Copy window.

FIGURE 328. Copy Window for Option Items

3. Enter the destination option item group or option class.

    a. Click **Browse...**.

        This displays a Hierarchy Browser.

    b.   Browse the model group hierarchy until you find the option item group or option class and select it.

    c.   Click **Done**.

The option item group or option class appears in the Destination: Option Item Group/Option Class field.

4.   Enter the Destination name.

The name defaults to the name of the option item being copied.

5.   Click **Copy** in the Copy window.

The option item is copied to the destination option item group or option class. Properties are handled as defined in "Copying and Embedding" on page 103.

To Delete an Option Class

You delete an option class by deleting the option class as a child of the parent to which it belongs. This can be one of the following:

- A model. See "To Delete the Children of a Model" on page 517.

- An option class. See "To Delete the Children of an Option Class" on page 531.

- An option class group. See "To Delete the Children of a Group" on page 548.

Deleting the option class automatically deletes any option items, nested option classes, or attachments to groups.

> **Note:**   Nested groups are not deleted when you delete an option class, only the attachment to those groups.

To Delete the Children of an Option Class

You can delete option items and nested option classes, as well as any attachments to groups.

1.   Navigate to and display the detail page for the model or option class group that contains the option class.

See "To Access the Visual Modeler" on page 506 for information on how to navigate the model group hierarchy.

2. In the Navigation frame, navigate to and select the option class.

   This displays the **General Info** tab which contains a list box showing the children of the option class.

FIGURE 329. Model Detail Page with Option Class Selected

3. Click the item to be deleted: option item (OI), option class (OC), model, option class group (OCG), or option item group (OIG).

> **Note:** Nested groups are not deleted. However, the attachment to those groups is removed.

4. Click the **Delete** button.

5. Click **Save All Changes**.

The items are no longer displayed in the Navigation frame.

Working with Option Class Groups and Option Item Groups

See "Groups and Sub-Models" on page 87 for an explanation of how groups work.

To Create a Group

1. In the Model Groups frame, navigate to and select the model group for which you are creating the option class group or option item group.

   See "To Access the Visual Modeler" on page 506 for information on how to navigate the model group hierarchy.

   This displays the **General Info** tab for the group. Make sure you are creating the group within the appropriate model group. The group will be available for attachment to any items below this model group in the model group hierarchy.

2. Click **New Option Group**.

   This displays the **New Option Class/Item Group** tab (see Figure 330 on page 533).

FIGURE 330. New Option Class/Item Group tab

3. Enter a name and description for the group.

4. Select the type of group (Option Class Group or Option Item Group).

5. Click **Save** or **Save and Edit**.

The group appears in the hierarchy. You can now begin to build the group. The first step is to create one or more option classes. See "To Create an Option Class" on page 523.

To Modify a Group

When you modify a group and then compile it, the modifications are reflected in any model to which the group is attached, once the model is recompiled.

1. In the model group hierarchy, navigate to and select the option class group or option item group that you want to modify.

    See "To Access the Visual Modeler" on page 506 for information on how to navigate the model group hierarchy.

    This displays the **General Info** tab for the group.

FIGURE 331. Modifying a Group

2. Modify the name and description, reorder or delete the children.

    See "To Delete the Children of a Group" on page 548 for information about deleting the children of a group.

3. (Option item groups only) If applicable, define start/end dates.

4. Click **Save All Changes**.

You can also do the following:

*   Add option classes to an option class group. See "To Create an Option Class" on page 523.

*   Attach groups to the group. See "To Attach a Group to a Model or Another Group" on page 540.

To Copy an Option Class Group

You can copy an option class group to a model group.

1. In the Model Groups frame, navigate to and select the model group that contains the group you want to copy. (See "To Access the Visual Modeler" on page 506 for information on how to navigate the model group hierarchy.)

2. In the Models and Groups frame, click on the group you want to copy.

   The current structure of the group, if any, appears in the content frame.

3. Click **Copy** in the taskbar.

   This displays the Copy window.

FIGURE 332. Copy Window for Option Class Groups

4. Enter the Destination Model Group.

   a. Click **Browse...**.

      This displays a Hierarchy Browser.

   b. Browse the model group hierarchy until you find the destination model group and select it.

   c. Click **Done**.

   The model group appears in the Destination Model Group field.

5. Enter the Destination name.

   The name defaults to the name of the option class group being copied.

6.   Click **Copy** in the Copy window.

The option class group is copied to the destination model group. Properties are handled as defined in "Copying and Embedding" on page 103.

To Embed an Option Class Group

You can embed an option class group within a model, another option class group, or an option class. See "Copying and Embedding" on page 103 for an explanation of how the process handles properties.

1.   In the Model Groups frame, navigate to and select the model group that contains the option class group you want to embed. The group name is displayed in the Models and Groups frame.

     See "To Access the Visual Modeler" on page 506 for information on how to navigate the model group hierarchy.

2.   In the Models and Groups frame, click on the group you want to embed.

     This displays the current structure of the group.

3.   Click **Edit** in the taskbar.

     This displays the **General Info** tab.

4.   Click **Copy** in the taskbar.

     This displays the Copy window.

FIGURE 333. Copy Window for Embedding Option Class Groups

5. Enter the destination model, option class group, or option class as follows:

   a. Click **Browse...**.

      This displays a Hierarchy Browser.

   b. Browse the model group hierarchy until you find the destination model, option class group, or option class and select it.

   c. Click **Done**.

   The model, option class group, or option class appears in the Destination Model/Option Class Group/Option Class field.

6. Click **Copy** in the Copy window.

The option class group is embedded in the destination model, option class group, or option class. Properties are handled as defined in "Copying and Embedding" on page 103.

To Copy an Option Item Group

You can copy an option item group to a model group.

1. In the Model Groups frame, navigate to and select the model group that contains the option item group you want to copy. (See "To Access the Visual Modeler" on page 506 for information on how to navigate the model group hierarchy.)

2. In the Models and Groups frame, click on the option item group you want to copy.

   The current structure of the group, if any, appears in the content frame.

3. Click **Copy** in the taskbar.

   This displays the Copy window.

FIGURE 334. Copy Window for Option Item Groups

4. Enter the Destination Model Group.

   a. Click **Browse...**.

      This displays a Hierarchy Browser.

   b. Browse the model group hierarchy until you find the destination model group.

   c. Select the destination model group.

    d.   Click **Done**.

    The model group appears in the Destination Model Group field.

5.   Enter the Destination name.

    The name defaults to the name of the option item group being copied.

6.   Click **Copy** in the Copy window.

The option item group is copied to the destination model group. Properties are handled as defined in "Copying and Embedding" on page 103.

To Embed an Option Item Group

You can embed an option item group within another option item group or option class. See "Copying and Embedding" on page 103 for an explanation of how the process handles properties.

1.   In the Model Groups frame, navigate to and select the model group that contains the option item group you want to embed. The group name is displayed in the Models and Groups frame.

    See "To Access the Visual Modeler" on page 506 for information on how to navigate the model group hierarchy.

2.   In the Models and Groups frame, click on the group you want to copy.

    This displays the current structure of the group.

3.   Click **Edit** in the taskbar.

    This displays the **General Info** tab.

4.   Click **Copy** in the taskbar.

    This displays the Copy window.

FIGURE 335. Copy Window for Embedding Option Item Groups

5. Enter the destination option item group or option class.

   a. Click **Browse...**.

      This displays a Hierarchy Browser.

   b. Browse the model group hierarchy until you find the destination option item group or option class and select it.

   c. Click **Done**.

   The option item group or option class appears in the Destination OIG/Option Class field.

6. Click **Copy** in the Copy window.

The option item group is embedded in the destination option item group or option class. Properties are handled as defined in "Copying and Embedding" on page 103.

To Attach a Group to a Model or Another Group

You can attach a model only to an option class (see "To Attach a Model, Option Class Group, or Option Item Group to an Option Class" on page 542). You can attach an option class group to a model, an option class, or another option class

group. You can attach an option item group to an option class or to another option item group.

1. In the Model Groups frame, navigate to and select the model group that contains the model or group to which you want to attach the group.

    See "To Access the Visual Modeler" on page 506 for information about how to navigate the model group hierarchy.

2. In the Models and Groups frame, click on the model or group to which you want to attach the option class group or option item group.

3. Click **Edit**.

    This displays the **General Info** tab for the model or group.

4. In the **General Info** tab, click **Attach**.

    This displays the **Attach** tab.

FIGURE 336. Attach Tab

5. Enter a name and description for the attachment to the group or model.

6. Select the option class group or option item group to be attached.

    a. Click **Browse...**.

        This displays a Hierarchy Browser.

    b. Browse the model group hierarchy until you find the option class group or option item group.

    c. Select the group.

    d. Click **Done**.

    The group appears in the selection field.

7. Click **Assign**.

    You can click **Return to General** to return to the **General Info** tab.

The name you entered for the attached group or model appears in the model hierarchy in the Navigation frame.

To Attach a Model, Option Class Group, or Option Item Group to an Option Class

You can attach a model, an option class group, or an option item group to an option class.

1. In the Model Groups frame, navigate to and select the model group that contains the model with the option class.

    See "To Access the Visual Modeler" on page 506 for information on how to navigate the model group hierarchy.

2. In the Models and Groups frame, click on the model or option class group that contains the option class.

    The current structure of the model or group, if any, appears in the content frame.

3. Click **Edit**.

    This displays the **General Info** tab for the model or group.

4. In the Navigation frame, navigate to and select the option class to which you want to attach the group.

    This displays the **General Info** tab for the option class.

5. In the **General Info** tab, click **Attach**.

    This displays the **Attach** tab.

FIGURE 337. Attach Tab

6. Enter a name and description for the attached group or model.

7. Select the model, option class group, or option item group to be attached.

    a.   Click **Browse...**.

        This displays a Hierarchy Browser.

    b.   Browse the model group hierarchy until you find the model, option class group, or option item group.

    c.   Select the model or group.

    d.   Click **Done**.

    The model or group appears in the selection field.

8.   Click **Assign**.

    You can click **Return to General** to return to the **General Info** tab.

The name you entered for the attached model or group appears in the model hierarchy in the Navigation frame.

To View the Structure of an Attached Group

Once a group is attached, you can view the group's structure by clicking **Show Detail**.

1.   Navigate to the level in the hierarchy (model, option class or option item) where the group is attached.

    See "To Access the Visual Modeler" on page 506 for information on how to navigate the model group hierarchy.

2.   Click **Show Detail**.

    This displays a read-only view of the group's structure.

FIGURE 338. Model Group View

To Copy an Option Class Group Attachment

You can copy a reference to an option class group; that is, rather than copy the group itself, you copy the reference to the group. You can copy the reference into either a model, an option class group or into an option class.

1. In the Model Groups frame, navigate to and select the model group that contains the entity with the option class group attachment you want to copy. (See "To Access the Visual Modeler" on page 506 for information on how to navigate the model group hierarchy.)

2. In the Models and Groups frame, click on the entity that contains the attachment you want to copy.

    The current structure of the model appears in the content frame.

3. Click **Edit** in the taskbar.

    This displays the model in the Navigation frame and the **General Info** tab for the group.

4. In the Navigation frame, navigate the model until you find the attached group you want to copy.

5. Click the attached group.

6. Click **Copy** in the taskbar.

    This displays the Copy window.

FIGURE 339. Copy Window for Option Class Group Attachments

7. Enter the destination model, option class group, or option class as follows:

   a. Click **Browse...**.

      This displays a Hierarchy Browser.

   b. Browse the model group hierarchy until you find the destination model, option class group, or option class and select it.

   c. Click **Done**.

   The model, option class group, or option class appears in the Destination Model/Option Class Group/Option Class field.

8. Enter the Destination name.

   The name defaults to the name of the option class group being copied.

9. Click **Copy** in the Copy window.

The attachment is copied to the destination model, option class group, or option class. Properties are handled as defined in "Copying and Embedding" on page 103.

To Copy an Option Item Group Attachment

You can copy a reference to an option item group; that is, rather than copy the group itself, you copy the reference to the group. You can copy the reference into either an option item group or into an option class.

1. In the Model Groups frame, navigate to and select the model group that contains the entity with the option item group attachment you want to copy. (See "To Access the Visual Modeler" on page 506 for information on how to navigate the model group hierarchy.)

2. In the Models and Groups frame, click on the entity that contains the attachment you want to copy.

   The current structure of the entity appears in the content frame.

3. Click **Edit** in the taskbar.

   This displays the entity in the Navigation frame and the **General Info** tab for the group.

4. In the Navigation frame, navigate the entity until you find the attached group you want to copy.

5. Click the attached group.

6. Click **Copy** in the taskbar.

   This displays the Copy window.

FIGURE 340. Copy Window for Option Item Group Attachments

7. Enter the destination option item group or option class.

    a. Click **Browse...**.

        This displays a Hierarchy Browser.

    b. Browse the model group hierarchy until you find the option item group or option class and select it.

    c. Click **Done**.

    The option item group or option class appears in the Destination Option Item Group/Option Class field.

8. Click **Copy** in the Copy window.

The attachment is copied to the destination option item group or option class. Properties are handled as defined in "Copying and Embedding" on page 103.

To Delete a Group

You delete a group by finding the model group that is the parent of the group you want to delete, then deleting the group from that model group. See "To Delete the Children of a Model Group" on page 511 for the procedure.

• You cannot delete an option class group if it is being referenced from another model or option class group.

• You cannot delete an option item group if it is referenced from another model, option class group, or option item group.

To Delete the Children of a Group

Use this procedure to delete one or more option classes or groups that are children of a group:

1. Navigate to and select the parent model group that contains the group with the children you want to delete.

   See "To Access the Visual Modeler" on page 506 for information on how to navigate the model group hierarchy.

2. In the Models and Groups frame, click on the group.

   This displays the current structure of the group.

3. Click **Edit**.

   This displays the **General Info** tab that contains a list box showing the children belonging to the group. This can include option classes (OC) and option class groups (OCG).

4. In the list box, select one or more elements to be deleted.

5. Click **Delete**.

Note:	Groups are not deleted by this action. Only the attachment to those groups is removed. See "To Delete a Group" on page 547.

6. Click **Save All Changes**.

The model hierarchy no longer displays the deleted elements.

Including Sub-Models in Models

You can include one model in another so that a sub-component of the parent model can be modeled and configured separately. For example, you might have a parent model for cellular products that includes configurable sub-components for cell phones and calling plans.

To Include a Sub-Model in a Model

Suppose that you have a model A, and you want to use Model B as an option item in Model A, so that end-users can configure the Model B component as part of a session to configure model A.

1. Create Model B as a model in its own right, and compile it. Make a note of the location of this model in the model group and model hierarchy. For example: Matrix/Computers/Workstations/Configurable Monitors/Matrix Monitor.

2. Navigate to Model A and to the location in the Model hierarchy at which you want to include Model B as an option item.

3. Create the option item and enter a name, description, and effectivity dates for it. Click **Save**.

4. Click the **Properties** tab.

5. Select CONFIG: SUBMODEL NAME in the Unattached Properties drop-down list.

6. In the Value field, enter the fully qualified name to Model B. For example, Matrix/Computers/Workstations/Configurable_0020Monitors/ Matrix_0020Monitor. Note the use of escape characters to encode special characters such as spaces. See "Special Characters Encoding" on page 550 for more information.

7. Click **Attach**.

8. Click **Save All Changes**.

9. A separate property called CONFIG: SUBMODEL RETURN controls whether end-users return to the main model after configuring the child model.

   a. If you want to have end-users return to the main model when they have finished configuring Model B, then set the value of CONFIG: SUBMODEL RETURN to "true".

   b. If you want to have end-users return to directly to the calling application when they have finished configuring Model B, then set the value of CONFIG: SUBMODEL RETURN to "false".

10. Click **Attach**.

11. Click **Save All Changes**.

12. Click **Compile** to re-compile Model A.

13. To test the model, click **Test**.

Special Characters Encoding

You must encode any special characters in model group and model names when you provide model group path names and model names.

The following table lists some common special character encodings:

TABLE 32. Character Encodings

Character	Encoding
" " (blank)	_0020
"-"	_002D
"/"	_002F
"!"	_0021
"@"	_0040
"#"	_0023
"$"	_0024

Testing a Model

You can test the model at any point while you are creating it. The test model feature performs the following steps:

1. Compiles the model into an XML file.

2. Launches the browser.

3. Displays the model as a HTML page.

To Test a Model

1. Navigate to the model that you want to test.

   See "To Access the Visual Modeler" on page 506 for information on how to navigate the model group hierarchy.

2. Click **Compile**.

   A dialog box reports that compilation is successful.

3. Click **Test Model**.

This displays a configuration window as the end-user will see it, based on the current model.

Note that if you click **Compile and Test**, then both actions are taken.

4. To change some of the environmental variables that affect how a model displays, click **Set Defaults**.

FIGURE 341. Set Defaults Window

Model display environmental variables include:

• Current Effective Date: by changing the date in this field, you can view the model as it would be viewed by a customer on the specified date. This means that you would see only option classes and option items that are effective on that date, and the prices that you see are based on price lists effective on that date.

• Current Partner: By selecting a specified a partner, you view the model as it would be seen by a user of that particular partner. Depending on the assignment of price lists to the partner, this may affect which option classes and option items are displayed.

• Vertical Market: When customers create carts and orders, they can specify a customer type: this is used to filter which price lists are to be used in calculating prices. By selecting a customer type, you can check how the model will be seen by customers who select the same customer type.

• Currency: When customers create carts and orders, they can specify a currency: this is used to filter which price lists are to be used in calculating prices. By selecting a currency, you can check how the model will be seen by customers who select the same currency.

Compiling a Model

Before a model can be associated with a configurable product and a customer can use the model you have created to configure a product, you must compile the model into XML format and store the model in a location accessible by Sterling Configurator. Only compiled models can be associated with configurable products.

To Compile a Model

1. Navigate to the model that you want to compile.

    See "To Access the Visual Modeler" on page 506 for information on how to navigate the model group hierarchy.

FIGURE 342. Model Navigation Detail Page

2. Click **Compile**.

The model is compiled into an XML file. This XML file is placed in the following location in *debs_home*/**Sterling/WEB-INF/data/config/**. This directory contains several directories, one for each locale. The model resides within the directory representing your preferred locale in either the folder representing the root model group folder or in one of the folders representing model groups within the root

model group. They are stored in the shared location of a clustered deployment of the Sterling Multi-Channel Selling Solution.

Attention:	If your implementation of the Sterling Multi-Channel Selling Solution makes use of a staging and a production system, then bear in mind that the XML files may have to be moved over to the production environment or the model directories must be shared between the systems.
	In addition, the product records in the Knowledgebase for configurable products may have to be updated to point to the location of the XML files.

If your model group and model hierarchy include special characters (that is, non-alphanumeric characters), then these are encoded in the directory and files names that correspond to them. See "Special Characters Encoding" on page 550 for more information.

To Compile All Models

Rather than compile models one by one, you can also compile all the models in a model group at once.

1. Navigate to the model group whose models you want to compile. This can be the top-level model group.

2. Click **Compile All**.

3. In the Compile All Models window, click **Compile All Models**.

4. The Compile All Models Status window is displayed.

5. When it reports that all the models have been compiled, then click **Close**.

Searching the Product Catalog for a Product ID

See "Associating a Product with a Model, an Option Class, or Option Item" on page 85 for a description of associating products with models, option classes, and option items. When you assign a product ID, you can click **Browse...** to display the Hierarchical Entity Chooser.

FIGURE 343. Hierarchical Entity Chooser

You can use this window to navigate through the hierarchy until you find the product ID that you want to assign to the model object. You can click the **Search** tab to search through products unassigned to any product category.

Click **Done** when you find the product ID that you want to assign. The product ID appears in the Assigned Product ID field.

Working with a Tabbed User Interface

You can design your end-user interface so that, rather than being displayed in a single frame, the option classes appear within a series of tabs. You do this by first selecting the Tabbed Configurator JSP template at the model level, which sets the display property UI:JSP Filename (see "Working with Display Properties" on page 644). You then design the end-user interface using **Tabs** tab.

To Create a Tabbed User Interface

1. Navigate to the model for which you want to create the tabbed interface.

   See "To Access the Visual Modeler" on page 506 for information about how to navigate the model group hierarchy.

FIGURE 344. Detail Page with Model Selected

2. Click the **Display** tab.

FIGURE 345. Display Tab

3. Select Tabbed Configurator from the JSP Template drop-down list.

    This automatically sets the UI: JSP FILENAME property to
    Configurator_Tabbed.jsp.

4. Click the **Tabs** tab.

FIGURE 346. Tabs Tab

5. Enter a name for the tab in the Tab Name field.

6. Click **Add**.

The content frame displays an area for editing the new tab.

FIGURE 347. Tabs Tab with Entry

7. Select the option classes or option class groups for the tab.

a. Select an option class or option class group from the drop-down list.

    b.   Click **Add**.

8.   Repeat the last step for each option class or option class group you want in the tab.

> **Note:**   If you are creating a tabbed UI, then not all option classes must be accounted for in the tabs. Any option classes not included in a tab will not be displayed to the end-user.

9.   Click **Move Up** or **Move Down** to arrange the order of the entities. To remove an entity, click the entity, then click **Remove**.

10.   Click **Save All Changes**.

To Modify a Tab

1.   Navigate to the model with the tabbed interface.

    See "To Access the Visual Modeler" on page 506 for information on how to navigate the model group hierarchy.

FIGURE 348. Detail Page with Model Selected

2.   Click the **Tabs** tab.

    This displays the **Tabs** tab.

FIGURE 349. Tabs Tab

3. Find the tab element you want to modify.

4. To rearrange the order of the entities within the tab:

   a. Find and select the entity you want to move.

   b. Click **Move Up** or **Move Down**.

5. To remove an entity:

   a. Find and select the entity you want to remove.

   b. Click **Remove**.

6. To rearrange the location of the tab within the list of tabs, click the up or down arrows in the far right.

7. Click **Save All Changes**.

To Delete a Tab

1. Navigate to the model with the tabbed interface.

   See "To Access the Visual Modeler" on page 506 for information on how to navigate the model group hierarchy.

2. Click the **Tabs** tab.

   This displays the **Tabs** tab.

FIGURE 350. Tabs Tab

3. Find the tab element you want to delete.

4. On the far right, click the **Delete** icon (X) for that tab.

5. Click **Save All Changes**.

Advanced Visual Modeler Concepts

The basic concepts and tasks of modeling are covered in CHAPTER 16, "Using the Visual Modeler". This chapter and the next, CHAPTER 18, "Visual Modeler UI Concepts", describes the more advanced concepts associated with building complex models. This chapter covers:

- "Properties" on page 562

  - "Working With Properties" on page 563

  - "Using Worksheets" on page 574

  - "Properties as Variables" on page 577

  - "Sterling Multi-Channel Selling Solution Properties" on page 580

- "Lists" on page 581

  - "Working With Lists" on page 582

- "Rules" on page 585

  - "Working With Rules" on page 586

  - "Working With Rule Fragments" on page 600

  - "Working with Rule Actions" on page 615

- "Fragments" on page 600

Properties

As described in "Properties" on page 88, a property is an attribute of a model, option class, or option item. It is used as a basic building block for rule creation.

The Sterling Multi-Channel Selling Solution provides a set of built-in properties which are understood by the Sterling Configurator engine. These control the behavior of the engine and the presentation of the model to the end-user. These properties are summarized in "Sterling Multi-Channel Selling Solution Properties" on page 580.

You can specify the properties that a submodel expects as input from its parent model or external system, and the properties that a submodel outputs to its parent model or external system. This ensures that only those properties that the submodel depends upon are imported from the parent model, and that only those properties that the submodel provides for the parent model's use are exported from the submodel.

You can also define properties and they are available for use in any part of the model group and model hierarchy beneath the point at which they are defined. These defined properties are used to describe the product so that the Sterling Configurator engine can ensure that the user-configured model is valid.

You can also use properties as variables and write rules that reason on the properties' values using functions such as value and expand, and the date functions provided by the DateFunctions class.

Working With Properties

To Define a Property

1. Navigate to and select the location in the model group hierarchy where you want to create the property.

   See "To Access the Visual Modeler" on page 506 for information about how to navigate the model group hierarchy.

   This is important since where you create the property determines what objects in the hierarchy can use the property. See"Properties" on page 88 for a more detailed explanation.

2. When you reach the appropriate level, click the **Properties** tab.

FIGURE 351. Model Properties Tab: Attach Sub-Tab

FIGURE 352. Model Group Properties Tab

3.   If you are working in a model, then within the **Properties** tab, click the **Define** tab.

FIGURE 353. Properties Tab: Define Sub-Tab

4.   Enter a name for the property.

> **Note:**   Do not begin a property name with "UI:" or "CONFIG". Do not include a period (.) in a property name.

5. Select a property type from the drop-down list.

    •   **Number**: use this for any property whose value is determined by a number. For example, the weight of an item could be expressed as a real number of grams (including decimals).

    •   **String**: use this for any property that is expressed as a word or phrase. For example, you can use a string-valued property to indicate the color of an option item.

        If you select this type, then the Localize field is enabled. If you check this box, then you can enter values for this property in any of the supported locales. In other words, if you enter the original value in English, then you can change the system locale to German and then modify the property's value in German. The German value will appear for those users whose locale is German; the English value will appear for those users whose locale is English.

    •   **List**: use this for any property where the value of the property must be selected from a list. For example, the availability of an item might be limited to specifying one or more days of the week. You can capture this in the form of a property by defining a list called "Weekdays" whose values are Sunday, Monday, and so on, concluding with Saturday.

6. If applicable, define a default value that this property takes. You can override this value when you apply the property to an item or class.

    If you selected "List" as the property type, then the Value field displays a drop-down selection of the current lists available. Select a list. See "Lists" on page 581 for information about creating lists.

7. Click **Add**.

    The new property appears in the boxes below the fields.

8. Click **Save All Changes** to save the new property.

To Attach a Property

You define a property at the model group or model level (see "To Define a Property" on page 563). You attach a property to a model, an option class, or an option item.

1. Click **Configuration Models** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. In the Navigation frame, navigate to the object to which you want to attach the property.

FIGURE 354. Detail Page with Model Selected

3. Click the **Properties** tab.

    This displays two sets of fields: one called Unattached Properties for selecting properties and defining values for them, and one called Attached Properties that shows the properties that are currently attached.

Note:	The **Properties** tab for a model contains two tabs: **Attach** and **Define**. You use the **Define** tab to define properties. See "To Define a Property" on page 563.

FIGURE 355. Properties Tab

4. Select a property from the Unattached Properties drop-down list.

    The property will display any default value defined for it.

5. Enter a value for the property. You can set the value of a property simply by entering its value in the text field, or you can use a property editor window to set a value. See "To Use the Property Editor Window" on page 569 for details.

6. Click **Attach**.

    The newly-attached property appears among the Attached Properties.

7. Click **Save All Changes**.

> **Attention:**   You must perform this last step. Otherwise the property will not be attached.

To Define Input/Output Properties

When working with a submodel, you can specify that only the properties required by the submodel are passed as input from the parent model or external system. You can also specify that the submodel pass as output only those properties to be used by the parent model or external system.

1. Click **Configuration Models** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. In the Navigation frame, navigate to the submodel for which you want to specify input and output properties.

3. Click the **Properties** tab, then click the **InputOutput** tab.

FIGURE 356. Input/Output Properties Tab

4. Use the Input Properties drop-down list to select the properties that this submodel expects to import from the parent model or external system, then click the **Add** button.

5. Use the Output Properties drop-down list to select the properties that this submodel will export to the parent model, then click the **Add** button.

All changes take effect immediately. To remove an input or output property, click the **Remove** button next to the property.

FIGURE 357. Input/Output Properties Tab Remove Button

To Use the Property Editor Window

The Numeric Property Editor window and the String Property Editor window are used to edit property values.

1. You can invoke the property window editor simply by clicking the **Edit** button next to any property.

    When you do so, a Property Editor window is displayed.

FIGURE 358. Numeric Property Editor Window

FIGURE 359. String Property Editor Window

2. You can use this window to specify a fixed value of a property or to specify a formula that is used to calculate a value at runtime. If the first character of the text area is "=", then the editor window assumes that you want to create a formula, and the expansion fields are activated to help you define the formula.

3. The syntax of a formula depends on whether you are editing a numeric or a string property:

   a. If you are working on a numeric property, then when you specify a formula, use the drop-down lists as follows:

   • Function: select one of the defined functions. See Table 12, "Function Definitions", on page 95 for a description of the available functions.

   • Property: specify the property whose values should be used to calculate the function.

   • Location: specify where the named property (or properties) should be located. You can select an option item or select one of the following values for the location:

      • unspecified: select this to use the named property anywhere it is defined in the model. First, the current position is checked to see if the property is defined at that location, if not, then the standard algorithm is followed to see if the property is defined anywhere else in the model.

      • relative: select this to use the named property at the current location.

   a. If you are working on a string property, then when you specify a formula, use the drop-down lists as follows:

   • Choose among gather, match, and expand:

      • gather: use this in assigning actions to a string property. It finds all occurrences of the specified property in the property pool and creates a string with the semicolon separating the values of these occurrences.

      • match: use this in writing rule fragments. It provides a mechanism to compare a string to the value of a property.

      • expand: use the expand function as described in "Working with Display Properties" on page 644.

To Modify or Remove an Attached Property

You can only modify the value of an attached property at the local level to which it is attached. To modify the name or default value, see "To Modify or Delete a Property Definition" on page 571.

1. Click **Configuration Models** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. In the Model Groups frame, navigate to the element to which the property is attached.

   If the property is attached to a model:

   a. In the Model Groups frame, click the model group that contains the model.

   b. In the Models and Groups frame, click the model to which the property is attached.

   c. Click **Edit** in the toolbar.

   If the property is attached to an option class or option item:

   a. In the Model Groups frame, click the model group that contains either the model or group with the option class or option item.

   b. In the Models and Groups frame, click the model or group.

   c. Click **Edit** in the toolbar.

   d. In the Navigation frame, find and click the option class or option item.

3. Click the **Properties** tab.

   This tab displays two sets of fields: one called Unattached Properties for selecting properties and defining values for them, and one called Attached Properties that shows the properties that are currently attached.

Note:	If the property is attached to a model, you will see two tabs within the Properties tab: **Attach** and **Define**. The **Attach** tab is automatically displayed.

4. Find the property you want to modify or remove.

5. Modify or remove the attached property:

   • If necessary, change the value of a property.

     Note that this only changes the value locally, at the level it is attached. To change the default value of the property, see "To Modify or Delete a Property Definition" on page 571.

   • To remove an attached property, click **Remove**.

6. Click **Save All Changes**.

To Modify or Delete a Property Definition

1. Click **Configuration Models** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. Navigate to and select the location in the model group hierarchy where the property is defined.

    •   At the root model group level:

        The Visual Modeler page automatically displays the root model group when you access Visual Modeler. If the root model group is not selected, then click on the root model group.

    •   At the model group level, navigate to and click the model group in the Model Groups frame.

    •   At the model level, navigate to and click the model group that contains the model. Then, in the Models and Groups frame, click the model. Now click **Edit Model** in the toolbar.

    In all of these cases, this displays the **General Info** tab for the group or model.

3. Click the **Properties** tab.

    At the model group level, this displays the properties defined at that level.

    At the model level, this displays two tabs: **Attach** and **Define**. If the property is attached anywhere in the model group hierarchy, you will not be able to modify the property type. If the property is attached anywhere in the model group hierarchy, you will not be able to delete the property definition.

4. If you want to modify an unattached property, click the **Define** tab. Within the **Define** tab, find the property you want to modify or delete.

FIGURE 360. Model Properties Define Tab

5. If you want to modify an attached property, click the **Attach** tab. Within the **Attach** tab, find the property you want to modify or remove.

FIGURE 361. **Model Properties Attach Tab**

6. Modify or delete the property definition (property type or value).

7. To specify the properties that a child model imports from and exports to a parent model, click the **Input/Output** tab. Within the Input/Output tab, use the Input Properties field to specify the properties that the child model will take as input from the parent model or external system, and use the Output Properties field to specify the properties that the child model will export to the parent model or external system.

FIGURE 362. Model Properties Input/Output Tab

8. Click **Save All Changes**.

Name changes and value changes will be propagated to anywhere the property is attached. The value change is the default value for the property. It will not override any values set for the attached property.

Using Worksheets

Worksheets provide quick access to a group of properties, enabling you to easily maintain all of a model's properties in one place. A worksheet is a table that assigns property values to option items:

•   Rows represent option items

•   Columns represent properties

Each worksheet belongs to a model and can be used to set the values of properties of that model. You can still set the values for properties as described in "To Attach a Property" on page 565.

For example, suppose that a model of a computer has an option class for hard drives. Each hard drive option item has a number of properties such as capacity,

RPM, latency, and buffer cache. You can create a worksheet to maintain the hard drive properties, similar to the following table:

TABLE 33. **Hard Drive Worksheet**

Option Item	Capacity	RPM	Latency	Buffer Cache
WD Protege	160	5400	5.00	2
WD Caviar	250	7200	4.20	2
WD Caviar SE	250	7200	4.20	8
WD Essential	250	7200	4.20	2

To Create a Worksheet

1. Navigate to the model for which you want to create a worksheet.

2. Click the Worksheets tab.

3. Click **New...**.

4. In the New Worksheet window, enter a name for the worksheet, and click **Create**.

5. Add the option items whose properties you want to set using this worksheet. You do this by clicking **Add Row**, and then navigating to each option item in turn using the entity picker window.

6. Add the properties to the worksheet by clicking **Add Column** and in the Add Column dialog box, select each property from the drop-down list of properties defined for this model. You can create a new property by clicking **New Property** in the Add Column window, and then entering the new property details in the Define New Property window.

7. After you have added the rows and columns for your worksheet, you can enter values for each option item and property.

8. Click **Save All Changes**.

To Modify a Worksheet

You can modify a worksheet at any time. Changes to property values are effective immediately, and will be compiled with the other model details when you next compile the model.

1. Navigate to the model to which the worksheet belongs.

2. Click the Worksheets tab.

3. Select the name of the worksheet form the drop-down list.

4. Click **Select**.

5. In the worksheet, you can do the following:

   • Change the name of the worksheet: click the worksheet name and enter a new name for the worksheet.

   • Add a new row: click **Add Row** and select option items as required.

   • Move a row: click the link to the row, and select its new position from the drop-down list of rows.

   • Remove a row: click the link to the row, and click **Delete**.

   • Add a new column: click **Add Column**, and select the property from the drop-down list.

   • Move a column: click the column name, and select its new position form the drop-down list of columns.

   • Delete a column: click the column name and click **Delete**.

To Export a Worksheet

There are times when it is more convenient to manage the values of properties when you have the worksheet in the form of a spreadsheet that you maintain on your local machine. You can export a worksheet in the form of a comma-separated values (CSV) file, and then open this file in your preferred spreadsheet program to manage the values. You can then import the modified spreadsheet to update the values in the worksheet: see "To Import a Worksheet" on page 577 for details on importing a worksheet.

1. Navigate to the model to which the worksheet belongs.

2. Click the Worksheets tab.

3. Select the name of the worksheet from the drop-down list.

4. Click **Select**.

5. Click **Export...**.

6. In the File Download window, click **Save**.

7. In the Save As window, navigate to the directory on your local machine to which you want to save the file, and then click **Save**.

   The file is saved to your local machine.

To Import a Worksheet

When you have finished editing a spreadsheet for a worksheet, save it as a comma-separated values (CSV) file. Follow these steps to import the worksheet into the Sterling Multi-Channel Selling Solution.

1. Navigate to the model to which the worksheet belongs.

2. Click the Worksheets tab.

3. Click **Import...**.

4. In the Worksheet Import window, click the **Browse...** button.

5. In the Choose File window, navigate to and select the spreadsheet that you want to import.

6. Click **Open**.

7. In the Worksheet Import window, click **Import Now**.

   The spreadsheet is imported into the Sterling Multi-Channel Selling Solution.

Properties as Variables

You can evaluate the value of a property in defining rules and properties using this syntax: ${*function(...)*}. This enables you to define a property as a function of another property. This can be useful in defining display properties and in defining mathematical formulae for rules. For example, you can use ${expand(property[,default[,format]])} to display properties of models.

For example, suppose that you have a numerical property called "Monitor Size"defined on a series of monitors that expresses the screen size in inches and suppose that you want to present this information in a table in the form "17.00 inches". You can define a property called Display Monitor Size by "${expand("Monitor Size","n/a",0.00)} inches". Now use this new property in the display of the model and users will see the size expressed as "17.00 inches" if the underlying Monitor Size property has the value "17". Note that if the Monitor Size property is not defined, then "n/a inches" is displayed.

Properties and the Date Functions

The property type UI: UEV DATE VALUE enables users to enter date values such as starting and ending dates for service contracts. You can reason on these dates using DateFunctions class functions. The general syntax is:

```
DateFunctions.functionName(parameter1, parameter2, ...)
```

where functionName is the name of the date function, and parameter1, parameter2, and so on are the function parameters.

The following table lists the DateFunctions class functions.

TABLE 34. **DateFunctions Class Functions**

Function/Syntax	Description
addMonth(double startDate, double number)	Add the specified number of months to the date specified by the startDate parameter. To subtract a number of months from the date, the number parameter must be negative.
	For example, to add five months to the CONTRACT: START_DATE property:
	DateFunctions.addMonth(value("CONTRACT: START_DATE"), 5)
addWeek(double startDate, double number)	Add the specified number of weeks to the date specified by the startDate parameter. To subtract a number of weeks from the date, the number parameter must be negative.
addDay(double startDate, double number)	Add the specified number of days to the date specified by the startDate parameter. To subtract a number of days from the date, the number parameter must be negative.
addYear(double startDate, double number)	Add the specified number of years to the date specified as the startDate parameter. To subtract a number of years from the date, the number parameter must be negative.
daysBetween(double startDate, double endDate)	Calculate the number of days between two dates. If the endDate parameter is earlier than the startDate parameter, then the result is negative.
	For example, to calculate the number of days between the CONTRACT: START_DATE value and the CONTRACT: END_DATE value:
	DateFunctions.daysBetween(value("CONTRACT: START_DATE"), value("CONTRACT: END_DATE"))

TABLE 34. (Continued) DateFunctions Class Functions

Function/Syntax	Description
weeksBetween(double startDate, double endDate)	Calculate the number of weeks between two dates. If the endDate parameter is earlier than the startDate parameter, then the result is negative.
daysBetweenDaysRemainder(double startDate, double endDate)	Calculate the number of days remaining after the exact number of weeks between two dates has been calculated. For example, if the difference between two dates is 4 weeks and 3 days, then this method returns 3.
monthsBetween(double startDate, double endDate)	Calculate the number of months between two dates. If the endDate parameter is earlier than the startDate parameter, then the result is negative.
monthsBetweenDaysRemainder(double startDate, double endDate)	Calculate the number of days remaining after the exact number of months between two dates has been calculated. For example, if the difference between two dates is 4 months and 3 days, then this method returns 3.
yearsBetween(double startDate, double endDate)	Calculate the number of years between two dates. If the endDate parameter is earlier than the startDate parameter, then the result is negative.
yearsBetweenMonthsRemainder(double startDate, double endDate)	Calculate the number of months remaining after the exact number of years between two dates has been calculated. For example, if the difference between two dates is 1 year, 4 months, and 14 days, then this method returns 4.
yearsBetweenDaysRemainder(double startDate, double endDate)	Calculate the number of days remaining after the exact number of years between two dates has been calculated. For example, if the difference between two dates is 1 year, 4 months, and 14 days, then this method returns 14.
getCurrentDate( )	Return the current date.

Sterling Multi-Channel Selling Solution Properties

The following table summarizes the properties that are built in to the Sterling Multi-Channel Selling Solution. Note that UI properties are covered in CHAPTER 18, "Visual Modeler UI Concepts".

TABLE 35. Sterling Multi-Channel Selling Solution Properties

Property	Type	Comments
CONFIG: CONTAINER ONLY	string	"yes" or "true" indicates that the assigned product ID is a dummy product used to group related orderable products together, especially hard goods and service goods. For example, a cellular solution product may include several related items such as cell phones and calling plans featuring various plan options.
CONFIG: FIRST FIRE	numeric	1 if this is the first time firing rules, 0 otherwise.
CONFIG: INPUT PROPERTIES	list	
CONFIG: OUTPUT PROPERTIES	list	
CONFIG: POOL SIZE	numeric	Number of copies of a model to keep in the model pool.
CONFIG: PRICE LOCKED	numeric	Determines whether or not the price of a particular line item in a bill of materials is locked. Set CONFIG: PRICE LOCKED > 0 to lock the price; 0 to unlock the price.
CONFIG: REPEAT FIRING	string	"yes" or "true" turns on looping in the rule engine, causing rules to fire as long as the current state keeps changing. Since rules are removed from the rule list whenever they fire, this is not an infinite loop.
CONFIG: SUBMODEL NAME	string	The encoded name of another model. Encoding replaces potentially unsafe file system characters with _XXXX where XXXX is the hex representation of their Unicode character code. For example, a space is represented by "_0020". See "Special Characters Encoding" on page 550 for more information.

TABLE 35. Sterling Multi-Channel Selling Solution Properties (Continued)

Property	Type	Comments
CONFIG: SUBMODEL RETURN	string	"yes" or "true" implies that when we punch into a submodel specified by the previous property we will be returning with that models BOM as a child of this model.
_cacheKey	string	Used on a model node to contain the key used to store the model in the model cache.
_description	string	The description of an item.
_errorCount	numeric	Number of errors encountered during rule firing.
_fileSize	string	String representation of a Long value, size of the XML file for a model.
_lastModified	string	Last modified date for a model as a string (number of seconds since some important date).
_modelTabs	list	List of tab names for the model.
_name	string	The name of an option item, option class, or model.
_parent.<item names>	varies	Properties inherited by a submodel from the parent.
_pickItems	list	Internally used to keep track of picked items.
_pickmap.<itemKey>	string	Mapping of an item to an option class.
_picks	list	Internally used to keep track of picked items.
_quantity	integer	Quantity selected, if >0 the item is picked.
_sequence	numeric	Rule firing sequence, if 0 this is the first time through the loop, 1 is the second, and so on.
_tabMembers<#>	list	Where <#> is a tab number (0...N), these properties contains the names of the root level option classes that are part of the tab whose index is <#>.

Lists

In many cases, the values a property may take can be expressed as a number or as a string of characters. In some cases however, a property has to take one of a certain number of pre-specified values such as the days of the week, or one of a set of manufacturer-specified formats such as SM, M, L, or XL.

In these situations, the best approach to take is to define a property, of List type. Then you can write rules to test whether the value of the first property is in the list that is the value of the List property. See "Lists" on page 91 for a more detailed explanation of lists.

Thus, if you have a property called ShirtSize and you want to restrict the choices that a user can select to SM, M, L, or XL, then the steps are:

1. Create a list called ShirtSizeList. Enter values for the list: in this case SM, M, L, and X.

2. Create a property called AvailableShirtSizes whose type is List and assign it the value ShirtSizeList.

3. Create the ShirtSize property and assign it to option items as appropriate.

4. Create a rule that specifies that the value of the ShirtSize property must be in the list of the AvailableShirtSizes property.

Working With Lists

To Define a List

1. Navigate to the model group or model for which you want to define the list.

    See "To Access the Visual Modeler" on page 506 for information about how to navigate the model group hierarchy.

2. Click the **Lists** tab.

    This displays any lists already defined.

3. Click **New...**.

    This displays the **New List** tab.

FIGURE 363. New List Tab

4. Enter a name and description for the list.

5. Define the values for the list.

   a. Enter a value in the New Value field.

   b. Click **Add Item**.

6. Repeat the last step for each value you want to add.

7. Click **Save** to save the values and remain at the **New List** tab.

When you click **Save and Return**, you save the values and return to the **Lists** tab. The new list appears among the defined lists.

To Modify a List

1. Navigate to the model which contains the list you want to modify.

   See "To Access the Visual Modeler" on page 506 for information about how to navigate the model group hierarchy.

2. Click the **Lists** tab (see Figure 364 on page 584).

   This displays any lists already defined.

FIGURE 364. Lists Tab with Defined Lists

3. Click the name of the list you want to modify.

   This displays the **Edit List** tab.

FIGURE 365. Edit List Tab

4. Modify the name or description.

5. Delete values from the list.

   a. Select one or more values in the list.

   b. Click **Delete**.

6. Add values to the list.

    a. Type a value in the New Value field.

    b. Click **Add Item**.

7. Modify values in the list.

   There is no way to modify a value in a single step. You must delete the old value and add the new one.

8. Click **Save** to save the values and remain at the **Edit List** tab.

When you click **Save and Return**, you save your changes and return to the **Lists** tab.

To Delete a List

1. Navigate to the model which contains the list you want to delete.

   See "To Access the Visual Modeler" on page 506 for information on how to navigate the model group hierarchy.

2. Click the **Lists** tab (see Figure 364 on page 584).

   This displays any lists already defined.

3. Among the defined lists, find the list you want to delete.

4. Click **Delete** on the same line as the list you want to delete.

   The list disappears from among the defined lists.

Attention: This last step is important! If you click **Delete**, but do not click **Save All Changes**, then the list will not be deleted.

---

5. Click **Save All Changes**.

Rules

See "Rules in Sterling Visual Modeler" on page 93 for an explanation of rules and how they work.

Working With Rules

To Define a Rule

1. Navigate to the detail page for the model group or model where you want to create the rule.

    See "To Access the Visual Modeler" on page 506 for information on how to navigate the model group hierarchy.

2. Click the **Rules** tab.

    a. If you are defining the rule at the model level, then the **Rules** tab displays two tabs: **Attach** and **Define**. Click the **Define** tab.

    b. The model group level contains a single tab for defining the rule.

FIGURE 366. Define Tab for a Model Rule

3. Click **New...**.

    This displays the **New Rule** tab.

FIGURE 367. Model Page: New Rule Tab

FIGURE 368. Model Group Page: New Rule Tab

4. Select a classification for the rule and specify a priority.

You can create your own rule classifications: see "To Create a Rule Classification" on page 590. Rule priorities are used to determine the order in which rules are fired: lowest numbers fire first. You should use values between 0 and 100: 50 is the default value.

5. Enter a name and description for the rule. Also, select whether the rule is triggered when the rule's conditions are met (success) or not met (failure).

6. Define the fragments of the rule.

   See "Fragments" on page 600.

7. Define the rule actions.

   You can define messages to be displayed, a rule expansion formula, or you can assign properties and values. See "Working with Rule Actions" on page 615.

Note:	No syntax checking is performed on rules. The configurator engine will fail to load a model if there is a syntax error in any of the assigned rules.

8. Click **Save**.

To Modify a Rule

1. Navigate to the model group or model where the rule was created.

   See "To Access the Visual Modeler" on page 506 for information on how to navigate the model group hierarchy.

2. Click the **Rules** tab.

   The **Rules** tab for the Model level displays two tabs: **Attach** and **Define**. To modify the rule, click the **Define** tab. The model group level contains a single tab for defining the rule.

   The **Rules** tab displays a table with the currently defined rules.

FIGURE 369. Model Group Page: Rules Tab with Current Rules

3. Find the rule you want to modify, then click the **Edit** icon.

    The **Edit Rule** tab displays.

4. Modify the Name and Description as necessary.

5. Add or modify Comments as necessary.

6. Modify whether the rule is triggered when the rule's conditions are met (success) or not met (failure, as necessary).

7. Modify the firing phases for this rule as necessary.

FIGURE 370. Edit Rule Tab

8.   Modify the rule fragments in the Fragments table.

See "Fragments" on page 600.

9.   Add or modify actions in the Actions area.

You can define messages to be displayed, a rule expansion formula, or assign properties and values. See "Working with Rule Actions" on page 615.

Repeat these steps for each rule you want to modify. You can click **Where Used** at the bottom of the tab to view the entities to which the rule is attached. See "To View Rule Attachments" on page 594.

To Create a Rule Classification

You can create new rule classifications as follows.

1.   Navigate to the rule creation page: see "To Define a Rule" on page 586.

2.   Click **...** next to the Classification drop-down list.

FIGURE 371. Rule Classification Window

3. In the Rule Classification Window, enter a name for the classification, and click **Add Item**.

4. Click **Save and Return**.

To Attach a Rule

1. Navigate to the level in the model hierarchy (model, option class or option item) where you want to attach the rule.

    See "To Access the Visual Modeler" on page 506 for information on how to navigate the model group hierarchy.

2. Click the **Rules** tab.

    At the model level, the **Rules** tab contains two tabs: **Attach** and **Define**. At the option class and option item levels, the **Rules** tab looks like the **Attach** tab.

    The **Attach** tab displays a drop-down list of the unattached rules, as well as a table showing the rules that are currently attached.

FIGURE 372. Rules Tab

3. Select a rule from the drop-down list in the Unattached Rules table.

4. Click **Attach**.

   The rule is appended to the end of the current rules in the Attached Rules table.

5. Define the start and end dates for the rule.

6. If you want this rule to be a checkpoint, check the box the Stop Firing column.

   When checked, this rule acts as a checkpoint: if any errors have occurred up to this point in the rule firing, then processing will stop at this point and the errors will be displayed. If no errors have occurred, then rule firing will continue until all the rules are fired or the next checkpoint is hit.

7. Determine the sequence.

   The rules will fire within the element to which they are attached in the order they appear in the list. You can modify the order using the up or down arrows to the right of the rule. See "Rule Firing" on page 101 for a complete description of how rules are fired.

8. Click **Save All Changes**.

To View the Details of an Attached Rule

Once you have attached a rule, you can view the details of the attached rule by clicking the rule's name in the **Attach** tab.

1. Navigate to the level in the hierarchy (model, option class, or option item) where the rule is attached.

   See "To Access the Visual Modeler" on page 506 for information on how to navigate the model group hierarchy.

2. Click the **Rules** tab.

   At the model level, the **Rules** tab contains two tabs: **Attach** and **Define**. At the option class and option item levels, the **Rules** tab looks like the **Attach** tab.

   The **Attach** tab displays a drop-down list of the unattached rules, as well as a table showing the rules that are currently attached.

FIGURE 373. Attach Tab

3. Find the rule among the list of attached rules in the lower part of the frame.

4. Click the name of the rule.

   This displays the Rule Detail Viewer.

FIGURE 374. Rules Detail Viewer

To View Rule Attachments

You can use this procedure to see where a rule is attached.

1. Navigate to the model group or model where the rule was created.

   See "To Access the Visual Modeler" on page 506 for information on how to navigate the model group hierarchy.

2. Click the **Rules** tab.

   The **Rules** tab for the Model level displays two tabs: **Attach** and **Define**. To modify the rule, click the **Define** tab. The model group level contains a single tab for defining the rule.

   The **Rules** tab displays a table with the currently defined rules.

FIGURE 375. Rules Tab with Current Rules

3. Find the rule you want to modify, then click the **Edit** icon.

   The **Edit Rule** tab displays.

FIGURE 376. Edit Rule Tab

4. Click **Where Used...**.

The Rule Usage window displays.

FIGURE 377. **Rule Usage Window**

To Unattach a Rule

1. Navigate to the level in the model hierarchy (model, option class or option item) where the rule is attached.

   See "To Access the Visual Modeler" on page 506 for information about how to navigate the model group hierarchy.

2. Click the **Rules** tab.

   At the model level, the **Rules** tab contains two tabs: **Attach** and **Define**. At the option class and option item levels, the **Rules** tab only contains attachments.

   The Rules tab displays a drop-down list of the unattached rules, as well as a table showing the rules that are currently attached.

3. Find the rule in the Attached Rules table.

4. Click the **Delete** symbol (**X**) at the end of the rule's row in the table.

   The rule returns to the Unattached Rules table.

5. Click **Save All Changes**.

To Delete a Rule

You can delete rules when they are no longer required.

Note:	You cannot delete a rule if the rule is currently attached to any node in the model hierarchy.

1. Navigate to the model group or model where you created the rule.

   See "To Access the Visual Modeler" on page 506 for information about how to navigate the model group hierarchy.

2. Click the **Rules** tab.

   At the model level, the **Rules** tab contains two tabs: **Attach** and **Define**. At the model group level, you can only define. If the rule you want to delete was created at the model level, then click the **Define** tab.

3. Find the rule you want to delete.

4. Click the **Delete** icon next to the rule you want to delete.

5. Click **Save All Changes**.

To Move or Copy a Rule

It is sometimes necessary to re-organize your model hierarchy and in doing so, you may need to move the rule definitions too. You can move or copy a rule: *moving* means that the rule definition is deleted from its previous location whereas *copying* means that you create a copy of the rule without deleting its original definition.

1. Navigate to the rule definition that you wish to move or copy.

2. Click **Copy Rule**.

FIGURE 378. Rule Copy or Move Window

3. Click **Browse...** to open the entity picker window.

4. Navigate to the model group or group to which you want to move or copy the rule definition, select it and click **Done**.

5. If you want to, you can then change the name of the rule definition.

6. Click **Move** or **Copy** as appropriate.

An error message is displayed if a rule with the same name already exists in the target location. If a property referenced in the rule does not exist in the new location, then it is created at the same time as the rule is.

7. Click **Close**.

Rule Firing

Each time a model is validated, the rules are fired to determine whether each rule succeeds or fails. You can control the order in which rules fire by setting a priority for each rule: see "To Specify the Rule Firing Sequence" on page 598. When you are testing a model, you can review the model firing behavior: see "To Review Rule Firing" on page 598. You can also specify whether rules are fired just once or possibly multiple times: see "To Force Multiple-Pass Rule Testing" on page 600.

To Specify the Rule Firing Sequence

1. Navigate to the model.

2. Click the Rules tab.

3. Click the Firing Sequence sub-tab.

FIGURE 379. Firing Sequence Tab

4. Enter a priority for each rule: this should be an integer between 0 and 100.

The higher the value the lower the priority: that is rules with lower priority value will fire before rules with a higher priority value. The default value is 50.

To Review Rule Firing

1. Navigate to the model whose rule firing you want to review.

2. Click **Test**.

3. In the Product Configurator window, click **Show Trace Log**.


```
                      Matrix/Workstations/MXWS_002D7550
                             Rule Firing Trace
    # Result
    0 Firing phase [0]:begin
    1    Firing rules on MXWS-7550.Memory
    2
    3      MSG E_max_memory_slots_exceeded ==> fires on FALSE
    4        Property not found [MX75_Memory_Slots_available or
      MX75_Memory_Slots_required], taking null action
    5
    6      MSG_E_MX75_Memory_Software_Check ==> fires on TRUE
    7        Property not found [MX75_Mem_Ordered or MX75_Mem_Required], taking null
      action
    8
    9    Firing rules on MXWS-7550.Disk Drives
   10
   11      MSG_E_Available_HDD_Slots ==> fires on TRUE
   12          TESTING:sum(MX75_HDD_Ordered) >value(MX75_Bays_Available)
      [nullreturn=false]
   13            FALSE: 1.0>MX75_Bays_Available:4.0
   14          FALSE: sum(MX75_HDD_Ordered) >value(MX75_Bays_Available)
      [nullreturn=false]
   15
   16    Firing rules on MXWS-7550.Software.Application
   17
   18      EXP_MX75_Fire_Wire ==> fires on TRUE
   19        Left side property [MX75_Video_Editing] not found, taking null action
   20
```

FIGURE 380. Configurator Rule Firing Trace Window

4. The secondary window displays a trace of the results of the rule firing. You can review this to determine if rules are firing as you expect.

Controlling Rule Firing

When Sterling Configurator validates a model and the current set of picks, it tests each rule in turn to evaluate them for success or failure, and performs expansion and assignment actions as appropriate. There are different ways in which rule firing can behave:

• Each rule is tested only once when a model is validated. This is referred to as single-pass rule firing.

- You can configure a model so that if any rules are fired, the fired rules are removed from the rules list and the remaining rules are tested again. This process continues until no more rules are fired. This is referred to as multiple-pass rule firing.

  The property CONFIG: REPEAT FIRING controls this behavior. By default, only single-pass firing is performed.

To Force Multiple-Pass Rule Testing

1. Navigate to the model whose rule firing you want to control.

2. Click **Properties**.

3. Select CONFIG: REPEAT FIRING from the **Unattached Properties** drop-down list.

4. Set its value to "true" and click **Attach**.

5. Click **Save All Changes**.

You can verify that the rules fire only once by following the steps described in "To Review Rule Firing" on page 598. In the summary section of the trace log, you should see that there was one firing phase.

48	Summary of rules fired during this pass
49	Firing phase [0]:end (rules fired=0)
50	Applying picks
51	done
52	Applying Constraints

FIGURE 381. Trace Log Summary Section

Fragments

As you create rules, you must create rule fragments that perform the rule logic. This section describes in detail how to create and work with rule fragments.

Working With Rule Fragments

This section describes the procedures to define or modify the fragments of a rule when you are creating ("To Define a Rule" on page 586) or modifying ("To Modify a Rule" on page 588) a rule. The Fragment area appears as in Figure 382 on page 601.

FIGURE 382. New Rule and Defining Fragments

Click the arrow icon, ▷ , to toggle the visibility of sections of the Fragments area and enable working with them. For example, click the arrow to display the foreach section:

FIGURE 383. New Rule and Foreach Section Display

The following table describes the buttons that display in the Fragments area of the New Rule tab.

TABLE 36. Rule Buttons

Button	Name
⑤	New Operator button
⓪	New Fragment button

TABLE 36. Rule Buttons (Continued)

Button	Name
✖	Delete button
✎	Edit button

Click the **New Operator** icon to create a nested level for creating fragments, as shown in Figure 384 on page 603. The new level displays a new set of **New Fragment** and **New Operator** links. You use this **New Fragment** link to create the fragments at this nested level. If you click **New Operator** at this level, then you will create another nested level below this one with another set of **New Fragment** and **New Operator** links for that level.

Click the **New Fragment** icon to create a fragment at the currently displayed level (in this case, the top level) in the rule structure. Click **New Fragment** again to create a second fragment at the currently displayed level. In other words, the rule would be:

```
FragmentA AND FragmentB
```

Click the **Delete** button to delete the fragment.

Click the **Edit** button to modify the fragment.

FIGURE 384. New Rule Tab with Nested Levels

Foreach

A rule condition can have a property called the foreach property. Use the foreach property to loop through the property pool, identify all instances of a specified property, and act on a set of found values. You associate the foreach property with a property defined in the model. Each occurrence of the foreach property is bound to an "as" property.

For example, to increase the price of any node found selected in the model that has the SKU MXDS-7500 and for which the rackMountable property is true, you could use foreach in the following way:

```
foreach sku as tempSku
    IF value(tempSku) == literal(MXDS-7500)
    AND propval(itemType) == literal("rackMountable")
    THEN UI: PRICE = value(UI: PRICE) * 1.1
```

Example: To Create a Simple Level of Fragments

In this example, you are attempting to create a rule consisting of two fragments, joined by a single operator, with no nested levels: FragmentA AND FragmentB. When you access the tab, the **New Rule** tab appears as in Figure 385 on page 604.

FIGURE 385. New Rule Tab for a Single-Level Rule

1. Select the boolean operator you want for these fragments.

2. Click the **New Fragment** icon

    This displays the **New Fragment** tab.

FIGURE 386. New Fragments Tab

3. Define the fragment.

    a. Check the **Not** check box if you want to define the fragment as a negative: "NOT (sum(PropertyA <= 250))".

    b. Select the first function from the Function1 drop-down list.

       See Table 12, "Function Definitions", on page 95.

    c. Select a property from the Property1 drop-down list.

    d. Select the operator.

       See Table 13, "Operators", on page 96.

    e. Select the second function from the Function2 drop-down list.

    f. In the Property2 field, select a property from the drop-down list or enter a literal value in the field (if you selected "literal" as the function).

    g. Select the value for the If Not Specified drop-down list.

       See "If Not Specified" on page 98 for an explanation of these values.

4. Click **Save and Return**.

This re-displays the **New Rule** tab with the new fragment, as shown in Figure 387 on page 606. Also, notice the infix representation.

FIGURE 387. New Rule Tab with New Fragment

5.   Click the **New Fragment** icon to create the next fragment in the rule.

6.   Repeat Step 3 to define the second fragment.

7.   Click **Save and Return**.

This re-displays the **New Rule** tab with the fragment you created, as shown in Figure 388 on page 607. Notice that the rule has two fragments now.

You can click **Save** to save the rule and continue defining the rule. Click **Save and Return** to return to the list of rules in the **Define** tab.

FIGURE 388. New Rule Tab with Two New Fragments

Example: To Create Nested Fragments

In this example, the modeler is creating the following rule with nested fragments:

```
(FragmentA AND FragmentB) OR (FragmentC AND FragmentD)
```

FIGURE 389. New Rule Tab

1.   Click **New Operator** icon.

     A nested level appears in the **New Rule** tab, as shown in Figure 390 on
     page 609. This level has its own drop-down boolean operators, as well as its
     own **New Fragment**, **New Operator**, and **Delete Operator** icons.

FIGURE 390. New Rule Tab with Nested Fragments

2. Create two fragments as described in "Example: To Create a Simple Level of Fragments" on page 604.

   Use the nested drop-down list to select the boolean operator for these fragments. The default is AND.

   Use the nested **New Fragment** icon to create the fragments at this nested level.

   When the two fragments are completed, the **New Rule** tab appears as in Figure 391 on page 610.

You can nest as many fragments as you want by clicking the nested **New Operator** icon. Each time, a new nested operator will appear with a new set of nested icons. You use these nested icons to create the fragments for the nested level.

FIGURE 391. New Rule Tab with Nested Fragments

3.   Using the top-level list, select the boolean operator (in this example, OR) that
      will join the two nested levels.

FIGURE 392. Nested Fragments with OR Boolean

4. Click the **New Operator** icon at the top level.

A new nested level appears in the fragments tab, as shown in Figure 393 on page 612. This level has its own drop-down boolean operators, as well as its own **New Fragment**, **New Operator**, and **Delete Operator** icons.

FIGURE 393. Nested Fragments

5. Create two fragments as described in "Example: To Create a Simple Level of Fragments" on page 604.

    Use the nested drop-down list of boolean operators and the nested **New Fragment** icon for these fragments.

    When the two fragments are completed, the **New Rule** tab appears as in Figure 394 on page 613.

FIGURE 394. Two Nested Fragments Joined by OR

To Modify a Fragment

1. Find the fragment you want to modify, then click on the **Edit Fragment** icon in the Actions column.

    This displays the **Edit Fragment** tab.

FIGURE 395. Edit Fragment Tab

2. Modify one or more elements of the fragment.

    a. Check the **Not** check box if you want to define the fragment as a negative: "NOT (sum(PropertyA <= 250))".

    b. Select the first function from the Function1 drop-down list.

        See Table 12, "Function Definitions", on page 95.

    c. Select a property from the Property1 drop-down list.

    d. Select the operator.

    e. See Table 13, "Operators", on page 96.

    f. Select the second function from the Function2 drop-down list.

    g. In the Property2 field, select a property from the drop-down list or enter a literal value in the field (if you selected "literal" as the function).

    h. Select the value for the If Not Specified drop-down list.

        See "If Not Specified" on page 98 for an explanation of these values.

3. Click **Save And Return**.

To Delete a Fragment

Find the fragment you want to delete in the Fragments table, then click the **Delete** icon in the Actions column on the same line as the fragment.

Working with Rule Actions

Perform these tasks when you want to include a rule action when you are creating ("To Define a Rule" on page 586) or modifying ("To Modify a Rule" on page 588) a rule.

You define rule actions in the lower part of the **New Rule** or **Edit Rule** tab. Rule actions comprise three types of actions:

- **Message Actions**: A message that is displayed when the rule is triggered.

- **Formula and Expansion Actions**: Defines an expansion action based on a rule expansion formula.

- **Assignment Actions**: Assigns the value calculated by the rule formula to one or more properties when the rule is triggered.

FIGURE 396. New Rule Tab Showing Action Area

To Create a Message Action

When you are creating ("To Define a Rule" on page 586) or modifying ("To Modify a Rule" on page 588) a rule, you perform this task in the Message Actions area of the **New Rule** or **Edit Rule** tab.

1. Select the type of message action from the drop-down list: Error, Warning, Suggestion.

2. Type the message.

3. Click **Add Item**.

4. Repeat these steps to enter additional messages.

5. Click **Save** to save the message action and continue editing. Click **Save and Return** to save the message and return to the **Define** tab.

FIGURE 397. Edit Rule Tab with Message Action

To Create an Expansion Action

When you are creating ("To Define a Rule" on page 586) or modifying ("To Modify a Rule" on page 588) a rule, you perform this task in the Expansion Actions area of the **New Rule** or **Edit Rule** tab.

1. Enter a formula. The formula can use the supported functions as described in "Rule Fragments" on page 94.

   The results of formula will be used to perform the expansion. See "Expansion" on page 99 for an explanation of rule formulas.

FIGURE 398. Expansion Action

2. Enter a minimum and a maximum amount of the formula result.

    The minimum amount is the minimum value the rule formula result must be greater than. This value can be negative or greater than or equal to zero. The value must be less than the maximum value (Max). The maximum amount is the maximum value the rule formula result must match. This value must be greater than the minimum value (Min).

Note:	Min and Max work slightly differently: for a fragment to evaluate to true, the rule formula must evaluate to greater than the Min value, but less than *or equal* to the Max value.

3. Enter the quantity of the expansion items (must be greater than zero). You can use the supported functions to calculate the quantity and so you can specify the quantity as a function of a property. For example:

    2*value(Memory Cards)

4. Enter the item that will be expanded.

    You must provide the full path to the expansion item within the current model. In the figure above, for example, the rule adds an option item called either 64MB, 128MB, or 256MB, located in option class AutoMemory in the current model.

FIGURE 399. Expansion Action With Example of Using Quantity Function

When a rule is used in multiple models, this fully qualified path could be difficult to specify since the current model name will very likely not be "MXWS-7650" for all the models where the rule is attached. To facilitate the use of expansion rules across multiple models, you can usual special symbols as follows:

•   You can begin the path with a period (.), which means "from the attachment point of the rule". In other words, if you attach a rule to a

model, then ".Memory.64MB" means "an option item called 64MB in an option class called Memory in the current model".

- You can begin the path with an asterisk (*), which means from the root of the model group hierarchy.

- If the name of a path component includes a quote character (' or "), then you must escape the quote character or wrap the whole expression in quotes. For example, to get the gauge property from the Tubing.3" pipe.threading option item, you can use

```
x = value(Tubing.3\"pipe.threading.gauge)
```

or

```
x = value('Tubing.3"pipe.threading.gauge')
```

To retrieve Board.8'plank.thickness, use

```
x = value(Board.8\'plank.thickness)
```

or

```
x = value("Board.8'plank.thickness")
```

5. Repeat these steps to enter additional items.

6. Click **Save All Changes**.

The result of an expansion action picks a quantity selected on an option item. If the option item quantity is a drop-down list, ensure that the possible calculated values are consistent with the pickable values: otherwise, the drop-down list will not be able to display the calculated value.

To Create an Assignment Action

When you are creating ("To Define a Rule" on page 586) or modifying ("To Modify a Rule" on page 588) a rule, you perform this task in the Assignment Actions area at the bottom of the **New Rule** or **Edit Rule** tab.

FIGURE 400. Assignment Actions

1. Select a property from the drop-down list. The table below summarizes some of the special properties that can be assigned.

2. Enter a value for the property. You can use the supported functions to calculate the value and so you can specify the value as a function of a property. For example:

   2*value(Memory Cards)

   When you are assigning a value to a property whose type is String, you must use the following syntax to refer to properties:

   ${*function*(*arg1, arg2, ..., arg N*}

   For example, ${expand("Color", "Black", 0)}. See "Example Uses of Expand" on page 621 for other examples of the usage of the expand function.

3. Type the entity to which you want to assign the property and its value.

   If you leave this field blank, the assignment defaults to the entity to which the rule is attached.

4. Click **Add Item**.

FIGURE 401. Assignment Action With Example of Using Quantity Function

5. Repeat these steps to add additional items.

6. Click **Save All Changes**.

The following table summarizes some of the available properties for assignment. These properties may change in each release, so check with your Sterling Commerce representative for further information if required.

TABLE 37. Assignment Action Properties

Property	Action
_constraintMessage	String: a message on an item because it is constrained
_constraintType	Integer: type of constraint; 0 is suggest, 1 is warn, and 2 is error
_description	String: an items description
_amEntitled	Integer: 0 false, 1 true
_isConstrained	Integer: 0 false, 1 true
_isSelected	Integer: 0 false, 1 true
_isViewable	Integer: 0 false, 1 true
_itemKey	Integer: database key of the item
_pickOverride	Integer: 0 false, 1 true; pick was overridden by a rule
_quantity	Integer: quantity; 0 quantities are not in the rule pool
_ratio	Numeric: ratio of this item to its children, computed if nested within another parent
_rawRatio	Numeric: raw ratio used in previous computation
_rulePick	Integer: 0 false, 1 true
_tabLevel	Integer: depth of this item

Example Uses of Expand

The syntax of the expand function is:
${expand(property[,defaultValue[,format[,lookup]]])}.

For example, suppose that you want to display the name of the model as the name of the associated product together with the product description. At the model level, set the value of the UI: DISPLAY NAME property to: ${expand("UI: PRODUCT NAME")} or ${expand("UI: PRODUCT DESCRIPTION","Description not available")}.

Doing this ensures that if the product name or description changes and you recompile the model, the name or description displays with the new version when users next configure the product.

Here are some further examples of the expand function:

- String-valued property:

  - ${expand("color")}

  - ${expand("color", "Black")}

- Numeric-valued property:

  - ${expand("weight")}

  - ${expand("weight", 0.0)}

  - ${expand("weight", 0.0, #.00)}

Option Constraints

Constraint tables enable you to limit a customer's choice of one or more option items based on the customer's choice of another option item. For example, the choice of an exterior color for a car might limit the choice of interior colors.

Working With Constraints

To Create a Constraint Table

You create an option constraint by creating a constraint table. You define constraint tables at the model level.

1. Navigate to the model where you want to create the constraint table.

   See "To Access the Visual Modeler" on page 506 for information about how to navigate the model group hierarchy.

2. Click the **Tables** tab.

   This displays two tabs: **General Info** and **Records**. The **General Info** tab displays general information about the table displayed in the Table Name field.

FIGURE 402. Tables Tab

3. Click **New...**.

   This displays the **Create New Constraint Table** tab.

FIGURE 403. Create New Table Tab

4. Enter a Table Name, a Description, and a date range (Start Date/End Date) for the table. (You can click the **Calendar** icon to select dates from the calendar.)

5. Enter a message.

   This message appears when the end-user chooses a selection which is incompatible with a constraint defined in the table.

   a. Select the message type: error, warning, or suggestion.

   b. Enter the message in the Message field.

6. Click **Save Changes**.

This re-displays the **Tables** tab with the new table in the Table Name field. The next step is to create the option constraints that are a part of the table. You do this in the **Records** tab. See "To Define Option Constraints" on page 625.

To Modify a Constraint Table

1. Navigate to the model that contains the table you want to modify.

   See "To Access the Visual Modeler" on page 506 for information on how to navigate the model group hierarchy.

2. Click the **Tables** tab.

3. Select the table from the Table Names drop-down list.

4. Modify the table. You can:

   • Define option constraints (see "To Define Option Constraints" on page 625.

   • Modify option constraints (see "To Modify an Option Constraint" on page 629).

   • Delete option constraints (see "To Delete Option Constraints" on page 630).

   • Modify the name, description, or effectivity dates in the **General Info** tab.

   • Modify the error/warning/suggestion message in the **General Info** tab.

To Define Option Constraints

After you create a table and the option classes that will provide the constraints, you define the constraints. Each row in the table represents a constraint.

1. Navigate to the model that contains the table for which you want to define the constraint.

   See "To Access the Visual Modeler" on page 506 for information on how to navigate the model group hierarchy.

2. Click the **Tables** tab.

   This displays two tabs: **General Info** and **Records**. The **General Info** tab displays general information about the table displayed in the Table Name field. The **Records** tab is where you will define the constraints.

FIGURE 404. Tables Tab

3.   Select the table from the Table Names drop-down list.

4.   Click the **Records** tab.

This displays the currently defined option constraints.

FIGURE 405. Records Tab

5.   Add columns to the constraint table.

a. Select an option class from the Table Column name drop-down list.

The drop-down list includes all the option classes belonging to the model including any option classes nested within option classes as well as option classes that are part of option class groups attached to the model. The drop-down list will display the path to the option class relative to the model.

For example, the following figure shows two selections in the drop-down list called **Monitor** and **Software**. Notice that the Navigation frame shows two option classes by these names directly below the model.

The drop-down list has another selection, **Software.Application**. Notice that the model has an option class called **Software** directly below the model, with a nested option class called **Application**. Notice how the drop-down list indicates the path relative to the model, **Software.Application**.

The drop-down list also includes a selection, **MX-7500 Service.Warranty**. This corresponds to the option class group, **MX-7500 Service**, directly below the model. **Warranty** is an option class within the group.

FIGURE 406. **Records Tab with Drop-Down List**

b. Click **Add**.

The column name is added to the table.

c. Repeat the last two steps for every column you want to add.

FIGURE 407. Records Tab with Columns

6.   Define an option constraint.

   a.   Click **New Constraint** to add a new row to the table.

FIGURE 408. Constraint Table with New Constraint Added

   b.   Click **Edit**.

   This displays the option classes as table columns, along with their
   option items.

   The option items that display include any option items belonging to an
   any option item group attached to the option class.

FIGURE 409. Defining Constraints

    c.   Define compatibility ("Selected Values are all"). That is, will the selections you make in one column be valid or invalid with the selections in the other column(s)?

    d.   Select one or more option items in each column.

    e.   Click **Save**.

        A new row appears in the table.

7.   Repeat the last step for each constraint you want to define.

To Modify an Option Constraint

1.   Navigate to the model that contains the table with the constraint you want to modify.

    See "To Access the Visual Modeler" on page 506 for information on how to navigate the model group hierarchy.

2.   Select the table from the Table Names drop-down list.

3.   Click the **Records** tab.

    This displays the currently defined option constraints.

FIGURE 410. Records Tab

4.   Find the constraint row you want to modify and click **Edit**.

     This displays the constraint information.

5.   Modify the constraint information.

     a.   Modify compatibility.

          Will the selections you make in one column be valid/invalid with the
          selections in the other column(s)?

     b.   Modify the option items in each column.

     c.   Click **Save**.

The row is changed based on your modifications.

To Delete Option Constraints

1.   Navigate to the model that contains the table with the constraint you want to
     delete.

     See "To Access the Visual Modeler" on page 506 for information on how to
     navigate the model group hierarchy.

2.   Click the **Tables** tab.

3.   Select the table from the Table Names drop-down list.

4.   Click the **Records** tab.

     This displays the currently defined option constraints.

FIGURE 411. Records Tab

5.   Find the constraint row you want to delete.

6.   Click **Delete** (**X**).

The constraint row is deleted.

To Delete a Constraint Table

1.   Navigate to the model that contains the table with the constraint you want to delete.

     See "To Access the Visual Modeler" on page 506 for information about how to navigate the model group hierarchy.

2.   Click the **Tables** tab.

3.   Select the table from the Table Names drop-down list.

4.   Click the **Delete** button.

The constraint table is deleted.

Importing and Exporting Models

Importing Model Groups and Models

You can import model groups and models in the form of XML files. You can either import the entity relative to its original root model group, or you can designate a location into which to import. The model will appear in the Navigation frames, enabling you as modeler to add to or modify the imported model.

See "Importing and Exporting" on page 105 for an explanation of the process.

To Import Model Groups and Models

See "Importing and Exporting" on page 105 for an explanation of this process as well as an explanation of how the process handles properties, rules, and attached groups.

1. Access the Visual Model page.

   See "To Access the Visual Modeler" on page 506 for information on how to navigate the model group hierarchy.

2. If you want to import to a selected point, then navigate to the model group within which you want to import the file.

FIGURE 412. Visual Modeler Page

3. Click **Import** in the toolbar.

   This displays the Visual Modeler Import window (see Figure 413 on page 633).

FIGURE 413. Import Window

4.   Click **Browse...** to find the XML file you want to import.

When you select the file, the file will be displayed in the field along with the complete path to the file.

5.   Select the import option.

*   **Import with its original structure relative to its root model group**

When you make this selection, the Import process will ignore any Destination Model Group indicated at the top of the window.

*   **Import into the selected destination model group**

6.   Click **Import Now**.

The imported model group or model and its structure will be imported based on the import option you selected. See "Importing and Exporting" on page 105 for an explanation of the process.

Exporting Model Groups and Models

You can export any model group or model as an XML file to a specified location on your machine.

To Export a Model Group or Model

1. Navigate to the model group or the model that you want to export.

    See "To Access the Visual Modeler" on page 506 for information on how to navigate the model group hierarchy.

FIGURE 414. Model Navigation Detail Page

2. Click **Export** in the toolbar.

You can either open the XML file at its current location, choosing a desired text processing tool, or you can save the file to a desired location.

Using Dynamic Instantiation

Dynamic instantiation provides a way to allow users to configure products on the fly while avoiding the need to create option items for each possible product configuration in your model. For example, consider a server rack. The user can decide on the number of slots they need and create dynamic instantiation controls for each type of component, such as servers and storage arrays that can fit into a slot, AC or DC power, and so on. As the modeler, you create the rack model, then create option classes for each of the rack's configurable features (such as servers and storage arrays) and set them as dynamic instantiation control classes. An end-

user buying computer racks navigates to the rack product on your site and clicks the Configure button next to the servers and storage array choices. This causes a new option item to be added to the model for that configurable feature. The user can then configure each option item by clicking the Configure button that appears next to each added item. When the entire rack and all the configurable features have been added and configured, the user clicks the Add button located in the button bar at the top of the Configurator page to add the rack to their cart.

The following steps describe the process in more detail.

1. On the Model Group Navigation page, click **New Model**.

   The New Model page displays.

2. Enter a name for the model, then click **Save and Edit**.

   The Model Navigation page for the new model displays.

3. Click **New Option Class**.

   The New Option Class page displays.

4. Enter a name for the new option class, then click **Save and Edit**.

5. Click the **Display** tab, then choose Dynamic Instantiation from the UI Control drop-down list, as shown in the following figure.

FIGURE 415. Choosing Dynamic Instantiation for the UI Control Type

Set other Display properties as appropriate, then click Save All Changes.

6. Click the **Properties** tab, then set the following properties from the Unattached Properties drop-down list:

   a. CONFIG: SUBMODEL NAME

      Enter the name of an existing submodel for the property value, then click Attach.

   b. CONFIG: SUBMODEL RETURN

      Enter the name of an existing submodel to which the end-user should return after clicking the Add button, then click Attach.

7. Click **Save All Changes**.

8. Return to the new model's root node, then click the Compile and Test icon to test your dynamic instantiation option class.

Searching

You can search for entities that contain properties and property values that you specify as parameters. You can search across the entire hierarchy, or you can limit your search to model groups, models, option classes, option items, and rules, or you can limit your search even further to the currently selected model or group.

To Search for Entities

1. Access the Visual Modeler page.

   See "To Access the Visual Modeler" on page 506 for information on how to navigate the model group hierarchy.

FIGURE 416. Visual Modeler Page

2. If you want to search within a specific model or group, then navigate to and select the model or group.

3. Click **Search** in the toolbar.

   This displays the Search window (Figure 417 on page 637).

FIGURE 417. Search Window

4. Select the scope for the search from the Search drop-down list.

   You can search all entities, you can limit the search to model groups, models, option classes, option items, or rules. If you are searching within a specific model or group (see Step 2), then you can limit your search to **Current Model** or **Current Group**.

5. Enter either a property name or a property value or both.

    Click **Browse...** to display a browser window to select a property from a list of all the properties in the Visual Modeler.

    Use the drop-down list to select AND or OR. Select AND to produce search results that include both the Property Name and Property Value parameters you select. Select OR to produce search results that include either parameter.

    When you enter a property value, the search results will include property values that contain the property value you enter. For example, if you enter "75", then the search results will include any properties with the value "75" as well as property values such as "7550-1" or "MX-75-1".

6. Click **Search**.

The search results will display below the parameters. By default, the result is sorted in ascending order by property name. You can click on one of the following columns to sort:

•   Property Name

•   Value

•   Location

When you click the column title the first time, the column is sorted in ascending order.

FIGURE 418. Search Window with Results

Reporting

You can run a report on a model that you specify. You can select the types of information you want in the report:

- Rule definitions

- List definitions

- Property definitions

- Display Settings

- Attached Properties

- Attached Rules

- Expand Groups

To Run A Report

1. Access the Visual Modeler page.

   See "To Access the Visual Modeler" on page 506.

2. Click **Report** in the toolbar.

   This displays the Report Entry window.

FIGURE 419. Report Entry Window

3. Enter the model you want to report on.

    You can click **Browse...** to find and select the model in the model hierarchy.

4. Select the locale in which you want to run the report.

5. Select a date to report.

    This produces a report for the models for whom the selected date falls within the range of their effectivity dates. The report does not display any models (or entities within the model) for whom the selected date falls outside their effectivity dates.

6. Select the information you want to include in the report.

7. Click **Run Report**.

A report is displayed based on the parameters you entered (Figure 420 on page 641).

FIGURE 420. Report Results Window

Visual Modeler UI Concepts

This chapter describes the user interface (UI) controls and how they can be used to help your customers configure your products. It covers:

The basic concepts and tasks of modeling are covered in CHAPTER 16, "Using the Visual Modeler".

UI Properties

A property is an attribute of a model, option class, or option item. UI properties are used to determine the look-and-feel of a product as it is configured. You can use UI properties to control how option classes are displayed, how to display properties of option items, as well as basic guiding text and pictures.

The Sterling Multi-Channel Selling Solution provides a set of built-in UI properties which are understood by the Sterling Configurator engine. These control the behavior of the engine and the presentation of the model to the end-user. These properties are summarized in "To Define Display Property Values" on page 653.

Working with Display Properties

The Visual Modeler provides certain *display properties* that come pre-defined with the Sterling Multi-Channel Selling Solution. These display properties enhance the customer experience by enabling you to provide values that define various aspects of the model or its elements. They can all be specified using the Display tab of a model, option class, or option item, or as UI properties in the Properties tab. For example, you can define a "Pre-Pick Guiding Text" for an option class either by defining it on the Display tab or by specifying the value of the UI: PRE-PICK GUIDING TEXT property on the Properties tab.

Display properties also allow you to create fields and options that end-users may use to enter their own values rather than values specified by you. See "User-Entered Values" on page 663. Note that every property displayed on the Display tab corresponds to a UI property. This means that display properties can also be set using the Properties tab provided that you know which UI property matches the display property. See "Display Properties" on page 653 for more details.

Sterling Multi-Channel Selling Solution UI Properties

The following table summarizes the UI properties that are built in to the Sterling Multi-Channel Selling Solution.

TABLE 38. Sterling Multi-Channel Selling Solution UI Properties

Property	Type	Comments
UI: ADDITIONAL DESCRIPTION	string	You can use this property to add additional descriptive text to an option class. use this property in conjunction with the UI: DISPLAY RESULTS property.
UI: ALIGNMENT	string	"Horizontal" or "Vertical" controls layout of radio buttons and check box controls.

<center>**TABLE 38.** **Sterling Multi-Channel Selling Solution UI Properties**</center>

Property	Type	Comments
UI: AUTOMATIC POST	string	"yes" or "true" turns on automatic posting for an option class.
		After a customer makes a pick of an option item, then you usually want the server to re-display the page so that rules can be fired and any changes to the available option classes displayed. However, if you do not want picks in an option class to cause a re-display, then set this property to "no" or "false". This is equivalent to selecting On User Request from the Submit to Server Display property drop-down list.
		The option class is displayed with **Update** button: after making a pick in this option class, a user can click the **Update** button to request a re-display of the page from the server.
UI: CLASS DISPLAY NAME	string	Use this property at the model level to determine what is displayed as the displayed name of option classes. By default, this property takes the value ${expand("_description")} which means that the value of the option class's Description field is displayed.
		For example, if you want to display option class names instead of descriptions, then set this property to ${expand("_name")}. You can overwrite this value at a single class by using the UI: DISPLAY NAME property.
UI: COLUMN ALIGNMENT	string	Used in the tabular display control to specify the alignment of the values in the column. The tabular display control uses the ";" character to separate entries from each other, so the format of this column is something like: "left;left;center;right".
UI: COLUMN HEADINGS	string	Used in the tabular display control to specify the titles of columns. Each title is separated from each other with the ";" character. For example: "Speed;Pins;Manufacturer".
		See "Tabular Display of Properties" on page 659 for an example of using this property.
UI: COLUMN PROPERTIES	string	A semi-colon-separated list of property names used in the tabular display of properties. For example: "SPEED;NOPINS;SUPPLIER", where SPEED, NOPINS, and SUPPLIER are properties defined on option items in an option class.
		See "Tabular Display of Properties" on page 659 for an example of using this property.

<div align="center">**TABLE 38.** **Sterling Multi-Channel Selling Solution UI Properties**</div>

Property	Type	Comments
UI: COLUMN SPAN	numeric	Controls how many columns an option class requires for its display in the customer-facing display of the model. This is the same as entering a number for the Number of Columns field on the Display tab. See also UI: SKIP COLUMNS.
UI: CONFIG CELL HTML CLASS	string	Sets the CSS class attribute in the HTML. Use this property to control the look-and-feel of cells. Note that the Visual Modeler uses the **internal.css** CSS file when you test models.
UI: CONSTANT GUIDING TEXT	string	Defines the guiding text that will always be shown for an option class. This is the same as entering text for the Constant Guiding Text field on the Display tab. See also UI: POST PICK GUIDING TEXT and UI: PRE PICK GUIDING TEXT.
UI: CONTROL	string	The name of the JSP fragment used to render an option class. Do not use UI: JSP FILENAME at the option class level.
UI: DEFAULT SELECTION	string	"true" or "yes" on an item makes the item a default selection within its parent option class.
UI: DISPLAY ADDITIONAL INFO	string	Use this property to provide a description specific to a particular instance of a sub-model. If you attach this property to the root node of a submodel and pass it as an output property to the parent model, the parent model displays the description next to the item in the parent model. This allows you to give feedback to the end-user about how the sub-model is configured. This is particularly useful for dynamic instantiation, where there can be multiple instances of a sub-model, each configured differently, and you want to provide an appropriate description for each instance of the submodel.
UI: DISPLAY NAME	string	Use this property to determine what is displayed as the displayed name of the option class. By default, this property takes the value ${expand("_description")} which means that the value of the option class's Description field is displayed.

<div align="center">**TABLE 38. Sterling Multi-Channel Selling Solution UI Properties**</div>

Property	Type	Comments
UI: DISPLAY RESULTS	string	This property is deprecated. A property that is displayed along with the description of items. This special property also allows the usage of text expansion macros. Currently we support: `${expand(propname[,defaultValue[,picture-String]])}` but the name of this "function", expand in this case, is accessed via the object manager.[a] An example usage is to set a description string in the UI: ADDITIONAL DESCRIPTION property, and then set the value of this property to `${expand("UI: ADDITIONAL DESCRIPTION")}`.
UI: HELP URL	string	A URL that is used to turn an option class description into a hyperlink, typically used to provide additional information about what that option class is for, but could also be a datasheet or any other hyperlink. Clicking on the hyperlink will bring up the page in a new window. This is the same as entering text for the Help URL field on the Display tab.
UI: ICON GRAPHIC	string	Used with an option class to display a picture along with the description of the option class. This is the same as entering text for the Image field on the Display tab: see "Image Properties" on page 662 for information on how values in this field are resolved to URLs.
UI: IGNORE IN QUOTE	string	When set to "yes" or "true" will cause whatever item this property is attached to, to be filtered out of the summary page, and flagged as not visible in the BOM transfer to the shopping cart. This is the same as checking Ignore in Quote on the Display tab. Typically, this field is used to ensure that only selected option items are displayed in shopping carts and to suppress option classes in the list of items in a shopping cart.
UI: JSP FILENAME	string	The name of the JSP page that will render the model: **Configurator_Tabbed.jsp** or **configurator.jsp**. This property is added to support easier customization and eventually to allow different presentations per model. Using built-in customization elements of Sterling Configurator, it is possible to dynamically change pages as well.

<p align="center">TABLE 38. **Sterling Multi-Channel Selling Solution UI Properties**</p>

Property	Type	Comments
UI: LEAD TIME	numeric	Attached to items in the model. It is used to build a maximum lead time for the entire model by finding the largest lead time of all items currently selected.
UI: NUMBER OF COLUMNS	numeric	Number of columns to divide the end-user configurator presentation. This property is defined at the model level to manage how many columns are used to display the option classes for a model. This property in conjunction with UI: COLUMN SPAN, UI: ROW SPAN, and UI: SKIP COLUMNS controls how option classes are arranged on the page. This property is the same as setting the Number of Columns property in the Display tab.
UI: OPTION CLASS REQUIRED	string	"yes" or "true" causes Sterling Configurator to require that a selection be made for an option class. For radio buttons this causes the None selection to be removed.
UI: OPTION CLASS SELECT	string	This property is used to specify what UI control should be used when no specific UI: CONTROL value is specified. Its use is primarily to support importing models from external configuration systems or from earlier releases of the Sterling Multi-Channel Selling Solution. It takes "single" or "multiple" as values, and is only used in the absence of a UI: CONTROL property to determine if a radio button or checkbox control should be shown for an option class.
UI: OPTION CLASS TYPE	string	Obsolete: do not use.
UI: OPTION CLASS VIEW	string	"POPUP", "POPUP-QTY", or "INVISIBLE". This controls the display behavior of an option class. If POPUP, a standard option class is shown; if POPUP-QTY is selected, then a quantity box will be shown for each selected item within that control. Finally, INVISIBLE is used to prevent the display of the control entirely. INVISIBLE is often used to hide option classes until other picks made by the customer requires the class to be displayed.
UI: POPUP-QTY ALLOWED VALUES	string	This controls what values are available for a selection in a popup drop-down list. Use this at the option class level, in conjunction with setting UI: OPTION CLASS VIEW to POPUP-QTY. A "," separated list of allowed values. Ranges can be specified with "-", so 1-4,7-9 is the same as 1,2,3,4,7,8,9. If you leave this field blank, then a text field is displayed with the current value; otherwise a drop-down list with the allowed values is displayed.

TABLE 38. Sterling Multi-Channel Selling Solution UI Properties

Property	Type	Comments
UI: POST PICK GUIDING TEXT	string	A guiding text message displayed with an option class description if the user has made at least one pick from within the option class. This is the same as entering text for the Pre-Pick Guiding Text field on the Display tab. This property is not displayed until a customer makes a pick. See also UI: CONSTANT GUIDING TEXT and UI: PRE PICK GUIDING TEXT.
UI: PRE PICK GUIDING TEXT	string	A guiding text message displayed with an option class description if the user has not made a pick from within the option class. This is the same as entering text for the Post-Pick Guiding Text field on the Display tab. Once a pick has been made, then this property is no longer displayed. See also UI: CONSTANT GUIDING TEXT and UI: POST PICK GUIDING TEXT.
UI: PREVENT SELECTION	string	"yes" or "true" causes the Sterling Configurator to prevent the user from selecting items that would violate a constraint table rule. If the Constraint Selections display property is set to "Hide constrained items", then this property is set to "yes".
UI: PRICE	numeric	The price for an item that will be used if STATIC_PRICING or OVERRIDE_PRICINC is set in the business rules. In the case of OVERRIDE_PRICING, this value will be used if a price cannot be found for the item in the price list.
UI: PRICING SKU	string	The SKU to use when looking up the item in the price list. Note that if you set a product ID value for this property, then it overrides the value of the Assigned Product ID in determining prices.
UI: PRICING STYLE	string	Usually, you use this property at the option class level. It controls how prices of option items are displayed to the end user as follows: NONE: Do not display prices as user configures product. ABSOLUTE: Display prices next to option items as absolute prices. DELTA: Display prices next to option items as their effect on the price of the whole configured product. This property is the same as setting Pricing Style in the Display tab.

TABLE 38. **Sterling Multi-Channel Selling Solution UI Properties**

Property	Type	Comments
UI: PRODUCT ID	string	If a product has been associated with a node of a model, then this property can be used to retrieve the product ID of the associated product. The value of this property is resolved at compile time, so if the product ID is changed, then you must re-compile the model for the change to take effect.
UI: PRODUCT NAME	string	If a product has been associated with a node of a model, then this property can be used to retrieve the product name of the associated product. The value of this property is resolved at compile time, so if the product name is changed, then you must re-compile the model for the change to take effect.
UI: PRODUCT DESCRIPTION	string	If a product has been associated with a node of a model, then this property can be used to retrieve the description of the associated product. The value of this property is resolved at compile time, so if the product description is changed, then you must re-compile the model for the change to take effect.
UI: QUANTITY AVAILABLE	numeric	Do not use in this release. Used in the quantity matrix, this can optionally be attached to the items for the matrix. If so it will set the quantity available of each item. If the control is set to show quantity available this property value will be displayed in a secondary row for each item.
UI: REQUIRED	string	Obsolete: do not use.
UI: ROW SPAN	numeric	Controls how many rows an option class requires for its display in the end-user presentation of the page. In conjunction with UI: NUMBER OF COLUMNS and UI: COLUMN SPAN, this property controls the layout of the page viewed by end-users. This is the same as entering a number for the Number of Rows field on the Display tab. See also UI: SKIP COLUMNS.
UI: SHOW ITEM IMAGES	string	"yes" or "true" controls whether item images are shown.

TABLE 38. Sterling Multi-Channel Selling Solution UI Properties

Property	Type	Comments
UI: SKIP COLUMNS	numeric	Number of columns to skip after this class. It is used to add to the count variable that is tracking how many cells are being used to lay out the option classes. This is the same as entering a number for the Number of Columns to Skip field on the Display tab. If you have used the UI: COLUMN SPAN property or UI: ROW SPAN for another option class, then use this property to account for table cells in the layout that the multiple span class uses.
UI: SUPPRESS NAME DISPLAY	string	"yes" or "true" causes Sterling Configurator to not display the names of option classes.
UI: SUPPRESS NONE SELECTION	string	"yes" or "true" suppresses the NONE selection value for radio buttons.
UI: SUPPRESS UEV NONE VALUE	string	"yes" or "true" suppresses the NONE selection for UEV combo boxes. Use this in conjunction with UI: UEV ALLOWED VALUES property. For example, if you have specified that a user-entered value field can only take the values Red, Green, Blue, then if the value of this property is set to "yes", then None will not appear in the drop-down list of selectable values. If you set the value of this property to "no", or do not attach this property, then None will be a selectable value.
UI: UEV ALLOWED VALUES	string	Comma-separated list of values for a combobox UEV control. Suppose that you want to allow customers to enter only one color from a small list of colors. Then enter the list like this: Black,Blue,Green,Red,White When this property is set, then the user-entered value option item is displayed as a drop-down list of these values. None is also displayed as a selectable option, unless you set the UI: SUPPRESS UEV NONE VALUE property to "yes". This property is the same as setting values in the Allowed Values display property.

<div align="center">**TABLE 38.** **Sterling Multi-Channel Selling Solution UI Properties**</div>

Property	Type	Comments
UI: UEV ASSIGNMENT PROPERTY	string	The name of a property where a UEV will store its value. This property should be of the correct type to contain the UEV. Note: numeric properties can be used to hold INTEGER UEVs as well as NUMERIC UEVs. • If the value of this property is just a property name, then the property will be set on the current item. • If the value contains a path to a property as well as the property name, then the property will be set on the item referenced by the path if it exists. Once a user makes their pick in the user-entered value field, then the assigned property can be used by rules or in the display of the model, just like any other property. This property is the same as setting a value in the Assign Value to Property display property.
UI: UEV INTEGER VALUE	integer	Filled in by the engine when an integer UEV has a value in it. This provides you with a way to reference the value of the field without assigning it to another property: see UI: UEV ASSIGNMENT PROPERTY to use another property.
UI: UEV LIST VALUE	list	Filled in by the engine when a list UEV has a value in it (not currently used). This provides you with a way to reference the value of the field without assigning it to another property: see UI: UEV ASSIGNMENT PROPERTY to use another property.
UI: UEV NUMERIC VALUE	numeric	Filled in by the engine when a numeric UEV has a value in it. This provides you with a way to reference the value of the field without assigning it to another property: see UI: UEV ASSIGNMENT PROPERTY to use another property.
UI: UEV POSTFIX	string	A string of text displayed after the UEV entry field. This property is the same as setting a value in the Text After Entry Field display property.
UI: UEV PREFIX	string	A string of text displayed before a UEV entry field. This property is the same as setting a value in the Text Before Entry Field display property.
UI: UEV SELECTION	varies	Obsolete: do not use.

TABLE 38. **Sterling Multi-Channel Selling Solution UI Properties**

Property	Type	Comments
UI: UEV SPECIAL	string	Used by the user entered value control to enable a file list or notes control. This will be phased out and replaced by a new file attachment control and notes control in future releases: do not use.
UI: UEV STRING VALUE	string	Filled in by the engine when a string UEV has a value in it. This provides you with a way to reference the value of the field without assigning it to another property: see UI: UEV ASSIGNMENT PROPERTY to use another property.
UI: UEV TYPE	string	"string", "integer", or "numeric"; the type of UEV control.

a. To add additional macros, define a new class that implements the IExpansionHandler interface, and put a reference to it into the object manager.

Display Properties

To Define Display Property Values

See "Display Properties" on page 91 for an explanation of display properties.

1. Navigate to and display the detail page for the model, option class, or option item.

   See "To Access the Visual Modeler" on page 506 for information about how to navigate the model group hierarchy.

2. Click the **Display** tab.

   This displays the display properties appropriate to the level.

FIGURE 421. Display Properties

3. Edit the desired fields.

See Table 39 on page 655 for an alphabetical list of the properties, where they can be assigned, and what they mean. Because each display property corresponds to a UI property, the table also provides the name of the corresponding UI property, and further information about each UI property is provided in "Sterling Multi-Channel Selling Solution UI Properties" on page 644.

4. Click **Save All Changes**.

TABLE 39. Display Properties

Field Name/Property Name	Where Used	Description
Automatic Post/UI: AUTOMATIC POST	Model Option Class	Depending on the value you choose, this property specifies how posting is done: **none**: No update is performed when the customer selects an option item. **update**: An incremental update occurs when the customer selects an option item. **final (default)**: A final update occurs when the customer selects an option item.
Constant Guiding Text/UI: CONSTANT GUIDING TEXT	Model Option Class	Used to add extra text to the displayed HTML page. This text is "constant", that is, it appears all the time, even after a selection is made. For example, guiding text for a configurable camcorder may state "Only lithium batteries type XYZ are compatible with this model."
Control/UI: CONTROL	Option Class	Enables you to determine how the option items are displayed: **Radio button**: Items appear as radio buttons. Customer can only select one. **Checkbox**: Option items will appear with check boxes; multiple selection allowed. **Drop down list**: Items appear in a drop-down list. **Combobox**: Items appear in drop-down list, but end-users can also type in a selection. **Multiple Selection listbox**: Items appear in a scrollable list from which the customer can make multiple selections. **Display All Children**: When you have nested option classes, nested classes appear with their option items visible (as opposed to option items only appearing when nested option classes are "picked"). **User EnteredValue**: Items appear as user-entered fields. **Tabular Display**: Items appear as rows in a table.

TABLE 39. Display Properties (Continued)

Field Name/Property Name	Where Used	Description
Default Selection/UI: DEFAULT SELECTION	Model Option Class Option Item	This property specifies that, if the user does not choose an entity in the option class, this entity (embedded model, nested option class, or option item) is automatically selected. You can use this property in conjunction with the **Option Class Required** special property. You can only assign it to one option item in an option class.
Display Template	Model	Select the type of user interface from the drop-down list: Tabbed UI or Non-tabbed UI. See "Working with a Tabbed User Interface" on page 554.
Help URL/UI: HELP URL	Model Option Class	Enables you to display a link (URL) to a page that has additional information about the model, option class, or option item.
Icon Graphic/UI: ICON GRAPHIC	Model Option Class	Provides the location (fully qualified path) of a GIF format file to be displayed next to this model, option class, or option item.
Ignore In Quote/UI: IGNORE IN QUOTE	Model Option Class Option Item	This special property is attached to option classes and option items that will not be transferred into the summary page when these option items are selected by the customer or through an expansion rule.
Lead Time/ UI: LEAD TIME	Model Option Class Option Item	Enables you to specify a lead time between when a customer orders a product that includes this item and when that product can be expected to ship.
Option Class Required/UI: OPTION CLASS REQUIRED	Option Class	Enables you to specify whether or not a customer must make a selection in that option class to complete the configuration. Customer must select one of the option items to complete the configuration.

TABLE 39. **Display Properties (Continued)**

Field Name/Property Name	Where Used	Description
Option Class View/UI: OPTION CLASS VIEW	Option Class	Determines (1) if the items in this option class are displayed, and (2) if the pop-up quantity is displayed next to the option item.
		Popup: When the customer clicks the drop-down arrow, the line is expanded to display all items.
		Popup-qty: Customer types in a number in the quantity field. The entered value influences the quantity of option items that are ordered for this option class.
		Invisible: Option class and its items are not displayed to the customer. This is typically used for an automatic expansion when the customer does not need to know about the added option items that are part of the configuration. For example, if a customer orders a special wheel, then invisible option items may include nuts and bolts that are included with the special wheel.
Popup-Qty Values/ UI: POPUP-QTY ALLOWED VALUES	Option Class	Enables you to set quantity for that item. The quantities specified appear as possible selections in a quantity box next to the item.
Post-Pick Guiding Text/UI: POST PICK GUIDING TEXT	Model Option Class	Used to add extra text displayed on the HTML page after the customer has made a selection. For example, a model of a computer has an option class called "Operating System", and that option class has an option item called "Windows 2000". Post-pick guiding text for that option item might be "Windows 2000 requires a minimum of 256MB of RAM; make sure the amount of RAM you select is at least 256MB".
Pre-Pick Guiding Text/UI: PRE PICK GUIDING TEXT	Model Option Class	This special property is assigned at the option class level, and is used to add extra text that is displayed on the HTML page. The text disappears once a selection is made. For example, pre-pick guiding text for a CPU option class of a configurable computer may state "Choose a Processor". Once a processor is chosen, the text disappears.
Prevent Selection of Items Resulting in Constraint Errors/ UI: PREVENT SELECTION	Option Class	Enables you to prevent a customer from selecting items in this class that are incompatible with items in another class (based on an option constraint table).
		If the Constraint Selections display property is set to "Hide constrained items", then this property is set to "yes".
		If Option Class Required is selected, then you cannot check this box.

<div align="center">

TABLE 39. Display Properties (Continued)

</div>

Field Name/Property Name	Where Used	Description
Pricing Style/UI: PRICING STYLE	Model Option Class	This special property enables you to specify how option class items will display price information. There are three possible values: **none**: If you assign this property with the value *none*, then the option class' items are displayed without any pricing information. **delta**: If you assign this property with the value **delta**, then the option items display pricing information in relation to the total base price of the configurable product. When end-users first see the option class, they see the option items with prices as "Add $xxx.xx", meaning "selecting this item adds this amount to the current configuration price of the model." Once the end-user selects an option item, the other option items will show either "Add $xxx.xx" or "Subtract $xxx.xx", depending on how choosing those option items will affect the price. **absolute**: If you assign this property with the value *absolute*, then the option items display pricing information as the total cost of that item. This kind of pricing information is not relative to any base price. It is simply the cost of that item.
Price/UI: PRICE	Model Option Class Option Item	This special property enables you to assign a specific price to the item. This property is used to attach a price to a model if your model, option class, or option item is not associated with a product ID (see "To Associate a Product with a Model, Option Class, or Option Item" on page 517). Note that prices assigned to option items in this way are not preserved when the configured product is returned to a cart.
Return From Submodel/ CONFIG: SUBMODEL RETURN	Option Item	Setting this property to "no" allows end users to transition from one model to the next. If a user returns to a model, all selections and derived properties are reset.
User Entered Value Type/UI: UEV TYPE	Option Item	This property is displayed only if you selected "User entered value" for the Control display property of the option class to which the item belongs. This property enables you to define the type: **string**, **integer**, or **numeric**.
User Entered Value Prefix/UI: UEV PREFIX	Option Item	This property is displayed only if you selected "User entered value" for the Control display property of the option class to which the item belongs. This enables you to provide a text string that precedes a user-entered value (For example, "$").

<div align="center">**TABLE 39.** **Display Properties (Continued)**</div>

Field Name/Property Name	Where Used	Description
User Entered Value Postfix/UI: UEV POSTFIX	Option Item	This property is displayed only if you selected "User entered value" for the Control display property of the option class to which the item belongs. This enables you to provide a text string that follows any user-entered values (for example, "inches", "feet", and so on).
User Entered Value Allowed Values/UI: UEV ALLOWED VALUES	Option Item	This property is displayed only if you selected "User entered value" for the Control display property of the option class to which the item belongs. This property enables you to define a comma-delimited list of values for numbers (1-3, 5, 9, 10-12, and so on). For strings, you can enter the name of a list property.
Validate Submodel/CONFIG: VALIDATE SUBMODEL	Option Item	This setting ensures that the submodel is correctly configured in nested configuration scenarios. Use Validate Submodel in conjunction with the Submodel Return property. The default behavior is not to validate a submodel configuration after returning to a parent model. When you set this property to "yes" and the Return From Submodel property to "yes", the submodel configuration will be validated after the user returns to the parent model and is configuring the parent or sibling. Consider using this setting carefully as there can be performance issues.

Tabular Display of Properties

To help users choose between two or more option items in an option class, it is often helpful to display one or more properties for each option item in the form of a table. For example:

FIGURE 422. Example Tabular Display of an Option Class

You cannot use the tabular display for pickable option items. Use tabular displays with another option class that allows users to make a selection.

To Display Properties in a Tabular Form

1. Navigate to the option class whose option items you want to display in a tabular form.

2. Either:

    a. Click the **Display** tab.

    b. Select Tabular Display from the Control drop-down list.

    c. Click **Save All Changes**.

    Or:

    a. Click the **Properties** tab.

    b. Select UI: CONTROL from the Unattached Properties drop-down list and enter "controls/displayProps.jsp" as its value.

    c. Click **Attach**.

3. Select UI: COLUMN HEADINGS from the Unattached Properties drop-down list and enter a semi-colon delimited list of headings as its value.

    For example, "Size;Weight;Color".

4. Click **Attach**.

5. Select UI: COLUMN PROPERTIES from the Unattached Properties drop-down list and enter a semi-colon delimited list of the property names as its value.

   For example, "Monitor Size;Monitor Weight;Monitor Color".

   You can use property values as described in "Properties as Variables" on page 577 to help you display the values of properties exactly as you need.

To Display Properties in a Tabular Form

1. Navigate to the option class whose option items you want to display in a tabular form.

2. Either:

   a. Click the **Display** tab.

   b. Select Tabular Display from the Control drop-down list.

   c. Click **Save All Changes**.

   Or:

   a. Click the **Properties** tab.

   b. Select UI: CONTROL from the Unattached Properties drop-down list and enter "controls/displayProps.jsp" as its value.

   c. Click **Attach**.

3. Select UI: COLUMN HEADINGS from the Unattached Properties drop-down list and enter a semi-colon delimited list of headings as its value.

   For example, "Size;Weight;Color".

4. Click **Attach**.

5. Select UI: COLUMN PROPERTIES from the Unattached Properties drop-down list and enter a semi-colon delimited list of the property names as its value.

   For example, "Monitor Size;Monitor Weight;Monitor Color".

   You can use property values as described in "Properties as Variables" on page 577 to help you display the values of properties exactly as you need.

6. Click **Attach**.

FIGURE 423. Defining Tabular Display Properties

Note that the number of columns in the table is inferred from the number of properties you define in the UI: COLUMN PROPERTIES property.

7. Click **Save All Changes**.

8. If you now click **Test**, then you can verify that the option class is now presented as a table with one row for each option item and one column for each property specified.

Image Properties

You can associate images with models, option classes, and option items as described in this section.

Models and Option Classes

Use the Icon Graphic field on the **Display** tab for models and option classes. This corresponds to the UI: ICON GRAPHIC property.

Option Items

You can attach images to option items and display them to end-users using the UI: ITEM IMAGE NAME property to specify an image for each option item. You must set the UI: SHOW ITEM IMAGES property to be "true" at the option class level.

The value of the UI: ITEM IMAGE NAME can be interpreted as a relative URL or as an absolute URL:

•   If you enter "2of4stars.gif" or "../images/2of4stars.gif", then the image will be displayed by resolving the image location to:

```
http://server:port/Sterling/en/US/images/2of4stars.gif
```

- You can use absolute URLs to point to different locations anywhere on the Web. This is particularly useful if you use a different Web server to serve up static content for your Web site. For example:

```
http://imageserver:port/configurator/images/2of4stars.gif
```

User-Entered Values

You can allow your customers to type in values for a configurable product's options. For example, you may want to let customers enter a color that is not one of the pre-defined colors in a model, or you may want to let them enter a product ID for a product that is not in your product catalog, but which you can fulfil by special order.

The User Entered Value properties, described in Table 39 on page 655, enable customers to type in values. For example, suppose that you have a configurable product and you want to let the user specify their own choice of color. Do the following:

1. Navigate to the model and click **Edit**.

2. Click **New Option Class**.

3. In the Name field, enter "Custom Color Class".

4. In the Description field, enter "Enter your preferred color".

5. Click **Save**.

6. Click the **Display** tab.

7. Set the Control display property to "User Entered Values".

8. Check the **Ignore in Quote** check box.

9. Click **Save All Changes**.

10. Click the **General Info** tab.

11. Click **New Option Item**.

12. In the Name field, enter "Custom Color Item".

13. In the Description field, enter "We will provide a color match before shipping.".

14. In the Navigation panel, navigate to the Custom Color Item option item.

15. Click the **Display** tab.

16. Select String, Integer, or Numeric from the **User Entered Value Type** drop-down list.

17. Click **Save All Changes**.

18. Click **Compile**.

You can use user-entered values in rules by referring to the appropriate UEV property: UEV: NUMERIC VALUE (for Integer or Numeric values) or UEV: STRING VALUE (for String values).

UI Control Reset Behavior

Some UI controls allow the user to reset (clear) a selection and start over. A Clear button displays in the configuration UI by default to enable this reset behavior. The following table summarizes the default behavior of the Clear button in UI controls.

TABLE 40. Behavior of Clear Button in UI Controls

UI Control	Default View	Default Selection	Allowed User Action
Checkbox	Displays all values.	The model's default selections are checked. If there is no default value, nothing is checked.	Check or uncheck values. Clicking **Clear** checks the default value. If there is no default value, clicking **Clear** clears all values.
Radio Button	Displays all values.	The model's default selection is selected. If there is no default value, nothing is selected.	Check or uncheck values. Clicking **Clear** selects the default value. If there is no default value, clicking **Clear** clears all values.
List Box	Displays all values.	The model's default selection is selected. If there is no default value, nothing is selected.	Select any value in the list box. Clicking **Clear** selects the default value. If there is no default value, clicking **Clear** clears all values.
Multiple Selection List Box	Displays all values.	The model's default selections are selected. If there is no default value, nothing is selected.	Select or unselect any value. Clicking **Clear** selects the default value. If there is no default value, clicking **Clear** clears all values.
Display All Children	Displays all values.	No default selection.	User cannot take any action.

TABLE 40. (Continued) Behavior of Clear Button in UI Controls

UI Control	Default View	Default Selection	Allowed User Action
Drop-down List	Displays all the values in the drop-down.	The model's default selection is selected. If there is no default value, nothing is selected.	Select any value in the drop-down list. Clicking **Clear** selects the default value. If there is no default value, clicking **Clear** clears all values.
Dynamic Instantiation	Nothing displays.	No default selection.	User cannot take any action.
Tabular Display	Nothing displays.	No default selection.	User cannot take any action.
Single-Select Tabular Display	Displays all values and a **Reset** button.	The model's default selection is selected. If there is no default value, nothing is selected.	Select any value. Clicking **Clear** selects the default value. If there is no default value, clicking **Clear** clears all values. Clicking **Reset** clears all values.
Multi-Select Tabular Display	Displays all values.	The model's default selection is selected. If there is no default value, nothing is selected.	Select or unselect value(s). Clicking **Clear** selects the default value. If there is no default value, clicking **Clear** clears all values.
Tabular Display with Quantity Box Selection	Displays all values with quantity boxes.	The model's default selection is selected. If there is no default value, nothing is selected.	The user cannot take any action.
User Entered Values	Displays all with text boxes.	No default selection.	Enter values. Clicking **Clear** clears all values.

CHAPTER 19   *Pricing Administration*

This chapter covers tasks that are performed by enterprise or Sterling Partner.com partner employees to administer the Sterling Pricing application. Check with your system administrator to see if this application has been installed as part of your implementation of the Sterling Multi-Channel Selling Solution.

Note:	You can set a business rule so that price lists are used for entitlement only. This means that price lists assigned to partners define only the products the partners are entitled to purchase, not the prices for those products. Prices are obtained from an external source rather than the price lists. See CHAPTER 39, "Business Rules Administration".

See "Setting Prices for Products" on page 22 for an overview of Pricing in the Sterling Multi-Channel Selling Solution. See CHAPTER 20, "Advanced Pricing Administration" for tasks associated with order level pricing.

- "To Set Prices for Products as a Mass Update" on page 683
- "To Set Prices for Individual Products" on page 685
- "To Set Conditional Prices for a Product" on page 688
- "To Download Pricing Information for All Products in a Price List" on page 690
- "To Assign a Price List to a Partner using Sterling Profile Manager" on page 691
- "To Assign a Price List to All Partners Using Sterling Pricing" on page 692
- "To Unassign a Price List from All Partners Using Sterling Pricing" on page 693

Searching for and Displaying Price Lists

To Search for a Price List

1. Click **Price Lists** in the Pricing Administration panel on the Sterling Multi-Channel Selling Solution home page.

   The Price List Search Page displays (see Figure 424 on page 669).

FIGURE 424. Price List Search Page

2. Search for the price list(s).

    a. Enter search criteria. You can use an asterisk (*) wild card character with all criteria to perform a wild card search.

TABLE 41. Price List Search Fields

Field	Description
Price List Name	Enter the name of the price list.
Effective Date	You can search for price lists by specifying an effectivity date. Only those price lists that are effective on that date are displayed. Click the calendar icon to select the date you want.
Currency	You can search for price lists by one or more currency.

TABLE 41. Price List Search Fields (Continued)

Field	Description
Customer Type	You can search for price lists by one or more customer types:
Status	You can search for either active or inactive price lists or include both in your search.

    b.   Click **Search**.

        You can also click **Show All** to display all the price lists in the system or you can click **Advanced Search** to perform a more custom search for a price list. See "Advanced Search for Price Lists" on page 674 for more details.

        The search results are displayed as a list on the Price List Search page.

Note:	Partner administrators will only see price lists created by partner administrators in their own organization.

3.   In the list of results, find the list whose details you want to view.

4.   In the Price List Name column, click the name of the price list to view its details.

    This displays the Price List Detail page for that list.

FIGURE 425. Price List Detail Page

The Price List Detail page comprises the following tabs:

• **Edit Header**: this tab displays header information about the price list:

TABLE 42. **Header Fields**

Field	Description
Name	Each price list must have a unique name. The price list name is displayed on the Price List Display page.
Description	This provides a brief description of the price list and its purpose.
Currency	The currency used in all of the prices of this price list. You cannot mix currencies in a price list.
Customer Type	The type of customer (Education, Commercial) for this price list.
Supplier	The partner key of the supplier for this price list. Enterprise administrators can accept the default value ("1") or enter a partner key for any storefront partner. Storefront administrators will see this field pre-populated with their partner key and they cannot change it.
Starting Date	You can specify dates within which a price list is available. Click the calendar icon to select the dates you want.
Ending Date	
Active	Check the box to make the price list active. You can assign an inactive price list to a partner, but the partner cannot see prices from an inactive list.

You can also download the price list in the form of a text file by clicking **Download**, and make a copy of the price list by clicking **Copy**.

• **Edit Items**: use this tab to change prices of products that are already on the price list. You can search for a specific product or for products that belong to a specific product category.

FIGURE 426. Price List Detail Page: Edit Items Tab

- **Assign Products**: use this tab to add products to the price list. You can search for a specific product or for products that belong to a specific product category.

FIGURE 427. Price List Detail Page: Assign Products Tab

- **Mass Update**: use this tab to perform bulk operations on the price list. For example, you can increase the prices on the price list by a fixed or percentage amount.

FIGURE 428. Price List Detail Page: Mass Update Tab

- **View Organization Assignments**: use this tab to view the assignment of this price list to partners.

FIGURE 429. Price List Detail Page: View Organization Assignments Tab

You can use a business rule to set the number of rows that are displayed in the pricing list. See CHAPTER 39, "Business Rules Administration".

Advanced Search for Price Lists

By clicking **Advanced Search** on the Price List Search page, you can perform a more detailed search for a price list.

FIGURE 430. Price List Advanced Search Page

You can search using the following criteria:

TABLE 43. Price List Advanced Search Criteria

Criteria	Comments
Price List Name	Enter a string. You can use * to denote a wild card.
	The search will return all price lists whose name matches the search string.
	For example, if you enter Com*, then price lists with names such as Commercial and Communications are found.
Partner Name	Enter a string. You can use * to denote a wild card.
	The search will return all price lists that are assigned to a partner whose name matches the search string.
Price List Status	Select Active, Inactive, or Active and Inactive.
Product ID	Enter a product ID. You can use * to denote a wild card.
	The search returns all price lists that have a product whose product ID matches the search string.
	For example, if you enter MXWS*, then price lists with products such as MXWS-7500 and MXWS-OLP are found.

<div align="center">

TABLE 43. Price List Advanced Search Criteria (Continued)

</div>

Criteria	Comments
Customer Type	Select one or more customer types. Price lists with these customer types are returned.
Currencies	Select one or more currencies. Price lists with these currencies are returned.
Effectivity Dates	Enter a Starting Date, Ending Date, or both.
	If you specify only a Starting Date, then all price lists whose start date is before the specified Starting Date are returned.
	If you specify only an Ending Date, then all price lists whose end date is after the specified Ending Date are returned.
	If you specify both, then all price lists that are effective between the your specified dates are returned. Note that price lists must be effective for the entire interval.

If you provide more than one search criteria, then the search returns only those price lists that match all the specified criteria.

Managing Price Lists

You must have the appropriate administrative functions in order to perform these tasks:

- "To Create a Price List" on page 676

- "To Modify a Price List" on page 678

- "To Delete a Price List" on page 679

- "To Duplicate a Price List" on page 679

- "To Import a Price List" on page 679

To Create a Price List

1. Click **Price Lists** in the Pricing Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. On the Price List Search page, click **New Price List**. This displays the Price List Detail page.

FIGURE 431. Price List Detail Page: Edit Header Tab

3. On the Header tab, enter the header information. See Table 42 on page 671 for a complete description of the fields on this page.

4. Click **Create**.

5. If desired, add products from the product hierarchy as follows:

   a. Click **Assign Products**.

   b. Search for the product or product category that you want to add to the price list. Click **Search**.

   The resulting products are displayed.

   c. Enter prices for each product.

   d. After you add a list price (or one-time price) for a product, you can optionally add auxiliary prices to the product as follows:

   • Click the View/Assign auxiliary prices to the Product icon to the right of the product:

   • The Price Types page displays.

   • Click the check boxes to select the applicable auxiliary price types.

   • Enter the prices for each auxiliary price.

- • When you are finished adding auxiliary prices, click **Save.**

- • Click **Return** to return to the price list. Note the change to the appearance of the View/Assign auxiliary prices to the Product icon.

e. Check the check box next to the product IDs that you want to add to the price list. Click **Assign**.

The selected products are added to the price list.

You have several options for setting prices. See "Setting Prices for Products" on page 682 for these options and for step-by-step instructions.

To Modify a Price List

1. Search for the price list. See "To Search for a Price List" on page 668.

2. On the Price List Detail page Header tab, modify the header details as appropriate.

   For example, you can modify the starting or ending dates or the status of the price list. See Table 42 on page 671 for a description of the fields.

3. Modify the list of products by adding or removing products as appropriate:

   a. Add products by clicking the **Assign Products** tab and searching for products.

   b. Modify products by clicking the Edit Items tab and searching for products whose prices you want to update. You can remove products from a price list by checking the check box next to their product ID and clicking **Delete**.

4. Modify individual prices, discounts, auxiliary prices, and +/- amounts as appropriate.

   See "To Set Prices for Products as a Mass Update" on page 683

Note:	If you make changes to a price list while a customer is shopping, then the customer will not see the new prices until the customer updates the cart.

5. Save your changes by clicking **Save**.

To Delete a Price List

1. Search for the price list(s) you want to delete. See "To Search for a Price List" on page 668.

2. On the resulting Price List Search page, click **Delete** next to the price list to be deleted.

To Duplicate a Price List

1. Search for the price list(s) you want to duplicate. See "To Search for a Price List" on page 668.

2. Click the name of the price list to navigate to the Price List Detail page.

3. On the Header tab, click **Copy**.

    A dialog box is displayed asking if you want to copy the partner assignments to whom the copied list(s) are currently assigned. Click **OK** to copy the assignments. Click **Cancel** to copy the price list(s) without copying the assignments.

Note:	If a price list is assigned to a partner and marked as "sharable", then that price list is also assigned to any child partners of the partner to whom the price list is assigned. If you copy that sharable list and its assignments, then the assignments to the children are also copied. See "Making Price Lists Sharable with Child Profiles" on page 29 for an explanation of sharing price lists.

To Import a Price List

You can import a new price list or update an existing price list by posting an XML message as follows:

1. Create an XML message for price list import. It must conform to the PriceListImportRequest DTD. You can find this in the deployed Web application in the file: ***debs_home*/Sterling/WEB-INF/dXML/4.0/ PriceListImportRequest.dtd**.

    You must provide user authentication information in the RemoteUser element, and the price list itself is defined using the PriceList DTD to be found in the same directory.

2. You must provide the Name of the price list as the Name attribute of the PriceList element.

3. Provide the following information in the PriceListHeader element:

TABLE 44. PriceList Header Elements

Element	Description
Name	The name of the price list. If a price list with this name exists already, then it will be updated with the price list information provided in the XML message. If the price list name does not exist, then a new price list will be created with this name and the price list information to create new price list lines.
Description	A description of the price list.
Currency	The currency to be used for the price list. You must provide it in the standard abbreviated form: "USD", "GBP", and so on.
CustomerType	The customer type: it must be one of the valid customer types supported by your Sterling Multi-Channel Selling Solution. For example, the reference implementation supports "General", "Government", and so on.
StartDate	Provide this in the form: MM:DD:YYYY HH:MM:SS
EndDate	Provide this in the form: MM:DD:YYYY HH:MM:SS
Active	"0" denotes an inactive price list and "1" an active price list
SupplierID	Set this to the partner key of the supplier: "1" represents the Enterprise partner

A typical PriceListHeader element looks like this:

```
<PriceListHeader Action="Insert">
    <Description>This is my new price list</Description>
    <Currency>USD</Currency>
    <PartnerType>General</PartnerType>
    <StartDate>2003-01-01 00:00:00.0</StartDate>
    <EndDate>2003-12-31 23:59:59.999</EndDate>
    <Active>0</Active>
    <SupplierID>1</SupplierID>
</PriceListHeader>
```

4. Each Prices element provides the price(s) for a particular product, identified by the ProductID attribute. A typical Prices element looks like this:

```
<Prices ProductID="SKU_1234" StartDate="2003-01-01"
    EndDate="2003-09-30" Action="UpdateOrInsert">
    <Price ListPrice="100" PercentDiscount="-10"
        AbsoluteDiscount="5" />
    <QuantityTier From="100" To="190">
        <Price ListPrice="95" PercentDiscount="-10" />
    </QuantityTier>
```

```
        <QuantityTier From="300" To="399">
            <Price ListPrice="90" AbsoluteDiscount="-5" />
        </QuantityTier>
        <QuantityTier From="400">
            <Price ListPrice="90" AbsoluteDiscount="-10" />
        </QuantityTier>
        <AuxiliaryPrice PriceTypeCode="5000">
            <Price ListPrice="10"/>
    </Prices>
```

5. Using your preferred tool, post the XML message into the Sterling Multi-Channel Selling Solution using the standard message URL, for example:

```
http://server:port/Sterling/msg/matrix
```

- You must use POST rather than GET.

- Set the Content-type to "application/x-icc-xml".

- The XML message must be the body of the request.

When a price list is imported using this process, the processing logic is as follows:

1. If the imported price list name already exists as the name of an existing price list, then the PriceListHeader element is used to update header information in the existing price list. Each Prices element is used to update or insert corresponding information:

    a. First, the product ID, StartDate, and EndDate attributes are used to see if the Prices element matches an existing price list line:

        - If neither StartDate or EndDate attributes are defined, then the Prices element matches an existing line if the line has the same product ID and no start and end dates defined.

        - If the StartDate or EndDate attributes are defined, then the Prices element matches an existing line if the line has the same product ID and the date(s) specified in the attribute(s) are the same as the corresponding dates in the line.

    b. If the Prices element does match an existing price list line, then the Price element is used to update the corresponding information in the line. If no such price list line exists, then a new line is inserted.

    c. If a Prices element does match an existing price list line, and if it has any child QuantityTier elements, then any existing quantity tiers are removed and new quantity tiers are created as defined in the QuantityTier elements.

2. If the imported price list name does not exist as the name of an existing price list, then the PriceListHeader element is used to create a new price list. Each Prices element is used to insert a price list line into the new price list.

Setting Prices for Products

When you are creating or modifying a price list (see "Managing Price Lists" on page 676), you have several options for setting prices.

*   Setting product prices by category

    You set a price that is applied to each product in a product category. This is useful in cases where all the products in a product category are very similar products. See "To Set Prices for Products as a Mass Update" on page 683.

*   Setting prices by individual product

    You set a price for each product in the price list individually. See "To Set Prices for Individual Products" on page 685.

*   Setting prices by price type

    You can set a price that is applied to a particular auxiliary price type. See "To Set Prices for Products as a Mass Update" on page 683.

*   Setting prices according to certain defined conditions

    You can set prices for a category of products or for individual products that are in effect only when certain conditions are met. You can condition the prices on one or two options. For example, you might want to set a price for a product (or products) that is in effect only for OEMs who are rated Platinum level. See "To Set Conditional Prices for a Product" on page 688.

    You can also assign multiple rules to one product. For example, you can create a rule based on partner type and partner membership level, and a second rule based on territory and approved customer types.

Note:	These rule options and auxiliary price types are set up during the Sterling Multi-Channel Selling Solution implementation.

Frequently, you will use a combination of these methods to define prices for your price lists.

Note:	Before creating your price lists, you should consider how many decimal places will be required to store and display prices. For example, you may need to provide the unit price of some products to four decimal places. Sterling Pricing supports entering prices with an arbitrary degree of accuracy. The Scale attribute of the UnitListPrice DataElement determines this precision. By default, this is set to "2", but you can change its value as part of your implementation of the Sterling Multi-Channel Selling Solution. Whenever you are editing prices, you can enter this number of digits after the decimal point and this number is saved to the Knowledgebase. This precision is used to calculate all list and extended prices that are displayed to end-users.
	Prices that are displayed to end-users are truncated to a fixed number of decimal places. To change the number of decimal places displayed to end-users, you must change the Allowed Decimal Places system administration properties to be found under Application Settings. See CHAPTER 38, "Enterprise System Administration" for more information.

To Set Prices for Products as a Mass Update

When you are creating a price list ("To Create a Price List" on page 676) or once you have displayed a price list that you want to modify ("To Search for a Price List" on page 668), you can use the following procedure to set the prices for all the products, for one or more price types, or for all products that belong to the price list from a specific category. You can also remove all products from a price list or remove all products that belong to a product category (and its children).

1. On the Price List Detail page, click **Mass Update**.

   The Mass Update tab is displayed.

FIGURE 432. **Price List Detail Page: Mass Update Tab**

2. Specify the scope of the update:

   a. For all products currently on the price list: click **Entire Price List**.

   b. For a product category: click the **Category** radio button. Browse for the desired product category by clicking **Browse ...** and use the Hierarchical Entity Picker to select the category. Check the **Apply to child categories** check box if you want to set the price for all products in child categories too.

   c. For a price type: click the Price Types drop-down list to select a price type.

3. To enter a price to be applied to all products in the scope of the update.

   a. Enter either a list price or specify a change to the current price. If you are entering pricing information for the first time (as shown in Figure 432 on

page 684), then you must enter at least a List Price. You can specify price changes either as an absolute change in price based on the price list currency or as a percentage change.

b. Specify a change to the current percentage change.

c. Specify a change to the current absolute change.

d. Click **Update**.

4. To remove all the products in scope from the price list, click **Delete**.

At this point, you can define the individual prices for the products ("To Set Prices for Individual Products" on page 685) or you can define conditional prices ("To Set Conditional Prices for a Product" on page 688).

To Set Prices for Individual Products

When you are creating a price list ("To Create a Price List" on page 676) or once you have displayed a price list that you want to modify ("To Search for a Price List" on page 668), you can use the following procedure to set the prices for individual products assigned to a list.

1. Click **Assign Products**.

FIGURE 433. Price List Detail Page: Assign Products Tab

2. On the **Assign Products** tab, you can search for a particular product or you can browse for it using the **...** button.

a. To search for a product:

- Either select Product ID and enter the some or all of the product ID (use * as a wild card). Click **Search**. The search results are displayed on the price list.

- Or select Category and click **...** to browse for the category within which you want to search. Note that if you search for products within a category, then the results will not include child products of aggregated products in this category.

b. To browse for a product, click **...**. Use the Hierarchical Entity Picker window to navigate to the product and select it. Click **Done**.

c. Click **Search**.

The selected products are listed.

3. Define the pricing information.

If you are entering pricing information for the first time (as shown in Figure 427 on page 673), or you will be adding auxiliary prices, then you must first enter at least a List Price (or one-time price). Note that after you enter a one-time price for a product, you then enter auxiliary prices from the **Edit Items** tab. See "Managing Price Lists" on page 676

You can enter a Start Date and End Date for each price line item. See "Price List Line Item Effectivity Dates" on page 25 for more information on how price list line item effectivity dates are used.

If a price line item already exists for a product ID and you want to specify a different price for a particular date range, then you can clone the price line item as follows:

a. Click the Copy line to define new effectivity dates icon.

b. In the Clone Price List Item dialog box, enter a Start Date and End Date for the new price list item.

FIGURE 434. Clone Price List Item Dialog Box

c.   If there are quantity tiers and conditional prices associated with the price list item and you want to clone these as well, select the **Clone Quantity Tiers and Conditionals** checkbox.

d.   If there are auxiliary prices associated with the price list item and you want to clone the auxiliary prices as well, select the **Clone Auxiliary Prices** checkbox.

e.   Click **Clone**.

f.   Find the newly cloned price list item, and enter the list price.

You can enter a modification to the price expressed as either a percentage change or as an absolute amount. To enter a positive (+) number, simply enter the number. Do not add a plus (+) sign before the number. To enter a negative number, enter a minus (-) before the number (for example, -50). A positive (+) number represents the percentage or absolute amount to be added to the list price. A negative (-) number represents a percentage or absolute amount to be discounted from the list price.

4.   Repeat these steps for each product whose prices you want to define.

5.   Click **Assign**.

Conditional Pricing

You can set prices that depend on the user and their cart that further refine the prices that they see. If you create pricing rules for a product, then the pricing information you entered for each product ID in the **Assign Products** and **Edit**

Items tabs will apply to customers who satisfy *none* of the pricing rules that you create for the product.

To Set Conditional Prices for a Product

When you are creating a price list ("To Create a Price List" on page 676) or once you have displayed a price list that you want to modify ("To Search for a Price List" on page 668), you can use the following procedure to set conditional prices for individual products. You can define quantity tiers and one or more one- or two-option rules that define certain conditions for prices.

1. On the Price List Detail page, click **Edit Items**.

   The Edit Items tab is displayed.

2. Either search for the product or browse for it by clicking **Browse ...**.

3. Click on the **Rule** button for that product to open the Conditional Rules page.

FIGURE 435. Conditional Rules Page: Edit Quantity Tiers Tab

You can use this page to set volume discounts based on the quantity ordered and to set rules-based rule options. The rule options available to you are set up at implementation time. They may include options such as partner type and territory.

You cannot set volume discounts for the auxiliary prices associated with a product. The tiered pricing applied to the one-time price does not apply to the product's auxiliary prices.

4. To create quantity tiers:

    a. Click **Edit Quantity Tiers**.

    b. Enter quantity tiers for the product by entering **From Qty** values: these must be whole numbers and the **From Qty** value must increase.

    c. Enter list prices for each tier and any pricing adjustments for each tier. As you enter each **From Qty** value, the **To Qty** of the preceding tier is calculated automatically.

    d. Click **Save**.

5. To create conditional rules:

    a. Click **Edit Conditional Rules**.

FIGURE 436. Conditional Rules Page: Edit Conditional Rules Tab

    b. Click on the **First Option** drop-down list and select the first rule option.

       The options available to you were determined at the time of your Sterling Multi-Channel Selling Solution implementation.

    c. Click on the **Second Option** drop-down list and select the second rule option.

       • To create a single option rule, select the blank option line.

- To create a double-option rule, select a rule option. Both options must be satisfied before the pricing rule is fired.

    The options available to you were determined at the time of your Sterling Multi-Channel Selling Solution implementation.

d. Edit the discount and the +/- amount (either as a percentage or as an absolute amount) for each row as desired.

    To enter a positive (+) number, simply enter the number. Do not add a plus (+) sign before the number. To enter a negative number, enter a minus (-) before the number (for example, -50). A positive (+) number represents the percentage or absolute amount to be added to the list price. A negative (-) number represents a percentage or absolute amount to be discounted from the list price.

e. Click **Save**.

6. Click **Return**.

7. On the Pricing List Detail page, click **Save**.

To see *all* the rules associated with all products in a price list, click **Download** in the Price List Detail page.

Downloading Pricing Information

You can download the pricing information with all the products on a price list.

To Download Pricing Information for All Products in a Price List

1. Find the price list you want to download.

    See "To Search for a Price List" on page 668.

2. In the Price List Detail page Edit Header tab, click **Download**.

    A text file containing all prices on the price list is generated and you are prompted to save the file to your local machine. If your browser displays the data in the browser window, then right-click the browser window and select **View Source**. In the text editor window, you can now save the data to your local machine. You can navigate back to the price list as described in "To Search for a Price List" on page 668.

Assigning Price Lists to Partners

Once you have created the price list, you make the prices available to users by assigning the price list to partners (and therefore to their users) through the partner profile. You can assign price lists to partners either through the Sterling Profile Manager or through Sterling Pricing:

- Use Sterling Profile Manager if you want to assign one or more price lists to a single partner. See "To Assign a Price List to a Partner using Sterling Profile Manager" on page 691.

- Use Sterling Pricing if you want to assign a price list to all your partners or if you want to unassign a price list from all partners. See "To Assign a Price List to All Partners Using Sterling Pricing" on page 692 and "To Unassign a Price List from All Partners Using Sterling Pricing" on page 693.

Note:	A partner administrator can assign price lists that they or another partner administrator for the same partner have created to child partners of their partner.
	Only an *enterprise administrator* can assign price lists to enterprise partners. Therefore, after creating a price list, the partner administrator must notify an *enterprise administrator* if they want the price list to be assigned to an enterprise partner.

To Assign a Price List to a Partner using Sterling Profile Manager

1. Click Sterling Profile Manager on the Sterling Multi-Channel Selling Solution home page.

2. Search for a partner.

   Enter the partner name, or enter search criteria such as the partner type or the first few letters of their name, then click **Search**, or click **Show All** to view all the partners.

3. Click on the partner name to display the Partner Profile Detail page.

4. Click **Pricelists**.

   The Partner Manager page is displayed with a list of price lists.

FIGURE 437. Available Price Lists for a Partner

5. Click in the check box next to the appropriate price list(s).

Note:	You can assign an inactive price list to a customer. Inactive price lists have no effect on product prices until you activate the price list.

6. If you want this price list to be automatically assigned to any partners beneath this partner in the partner hierarchy, then check the box in the Sharable column.

   A dollar sign ($) designates any list that is shared with a parent (and therefore automatically assigned to the current partner). However, you can still assign that price list to the child and mark it as sharable. This guarantees that the price list will still be assigned to the child (and to its children), even after the assignment is removed from the parent.

   See "Making Price Lists Sharable with Child Profiles" on page 29 for an explanation of sharable price lists.

7. Click **Update**.

   The selected price lists are assigned to that partner.

To Assign a Price List to All Partners Using Sterling Pricing

1. Navigate to the Price List Detail page for the price list.

2. On the Edit Header tab, click **Assign All**.

To Unassign a Price List from All Partners Using Sterling Pricing

1. Navigate to the Price List Detail page for the price list.

2. On the Edit Header tab, click **Unassign All**.

CHAPTER 20 *Advanced Pricing Administration*

In addition to managing prices for products using price lists, you can also manage prices using pricing rules and coupons. These can manage discounts and special offers at the level of carts: as users add products to their carts, the prices of items reflect special offers based on the total value of items in the cart or on the combination of particular items chosen. If a user adds a coupon to their cart, then the rule associated with the coupon can apply a price change to a line item.

For example:

- *Buy one, get one free*: if you buy two of an item, then the second item is free.

- *Special offer for Gold distributors: 10% off if you buy more than $1000.00 worth of items*: If you are a partner user that belongs to a distributor whose partner level is Gold, and if your cart total (before tax and shipping) is greater than $1000, then the cart total is reduced by 10%.

- *Orders over $150 qualify for free shipping*: if you buy products totalling $150 or more, shipping charges are waived.

Note:	Coupons, cart-level discounts, and special offers apply only to the one-time price of a product.

You manage pricing rules using the rule administration pages described in "Pricing Rule Tasks" on page 698. You manage coupons using the coupon administration pages described in "Coupon Administration" on page 707.

You can define pricing rules using features: this enables you to construct pricing rules along the lines of: *buy any of our wireless-ready laptops and get a carry case free*. Any cart containing a laptop that has the wireless-ready feature would satisfy this rule.

Overview

Price lists give you the ability to create rules that apply to a specific product ID. These rules are managed using the conditional pricing rules: see "Conditional Pricing" on page 687. This section describes rules that apply at the level of the cart.

Rule Types

Rules are specified by conditions and actions: when the condition of a rule is satisfied, then the corresponding action is taken: in the case of cart rules, these actions are pricing adjustments. Conditions are evaluated on the basis of the product IDs or, in the case of item quantity rules, features. Each cart rule is one of the following types:

- Combination: A combination rule is used to adjust the price of a target product ID if a certain combination of source product IDs is in the cart. Combination rules are only applied if the target product ID is already in the cart. Combination rules can require that certain quantities of product IDs are present: for example, buy five PCs and get a printer free.

- Item Quantity: these rules provide you the ability to specify quantity-tiered pricing for products. You can specify what price a product should sell for if the user buys more than a specified number of the product. The product can be specified by product ID or you can use features to select the products to which the rule applies.

- Order Total: these rules take an action if the total value of the cart (before shipping and tax) falls in a range. Typically, the action is to reduce the cart total by a percentage discount or by an absolute value specified in the currency of the rule.

- Shipping Charge Order Total: these rules provide discounts on shipping charges based upon order total. Discounts can be a fixed amount, a percentage, or a flat fee shipping charge. You can attach the Shipping

Charge Order Total rule to customer segments, and specify one or more shipping types, products, or product categories.

- Item Shipping Surcharge: these rules operate at the line item level to associate a shipping surcharge with items with a specified feature. For example, suppose that you want to charge an additional flat fee for shipping oversized items such as refrigerators. You can create a feature type called Oversized, then create an Oversized: refrigerators feature and associate it with all the refrigerators. When you create the item shipping surcharge rule, you attach the surcharge by selecting the Oversized: refrigerators feature.

  When the rule applies to a product in the cart, the system multiplies the surcharge by the quantity of the product being purchased and adds the resulting amount to the shipping charge.

The range of totals for the order total rules is specified as an ascending set of tiers: if the total value of a cart falls in the range specified by a tier, then make the corresponding price adjustment.

These types of rules can be applied either to all carts or only to carts that meet certain additional constraints, such as the customer segment to which the owner of the cart belongs or the currency of the cart.

Any rule that uses absolute values in modifying product ID prices or cart totals can apply only to one currency. A rule that modifies product ID prices or cart totals by a percentage amount can apply to one currency or all currencies. Apply pricing rules only to users to whom the prices can be honored.

Coupons, cart-level discounts, and order-level pricing rules apply only to the one-time price, that is, the price that the customer pays when the product is ordered or shipped. Mixing combination, order total, or item quantity pricing rules with duration-based goods such as service contracts is not recommended. If mixing these types of rules with duration-based goods cannot be avoided, define the rules in the Visual Modeler during the service contract model configuration process. See "Rules" on page 585 for information about creating and working with rules in the Visual Modeler.

Coupons

The pricing rules described in "Rule Types" on page 696 are global: they apply to all carts and users do not have to do anything to have them modify the prices that they see in their carts. By contrast, coupons only modify the prices of items in carts if the user actively adds them to their cart.

When a user is viewing one of their carts, they can add a coupon to it by entering the coupon ID. A user can add one or more coupons to a cart. The coupon affects the price of items in the cart only if the user and cart meet the constraints defined for the coupon. When the pricing rules are applied, the rule associated with the coupon is also applied and, if it is valid for that cart, the rule modifies a line item price in the same way that other pricing rules do.

Pricing Rule Tasks

This section describes the main administration tasks associated with pricing rules.

To Search for a Pricing Rule

1. Click **Pricing Rules** in the Pricing Administration panel on the Sterling Multi-Channel Selling Solution home page.

    The Rules List page displays.

FIGURE 438. Rules List Page

2. You can perform a quick search by Rule ID, Rule Name, Target Product ID, Target Feature, Effective Date, Rule Type, Rule Category, and Enabled by entering the appropriate search criteria and clicking **Search**. You can also click **Show All** to view all the pricing rules.

    The Search Results page displays a list of all the pricing rules that meet your search criteria.

FIGURE 439. Pricing Rules Search Results Page

To Create a Pricing Rule

1. Click **Pricing Rules** in the Pricing Administration panel on the Sterling Multi-Channel Selling Solution home page.

   The Rules List page displays.

2. On the Rules List page, click:

   • **New Combination Rule**: click to create a rule that changes the price of a target product ID based on a combination of products in the cart.

   • **New Pricing Order Total Rule**: click to create a rule that changes the total charged to the customer based on the total of the cart.

   • **New Item Quantity Rule**: click to create a rule that changes the unit price of a product ID based on the quantity being bought.

   • **New Ship Surcharge Rule**: click to create a rule that changes the unit shipping cost of a product with a specified set of features.

   • **New Ship Order Total Rule**: click to create a rule that changes the total shipping cost charged to the customer based on the order total.

   This displays the Rule Detail page.

FIGURE 440. Rule Detail Page

3. Enter general rule information:

a. A Rule Name and optionally a brief description of the rule in Rule Description. The rule description is what is displayed to the user as an explanation of the price adjustments.

b. Check **Enabled**.

c. Specify a Start Date and End Date for the rule.

d. Shipping Method: if the rule is an item shipping surcharge rule or a shipping charge order total rule, select a shipping method from the drop-down list or select All if you want to apply the rule to apply to all shipping methods. All is the default.

e. Customer Type: select All if you want the rule to apply to all types of customers or select a customer type from the drop-down list.

f. Currency: if you specify absolute price adjustments, you must select a currency. To select All, you must check that you use only percentage adjustments everywhere in this rule.

g. If the rule is a combination rule, specify the Target Product ID: You can either use the product picker or simply enter the product ID in the text field.

4. Set the rule targets: if the rule is an item quantity rule, then specify the target product ID or features. You can use the hierarchical entity picker to select the product IDs or features and enter them in the list box.

   a. If you specify **Use Product ID**, then the target products are treated separately when the rule is evaluated. That is, if you specify products A and B as targets and you specify a quantity tier of five, and if a user has in their cart three of product A and three of product B, then neither product has the rule applied. If the user adds two more product A items, then product A will have the rule applied, but product B will not.

   b. If you specify **Use Feature**, then the features are treated collectively when the rule is evaluated. That is, if you specify features F and G as targets and you specify a quantity tier of five, and if a user has in their cart five or more of a product that has both features F and G, then the rule is applied. However, the rule is not applied to a product that has only feature F even if there is another product in the same cart that has feature G.

FIGURE 441. Set Targets Panel

5. If the rule is a combination rule, specify how the rule will operate on products using the Rule Operation drop-down list:

   • Any Product specifies that the rule acts on the target product if any of the trigger products are in the cart.

   • All Products specifies that the rule acts only if all of the trigger products are in the cart.

FIGURE 442. General Rule Information Panel

6. Specify the amount of the discount or markup as a negative (for discount) or positive (for markup) amount.

7. If the rule is a combination rule or item quantity rule, then specify how the rule should be applied using the **Applies To** field:

    •   Single Item: apply the pricing adjustment to just one occurrence of the target product ID or assigned feature.

    •   All Items: apply the pricing adjustment to each occurrence of the target product ID or assigned feature.

    •   Each Combination: apply the pricing rule for each occurrence of the combination of source product IDs.

8. Specify the condition for the rule action:

    •   If the rule is an item quantity rule, specify the tiers and the price adjustment that applies at each tier. The price adjustment applies to the unit price of the line item.

    •   If the rule is a combination rule, then specify the combination of source product IDs and quantities that must be present for the rule action to act on the source product ID. The price adjustment applies to the unit price of the line item.

    •   If the rule is a cart total rule, then specify the tiers that effect the price adjustment. The price adjustment is to the order as a whole.

        The tier value is the lower bound for the tier. Each tier value must be greater than the previous one: that is the tier value for tier 1 must be less than the tier 2 value which must be less than the tier 3 value, and so on. The tier 1 range is taken to be from the tier 1 value to the tier 2 value, the tier 2 range is between the tier 2 value and the tier 3 value, and so on. The last tier defined is the range from that tier value upwards without limit.

- If the rule is a shipping charge order total rule, select criteria for the rule and define one or more order total tiers, then specify the modifications to make to the shipping charges for that tier. The types of modifications are:

  - Absolute. For example, $10 off.

  - Percentage. For example, 20% off.

  - Flat fee. The flat fee replaces the existing shipping charge.

  The rule has no effect if you do not define tiers.

  To apply the rule only when the order is flagged as Ship Complete, check the **Ship Complete Only** check box. Ship Complete Only is the default setting.

FIGURE 443. Rule Trigger Panel for Item Quantity Rule

9. Click **Create**. The rule is created and the page re-displays with a new tab, **Target Customers**, similar to the following figure.

FIGURE 444. Rule Detail Page with Target Customers Tab

The rule does not apply to any users until you either associate one or more customer segments with it, or apply the rule to all users. See "To Apply a Rule to Users" on page 704 for details.

To Apply a Rule to Users

Rules do not become active until they apply to users. You can apply a rule to all users, or associate one or more customer segments with the rule.

1. On the Rule Detail page, click the **Target Customers** tab. The Target Customers page displays, similar to the following figure.

FIGURE 445. Rule Detail Page: Target Customers Tab

2. To apply this rule to all users, click the **All Users** radio button.

3. To apply this rule to one or more customer segments:

   a. Click the **Selected Customer Segments** radio button.

   b. Click **Browse...** to browse the list of available customer segments. A Segment Picker pop-up displays, similar to the following figure.

FIGURE 446. Segment Picker Pop-Up

You can search for segments by name or effective date. To delete a segment from your list, click the segment name, then click **Delete**.

    c.   To select a customer segment, click the segment name. The segment name displays in the Segment Picker text box. When you finish selecting segments, click **Done**.

4.   Click **Save**.

To Delete a Rule

There may come a time when you want to stop using a pricing rule. You can set its End Date to make it ineffective or you can delete the rule. If you delete a rule, then it will no longer be used to adjust prices in carts.

Note:	If a user views a cart that previously had its total price affected by a pricing rule, and if the rule is deleted or becomes ineffective, then when the user next views the cart, they may see different prices.

1.   Click **Pricing Rules** in the Pricing Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. On the Rules List page, select the rule(s) that you would like to delete by checking the check box next to their Rule ID, and click **Delete**.

Coupon Administration

You create and modify coupons using the coupon administration pages. You can create coupons of the following types:

• Combination

• Item Quantity

• Order Total

• Shipping Charge Order Total

Users can add coupons to a cart before placing the cart as an order. When they add a coupon, the coupon is displayed as an additional line item in the cart. Its effect on the inquiry (such as applying a discount to the order) is displayed in the Amount column.

Note:	Coupons apply only to those carts that contain only products supplied by the enterprise. If a cart contains products supplied by more than one supplier, you cannot add a coupon to the cart.

To Search for a Coupon

1. Click **Coupons and Promotional Prices** in the Pricing Administration panel on the Sterling Multi-Channel Selling Solution home page.

   The Coupons List page displays.

FIGURE 447. Coupons List Page

2.   You can perform a quick search by Coupon ID, Target Product ID, Effective
     Date, Type, Coupon Category, Enabled, and Exclusive by entering the
     appropriate search criteria and clicking **Search**. You can also click **Show All** to
     view all the coupons.

     The Search Results page displays a list of all the coupons that meet your
     search criteria.

FIGURE 448. Coupons Search Results Page

To Create a Coupon

1. Click **Coupons & Promotional Prices** in the Pricing Administration panel on the Sterling Multi-Channel Selling Solution home page.

   The Coupons List page displays.

2. On the Coupons List page, click one of the following:

   • **New Combination Coupon**: click to create a coupon that changes the price of a target product ID based on a combination of products in the cart.

   • **New Order Total Coupon**: click to create a coupon that changes the total charged to the customer based on the total of the cart.

   • **New Item Quantity Coupon**: click to create a coupon that changes the unit price of a product ID based on the quantity being bought.

   • **New Ship Order Total Coupon**: click to create a coupon that changes the total shipping cost charged to the customer based on the total of the cart.

   The Coupon Detail page displays.

FIGURE 449. Coupon Detail Page

3. Enter a Coupon ID and optionally a brief description of the coupon in Coupon Description. The coupon ID is what users must enter to add the coupon to their cart. The coupon description is what is displayed to the user as an explanation of the price adjustment.

Note:	Do not use "*" in a coupon ID.

4. If the coupon is a combination coupon or item quantity coupon, specify the target product ID. You can either use the product picker or enter the product ID in the text field.

5. Check **Enabled**.

6. Specify a Start Date and End Date for the coupon.

7. Specify the amount of the discount or markup as a negative (for discount) or positive (for markup) amount.

8. If the coupon is a combination coupon or item quantity coupon, specify how the coupon should be applied using the **Applies To** field:

   a. Single Item: apply the pricing adjustment to just one occurrence of the target product ID.

   b. All Items: apply the pricing adjustment to each occurrence of the target product ID.

   c. Each Combination: apply the coupon for each occurrence of the combination of source product IDs.

9. Specify the rule filters that constrain when the coupon is applied:

   a. Customer Type: select All if you want the rule to apply to all types of customers or select a customer type from the drop-down list. All is the default setting.

   b. Currency: if you specify absolute price adjustments, then you must select a currency. That is, in order to select "All", you must check that you use only percentage adjustments everywhere in this rule.

   c. Exclusive: if a coupon is marked as exclusive, then if an end-user adds it to their cart, then no other coupon can be applied to the cart.

   d. If the coupon is a combination coupon, specify how the coupon will operate on products using the Coupon Operation drop-down list:

      • Any Product specifies that the coupon acts on the target product if any of the trigger products are in the cart.

- All Products specifies that the coupon acts only if all of the trigger products are in the cart.

10. Specify the condition for the coupon action:

    a. If the coupon is an item quantity coupon, specify the tiers and the price adjustment that applies at each tier. The price adjustment applies to the unit price of the line item.

    b. If the coupon is a combination coupon, specify the combination of source product IDs and quantities that must be present for the coupon action to act on the source product ID. The price adjustment applies to the unit price of the line item.

    c. If the coupon is an order total coupon, specify the tiers that effect the price adjustment. The price adjustment is to the order as a whole.

       The tier value is the lower bound for the tier. Each tier value must be greater than the previous one: that is the tier value for tier 1 must be less than the tier 2 value which must be less than the tier 3 value, and so on. The tier 1 range is taken to be from the tier 1 value to the tier 2 value, the tier 2 range is between the tier 2 value and the tier 3 value, and so on. The last tier defined is the range from that tier value upwards without limit.

    d. If the coupon is a shipping charge order total coupon, select criteria for the coupon and define one or more order total tiers, then specify the modifications to make to the shipping charges for that tier. The types of modifications are:

       - Absolute. For example, $10 off.

       - Percentage. For example, 20% off.

       - Flat fee. The flat fee replaces the existing shipping charge.

       The coupon has no effect if you do not define tiers.

       To apply the coupon only when the order is flagged as Ship Complete, check the **Ship Complete Only** check box. Ship Complete Only is the default setting.

       If you check the **Exclusive** check box, then if you add the shipping charge order total coupon to your cart, no other coupon can be applied to the cart.

11. Click **Create**. The coupon is created and the page re-displays with a new tab, **Target Customers**, similar to the following figure.

FIGURE 450. **Coupon Detail Page with Target Customers Tab**

The coupon does not apply to any users until you either associate one or more customer segments with it, or apply the coupon to all users. See "To Apply a Coupon to Users" on page 712 for details.

To Apply a Coupon to Users

Coupons do not become active until they apply to users. You can apply a coupon to all users, or associate one or more customer segments with the coupon.

1. On the Coupon Details page, click the **Target Customers** tab. The Target Customers page displays, similar to the following figure.

FIGURE 451. **Coupon Detail Page: Target Customers Tab**

2. To apply this coupon to all users, click the **All Users** radio button.

3. To apply this coupon to one or more customer segments:

   a. Click the **Selected Customer Segments** radio button.

   b. Click **Browse...** to browse the list of available customer segments. A Segment Picker pop-up displays, similar to the following figure.

FIGURE 452. Segment Picker Pop-Up

You can search for segments by name or effective date. To delete a segment from your list, click the segment name, then click **Delete**.

   c. To select a customer segment, click the segment name. The segment name displays in the Segment Picker text box. When you finish selecting segments, click **Done**.

4. Click **Save**.

To Delete a Coupon

There may come a time when you want to stop using a coupon. You can set its End Date to make it ineffective or you can delete the coupon. If you delete a coupon, then it will no longer be used to adjust prices in carts.

Note:	If a user views a cart that previously had its total price affected by a coupon, and if the coupon is deleted or becomes ineffective, then when the user next views the cart, they may see different prices.
	The user will have to remove the deleted or ineffective coupon from their cart before they can place the cart as an order.

1. Click **Coupons & Promotional Prices** in the Pricing Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. On the Coupon List page, select the coupon(s) that you would like to delete by checking the check box next to their Coupon ID, and click **Delete**.

CHAPTER 21   *Managing Service Contracts*

This chapter covers the tasks associated with creating and managing service products and presents some examples showing how to create service products. See "Service Contracts" on page 34 for an overview of service contracts.

This chapter covers the following topics:

- "Overview" on page 716

- "Service Products and Visual Modeler" on page 718

- "Service Products and Product Master" on page 723

- "Example: Creating a Basic Cable Service Product" on page 724

- "Example: Creating an Expanded Cable Service Product" on page 740

Terminology

The following terminology applies to service products:

- Service contractible item: a product created as a service item (the Service Item checkbox is checked during product creation) and associated with a maintenance model.

- Service product: a product bundle that consists of products that include one or more service contractible items.

- Service contract: an agreement that is in effect for a specific period of time that specifies the terms, conditions, attributes, and prices associated with a particular service product.

- Duration-based good: a product that is effective for a specific period of time, such as a cell phone plan, software license, or warranty.

- Selling model: a model that defines what the user will see when they select this product from the product catalog. The selling model can include rules governing compatible product configuration choices.

- Maintenance model: a model that enables generation of a service contract. The maintenance model takes as input the properties that represent the service contractible item picks that the user made: items that must be tracked over the period of the contract.

- Input/output properties: the properties representing the picks that the user makes while configuring a product. These properties are output from the selling model when the order is placed, and accepted as input by the maintenance model for service contract generation.

Overview

Service contracts enable tracking and managing duration-based goods, such as cell phone calling plans, software distribution licenses, and extended maintenance plans. Service contracts are generated when the user orders a product that includes at least one service contractible item and that is associated with a maintenance model. A service product may be associated with a selling model, which determines what the user will see when they view the product in the catalog. A service product must be associated with a maintenance model, which enables generation of the service contract and allows tracking and management of the contract over time.

If the service product is relatively simple, then you need only design a maintenance model. If the service product is more complex, requiring the user to configure the service product before placing an order, then design a selling model to enable the user to view product options and make their choices, and design a separate maintenance model to process the user's choices for service contract generation.

Service Product Components

Service products can include a mix of products: service contractible items such as text messaging and music download services that are associated with monthly fees, and "buy once" products such as a cell phone, headset, and travel charger that the user buys outright. After the user views the available service product options,

makes their choices, and places the order for the service product, their service contractible item picks are transferred to a maintenance model, from which the service contract is generated. The "buy once" products are not part of the service contract: only those items that must be tracked over time are part of the service contract.

Distinguishing Service Contractible Items

You distinguish service contractible items from other products when you create them using the Product Master. Checking the product's Service Item checkbox and associating them with a maintenance model distinguish service contractible items from other products. You assign the initial, or one-time, price and the on-going, or auxiliary prices such as monthly fees, using either the **Prices** tab in Product Master or Sterling Pricing.

Considerations for Building Service Products

The following lists items to consider while building service products. Answers to questions in the following list will help you to determine what kinds of objects you need to build to support service contracts in your Sterling Multi-Channel Selling Solution implementation.

- What will the user experience be like? When the user views a service product in the catalog, what will they see? What options will they choose among to configure the service product? What special features or options will be available to the user, and will they be offered additional services or special discounts for ordering particular features?

- What types of objects do you need to build in order to create the desired user experience? For example:

  - If all your service contracts have a specific term, then you may want to create an end date property with a rule that automatically calculates the end date based upon the contract start date.

  - If you want to offer the user a choice of cell phone calling plans with a choice of cell phones and accessories (carrying case, travel charger, headsets), then you can build a configurable model that consists of a particular calling plan as the major line item with the various options and accessories as minor line items. You would then create option classes for each of the types of available options. For example, you would create a cell phone option class containing an option item for each available cell phone and an accessory option class containing an option item for each available accessory.

- If a minor line item, such as a cell phone, is itself configurable, then you can associate a sub-model for configuring the cell phone with the larger cell phone plan model.

- Will you offer the user a choice of payment frequency, such as a monthly billing or yearly fee for a home or auto insurance policy? If so, then you could create a billing option item to allow the user to pick among payment frequencies.

- Will you offer the user a choice of contract terms, such as 1-year, 2-year, or 5-year contracts, or will all the service contracts have the same duration? You can create a rule to calculate the contract end date based upon the start date and the duration of the contract, then use that end date to track the contract expiration date and send a reminder to the user when it is time to renew the contract.

- What types of costs are associated with the service product? Will there be recurring costs, such as monthly fees for specific services, periodic costs such as overage charges, or other one-time costs such as installation, activation, or cancellation fees? Any costs apart from the list price (or one-time price) require that you implement auxiliary price types. See the *Sterling Multi-Channel Selling Solution Implementation Guide* for more information.

- Do you plan to offer discounts if the user orders certain features? Will you require that the user sign up for a specific contract term? Will the user receive a discount price for signing up for a longer-term contract?

Service Products and Visual Modeler

Using the Visual Modeler, you create selling and maintenance models, define and attach properties to the models, specify the properties that are needed for maintenance of service contracts (the Input/Output properties), and create the rules that govern the creation of the service contracts.

For complex service products that offer many options in many combinations, create both a selling model and a maintenance model. For a simple service product, you need only create a maintenance model.

Create the selling and maintenance models in the same model group to make it easy to share properties. Sharing properties among models in the same model group also eases transferring the user's product option picks to the maintenance model for service contract generation and management.

See "Creating Service Products" on page 34 for an overview of the service products creation process.

See CHAPTER 16, "Using the Visual Modeler", for information about creating and working with models and model groups.

Creating the Selling and Maintenance Models

Suppose that you are creating the selling and maintenance models for a cellular calling plan. The general steps are as follows:

*   In the Product Master, create new products for the items that will comprise the cellular calling plan. Create those products that will be associated with the calling plan service contract as service items.

*   In Visual Modeler:

    *   Create the selling and maintenance models for the calling plan, including the display option classes, sub-models for service products that are themselves configurable, and option items.

    *   Attach contract properties (those beginning with CONTRACT:) to the service contractible items in the selling model. In particular, attach the CONTRACT: START_DATE property to service contractible items in the selling model.

Note:	You must attach the CONTRACT: START_DATE property to the service contractible item(s) in the selling model, and only in the selling model. If you do not attach this property, then there will be no start date for the contract.

    *   Define and attach other properties (such as display properties) to other option classes and option items as appropriate.

    *   Create the constraints that govern the availability of calling plan options, if applicable. The choices that the customer makes determine the options that are available to them. For example, if they choose a cell phone that has limited capability, then certain option choices become invalid.

    *   Create the rules that govern the creation of the service contract. As customers choose valid calling plan options that are service contractible items, rules written by the modeler ensure that those options are transferred to the maintenance model for service contract generation.

Service Contract Generation

When the user views the service product offering in the catalog, picks the options they want, then places the order, their service contractible item picks are transferred

from the selling model to the maintenance model and the service contract is generated. The service contract can then be managed by Customer Service Representatives.

When the user places the order, the options that they picked during product configuration (which uses the selling model) are transferred to the maintenance model. In most cases, items in the selling model have the same SKU as items in the maintenance model.

Transferring the pick information from the selling model to the maintenance model happens by way of properties. The process is as follows:

1. The modeler defines the "pick" properties at the model group level.

2. In the selling model, the modeler attaches the pick properties to the option items that represent the picks that the user can make. The modeler then specifies the pick properties as the selling model's output properties.

3. In the maintenance model, the modeler specifies the pick properties as the maintenance model's input properties.

4. The modeler specifies those pick properties that represent service contractible items as the maintenance model's output properties.

When the user places the order, the selling model passes the "pick" properties to the maintenance model. The maintenance model accepts the pick properties as input, and passes the service contractible item properties to the service contracts module, which generates the service contract.

Service Contract Properties

The following table lists the service contract properties. You can write rules that reason on these properties to determine information such as the service contract end date based upon the start date and contract term.

Note:	If the current user is a Customer Service Representative who is acting on behalf of a customer, then the EFFUSER properties contain information pertaining to the customer (the effective user), and the USER properties contain information pertaining to the Customer Service Representative.

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TABLE 45. Service Contract Properties

Property Name	Type	Description
CONFIG: PRICE LOCKED	Number	Determines whether or not the price of a particular line item in a bill of materials is locked. Set CONFIG: PRICE LOCKED > 0 to lock the price; 0 to unlock the price.
CONTRACT: END_DATE	Date	Contains the service contract end date, generally calculated based upon the start date and term.
CONTRACT: PERPETUAL	String	Sets the billing cycle type. Yes=perpetual billing, no=billing stops at contract expiration.
CONTRACT: START_DATE	Date	Contains the service contract start date. Attach this property only to service contractible items in the selling model.
		You must attach this property to the service contractible item in the selling model. If you do not attach this property, then there will be no start date for the contract.
CONTRACT: TERM	Number	Contains the length (term) of the service contract.
EFFUSER: EMAIL ADDRESS	String	Contains the effective user's email address.
EFFUSER: FIRST NAME	String	Contains the effective user's first name.
EFFUSER: LAST NAME	String	Contains the effective user's last name.
EFFUSER: NAME	String	Contains the effective user's name.
EFFUSER: ROLES	List	Contains the list of the effective user's roles, such as Enterprise.CustomerServiceRepresentative.
EFFUSER: TITLE	String	Contains the effective user's title.
EFFUSER: TYPE	String	Contains the effective user's type, such as User, Procurement User, ERP Administrator, and so on. The user type is set when the user is created in the Sterling Multi-Channel Selling Solution.
UI: CLASS READONLY	String	Indicates whether or not an option class and its children may only be modified by customer service representatives. Use this property to limit the kinds of changes that a customer can make to service contract attributes such as start and end dates and service fees. "Yes" means that only CSR's can modify the child option classes; "no" means that anyone can modify them. You can override the setting in individual option classes.

TABLE 45. (Continued)Service Contract Properties

Property Name	Type	Description
UI: MODEL READONLY	String	Indicates whether or not the entire model is read only. This property is generally set internally to indicate that the service contract is in a state in which no changes are allowed. This property overrides the UI: CLASS READONLY property.
UI: UEV DATE VALUE	Date	Provides support for entering date values.
USER: EMAIL ADDRESS	String	Contains the user's email address.
USER: FIRST NAME	String	Contains the user's first name.
USER: LAST NAME	String	Contains the user's last name.
USER: NAME	String	Contains the user's name.
USER: ROLES	List	Contains the list of the user's roles, such as Enterprise.CustomerServiceRepresentative.
USER: TITLE	String	Contains the user's title.
USER: TYPE	String	Contains the user's type, such as User, Procurement User, ERP Administrator, and so on. The user type is set when the user is created in the Sterling Multi-Channel Selling Solution.

Container Only

In previous releases, models had to be associated with a valid product ID (a SKU) to enable customers to add products to a cart. When modelers created a selling model to group several related products, they either attached a dummy SKU to the root node of the model, or created a rule to set the SKU based on the choices made by the customer while configuring the product. In this release, modelers can specify that a selling model is designed as a container for the components that comprise a service product. Container Only selling models do not have to be associated with a SKU.

If the model is used to sell a product that is a single, logical unit - for example, a product that can be ordered from the catalog, contains pricing information, and so on - then associate the selling model with a SKU. For example, the selling model for a calling plan includes all the possible plan options and can be configured and ordered as a single product, so it is associated with a SKU and is not specified as a Container Only selling model.

If the model is used to group several discrete products that ship separately but that may require information about each other, then do not associate a selling model

with a SKU. For example, a selling model that includes a choice of cell phones and a cell phone plan is specified as a Container Only selling model since it associates two discrete products: the calling plan and the cell phone, each of which already have SKUs and can be ordered as separate products in the catalog.

Service Products and Prices

All products have a one-time price: the price that the user pays when the product is ordered or shipped. If the product is a service contractible item, there may be additional, or auxiliary, prices as well, such as a monthly fee for a service plan or a charge for a maintenance contract or extended warranty. Auxiliary prices are generally set up as part of the implementation process, though you also can set up auxiliary prices after implementation. See the *Sterling Multi-Channel Selling Solution Implementation Guide*'s Customizing Sterling Pricing chapter for more information.

Service products that include both hard and soft goods, such as a cell phone package that includes a service plan, can be associated with a one-time price for the phone as well as auxiliary prices for activation, a recurring monthly service charge, late fees, overage fees, and cancellation charges.

A product's one-time price can be $0.00 if the product is associated with an on-going auxiliary price such as a monthly fee and therefore does not have a one-time price.

You can set prices, including applicable auxiliary prices, in the model or by using Sterling Pricing. Setting prices in the model allows you to write rules to control the price of a product. For example, if the customer signs up for a two-year calling plan contract, then you could write a rule to provide a discount on the price of a cell phone.

Service Products and Product Master

Using the Product Master, you create the products that comprise a service product. Products that are associated with fees that must be tracked over time as part of a service contract must be created as service contractible items and associated with a maintenance model. Configurable service products must be associated with a selling model as well as with a maintenance model.

Creating Service Products

Suppose that you are creating the products that comprise a cellular calling plan service product. The calling plan offers various options that the user will configure before placing their order, and those options are associated with fees that must be tracked over time. That means that you create the cellular calling plan as a configurable, service contractible item and associate it with both selling and maintenance models. How you create the products that comprise the calling plan options depends upon the type of product they are.

The following is the general process for creating the cellular calling plan service product (the major line item) and its associated products (the minor line items).

- Create new products for each cell phone to be offered with the calling plan. Create the products as normal products. The cell phones are not service contractible items: the user pays for them once.

- Create new products for the accessories to be offered with the cell phones, such as headsets, travel chargers, and carrying cases. Create the products as normal products. The accessories are not service contractible items: the customer pays for them once.

- Create a new product for the cellular calling plan. When you create the calling plan product, check the Service Item check box and associate the calling plan with both selling and maintenance models.

- Create new products for the calling plan attributes. The plan attributes are associated with fees that are paid on an on-going basis and must be tracked over time. Since the plan attributes themselves are not configurable, but are associated with recurring fees, you create them as normal, service contractible items and associate them with the calling plan maintenance model.

Example: Creating a Basic Cable Service Product

This section describes how to create a basic cable service product. The basic cable service product is simple and does not need a selling model, but it does require a maintenance model to generate a service contract. The service contract will track

details such as the contract term, start and end dates, monthly service fee, cancellation fee, and perpetual billing cycle.

Note:	This section assumes the following items:
	• That your implementation includes the auxiliary price types Monthly and Cancellation. See the *Sterling Multi-Channel Selling Solution Implementation Guide* to learn how to add auxiliary price types to your implementation.
	• That you have set up price lists, assigned the price lists to partners, and provided appropriate entitlements to the partners.

This example illustrates how to use rules to set contract start and end dates, set the contract term, and set billing options. The contract properties are stored on the root node of the model so that they are available to all option classes and option items in the model. The values for the user-entered value fields initially come from the contract properties set on the root node of the model. If the user changes any values (such as the contract term, start or end dates, perpetual billing setting), then rules transfer the changes to the root node of the model.

The service contract must track the contract's end date and perpetual billing settings, so those properties are set as the model's output properties.

The model initializes the start date to either the existing start date (if a customer service representative is modifying the service contract), or to the current date, and calculates the end date based upon the start date and contract term. The customer service representative can change the start date, term, and perpetual billing setting.

As you work through the example, do not use special characters to enter formulas or property values. In particular, do not use smart quotes.

The product attributes are as follows:

- $29.99 monthly service fee for a 1-year contract

- $50 installation fee

- $200 cancellation fee

- 1 year contract term

- Start date: defaults to the current date

- End date: defaults to the current date plus one year

- A perpetual billing option

    The perpetual billing option setting determines whether or not the user receives monthly invoices for their cable service automatically, even if their service contract expires and they do not renew it. Setting the perpetual billing option to "yes" enables perpetual billing and is the default. Setting the perpetual billing option to "no" disables perpetual billing.

- Allow only customer service representatives to view and change user-entered values

Given these attributes, you will create the following types of objects:

- A basic cable service product with an initial one-time price of $29.99, an installation fee of $50, and auxiliary prices of $29.99 monthly and $200 cancellation. Since the first month's service and installation fee are both charged up-front, one time only, we will combine them for a one-time price of $79.99.

- A basic cable product model to allow the cable service and its associated prices to be grouped together and sold as a service product.

- A basic cable maintenance model that will enable generation and tracking of the service contract.

- Auxiliary price types for monthly and cancellation costs. See the *Sterling Multi-Channel Selling Solution Implementation Guide* for more information about creating auxiliary price types, or check your existing price lists to find out about your implementation's available auxiliary price types.

- A start date option item of type Date that defaults to the current date.

- An end date option item of type Date that defaults to the current date plus one year.

- A billing option item that defaults to the perpetual billing option.

- A rule that prevents users who are not customer service representatives from seeing and modifying user-entered values.

- A rule that sets the contract start date to today's date if the start date has not been set.

- A rule that updates the contract end date based on the contract start date and term.

- A rule that updates the contract start date if it is changed by a customer service representative.

- A rule that updates the contract term if it is changed by a customer service representative.

- A rule that updates the perpetual billing setting if it is changed by a customer service representative.

The general steps are:

1. "Create the Basic Cable Product" on page 727.

2. "Assign Prices To the Basic Cable Product" on page 728.

3. Ensure that your organization and your customers have access to the price list and appropriate product entitlements to enable ordering the cable product. See CHAPTER 13, "Product Entitlement", for more information.

4. "Create the Maintenance Model" on page 729.

5. "Associate the Basic Cable Product with the Maintenance Model" on page 739.

6. "Test Ordering the Service Product" on page 739.

Create the Basic Cable Product

1. In the Product Master, create a new category: Cable.

2. In the **Cable** category, click the **Product** tab, and then click **Create New Product**.

3. Enter the following information:

   - Product ID: MX-CBLBasic

   - Product Name: Basic Cable

   - Description: Basic Cable Service

   - Component Type: Normal

   - Check the Service Item check box

   Leave the Maintenance Model field blank. Leave the Status field as In Creation.

4. Click **Save and Return**. The MX-Basic product is listed in the Product panel.

Assign Prices To the Basic Cable Product

You can create prices using Sterling Pricing or using the Product Master. This example uses the Product Master to assign prices to the product and to add the product to a price list.

1. In the Product Master, navigate to the **Cable** category, select the MX-CBLBasic product, and click the **Prices** tab.

   The Prices page displays.

2. Click the **Assign New** tab.

   The list of price lists displays.

3. Check the check box for an appropriate price list, such as the Enterprise Master List, choose a supplier, such as Matrix Solutions, enter 79.99 in the List Price field, then click **Assign**. Note that the auxiliary price types icon displays to the right of the price, similar to the following figure:

FIGURE 453. Basic Cable Product Price Assignment

4. Click the auxiliary price types icon.

   The Edit Auxiliary Price Types window displays. Enter the following values:

   - Monthly: 29.99

   - Cancellation: 200.00

   The Edit Auxiliary Price Types window is similar to the following figure:

FIGURE 454. Basic Cable Product Auxiliary Price Assignment

5. Click **Save**, and then click **Close**. Note that the auxiliary price types icon has changed, indicating that this product has auxiliary prices, similar to the following figure:

FIGURE 455. Basic Cable Price Assignment With Auxiliary Price Icon Change

Create the Maintenance Model

The Basic Cable product requires a service contract for tracking contract details and for on-going billing of the monthly service charge, so next you create a maintenance model to generate the service contract.

Create the Model Group and Model

1. In the Visual Modeler, create a new model group called Cable Products.

2. In the Cable Products model group, click **New Model**.

    The **New Model** tab displays. Enter the following information:

    • Name: basicCableMaintenance

    • Description: Basic cable - 1 year contract

    • Assigned Product ID: browse to select the MX-CBLBasic product created earlier. Since the product ID is also the product SKU and in this case is somewhat cryptic, we will not use the product ID and name for the name and ID of the model. Using a separate name for the model avoids confusion if the same model is used for several products.

    • Click **Save and Edit**.

Add and Define the Service Contract Properties

1. In the **Properties** tab, attach the following properties:

    • CONTRACT: PERPETUAL

       Enter a value of "yes" for the CONTRACT: PERPETUAL property.

• CONTRACT: TERM

Enter a value of 1 for the CONTRACT: TERM property.

The basic cable product requires only a maintenance model, so you do not attach CONTRACT: START_DATE. The order ship date is the contract start date.

Click **Save All Changes**.

2. In the **Properties** tab, click **New Property** and add the following new properties to the basicCableMaintenance model. When you define the new properties, click **Define**. Do not attach the new properties to the model.

    • dispEnd: Type: Date

    • dispMonthlyPrice: Type: String

    • dispStart: Type: Date

    • dispTerm: Type: String

    • editEnd: Type: Date

    • editPerpetual: Type: String

    • editStart: Type: Date

    • editTerm: Type: Number

    • Click **Save All Changes**.

3. In the **Properties** tab, click the **Input/Output** tab, then add input and output properties as follows:

    a. Input Properties:

        • CONTRACT: START_DATE

        • CONTRACT: END_DATE

        • CONTRACT: PERPETUAL

        • CONTRACT: TERM

    b. Output Properties:

        • CONTRACT: START_DATE

        • CONTRACT: END_DATE

        • CONTRACT: PERPETUAL

- CONTRACT: TERM

Define Rules to Manage the Service Contract

In this section, you create rules to manage the service contract. All rules are created in, and attached to, the root node of the basicCableMaintenance model.

1. Define a rule to hide user-entered values if the user is not a customer service representative.

   a. Click the **Rules** tab, then click the **Define** tab, then click the **New...** button, and define the rule as follows:

      - Leave Classification blank.

      - Leave Default Priority as 50.

      - Name: hideUEVFields

      - Description: Hide entry fields if the user is not a Customer Service Representative

      - Rule triggered on: Failure

   b. Click **Save and Edit**. The Edit Rule page expands. Write a new conditional relation as follows:

      - Function1: value

      - Property1: USER: ROLES

      - Operator: contains

      - Function2: literal

      - Property2: Enterprise.CustomerServiceRepresentative

      - If not specified: Fragment is false

   c. Click **Save and Return**.

   d. In the Assignment Actions panel, select the _isViewable property with value 0, then click **Add Item**.

   e. Click **Save and Return**.

2. Define a rule to update the contract end date. This rule has two conditional relations.

   a. Click the **Rules** tab, then click the **Define** tab, then click the **New...** button, and define the rule as follows:

- • Leave Classification blank.

- • Default Priority: 30

The CONTRACT: END DATE property depends upon the value of the start date. The value of the start date may be changed depending by the customer service representative. If changes have been made, then the start date value must be updated before end date calculations can be made. Setting this rule's default priority to 30 ensures that the contract end date is always set last, after all other rules are fired.

- • Name: updateContractEndDate

- • Description: Update the contract end date based on the contract start date and term

- • Rule triggered on: Success

b. Click **Save and Edit**. The Edit Rule page expands.

c. Write a new conditional relation as follows:

- • Function1: value

- • Property1: CONTRACT: START_DATE

- • Operator: >

- • Function2: literal

- • Property2: 0

- • If not specified: Fragment is false

d. Click **Save and Return**.

e. Select "and" from the conditional relation drop-down list.

f. Define another conditional relation as follows:

- • Function1: value

- • Property1: CONTRACT: TERM

- • Operator: >

- • Function2: literal

- • Property2: 0

- • If not specified: Fragment is false

g.   Click **Save and Return**.

h.   In the Assignment Actions panel, select the CONTRACT: END_DATE property, then set the value to the following formula:

```
=DateFunctions.addYear(value("CONTRACT: START_DATE"),
value("CONTRACT: TERM"))
```

   Click **Add Item**.

i.   Click **Save and Return**.

3.   Define a rule to update the contract start date if the start date has been changed by a Customer Service Representative:

a.   Click the **Rules** tab, then click the **Define** tab, then click the **New...** button, and define the rule as follows:

   •   Leave Classification blank.

   •   Default Priority: 20

   This rule must fire after the start date has been set and before the end date can be calculated. Setting this rule's default priority to 20 ensures that this rule fires in the required sequence.

   •   Name: updateContractStartDate

   •   Description: Update the contract start date if the start date has been changed by a Customer Service Representative.

   •   Rule triggered on: Success

b.   Click **Save and Edit**. The Edit Rule page expands. Write a new conditional relation as follows:

   •   Function1: value

   •   Property1: editStart

   •   Operator: >

   •   Function2: literal

   •   Property2: 0

   •   If not specified: Fragment is false

c.   Click **Save and Return**.

d.   In the Assignment Actions panel, select the CONTRACT: START_DATE property, then set the value to the following formula:

```
=value("editStart")
```

  Click **Add Item**.

 e. Click **Save and Return**.

4. Define a rule to update the contract term if the start date has been changed by a Customer Service Representative:

 a. Click the **Rules** tab, then click the **Define** tab, then click the **New...** button, and define the rule as follows:

- Leave Classification blank

- Default Priority: 20

This rule must fire after the start date has been set and before the end date can be calculated. Setting this rule's default priority to 20 ensures that this rule fires in the required sequence.

- Name: updateContractTerm

- Description: Update the contract term if the term has been changed by a Customer Service Representative

- Rule triggered on: Success

 b. Click **Save and Edit**. The Edit Rule page expands. Write a new conditional relation as follows:

- Function1: value

- Property1: editTerm

- Operator: >

- Function2: literal

- Property2: 0

- If not specified: Fragment is false

 c. Click **Save and Return**.

 d. In the Assignment Actions panel, select the CONTRACT: TERM property, then set the value to the following formula:

```
=value("editTerm")
```

  click **Add Item**.

 e. Click **Save and Return**.

5. Define a rule to update the perpetual billing setting if the setting has been changed by a Customer Service Representative:

    a. Click the **Rules** tab, then click the **Define** tab, then click the **New...** button, and define the rule as follows:

        •   Leave Classification blank.

        •   Default Priority: 20

        This rule must fire after the start date has been set and before the end date can be calculated. Setting this rule's default priority to 20 ensures that this rule fires in the required sequence.

        •   Name: updatePerpetualBilling

        •   Description: Update the perpetual billing setting if the setting has been changed by a Customer Service Representative

        •   Rule triggered on: Success

    b. Click **Save and Edit**. The Edit Rule page expands. Write a new conditional relation as follows:

        •   Function1: length

        •   Property1: editPerpetual

        •   Operator: >

        •   Function2: literal

        •   Property2: 0

        •   If not specified: Fragment is false

    c. Click **Save and Return**.

    d. In the Assignment Actions panel, select the CONTRACT: PERPETUAL property, then set the value to the following formula:

        ```
        =${expand("editPerpetual")}
        ```

        click **Add Item**.

    e. Click **Save and Return**.

6. Click the **Attach** tab, then attach the following rules to the basicCableMaintenance model:

    •   updateContractEndDate

- updateContractTerm

- updateContractStartDate

- updatePerpetualBilling

Click **Save All Changes**.

Create the contractDetails Option Class

1. In the **General Info** tab of the basicCableMaintenance model, click **New Option Class**.

   The **New Option Class** tab displays. Enter the following information:

   - Name: contractDetails

   - Description: Contract Details

   - Click **Save and Edit**.

   The General Info tab for the contractDetails option class displays.

2. Click the **Display** tab and select the following values:

   - UI Control: User Entered Values

   - Layout: Alignment: Horizontal

   - Click **Save All Changes**.

3. Click the **Rules** tab and attach the rule hideUEVFields to the contractDetails option class, then click **Save All Changes**.

4. In the contractDetails **General Info** tab, create new Start Date, End Date, Term, and Perpetual Billing option items to contain the service contract details as shown in the following table.

TABLE 46. Basic Cable Maintenance Model Option Item Values

Option Item	Tab	Field	Values
Start Date Description: Start Date	**Display**:	User Entered Value Settings	Date: =value("CONTRACT: START_DATE")
		Assign Value to Property	editStart
End Date Description: End Date	**Display**	User Entered Value Settings	Date: =value("CONTRACT: END_DATE")
		Assign Value to Property	editEnd

TABLE 46. (Continued) Basic Cable Maintenance Model Option Item Values

Option Item	Tab	Field	Values
Term Description: Contract Term	**Display**	User Entered Value Settings	Integer
		Assign Value to Property	editTerm
	Properties	UI: UEV INTEGER VALUE	=value("CONTRACT: TERM")
Perpetual Billing Description: Perpetual Billing	**Display**	User Entered Value Settings	String: =${expand("CONTRACT: PERPETUAL")}
		Allowed Values	yes, no
		Hide 'None' Selection	Selected
		Assign Value to Property	editPerpetual

5. Compile and test the model. The result should be similar to the following figure.

.

FIGURE 456. Basic Cable Model Compile and Test Result

Note that because the contract start date has not been set, no value displays for the start and end date. However, you should be able to enter values for start dates and terms, click Update, and see the correct values.

Create the contractDisplay Option Class

1. In the **General Info** tab of the basicCableMaintenance model, click **New Option Class**.

    The **New Option Class** tab displays. Enter the following information:

    • Name: contractDisplay

    • Description: Display contract details

    • Click **Save and Edit**.

    The **General Info** tab for the contractDisplay option class displays.

2. Click the **Display** tab and select the following values:

- UI Control: Tabular Display

- Tabular Display Control Settings:

  - Column Headings: Start Date;End Date;Term;Monthly Price

  - Column Properties: dispStart;dispEnd;dispTerm;dispMonthlyPrice

  - Column Alignment: center;center;center;right

- Click **Save All Changes**.

3. In the **General Info** tab of the contractDisplay option class, click **New Option Item.**

   The **New Option Item** tab displays. Enter the following information:

   - Name: displayDetails

   - Description: Basic Cable 1 Year Contract

   - Click **Save and Edit**.

     The **General Info** tab of the displayDetails option item displays.

4. Click the **Properties** tab and attach the following properties:

   - dispEnd: =value("CONTRACT: END_DATE")

   - dispMonthlyPrice: =${expand("PRICE: MONTHLY",n/a,$#0.00)}

   - dispStart: =value("CONTRACT: START_DATE")

   - dispTerm: =${expand("CONTRACT: TERM", n/a, #0)} Year

   Click **Save All Changes**.

5. Compile and test the model. The result should be similar to the following figure.

FIGURE 457. Completed Basic Cable Model

Note that since the product has not shipped, there is no start or end date yet. No maintenance model is associated the basic cable service product yet, the product is not yet released, and the product catalog index has not been re-generated so the value for the monthly price is not correct. However, you should be able to make changes to the contract start date and term and see the updates.

Associate the Basic Cable Product with the Maintenance Model

1. In Product Master, navigate to the Cable category, then select the Basic Cable product.

2. Click the **...** button next to the Maintenance Model field and use the Hierarchical Entity Choose to browse to the basicCableMaintenance model. Select basicCableMaintenance, then click **Done**.

3. Change the Status field to Released.

4. Click **Save Changes**.

5. Re-generate the product index:

   In the Search Admin tab of the Product Master, enter your administrative password and click **Generate New**. This generates a new index that includes the new Cable category and Basic Cable product.

Test Ordering the Service Product

Before you start, ensure that the user with which you will test ordering the Basic Cable Service Product has the appropriate price lists and product entitlements to enable ordering the product.

1. Log in as a user with the Commerce role.

2. Navigate to the Cable category and add the Basic Cable product to your cart.

3. Confirm and then place the order.

4. Click the order number. The Order Details page displays.

5. Note that there is a Service Contracts button, indicating that a service contract was generated.

6. Click the Service Contracts button to view the details of the Basic Cable service contract.

Example: Creating an Expanded Cable Service Product

This section describes how to create an expanded cable service product. The expanded cable service product is configurable: it provides a choice of additional programming options. Since the expanded cable service product is more complex than the basic cable service product, it needs both a selling model and a maintenance model to generate a service contract. When users choose the expanded cable product from the catalog, the selling model displays the available options and prices. The user makes selections, places the order, and the selling model transfers the user's service contractible item selections to the maintenance model, which generates the service contract.

Note:	This section assumes the following items:
	• That your implementation includes the auxiliary price types Monthly and Cancellation. See the *Sterling Multi-Channel Selling Solution Implementation Guide* to learn how to add auxiliary price types to your implementation.
	• That you have set up price lists, assigned the price lists to partners, and provided appropriate entitlements to the partners.

The attributes of the expanded cable service product are as follows:

• $49.99 monthly service fee for a 1-year contract

• $49.99 initial fee

• $50 installation fee

• $300 cancellation fee

• Contract term is 1 year

- Start date defaults to the current date

- End date defaults to the current date plus one year

- Perpetual billing

- Entertainment packages: HBO, Cinemax, Showtime: $10 per month each

Since the selling model must transfer the user's service contractible items to the maintenance model, you define properties in both the selling and maintenance models at the model level to contain the user's product picks. In the selling model, you add the properties to the output properties list, and in the maintenance model, you add the properties to the input properties list. You add the service contractible items' properties to the maintenance model's output properties list to enable service contract generation. You define a string property, sellPicks, on the model group level to contain the user's additional programming picks.

The work of actually transferring the "pick properties" from the selling model to the maintenance model is done by a rule that you define, transferPicks. You define transferPicks on the maintenance model, and then attach the rule to each of the additional programming option items.

As you work through the example, do not use special characters to enter formulas or property values. In particular, do not use smart quotes.

The general steps are:

1. "Create the Expanded Cable Products" on page 742.

   a. Configurable products require both a selling model and a maintenance model, so we first create the overall expanded cable product as a normal product. After creating the expanded cable selling and maintenance models, we will return to the Product Master and attach the selling and maintenance models to the overall expanded cable product.

   b. Create the additional programming options as normal, service contractible items.

2. "Assign Products To Price Lists Using Sterling Pricing" on page 745.

   Assign the overall expanded cable service product and the additional programming options to price lists and set their one-time and auxiliary prices.

   Ensure that your organization and your customers have access to the price list and appropriate product entitlements. See CHAPTER 19, "Pricing Administration" and CHAPTER 13, "Product Entitlement" for more information.

3. "Create the Cable Model Group" on page 747. Define a string property, sellPicked, on the cable model group node.

4. "Create the Expanded Cable Selling Model" on page 748:

   a. Attach the CONTRACT properties to the expanded cable model.

   b. Define and attach the output properties for contract term, start and end date, and perpetual billing.

   c. Add these properties and the sellPicked property to the output properties list.

   d. Create the selling model option classes and option items to control the display and selection of expanded basic cable service options.

   e. Write a rule to hide entry fields if the user is not a Customer Service representative.

   f. Write rules to set the values of the CONTRACT properties on the expanded cable model's root node and to transfer any changes in the CONTRACT properties from the user-entered value fields to the root node.

5. "Create the Expanded Cable Maintenance Model" on page 758:

   a. Since the maintenance model requires the same option classes, properties, and option items as the selling model, copy the selling model to create the expanded cable maintenance model.

   b. Change the output properties to input properties in the maintenance model.

   c. Write a rule, transferPicks, to transfer the picks from the selling model to the maintenance model. The rule should fire on success during service contract creation, which is why you write the rule in the maintenance model rather than the selling model. Attach the rule to each additional programming option item.

6. "Associate the Selling and Maintenance Models with the Expanded Cable Product" on page 760.

7. "Test the Expanded Basic Cable Service Product" on page 761.

Create the Expanded Cable Products

Create the overall expanded cable product, and then create the products for each of the entertainment offerings: HBO, Cinemax, and Showtime. The overall expanded

cable product is configurable since users can select the additional programming options that they want. The additional programming options are normal products since they are not configurable themselves, but they are service contractible items since the user pays for them each month. Since it does not make sense to buy the additional programming options if the user does not buy the expanded basic cable service, you also specify that the additional programming options cannot be sold separately.

Because configurable products require a selling model, we first create the expanded cable product as a normal product. After creating the expanded cable selling model, we will return to the Product Master and attach the selling and maintenance models to the overall expanded cable product.

To Create the Expanded Cable Product

1. Navigate to the Product Master and, if the Cable category does not exist, then create it.

2. In the **Cable** category, click the **Product** tab, and then click **Create New Product**.

3. Enter the following information:

    • Product ID: MX-ExCable

    • Product Name: Expanded Cable

    • Description: Expanded Cable Service

    • Component Type: normal

    • Check the Service Item check box

    For now, leave the Maintenance Model field blank and leave the Status field as In Creation.

4. Click **Save and Return**. The MX-ExCable product is listed in the Product panel.

To Create the Additional Programming Products

Next, create the products for the additional programming products in the Cable category.

1. Create the HBO product.

    a. In the Cable category's **Product** tab, click **Create New Product** and enter the following information:

•   Product ID: HBO

•   Product Name: HBO

•   Description: HBO Movie Channel

•   Component Type: Normal

•   Check the Service Item check box

Leave the Maintenance Model field blank and leave the Status field as In Creation. Click **Save and Return** to add the product to the Cable category.

The HBO product is listed in the Product panel.

b.   In the Product panel, click HBO, then in the **Sales** tab, check the Cannot be Sold Separately check box.

c.   Click **Save Changes**, then return to the Cable category's **Products** tab.

2.   Create the Cinemax product.

a.   In the Cable category's **Product** tab, click **Create New Product** and enter the following information:

•   Product ID: Cinemax

•   Product Name: Cinemax

•   Description: Cinemax Movie Channel

•   Component Type: Normal

•   Check the Service Item check box

Leave the Maintenance Model field blank and leave the Status field as In Creation. Click **Save and Return** to add the product to the Cable category.

The Cinemax product is listed in the Product panel.

b.   In the Product panel, click Cinemax, and then in the **Sales** tab, check the Cannot be Sold Separately check box.

c.   Click **Save Changes**, then return to the Cable category's **Products** tab.

3.   Create the Showtime product.

a.   In the Cable category's **Product** tab, click **Create New Product** and enter the following information:

- • Product ID: Showtime

- • Product Name: Showtime

- • Description: Showtime Movie Channel

- • Component Type: Normal

- • Check the Service Item check box

Leave the Maintenance Model field blank and leave the Status field as In Creation. Click **Save and Return** to add the product to the Cable category.

The Showtime product is listed in the Product panel.

b. In the Product panel, click Showtime, and then in the **Sales** tab, check the Cannot be Sold Separately check box.

c. Click **Save Changes**.

Assign Products To Price Lists Using Sterling Pricing

You next assign the cable products to a price list and assign prices to them.

1. In the Pricing Administration panel of the home page, click **Price Lists** to open the Price Lists page, and then click the price list to which the cable products should be added. In this example, we use the Enterprise Master List.

The price list header page displays.

2. Click the **Assign Products** tab.

The Assign Products page displays.

3. In the Find panel, search for products in the Cable category.

The Cable products display, similar to the following figure

FIGURE 458. Cable Products Display

4.   Assign prices as follows:

TABLE 47.   Cable Products List Price Assignments

Product ID (SKU)	Supplier	List Price
MX-ExCable	Matrix Solutions	99.99
Cinemax	Matrix Solutions	0.00
HBO	Matrix Solutions	0.00
Showtime	Matrix Solutions	0.00

In this release, all products in the catalog must be associated with a list price, or one-time price. Products that are associated with auxiliary price types must also have a one-time price, even if the one-time price is 0.

The additional programming options are available for a monthly fee and are not associated with one-time prices, so we set the one-time price to 0.

The resulting price list is similar to the following figure.

FIGURE 459. Expanded Cable Price List

5. Click **Assign,** then click **Edit Items** to add auxiliary prices as follows:

TABLE 48. Cable Products Auxiliary Price Assignments

Product ID (SKU)	Auxiliary Price(s)
MX-ExCable	Monthly: 49.99
	Cancellation: 300.00
Cinemax	Monthly: 10.00
HBO	Monthly: 10.00
Showtime	Monthly: 10.00

Create the Cable Model Group

1. Navigate to the Visual Modeler and, if the Cable Products model group does not exist, then create it as follows:

    • Name: Cable Products

    • Description: Cable Product Models

Click **Save and Edit**. The Cable Products model group displays in the Model Groups navigation panel.

2. In the **Properties** tab of the Cable Products model group, create a new string property, sellPicked. Click **Add**, and then click **Save All Changes**.

Create the Expanded Cable Selling Model

3. In the **General Info** tab of the Cable Products model group, click **New Model**.

    The **New Model** tab displays.

    a. Enter the following information:

        •   Name: expandedCableSelling

        •   Description: Expanded Cable - 1 year contract

        •   Assigned Product ID: browse to select the MX-ExCable product created earlier. Since the product ID is also the product SKU and in this case is somewhat cryptic, we will not use the product ID and name for the name and ID of the model. Using a separate name for the model avoids confusion if the same model is used for several products.

    b. Click **Save and Edit**.

Add and Define the Service Contract Properties

1. In the **Properties** tab, attach the following properties:

    •   CONTRACT: PERPETUAL

        Set the value of CONTRACT: PERPETUAL to "yes".

    •   CONTRACT: START_DATE

        Do not set a default value.

    •   CONTRACT: TERM

        Set the value of CONTRACT: TERM to 1.

    Click **Save All Changes**.

2. In the **Properties** tab, click **New Property** and add the following new properties to the basicCableSelling model. When you define the new properties, click **Define**. Do not attach the new properties to the model.

    •   dispEnd: Type: Date

    •   dispMonthlyPrice: Type: String

    •   dispStart: Type: Date

    •   dispTerm: Type: String

    •   editEnd: Type: Date

- editPerpetual: Type: String

- editStart: Type: Date

- editTerm: Type: Number

Click **Save All Changes**.

3. In the **Input/Output** tab of the **Properties** tab, add the following properties to the Input Properties list:

- CONTRACT: END_DATE

- CONTRACT: PERPETUAL

- CONTRACT: START_DATE

- CONTRACT: TERM

4. In the **Input/Output** tab of the **Properties** tab, add the following properties to the Output Properties list:

- CONTRACT: END_DATE

- CONTRACT: PERPETUAL

- CONTRACT: START_DATE

- CONTRACT: TERM

- sellPicked

Define Rules to Manage the Service Contract

In this section, you define the rules that manage the service contract. All rules are created in, and attached to, the root node of the Expanded Cable Service model.

1. Define a rule to hide user-entered values if the user is not a customer service representative.

   a. Click the **Rules** tab, then click the **Define** tab, then click the **New...** button, and define the rule as follows:

      - Leave Classification blank

      - Leave Default Priority set to 50

      - Name: hideUEVFields

      - Description: Hide entry fields if the user is not a Customer Service Representative

- Rule triggered on: Failure

b. Click **Save and Edit**. The Edit Rule page expands. Write a new conditional relation as follows:

- Function1: value

- Property1: USER: ROLES

- Operator: contains

- Function2: literal

- Property2: Enterprise.CustomerServiceRepresentative

- If not specified: Fragment is false

c. Click **Save and Return**.

d. In the Assignment Actions panel, select the _isViewable property with value 0, then click **Add Item**.

e. Click **Save and Return**.

2. Define a rule to update the contract start date if the start date has been changed by a Customer Service Representative:

a. Click the **Rules** tab, then click the **Define** tab, then click the **New...** button, and define the rule as follows:

- Leave Classification blank

- Default Priority: 20

This rule must fire after the start date has been set and before the end date can be calculated. Setting this rule's default priority to 20 ensures that this rule fires in the required sequence.

- Name: updateContractStartDate

- Description: Update the contract start date if the start date has has been changed by a Customer Service Representative

- Rule triggered on: Success

b. Click **Save and Edit**. The Edit Rule page expands. Write a new conditional relation as follows:

- Function1: value

- Property1: editStart

- Operator: >

- Function2: literal

- Property2: 0

- If not specified: Fragment is false

c. Click **Save and Return**.

d. In the Assignment Actions panel, select the CONTRACT: START_DATE property, then set the value to the following formula:

```
=value("editStart")
```

e. Click **Add Item**.

f. Click **Save and Return**.

3. Define a rule to update the contract term if the start date has been changed by a Customer Service Representative:

a. Click the **Rules** tab, then click the **Define** tab, then click the **New...** button, and define the rule as follows:

- Leave Classification blank

- Default Priority: 20

This rule must fire after the start date has been set and before the end date can be calculated. Setting this rule's default priority to 20 ensures that this rule fires in the required sequence.

- Name: updateContractTerm

- Description: Update the contract term if the term has been changed by a Customer Service Representative

- Rule triggered on: Success

b. Click **Save and Edit**. The Edit Rule page expands. Write a new conditional relation as follows:

- Function1: value

- Property1: editTerm

- Operator: >

- Function2: literal

- Property2: 0

- If not specified: Fragment is false

c. Click **Save and Return**.

d. In the Assignment Actions panel, select the CONTRACT: TERM property, then set the value to the following formula:

```
=value("editTerm")
```

Click **Add Item**.

e. Click **Save and Return**.

4. Define a rule to update the contract end date:

a. Click the **Rules** tab, then click the **Define** tab, then click the **New...** button, and define the rule as follows:

- Leave Classification blank

- Default Priority: 30

The CONTRACT: END DATE property depends upon the value of the start date. The value of the start date may be changed depending by the customer service representative. If changes have been made, then the start date value must be updated before end date calculations can be made. Setting this rule's default priority to 30 ensures that the contract end date is always set last, after all other rules are fired.

- Name: updateContractEndDate

- Description: Update the contract end date based on the contract start date and term

- Rule triggered on: Success

b. Click **Save and Edit**. The Edit Rule page expands. Write a new conditional relation as follows:

- Function1: value

- Property1: CONTRACT: START_DATE

- Operator: >

- Function2: literal

- Property2: 0

- If not specified: Fragment is false

Click **Save and Return**.

    c.   Select "and" from the conditional relation drop-down list.

    d.   Write a new conditional relation as follows:

- Function1: value

- Property1: CONTRACT: TERM

- Operator: >

- Function2: literal

- Property2: 0

- If not specified: Fragment is false

    e.   Click **Save and Return**.

    f.   In the Assignment Actions panel, select the CONTRACT: END_DATE property, then set the value to the following formula:

```
 =DateFunctions.addYear(value("CONTRACT: START_DATE"),
value("CONTRACT: TERM"))
```

       Click **Add Item**.

    g.   Click **Save and Return**.

5.   Define a rule to update the perpetual billing setting if the setting has been changed by a Customer Service Representative:

    a.   Click the **Rules** tab, then click the **Define** tab, then click the **New...** button, and define the rule as follows:

- Leave Classification blank

- Default Priority: 20

       This rule must fire after the start date has been set and before the end date can be calculated. Setting this rule's default priority to 20 ensures that this rule fires in the required sequence.

- Name: updatePerpetualBilling

- Description: Update the perpetual billing setting if the setting has been changed by a Customer Service Representative

- Rule triggered on: Success

    b.   Click **Save and Edit**. The Edit Rule page expands. Write a new conditional relation as follows:

- Function1: length

- Property1: editPerpetual

- Operator: >

- Function2: literal

- Property2: 0

- If not specified: Fragment is false

c. Click **Save and Return**.

d. In the Assignment Actions panel, select the CONTRACT: PERPETUAL property, then set the value to the following formula:

```
=${expand("editPerpetual")}
```

Click **Add Item**.

e. Click **Save and Return**.

6. Click **Save All Changes**.

7. Click the **Attach** tab, then attach the following rules to the expandedCableSelling model:

- updateContractEndDate

- updateContractTerm

- updateContractStartDate

- updatePerpetualBilling

Click **Save All Changes**.

Create the contractDetails Option Class

1. In the **General Info** tab of the expandedCableSelling model, click **New Option Class**.

The **New Option Class** tab displays. Enter the following information:

- Name: contractDetails

- Description: Contract Details

- Click **Save and Edit**.

The **General Info** tab for the contractDetails option class displays.

2. Click the **Display** tab and select the following values:

- UI Control: User Entered Values

- Layout: Alignment: Horizontal

- Click **Save All Changes**.

3. Click the **Rules** tab and attach the hideUEVFields rule.

4. In the **General Info** tab, create new Start, End, Term, and Perpetual Billing option items and assign properties and values to them as shown in the following table.

TABLE 49. **Selling Model Option Item Properties andValues**

Option Item	Tab	Field	Values
Start Description: Start Date	**Display**:	User Entered Value Type	Date =value("CONTRACT: START_DATE")
		Assign Value to Property	editStart
End Description: End Date	**Display**	User Entered Value Settings	Date =value("CONTRACT: END_DATE")
		Assign Value to Property	editEnd
Term Description: Contract Term	**Display**	User Entered Value Settings	Integer
		Assign Value to Property	editTerm
	Properties	UI: UEV INTEGER VALUE	=value("CONTRACT: TERM")
Perpetual Billing Description: Perpetual Billing	**Display**	User Entered Value Settings	String: =${expand("CONTRACT: PERPETUAL")}
		Hide 'None' Selection	Selected
		Allowed Values	yes, no
		Assign Value to Property	editPerpetual

Create the contractDisplay Option Class

1. In the **General Info** tab of the expandedCableSelling model, click **New Option Class**.

    The **New Option Class** tab displays. Enter the following information:

    - Name: contractDisplay

    - Description: Contract Display

- Click **Save and Edit**.

    The General Info tab for the contractDisplay option class displays.

2. Click the **Display** tab and select the following values:

    - UI Control: Tabular Display

    - Tabular Display Control Settings:

        - Column Headings: Start Date;End Date;Term;Monthly Price

        - Column Properties: dispStart;dispEnd;dispTerm;dispMonthlyPrice

        - Column Alignment: center;center;center;right

    - Click **Save All Changes**.

3. In the **General Info** tab of the contractDisplay option class, click **New Option Item**.

    The **New Option Item** tab displays. Enter the following information:

    - Name: displayDetails

    - Description: Expanded Cable -1 Year Contract

    Click **Save and Edit**.

    The **General Info** tab of the displayDetails option item displays.

4. Click the **Properties** tab and attach the following properties:

    - dispEnd: =value("CONTRACT: END_DATE")

    - dispMonthlyPrice: =${expand("PRICE: MONTHLY",n/a,$#0.00)}

    - dispStart: =value("CONTRACT: START_DATE")

    - dispTerm: =${expand("CONTRACT: TERM",n/a,#0)}

    Click **Save All Changes**.

Create the addlProgOptions option class

1. In the **General Info** tab of the expandedCableSelling model, click **New Option Class**.

    The **New Option Class** tab displays. Enter the following information:

    - Name: addlProgOptions

    - Description: Additional Programming Options

- Click **Save and Edit**.

  The General Info tab for the addlProgOptions option class displays.

2. Click the **Display** tab and select the following values:

   - UI Control: Multi-selectTabular Display

   - Tabular Display Control Settings:

     - Column Headings: Monthly Cost

     - Column Properties: dispMonthlyPrice

     - Column Alignment: right

   - Click **Save All Changes**.

3. In the **General Info** tab, create new option items for each of the additional programming options: HBO, Cinemax, and Showtime, as shown in the following table. Click **Save All Changes** after entering information for each tab.

TABLE 50. **addlProgOptions Option Item Values**

Option Item	Tab	Field	Value
HBO	**General Info**	Assigned Product ID	HBO
	Display	Ignore in Quote	Not selected
	Properties	dispMonthlyPrice	=${expand("PRICE: MONTHLY", n/a, $#0.00)}
		sellPicked	HBO
Cinemax	**General Info**	Assigned Product ID	Cinemax
	Display	Ignore in Quote	Not selected
	Properties	dispMonthlyPrice	=${expand("PRICE: MONTHLY", n/a, $#0.00)}
		sellPicked	Cinemax
Showtime	**General Info**	Assigned Product ID	Showtime
	Display	Ignore in Quote	Not selected
	Properties	dispMonthlyPrice	=${expand("PRICE: MONTHLY", n/a, $#0.00)}
		sellPicked	Showtime

Compile and Test the Expanded Cable Selling Model

If you compile and test the expanded cable selling model, the results should be similar to the following figure:

FIGURE 460. Expanded Cable Selling Model Compile and Test

Note that since the product has not been shipped, there is no start or end date yet. No maintenance model has been associated with the expanded cable service product, the product is not yet released and the catalog product index has not been rebuilt, so the values you see in the model test are not correct. However, you should be able to make changes to the start date and term and see the updates.

Create the Expanded Cable Maintenance Model

This section describes how to create the expanded cable maintenance model. Since the maintenance model requires the same option classes, properties, and option items as the expanded cable selling model, you copy the selling model to create the maintenance model, then modify the model information for maintenance purposes.

1. In the Visual Modeler, navigate to the Cable Products model group and select the expandedCableSelling model.

2. In the menu bar, click the Copy icon:

3. Click the **Browse** button and select the Cable Products model group from the Hierarchical Entity Chooser, then click **Done**.

4. Enter expandedCableMaintenance as the Destination Name.

5. Click **Copy**, then click **Close**.

    The expandedCableMaintenance model displays in the list of Cable Products models.

6. Edit the expandedCableMaintenance model as follows:

a. In the **Properties** tab, click the **Attach** tab, then remove CONTRACT: PERPETUAL, CONTRACT: START_DATE, and CONTRACT: TERM. The values for these properties will come from the selling model so there is no need to set them in the maintenance model.

b. In the **Properties** tab, click Input/Output, then remove sellPicked from the Output Properties list.

c. In the **Rules** tab, click the **Define** tab, then click the **New**... button to define a new rule, transferPicks, to transfer the user's additional programming option selections from the selling to the maintenance model:

- Leave Classification blank

- Leave Default Priority as 50

- Name: transferPicks

- Description: Transfer user picks from the selling model to the maintenance model.

- Rule triggered on: Success

- Firing Phases: Service Contract Creation

d. Click **Save and Edit.** The **New Rule** page displays, showing additional fields. Define a new conditional relation as follows:

- Function1: value

- Property1: sellPicked

- Operator: =

- Function2: propval

- Property2: _sku

- If not specified: Fragment is false

e. Click **Save and Return**.

f. You now define an expansion action to indicate that the current option item was picked. Click **Formula** to expand the Formula panel. In the Expansion Actions section, enter the following values:

- Formula: 1

- Min: 0

- Max: 1

- • Qty: 1

- • Item: .

  The value in the Item field is a period. These values mean that if the
  number of picks is between 0 and 1, pick 1 current option item. So if
  the current option item is the HBO product, then pick one HBO product
  and add it to the service contract.

  Click **Add Item**.

  g. Click **Save and Return**.

  h. Click **Save All Changes**.

7. Attach the transferPicks rule to the HBO, Cinemax, and Showtime option
   items.

Test the expandedCableSelling and expandedCableMaintenance Models

Compile the expandedCableMaintenance model, then navigate to the
expandedCableSellingModel. Compile and test the selling model, changing the
values for start date and term and selecting among the additional programming
options. When you are done:

1. Click the **Add** button

2. Click **Launch New Model**, then choose the expandedCableMaintenance
   model from the drop-down list.

3. Click **Pass Current State to the Model**.

4. Click the **Launch** button.

The expandedCableMaintenance model should display with the contract
information that you entered in the selling model.

Associate the Selling and Maintenance Models with the Expanded Cable Product

Now that the selling and maintenance models are complete, associate them with the
MX-ExCable expanded cable product and release the expanded cable service
products for sale.

1. Navigate to the Cable product category in the Product Master.

2. Edit the MX-ExCable Expanded Cable product as follows:

   - • Component Type: Configurable

- Selling Model: click the **Browse** button and use the Hierarchical Entity Chooser to select the expandedCableSelling model

- Maintenance Model: click the **Browse** button and use the Hierarchical Entity Chooser to select the expandedCableMaintenance model

- Status: Released

- Click **Save Changes**

3. Change the Status for the HBO, Cinemax, and Showtime products to Released.

4. Rebuild the product index.

Test the Expanded Basic Cable Service Product

Rebuild the product index and test the products.

Sterling Promotions Administration

This chapter covers tasks involved in serving promotions. The promotions feature is available if you purchased the Sterling Promotions application as part of your implementation of the Sterling Multi-Channel Selling Solution.

"Serving Promotions" on page 41 provides an overview of Sterling Promotions in the Sterling Multi-Channel Selling Solution.

Managing Promotions

Promotion Administration List Page

You manage your promotions by clicking **Promotions** in the Pricing Administration panel on the Sterling Multi-Channel Selling Solution home page. The Promotion Administration List page displays.

FIGURE 461. Promotion Administration List Page

You can sort the Promotion Lists page by any column (except for Actions and Products) by clicking the column title. The page redisplays with the table sorted based on the selected column.

The Promotion Administration List page consists of the fields listed in the following table.

TABLE 51. Columns in the Promotion Administration List Page

Column	Description
ID	ID number assigned by the Sterling Multi-Channel Selling Solution to identify the promotion uniquely.
Name	Name of the promotion.
Actions	Enables promotion administrators to duplicate or delete promotions.
View Count	Number of times a customer clicks the promotion icon and views the promotion.
Add to List Count	Number of times **Add to List** is clicked in the promotions window.
Priority	Priority of the promotion. See "Promotion Control" on page 43 for an explanation of how priority is used.

Column	Description
Product ID	The identification number for the item. The entry in this column can take one of three forms: a single product ID, a product ID followed by three dots (...) indicating more than one product ID, or an asterisk (*) indicating the promotion is linked with all products.
	If you enter "PORTAL", this promotion displays when the Promotions widget is added to the end-user home page.
	If you enter "CATALOG", this promotion displays when users visit the catalog landing page: this is the page that displays when users click **All Categories**.
Date Range	The date the promotion begins appearing (Start Date) through the date when the promotion ceases appearing (End Date).
Enabled	Promotion is enabled or disabled.

You can specify the parameters for some of these columns by configuring the business rules for promotions. See CHAPTER 39, "Business Rules Administration".

Managing Promotions

When the Sterling Multi-Channel Selling Solution is installed for an enterprise, the tasks of an enterprise promotion administrator are:

- "To Create or Duplicate a Promotion" on page 765

- "To Modify a Promotion" on page 774

- "To Delete a Promotion" on page 775

- "To Disable a Promotion" on page 775

To Create or Duplicate a Promotion

1. Click **Promotions** in the Pricing Administration panel on the Sterling Multi-Channel Selling Solution home page.

   The Promotion Administration List page displays, similar to the following figure.

FIGURE 462. Promotion Administration List Page

2. Create or duplicate a promotion:

- To create a promotion, click **New**.

- To duplicate a promotion, identify the promotion you want to duplicate. Check its check box, click **Copy**, then click the link to the new promotion.

  The Promotion Detail page displays.

FIGURE 463. Promotion Detail Page

3. In the General Info on page panel:

    a.   Enter a name for the promotion.

        The name identifies the promotion on the Promotion List page; it is not displayed to customers.

    b.   (Optional) Enter a short description.

        The short description displays when the customer places the mouse over the promotion icon. If you associate an image with the promotion, the description displays when the image displays.

    c.   Enter one of the following:

        •   The name of a GIF or JPG file for an image to use with the promotion. Click **Browse...** to find and select the file, then click **Upload**. If you entered a description, the description appears with the image.

        •   A URL for a page that provides the promotion text. The URL must include "http://" or "https://". The URL takes precedence over either a

description or an image. For example, if you enter both an image and a URL, the promotion displays the URL rather than the image.

Click **Preview** to see how the last saved version of this promotion will display to your customers.

4. In the Promotion Controls panel:

   a. Enter a date range during which the promotion will appear. You can use the calendar widgets to specify the Start Date and End Date.

   b. Select a priority level from the drop-down list. The lower the number, the higher the priority.

   c. Select a locale for the promotion. Only users whose current locale is the same as your selection will see the promotion.

   d. Check the **Enabled** check box.

5. Assign the promotion to one or more products. You can enter product IDs directly in the Product ID field, or use the Hierarchical Entity Chooser to browse the product hierarchy.

   • To assign the promotion to a single product, enter the product ID, then click **Add**.

   • To assign the promotion to multiple products, enter multiple product IDs. You can enter a single ID and click **Add**, then repeat the process for each ID, or you can enter multiple IDs separated by a comma, then click **Add**.

   • To assign the promotion to all products, enter * .

6. Enter a promotion control product ID in the Product ID field. Promotion control product ID's allow you to specify the catalog pages and the merchandising area(s) on those pages on which to display a promotion. The following are the possible formats for promotion control product ID's:

   a. *<KEYWORD>:<itemKey>:<property>*

   The *KEYWORD* indicates the type of the promotion: CATEGORY for an entire category of products, or PRODUCT for specific product items. The *itemKey* is the product category assigned to this promotion. The property indicates the merchandising area of the catalog page in which the promotion will appear. The promotion control product ID elements are separated by colons (:).

b. *<location>*

The *location* indicates in which merchandising area of the catalog landing page the promotion will appear, for example, the Special Offers area or the Featured Products area.

TABLE 52. Promotion Control Product ID's

Product ID Pattern	Description
CATEGORY:*<itemKey>*:CategoryMainPromo	This promotion appears in the main merchandising area of the *itemKey* category page.
CATEGORY:*<itemKey>*:CategoryFeaturedProducts	This promotion appears in the Featured Products merchandising area of the *itemKey* category page.
CATEGORY:*<itemKey>*:TopSeller	This promotion appears in the Top Sellers merchandising area of the *itemKey* category page.
CATEGORY:*<itemKey>*:NewArrival	This promotion appears in the New Arrivals merchandising area of the *itemKey* category page.
CATEGORY:*<itemKey>*:CategoryOffers	This promotion appears in the Special Offers merchandising area of the *itemKey* category page.
PRODUCT:*<productID>*:ItemPromo	This promotion appears in the Item Promotions merchandising area of the *productID* catalog page.
PRODUCT:*<productID>*:ItemCrossSell	This promotion appears in the cross sell ("You may also like") merchandising area of the *productID* catalog page.
HomeMainPromo	This promotion appears in the main merchandising area of the catalog landing page.

TABLE 52. **Promotion Control Product ID's (Continued)**

Product ID Pattern	Description
HomeFeaturedCategory	This promotion appears in the Featured Categories merchandising area of the catalog landing page.
HomeFeaturedProduct	This promotion appears in the Featured Products merchandising area of the catalog landing page.
HomeSpecialOffers	This promotion appears in the Special Offers merchandising area of the catalog landing page.
CARTPROMO	This promotion appears in the merchandising area of the user's Shopping Cart page.

- To get category keys, click Product Master in the Product and Catalog Administration panel, then navigate the Product Category hierarchy to locate the product(s) to feature in the promotion. Place the cursor over a category link, then check your browser's status bar. A line such as the following displays:

```
javascript:sellitem('catKey','pc')
```

where *catKey* is the category key.

- Leave the field blank. If you do this, the promotion is not assigned to any product. You can still create the promotion, but before it can be used you must assign a product ID (or use *) to activate it.

To remove a product ID from a promotion, select that product ID and click **Remove**.

7. To allow customers to add promotion item(s) to a cart from the separate promotions window, complete the following fields in the Optional Add To List Properties panel:

   a. Enter the product ID to be added (for the promotion item) in the Add to Cart Product ID field.

b. Enter the quantity of that product to be added to the cart in the Add to Cart Quantity field.

Note:	These fields appear only if the appropriate permissions are set during implementation.

8. To enable customers to click a promotion and go directly to the product category page (also called "click through"), complete both of the following fields:

a. Enter the keyword CATEGORY followed by the category key in the Add to Cart Product ID field. The format is:

CATEGORY:*<categoryKey>*

For example, to enable customers to click through to the digital cameras catalog page, enter:

CATEGORY:1013

b. Enter the quantity of that product (to be added to the cart) in the Add to Cart Quantity field.

9. Click **Create**. The promotion is created and the Promotion Details page redisplays with an additional tab, **Target Customers,** similar to the following figure.

FIGURE 464. Promotions Detail Page With Target Customers Tab

Note that there are now **Save** and **Preview** buttons on the page.

The promotion does not apply to any users until you either associate one or more customer segments with it, or apply the promotion to all users. See "To Apply a Promotion to Users" on page 772 for details.

To Apply a Promotion to Users

Promotions do not become active until they apply to users. You can apply a promotion to all users, or associate one or more customer segments with the promotion.

1. On the Promotion Details page, click the **Target Customers** tab. The Target Customers page displays, similar to the following figure.

FIGURE 465. Target Customers Tab

2. To apply this promotion to all users, click the **All Users** radio button.

3. To apply this promotion to one or more customer segments:

    a. Click the **Selected Customer Segments** radio button.

    b. Click **Browse** to browse the list of available customer segments. A Segment Picker pop-up displays.

FIGURE 466. Segment Picker Pop-Up

> You can search for segments by name, effective date, or status. To remove a segment from your list, click the segment name, then click **Remove**.

c. To select a customer segment, click the segment name. The segment name displays in the Segment Picker text box. When you finish selecting segments, click **Done**.

4. Click **Save**.

To Modify a Promotion

1. Click **Promotions** in the Pricing Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. On the Promotion Administration List page, click the promotion ID number from the current list of promotions.

FIGURE 467. Promotion Detail Page

3. On the Promotion Detail page, modify the appropriate entries.

4. Click **Save**.

You can delete a promotion (see "To Delete a Promotion" on page 775), or you can disable it by leaving the **Enabled** check box unchecked. This renders the promotion unusable until you want to reuse it.

To Delete a Promotion

1. Click **Promotions** in the Pricing Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. Identify the promotion you want to delete, check its check box, and click **Delete**.

To Disable a Promotion

1. Click **Promotions** in the Pricing Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. Identify the promotion you want to disable and click the link to its detail page.

3. On the Promotion Detail page, uncheck the **Enabled** check box.

4. Click **Save**.

Managing Features in Sterling Advisor

Features are attributes of products, and are created as part of a feature hierarchy. When your customers use your questionnaire, Sterling Advisor uses features to identify the products that interest them. This chapter describes the feature hierarchy and how to create it.

CHAPTER 4, "Introduction to Sterling Advisor" provides a description of Sterling Advisor and how it works as well as a short tutorial.

Working with Feature Type Groups

When you create a feature type, you can assign the feature type to a feature type group. When you build your feature hierarchy, create feature type groups first. How many feature type groups you create depends on how many different feature types you have, and how many of these feature types are related.

To Create a Feature Type Group

1. Click **Advisor Flows & Questionnaires** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. In the Navigation panel, click the Feature Type Groups link to display the Feature Type Groups List Panel.

FIGURE 468. Feature Type Groups List Panel

3. In the Feature Type Groups List panel, click **Create Feature Type Group** to display the New Feature Type Group Panel.

FIGURE 469. New Feature Type Group Panel

4. In the New Feature Type Group panel, enter a name and description for this feature type group.

5. Click **Save All and return to List**.

   • You return to the Feature Type Groups List panel.

- The new feature type group appears in the List of Feature Type Groups list box.

- The new feature type group appears in the Navigation panel.

6. In the Navigation panel, click the new feature type group's link to display its detail panel.

FIGURE 470. New Feature Type Group Detail Panel

7. To assign resources, click the **Resources** tab.

Assigning resources is optional and can be done at any time. If you do not want to assign a resource now, skip this step and go to Step 8.

For each resource you want to assign, follow the procedure in "To Assign a Resource to an Entity" on page 797.

8. Click **Save All Changes**.

To Modify a Feature Type Group

1. Click **Advisor Flows & Questionnaires** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. Click the folder next to the Feature Type Groups link to expand the tree.

3. Click the link of the feature type group that you want to modify.

4. In the **General** tab make any necessary changes to the Name, and Description of the feature type group, and click **Save All Changes**.

5. Click the **Resources** tab to assign or unassign resources.

   See "Resources and Resource Types" on page 118 for more information about resources. The assignment of resources is optional, and can be done at any time. If you do not want to assign or unassign a resource now, then skip this step and go to Step 6.

   • For each resource you want to assign, follow the procedure "To Assign a Resource to an Entity" on page 797.

   • For each resource you want to unassign, follow the procedure "To Unassign a Resource from an Entity" on page 798.

6. Click **Save All Changes**.

To Delete a Feature Type Group

Deleting a feature type group automatically deletes any feature type that has that feature type group as an attribute.

1. Click **Advisor Flows & Questionnaires** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. In Sterling Advisor Administration, click the Feature Type Group's link to display the Feature Type Groups List Panel.

3. In the List of Feature Type Groups list box, highlight the feature type group you want to delete, and click **Delete**.

   The feature type group disappears from both the list box and the navigation panel.

4. Click **Save All Changes**.

FIGURE 471. Feature Type Groups List Panel

Working with Feature Types

After you create your feature type groups, create your feature types. Feature types have the following properties:

- Name

  The name of the feature type. Your customers see this name.

- Description

  This is a description for internal use. Your customers never see this text.

- Row type

  Row type determines how the features within the feature type display when customers compare products that have this feature type.

  - **Multiple Feature Row** specifies that all of the features within this feature that apply to the product display in a single cell of the comparison table.

  - **Single Feature Row** specifies that each feature within this feature type displays in its own row in the comparison table.

- Feature type group

  This is where you attribute a specific feature type group to the feature type. This is optional.

You can also specify whether or not to include the features associated with this feature type in product comparisons. Check **Comparable** to include the features. Check **Incomparable** to exclude the features.

To Create a Feature Type

1. Click **Advisor Flows & Questionnaires** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. In the Navigation Panel, click the Feature Types link to display the Feature Types List Panel.

FIGURE 472. Feature Types List Panel

3. Click **Create Feature Type** to display the New Feature Type Panel.

FIGURE 473. New Feature Type Panel

4. Type a name and description for the new feature type in the appropriate fields.

5. In the Row Type drop-down list, choose the row type to apply to this feature type.

    Row type determines how the features within the feature type will be displayed when products having this feature type are compared.

    •   **Multiple Feature Row** specifies that all of the features within this feature type that apply to the product will appear in a single cell of the comparison table.

    •   **Single Feature Row** specifies that each feature within this feature type will have its own row in the comparison table.

6. (Optional) In the Feature Type Group drop-down list, choose the feature type group to attribute to this feature type.

7. Check **Use to compare** to include all the features associated with the feature type in any product comparisons.

    The **Use to compare** check box determines whether or not the features belonging to this type are included in a product comparison. When your customer uses your questionnaire to find products, they can select two or

more products from the product list and compare them. Sterling Advisor generates and displays a *product comparison table* that lists the products and their features, allowing your customer to compare the products.

Note:	If you check **Use to compare** for a feature, ensure that **Use to compare** is also checked for its feature type.

8. Click **Save All and Return to List**.

   • The Feature Types List panel displays.

   • The new feature type appears in the List of Feature Types list box.

   • The new feature type appears in the Navigation panel.

9. In the Navigation panel, click the new feature type's link to display its detail panel.

10. Click the **Features** tab.

    Create the features that need to exist within this feature type, using the procedure described in "To Create a Feature" on page 787.

FIGURE 474. Feature Type Detail Panel: Features Tab

11. Click the **Resources** tab.

    See "Resources and Resource Types" on page 118 for more information about resources. The assignment of resources is optional, and can be done at any time. If you do not want to assign a resource now, skip this step and go to Step 12.

        • For each resource you want to assign, follow the procedure "To Assign a Resource to an Entity" on page 797.

        • For each resource you want to unassign, follow the procedure in "To Unassign a Resource from an Entity" on page 798.

12. Click **Save All Changes**.

To Modify a Feature Type

1. Click **Advisor Flows & Questionnaires** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. Click the folder next to the Feature Types link to display all existing feature types.

3. Click the link of the feature type that you want to modify to display its detail panel.

4. In the **General** tab make any necessary changes and click **Save All Changes**.

   You can change Name, Description, Row Type, Feature Type Group, and Comparable/Incomparable of the feature type.

5. Click the **Resources** tab.

   See "Resources and Resource Types" on page 118 for more information about resources. The assignment of resources is optional, and can be done at any time. If you do not want to assign or unassign a resource now, then skip this step and go to Step 6.

   Modifying resource assignment is includes assigning and unassigning resources.

   • For each resource you want to assign, follow the procedure "To Assign a Resource to an Entity" on page 797.

   • For each resource you want to unassign, follow the procedure "To Unassign a Resource from an Entity" on page 798.

6. Click **Save All Changes**.

To Delete a Feature Type

Deleting a feature type automatically deletes its child features.

1. Click **Advisor Flows & Questionnaires** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. In the Navigation Panel, click the Feature Types link to display the Feature Types List Panel.

3. In the List of Feature Types list box, highlight the feature type you want to delete, and click **Delete**.

4. Click **Save All Changes**.

Working with Features

Each feature is created as a member of a specific feature type. Features have the following properties:

- Name

  This is the name you give the feature, and is also the name your customers will see.

- Description

  This is a description for internal use. Your customers will never see this text.

- Use to Compare

  The **Use to compare** check box determines whether or not the features belonging to this type are included in a product comparison. When your customers use your questionnaire to find products, they can select two or more products from the product list and compare them. Sterling Advisor generates and displays a *product comparison table* that lists the products and their features, allowing your customers to compare the products.

Note:	If you check **Use to compare** for a feature, ensure that **Use to compare** is also checked for its feature type.

- Start Date

  For features that are effective only for a specific time period, Start Date defines when the feature becomes effective.

- End Date

  For features that are effective only for a specific time period, End Date when the feature ceases to be effective.

To Create a Feature

1. Click **Advisor Flows & Questionnaires** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. Click the folder next to the Feature Types link to expand the tree and display the list of existing feature types.

3. Click the link of the feature type in which you want to create the new feature to display that feature's detail panel.

4. Click the **Features** tab.

FIGURE 475. Feature Type Detail Panel: Features Tab

5. Click **Create Feature** to display the New Feature Panel.

FIGURE 476. New Feature Panel

6. Enter the name and description you want to give to the new feature.

7. To enable using this feature in product comparisons, check the **Use to compare** box.

8. Use the Start Date and End Date controls to define the effectivity of the feature (if applicable). See "Feature Effectivity" on page 73 for more information.

9. Click **Save All and Return to List**.

    •   The **Features** tab of the Feature Types Detail panel displays.

    •   The new feature appears in the List of Features list box.

    •   The new feature appears in the Navigation panel.

10. Click the new feature's link to display its detail panel.

11. Click the **Resources** tab.

    See "Resources and Resource Types" on page 118 for more detailed information about resources. The assignment of resources is optional, and can be done at any time. If you do not want to assign a resource now, then skip this step and go to Step 12.

    •   For each resource you want to assign, follow the procedure "To Assign a Resource to an Entity" on page 797.

    •   For each resource you want to unassign, follow the procedure in "To Unassign a Resource from an Entity" on page 798.

12. Click **Save All Changes**.

To Modify a Feature

1. Click **Advisor Flows & Questionnaires** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. Click the folder next to the Feature Types link to display all existing feature types.

3. Click the folder next to the feature type that includes the feature you want to modify to display all of the features that exist within that feature type.

4. Click the name of the feature that you want to modify. The feature's Feature Detail panel displays.

FIGURE 477. Feature Detail Panel

5. In the **General** tab make any necessary changes to Name, Description, Use To Compare, Start Date, and End Date, and click **Save All Changes**.

6. Click the **Resources** tab.

   See "Resources and Resource Types" on page 118 for more detailed information about resources. The assignment of resources is optional, and can be done at any time. If you do not want to assign or unassign a resource now, then skip this step and go to Step 7.

   Modifying resource assignment includes assigning and unassigning resources.

   • For each resource you want to assign, follow the procedure "To Assign a Resource to an Entity" on page 797.

- For each resource you want to unassign, follow the procedure "To Unassign a Resource from an Entity" on page 798.

7. Click **Save All Changes**.

To Delete a Feature

1. Click **Advisor Flows & Questionnaires** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. Click the folder next to the Feature Types link to expand the tree.

3. Click the link of the feature type that contains the feature you wish to delete.

   The **General** tab of the Feature Type detail panel appears.

4. Click the **Features** tab.

   The **Features** tab displays.

5. In the List of Features list box, highlight the feature you want to delete, and click **Delete**.

   The feature disappears from the list box.

6. Click **Save All Changes**.

Managing Resources in Sterling Advisor

This chapter describes resource types and resources. Resources are electronic media you assign to the business objects in your Sterling Advisor questionnaire to enhance presentation.

CHAPTER 4, "Introduction to Sterling Advisor" provides a description of Sterling Advisor and how it works, as well as a short tutorial.

Working with Resource Types

A resource type business object is a definition. It has a type, a label, and a description.

- The *type* property is the unique name you give to a resource type for your internal use.

- The *label* is a text string that you define when you create a resource type. When you assign a resource of this type, this is the default label text. Note that you can define a unique label for each resource if you choose.

- The *description* property allows you to enter a description or your comments about that resource type for internal use. When you assign a resource of this type, this is the default description text. Note that you can define a unique description for each resource if you choose.

You decide how many resource types to create, and what those resource types should be. One approach is to create a resource type for each kind of resource you want to assign. In this case, you might create resource types such as "Photographic Images," "Data Sheets," "Promotions," and "URLs."

You can assign multiple resources to any of your business objects (entities), but you can only assign one resource of a given resource type to each entity. If you define three resource types, you can assign up to three resources to any entity.

For this reason, many administrators choose to create what seem to be redundant resource types. For example, if you create the resource types "Photographs1" and "Photographs2," you can assign two different photographic resources to an entity.

To Create a Resource Type

1. Click **Advisor Flows & Questionnaires** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. In the Navigation panel, click the Resource Types link. The Resource Types List panel displays.

FIGURE 478. Resource Types List Panel

3. Click **Create Resource Type**. The New Resource Type Panel displays.

FIGURE 479. New Resource Type Panel

4. Enter the appropriate information for this resource type.

    • Type: the name of the resource type.

    • Label: the label for this resource.

    • Description: the description of the resource type.

5. Click **Save All and Return to List**.

To Modify a Resource Type

1. Click **Advisor Flows & Questionnaires** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. In the Navigation panel, click the folder next to the Resource Types link to display the existing resource types.

FIGURE 480. Resource Type Tree (expanded)

3. Click the name of the resource type that you want to modify. The Resource Type Detail panel displays.

FIGURE 481. Resource Type Detail Panel

4. In the Resource Type detail panel, make any necessary changes.

5. Click **Save All Changes**.

To Delete a Resource Type

If you delete a resource type, the resources for that type are automatically deleted.

1. Click **Advisor Flows & Questionnaires** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. In the Navigation panel, click the Resource Types link. The Resource Types List panel displays.

FIGURE 482. Resource Types List Panel

3. In the List of Resource Types list box, highlight the resource type you want to delete, and click **Delete**.

    The resource type disappears from the List of Resource Types list box.

4. Click **Save All Changes**.

    The resource type disappears from the Navigation panel.

When you delete a resource type, you also delete all resources of that type that have been assigned to entities.

Working with Resources

A resource can be a URL, a document file, and so on. Sterling Advisor handles resources differently than it does business objects of a known type. Instead of creating resources as business objects, you assign a resource type to an entity (feature type group, feature type, and so on), and then define the location of the resource (the path to a file or a URL that displays the information).

The management of resources includes assigning resources to entities and unassigning resources from entities. Resource assignment is performed in the **Resources** tab of the detail panel of the business object to which you are assigning the resource. For example, to assign a resource to a question (or to unassign a resource from a question), you must go to the **Resources** tab of that question's detail panel. Every kind of entity that can have a resource assigned to it has a

Resources tab. The process for assigning and unassigning is the same, regardless of the kind of entity.

To Assign a Resource to an Entity

1. Click **Advisor Flows & Questionnaires** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. In the Navigation Panel, click the folder of the entity type to which you want to assign a resource to display the list of existing entities of that type.

3. Click the link of the entity to which you want to assign a resource. The entity's detail panel displays.

4. Click the **Resources** tab.

FIGURE 483. Resources Tab

5. In the Unassigned Resource Types drop-down list, select the resource type you want to assign to this entity, and click **Assign**.

    •   The resource type disappears from the Unassigned Resource Types drop-down list and displays in the Assigned Resource Types list box.

    •   The resource type displays in the Type field.

    •   The resource type's label displays in the Label field.

    •   The resource type's description displays in the Description text box.

6. In the Value field, type the location of the resource you want to assign.

    The location can be a path to the file selected as the resource or a URL to a Web page that displays the information for the resource.

7. (Optional) In the Label field, type the text you want to use as a label for the resource when it is displayed on a questionnaire page.

    When you assign a resource type, its label is automatically populated in the Label field. You can choose to use this label if you want. You only need to overwrite the label if you want to give the resource a label that is different from the resource type's label.

8. (Optional) In the Description field, type the text you want to use as a description for the resource when it is displayed on a questionnaire page.

    When you assign a resource type, the resource type's description is automatically populated in the Description field. You can use this description or enter a different description if you want the resource to have a description that is different from the resource type's.

9. Click **Save All Changes**.

To Unassign a Resource from an Entity

1. Click **Advisor Flows & Questionnaires** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. In the Navigation Panel, click the folder of the entity type from which you want to unassign a resource to display the list of existing entities of that type.

3. Click the name of the entity from which you want to unassign a resource to display its detail panel.

4. Click the **Resources** tab.

    The resource types currently assigned to the entity display in the Assigned Resource Types list box (Figure 484 on page 799).

5. In the Assigned Resource Types list box, select the resource type you want to unassign.

    The defined value, label, and description for the resource display in the appropriate fields.

FIGURE 484. Resources Tab with Assigned Resources

6. Click **Unassign**.

   • The resource type disappears from the Assigned Resource Types list box and appears in the Unassigned Resource Types drop-down list.

   • The Value, Label, and Description fields are emptied.

7. Click **Save All Changes**.

Managing Questionnaire Pages in Sterling Advisor

This chapter describes how to create and manage questionnaire pages. Questionnaire pages are the part of your questionnaire that your customers see. The pages can display one or more questions as well as the product list.

See CHAPTER 4, "Introduction to Sterling Advisor" for a description of Sterling Advisor and how it works as well as a short tutorial.

Attention:	Sterling Advisor will not work unless you create and activate a search index. See "Administering Advanced Search" on page 435 for more information.

Working with Questionnaire Pages

To work with questionnaire pages, you define their properties and manage the assignment of questions to questionnaire pages. The properties of a questionnaire page are:

- Name: the name you give the questionnaire page for internal use.

- Description: a description of the questionnaire page for internal use.

- Page Template to use: the JSP page to use to render the questionnaire page. The default template page is defined in the Business Rules Manager.

See CHAPTER 39, "Business Rules Administration" for more information about setting the default template page.

- Show Product List: determines whether or not to show the product list for preliminary questionnaire pages that contain a long list of matching products. If you do not check the Show Product List check box, the product list displays only on later questionnaire pages that contain a short list of matching products.

- Number Of Columns: the number of columns in which questions display in the question panel of the questionnaire page.

You determine which questions are assigned to the questionnaire page, and specify the sequence in which these questions are displayed on the page. As you create other pages that are part of the questionnaire, you must set the start page for the questionnaire.

In addition, you can assign resources to a questionnaire page.

Note that within the question panel, questions are displayed left to right across columns. For example, if a questionnaire page has five assigned questions and is defined to have three columns, the first row displays three questions, and the next row displays two questions.

To Create a Questionnaire Page

1. Click **Advisor Flows & Questionnaires** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. In the Navigation panel, click Questionnaire Pages. The Questionnaire Pages List panel displays.

FIGURE 485. Questionnaire Pages List Panel

3. In the Questionnaire Pages List panel, click **Create Questionnaire Page** to
    display the New Questionnaire Page panel.

FIGURE 486. New Questionnaire Page Panel

4. Type the name and description of the new questionnaire page in the appropriate
    fields.

5. (Optional) Type the name of the template JSP page you want to use to render the questionnaire page.

   If you leave this field blank, the JSP page defaults to a page defined in a system property. See "Enterprise System Administration" on page 1075 for information about accessing the system properties.

6. Leave the box checked next to **Show Product List** to display a list of products that match their requirements on the questionnaire page. If you uncheck this box, the questionnaire page does not display the list of products that currently match the answers given by the customer.

   In general, use this check box to avoid the display of preliminary questionnaire pages with a long list of matching products. Design the questionnaire so that the list of matching products displays only on later questionnaire pages when the list of matching products is shorter.

7. Select the number of columns to be displayed in the question panel of the questionnaire page from the drop-down menu in the Number of Columns field.

8. Click **Save All and Return to List**.

   • The Questionnaire Pages List panel displays.

   • The new questionnaire page appears in the List of Questionnaire Pages list box.

   • The new questionnaire page appears in the Navigation panel.

9. In the Navigation panel, click the name of the new questionnaire. The questionnaire detail panel displays.

FIGURE 487. Questionnaire Page Detail Panel

10. Click the **Assign Questions** tab.

FIGURE 488. Questionnaire Page Detail Panel: Assign Questions Tab

11. In the Unassigned Questions list box, highlight the questions that you want to assign to this questionnaire page, and click **Add**.

   The highlighted questions move from the Unassigned Questions list box to the Assigned Questions list box.

12. Click **Save All Changes**.

13. Click the **Sequence Questions** tab.

FIGURE 489. Questionnaire Page Detail Panel: Sequence Questions Tab

14. One at a time, highlight each question and use the up and down arrows to sequence the questions as they should appear on the questionnaire page when it is displayed.

15. Click **Save All Changes**.

16. Click the **Resources** tab.

    The assignment of resources is optional, and can be done at any time. If you do not want to assign a resource now, skip this step and go to Step 18.

17. For each resource you want to assign, follow the procedure "To Assign a Resource to an Entity" on page 797.

18. Click **Save All Changes**.

To Modify a Questionnaire Page

1. Click **Advisor Flows & Questionnaires** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. Click the folder next to the Questionnaire Pages link to display all existing questionnaire pages.

3. Click the name of the questionnaire page that you want to modify. The questionnaire page's detail panel displays.

FIGURE 490. Questionnaire Page Detail Panel

4. In the **General** tab, make any necessary changes to the Name, Description, and Number of Columns.

5. Click **Save All Changes**.

6. Click the **Assign Questions** tab.

   To modify question assignment, you assign new questions and unassign existing ones.

   • To assign a new question to the questionnaire page, highlight the question in the Unassigned Questions list box, and click **Add**.

   • To unassign a question that is currently assigned to the questionnaire page, highlight the question in the Assigned Question list box, and click **Remove**.

7. Click **Save All Changes**.

8. Click the **Sequence Questions** tab.

9. Use the up and down arrows to order the questions in the sequence in which they need to be displayed on the questionnaire page.

10. Click **Save All Changes**.

11. Click the **Resources** tab.

The assignment of resources is optional, and can be done at any time. If you do not want to assign or unassign a resource now, then skip this step and go to Step 12.

Modifying resource assignment is includes assigning and unassigning resources.

- For each resource you want to assign, follow the procedure "To Assign a Resource to an Entity" on page 797.

- For each resource you want to unassign, follow the procedure "To Unassign a Resource from an Entity" on page 798.

12. Click **Save All Changes**.

To Delete a Questionnaire Page

1. Click **Advisor Flows & Questionnaires** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. Click the folder next to the Questionnaire Pages link to expand the tree and display all existing questionnaire pages.

FIGURE 491. Questionnaire Pages List Panel

3. In the Questionnaire Pages List Panel, highlight the questionnaire page you want to delete, and click **Delete**.

4. Click **Save All Changes**.

To Assign Questions and Sequence Questions

1. Click **Advisor Flows & Questionnaires** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. Click the folder next to the Questionnaire Pages link to display all existing questionnaire pages.

3. Click the name of the questionnaire page to which you want to assign a question. The questionnaire page's detail panel displays.

FIGURE 492. Questionnaire Page Detail Panel

4. Click the **Assign Questions** tab.

FIGURE 493. Questionnaire Page Detail Panel: Assign Questions Tab

5.   In the Unassigned Questions list box, highlight the question or questions you want to assign to this questionnaire page, and click **Add**.

The highlighted questions move from the Unassigned Questions list box to the Assigned Questions list box.

6.   Click **Save All Changes**.

7.   Click the **Sequence Questions** tab.

FIGURE 494. Questionnaire Page Detail Panel: Sequence Questions Tab

8. In the List of Questions list box, highlight the question you want to reposition, and use the up and down arrows to move it to its proper position in the sequence.

   Repeat this step until the list of questions appears in the required order.

9. Click **Save All Changes**.

To Set the Start Page

1. Click **Advisor Flows & Questionnaires** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. Click the folder next to the Questionnaire Pages link to expand the tree and display all existing questionnaire pages.

3. In the Navigation panel, click the Questionnaire Pages link to display the Questionnaire Pages List Panel.

FIGURE 495. Questionnaire Pages List Panel

4. In the List of Questionnaire Pages list box, highlight the page that you want to set as the start page, and click **Set Start**.

   You can specify only one start page. Highlighting multiple questionnaire pages and then clicking Set Start Page results in an error message. Setting a different page replaces the old start page.

5. Click **Save All Changes**.

Managing Questions and Answers in Sterling Advisor

This chapter describes how to create and manage questions and answers. Answers map to features, which allows the Sterling Advisor questionnaire to identify products by the answers your customers choose. Questions and answers are also key elements in the rules you create.

CHAPTER 4, "Introduction to Sterling Advisor" provides a description of Sterling Advisor and how it works as well as a short tutorial.

Working with Questions

To create and manage a question, you define its properties and create its answers. This section describes how to manage a question's properties. The section "Working with Answers" on page 818 describes how you manage the answers within a question.

Managing questions includes creating, modifying, and deleting.

To Create a Question

1. Click **Advisor Flows & Questionnaires** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

2.   In the Navigation Panel, click the Questions link to display the Questions List Panel.

FIGURE 496. Questions List Panel

3.   In the Questions List Panel, click **Create Question** to display the New Question Panel.

FIGURE 497. New Question Panel

4.   Type the Name, Question Text, and Description for the new question in the appropriate fields.

5. Choose the kind of control to apply to the question's answers.

   You can choose Check Box, Drop-down List, or Radio Button.

6. Click **Save All and Return to List**.

   • The Questions List panel displays.

   • The new question appears in the List of Questions list box.

   • The new question appears in the Navigation panel.

7. Click the new question's link in the Navigation panel to display its detail panel.

8. Click the **Answers** tab

   Follow the procedure "To Create an Answer" on page 818 to create the question's answers.

9. Click the **Resources** tab.

   The assignment of resources is optional, and can be done at any time. If you do not want to assign a resource now, then skip this step and go to Step 11.

10. For each resource you want to assign, follow the procedure "To Assign a Resource to an Entity" on page 797.

11. Click **Save All Changes**.

To Modify a Question

1. Click **Advisor Flows & Questionnaires** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. Click the folder next to the Questions link to display the existing questions.

3. Click the question that you want to modify to display its detail panel.

FIGURE 498. Question Detail Panel

4. In the **General** tab, make any necessary changes to the Name, Question Text, Description, or Control Type fields.

   • To change the information for Name, Question Text, or Description, type your changes in the appropriate field.

   • To change the Control Type, select a different control from the drop-down list.

5. Click **Save All Changes**.

6. Click the **Answers** tab.

FIGURE 499. Question Detail Panel: Answers Tab

7. In the **Answers** tab, make any necessary changes to the Question's answers.

   - To create a new answer, follow the procedure "To Create an Answer" on page 818.

   - To delete an answer, follow the procedure "To Delete an Answer" on page 826.

   - To reorder the answers, select each answer one at a time, and use the up and down arrows to position the answer in its proper place in the sequence.

8. Click **Save All Changes**.

9. Click the **Resources** tab.

   The assignment of resources is optional, and can be done at any time. If you do not want to assign or unassign a resource now, then skip this step and go to Step 10.

   Modifying resource assignment is includes assigning and unassigning resources.

   - For each resource you want to assign, follow the procedure "To Assign a Resource to an Entity" on page 797.

   - For each resource you want to unassign, follow the procedure "To Unassign a Resource from an Entity" on page 798.

10. Click **Save All Changes**.

To Delete a Question

Deleting a question automatically deletes all of that question's answers.

1. In the Sterling Advisor Administration page, click the Questions link to display the Questions List Panel.

2. In the List of Questions list box, highlight the question you want to delete, and click **Delete**.

    The question disappears from the list box.

3. Click **Save All Changes**.

Working with Answers

To create and manage answers, you define their properties and assign features to them. This section describes how to manage an answer's properties and its feature assignments.

To learn about managing features, see "Working with Features" on page 786.

Managing answers includes creating, modifying, and deleting answers, as well as assigning features.

To Create an Answer

1. Click **Advisor Flows & Questionnaires** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. Click the folder next to the Questions link to expand the tree and display all existing questions.

3. Click the link of the question in which you want to create the new answer to display its detail panel.

4. Click the **Answers** tab.

FIGURE 500. Question Detail Panel: Answers Tab

5. Click **Create Answer** to display the New Answer Panel.

FIGURE 501. New Answer Panel

6. Type the name, answer text, and description for the new answer in the appropriate fields.

7. Click **Save All and Return to List**.

   • The **Answers** tab of the Questions Detail panel displays.

   • The new answer appears in the List of Answers list box.

   • The new answer appears in the Navigation panel under the condition for which you created it.

8. Click the new answer's link in the Navigation panel to display its detail panel.

FIGURE 502. Answer Detail Panel: General Tab

9. Click the **Features** tab.

FIGURE 503. Answer Detail Panel: Features Tab

10. In the Feature Types drop-down list, select the feature type that includes the feature type or types you want to assign.

   All available features in that feature type appear in the Unassigned Features list box.

11. Highlight the feature or features you want to assign to this answer, and click **Add**.

    The highlighted features move from the Unassigned Features list box to the Assigned Features list box. These features appear in the Assigned Features list box under their feature type.

12. Click **Save All Changes**.

13. Click the **Resources** tab.

    The assignment of resources is optional, and can be done at any time. If you do not want to assign a resource now, then skip this step and go to Step 15.

14. For each resource you want to assign, follow the procedure "To Assign a Resource to an Entity" on page 797.

15. Click **Save All Changes**.

To Modify an Answer

1. Click **Advisor Flows & Questionnaires** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. Click the folder next to the Questions link to display all existing questions.

3. Click the folder next to the question that includes the answer you want to modify to display all of the answers that exist within that question.

4. Click the answer that you want to modify to display its detail panel.

FIGURE 504. Answer Detail Panel

5. In the **General** tab make any necessary changes to the Name, Question Text, Description, or Control Type. To change the information for Name, Description, or Answer Text, type your changes in the appropriate field.

6. Click **Save All Changes**.

7. Click the **Features** tab.

FIGURE 505. Answer Detail Panel: Features Tab

8. Use the **Add** and **Remove** buttons to assign new features or unassign existing ones.

   To assign a feature:

   a. In the Feature Types drop-down list, select the feature type that includes the feature type or types you want to assign.

      All available features in that feature type display in the Unassigned Features list box.

   b. Highlight the feature or features you want to assign to this answer, and click **Add**.

      Note that you can highlight and assign multiple features at once.

      The highlighted features move from the Unassigned Features list box to the Assigned Features list box. These features appear in the Assigned Features list box under their feature type.

   c. Click **Save All Changes**.

   To unassign a feature:

   a. Highlight the feature in the Assigned Features list box and click **Remove**.

      The highlighted features move from the Assigned Features list box to the Unassigned Features list box.

   b. Click **Save All Changes**.

      Note that you can unassign all the assigned features of a given feature type by highlighting the name of the feature type and clicking **Remove**.

9. Click the **Resources** tab.

   The assignment of resources is optional, and can be done at any time. If you do not want to assign or unassign a resource now, then skip this step and go to Step 10.

   Modifying resource assignment is includes assigning and unassigning resources.

   • For each resource you want to assign, follow the procedure "To Assign a Resource to an Entity" on page 797.

   • For each resource you want to unassign, follow the procedure "To Unassign a Resource from an Entity" on page 798.

10. When you finish modifying the answer, click **Save All Changes**.

To Assign a Feature to an Answer

1. Click **Advisor Flows & Questionnaires** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. Click the folder next to the Questions link to display all existing questions.

3. Click the folder next to the question that includes the answer you want to modify to display all of the answers that exist within that question.

4. Click the answer to which you want to assign a feature to display its detail panel.

5. Click the **Features** tab.

FIGURE 506. Answer Detail Panel: Features Tab

6. In the Feature Types drop-down list, select the feature type that includes the feature type or types you want to assign.

    All of the available features in that feature type appear in the Unassigned Features list box.

7. Highlight the feature or features you want to assign to this answer, and click **Add**.

    The highlighted features move from the Unassigned Features list box to the Assigned Features list box. These features appear in the Assigned Features list box under their feature type.

8. Click **Save All Changes**.

Note that you can highlight and assign multiple features at once.

To Unassign a Feature from an Answer

1. Click **Advisor Flows & Questionnaires** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. Click the folder next to the Questions link to display all existing questions.

3. Click the folder next to the question that includes the answer you want to modify to display all of the answers that exist within that question.

4. Click the answer from which you want to unassign a feature to display its detail panel.

5. Click the **Features** tab.

FIGURE 507. Answer Detail Panel: Features Tab

6. In the All Assigned Features list box, select the feature that you want to unassign.

Note that you can select all of the features of a feature type by selecting just the feature type. You can also select more than one feature at a time in the All Assigned Features list box.

7. Click **Remove**.

    The highlighted features move from the All Assigned Features list box to the Unassigned Features list box.

8. Click **Save All Changes**.

Note that you can highlight and unassign multiple features at once.

To Delete an Answer

1. Click **Advisor Flows & Questionnaires** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. Click the folder next to the Questions link to display all existing questions.

3. Click the question that contains the answer you wish to delete to display that question's detail panel.

FIGURE 508. Question Detail Panel

4. Click the **Answers** tab.

FIGURE 509. Question Detail Panel: Answers Tab

5. In the List of Answers list box, highlight the answer you want to delete, and click **Delete**.

    The answer disappears from the list box.

6. Click **Save All Changes**.

Rule Management in Sterling Advisor

This chapter describes how to create and manage rules, which are the logic that determine the behavior of Sterling Advisor questionnaires. To learn more about the concept of rules in Sterling Advisor, see "Rules in the Sterling Advisor" on page 125.

See CHAPTER 4, "Introduction to Sterling Advisor" provides a description of Sterling Advisor and how it works as well as a short tutorial.

Working with Rules

This section describes how to create and manage rules in the Sterling Advisor Administration interface. Before you begin to create rules (or any other Sterling Advisor business object), you must design the questionnaire that you want to build. See "Designing the Questionnaire" on page 134.

Note:	Rules in Sterling Advisor are distinct from rules in Visual Modeler. See "Rules" on page 585 for the tasks associated with Visual Modeler rules.

Managing rules includes creating, modifying, and deleting rules.

To Create a Rule

1. Click **Advisor Flows & Questionnaires** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. In the Navigation panel, click Rules. The Rules List panel displays.

FIGURE 510. Rules List Panel

3. Click **Create Rule.** The New Rule panel displays.

FIGURE 511. New Rule Panel

4. Enter the name and description for this rule.

5. Click **Save All and Return to List**.

   • The New Rule panel disappears.

- • The new rule appears in the List of Rules list box.

- • The new rule appears in the Navigation Panel.

6. In the Navigation Panel, click the new rule. The Rule Detail panel displays.

FIGURE 512. Rule Detail Panel

7. Click the **Construction** tab.

FIGURE 513. Rule Detail Panel: Construction Tab

8. In the Priority text field, type the priority to assign to this rule.

   Priority determines the order in which rules are tested against the current state. Rules with a smaller numerical value are tested before rules with larger values.

9. Define the IF clause.

   To assign a questionnaire page to the IF clause:

   a. Select Questionnaire Page in the Questions drop-down list.

   b. Select a questionnaire page in the Values drop-down list.

   c. Click the **Add Clause** button to the right of the IF list box.

   To assign a question to the IF clause:

   a. Select either AND or AND NOT in the Modifier drop-down list.

   b. Select a question in the Questions drop-down list.

   c. Select an answer in the Values drop-down list.

   d. Click the **Add Clause** button to the right of the IF list box.

   To remove an argument from the IF clause, highlight that argument in the IF list box, and click **Delete Clause**.

   Repeat these steps to add all of the necessary arguments to the IF clause.

10. Define the THEN clause.

    The process is the same as that shown in the previous step, except that you use the Add and Delete buttons to the right of the THEN list box.

11. When you finish creating the rule, click **Save All Changes**.

The IF clause and the THEN clause may contain either one questionnaire page or none. If you try to add a second questionnaire page to either clause, the second page replaces the questionnaire page previously added to that clause. Both clauses may contain an unlimited number of question arguments.

To Modify a Rule

1. Click **Advisor Flows & Questionnaires** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. In the Navigation panel, click the Rules folder to display all existing rules.

3. Click the rule you wish to modify to display its detail panel.

FIGURE 514. Rule Detail Panel

4. Make any necessary changes to the rule's name and description and click **Save All Changes**.

5. Click the **Construction** tab.

FIGURE 515. Rule Detail Panel: Construction Tab

6. Make any necessary changes to the rule's construction.

- To change the rule's priority value, highlight and overwrite the value in the Priority text field.

- To modify the IF and THEN clauses, use the drop-down lists and the Add and Delete buttons as described in steps 9 and 10 in the task "To Create a Rule" on page 830.

7. Click **Save All Changes**.

To Delete a Rule

Because rules are by their nature interdependent, deleting a rule may cause unexpected behavior in your questionnaire.

1. Click **Advisor Flows & Questionnaires** in the Product and Catalog Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. In the Navigation panel, click Rules. The Rules List panel displays.

FIGURE 516. Rules List Panel

3. In the List of Rules list box, highlight the rule you want to delete.

4. Click **Delete**.

5. Click **OK** to confirm that you want to delete the rule.

   The rule disappears from the List of Rules list box and the Navigation panel.

6. Click **Save All Changes**.

Cart and Commerce Administration

This chapter covers the tasks performed by enterprise employees or Sterling Partner.com partner employees to manage carts, wish lists, templates, and registries. This chapter also covers the tasks performed by the customer service representative to manage quotes. "Quotes Management" on page 46 provides an overview of how customers submit quotes and the responses by the customer service representative.

"Using Carts" on page 40 provides an overview of cart administration.

This chapter covers the following topics:

- "Working with Carts" on page 838

    - "To Search for a Cart" on page 838

    - "To Download Cart Information" on page 842

    - "To View Cart Activity for Selected Partners" on page 842

- "Working with Wish Lists" on page 842

    - "To Search for a Wish List" on page 842

    - "To Copy a Wish List" on page 845

    - "To Delete a Wish List" on page 846

    - "To Create a New Wish List" on page 846

Working with Carts

You can search for and display carts belonging to partner users.

To Search for a Cart

1. Click **Customer Account Activity** on the Commerce Activity panel on the Sterling Multi-Channel Selling Solution home page.

FIGURE 517. Cart List Page

2. You can perform a quick search on product ID, cart ID, or name, or search for the cart(s) by clicking **Advanced Search**.

FIGURE 518. Carts Search Page

3. You can click **Submit** to display all the lists or quotes, or enter search criteria:

Enter search criteria to help you locate a list or set of lists. You can specify criteria to limit the scope of the search. The search criteria are described in Table 53 on page 840.

TABLE 53. Search Fields

Field	Description
Profile Name	If you enter the name of an organization, then only carts that belong to users of that organization are listed.
Product Id	If you enter one or more product IDs, then only carts that contain one or more of those IDs are listed.
Cart ID	Enter the ID number for the cart if you are searching for a particular cart.
Status	Select Active or Routed.
Username	Enter the username of a user to find all carts created by the specific user.
User First Name	Enter the first name of a user to find all carts created by the specific user.
User Last Name	Enter the last name of a user to find all carts created by the specific user.
Creation Date	Enter the Starting Date and Ending Date to find all carts created within a certain time frame. Enter Starting Date only to find all carts from the specified date forward. Enter an Ending Date only to find all carts up to the specified date.
Last Modified	Enter the Starting Date and Ending Date to find all carts updated within a certain time frame. Enter Starting Date only to find all carts from the specified date forward. Enter an Ending Date only to find all carts up to the specified date.

The Search Results page displays all of the lists that meet your search criteria.

FIGURE 519. Search Results

4. Click an item or refine your search.

    If you can identify the cart that you are looking for, click its link to display the Cart Detail page. The Cart Detail page provides a complete description of a list, including line items and prices.

FIGURE 520. Cart Detail Page

To Download Cart Information

1. Click **Customer Account Activity** on the Commerce Activity panel on the Sterling Multi-Channel Selling Solution home page.

2. Search for a list or set of carts.

   See "To Search for a Cart" on page 838.

   The cart list page is displayed. It presents all of the carts that meet your search criteria.

3. Select those carts whose details you wish to export by checking the check box next to each cart.

4. Click **Download Selected Carts** in the lower-right corner of the page.

5. Click **Go**.

   A new browser window is displayed showing the selected cart data in HTML format.

You can save this file to your machine. If the file has been generated by a UNIX installation of the Sterling Multi-Channel Selling Solution, then the file has UNIX end-of-line characters. This means that some Windows text-editing applications such as Notepad may display the file as one continuous line.

To View Cart Activity for Selected Partners

See "To View Cart Activity for Selected Profiles" on page 204.

Working with Wish Lists

This section describes the tasks that partner users can perform to manage wish lists. A wish list is a list of items that a user would like to have and wants someone else to purchase for him or her.

To Search for a Wish List

1. Click the **Wish Lists** tab on the **Account Activity** page.

   The list of available wish lists displays.

FIGURE 521. Wish List Page

2.   You can perform a quick search on Product ID, Wish List ID, Wish List Name, or Status, or search for the wish list(s) by clicking **Advanced Search**.

FIGURE 522. Wish List Search Page

3. Click **Submit** to display all the wish lists, or enter search criteria.

    Enter search criteria to help you locate a list or a set of lists. You can specify the criteria to limit the scope of the search. The search criteria are described in Table 54 on page 844.

TABLE 54. Search Fields

Field	Description
Wish List ID	Enter the ID number for the wish list if you are searching for a particular wish list.
Product ID	If you enter one or more product IDs, then only wish lists that contain one or more of those IDs are listed.
Wish List Name	Enter the wish list name if you are searching for a particular wish list.
Wish List Status	Select Private or Public.
Creation Date	Enter the Starting Date and Ending Date to find all wish lists created within a certain time frame. Enter Starting Date only to find all wish lists from the specified date forward. Enter an Ending Date only to find all wish lists up to the specified date.
Last Modified	Enter the Starting Date and Ending Date to find all wish lists updated within a certain time frame. Enter Starting Date only to find all wish lists from the specified date forward. Enter an Ending Date only to find all wish lists up to the specified date.

The Search Results page displays all of the wish lists that meet your search criteria.

FIGURE 523. Search Results

You can use this page to perform one or more of the following tasks:

• To copy a wish list. See "To Copy a Wish List" on page 845.

• To delete a wish list. See"To Delete a Wish List" on page 846.

• To create a new wish list. "To Create a New Wish List" on page 846.

• To mark a wish list as private or public. See "To Change the Status of a Wish List" on page 847.

• To set a wish list as the default wish list. See "To Set a Default Wish List" on page 847.

• To search for a wish list belonging to another user. See "To Search for and View Details of Another User's Wish List" on page 847.

• To view the details of a wish list. See "To View the Details of a Wish List" on page 849.

To Copy a Wish List

One way to create a wish list is to copy an existing wish list. When you copy a wish list, you copy all its attributes other than the Wish List Name and Wish List ID. So after copying the wish list, you must modify any attributes that are different.

1. On the Wish List page, check the check box next to the wish list that you want to copy and click the **Copy** button.

2. A new wish list with "Copy of" prefixed to the wish list name gets added to the list of wish lists.

To Delete a Wish List

1. On the Wish List page, check the check box next to the wish list that you want to delete and click the **Delete** button.

2. The wish list gets deleted from the list of wish lists.

To Create a New Wish List

1. Navigate to the Wish List page and click the **New** button.

   The Create New Wish List panel displays.

FIGURE 524. Create New Wish List Panel

2. Enter the wish list name, and click **Create**.

   The Wish List Detail page displays for the wish list that you just created.

FIGURE 525. Wish List Detail Page

To Change the Status of a Wish List

1. On the Wish List page, check the check box next to the wish list for which you want to change the status, and click **Private** if you want to mark it private, or click **Public** if you want to mark it public.

   The new status appears under the **Status** column of the wish list.

To Set a Default Wish List

1. Navigate to the wish list that you want to set as the default wish list, and click the Default Wish List icon next to the wish list.

   The wish list is set as the default wish list.

To Search for and View Details of Another User's Wish List
You can search for a wish list that belongs to another user and view its details.

1. On the Wish List page, click the **Find someone else's wish list** link.

   The Public Wish List(s) search page displays.

FIGURE 526. Public Wish Lists Search Page

2. Enter search criteria, such as the last name or email of the user who owns the wish list you are searching for, then click **Search**.

   The Public Wish List(s) Search Results page displays the list of wish lists belonging to the user.

Note:	The Public Wish List(s) Search Results page displays only those wish lists with **Public** status.

FIGURE 527. Public Wish List(s) Search Results Page

3. Click the Wish List Name of the wish list for which you want to view the details.

    The Public Wish List Detail page displays.

FIGURE 528. Public Wish List Detail Page

You can use the Public Wish List Detail page to perform one or more of the following tasks:

*   To add all the items in the wish list to your cart, click the **Add All Items to Cart** button.

- To print the wish list details, click the **Print View** link under the **Actions** panel. A new window with details of the wish list displays.

- To sort the items in the wish list by Date Added, Still Needs, Price (low to high), Price (high to low), Department, or Priority, select the sorting criteria from the Sort On drop-down list.

- To add a particular line item in the wish list to your cart, click the **Add to Cart** icon next to the item.

To View the Details of a Wish List

1. Search for the wish list for which you want to view the details. See "To Search for a Wish List" on page 842.

2. Click the appropriate Wish List Name.

   The Wish List Detail page displays.

FIGURE 529. Wish List Detail Page

You can use the Wish List Detail page to perform one or more of the following tasks:

- To add an item to a wish list. See "To Add an Item to a Wish List" on page 851.

- To mark a wish list private or public, click the **Make Wish List Private** or **Make Wish List Public** link.

- To set a wish list as the default wish list, click the **Make Wish List Default** link.

- To email wish list information to another user. See "To Email Wish List Information" on page 853.

- To download the details of a wish list. See "To Download Wish List Information" on page 854.

- To view and add notes for a wish list. See "To Add Notes for a Wish List" on page 854.

- To view the purchase history of a wish list. See "To View the Purchase History of a Wish List" on page 855.

- To search for a wish list belonging to another user, click the **Find someone else's wish list** link. For more details about searching for a wish list belonging to another user, see "To Search for and View Details of Another User's Wish List" on page 847.

- To modify a wish list. See "To Modify Wish List Header Information" on page 855.

- To view more wish lists, click the **More** link under the **My Wish List** panel.

- To navigate to the Templates tab of your workspace, click the **Templates** link under the **My Wish List** panel.

- To add another item to your cart, enter the item's Product ID and quantity under the **Quick Add** panel, then click **Add**.

- To copy all the items in the wish list to a cart, click the **Add All Items to Cart** button. A pop-up displays where you can select the cart to copy the items to.

- To update the wish list after making modifications, click the **Update** button.

- To change the order of the sequence in which the items appear in the wish list, select the appropriate sorting criteria from the **Sort On** drop-down

list. You can sort the items by Still Needs, Price (low to high), Price (high to low), Department, Date Added, or Priority.

- To delete a line item from the wish list, click the **Delete** (**X**) button next to the item.

- To add a line item to a cart. See "To Add an Item to a Cart" on page 856.

- To move a line item to a wish list. See "To Move an Item to a Wish List" on page 857.

- To copy a line item to a wish list. See "To Copy an Item to a Wish List" on page 858.

- To view alternative items for a selected line item. See "To View Alternative Items for a Line Item" on page 859.

- To view complementary items for a wish list. See "To View Complementary Items for a Line Item" on page 859.

- To purchase items for another user from the user's wish list. See "To Purchase Items from Wish List of Another User" on page 860.

To Add an Item to a Wish List

1. On the Wish List Detail page, search for the item you want to add to the wish list using the **Catalog Search** panel.

2. Navigate to the Product Detail page of the item you want to add to the wish list.

FIGURE 530. **Product Detail Page**

3. You can add the item to a wish list in one of the following ways:

   a. Click the **Add to Wish List** button to add the item to the default wish list.

   b. Click the down arrow next to the **Add To Wish List** button to select a wish list to add the item to.

   A pop-up displays.

FIGURE 531. Select Wish List Pop-Up

Select the radio button next to the wish list you want to add the item to and click **Add**, or enter a wish list name and click **Create & Add** to create a new wish list and add the item to the new wish list.

To Email Wish List Information

1. On the Wish List Detail page, click the **Email** link under the **Actions** panel.

   The Send Email pop-up displays.

FIGURE 532. Send Email Pop-Up

2. Enter the recipient's email address in the To: field and the sender's email address in the From: field. Optionally, enter a CC: email address in the CC: field and any additional comments in the Memo: field.

3. Click **Send** to send the email or **Cancel** to cancel it.

To Download Wish List Information

1. On the Wish List Detail page, click the **Print View** link under the **Actions** panel.

   A new browser window displays showing details of the wish list in HTML format.

   You can save this file to your machine. If the file has been generated by a UNIX installation of the Sterling Multi-Channel Selling Solution, then the file has UNIX end-of-line characters. This means that some Windows text-editing applications such as Notepad may display the file as one continuous line.

To Add Notes for a Wish List

1. On the Wish List Detail page, click the **Notes** link under the **Actions** panel.

   The Notes page displays.

FIGURE 533. Notes Page

2. Enter a note, then click **Add Note**.

To View the Purchase History of a Wish List

1. On the Wish List Detail page, click the **View Purchases** link under the **Actions** panel.

    The Purchase History page displays.

FIGURE 534. Purchase History Page

The Purchase History page displays details of the items that a user has purchased by copying them from the wish list, such as the quantity of the item, the date on which the item was purchased, the user who purchased the item, and the date the item was shipped.

To Modify Wish List Header Information

1. On the Wish List Detail page, click the **Change** button under the **Details** panel.

    The Edit Wish List page displays.

FIGURE 535. Edit Wish List Page

2. Modify the appropriate details. You can change the following information:

   • Wish List Name, Event Date, Comments, Currency, Event Type, and Shipping Address. For more details about creating custom event types, see the *Sterling Multi-Channel Selling Solution Developer Guide*.

3. Click **Save** to save your changes or click **Reset** to reset the details.

To Add an Item to a Cart

1. On the Wish List Detail page, click the **Add to Cart** icon next to the item.

   a. If the user has only one active cart, the item gets added to this cart.

   b. If the user has more than one active cart, a pop-up displays.

FIGURE 536. Select Cart Pop-Up

• Select the radio button next to the cart and click **Copy** to add the item to the cart, or enter a cart name and click **Create & Copy** to create a new cart and add the item to the new cart.

To Move an Item to a Wish List

1. Click the **Move to Wish List** icon next to the item you want to move.

   A pop-up displays.

FIGURE 537. Select Wish List Pop-Up

The pop-up displays all the wish lists that belong to the user.

- Select the radio button next to the wish list you want to move the item to and click **Move**, or enter a wish list name and click **Create & Move** to create a new wish list and move the item to the new wish list.

To Copy an Item to a Wish List

1. Click the **Copy to Wish List** icon next to the line item you want to copy to a wish list. A pop-up displays.

FIGURE 538. Select Wish List Pop-Up

- Select the radio button next to the wish list you want to copy the item to and click **Copy**, or enter a wish list name and click **Create & Copy** to create a new wish list and copy the item to the new wish list.

To View Complementary Items for a Line Item

You can view the complementary items for a line item.

Note:	You can view complementary items for a line item only if the **Enable Complementary items link in Wish Lists** business rule is set to true, and if the line item has any complementary items associated with it. For more information about business rules, see CHAPTER 39, "Business Rules Administration".

1. On the Wish List Detail page, navigate to the line item for which you want to view the complementary items, and click the **View Complementary Items** link.

   The list of available complementary items for the line item displays.

To View Alternative Items for a Line Item

You can view the alternative items for a line item.

Note:	You can view alternative items for a line item only if the **Enable Alternative items link in Wish Lists** business rule is set to true, and if the line item has any alternative items associated with it. For more information about business rules, see CHAPTER 39, "Business Rules Administration".

1. On the Wish List Detail page, click the **View alternatives** link under the **Availability** column for the line item.

   A pop-up displays.

FIGURE 539. Select Alternate Item Pop-Up

The pop-up displays the list of alternative items for the line item.

2. Select the radio button next to the item you want to add to the wish list to replace the line item, then click **Add**.

To Purchase Items from Wish List of Another User

1. Navigate to the Public Wish List Detail page of the user from whose wish list you want to purchase the items. See "To Search for and View Details of Another User's Wish List" on page 847.

FIGURE 540. Public Wish List Detail Page

2. Click the **Add All Items to Cart** button to copy the items to a cart. See "To Add an Item to a Cart" on page 856.

3. Search for the cart to which you copied the items you want to purchase and navigate to the Cart Detail page. See "To Search for a Cart" on page 838.

4. Click the **Checkout** button.

   The Order Detail page displays.

FIGURE 541. Order Detail Page

5.   Click the **Place Order** button.

Working with Templates

This section describes the tasks that partner users can perform to manage templates. A template is a list of items that a user purchases regularly. A template cannot be shared with anyone. If you want to purchase an item from a template, you must first copy the item to your cart and then place the order.

To Search for a Template

You can search for a template as follows:

1.   Click the **Templates** tab on the **Account Activity** page.

The list of available templates displays.

FIGURE 542. Template List Page

2. You can search for the template in one of the following ways:

    a. Click **Search** to perform a quick search on Product ID, Template ID, or Template Name.

    b. Click **Show All** to display all the templates.

    c. Click **Advanced Search** to perform an advanced search for the template.

        The Template Search page displays.

FIGURE 543. Template Search Page

3. Click Submit to display all the templates, or enter search criteria.

   Enter search criteria to help you locate a list or set of lists. You can specify the criteria to limit the scope of the search. The search criteria are described in Table 55 on page 864.

TABLE 55. Search Fields

Field	Description
Template ID	Enter the ID number for the template if you are searching for a particular template.
Product ID	If you enter one or more product IDs, then only templates that contain one or more of those IDs are listed.
Template Name	Enter the template name if you are searching for a particular template.
Creation Date	Enter the Starting Date and Ending Date to find all templates created within a certain time frame. Enter Starting Date only to find all templates from the specified date forward. Enter an Ending Date only to find all templates up to the specified date.
Last Modified	Enter the Starting Date and Ending Date to find all templates updated within a certain time frame. Enter Starting Date only to find all templates from the specified date forward. Enter an Ending Date only to find all templates up to the specified date.

The Search Results page displays a list of all the templates that meet your search criteria.

FIGURE 544. Template Search Results Page

You can use the Search Results page to perform one or more of the following tasks:

- To copy a template. See "To Copy a Template" on page 865.

- To delete a template. See "To Delete a Template" on page 866.

- To create a new template. See "To Create a New Template" on page 866.

- To set a template as the default template. See "To Set a Default Template" on page 867.

- To download template information. See "To Download Template Information" on page 868.

- To email template information. See "To Email Template Information" on page 868.

To Copy a Template

One way to create a template is to copy an existing template. When you copy a template, you copy all its attributes other than the Template Name and Template ID. So after copying the template, you must modify any attributes that are different.

1. On the Template List page, check the check box next to the template that you want to copy and click the **Copy** button.

2. A new template with "Copy of" prefixed to the Template Name gets added to the list of templates.

To Delete a Template

1. On the Template List page, check the check box next to the template that you want to delete, and click the **Delete** button.

2. The template gets deleted from the list of templates.

To Create a New Template

1. Navigate to the Template List page and click the **New** button.

    The Create New Template panel displays.

FIGURE 545. Create New Template Panel

2. Enter the Template name, and click **Create**.

    The Template Detail page displays for the template that you just created.

FIGURE 546. Template Detail Page

To Set a Default Template

1. Navigate to the template that you want to set as the default template, and click the **Set as Default Template** icon next to the template.

    The template is set as the default template.

To Download Template Information

1. On the Template List page, check the check boxes next to the templates for which you want to download information, and click **Download Selected Templates** on the right-hand corner of the page.

   A new browser window displays with the details of the selected template data in HTML format.

   You can save this file to your machine. If the file has been generated by a UNIX installation of the Sterling Multi-Channel Selling Solution, then the file has UNIX end-of-line characters. This means that some Windows text-editing applications (such as Notepad) may display the file as one continuous line. You can still open the file as a spreadsheet.

To Email Template Information

1. On the Template List page, check the check boxes next to the templates whose details you want to email, and click **Email Selected Templates** on the right-hand corner of the page.

   The **Send Email** pop-up displays.

FIGURE 547. Send Email Pop-Up

2. Enter the recipient's email address in the To: field and the sender's email address in the From: field. Optionally, enter a CC: email address in the CC: field and any additional comments in the Memo: field.

3. Click **Send** to send the email or **Cancel** to cancel it.

To View the Details of a Template

1. Search for the template for which you want to view the details. See "To Search for a Template" on page 862.

2. Click the appropriate Template Name.

    The Template Detail page displays showing the complete details of the template, including the availability, price, and quantity of each line item.

FIGURE 548. Template Detail Page

You can use the Template Detail page to perform one or more of the following tasks:

*   To add an item to a template. See "To Add an Item to a Template" on page 871.

*   To set a template as the default template. See "To Set a Default Template" on page 872.

- To email template information to another user, click the **Email** link under the **Actions** panel. For more information about emailing template information, see "To Email Template Information" on page 868.

- To download template information, click the **Print View** link under the **Actions** panel. For more information about downloading template information, see "To Download Template Information" on page 868.

- To add notes for a template, click the **Notes** link under the Actions panel. See "To Add Notes for a Template" on page 872.

- To change the reminder frequency for the template. See "To Change the Reminder Frequency for a Template" on page 873.

- To modify the template details. See "To Modify Template Header Information" on page 873.

- To view more templates. See "To View More Templates" on page 874.

- To navigate to the **Wish List** tab of your workspace. See "To View Wish Lists" on page 874.

- To add an item to your cart. See "To Add an Item to a Cart" on page 874.

- To compare line items. See "To Compare Line Items" on page 874.

- To copy a line item to a template. See "To Copy a Line Item to a Template" on page 874.

- To move a line item to a template. See "To Move a Line Item to a Template" on page 875.

- To delete a line item from the template. See "To Delete a Line Item From a Template" on page 876.

- To add a line item to a cart. See "To Add a Line Item to a Cart" on page 877.

- To update a template after making modifications. See "To Update a Template After Making Changes" on page 876.

- To change the order of the sequence in which the items appear in the template. See "To Sort the Items in a Template" on page 876.

- To view complementary items for a selected line item. See "To View Complementary Items for a Line Item" on page 878.

- To view alternative items for a selected line item. See "To View Alternative Items for a Line Item" on page 859.

To Add an Item to a Template

1. On the Template Detail page, search for the item you want to add to the template using the **Catalog Search** panel.

2. Navigate to the Product Detail page of the item you want to add to the template.

FIGURE 549. Product Detail Page

3. You can add the item to a template in one of the following ways:

   a. Click the **Add to Template** button to add the item to the default template.

   b. Click the down arrow next to the **Add To Template** button to select a template to add the item to.

      A pop-up displays.

FIGURE 550. Select Template Pop-Up

> Select the radio button next to the template you want to add the item to and click **Add**, or enter a template name and click **Create & Add** to create a new template and add the item to the new template.

To Set a Default Template

1. On the Template Detail page, click the **Make Template default** link under the **Actions** panel.

   The template is set as the default template and the **Make Template default** link disappears.

To Add Notes for a Template

1. On the Template Detail page, click the **Notes** link under the **Actions** panel.

   The **Notes** page displays.

FIGURE 551. Notes Page

2.   Enter a note, and click **Add Note.**

To Change the Reminder Frequency for a Template

1.   On the Template Detail page, click the **Change** button under the **Actions** panel.

2.   Select the appropriate reminder frequency for the template from the drop-down lists. You can set the reminder frequency in one of the following ways:

   a.   Weekly: Select Beginning from the drop-down list to use the Reminder Frequency cron job to send an email reminder to the user every Sunday, or End to send the reminder every Thursday.

   b.   Monthly: Select Beginning from the drop-down list to use the Reminder Frequency cron job to send an email reminder on the day before the month begins, or 15th to send the reminder on the 14th day of the month, or End to send the reminder on the last day of the month.

Note:	The system sends the reminder emails at the time that the Reminder Frequency cron job is run. Administrators should set the Reminder Frequency cron job start time so that it runs late at night to prevent emails from being received one business day earlier than intended. See CHAPTER 40, "Job Scheduling Administration", for more information.

3.   Click **Update**.

To Modify Template Header Information

1.   On the Template Detail page, click the **Change** button under the **Details** panel.

2. Modify the appropriate details. You can change the following information:

   • Template Name, Customer Type, and Currency.

3. Click **Update**.

To View More Templates

1. On the Template Detail page, click the **More** link under the **My Template** panel.

   The Template List page displays, showing the list of templates belonging to the user.

To View Wish Lists

1. On the Template Detail page, click the **Wish Lists** link under the **My Template** panel.

   The **Wish Lists** tab of your workspace page displays.

To Add an Item to a Cart

1. On the Template Detail page, enter the item's Product ID and quantity under the **Quick Add** panel.

2. Click the **Add** button.

To Compare Line Items

1. On the Template Detail page, check the check boxes next to the line items you want to compare, and click the **Compare** button.

2. The **Compare Products** page displays, showing the details of the selected products.

To Copy a Line Item to a Template

1. On the Template Detail page, check the check box next to the line item you want to copy to a template, and click the **Copy to Template** button.

   A pop-up displays.

FIGURE 552. Select Template To Copy Pop-Up

2. Select the radio button next to the template you want to copy the item to and click **Copy**, or enter a template name and click **Create & Copy** to create a new template and copy the item to the new template.

To Move a Line Item to a Template

1. On the Template Detail page, check the check box next to the line item you want to move to a template, and click the **Move to Template** button.

FIGURE 553. Select Template To Move Pop-Up

2. Select the radio button next to the template you want to move the item to and click **Move**, or enter a template name and click **Create & Move** to create a new template and move the item to the new template.

To Delete a Line Item From a Template

1. On the Template Detail page, check the check box next to the line item you want to delete, and click the **Delete** button.

    The line item is deleted from the template.

To Update a Template After Making Changes

1. On the Template Detail page, click the **Update** button.

    The template is updated with the changes that you made.

To Sort the Items in a Template

You can change the order of the sequence in which the items appear in the template.

1. On the Template Detail page, select the appropriate sorting criteria from the **Sort On** drop-down list. You can select one of the following sorting criteria:

    •   Price (low to high)

    •   Price (high to low)

    •   Date Added (most recent first)

- Date Added (oldest first)

- Department

- Product Name (A-Z)

- Product Name (Z-A)

- Product ID (A-Z)

- Product ID (Z-A)

To Add a Line Item to a Cart

1. On the Template Detail page, check the check the check box next to the line item you want to add to a cart, and click the **Add to Cart** button.

   a. If the user has only one active cart, the item gets added to this cart.

   b. If the user has more than one active cart, a pop-up displays.

FIGURE 554. Select Cart Pop-Up

- Select the radio button next to the cart you want to add the item to and click **Copy**, or enter a cart name and click **Create & Copy** to create a new cart and add the item to the new cart.

To View Complementary Items for a Line Item

You can view complementary items for a line item.

> **Note:** You can view complementary items for a line item only if the **Enable Complementary items link in Templates** business rule is set to true, and if the line item has any complementary items associated with it. For more information about business rules, see CHAPTER 39, "Business Rules Administration".

1. On the Template Detail page, navigate to the line item for which you want to view the complementary items, and click the **View Complementary Items** link.

    The list of available complementary items for the line item displays.

To View Alternative Items for a Line Item

You can view the alternative items for a line item.

> **Note:** You can view alternative items for a line item only if the **Enable Alternative items link in Templates** business rule is set to true, and if the line item has any alternative items associated with it. For more information about business rules, see CHAPTER 39, "Business Rules Administration".

1. On the Template Detail page, click the **View alternatives** link under the **Availability** column for the line item.

    A pop-up displays.

FIGURE 555. Select Alternate Item Pop-Up

The pop-up displays the list of alternative items for the line item.

2. Select the radio button next to the item you want to add to the template to replace the line item, then click **Add**.

Working with Registries

This section describes the tasks that partner users can perform to manage baby and wedding registries.

To Search for a Registry

1. Navigate to the **Registries** tab of your Account Activity page.

   The Registry List page displays.

FIGURE 556. Registry List Page

2. You can perform one of the following tasks to search for a registry:

   a. Click **Search** to perform a quick search on Registry Type, Registrant Name, Co-Registrant Name, Status, Product ID, or Event Location.

   b. Click **Show All** to display the list of all the registries.

   c. Click **Advanced Search** to perform an advanced search for the registry.

      The Registries Search page displays.

FIGURE 557. Registries Search Page

3. Click **Submit** to display all the registries, or enter search criteria.

    Enter search criteria to help you locate a list or set of lists. You can specify the criteria to limit the scope of the search. The search criteria are described in Table 56 on page 881.

TABLE 56. Search Fields

Field	Description
Registry ID	Enter the ID number for the registry if you are searching for a particular registry.
Product ID	If you enter one or more product IDs, then only registries that contain one or more of those IDs are listed.
Event Location	Enter the location where the event will be held.
First Name	Enter the first name of the registrant to find all registries created by the registrant.
Last Name	Enter the last name of the registrant to find all registries created by the registrant.
First Name	If you enter the first name of the co-registrant, then only registries that have this last name as the co-registrant's first name are listed.
Last Name	If you enter the last name of the co-registrant, then only registries that have this last name as the co-registrant's last name are listed.
Registry Type	Select Baby Registry if you are searching for a baby registry, or Wedding Registry if you are searching for a wedding registry.
Registry Status	Select Private or Public.
Creation Date	Enter the Starting Date and Ending Date to find all registries created within a certain time frame. Enter Starting Date only to find all registries from the specified date forward. Enter an Ending Date only to find all registries up to the specified date.
Last Modified	Enter the Starting Date and Ending Date to find all registries updated within a certain time frame. Enter Starting Date only to find all registries from the specified date forward. Enter an Ending Date only to find all registries up to the specified date.

The Search Results page displays a list of all the registries that meet your search criteria.

FIGURE 558. Registry Search Results Page

4. Click an item or refine your search.

 If you can identify the registry that you are looking for, click its link to display the Registry Detail page. The Registry Detail page provides a complete description of a registry, including the availability, price, desired quantity and received quantity of each line item.

FIGURE 559. Registry Detail Page

To Create a Registry

1. Navigate to the **Registries** tab of your Account Activity page.

   The Registry List page displays.

2. Click the **Create Baby Registry** button if you want to create a baby registry, or click the **Create Wedding Registry** button if you want to create a wedding registry.

   The **Event Details** page displays. The Event Details step is the first in the three-step registry creation process.

FIGURE 560. **Event Details Page**

3. Enter the appropriate details. See Table 57 on page 884 for a description of the fields.

TABLE 57. Event Details Fields

Field	Description
Wedding Date	Click the calendar icon to select a wedding date. **Note:** This field displays only if you are creating a wedding registry.
Wedding Location	Enter the location of the wedding. **Note:** This field displays only if you are creating a wedding registry.
Shower Date	Click the calendar icon to select a shower date for the registry.
Shower Location	Enter the location of the shower.
Expected Birth Date	Click the calendar icon to select the expected birth date of the baby. **Note:** This field displays only if you are creating a baby registry.
Baby Gender	Select Boy, Girl, or Not Known from the drop-down list. **Note:** This field displays only if you are creating a baby registry.
Approximate number of guests	Enter the number of guests expected to attend the event.
Reward Card No.	Enter the reward card number.
Comments	Enter your comments.
Registrant's First Name	Enter the registrant's first name.
Registrant's Last Name	Enter the registrant's last name.
Registrant's Email	Enter the registrant's email address.
Registrant's Address Line 1	Enter the first line of the registrant's address. Click the **Copy Registrant's Address** icon next to this field to copy the registrant's address to the co-registrant's address fields.
Registrant's Address Line 2	Enter the second line of the registrant's address.
Registrant's city	Enter the registrant's city.

TABLE 57. **Event Details Fields**

Field	Description
State and Zip	Select the registrant's state and enter its zip code.
Country	Select the registrant's country.
More Addresses	Click this link to select another address for the registrant.
Save to User Profile	Check this check box to save the registrant's address in the user's profile as a new Bill To address.
Registrant's Phone No.	Select the type of phone number and enter the phone number, then click the **Add** or **Remove** button to add or remove the registrant's phone numbers.
Co-Registrant's First Name	Enter the co-registrant's first name.
Co-Registrant's Last Name	Enter the co-registrant's last name.
Co-Registrant's Email	Enter the co-registrant's email address.
Co-Registrant's Address Line 1	Enter the first line of the co-registrant's address.
Co-Registrant's Address Line 2	Enter the second line of the co-registrant's address.
Co-Registrant's city	Enter the co-registrant's city.
State and Zip	Select the co-registrant's state and enter its zip code.
Country	Select the co-registrant's country.
Co-Registrant's Phone No.	Enter the co-registrant's phone number.

4. Click **Next**.

   The Shipping Information page displays.

FIGURE 561. Shipping Details Page

5. Enter the appropriate shipping information.

6. Click **Next**.

    The Registry Confirmation Page displays. The Registry Confirmation is the final step in the three-step registry creation process.

FIGURE 562. Registry Confirmation Page

7. Click the **Add Items to my registry** button to add items to the registry.

The Registry Detail page displays.

FIGURE 563. Registry Detail Page

8. Search for the item you want to add to the registry by using the **Catalog Search** panel.

9. Navigate to the Product Detail page of the item you want to add to the registry.

FIGURE 564. Product Detail Page

10. You can add the item to your active registry or another existing registry.

   a. Click the **Add to Wedding Registry** button to add the item to your active wedding registry, or click the **Add to Baby Registry** button to add the item to your active baby registry.

Note:	Users can have more than one baby registry or wedding registry but they cannot have more than one active registry of each type at the same time.

   b. Click the down arrow next to the **Add to Wedding Registry** button to add the item to an existing wedding registry, or click the down arrow next to the **Add to Baby Registry** button to add the item to an existing baby registry.

   A pop-up displays, similar to the following figure.

FIGURE 565. Select Registry Pop-Up

To Mark a Registry Private

1. Navigate to the **Registries** tab of your Account Activity page.

    The Registry List page displays.

2. Check the check box next to the registry you want to mark private, then click the **Private** button.

To Mark a Registry Public

1. Navigate to the **Registries** tab of your Account Activity page.

    The Registry List page displays.

2. Check the check box next to the registry you want to mark public, then click the **Public** button.

Note:	You can mark a registry Public only if it is in Active status.

To Set a Registry as Active

1. Navigate to the **Registries** tab of your Account Activity page.

    The Registry List page displays.

2. Click the **Set As Active Registry** icon next to the registry you want to set as your active registry.

Note: You can have only one active registry of each type at one time.

To Purchase Items from a Registry

1. Search for and navigate to the registry from where you want to purchase the items. See "To Search for a Registry" on page 879.

2. On the Registry Detail page, click the **Add to Cart** icon next to the line item to add the item to your cart.

    a. If the user has only one active cart, the item gets added to this cart.

    b. If the user has more than one active cart, a pop-up displays.

FIGURE 566. Select Cart Pop-Up

   • Select the cart to which you want to add the item, then click **Copy**.

3. Navigate to your cart. See "To Search for a Cart" on page 838.

4. On the Cart Detail page, click the **Checkout** button.

5. Enter the Ship To and Bill To addresses, then click the **Place Order** button.

To Search for a Registry Belonging to Another User

1. On the Registry List page, click the **Find someone else's Registry** link in the lower right-hand corner of the page.

    The Public Registry Search page displays.

FIGURE 567. Public Registry Search Page

2. Enter the registrant or co-registrant's first name and last name, then click
    Search.

    The Public Registry Search Results page displays the list of all the registries
    that meet your search criteria. The search results page displays only the
    registries that are marked Public.

FIGURE 568. Public Registry Search Results Page

    Click the Registry Name to view the details of the registry and purchase
    items from the registry, or refine your search.

To Purchase Items from a Registry Belonging to Another User

1. Search for the registry from where you want to purchase items. See "To Search
    for a Registry Belonging to Another User" on page 890.

2. On the Public Registry Search Results page, click the Registry Name from where you want to purchase items.

The Registry Detail page displays.

FIGURE 569. Registry Detail Page

3. Click the **Add to Cart** icon next to the line item to purchase an item from the registry.

a. If the user has only one active cart, the item gets added to this cart.

b. If the user has more than one active cart, a pop-up displays.

FIGURE 570. Select Cart Pop-Up

- Select the cart to which you want to add the item, then click **Copy**.

4. Search for the cart to which you copied the items you want to purchase and navigate to the Cart Detail page. See "To Search for a Cart" on page 838.

5. Click the **Checkout** button.

The **Order Detail** page displays.

FIGURE 571. Order Detail Page

6.   Click the **Place Order** button.

Working with Quotes

Partner users can create quotes from product carts. They can also submit requests for price negotiation. The customer service representative uses the tasks in this section to approve or reject the quotes. Once approved, a price-negotiation quote becomes an orderable quote. The customer service representative can use the tasks in this section to edit quote details. For further details, see "Processing Quotes" on page 984.

To Search for a Quote

You can search for a quote as follows:

1.   Click **Advanced Search** in the Quotes panel on the Sterling Multi-Channel Selling Solution home page.

FIGURE 572. Quotes Search Page

2.   Enter search criteria.

Note:	You can click **Submit** to display all the lists of the selected list type.

You can specify one or more of the criteria listed in Table 53 on page 840 to limit the scope of the search.

3.   Click **Submit**.

The Search Results page displays all of the quotes that meet your search criteria.

FIGURE 573. Quotes Search Results Page

To View Cart Activity for Selected Partners

See "To View Cart Activity for Selected Profiles" on page 204.

CHAPTER 29   *Customer Service*

This chapter covers tasks performed on the enterprise server only by enterprise employees who have been assigned the Commerce function in the Sterling Multi-Channel Selling Solution.

Note that users with the Commerce role must have at least the Anonymous User Partner account assigned to them. This also allows users with the Commerce role to access shared wish lists and registries.

See CHAPTER 6, "User Administration" for information about assigning functions. "Customer Service" on page 44 provides an overview of customer service in the Sterling Multi-Channel Selling Solution.

The users assigned the Commerce function can perform the following tasks in the Sterling Multi-Channel Selling Solution:

- "Viewing and Modifying Order Information" on page 900

  - "To Search for Orders" on page 901

  - "To Modify Price and Quantity Information" on page 904

  - "To Modify Order Header Information" on page 905

  - "To Modify Header Information for a Line Item" on page 908

  - "To View Order History" on page 912

- "Ordering On Behalf Of Customers" on page 913

Viewing and Modifying Order Information

After an order has been placed and accepted, customer service representatives can modify information about the order. This includes order header information (addresses and shipping details), and line item information (quantities, prices, ship-to addresses). For example, the original order quantity might have qualified for a price break; a change in quantity might mean the price break no longer applies.

You can only modify orders whose status is "In Process", "Partially Shipped", or "Partially Shipped, Partially Returned". When the order status is any of the "submitted" states ("Order Submitted", "Change Submitted", and so on), you cannot modify the order until after the submission is processed.

Simultaneous Changes to an Order

If simultaneous modifications are being made to an order, such as users or administrators modifying orders at a Sterling Multi-Channel Selling Solution installation, automatic ERP updates to the Sterling Multi-Channel Selling Solution installation, and so on, the last-saved changes override previous changes.

For example, Person A displays the Order Detail page and changes a line item quantity from 5 to 10. At the same time, Person B displays the Order Detail page for the same order and changes the quantity for another line item from 5 to 8. Person B submits their changes which are then committed to the database. Person A then submits changes which are committed to the database. When Person B logs in later and displays the Order Detail page for the changed order, the quantity that Person B changed will still show 5 not 8. The quantity for the line item changed by Person A will show correctly, 10 not 5.

In the same way, Person A can make a change to a partially-shipped line item which, while Person A is making the change, is being completely shipped. When Person A attempts to submit the change, the database will show that the line item cannot be modified. The system will refuse to allow the change by Person A.

If you suspect that changes have been made to an order, then you should log out of the Sterling Multi-Channel Selling Solution and log back in again. When you display the order, the order will contain the latest changes.

To Search for Orders

You can search for orders as follows:

1. Click **Advanced Search** in the Orders panel on the Sterling Multi-Channel Selling Solution home page.

FIGURE 574. Order Search Page

2. Enter one or more search criteria (Table 58 on page 901), then click **Submit**.

   You can use the asterisk (*) to perform wildcard searches.

   The Orders tab of your Workspace page (Figure 575 on page 903) displays all of the orders that meet your search criteria.

TABLE 58. Searching for Orders: Search Fields

Field	Description
Accounts by Manager/ Rep	You can specify that the search should be performed only over partner accounts that are assigned to particular enterprise managers and users. Click **...** to select users from the enterprise organization.
Organization	If you enter the name of an organization, then only orders that belong to users of that organization are listed.

TABLE 58. Searching for Orders: Search Fields (Continued)

Field	Description
Username	Enter the username of a user to find all orders created by the specific user.
User First Name	Enter the first name of a user to find all orders created by the specific user.
User Last Name	Enter the last name of a user to find all orders created by the specific user.
Reference Number	Enter a reference number to retrieve an order by its reference number.
Supplier Name	Enter the name of a supplier to find all orders placed with the supplier.
Order Number	Enter a order number to retrieve an order by its order number.
PO Number	Enter a purchase order number to retrieve an order by its purchase order number.
Product Id	If you enter one or more product IDs, then only lists that contain one or more of those IDs are listed.
Serial Number	Enter a serial number to retrieve orders that use this serial number.
Order Status	Select an order status.
Ordered Date	Enter the Starting Date and Ending Date to find all orders placed within a certain time frame. Enter Starting Date only to find all orders from the specified date forward. Enter an Ending Date only to find all orders up to the specified date.
Last Updated	Enter the Starting Date and Ending Date to find all orders updated within a certain time frame. Enter Starting Date only to find all orders from the specified date forward. Enter an Ending Date only to find all orders up to the specified date.

FIGURE 575. Workspace Page: Orders Tab with Search Results

3. Click the order number to see the Order Detail page.

This page provides specific information about the order, including relevant information about the user, the order, and the line item(s).

FIGURE 576. Order Detail Page

If the order has not yet been accepted, then the page will be displayed as read-only. Otherwise, the page is displayed as in Figure 576 on page 903.

To Modify Price and Quantity Information

You may be required to change an order, for example in response to a request by a user.

1. Search for and display the Order Detail page for the order you want to modify.

    See "To Search for Orders" on page 901.

2. Click **Change Order**.

    This displays the Change Order page.

FIGURE 577. Change Order Page

3. Modify the price or quantity of the line items you want to change. You can add products to the carts in these ways:

    a. Click **Browse Catalog** to navigate through the product catalog to the product that you want to add.

    b. Click **Help Me Find Products** to use Sterling Advisor to identify products that meet the customer's needs.

c. Click **Advanced Search** to search for the product you want to add to the cart.

FIGURE 578. Enter Product ID Panel

Enter the product ID and quantity and then click **Add**. You can enter product IDs that do not exist in the product catalog: these are referred to as *external products*. If you do so, then you must uncheck the **Validate product** check box. When you do, extra fields open up so that you can enter a Name, Description, and Price for this external product. Then click **Add to List**. Note that external product prices cannot be validated against the price lists stored in the Knowledgebase: if the currency of the cart changes, then the prices of external products are marked as N/A (not available).

4. Click **Update**.

5. Click **Checkout**. If you want to change information in the order header such as delivery or payment information, then click **Edit**. When you have finished making changes, then click **Save** to return to the Change Order Header page.

6. Click **Place Order** to submit the changes.

The changes are submitted and the status of the order changes to "Change Submitted".

7. On the Confirmation of Order page, click **Done** to return to the Orders tab of your Workspace page.

To Modify Order Header Information

This task describes how to modify header information for the entire order. See "To Modify Header Information for a Line Item" on page 908 for information about modifying header information for a specific line item.

1. Search for and display the Order Detail page for the order you want to modify.

See "To Search for Orders" on page 901.

2. Click **Change Order**.

This displays the Change Order page.

FIGURE 579. Change Order Page

3. Click **Checkout**.

Note:	If no Checkout button is displayed, then a change has already been submitted for this order. You cannot make a change until the submitted change has been processed.

This displays the Change Order Header page.

FIGURE 580. Change Order Header Page

4. Click **Change** to display the Order Header Info page.

FIGURE 581. Order Header Info Page

5. You can change the following information:

   • General Order Information

     This includes payment information, phone numbers, and email addresses.

   • Ship To, Bill To, and Sold To Addresses

     The ship to address you enter here is used as the default for the order. Each line item can have its own ship to address. You can choose to have this line item address override the order level ship to address.

   • Modify the shipping details as necessary. To change the delivery date, you can click the calendar icon to the right of the field to display a calendar.

6. Click **Save** to save your changes and re-display the Order Header Change page (Figure 580 on page 907).

7. Click **Review Changes**.

   This displays a read-only screen that enables you to review the changes you have made.

Attention:	Do not click **Place Order** until you have made all the order modifications you want to make. Once you submit the changes, you cannot make any changes to the order until the changes have been processed.

---

8. Click **Place Order** to submit the changes.

To Modify Header Information for a Line Item

This task describes how you can modify order information specific to a line item. To modify price and quantity, see "To Modify Price and Quantity Information" on page 904.

1. Search for and display the Order Detail page for the order you want to modify.

   See "To Search for Orders" on page 901.

2. Click **Change Order**.

   This displays the Change Order page.

FIGURE 582. Change Order Page

3. Click **Checkout**.

Note:	If no Checkout button is displayed, then a change has already been submitted for this order. You cannot make a change until the submitted change has been processed.

This displays the Change Order Header page.

FIGURE 583. Change Order Header Page

4. Find the line item whose header information you want to modify.

5. Click the **Change Line Item Shipping** icon next to the line item you want to modify.

    This displays the Shipping Detail page (see Figure 584 on page 911).

FIGURE 584. Shipping Detail Page: Line Item

6. Change information as necessary. Check the box marked **Use this shipping information** if you want to use the line-item specific ship to address for this line item. If you do not check this box, then the order level ship to address will be used as the default.

    •   Ship To Address

        The ship to address you enter here is used as the ship to address for this particular line item.

    •   Modify the shipping details as necessary.

        You use the Shipping Details frame in the lower right portion of the page (see Figure 584 on page 911). To change the delivery date, you can click the calendar icon to the right of the field to display a calendar.

    You can also enter shipping details that apply to this specific line item.

7. Click **Save** to save your changes and re-display the Change Order Header page (Figure 583 on page 910).

8. Repeat steps 4 through 7 to modify additional line items.

9. Click **Place Order** to submit the changes.

To View Order History

Perform these steps to view the history for an individual line item on an order.

1. Search for and display the Order Detail page for the order you want to modify.

    See "To Search for Orders" on page 901.

2. Click the Order Number to display the detail page.

FIGURE 585. Order Detail Page

3. Find the line item whose history you want to view.

4. Click the **History** link next to the line item.

    This displays the Line History list page. This page lists the actions that have been performed on the line item. Click **Done** to return to the Order Detail page.

FIGURE 586. Line History List Page

5. Find the action for which you want to view the details.

6. Click **Details** for the action.

FIGURE 587. Line History Detail Page

7. Click **Done** to return to the Line History list page.

Ordering On Behalf Of Customers

Occasionally, a customer is unwilling or temporarily unable to place orders themselves. They might not have access to online ordering or their online system

may not be working. Enterprise users assigned to the Commerce function can use the tasks in this chapter to place an order on behalf of a customer.

Note:	You can only place orders on behalf of users who already exist in the Sterling Multi-Channel Selling Solution and who belong to partners that have been assigned to you.
	In particular, you can only create orders for new customers if you have been assigned the Anonymous User partner.

To Create Orders On Behalf of Customers

1. Click **Customer Account Activity** under the Commerce Activity panel on the Sterling Multi-Channel Selling Solution home page.

   This displays the Workspace for creating and modifying orders on behalf of the customers.

FIGURE 588. CSR Workspace

2. Click **New**.

   The Create New Cart panel displays.

FIGURE 589. Create New Cart

3. Enter the username of the registered user.

4. Enter the name that you want to give the cart.

   It is good practice to include the name of the user in the cart name to help distinguish among carts.

5. Click **Create**.

   The Cart Detail page displays.

FIGURE 590. Cart Detail Page

6. Modify the general information, if necessary.

   a. Click **Change**.

b.   If desired, change the name, the customer type, or the currency code.

The customer types and currency codes in the drop-down lists represent the customer types and currency codes of the price lists assigned to the partner user for whom you are creating the order. When you create the order, you will find only products (and prices) from price lists assigned to the partner that have the displayed combination of customer type and currency code.

c.   Click **Update**.

7.   Build the product list.

You can add products in the following ways:

•   Search for the products.

Click **Advanced Search** to search for the products.

•   Browse the product catalog.

Click **Browse Catalog** to browse the product hierarchy.

•   Add products by answering questions.

Click **Help Me Find Products**. This displays a series of questions, the answers to which determine the products that are displayed.

•   Add products by entering product IDs.

Enter the Product ID, then click **Go**.

8.   Click **Checkout**.

The **Sold-To Address** page displays.

FIGURE 591. Sold-To Address Page

    a.   Select or enter the Sold-To address, then click **Next**.

        The Shipping Information page displays.

FIGURE 592. Shipping Information Page

    b.   Select or enter the shipping information, then click **Next**.

        The Billing Address page displays.

FIGURE 593. Billing Address Page

    c.   Select or enter the billing information.

          The Confirm Order page displays.

FIGURE 594. Confirm Order Page

9.   Click **Place Order**.

The order is submitted. A confirmation number is displayed.

Once the order has been accepted and is "in process", the partner user for whom the order was placed can view and modify the order by logging in as an end-user.

The customer service representative can view and modify the order using the procedures in "Viewing and Modifying Order Information" on page 900.

To Download Order Information

1.   Click **Advanced Search** in the Orders panel on the Sterling Multi-Channel Selling Solution home page.

2.   Enter search criteria to help you locate an order or set of orders. You can specify criteria to limit the scope of the search as described in "To Search for Orders" on page 901. Click **Submit**.

The Orders tab of the Workspace page is displayed with the orders that meet your search criteria displayed.

3.   Select those orders whose details you wish to download by checking the check boxes next to each order.

4. Click **Download Selected Orders**.

    A new browser window is displayed showing the selected order data in text format.

FIGURE 595. Download Selected Lists Page

You can save this file to your machine. When you open this saved file in a spreadsheet application, you must specify that it has been created in a tab-delimited format.

If the file has been generated by a UNIX installation of the Sterling Multi-Channel Selling Solution, then the file has UNIX end-of-line characters. This means that some Windows text-editing applications (such as Notepad) may display the file as one continuous line. You can still open the file as a spreadsheet.

To Email Order Information

1. Click **Advanced Search** in the Orders panel on the Sterling Multi-Channel Selling Solution home page.

FIGURE 596. Order Search Page

2. Enter search criteria to help you locate an order or set of orders. You can specify criteria to limit the scope of the search as described in "To Search for Orders" on page 901. Click **Submit**.

   The Orders tab of the Workspace page is displayed with the orders that meet your search criteria.

3. Select those orders whose details you wish to download by checking the check boxes next to each order.

4. Click **Email Selected Orders**.

   The Email Lists window displays.

FIGURE 597. Email Lists Window

5. Enter the receiving email address in the To: field and the sending email address in the From: field. Optionally enter a CC: email address in the CC: field and any additional comments in the Memo: field.

6. Click **Send**.

7. Click **Close** to close the window.

Managing Wish Lists

This section describes the tasks that a customer service representative can perform to manage wish lists. If your implementation uses shared wish lists, you add wish list items from a public wish list to the anonymous user cart, then change the cart ownership to the partner user on whose behalf you are adding wish list items.

To Create a Wish List On Behalf of a Customer

1. Search for the user for whom you want to create a wish list by using the Search for User by Name panel on the Sterling Multi-Channel Selling Solution home page.

2. On the User List page, click the **Account Activity** link next to the user for whom you want to create a wish list.

   The workspace page displays.

FIGURE 598. Workspace Page

3.   Click the Wish Lists tab.

The list of wish lists belonging to the user displays.

FIGURE 599. Account Activity Page: Wish Lists Tab

4.   Click **New**.

The Create New Wish List panel displays.

FIGURE 600. Create New Wish List Panel

5. Enter a wish list name in the New Wish List Name field, and click **Create**.

The Wish List Detail page displays.

FIGURE 601. Wish List Detail Page

To Add Items to a Wish List on Behalf of a Customer

1. Search for the user to whose wish list you want to add items by using the Search for User by Name panel on the Sterling Multi-Channel Selling Solution home page.

2. On the User List page, click the **Account Activity** link next to the user.

The workspace page displays.

3. Click the **Wish Lists** tab.

    The list of wish lists belonging to the user displays.

4. Click the Wish List Name of the wish list you want to add items to.

    The Wish List Detail page displays.

5. Search for the item you want to add to the wish list using the **Catalog Search** panel.

    The Catalog Search Results page displays.

6. Click the Product Name.

    The Product Detail page displays.

FIGURE 602. Product Detail Page

7. You can add the item to a wish list in one of the following ways:

    a. Click the **Add to Wish List** button to add the item to the default wish list.

b. Click the down arrow next to the **Add to Wish List** button to select a wish list to add the item to.

A pop-up displays.

FIGURE 603. Select Wish List Pop-Up

Select the radio button next to the wish list you want to add the item to and click **Add**, or enter a wish list name and click **Create & Add** to create a new wish list and add the item to the new wish list.

To Search for and View the Details of a Wish List

1. Click **Customer Account Activity** on the Commerce Activity panel on the Sterling Multi-Channel Selling Solution home page.

   Your Workspace page displays.

2. Click the **Wish Lists** tab.

   The **Wish List** page displays.

FIGURE 604. Wish List Page

3.   You can perform a quick search on Product ID, Wish List ID, Wish List Name, or Status, or search for the wish list(s) by clicking **Advanced Search**.

FIGURE 605. Wish List Search Page

4. Click Submit to display all the wish lists, or enter search criteria.

   Enter search criteria to help you locate a list or set of lists. You can specify the criteria to limit the scope of the search. The search criteria are described in Table 59 on page 928.

TABLE 59. Search Fields

Field	Description
Organization	If you enter the name of an organization, then only wish lists that belong to users of that organization are listed.
Username	Enter the username of a user to find all wish lists created by the specific user.
User First Name	Enter the first name of a user to find all wish lists created by the specific user.
User Last Name	Enter the last name of a user to find all wish lists created by the specific user.
Wish List ID	Enter the ID number for the wish list if you are searching for a particular wish list.
Product ID	If you enter one or more product IDs, then only wish lists that contain one or more of those IDs are listed.
Wish List Name	Enter the wish list name if you are searching for a particular wish list.
Wish List Status	Select Private or Public.
Creation Date	Enter the Starting Date and Ending Date to find all wish lists created within a certain time frame. Enter Starting Date only to find all wish lists from the specified date forward. Enter an Ending Date only to find all wish lists up to the specified date.
Last Modified	Enter the Starting Date and Ending Date to find all wish lists updated within a certain time frame. Enter Starting Date only to find all wish lists from the specified date forward. Enter an Ending Date only to find all wish lists up to the specified date.

The Search Results page displays a list of all the wish lists that meet your search criteria.

FIGURE 606. Search Results

5. Click an item or refine your search.

   If you can identify the wish list that you are looking for, click its link to
   display the Wish List Detail page. The Wish List Detail page provides a
   complete description of a wish list, including the availability of each line
   item, its price, and the desired and received quantity.

FIGURE 607. Wish List Detail Page

You can use the Wish List Detail page to perform one or more of the following tasks:

- To make a wish list public or private.

    - To make a wish list public, click the **Make Wish List Public** link under the **Actions** panel.

    - To make a wish list private, click the **Make Wish List Private** link under the **Actions** panel.

- To email wish list information, click the **Email** link under the **Actions** panel. See "To Email Wish List Information" on page 932.

- To download wish list information, click the **Print View** link under the **Actions** panel. See "To Download Wish List Information" on page 932.

- To add notes for a wish list, click the **Notes** link under the **Actions** panel. See "To Add Notes for a Wish List" on page 932.

- To view the purchase history of a wish list. See "To View the Purchase History of a Wish List" on page 933.

- To search for a wish list belonging to another user. See "To View the Purchase History of a Wish List" on page 933.

- To modify the header information for a wish list, click the **Change** button under the **Details** panel. See "To Modify a Wish List Header Information" on page 935.

- To view more wish lists, click the **More** link under the **My Wish List** panel.

- To navigate to the Templates tab of your workspace, click the **Template** link under the **My Wish List** panel.

- To add another item to your cart, enter the item's Product ID and quantity under the **Quick Add** panel, then click **Add**.

- To copy all the items in the wish list to a cart, click the **Add All Items to Cart** button. A pop-up window displays. Use the pop-up window to select the cart to which to copy the items.

- To update the wish list after making modifications, click the **Update** button.

- To change the order of the sequence in which the items appear in the wish list, select the appropriate sorting criteria from the **Sort On** drop-down list. You can sort the items by Still Needs, Price (low to high), Price (high to low), Department, Date Added, or Priority.

- To delete a line item from the wish list, click the **Delete** (**X**) button next to the item.

- To add a line item to a cart. See "To Add an Item to a Cart" on page 935.

- To move a line item to a wish list. See "To Move an Item to a Wish List" on page 936.

- To copy a line item to a wish list. See "To Copy an Item to a Wish List" on page 937.

- To view alternative items for a selected line item. See "To View Alternative Items for a Line Item" on page 938.

- To view complementary items for a wish list. See "To View Complementary Items for a Line Item" on page 939.

- To purchase items for another user from the user's wish list. See "To Purchase Items for Another User from the User's Wish List" on page 939.

To Email Wish List Information

1. On the Wish List Detail page, click the **Email** link under the **Actions** panel.

   The Send Email pop-up displays.

FIGURE 608. Send Email Pop-Up

2. Enter the recipient's email address in the To: field and the sender's email address in the From: field. Optionally, enter a CC: email address in the CC: field and any additional comments in the Memo: field.

3. Click **Send** to send the email or **Cancel** to cancel it.

To Download Wish List Information

1. On the Wish List Detail page, click the **Print View** link under the **Actions** panel.

   A new browser window displays showing details of the wish list in HTML format.

   You can save this file to your machine. If the file has been generated by a UNIX installation of the Sterling Multi-Channel Selling Solution, then the file has UNIX end-of-line characters. This means that some Windows text-editing applications such as Notepad may display the file as one continuous line.

To Add Notes for a Wish List

1. On the Wish List Detail page, click the **Notes** link under the **Actions** panel.

   The Notes page displays.

FIGURE 609. Notes Page

2. Enter a note, then click **Add Note**.

To View the Purchase History of a Wish List

1. On the Wish List Detail page, click the **View Purchases** link under the **Actions** panel.

   The Purchase History page displays.

FIGURE 610. Purchase History Page

The Purchase History page displays details of the items that a user has purchased by copying them from the wish list, such as the quantity of the item, the date on which the item was purchased, the user who purchased the item, and the date the item was shipped.

To Search for a Wish List Belonging to Another User

1. On the Wish List Detail page, click the **Find someone else's wish list** link under the **Actions** panel.

   The Public Wish List(s) search page displays.

FIGURE 611. Public Wish List(s) Search Page

2. Enter search criteria, such as the last name or email of the user who owns the wish list you are searching for, then click **Search**.

   The Public Wish List(s) Search Results page displays the list of wish lists belonging to the user.

Note:	The Public Wish List(s) Search Results page displays only those wish lists with **Public** status.

FIGURE 612. Public Wish List(s) Search Results Page

To Modify a Wish List Header Information

1. On the Wish List Detail page, click the **Change** button under the **Details** panel.

   The Edit Wish List page displays.

FIGURE 613. Edit Wish List Page

2. Modify the appropriate details. You can change the following information:

   • Wish List Name, Event Date, Comments, Currency, Event Type, and Shipping Address. For more information about custom event types, see the *Sterling Multi-Channel Selling Solution Developer Guide*.

3. Click **Save** to save your changes or click **Reset** to reset the details.

To Add an Item to a Cart

1. On the Wish List Detail page, click the **Add to Cart** icon next to the item.

   a. If the user has only one active cart, the item gets added to this cart.

   b. If the user has more than one active cart, a pop-up window displays.

FIGURE 614. Select Cart Pop-Up

- Select the radio button next to the cart and click **Copy** to add the item to the cart, or enter a cart name and click **Create & Copy** to create a new cart and add the item to the new cart.

To Move an Item to a Wish List

1. Click the **Move to Wish List** icon next to the item you want to move.

   A pop-up window displays.

FIGURE 615. Select Wish List Pop-Up

The pop-up displays all the wish lists that belong to the user.

* Select the radio button next to the wish list you want to move the item to and click **Move**, or enter a wish list name and click **Create & Move** to create a new wish list and move the item to the new wish list.

To Copy an Item to a Wish List

1. Click the **Copy to Wish List** icon next to the line item you want to copy to a wish list.

   A pop-up window displays.

FIGURE 616. Select Wish List Pop-Up

- Select the radio button next to the wish list you want to copy the item to and click **Copy**, or enter a wish list name and click **Create & Copy** to create a new wish list and copy the item to the new wish list.

To View Alternative Items for a Line Item

You can view the alternative items for a line item.

Note:	You can view alternative items for a line item only if your storefront administrator has set the **Enable Alternative items link in Wish Lists** business rule to true, and if the line item has any alternative items associated with it. For more information about business rules, see CHAPTER 39, "Business Rules Administration".

1. On the Wish List Detail page, click the **View alternatives** link under the **Availability** column for the line item.

   A pop-up window displays.

FIGURE 617. Select Alternate Item Pop-Up

The pop-up displays the list of alternative items for the line item.

2. Select the radio button next to the item you want to add to the wish list to replace the line item, then click **Add**.

To View Complementary Items for a Line Item

You can view the complementary items for a line item.

Note:	You can view complementary items for a line item only if your storefront administrator has set the **Enable Complementary items link in Wish Lists** business rule to true, and if the line item has any complementary items associated with it. For more information about business rules, see CHAPTER 39, "Business Rules Administration".

1. On the Wish List Detail page, navigate to the line item for which you want to view the complementary items, and click the **View Complementary Items** link.

   The list of available complementary items for the line item displays.

To Purchase Items for Another User from the User's Wish List

1. Search for the wish list from where you want to purchase the items. See "To Search for a Wish List Belonging to Another User" on page 934.

2. Click the wish list Name of the wish list from where you want to purchase the items. The Wish List Detail page displays.

FIGURE 618. Public Wish List Detail Page

3. Click the **Add All Items to Cart** button to copy the items to a cart.

    a. If the user has only one active cart, the item gets added to this cart.

    b. If the user has more than one active cart, a pop-up displays where you can select the cart to copy the items to.

4. Click the **Add to Cart** icon to add a line item to a cart. See "To Add an Item to a Cart" on page 935.

5. Search for the cart to which you copied the items you want to purchase and navigate to the Cart Detail page. See "To Search for a Cart" on page 838.

6. Click the **Checkout** button.

    The **Order Detail** page displays.

FIGURE 619. Order Detail Page

7. Click the **Place Order** button.

Managing Templates

This section describes the tasks that a customer service representative can perform to manage templates. A template cannot be shared with anyone. A user can purchase items only from his own template. To purchase items from a template, a user has to copy the items from the template to his cart before placing the order.

To Create a Template on Behalf of a Customer

1. Search for the user for whom you want to create a template by using the Search for User by Name panel on the Sterling Multi-Channel Selling Solution home page.

2. On the User List page, click the **Account Activity** link next to the user for whom you want to create a template.

    The workspace page displays.

FIGURE 620. Workspace Page

3.   Click the **Templates** tab.

The list of templates belonging to the user displays.

FIGURE 621. Account Activity Page: Templates Tab

4.   Click **New**.

The Create New Template panel displays.

FIGURE 622. Create New Template Panel

5. Enter a template name in the New Template Name field, and click **Create**.

    The Template Detail page displays.

FIGURE 623. Template Detail Page

To Add Items to a Template on Behalf of a Customer

1. Search for the user to whose template you want to add items by using the Search for User by Name panel on the Sterling Multi-Channel Selling Solution home page.

2. On the User List page, click the **Account Activity** link next to the user.

   The workspace page displays.

3. Click the **Templates** tab.

   The list of templates belonging to the user displays.

4. Click the Template Name of the template you want to add items to.

   The Template Detail page displays.

5. Search for the item you want to add to the template using the **Catalog Search** panel.

   The Catalog Search Results page displays.

6. Click the Product Name.

   The Product Detail page displays.

FIGURE 624. Product Detail Page

7. You can add the item to a template in one of the following ways:

   a. Click the **Add to Template** button to add the item to the default template.

b.   Click the down arrow next to the **Add to Template** button to select a
template to add the item to.

A pop-up displays.

FIGURE 625. Select Template Pop-Up

Select the radio button next to the template you want to add the item to
and click **Add**, or enter a template name and click **Create & Add** to
create a new template and add the item to the new template.

To Search for and View the Details of a Template

1.   Click **Customer Account Activity** on the Commerce Activity panel on the
Sterling Multi-Channel Selling Solution home page.

The Workspace page displays.

2.   Click the **Templates** tab.

The **Template List** page displays.

FIGURE 626. Template List Page

3. You can perform one of the following tasks to search for a template:

   a. Click **Search** to perform a quick search on Product ID, Template ID, or Template Name

   b. Click **Show All** to display all the templates

   c. Click **Advanced Search** to perform an advanced search for the template.

      The Template Search page displays.

FIGURE 627. Template Search Page

4. Click **Submit** to display all the templates, or enter search criteria.

Enter search criteria to help you locate a list or set of lists. You can specify the criteria to limit the scope of the search. The search criteria are described in Table 59 on page 928.

TABLE 60. **Search Fields**

Field	Description
Organization	If you enter the name of an organization, then only templates that belong to users of that organization are listed.
Username	Enter the username of a user to find all templates created by the specific user.
User First Name	Enter the first name of a user to find all templates created by the specific user.
User Last Name	Enter the last name of a user to find all templates created by the specific user.
Template ID	Enter the ID number for the template if you are searching for a particular template.
Product ID	If you enter one or more product IDs, then only templates that contain one or more of those IDs are listed.
Template Name	Enter the template name if you are searching for a particular template.
Creation Date	Enter the Starting Date and Ending Date to find all templates created within a certain time frame. Enter Starting Date only to find all templates from the specified date forward. Enter an Ending Date only to find all templates up to the specified date.
Last Modified	Enter the Starting Date and Ending Date to find all templates updated within a certain time frame. Enter Starting Date only to find all templates from the specified date forward. Enter an Ending Date only to find all templates up to the specified date.

The Search Results page displays a list of all the templates that meet your search criteria.

FIGURE 628. Template Search Results Page

5. Click an item or refine your search.

   If you can identify the template that you are looking for, click its link to display the Template Detail page. The Template Detail page provides a complete description of a template, including the availability, price, and quantity of each line item.

FIGURE 629. Template Detail Page

To Compare Items in a Template

1.   Search for and navigate to the Template Detail page of the template you want to compare line items for. See "To Search for and View the Details of a Template" on page 945.

2.   Check the check boxes next to the line items you want to compare, and click the **Compare** button.

     The Compare Products page displays, similar to the following figure.

FIGURE 630. Compare Products Page

To Copy an Item to A Template

1. On the Template Detail page, check the check box next to the line item you
    want to copy to a template, and click the **Copy to Template** button.

    A pop-up window displays.

FIGURE 631. Select Template to Copy Pop-Up

   •   Select the radio button next to the template you want to copy the item to
       and click **Copy**, or enter a template name and click **Create & Copy** to
       create a new template and copy the item to the new template.

To Move an Item to a Template

1. On the Template Detail page, check the check box next to the line item you want to move to a template, and click the **Move to Template** button.

    A pop-up displays.

FIGURE 632. Select Template to Move Pop-Up

2. Select the radio button next to the template you want to move the item to and click **Move**, or enter a template name and click **Create & Move** to create a new template and move the item to the new template.

To Delete an Item from a Template

1. On the Template Detail page, check the check box next to the line item you want to delete from the template, and click the **Delete** button.

    The line item is deleted from the template.

To Add an Item to a Cart

1. On the Template Detail page, check the check box next to the line item you want to add to a cart, and click the **Add to Cart** button.

    a. If the user has only one active cart, the item gets added to this cart.

    b. If the user has more than one active cart, a pop-up displays.

FIGURE 633. Select Cart Pop-Up

- Select the radio button next to the cart you want to add the item to and click **Copy**, or enter a cart name and click **Create & Copy** to create a new cart and add the item to the new cart.

To View Complementary Items for a Template

You can view complementary items for a line item.

Note:	You can view complementary items for a line item only if the **Enable Complementary items link in Templates** business rule is set to true, and if the line item has any complementary items associated with it. For more information about business rules, see CHAPTER 39, "Business Rules Administration".

1. On the Template Detail page, navigate to the line item for which you want to view the complementary items, and click the **View Complementary Items** link.

   The list of available complementary items for the line item displays.

To View Alternative Items for a Line Item

You can view the alternative items for a line item.

Note:	You can view alternative items for a line item only if the **Enable Alternative items link in Templates** business rule is set to true, and if the line item has any alternative items associated with it. For more information about business rules, see CHAPTER 39, "Business Rules Administration".

1. On the Template Detail page, click the **View alternatives** link under the
    Availability column for the line item.

    A pop-up displays.

FIGURE 634. Select Alternate Item Pop-Up

   The pop-up displays the list of alternative items for the line item.

2. Select the radio button next to the item you want to add to the template to
    replace the line item, then click **Add**.

To Download Template Information

1. Click **Customer Account Activity** on the Commerce Activity panel on the
    Sterling Multi-Channel Selling Solution home page.

2. Search for a list or set of templates.

    See "To Search for and View the Details of a Template" on page 945.

    The template list page displays. It presents all of the templates that meet
    your search criteria.

3. Select those templates whose details you wish to export by checking the check
    box next to each template.

4. Click **Download Selected Templates** in the lower-right corner of the page.

A new browser window displays showing details of the selected templates in HTML format.

You can save this file to your machine. If the file has been generated by a UNIX installation of the Sterling Multi-Channel Selling Solution, then the file has UNIX end-of-line characters. This means that some Windows text-editing applications such as Notepad may display the file as one continuous line.

To Email Template Information

1. Click **Customer Account Activity** on the Commerce Activity panel on the Sterling Multi-Channel Selling Solution home page.

2. Search for a list or set of templates.

See "To Search for and View the Details of a Template" on page 945.

The template list page displays. It presents all of the templates that meet your search criteria.

3. Select those templates whose details you wish to email by checking the check box next to each template.

4. Click **Email Selected Templates** in the lower-right corner of the page.

The Send Email pop-up displays.

FIGURE 635. Send Email Pop-Up

5. Enter the recipient's email address in the To: field and the sender's email address in the From: field. Optionally, enter a CC: email address in the CC: field and any additional comments in the Memo: field.

6. Click **Send** to send the email or **Cancel** to cancel it.

Managing Registries

This section describes the tasks that a customer service representative can perform to manage registries. If your implementation uses shared registries, you add registry items from a public registry to the anonymous user cart, then change the cart ownership to the partner user on whose behalf you are adding registry items.

To Create a Registry on Behalf of a Customer

1. Search for the user for whom you want to create a registry by using the **Search for User by Name** panel on the Sterling Multi-Channel Selling Solution home page.

2. On the User List page, click the **Account Activity** link next to the user for whom you want to create a registry.

   The workspace page displays.

FIGURE 636. Workspace Page

3. Click the **Registries** tab.

   The list of registries belonging to the user displays.

FIGURE 637. Account Activity Page: Registries Tab

4.   Click **Create Baby Registry** if you want to create a baby registry, or click
     Create Wedding Registry if you want to create a wedding registry.

     The Event Details page displays. The Event Details step is the first in the
     three-step registry creation process.

FIGURE 638. Event Details Page

5. Enter the appropriate details. See Table 61 on page 957 for a description of the fields.

TABLE 61. **Event Details Fields**

Field	Description
Wedding Date	Click the calendar icon to select a wedding date.
	Note: This field displays only if you are creating a wedding registry.
Wedding Location	Enter the location of the wedding.
	Note: This field displays only if you are creating a wedding registry.
Shower Date	Click the calendar icon to select a shower date for the registry.
Shower Location	Enter the location of the shower.
Expected Birth Date	Click the calendar icon to select the expected birth date of the baby.
	Note: This field displays only if you are creating a baby registry.
Baby Gender	Select Boy, Girl, or Not Known from the drop-down list.
	Note: This field displays only if you are creating a baby registry.
Approximate number of guests	Enter the number of guests expected to attend the event.
Reward Card No.	Enter the reward card number.
Comments	Enter your comments.
Registrant's First Name	Enter the registrant's first name.
Registrant's Last Name	Enter the registrant's last name.
Registrant's Email	Enter the registrant's email address.
Registrant's Address Line 1	Enter the first line of the registrant's address.
	Click the **Copy Registrant's Address** icon next to this field to copy the registrant's address to the co-registrant's address fields.
Registrant's Address Line 2	Enter the second line of the registrant's address.
Registrant's city	Enter the registrant's city.

TABLE 61. Event Details Fields

Field	Description
State and Zip	Select the registrant's state and enter its zip code.
Country	Select the registrant's country.
More Addresses	Click this link to select another address for the registrant.
Save to User Profile	Check this check box to save the registrant's address in the user's profile as a new Bill To address.
Registrant's Phone No.	Select the type of phone number and enter the phone number, then click the **Add** or **Remove** button to add or remove the registrant's phone numbers.
Co-Registrant's First Name	Enter the co-registrant's first name.
Co-Registrant's Last Name	Enter the co-registrant's last name.
Co-Registrant's Email	Enter the co-registrant's email address.
Co-Registrant's Address Line 1	Enter the first line of the co-registrant's address.
Co-Registrant's Address Line 2	Enter the second line of the co-registrant's address.
Co-Registrant's city	Enter the co-registrant's city.
State and Zip	Select the co-registrant's state and enter its zip code.
Country	Select the co-registrant's country.
Co-Registrant's Phone No.	Enter the co-registrant's phone number.

6. Click **Next**.

   The Shipping Information page displays.

FIGURE 639. Shipping Details Page

7. Enter the appropriate shipping information.

8. Click **Next**.

   The Registry Confirmation Page displays. The Registry Confirmation is the final step in the three-step registry creation process.

FIGURE 640. Registry Confirmation Page

9. Click the **Add Items to my registry** button to add items to the registry.

The Registry Detail page displays.

FIGURE 641. Registry Detail Page

10. Search for the item you want to add to the registry using the **Catalog Search** panel.

The Catalog Search Results page displays.

11. Click the Product Name.

The Product Detail page displays.

FIGURE 642. Product Detail Page

12. Click the **Add to Wedding Registry** button to add the item to a wedding registry, or click the **Add to Baby Registry** button to add the item to a baby registry.

A pop-up displays, similar to the following figure.

FIGURE 643. Select Registry Pop-Up

Select the radio button next to the registry you want to add the item to and click **Add**.

To Search for a Registry

1. Click **Customer Account Activity** on the Commerce Activity panel on the Sterling Multi-Channel Selling Solution home page.

    Your workspace page displays.

2. Click the **Registries** tab.

    The Registry List page displays.

FIGURE 644. Registry List Page

3. You can perform one of the following tasks to search for a registry:

    a. Click **Search** to perform a quick search on Registry Type, Registrant Name, Co-Registrant Name, Status, Product ID, or Event Location.

    b. Click **Show All** to display the list of all the registries.

    c. Click **Advanced Search** to perform an advanced search for the registry.

        The Registries Search page displays.

FIGURE 645. Registries Search Page

4. Click **Submit** to display all the registries, or enter search criteria.

   Enter search criteria to help you locate a list or set of lists. You can specify the criteria to limit the scope of the search. The search criteria are described in Table 62 on page 965.

TABLE 62. Search Fields

Field	Description
Organization	If you enter the name of an organization, then only registries that belong to users of that organization are listed.
Username	Enter the username of a user to find all registries created by the specific user.
User First Name	Enter the first name of a user to find all registries created by the specific user.
User Last Name	Enter the last name of a user to find all registries created by the specific user.
Registry ID	Enter the ID number for the registry if you are searching for a particular registry.
Product ID	If you enter one or more product IDs, then only registries that contain one or more of those IDs are listed.
Event Location	Enter the location where the event will be held.
First Name	Enter the first name of the registrant to find all registries created by the registrant.
Last Name	Enter the last name of the registrant to find all registries created by the registrant.
First Name	If you enter the first name of the co-registrant, then only registries that have this last name as the co-registrant's first name are listed.
Last Name	If you enter the last name of the co-registrant, then only registries that have this last name as the co-registrant's last name are listed.
Registry Type	Select Baby Registry if you are searching for a baby registry, or Wedding Registry if you are searching for a wedding registry.
Registry Status	Select Private or Public.

TABLE 62. Search Fields

Field	Description
Creation Date	Enter the Starting Date and Ending Date to find all registries created within a certain time frame. Enter Starting Date only to find all registries from the specified date forward. Enter an Ending Date only to find all registries up to the specified date.
Last Modified	Enter the Starting Date and Ending Date to find all registries updated within a certain time frame. Enter Starting Date only to find all registries from the specified date forward. Enter an Ending Date only to find all registries up to the specified date.

The Search Results page displays a list of all the registries that meet your search criteria.

FIGURE 646. Registry Search Results Page

5.   Click an item or refine your search.

If you can identify the registry that you are looking for, click its link to display the Registry Detail page. The Registry Detail page provides a complete description of a registry, including the availability, price, desired quantity and received quantity of each line item.

FIGURE 647. Registry Detail Page

You can use the Registry Detail page to perform one or more of the following tasks:

- To make a registry public, click the **Make this registry public** link under the **Actions** panel.

- To share a public registry with another user, click the **Email** link under the **Actions** panel. See "To Email Registry Information to Another User" on page 968.

- To download registry information, click the **Print View** link under the **Actions** panel. See "To Download Registry Information" on page 969.

- To add notes for a registry, click the **Notes** link under the **Actions** panel. See "To Add Notes for a Registry" on page 969.

- To view the purchase history of a registry. See "To View the Purchase History of a Registry" on page 970.

- To modify the header information for a registry, click the **Change** button under the **Details** panel. See "To Modify a Registry's Header Information" on page 971.

- To add an item to a cart, enter the Product ID and quantity of the item you want to add to a cart, then click the **Add** button under the **Quick Add** panel.

- To sort the line items in a registry by Date Added, Still Needs, Price (low to high), Price (high to low), Department, or Priority, select the sorting criteria from the Sort On drop-down list.

- To update the registry after making modifications, click the **Update** button.

- To delete a line item from the registry, click the **Delete** (**X**) icon next to the line item.

- To add a line item to a cart, click the **Add to Cart** icon next to the line item. See "To Add a Line Item to a Cart" on page 973.

- To move a line item to a registry. See "To Move a Line Item to a Registry" on page 973.

- To copy a line item to a registry. See "To Copy a Line Item to a Registry" on page 974.

- To view complementary items for a line item. See "To View Complementary Items for a Line Item" on page 975.

- To view alternative items for a line item. See "To View Alternative Items for a Line Item" on page 975.

To Email Registry Information to Another User

1. On the Registry Detail page, click the **Email** link under the **Actions** panel.

   The Send Email pop-up displays.

FIGURE 648. Send Email Pop-Up

2. Enter the recipient's email address in the To: field and the sender's email address in the From: field. Optionally, enter a CC: email address in the CC: field and any additional comments in the Memo: field.

3. Click **Send** to send the email or **Cancel** to cancel it.

To Download Registry Information

1. On the Registry Detail page, click the **Print View** link under the **Actions** panel.

    A new browser window displays showing details of the wish list in HTML format.

    You can save this file to your machine. If the file is generated by a UNIX installation of the Sterling Multi-Channel Selling Solution, the file has UNIX end-of-line characters. This means that some Windows text-editing applications such as Notepad may display the file as one continuous line.

To Add Notes for a Registry

1. On the Registry Detail page, click the **Notes** link under the **Actions** panel.

    The Notes page displays.

FIGURE 649. Notes Page

2. Enter a note, then click **Add Note**.

To View the Purchase History of a Registry

1. On the Registry Detail page, click the **View Purchases** link under the **Actions** panel.

    The Purchase History page displays.

FIGURE 650. Purchase History Page

The Purchase History page displays details of the items that a user has purchased by copying them from the registry, such as the quantity of the item, the date on which the item was purchased, the user who purchased the item, and the date the item was shipped.

To Modify a Registry's Header Information

1. On the Registry Detail page, click the **Change** button under the **Details** panel.

   The Edit Registry Information page displays.

FIGURE 651. Edit Registry Information Page

2. Modify the appropriate details. You can change the registry's information, the registrant and co-registrant's information and shipping address.

3. Click **Save** to save your changes or click **Reset** to reset the details.

To Add a Line Item to a Cart

1. On the Registry Detail page, click the **Add to Cart** icon next to the item.

    a. If the user has only one active cart, the item gets added to this cart.

    b. If the user has more than one active cart, a pop-up window displays.

FIGURE 652. Select Cart Pop-Up

   • Select the radio button next to the cart and click **Copy** to add the item to the cart.

To Move a Line Item to a Registry

1. On the Registry Detail page, click the **Move to Registry** icon next to the item you want to move.

    A pop-up displays.

FIGURE 653. Select Wish List Pop-Up

The pop-up displays all the registries that belong to the user.

•   Select the radio button next to the registry you want to move the item to and click **Move**.

To Copy a Line Item to a Registry

1.   On the Registry Detail page, click the **Copy to Registry** icon next to the item you want to copy.

A pop-up displays.

FIGURE 654. Select Wish List Pop-Up

The pop-up displays all the registries that belong to the user.

•   Select the radio button next to the registry you want to copy the item to and click **Copy**.

To View Complementary Items for a Line Item

You can view the complementary items for a line item.

Note:	You can view complementary items for a line item only if your storefront administrator has set the **Enable Complementary items link in Registries** business rule to true, and if the line item has any complementary items associated with it. For more information about business rules, see CHAPTER 39, "Business Rules Administration".

1. On the Registry Detail page, navigate to the line item for which you want to view the complementary items, and click the **View Complementary Items** link.

   The list of available complementary items for the line item displays.

To View Alternative Items for a Line Item

You can view the alternative items for a line item.

Note:	You can view alternative items for a line item only if your storefront administrator has set the **Enable Alternative items link in Registries** business rule to true, and if the line item has any alternative items associated with it. For more information about business rules, see CHAPTER 39, "Business Rules Administration".

1. On the Registry Detail page, click the **View alternatives** link under the **Availability** column for the line item.

   A pop-up window displays.

FIGURE 655. Select Alternate Item Pop-Up

The pop-up displays the list of alternative items for the line item.

2. Select the radio button next to the item you want to add to the registry to replace the line item, then click **Add**.

To Search for a Registry Belonging to Another User

1. Click **Customer Account Activity** on the Commerce Activity panel on the Sterling Multi-Channel Selling Solution home page.

   Your Workspace page displays.

2. Click the **Registries** tab.

   The Registry List page displays.

FIGURE 656. Registry List Page

3. Click the **Find someone else's Registry** link on the right-hand corner of the page.

   The Public Registry Search page displays.

FIGURE 657. Public Registry Search Page

4. Enter the registrant or co-registrant's first name and registrant or co-registrant's last name, then click **Search**.

The Search Results page displays the list of registries that meet your search criteria.

FIGURE 658. Public Registry Search Results Page

Working with Service Contracts

The customer service representative can view the service contractable items in the system and make changes to service contracts that are in the Active state.

Service contracts are generated for service contractable items after orders including such items are submitted. Once the order containing the service contractable item has been placed and accepted, customer service representatives can modify

information about the service contract. Information that can be modified includes service contract header information such as addresses and shipping information, and contract line items such as prices and expiration dates. For example, a customer may wish to renew a contract that is due to expire within 30 days, or take advantage of a special service offer.

To Search for Service Contracts

You can search for service contracts as follows:

1. Click **Advanced Search** in the Service Contracts panel on the Sterling Multi-Channel Selling Solution home page. The Service Contracts Search page displays as shown in the following figure.

FIGURE 659. **Service Contracts Search Page**

2. Enter one or more search criteria, then click **Submit**. You can use the asterisk (*) to perform wildcard searches.

3. The **Service Contracts** tab of your workspace page displays all the service contracts that meet your search criteria.

4. Click the contract ID to see the Service Contract Summary page. This page provides specific information about the service contract, including relevant information about the user, the order, and the line item(s).

5. If the order has not yet been accepted, then the page will be displayed as read-only. Otherwise, the page displayed is similar to the following figure.

FIGURE 660. Service Contract Summary Page

To Modify Service Contracts

You may be required to change a service contract, for example in response to a request by a user.

1. Search for and display the service contract that you want to modify.

2. Click **Change Contract.** The Change Service Contract page displays.

3. Modify the service contract information.

4. When you are finished modifying the service contract information, click **Checkout**.

To View Service Contract History

Perform these steps to view the history for an individual service contract.

1. Search for and display the Service Contract Summary page for the service contract whose history you want to view.

   See "To Search for Service Contracts" on page 978.

2. Click the **history** link on the Service Contract Summary page. The Service Contract History page displays, as shown in the following figure.

FIGURE 661. Service Contract History Page

Processing Return Requests

The customer service representative can view all the return requests currently in the system. In addition, the representative can manually approve or reject those requests for which no decision has been reached.

To Search for Return Requests

1. Click **Advanced Search** in the Returns panel on the Sterling Multi-Channel Selling Solution home page.

FIGURE 662. Returns Search Page

2. Enter search criteria to help you locate a return request. You can use the asterisk (*) wildcard for your search. Click **Submit**.

TABLE 63. **Search Criteria: Returns**

Field	Description
Accounts by Manager/Rep	You can specify that the search should be performed only over partner accounts that are assigned to particular enterprise managers and users. Click **...** to select users from the enterprise organization.
Organization	If you enter the name of an organization, then only returns requested by users of that organization are listed.
Username	Enter the username of a user to find all returns requested by the specific user.
User First Name	Enter the first name of a user to find all returns requested by the specific user.
User Last Name	Enter the last name of a user to find all returns requested by the specific user.
Return Number	Enter the identification number for the return assigned when the return was created.
Order Number	Enter an order number to display the requests associated with that order.
RMA Number	Enter the Return Material Authorization (RMA) number to display the return request associated with that RMA number.
Serial Number	Inactive. You cannot use this field.
Product ID	Enter the product ID number to list all the return requests that contain this product ID.
Return Status	Enter the status (approved, rejected, or pending) to display requests that have that particular status.
Request Date	Enter starting and ending dates to display any requests created within a given time period.
Approval Date	Enter the starting and ending date to display any returns approved with the given period.

The **Returns** tab of the Workspace page displays with the returns that meet your search criteria.

FIGURE 663. Workspace Page: Returns Tab

3.   Click on the return number of the appropriate return request.

     This displays the Return Request Detail page.

FIGURE 664. Return Request Detail Page

To Process Return Requests

1.   Search for the return as described in "To Search for Return Requests" on page 980.

2.   Navigate to the detail page for the request.

3. On the Return Request Detail page, click **Approve Return** or **Reject Return**.

   If you approve the request, then a Returns Management Authorization (RMA) number is assigned and an email notification is sent to the customer.

   If you reject the request, then only an email notification is sent to the customer.

Processing Quotes

The customer service representative can view all the quotes currently in the system. In addition, the representative can override details of the quote, including its expiration date, and the quantity and prices of each line item saved in the quote.

To Search for Quotes

1. Click **Customer Account Activity** in the Commerce Activity panel on the Sterling Multi-Channel Selling Solution home page, then click the **Quotes** tab.

   The Quotes tab displays.

FIGURE 665. Quotes Tab

2. Enter search criteria in the Find Quotes that contain: panel. To perform a detailed search, click Advanced Search. Enter search criteria to help you locate a quote.

You can use the asterisk (*) wildcard character for the Organization, Username, User First name, User Last Name, and Quote Name fields of your search. Click **Submit**.

TABLE 64. Search Criteria: Quotes

Field	Description
Find by Accounts handled by Manager/ Rep	Find quotes for partner accounts that are assigned to particular enterprise managers and users. Click ... to select users from the enterprise organization.
Organization	Enter the company name of the user who created the quote.
Username	Enter the user name of the user who created the quote.
User First Name	Enter the username of the user who created the quote.
Quote ID	Enter the ID of the quote that you are looking for.
Quote Name	Enter the name of the quote that you are looking for.
Quote Status	Select the status of the quote that you are looking for from the drop-down list.
Find Quotes by Date Range	Enter creation, last modified, expiration, and ending dates to display quotes created, changed, or expiring within the given time period.

The **Quotes** tab displays with the quotes that meet your search criteria.

FIGURE 666. Quotes Tab

3. Click the quote name of the appropriate quote.

The Quote Detail page displays.

FIGURE 667. Quote Detail Page

To Process Quotes

Customer service representatives can modify the details of a quote and they can place the quote as an order on behalf of the user that saved the quote.

1. Search for the return as described in "To Search for Quotes" on page 984.

2. Navigate to the detail page for the quote.

3. On the Quote Detail page, modify the quote details as appropriate.

4. Click **Update**.

If you want to place the quote as an order, then follow these additional steps:

5. Click **Prepare Order Header**.

6. Click **Edit Header Info**. Enter order information as appropriate on behalf of the user.

7. Click **Review and Place Order**. On the Review and Place Order page, you can double-check any order details before placing the order.

8. Click **Place Order**.

    A confirmation page is displayed. Click **Done** to return to your workspace page.

To Modify a Quote

As an enterprise user, you can modify quotes as follows:

1. Search for the quote.

    See "To Search for Quotes" on page 984.

2. Click on an ID to view the details of the quote.

FIGURE 668. Quote Detail Page

3. Modify the information as necessary.

   You can click the calendar icon to select a new expiry date.

4. Click **Update** to save the changes and continue editing the quote; click **Back** to return to the list of quotes.

Users can request better prices by clicking **Negotiate Prices** while viewing a cart. When they do so, they are prompted to specify the discount that they want for each line item and to provide a reason for the request (such as a volume discount or a competing offer). When the request is submitted, then:

• It can be automatically approved: this occurs if the requested price for each line item is within a certain percentage of the user's list price. This percentage is determined by the RFQ Rule Acceptance Percentage system property. See "RFQ Rule Acceptance Percentage" on page 1083 for more information. If a quote is automatically approved, then it is saved as an orderable quote, and so the user can immediately place it as an order.

• If it is not automatically approved, then it is saved as an submitted quote and an email message is sent to an email address used to alert customer service representatives that a user has requested a quote. The email address is determined by the Email Address for CSR system property. See "Email Address for CSR" on page 1082 for more information. A customer service representative must then approve or reject the quote as described in this section.

A customer service representative can view all the quotes currently in the system that have not been automatically approved. In addition, the representative can override details of the quote, including its expiration date, and the quantity and prices of each line item saved in the quote.

• If you approve a quote, then the quote is converted to an orderable quote. When the user who requested the quote next logs in, they will see that the quote is now approved, and they can proceed to place the quote as an order.

• If you reject a quote, then the quote status is set to Rejected. When the user who requested the quote next logs in, they will see that the quote has been rejected. If they want to, the user can navigate to the quote and re-submit it.

To Approve a Quote

Customer service representatives can modify the details of a submitted quote and they can approve or reject it. If they approve a quote, then it is saved as an orderable

quote: it can then be placed as an order either by the user or by a customer service presentative. Note that once an quote is accepted, then any pricing rules associated with the quote are removed because their effect on prices is overwritten by manual pricing changes.

1. Search for the quote as described in "To Search for Quotes" on page 984.

2. Navigate to the detail page for the quote.

3. You can modify the quote before acting on it. If necessary, modify the quote to provide information about the approval or rejection.

   - Memo: the reason for approval or rejection

   - Quantity: an acceptable quantity.

   - CSR Price: an acceptable price. If you leave this field blank, then the quoted price defaults to the price requested by the user (User Price).

   If desired, modify the comment for each line.

4. Click **Approve**.

   The quote is saved as an orderable quote and can now be placed as an order.

To Reject a Quote

Customer services representatives can modify the details of a submitted quote and they can approve or reject it. If they reject a quote, then the user can review the reasons for your rejection and they can re-submit the request.

1. Search for the quote as described in "To Search for Quotes" on page 984.

2. Navigate to the detail page for the quote.

3. You can modify the quote before acting on it. If necessary, modify the quote to provide information about the approval or rejection.

   - Memo: the reason for approval or rejection

   - Quantity: an acceptable quantity.

   - CSR Price: an acceptable price. If you leave this field blank, then the quoted price defaults to the price requested by the user (User Price).

   If desired, modify the comment for each line.

4. Click **Reject**.

Creating Tasks From Commerce Objects

You can create tasks from orders and quotes. By doing so, you can add a task to your own "To do" list, or have a colleague work on the order or quote. See "Task Management" on page 59 for more information about tasks.

To Create a Task from a Commerce Object

1. Navigate to the detail page of the commerce object.

2. Click **Create Task**.

FIGURE 669. Task Detail Page for New Commerce Task

3. Enter the task details as appropriate.

4. Assign watchers to the new task.

5. Click **Create**.

   The Task Detail page re-displays.

6. Click **Notes** to enter task-related notes.

This chapter covers all of the tasks associated with managing leads, opportunities, and proposals. "Leads Management" on page 49 provides an overview of how you work with Sterling Leads.

Creating and Modifying Leads

Lead administrators can add leads to the system either by creating the leads manually or by uploading a file as described in "To Upload a Lead" on page 993. Before uploading leads, check that the system property Job Scheduler URL has been set: typically, it should be set to:

```
http://<server:port>/Sterling/msg/matrix
```

See "Job Scheduler Settings" on page 1079 for further information.

To Create a Lead

1. Click **Lead Activity** on the Channel Management panel on the Sterling Multi-Channel Selling Solution home page.

    This displays the Leads Management List page.

FIGURE 670. Leads List Page

2. On the Leads Management List page, click **New**.

    The **Lead Detail** page displays.

FIGURE 671. Lead Detail Page: General Tab

3. Enter the general lead information.

    See "To Add or Modify Lead Information" on page 998.

4. Enter contact information for the lead. You can add one or more contacts for a lead.

5. Click **Save & New** to save the lead and clear the fields so you can create
    another new lead. Click **Save** to save the lead and display the Detail page for
    the new lead, so you can modify the lead.

The lead is created. At this point, you can do one or more of the following:

•   Repeat the steps to create another lead (if you clicked **Save & New**).

•   Create a proposal by adding products to the product list. To do this, click
    Manage Proposals. Add products, either by adding them from the
    product catalog or by entering them directly using the rapid-entry UI.

•   Add notes about the lead.

    See "To Add or View Notes About a Lead" on page 1001.

•   Assign the lead to one or more partners.

    See "Assigning Leads" on page 1004.

FIGURE 672. Lead Detail Page: Edit Properties Tab

To Upload a Lead

You can upload leads to the Sterling Leads application using an XML file. The file
must conform to the requirements described in "Uploading Leads" on page 52.

The Automatic assign uploaded leads to their fixed recommended partners business rule determines whether uploaded leads are automatically assigned to partners. See "Automatic assign uploaded leads to their fixed recommended partners" on page 1088.

1. Click **Lead Activity** on the Channel Management panel on the Sterling Multi-Channel Selling Solution home page.

   This displays the Leads Management List page.

FIGURE 673. Leads List Page

2. On the Leads Management List page, click **Upload**.

   This displays a page that enables you to specify the file location.

FIGURE 674. Uploading a Lead

3. Select the appropriate format for the file which you want to upload.

4. Click **Browse...** to find the file of leads that you want to upload.

5. Click **Upload**.

The lead information is added to the system and the new lead names appear in the Leads Management List page. At this point, you can assign the leads or modify any other elements of the new leads. See "To Modify a Lead" on page 995.

Note:	If you see an error page that reports a timeout error, then the leads have been created correctly, but it has taken longer than the system timeout parameter allows. You can increase the value of this timeout by navigating to the system property Commerce Manager -> Partner Request Timeout Value, and set this to a higher value such as 300 (five minutes).

To Modify a Lead

If you modify a lead after it has been assigned to partners, then the modifications that you make are not propagated to the existing partner opportunities. Your changes will be seen only by those partners to whom you assign the lead after making your changes.

1. Click **Lead Activity** on the Channel Management Tasks panel on the Sterling Multi-Channel Selling Solution home page.

   This displays the Leads Management List page.

FIGURE 675. Leads List Page

2. In the Lead Name column, find the lead you want to modify.

3. Click on the lead name.

   This displays the lead detail page.

FIGURE 676. **Lead Detail Page: Edit Properties Tab**

At this point, you can modify the following information about a lead:

• Enter or modify general lead information.

   See "To Add or Modify Lead Information" on page 998.

• Add or modify contact information.

• Add or remove products from the product list.

• Add or view notes about the lead.

   See "To Add or View Notes About a Lead" on page 1001.

• Assign the lead to one or more partners.

   See "Assigning Leads" on page 1004.

• View any activity on the lead by partners.

   See "Viewing Partner Activity" on page 1011.

To Search for a Lead

You can use the fields at the top of the Leads Management List page to search for a specific lead.

1. Click **Lead Activity** on the Channel Management Tasks panel on the Sterling Multi-Channel Selling Solution home page.

    The Lead List page displays.

FIGURE 677. Lead List Page

2. Select a search criteria from the drop-down list, and enter a search string in the field next to the drop down list.

    The search is case-insensitive and you can use an asterisk (*) to perform wildcard searches.

3. Click **Search**.

Note:	You can click **Show All** to display all the leads.

    The Lead Search Results page displays the results of your search.

FIGURE 678. Lead Search Results Page

To Add or Modify Lead Information

When you create ("To Create a Lead" on page 991) or modify ("To Modify a Lead" on page 995) a lead, you can enter or modify lead information.

FIGURE 679. Lead Detail Page: General Lead Information

1. In the upper part of the page, enter the General Lead Information, as described in Table 65 on page 998.

   In the opportunity page, required fields are marked with an asterisk (*). At any time, you can click **Cancel** to clear any new or modified information and begin again.

TABLE 65. General Lead Information

Field	Description
Lead Name	Name of the Lead
Date Created	The date the lead was created. System-generated and read-only. If you are creating a lead, then this field is empty.
Lead Source	Where the lead came from: Phone, Tradeshow, Fax, Website
Status	Lead Status. This field is read-only. Values are Unassigned, Assigned, Working, and Closed.
	An Unassigned Lead is a lead that has not yet been assigned to a partner.
	An Assigned Lead is one which has been assigned to a partner, and which the partner has neither accepted nor declined.
	A Working Lead is one which has been assigned to and accepted by a partner.
	A Closed Lead is one which has been closed by the Enterprise Lead Administrator. See "To Close a Lead" on page 1013.

TABLE 65. General Lead Information (Continued)

Field	Description
Priority	The priority of the lead.
Territory	The territory to which the lead belongs
Customer Type	The vertical market to which the lead belongs
Assign To Profile Type	The profile type to whom the lead should be assigned: distributor, OEM, reseller, retailer. (Note: this list is customizable.)
Assign To Profile Level	The level of the profile to whom the lead should be assigned: platinum, gold, silver, tin. (Note: this list is customizable.)

FIGURE 680. Lead Detail Page: Contact Information

2. In the lower part of the Lead page, enter the contact information, as described in Table 66 on page 999.

   In the Lead Header General tab, required fields are marked with an asterisk (*).

TABLE 66. Contact Information

Field	Description
Title	The title of the lead contact (Mr., Mrs., and so on)
First Name	The first name of the lead contact
Last Name	The last name of the lead contact
Job Title	The job title for the lead contact
Department	The department to which the lead contact belongs at their company

TABLE 66. **Contact Information (Continued)**

Field	Description
Company	The company to which the contact belongs
Use as Primary Contact	Every lead must have one contact designated as the primary contact
Address Line 1	First line for an address. (In the United States, this is normally the street address.)
Address Line 2	Second line for an address. (In the United States, this is normally the apartment or mailstop.)
City	The city for the address
State/Province	The state for the address
Postal Code	The postal code for the address
Country	The country for the address
Email	The email address for the lead contact

3. Enter one or more phone numbers for the contact.

   a. Select the type of phone number from the drop-down list.

   b. Enter the phone number in the entry field.

   c. Click **Add**.

   d. Repeat these steps for each number you want to add.

   To remove a phone number, select the number in the list, then click **Remove**.

4. Click **Save**.

   The information is saved and the Lead Header page is re-displayed.

At this point, you can do one or more of the following:

- Add another contact or modify another contact.

- Add notes about the lead.

  See "To Add or View Notes About a Lead" on page 1001.

- Assign the lead to one or more partners.

  See "Assigning Leads" on page 1004.

- Add products to the lead product list.

To Add or View Notes About a Lead

When you modify ("To Modify a Lead" on page 995) a lead, you can add notes about the lead. In addition, notes can be generated by the system automatically when the lead is assigned or accepted.

FIGURE 681. **Lead Detail Page: Edit Properties Tab**

1. On the Lead Detail page, click **Add Notes**.

   This displays a list of the current notes as well as a text field for adding additional notes. The window displays all notes, system-generated as well as user-generated.

   By default the notes are sorted by date. You can sort the Date column in ascending or descending order by clicking the triangle in the Date column. You can also sort by Company or Created By.

FIGURE 682. Lead Detail Page: Add Notes Tab

2.   In the Lead Notes field, enter the note you want to add.

3.   Click **Add Note**.

The note is added to the list.

To Add Product Information to a Lead

One of the main things that you want to communicate to your partners is which of your products the contact is interested in. You do this by adding them to the product list associated with the lead.

1.   On the Lead Detail page, click **Manage Proposals**.

FIGURE 683. Lead Detail Page: Manage Proposals Tab

2. You can add products to the product list in the following ways:

   • Click **Advanced Search** to perform an advanced search of the product(s) you want to add.

   • Click **Browse Catalog** to navigate to the product(s) using the standard catalog navigation pages.

   • Click **Help Me Find Products**, and select the product(s) using the Sterling Advisor questionnaire.

   • Enter Product IDs and click **Go** to add the product(s) using the rapid-entry form provided.

   When you assign this lead to a partner, then products that you add to the product list will appear on the partner's opportunity product list.

3. You can remove products by checking the check box next to the product ID, and clicking **Remove**.

4. If you want to indicate that a product is to marked "below the line", then check the BTL check box and click **Save**.

You can use the below the line (BTL) flag to include products as suggestions in a lead. BTL products are not automatically part of an order placed from a lead, but they can be moved to "above the line" by the end-user and hence become part of the order.

Assigning Leads

You can assign a lead manually, or you can let the system assign the lead automatically. Refer to "To Assign a Lead Automatically" on page 1009 for details about automatic assignment.

There are two ways to assign a lead manually:

- You can select one or more leads from the Leads Management List, then choose the partner (or partners) to whom you want to assign them: see "To Assign Leads Manually from the Leads Management List" on page 1004.

- You can also access the lead detail page for a particular lead, then assign that single lead from the Assignments tab: see "To Assign a Lead Manually from Lead Header Page" on page 1007.

To Assign Leads Manually from the Leads Management List

1. Click **Lead Activity** on the Channel Management Tasks panel on the Sterling Multi-Channel Selling Solution home page.

This displays the Leads Management List page.

FIGURE 684. Leads Management List Page

2. In the list, find the lead(s) that you want to assign to one or more partners.

   See "To Search for a Lead" on page 996 for information on finding leads.

3. Click the check box to the left of the Lead Id.

4. Repeat the last two steps for each lead you want to assign.

Attention:	If you check the box next to one or more leads, and then search for a lead before you click **Assign**, then the leads you selected will become unselected. Likewise, if you click either **Show All**, **Next**, or **Previous**, before you click **Assign**, then the leads you selected become unselected.

5. Click **Assign**.

   If you have selected only one lead, then the Assign Lead tab of the Lead header is displayed. This displays the list of partners to whom you can assign this lead.

FIGURE 685. Lead Detail Page: Assign Lead Tab

If you have selected more than one lead, then a general Assignments page is displayed. This displays the list of partners to whom you can assign the selected leads.

FIGURE 686. Lead Assignments Page

In either case, the list displays only those partners who have a sales executive: that is, a partner user to whom the Sales Executive function has been assigned. See "Assigning Functions for Managing Leads" on page 51.

6. In the Partner Name column, find the partner(s) to whom you want to assign the lead.

You can search for a particular partner name. Enter the name of the partner in the Search Partner Name for field, then click **Search**. You can use an asterisk (*) to do a wildcard search.

If you are assigning only one lead, then you can click **Show Recommended** to display a list of partners filtered according to a set of criteria defined in the Lead Management Recommended Partner Search Attributes business rule. The criteria includes one to four attributes (partner type, partner level, territory, and customer type). You choose one of these attributes when creating a lead (see Table 65, "General Lead Information", on page 998). The system recommends partners whose attributes (as defined in their partner profile) match the same attributes in the lead.

You can click **Show All** to re-display the list of all partners that have a sales executive user.

7. Click the check box to the left of each partner name to whom you want to assign the lead.

    If there is no check box to the left of the partner, then that partner has already been assigned the lead.

Attention:	If you check the box next to one or more partners, then search for a partner before you click **Assign**, the partners you selected will become unselected. Likewise, if you click either **Show All**, **Show Recommended Partners**, **Next**, or **Previous**, before you click **Assign**, then the partners you selected become unselected.

8. Click **Assign**.

The lead(s) you selected are assigned to the partner (or partners) you selected.

To Assign a Lead Manually from Lead Header Page

When you create ("To Create a Lead" on page 991) or modify ("To Modify a Lead" on page 995) a lead, you can assign the lead to one or more partners from the Leads Management Detail page.

1. Navigate to the lead that you want to assign.

FIGURE 687. Lead Detail Page: Edit Properties Tab

---

1. Click **Assign Lead**.

   This displays a list of the partners to whom you can assign this lead. The list displays only those partners who have a partner sales manager.

   You can click **Show Recommended** to display the list of recommended partners. The recommended list of partners is filtered according to a set of criteria defined in the Lead Management Recommended Partner Search Attributes business rule. The criteria includes one to four attributes (profile type, profile level, profile territories, and customer type). You choose one of these attributes when creating a lead (see Table 65, "General Lead Information", on page 998). The system recommends partners whose attributes (as defined in their profile) match the same attributes in the lead.

   You can click **Show All** to re-display the list of all partners that have a partner sales manager.

FIGURE 688. Lead Detail Page: Assign Lead Tab

2. In the Partner Name column, find the partner to whom you want to assign the lead.

   If the partner is greyed-out, then that partner has already been assigned the lead.

   You can search for a particular partner name. Enter the name of the partner in the Search Partner Name for field, then click **Search**. You can use an asterisk (*) to do a wildcard search.

3. Click the check box to the left of each partner name to whom you want to assign the lead.

4. Repeat the last two steps for each partner to whom you want to assign the lead.

> **Attention:** If you check the box next to a partner, then search for a partner before you click **Assign**, the partners you selected will become unselected. Likewise, if you click either **Show All**, **Show Recommended Partners**, **Next**, or **Previous**, before you click **Assign**, then the partners you selected become unselected.

5. Click **Assign**.

The lead is assigned to the partner (or partners you selected).

To Assign a Lead Automatically

You can provide for automatic lead assignment by defining partner criteria in a business rule.

1. Click **Lead Activity** on the Channel Management Tasks panel in the Sterling Multi-Channel Selling Solution home page.

   This displays the Leads Management List.

2. In the list, find the lead that you want to assign to a partner.

   See "To Search for a Lead" on page 996 for information about searching.

3. Click the check box to the left of the Lead Id column.

4. Repeat the last two steps for each lead you want to assign.

> **Attention:** If you check the box next to a lead, then search for a lead before you click **Auto Assign**, the leads you selected will become unselected. Likewise, if you click either **Show All**, **Show Recommended Partners**, **Next**, or **Previous**, before you click **Auto Assign**, then the leads you selected become unselected.

5. Click **Auto Assign**.

   The Sterling Multi-Channel Selling Solution assigns the selected leads automatically to those partners defined by the business rule criteria. See "Assigning Leads" on page 52 for explanation of this business rule.

You can set a business rule (see "Lead Management Number of Recommended Partners/Users for Popup" on page 1088) so that a confirmation page is displayed for each lead that is being automatically assigned. This page displays the partners to

which the lead(s) will be automatically assigned. If this page is displayed, then uncheck the box(es) next to the partner(s) to whom you do not want to assign the lead, then click **Assign** (to confirm). You can click **Cancel** to cancel the auto-assignment for the specific lead for which the page appears.

Note:	The confirmation page only displays partners for whom a user has been created with the SalesExecutive function.

To Retract a Lead

On occasion, you may wish to retract an opportunity from a partner to whom you have assigned it. Retracting an opportunity has the effect of making the opportunity read-only for the partner sales executive and the sales representative to whom the opportunity has been delegated. You can re-assign a lead that you have retracted.

1. Click **Lead Activity** in the Channel Management Tasks panel on the Sterling Multi-Channel Selling Solution home page.

    This displays the Leads List page.

2. Identify the lead that you want to retract and navigate to the lead detail page.

3. On the Lead Detail page, click **Review Activity**.

FIGURE 689. Lead Detail Page: Review Activity Tab

4. Identify the partner(s) from whom you want to retract the lead, then click the (**X**) icon under the **Retract** column.

    The Status of the opportunity changes to Retracted. If the assigned sales representative now views the opportunity, then they will see it only as a read-only object. You can re-assign this lead to the partner later if you want to.

Viewing Partner Activity

You can view any activity performed by a partner to whom the lead is assigned. For example, when the partner sales representative speaks with the opportunity contact, they may create a proposal or modify. You can view the proposals created by the partner sales representatives when you view partner activity. You can also view any notes entered by the partner sales representative about the opportunity.

To View Partner Activity

1. Click **Lead Activity** in the Channel Management panel on the Sterling Multi-Channel Selling Solution home page.

   This displays the Leads Management List page.

FIGURE 690. Leads Management List Page

2. In the Lead Name column, find the lead whose partner activity you want to view.

   See "To Search for a Lead" on page 996 for information about searching.

3. Click the lead name to display the Lead Detail page.

4. Click **Review Activity**.

   The Review Activity tab displays the list of partners to whom the lead has been assigned.

FIGURE 691. **Lead Detail Page: Review Activity Tab**

5.   Find the partner whose activity you want to view, then click **View Details**.

     The Opportunity Detail page displays.

FIGURE 692. **Opportunity Detail Page: Edit Properties Tab**

The opportunity information is derived from the information entered when the lead
was created. The partner information is derived from the information about either
the partner sales manager or partner sales representative.

6.   Click **Manage Proposals** to display a list of products associated with the lead.

     After the enterprise lead administrator creates and assigns the lead, the
     partner manages their opportunity and creates a proposal for the contact.

7.   Click **Add Notes** to view notes about the partner activity.

Closing a Lead

Once you determine that a lead has been fulfilled, you can use these steps to close a lead. Typically, you would close a lead when you view partner activity for a lead (see "Viewing Partner Activity" on page 1011) and see that the opportunity status for one or more partners is Closed.

To Close a Lead

1. Click **Lead Activity** in the Channel Management panel on the Sterling Multi-Channel Selling Solution home page.

   The Leads Management List page displays.

FIGURE 693. Leads Management List Page

2. In the list, find the lead that you want to close.

   See "To Search for a Lead" on page 996 for information about finding leads.

3. Select the checkbox to the left of the Lead ID.

4. Repeat the last two steps for each lead you want to close.

Attention:	If you select the checkbox next to a lead, then search for a lead before you click **Close**, then the leads you selected will become unselected. Likewise, if you click either **Show All**, **Show Recommended Partners**, **Next**, or **Previous**, before you click **Close**, then the leads you selected become unselected.

5. Click **Close**.

    A confirmation pop-up displays that enables you to enter a reason for closing the lead.

FIGURE 694. Closing a Lead: Confirmation Popup

6. Enter a reason and click **OK**.

    The lead status changes to "Closed".

Sterling Campaigns

This chapter covers the tasks associated with managing email campaigns. See "Campaigns Management" on page 56 for an overview of campaigns and "Mailing Lists Management" on page 57 for an overview of mailing lists.

Before creating any campaigns, create the cron job necessary to run campaigns. See "Campaigns Cron Job" on page 1024.

This chapter covers the following topics:

- "Creating and Modifying Campaigns" on page 1015

- "Mailing Lists" on page 1020

- "Campaigns Cron Job" on page 1024

Creating and Modifying Campaigns

Campaign administrators can add campaigns to the system and manage existing ones.

To Create a Campaign

1. Click **Campaigns** in the Channel Management panel on the Sterling Multi-Channel Selling Solution home page.

   The Campaigns List page displays.

FIGURE 695. Campaigns List Page

2. Click **New Campaign**.

   The Campaign Detail Header tab displays.

FIGURE 696. Campaign Detail Edit Header Tab

3. On the Edit Header tab, enter a Name and Description for the new campaign.

4. Enter an execution date and time.

5. Check the **Enable** check box.

6. Click **Create**.

   The Campaign Detail page re-displays with new tabs.

7. Click the **Manage Content** tab.

The Content tab of the Campaign Detail Manage displays.

FIGURE 697. Campaign Detail Page: Manage Content Tab

Use the Manage Content tab to specify the email message(s) sent to the recipients of the campaign. You can create messages for one or more of the locales supported by the Sterling Multi-Channel Selling Solution. Repeat the following steps for each locale you want to use for this campaign.

a. Locale: select the appropriate locale for the email message. Only users whose preferred locale matches this value will be sent the email message. See "Campaigns and Locales" on page 56 for more information about how locales are used when campaigns are executed.

b. From: specify an appropriate email address.

c. Subject: specify an appropriate subject line for the email message.

d. Enter the message in the form of an HTML document. You can create the HMTL file using your preferred HTML editor and then cut and paste it into this text area.

If you use the @Link*n*@ tags in the HTML message, then make sure that you provide the corresponding values for the Link*n* fields. The first field is the URL set in the hypertext reference, and the second field is what recipients will see displayed as the link. For example, suppose that you enter:

```
Link1:
http://www.sterlingcommerce.comText: this link
```

Recipients will see the following in the received email message:

```
For more information on item1, go to this link.
```

When they click this link, their browser opens to http://www.sterlingcommerce.com

Note that the link URL in the generated email message is actually pointing back to the Sterling Multi-Channel Selling Solution. When the Sterling Multi-Channel Selling Solution server receives the request, it logs the request, and then redirects the browser to the target URL. This way, you can compile statistics that track which links from your email campaigns are clicked by users.

8. Click **Save**.

9. You can test the message as follows:

   a. Click **Test**.

   b. The Test Campaign dialog box is displayed.

FIGURE 698. Test Campaign Dialog Box

   c. In the Test Campaign dialog box, enter your email address.

    d.   Click **Send**.

        Verify that the email message is sent correctly. If you do not receive the email message, check the following items:

- Ensure that the email address is correct.

- Ensure that the address of the SMTP server used for campaigns is correct. Check the value of the Campaigns.SMTP Host Machine property by navigating to the system properties. See CHAPTER 38, "Enterprise System Administration" for more information about system properties.

        Verify that any automatically-generated URLs (using the Link*n* tags described in Step 7) point back to the Sterling Multi-Channel Selling Solution server. If they start "http://localhost...", then you must set the ServerName system property to the externally-visible name of the Sterling Multi-Channel Selling Solution server.

10. Click the **Manage Recipients** tab.

    The Campaign Detail Manage Recipients tab displays.

FIGURE 699. Campaign Detail Manage Recipients Tab

    Use the Manage Recipients tab to specify which recipients should receive the email message. You can specify the recipients by selecting which mailing lists should be used. See "Mailing Lists" on page 1020 for information about creating mailing lists.

    For each mailing list, you can decide whether to use it to include its email addresses, exclude its email addresses, or not to use it at all. Click the appropriate radio button for each mailing list for your email campaign.

11. Click **Save**.

Mailing Lists

You can create and manage mailing lists for use in marketing campaigns. To create a mailing list:

- Upload a file containing a list of email addresses and their accompanying information, or

- Attach one or more customer segments to the mailing list.

You manage mailing lists from the Mailing Lists page. To access the Mailing Lists page, click the Mailing Lists link under the Channel Management panel on the home page.

FIGURE 700. Mailing Lists Page

Mailing List Files

The format for uploading mailing lists is a tab-delimited text file. You can download a template for the file from the Upload Detail page. Each line must comprise the following fields, separated by tab characters:

TABLE 67. Mailing List Fields

Field	Required?	Description
Email Address	Yes	Email address of user
Company	No	Company of user
Title	No	Title: for example, Ms, Dr, and so on
First Name	No	First name
Last Name	No	Last name

Field	Required?	Description
Job Title	No	Job Title: for example, CTO, Product Manager, and so on
Department	No	Department: for example, Sales, Marketing, and so on
Locale	No	Locale: for example, en_US, fr_CA, and so on. You should only specify locales that are supported by the Sterling Multi-Channel Selling Solution. If you leave this field blank, then the user is assumed to have the default system locale as their preferred locale.
Telephone	No	Telephone

To Create a Mailing List by Uploading a File

1. On the Mailing Lists page, choose From Upload from the Mailing List Type drop-down list, and click **New Mailing List**.

   The New Mailing List page displays, similar to the following figure.

FIGURE 701. New Mailing List Page: Upload Mailing List

2. Enter a mailing list name and optionally a description of the mailing list. Make sure that the mailing list name is unique.

3. Browse to the mailing list file by clicking **Browse...** and navigating to the file using the file dialog box. Select the file and click **Open**.

4. Click **Upload**.

A success message displays if the upload succeeds. An error message displays if the file does not conform to the template format.

To Create a Mailing List Using Customer Segments

1. On the Mailing Lists page, choose From Customer Segment from the Mailing List Type drop-down list, and click **New Mailing List**.

The Mailing List Detail page displays, similar to the following figure.

FIGURE 702. New Mailing List Page: Customer Segment Mailing List

2. Enter the mailing list header information:

   • Mailing List Name

   • (Optional) Description

3. Click **Create**.

The New Mailing List Detail page re-displays with a new **Target Customers** tab.

FIGURE 703. New Mailing List Detail Page With Target Customers Tab

4. Click the **Target Customers** tab.

    The Target Customers page displays, similar to the following figure.

FIGURE 704. Mailing List Detail Page: Target Customers Tab

5. To select all users, click the **All Users** radio button.

6. To select one or more customer segments:

    a. Click the **Selected Customer Segments** radio button.

    b. Click **Browse...** to browse the list of available customer segments. A Segment Picker pop-up displays, similar to the following figure.

FIGURE 705. Segment Picker Pop-Up

You can search for segments by Segment Name or Effective date. To remove a segment from your list, click the segment name, then click **Delete**.

c. To select a customer segment, click the segment name. The segment name displays in the Segment Picker text box. When you finish selecting segments, click **Done**.

7. Click **Save**.

Campaigns Cron Job

When you create a campaign, it is designed to be run at a specified time in the future. A cron job called the campaigns cron job ensures that the campaign is run. Because the campaigns cron job runs as an application cron job, make sure that you

enable application cron jobs and specify the message URL for cron jobs. See "Job Scheduling Administration" on page 1097 for more information on cron jobs.

> **Attention:** Make sure that you have set the ServerName property of the **Comergent.xml** configuration file to the externally visible name of the Sterling Multi-Channel Selling Solution machine.

To create the campaigns cron job:

1. Log in as an enterprise administrator.

2. Navigate to the cron job list page by clicking **Job Scheduler** in the System Administration panel on the Sterling Multi-Channel Selling Solution home page.

3. Click **Create New Cron Job**.

4. On the Create New Cron Job page, enter the following information:

    • **Job Name**: Campaigns Execution

    • **Program**: com.comergent.apps.mktMgr.campaigns.bizAPI.CampaignsCron

    • **Command Line Arguments**: RequestTimeout=-1

    • Select **Application** cron job. Enter your username and password.

    • **Cron Job Schedule**: Enter appropriate start and end dates for the cron job. We suggest setting a frequency of one minute, but you can choose another lower frequency if you prefer.

5. Click **Save All Changes**.

Sterling Partner Programs

This chapter covers the tasks associated with managing programs and activities. See "Program Management and Payment Accounts" on page 57 for an overview of programs and activities.

You must have the Program Manager or Channel Executive function to manage programs and activities. You can assign a program to a partner if you are the account manager for the partner.

This chapter covers the following topics:

Before you can start approving requests and claims, you must create payment accounts for your partners. See "Payment Accounts" on page 206 for more information.

Creating and Modifying Programs

To Create a Program

1. Click **Partner Programs** in the Channel Management panel on the Sterling Multi-Channel Selling Solution home page.

   The Program List page displays.

FIGURE 706. Program List Page

2. Click **New Program**.

FIGURE 707. New Program Page

3. Enter a name and description for the new program.

4. Specify whether this is an MDF or a Co-op program.

    Your choice determines whether MDF or Co-op payment accounts are used to allocate funds to partner activities undertaken under this program.

5. If you want channel managers to be notified that the program has been created, then check the Notify Channel Managers check box.

6. Set start and end dates for the new program.

7. If you want to specify that only a restricted set of partners is eligible for this program, then check the appropriate check boxes under Organization Eligibility: Profile Types, Organization Eligibility: Profile Levels, and Organization Eligibility: Territories.

8. Click **Create**.

To Upload a Marketing Plan

After you create a program, you associate a marketing plan with it. A marketing plan is a document that describes the program and the activities that it supports. Partners consult the marketing plan when they want to choose how to participate in

it. The plan is a file, typically a Word document, that you upload to the Sterling Multi-Channel Selling Solution.

1. Navigate to the program to which you want to add a marketing plan.

2. Click **Browse** next to the Marketing Plan text field.

3. In the File Chooser dialog box, navigate to the file that describes the marketing plan. Select it and click **Open**.

4. Click **Upload**.

   The file is uploaded to the Sterling Multi-Channel Selling Solution. Check that it is correct by clicking **View Marketing Plan**.

To Add an Activity

After you create a program, you define activities for the program.

1. Navigate to the program to which you want to add an activity.

2. On the Program Detail page, click the **Activities** tab.

3. Click **New Activity**.

FIGURE 708. New Activity Page

4. Enter a name and description for the new activity.

5. Set submission dates as appropriate.

6. Specify which form should be used to submit pre-approval requests. See "To Create an Approval Form" on page 1032 for more information on creating approval forms.

   a. Click **...** under the Preapproval Process text field.

   b. In the Hierarchical Entity Picker window, navigate to the MDF Application Forms -> Approval Request Forms list.

   c. Select the form that you want to use.

   d. Click **Done**.

7. Specify which form should be used to submit claims. See "To Create a Claim Form" on page 1035 for more information on creating claim forms.

   a. Click **...** under the Claims Process text field.

   b. In the Hierarchical Entity Picker window, navigate to the MDF Application Forms -> Claims Request Forms list.

   c. Select the form that you want to use.

   d. Click **Done**.

8. Click **Create**.

To Assign a Program to a Partner

Once you have created a program and its activities, you can assign it to one or more partners so that they can begin to plan and execute activities, and make claims against the activities. Note that you can only assign an active program to partners: programs that are In Creation cannot be assigned.

1. Navigate to the program to which you want to assign a partner.

2. On the Program Detail page, click **Assignments**. The list of eligible partners displays.

Note:	By default, the list shows only the eligible partners that are assigned to you as an account manager. To see all eligible partners, click Show All, then click Show Eligible to remove ineligible partners from the list.

FIGURE 709. Assignments List Page

3.   Check the check boxes for the partners to whom you want to assign this program.

4.   Click **Save**.

Creating Forms

When a partner wants to submit an approval request or claim for an activity, they must complete the corresponding form. You can associate pre-existing forms with approval requests or claims, or you can create new forms using the Visual Modeler.

To Create an Approval Form

1.   Click **Configuration Models** in the Product and Catalog Administration panel.

2. In the Model Groups navigation panel, navigate to **Model Groups -> MDF Application Forms -> Activities**.

3. Click the activity for which you want to create the claim form.

4. Click **New Model**.

FIGURE 710. New Form Page

5. Enter a Name and a Description for the new form.

6. Click **Save**.

7. When the new form displays in the list of forms, select it and click **Edit**.

FIGURE 711. Edit Form Page

8. Now you can create the fields to be displayed on the form, by specifying them as option classes and option items. You can add pre-built portions of the form by attaching the corresponding option class assemblies as follows:

   a. Click **Attach**.

   b. Click **Browse...**.

FIGURE 712. Hierarchy Entity Chooser Window

    c.   Navigate to the Activities model group.

    d.   Select one of the option class assemblies such as Pre-Approval.

    e.   Click **Done**.

9.   Once you have completed the form, then click **Test** to verify that it meets your needs. If it does not, then close the Test window and modify the form as appropriate.

10.   Once the form is correct, then click **Compile**.

    The form is now available to use as a form for approval requests.

To Create a Claim Form

1.   Click **Configuration Models** in the Product and Catalog Administration panel.

2.   In the Model Groups navigation panel, navigate to **Model Groups -> MDF Application Forms -> Activities**.

3.   Click the activity for which you want to create the claim form.

4.   Click **New Model**.

FIGURE 713. New Form Page

5. Enter a Name and a Description for the new form.

6. Click **Save**.

   When the new form displays in the list of forms, select it and click **Edit**.

FIGURE 714. Edit Form Page

7. Now you can create the fields to be displayed on the form by specifying them as option classes and option items. You can add pre-built portions of the form by attaching the corresponding option class assemblies as follows:

   a. Click **Attach**.

   b. Click **Browse...**.

FIGURE 715. Hierarchy Entity Chooser Window

   c. Navigate to the Activities model group.

   d. Select one of the option class assemblies such as Pre-Approval.

   e. Click **Done**.

8. Once you have completed the form, click **Test** to verify that it meets your needs. If it does not, then close the Test window and modify the form as appropriate.

9. Once the form is correct, click **Compile**.

   The form is now available to use as a form for claims.

Managing Approval Requests and Claims

After you create programs and activities and set their status to Active, your partners can submit approval requests and claims for their activities. This section describes how to process these requests and claims.

To Manage Approval Requests

As an account manager for one or more accounts, you review approval requests made by your partners. For each program activity, one or more approval requests can be submitted by partner program managers (partner users assigned the Marketing Executive function).

1. Navigate to the activity.

FIGURE 716. Program Activity Detail Page

2. Click **View Preapprovals & Claims**.

FIGURE 717. Program Claim List Page

The claims list page displays all approval requests made against this activity. Requests that require approval have the Pending Approval status.

3. Click the Preapproval ID to the approval request that you want to consider.

FIGURE 718. Preapproval Request Page

4. You can:

    a. Approve the request by allocating funds: click **Allocate Funds**.

b. Deny this request: click **Deny**.

If you deny the request, then the approval request becomes read-only and cannot be acted on further.

If you click **Allocate Funds**, the Approve Funds page displays.

FIGURE 719. Approve Funds Page

5. You can choose to allocate funds from any of the partner's funds. The amount that you allocate is deducted from the available balance of the fund and is put on hold.

6. Click **Approve Funds**.

The Approval Request page re-displays with updated information.

Managing Claims

As an account manager for one or more accounts, you review and approve claims made by your accounts. You can view all claims or you can navigate to the claims made against a specific activity.

To Manage a Claim

1. Click **Partner Program Preapprovals & Claims** in the Channel Management panel on the Sterling Multi-Channel Selling Solution home page.

The Claim List page displays. Claims that require approval have the Pending Approval status.

FIGURE 720. Claim List Page

2. Click the Claim Id link to the claim that you want to consider.

FIGURE 721. Claim Detail Page

3. You can:

    a. Approve the claim by allocating funds: click **Allocate Funds**.

b.   Deny this claim: click **Deny**.

If you deny the claim, then the claim becomes read-only and cannot be acted on further.

If you click **Allocate Funds**, the Approve Funds page displays.

FIGURE 722. Approve Funds Page

4.   You can choose to allocate funds from any of the partner's funds. The amount that you allocate is deducted from the available balance of the fund.

5.   Click **Approve Funds**.

The Claim Detail page re-displays with updated information.

To Manage Claims for an Activity

1.   Navigate to the activity.

FIGURE 723. Program Activity Detail Page

2.   Click **View Claims**.

FIGURE 724. Program Claim List Page

The claims list page displays all approval requests and claims made against this activity. Claims that require approval have the Pending Approval status.

3.   Click the Claim Id link to the claim that you want to consider.

FIGURE 725. **Claim Detail Page**

4. You can:

   a. Approve the claim by allocating funds: click **Allocate Funds**.

   b. Deny this claim: click **Deny**.

   If you deny the claim, the claim becomes read-only and cannot be acted on further.

   If you click **Allocate Funds**, then the Approve Funds page displays.

FIGURE 726. Approve Funds Page

5. You can choose to allocate funds from any of the partner's funds. The amount that you allocate is deducted from the available balance of the fund.

6. Click **Approve Funds**.

   The Claim Detail page re-displays with updated information.

Managing Payment Accounts

You can upload updates to Co-op accounts from data saved in a text file. When you do so, you specify a base amount for each account: a percentage of the base amount is added to the account up to a maximum balance allowed for the account. The percentage and maximum amount are managed in the partner profile.

The format of the text file is specified in "Co-op Account Update File Format" on page 1131. You can download a template as described in "To Download a Co-op Account Update Template File" on page 1047.

For each line in the uploaded text file, the processing is as follows:

- If an account key is not provided, a new account is created with the header information provided in the line.

- If an account key is provided, the account amount is updated by the specified amount. However, the other header information is not updated.

To Upload Co-op Account Information

1. Click **Partner Programs** in the Channel Management panel on the Sterling Multi-Channel Selling Solution home page.

   The Program List page displays.

FIGURE 727. Program List Page

2. Click **Upload Co-op Accounts**.

FIGURE 728. Co-op Account Upload Page

3. Click **Browse...** and navigate to the file that you want to upload.

4. Click **Open** to insert the name of the file into the Upload File text field.

5. Click **Upload**.

    The Co-op Account Upload Results page displays, reporting the results of your upload.

FIGURE 729. Co-op Account Upload Results Page

To Download a Co-op Account Update Template File

1. Click **Partner Programs** in the Channel Management panel on the Sterling Multi-Channel Selling Solution home page.

    The Program List page displays.

FIGURE 730. Program List Page

2. Click **Upload Co-op Accounts**.

FIGURE 731. Co-op Account Upload Page

3. Click **Template** and save the template file to your local system.

Sales Contracts

This chapter covers all of the tasks associated with managing sales contracts. See "Sales Contracts" on page 37 for an overview of sales contracts.

You can manage sales contracts if you have been assigned the Channel Executive function. The tasks associated with program management are:

Creating and Modifying Sales Contracts

To Create a Sales Contract

1. Click **Customer Account Activity** in the Commerce Activity panel on the Sterling Multi-Channel Selling Solution home page.

2. Click the **Sales Contracts** tab.

FIGURE 732. Sales Contract Tab

3. Click **New**.

4. Using the Organization Picker, enter the Organization name and a name for the new sales contract.

FIGURE 733. Sales Contract Detail Page: Header Tab

5. Set the header information as follows:

   a. Offer Expiry Date

b. Contract Start Date

c. Contract End Date

d. Freight Terms

e. Payment Terms

f. Attached Document

g. Prepay

h. User details for intended partner user

6. Click **Create**.

After you create the basic header for the sales contract, you add products and their contract prices to the contract.

7. Click the Details tab.

FIGURE 734. Sales Contract Detail Page: Details Tab

8. You add products in the same way as for any cart:

    a.   Search for products using **Catalog Search** or by clicking **Advanced Search**.

    b.   Click **Browse Catalog** to add products through browsing and searching the product catalog.

    c.   Click **Help Me Find Products** to add products through the Sterling Advisor questionnaire.

    d.   In the **Quick Add** panel, add products by entering their product IDs.

9.   Enter the contract price for products added to the sales contract in the Contract Price field.

10. Specify the maximum quantity of the line item that can be ordered using the sales contract. As orders are placed using the sales contract, the quantity ordered for each line item is tracked so that the total quantity does not exceed the specified quantity.

11. Click **Update** to save prices and quantities.

12. Click the **Header** tab.

13. Click **Save**.

After creating the sales contract, submit it to the designated organization. Only a partner user who has the Financials function can accept the sales contract, so make sure that at least one partner user has been assigned this function. Sales contracts must be submitted to enable partner users to access them.

To Submit a Sales Contract

After you create a sales contract, you can submit it to the partner.

1.   Navigate to the sales contract.

FIGURE 735. Sales Contract Detail Page: Header Tab

2. Click **Submit**.

To Search for a Sales Contract

1. On the home page, click Customer Account Activity in the Commerce Activity panel.

2. Click the **Sales Contracts** tab.

FIGURE 736. Sales Contract Tab With Contract List

3. Enter your search criteria as appropriate or click the Contract ID link to display the Contract Details page.

CHAPTER 34 *Product Reviews*

This chapter covers the tasks associated with managing product reviews. See "Product Reviews" on page 38 for an overview of product reviews.

You can manage product reviews if you have been assigned the Product Review Administration function. The tasks associated with product review administration are:

- "To View a Product Review" on page 1055

- "To Hide or Reject a Review" on page 1056

- "To Search for a Product Review" on page 1057

Managing Product Reviews

To View a Product Review

1. Click **Review Management** in the Review Management panel on the Sterling Multi-Channel Selling Solution home page.

    The Review List page displays.

FIGURE 737. Review List Page

2. Click the link to the review that you want to view.

   The Review Detail page displays.

FIGURE 738. Review Detail Page

To Hide or Reject a Review

1. Navigate to the product review.

FIGURE 739. Review Detail Page

2. To hide a review: check the **Hide** check box.

3. To reject a review, select Rejected in the Review Status drop-down list.

4. Click **Save**.

To Search for a Product Review

1. Click **Review Management** in the Review Management panel on the Sterling Multi-Channel Selling Solution home page.

FIGURE 740. Review List Page

2. Select your search criteria as appropriate.

3. Click **Search**.

FIGURE 741. Review List Page with Search Results

4. Click the link to the product review you want to view.

Payment Transactions

This chapter covers the tasks associated with managing payment transactions. See "Payment Processing and Gift Card and Credit Card Transactions" on page 38 for an overview of payment transactions.

You can manage payment transactions if you have been assigned the Financials function. The tasks associated with payment transactions are:

Viewing and Modifying Payment Transactions

To View a Payment Transaction

1. Click **Payment History** in the Commerce Activity panel on the Sterling Multi-Channel Selling Solution home page.

FIGURE 742. Transaction List Page

2. Click the transaction ID of the transaction that you want to view.

FIGURE 743. Transaction Detail Page

To Make a Manual Transaction

Once an order has shipped, the corresponding payment transaction can be updated. You can make a manual transaction against an existing payment transaction as follows:

1. Navigate to the payment transaction as described in "To View a Payment Transaction" on page 1059.

FIGURE 744. Transaction Detail Page

2.   Click **Issue Credit** or **Issue Debit** as appropriate.

The Manual Transaction page displays.

FIGURE 745. Manual Transaction Page

3.   Enter the relevant details, such as the transaction amount and currency code, and click **Submit Transaction**.

Task Management

This chapter covers the tasks associated with managing tasks. "Task Management" on page 59 provides an overview of how you work with tasks. See "Creating Tasks From Commerce Objects" on page 990 for more information about creating tasks from orders and quotes.

Creating Tasks

To Create a Task

Any enterprise user can create a task as follows:

1. Click **Task Management** in the Commerce Activity panel on the Sterling Multi-Channel Selling Solution home page.

   The Task List page displays.

FIGURE 746. Task List Page

2. Click **New**.

   The task detail page displays.

FIGURE 747. Task Detail Page

3. Enter the following information:

   • Task Name

   • Task Summary

   • Priority

   • Due Date

- Task Type

4. To assign enterprise users as watchers of this task, click **...** next to the Watcher list box.

   The Hierarchical Entity Chooser window displays.

FIGURE 748. Hierarchical Entity Chooser

5. Click the arrow to navigate through the enterprise hierarchy. Click users to add them to the watcher list box.

6. Click **Done** when you finish selecting users for the watchers list.

7. On the Task Detail page, click **Create**.

   The Task Detail page displays again.

8. To enter a note associated with the task, click **Notes**.

FIGURE 749. Task Detail Page: Notes Tab

9.   Enter an appropriate note and click **Add Note**.

To Update an Existing Task

Users who are assigned tasks or who are on the watcher list for a task can update a task as follows.

1.   Click **Task Management** in the Commerce Activity panel on the Sterling Multi-Channel Selling Solution home page.

The Task List page displays.

FIGURE 750. Task List Page

2.   Click the link to the task you want to update.

The task detail page displays.

FIGURE 751. Task Detail Page

3.   Click **Accept** to take ownership of a task.

Automated Task Creation

Tasks can be created automatically when end-users perform specific actions such as requesting a price negotiation. This section describes what tasks are automatically created and which users are added to their watchers list.

TABLE 68. Automatically-Created Tasks

Application	Action	Watchers
Sterling Partner Programs	End-user submits claim	Enterprise users assigned to the end-user's account who have been assigned the Channel Executive function.
	End-user submits approval request	Enterprise users assigned to the end-user's account who have been assigned the Channel Executive function.
	Enterprise user activates a program	Enterprise users who have been assigned the Channel Executive function.

TABLE 68. Automatically-Created Tasks (Continued)

Application	Action	Watchers
Sterling Quotes	End-user submits price negotiation request	Enterprise users assigned to the end-user's account who have been assigned the Commerce function.
Sterling Orders	End-user places order beyond their credit limit	Enterprise users assigned to the end-user's account who have been assigned the Commerce function.
	End-user requests a return against an order	Enterprise users assigned to the end-user's account who have been assigned the Commerce function.

You can modify the default behavior by customizing or making configuration changes to the code for the automatically-generated tasks. See the *Events* chapter of the *Sterling Multi-Channel Selling Solution Developer Guide* for more information.

CHAPTER 37

Invoice Administration

After a purchase has been made, an invoice may be generated to complete the transaction. The invoice is sent by the enterprise to the customer and the customer can either submit payment against the invoice or contest some aspect of the invoice. The Sterling Multi-Channel Selling Solution enables the enterprise and its customers to track invoices through their life cycles. See "Invoice Management" on page 46 for an overview of invoices and how to manage them in the Sterling Multi-Channel Selling Solution.

This chapter covers the following tasks:

Invoice Administration

Enterprise users can view and modify invoices as follows. You must be assigned the Financials function to perform these tasks.

To View an Invoice

1. Click Customer Account Activity in the Commerce Activity panel on the Sterling Multi-Channel Selling Solution home page. The Account Activity page displays.

FIGURE 752. Account Activity Page

2. Click the **Invoices** tab. The Invoices tab displays.

FIGURE 753. Invoices Tab of Workspace Page

To search for an invoice. click **Advanced Search**. The Invoices Search page displays.

FIGURE 754. Invoice Search Page

3. Enter the search criteria and click **Submit**.

The Invoices Tab of your workspace page displays the search results.

4. On the Invoice List page, click the link for the invoice whose detail you want to view.

5. The Invoice Detail page displays.

FIGURE 755. Invoice Detail Page

To Modify an Invoice

1. Navigate to the invoice as described in "To View an Invoice" on page 1070.

2. You can update the enterprise status of each invoice line item. The status for the invoice is updated automatically applying the rules described in "Invoice Statuses" on page 47.

To View the History of an Invoice

1. Navigate to the invoice as described in "To View an Invoice" on page 1070.

2. For any line item, click **History**. The Invoice History List page displays.

FIGURE 756. Invoice History List Page

3. Click **Done** to return to the Invoice Detail page.

Memo Administration

You can create credit and debit memos for an invoice.

To Create a Credit Memo

1. Navigate to the invoice against which you want to create a credit memo.

2. Click **Create Memo**.

3. Select Credit from the drop-down list.

4. Enter the adjustment information as required.

5. Click **Save**.

To Create a Debit Memo

1. Navigate to the invoice against which you want to create a debit memo.

2. Click **Create Memo**.

3. Select Debit from the drop-down list.

4. Enter the adjustment information as required.

5. Click **Save**.

Enterprise System Administration

This chapter covers the tasks associated with enterprise system administration for the Sterling Multi-Channel Selling Solution. Enterprise employees are responsible for maintaining their enterprise installation. See "Configuring the Sterling Multi-Channel Selling Solution" on page 62 for an overview of enterprise system administration.

Note that some site administration tasks are performed by site system administrators: see CHAPTER 41, "Site System Administration" for more information.

System Administration Tasks

You perform the System Administration tasks through the System Administration link on the Sterling Multi-Channel Selling Solution Administration page. This link is accessible only to authorized personnel.

You can modify system configuration settings only if you have the appropriate access function. In the reference implementation provided with the Sterling Multi-Channel Selling Solution, only users with the Program Management function (defined in the **Entitlements.xml** configuration file as EnterpriseProgramManagement) may access the System Administration pages.

To Modify System Settings

1. Click **System Services** in the System Administration panel on the Sterling Multi-Channel Selling Solution home page.

   The system configuration properties are organized into logically-related groups.

FIGURE 757. System Administration Page

2. Access each group by clicking the corresponding link on the System Administration page.

   Each link takes you to a new page that displays the current values for each property.

3. Make the appropriate changes as necessary.

   See "Configuration Properties" on page 1077 for a description of each set of properties.

4. Click **Save All and return to List**.

5. By default, changes to the value of a system property take effect immediately, and are persisted to the file system. A server restart is not necessary, but if you do restart the server, the new value of the property remains in effect.

Configuration Properties

Use the steps described in "To Modify System Settings" on page 1076 to access the property you want to modify. With the exception of the following, the properties each contain a detailed description within the user interface.

Locale Settings

The locale names supported by your installation combine the ISO-639 language codes and ISO-3166 country codes. As a site administrator, you can define the display names that appear for these locale names in the Sterling Multi-Channel Selling Solution. You can define a display name for each supported locale that determines how each locale name appears for each supported locale. For example, you can decide that, in the en_us locale, "en_us" will be displayed as "United States", while in the de_de locale (Germany), "en_us" will be displayed as "Vereinigte Staaten".

Note:	If a display name is not defined for a locale name for the locale effective during a session, the fields in which that locale name should appear will be blank.

Changes that you make to locale names become active when you restart the Sterling Multi-Channel Selling Solution.

1. Log in to the System Administration site. By default, the URL is:

   `http://server:port/Sterling/en/US/enterpriseMgr/admin`

   Check your site documentation to identify this URL.

2. Click **System Services** to display the System Properties page.

FIGURE 758. Site Administration System Properties Page

3. Click Locale. The Properties for Locale page displays.

FIGURE 759. Mapping Display Names to Locale Names

To Define the Display Names

1. Select an effective locale from the Effective Locale drop-down list.

   The locale names for the supported locales appear in the Locale Name column. The current display name, if any, for each locale appears in the next field in the language of the effective locale.

2. In the text field next to each locale name, type the display name you want to appear for each locale name.

3. Repeat the last two steps for each supported locale.

4. Click **Save** to save the changes and remain at the Locale Settings page; click **Save All and return to List** to save the changes and redisplay the System Administration page.

   If you click **Save**, then the Effective Locale field re-displays the default system locale, as defined in the Internationalization properties.

Repeat these steps for each locale in the Effective Locale drop-down list.

Attention:	If you change the effective locale without clicking **Save**, then any unsaved changes to Display Names will be lost.

Job Scheduler Settings

The Sterling Multi-Channel Selling Solution supports the ability to schedule tasks that must be performed at regular intervals as cron jobs. See CHAPTER 40, "Job Scheduling Administration" for more information on this scheduling feature.

There are two types of cron jobs: system and application.

• System cron jobs run without session information and without an associated Sterling Multi-Channel Selling Solution user. Typically, they are used for low-level background tasks such as garbage collection. System cron jobs do not save their last execution time or execution status to the Knowledgebase because the same job may be run on several servers in a cluster.

• Application cron jobs are used when session information (such as a username or locale) is required to run the job or if audit information might be needed to determine how changes to data objects were made. Application cron jobs are initiated by posting an XML message to the Sterling Multi-Channel Selling Solution using the message URL for cron jobs: consequently, to enable application cron jobs, you must take care to set this URL correctly.

   For example, if the main URL used to access the Sterling Multi-Channel Selling Solution is:
   `http://`*server*`:`*port*`/Sterling/en/US/enterpriseMgr/matrix`
   then set the cron job message URL to:

```
http://server:port/Sterling/msg/matrix
```

Similarly, if the main URL used to access the Sterling Multi-Channel Selling Solution is:

```
http://server:port/store/en/US/enterpriseMgr/anderel
```

then set the cron job message URL to:

```
http://server:port/store/msg/anderel
```

You can choose whether or not to allow either type of cron job to run on your implementation.

Attention:	Some cron jobs such as the search index builder must be run as an application cron jobs. To support advanced search, you must enable application cron jobs.

Application cron jobs are created specifying a username and password of a Sterling Multi-Channel Selling Solution user. You must ensure that the Password data field of the CronConfig data object is not set to store one-way encrypted values.

In a clustered installation of the Sterling Multi-Channel Selling Solution, if you want a job to run on all servers in the cluster, then make it a system cron job. If you want the job to be run on only one server in the cluster, then you must make it an application cron job.

Frequently Used System Administration Settings

This section describes some of the most commonly used system administration settings: it does not cover all the possible settings.

Commerce Manager

Are comergent applications rendered as part of a frameset?

Set this property to TRUE if the Sterling Multi-Channel Selling Solution end-user pages are displayed within a frame set. For example, suppose that you have a frame set defined as:

```
<html>
<frameset rows="120,*">
    <frame src="http://server:port/Navigation.html">
    <frame src="http://server:port/Sterling/en/US/adirect/
        matrix?cmd=OnlineOrderingPageDisplay">
</frameset>
</html>
```

When this page is displayed, you want the Sterling Multi-Channel Selling Solution pages to be displayed without their built-in banner heading. By setting this system property to "True", you suppress the display of the built-in banner heading: end-users only see the navigation links provided in your **Navigation.html** page.

Availability Data Access Method

This property controls how inventory availability is obtained and estimated delivery date is calculated.

- If you select Static: inventory availability information is obtained from the static database tables, and estimated delivery date is not calculated.

- If you select System Initiated Real-Time: inventory availability information is obtained using a real-time availability check call to the Sterling Multi-Channel Fulfillment Solution (when the supplier is the current storefront) and/or static database tables (when the supplier is not the current storefront), and estimated delivery date is calculated automatically.

- If you select On Demand Real-Time: a Check Availability button is displayed on the Catalog Detail or Commerce page. Upon clicking the button, inventory availability information is obtained using a real-time availability check call to the Sterling Multi-Channel Fulfillment Solution (when the supplier is the current storefront) and/or static database tables (when the supplier is not the current storefront). While estimated delivery date is calculated on the Checkout page if the user clicks the Check Availability button, it is calculated automatically when the user places the order regardless of whether the user clicks the Check Availability button or not.

Note:	Before you choose System Initiated Real-Time or On-Demand Real-Time, you must make sure that the Sterling Multi-Channel Selling Solution is integrated with the Sterling Multi-Channel Fulfillment Solution. For more information about integrating the Sterling Multi-Channel Selling Solution with the Sterling Multi-Channel Fulfillment Solution, see the *Sterling Selling and Fulfillment Solution Integration Guide*.

Enable stack trace display in error pages

This property controls the display of stack traces on error pages. Set this property to TRUE to display the stack traces on error pages. Set this property to FALSE to hide the stack traces. By default, this property is set to TRUE.

Note:	For security reasons, it is recommended that you set this property to FALSE in a production environment. But in development and QA environments, set this property to TRUE as it provides valuable debugging information.

SMTP Host Machine

Set this property to the appropriate name of the SMTP host machine which is used to send email from the Sterling Multi-Channel Selling Solution.

Application Settings

Allowed Decimal Places for displaying extended prices

The value of this property determines how many decimal places are used in displaying calculated extended prices to users.

Allowed Decimal Places for displaying list prices

The value of this property determines how many decimal places are used in displaying list prices to users.

Lines Per Page in List Displays

This property controls the pagination behavior of the Sterling Multi-Channel Selling Solution. It specifies how many items appear on each page of a paginated list.

Orders

Email Address for CSR

Set this field to an appropriate address for customer service representatives. An email message is sent to this address when a user submits a quote for price negotiation and it is not automatically approved (see "RFQ Rule Acceptance Percentage" on page 1083).

Quote Expiration Duration

When an end-user creates a quote, this system property determines the number of days for which the quote is valid.

RFQ Rule Acceptance Percentage

When a user submits a quote, you can set a rule so that if the user's requested price is within a certain percentage of the list price, then the request is automatically approved, and the submitted quote becomes an orderable quote immediately.

For example, if you set this value to 10, then a user who requests a price of $95.00 for an item whose price to them is $100.00, then the submitted quote is approved automatically. However, if the user requests a price of $85.00, then the submitted quote must be approved (or rejected) by a customer service representative.

If you set the value to "0", then submitted quotes are never approved automatically.

Send Orders XML msgs to ERP

A system administration setting determines whether orders are posted as XML messages to an external ERP system when they are placed in the Sterling Multi-Channel Selling Solution (see *Sterling Multi-Channel Selling Solution Implementation Guide* for more information). There may be occasions when you want to temporarily suspend sending these messages: use this system setting to do so.

- If you set this property to true, then orders are posted to the ERP system as soon as they are placed.

- If you set the property to false, then orders are not posted when they are placed. You can use a cron job to post them at a later time. See "OrdersToERP" on page 1109 for more information about the cron job.

Product Manager

List Size for Each Indexing Thread

This parameter determines how may objects are retrieved in one batch by each indexing thread.

List Size for Each Indexing Thread for Incremental Indexing

This parameter determines how may objects are retrieved in one batch by each indexing thread for an incremental build.

XML Messages

Should the system enable and default to a configured 'DefaultXMLUser' identity when no user information is specified?

This parameter determines whether the system should assume that a user configured as the Default XML Identity user is the default user if an incoming

XML request does not contain any information to identify the user. Set this property to true if you want the system to consider the Default XML Identity user as the default user, and false if you do not want the system to consider the Default XML Identity user as the default user. By default, this property is set to false. For more information, see the *Sterling Multi-Channel Selling Solution Implementation Guide*.

Username of default identity for XML messages

Set this field to an appropriate username for the Default XML Identity user. When an incoming XML message request does not contain any information to identify the user, the system considers the user that this username belongs to as the default user. For more information, see the *Sterling Multi-Channel Selling Solution Implementation Guide*.

CHAPTER 39 *Business Rules Administration*

During implementation, you can configure business rules by editing the property files provided with the Sterling Multi-Channel Selling Solution. After implementation, you can manage the business rules from the Business Rules Manager page. See "Configuring the Sterling Multi-Channel Selling Solution" on page 62 for an overview of business rules administration.

Business Rules Administration Tasks

To manage the business rules in your Sterling Multi-Channel Selling Solution, you must be an enterprise user that has been assigned the appropriate function: typically, this is the Program Management function.

To Manage Business Rules

1. Click **Business Rules** in the System Administration panel on the Sterling Multi-Channel Selling Solution home page.

   The Business Rules Manager page displays (see Figure 760 on page 1086).

   The Business Rules link appears on the Sterling Multi-Channel Selling Solution home page only if you are assigned the appropriate function to perform this task.

FIGURE 760. Business Rules Manager Page

2. Click a link to modify the desired set of business rules.

FIGURE 761. Business Rules Detail Page

Each business rule contains help text describing the rule.

3. Click **Save**.

4. Unless otherwise directed, the changes to the value of a business rule take effect immediately, and are persisted to the file system. This means that a

server restart is not necessary, but if the server is restarted, the new value of the business rule continues to be used.

Frequently Used Business Rules

This section describes some of the most commonly used rules.

Advisor

Apply Dynamic Pricing to Product List

This rule controls the way pricing is displayed as a user navigates your product catalog or Sterling Advisor or performs a product search.

- To retrieve prices using the pricing engine, select "On".

- To display prices as they were saved when the current search index was created, select "Off".

Track Action Rules

A number of Sterling Advisor business rules enable you to record how users navigate the product catalog and use the Sterling Advisor questionnaire. On a busy site, the volume of data generated by this logging can be large: take care to size your database carefully, and take measures to archive data if need be.

Configurator

Pricing Type

The Pricing Type rule determines how prices are determined for configured products. You can set prices for an option class or option items either by associating a product with it (in which case the price is determined from the Sterling Pricing engine) or by setting the value of the Price display property. This rule determines which method should be used.

Show Promotions

The Show Promotions rule determines whether or not promotions display as customers configure products. Enabling this rule applies only when a promotion is associated with products that are associated with a model, option class or an option item.

Coupons

Enable Coupon

Set this rule to true to allow customers to add coupons to their carts.

Leads

Automatic assign uploaded leads to their fixed recommended partners

Lead administrators can upload leads using XML or tab-delimited text files. When they do so, this rule determines whether the uploaded leads are automatically assigned to their recommended partner. This is the optional RecommendedPartnerName child element of the LeadCreate element.

Note that if the partner name does not exist or if more than one partner has the same name, then the lead is created, but the RecommendedPartnerName element is ignored.

Lead Management Number of Recommended Partners/Users for Popup

This business rule determines how the auto-assign feature of Sterling Leads behaves. When you select one or more leads to auto-assign, you can be prompted to control how the Sterling Multi-Channel Selling Solution works as follows:

- If you select Always, a popup window prompts you to confirm the auto-assignment of the lead to partners.

- If you select Never, the auto-assignment is performed without a confirmation.

- If you select Number of Partners and enter a positive integer, the popup window is displayed if the number of partners exceeds the number that number you enter.

Lead Management Recommended Partner Search Attributes

This business rule determines which attributes are used to auto-assign leads. You can select any or all of the attributes:

- Partner Type

- Partner Level

- Territory

- Customer Type

Marketing

Automatic Promotion Display

This rule determines whether promotions are displayed automatically when a user views a cart for which promotions are relevant. If you set this rule to true, promotions are displayed in a pop-up window that is displayed without any action by the user.

Marketing Analytics

Abandoned Cart Threshold (Amount)

Use this rule to set the amount of time an active cart can remain unchanged before it is considered abandoned. The Abandoned Cart Threshold (Units) rule determines the unit of measure for this value.

Abandoned Cart Threshold (Units)

Use this rule to set the unit of measure for the Abandoned Cart Threshold (Amount) rule. Choose one of the following units of measure:

• Minutes

• Hours

• Days

The default unit of measurement is Days.

Abandoned Cart (Processed Data) Retention

Use this rule to set the number of days to retain processed abandoned cart data. Leave this rule blank to retain abandoned cart data indefinitely. Indefinite retention is the default.

Order (Processed Data) Retention

Use this rule to set the number of days to retain processed order data. Leave this rule blank to retain processed order data indefinitely. Indefinite retention is the default.

Track Catalog Category Browse Events

Use this rule to set whether or not to track the catalog categories that your users browse. Set this rule to True to enable tracking. Set this rule to False to disable tracking. False is the default.

Catalog Category Browse Event Retention

Use this rule to set the number of days to retain catalog category browsing data. This rule takes effect only if you set Track Catalog Category Browse Events to True. Leave this rule blank to retain the data indefinitely. Indefinite retention is the default.

Track Product Detail View Events

Use this rule to set whether or not to track the product detail pages that your users view. Set this rule to True to enable tracking; False to disable tracking. The default is False.

Product Detail View Event Retention

Use this rule to set the number of days to retain product detail viewing data. This rule takes effect only if you set Track Product Detail View Events to True. Leave this rule blank to retain the data indefinitely. Indefinite retention is the default.

Track Catalog Search Events

Use this rule to set whether or not to track the search terms used to find products in the catalog. Set this rule to True to enable tracking; False to disable tracking. The default is False.

Catalog Search Event Retention

Use this rule to set the number of days to retain search term data. This rule takes effect only if you set Track Catalog Search Events to True. Leave this rule blank to retain the data indefinitely. Indefinite retention is the default.

Identify Users Before Login

Use this rule to attempt to identify users before they log in, based upon the last authenticated user who used the browser. Set this rule to True to enable user identification before login; False to disable user identification before logging. The default is True.

Note:	Change this rule only during periods of low user activity to avoid putting current Anonymous User sessions into an inconsistent state.

Orders

Enable In-Store Pickup

Use this rule to enable or disable in-store pickup support for orders. Set this rule to true if you want in-store pickup to be supported for orders. Set this rule to false if

you want only shipping to be supported for orders. By default, this rule is set to false.

Distances Available for in-store pickup search

This business rule determines the distances that customers can choose from if they change their travel distance from the default. Enter the distance choices as a set of numeric values separated by commas.

Default distance for in-store pickup search

This business rule determines the default distance that customers are willing to travel to pick up their products. Enter the default distance as a numeric value.

Distance unit of measure for in-store pickup

This business rule determines the unit of measure for the travel distances to the stores for in-store pickup, for example, miles or kilometers.

Enable Future Pickup

This business rule indicates whether or not the customer can choose to pick up their products from stores that have back-ordered the product. True indicates that customers can choose stores that are currently out of stock; false indicates that customers cannot choose stores that are currently out of stock.

If this rule is set to false, stores that have back-ordered the product do not appear in the **Select A Store** drop-down list. If this rule is set to true, stores that have back-ordered the product do appear in the **Select A Store** drop-down list with the date that the product is expected to be back in stock. The user can then choose a date on which to pick up the product. If the store does not carry the product at all, it does not appear in the **Select A Store** drop-down list.

Maximum number of pickup stores

Use this business rule to control the number of stores that display to the customer.

Write Order Line Item History to the Database

Use this business rule to control whether changes to orders are logged to the Knowledgebase.

Order Approvals

Use this business rule to allow approval of orders within the Sterling Multi-Channel Selling Solution.

Use External Source for Tax calculation

Use this business rule to determine whether or not to use an external source for calculating the tax on orders.

Enable Complementary Items on Cart detail page

Use this business rule to determine whether or not to display complementary items on the customer's cart detail page.

Enable Quotes

Use this rule to enable or disable support for quotes. If you set this rule to false, end-users cannot save a cart as a quote.

Attention:	If you disable support for quotes, check that the Quotes widget is removed or disabled on the end-user JSP page that displays the widget.

Show Widgets on Home Page

Several business rules determine whether or not to show certain types of widgets on the home pages of users. By default, enterprise users such as administrators and Customer Service Representatives see only the Tasks widget on their home page, while all other users see all widgets. To turn off viewing a particular widget, set the relevant business rule to false. To allow administrators and Customer Service Representatives to view particular widgets, you must modify the **WEB-INF/web/en/US/enterpriseMgr/home/HomeData.jsp** page. See the section Home Page Widgets in Chapter 17, Customization Examples, of the *Sterling Multi-Channel Selling Solution Developer Guide* for more information.

The rules are:

* show Carts Widget On Home Page

* show Invoices Widget On Home Page

* show Orders Widget On Home Page

* show Quotes Widget On Home Page

* show Returns Widget On Home Page

* show Routed Carts Widget On Home Page

* show SalesContracts Widget On Home Page

* show Tasks Widget On Home Page

* show TeamTasks Widget On Home Page

Parameter to pass to the DB as the rownum or top hint in SQL Select statements for widgets

Use this rule to determine the number of results returned from the Knowledgebase by SQL SELECT queries.

Pricing

Create Product Entitlement Based on Pricelist

Use this rule to specify whether price lists and their assignment to partners are used to automatically specify product entitlements. If you set this rule to "Auto-Create", whenever a price list is created a corresponding product entitlement is created, and each time the price list is assigned to a partner, the product entitlement is also assigned.

Cache Currency and Customer Type assignments to a partner

Use this rule to determine whether the currencies and customer types available to partners are cached. If you set this rule to "Yes", then if you change the assignment of price lists to partners in such a way as to change their access to currencies and customer types, then partner users will not see the change take effect until the cache is flushed. The time interval that determines when the cache is flushed is controlled by the Expiry time (minutes) for Currency Customer Type cache business rule.

Cache Price List assignments

Use this rule to determine if the assignment of price lists to a user's partner should always be retrieved when there is a call to the pricing engine, or whether the assignments should be cached for the duration of the user's session. If you set this rule to "Yes", then if a new price list is assigned to a partner while a partner user is logged in, then they will not see the prices from the new list.

Pricing Engine Type

This rule controls whether the Sterling Multi-Channel Selling Solution uses the Sterling Pricing engine to retrieve prices or not. If you set this rule to Entitlement Only, then prices must be supplied by an external pricing engine and the Sterling Multi-Channel Selling Solution price lists are used only to determine which users can see which products. See the *Sterling Multi-Channel Selling Solution Implementation Guide* for more information.

Default customer type

Use this rule to determine the default customer type that will be used in pricing calculation. By default, this rule is set to "General".

Enable Auxiliary Price Calculation

This rule is in place for performance and tuning purposes. It determines whether auxiliary prices are calculated for products when there is a call to the pricing engine. Setting this rule to "No" improves system performance by preventing the attempted fetching of auxiliary rules from the database.

• If you set this business rule to "Yes", auxiliary prices will be calculated when there is a call for the catalog or cart level price.

• If you set this business rule to "No", auxiliary prices will not be calculated when there is a call for the catalog or cart level price. This is the default setting.

Quotes

Do you want to validate a configuration when the Order is placed?

This rule determines whether a product configuration is validated at the time that the order is placed.

• If the business rule is set to true, then when the order is placed, the product configuration is validated. This is the default setting.

• If the business rule is set to false, then the product configuration is not validated when the order is placed.

Use Configuration Prices for Service Products?

This rule determines whether configurable service product line items retain prices specified in the configuration session once the configured product has been put in the cart.

• If the business rule is set to true, then prices from a configuration session of a service product are preserved as the user works with this cart and places it is an order.

• If the business rule is set to false, then prices from a configuration session of a service product are recalculated using the Sterling Pricing engine as the user works with this cart and places it is an order.

Merge Line Items in Cart?

This rule controls whether line items in carts are merged if they have the same product ID. For example, if a user has the product ID MXWS-7500 in their cart with quantity 10, and they add another MXWS-7500 item to their cart:

- If the Merge Line Items in Cart? rule is set to true, the existing line is updated with quantity 11.

- If the Merge Line Items in Cart? rule is set to false, a new line item is created for the newly-added MXWS-7500 item.

Saved List

Enable Alternative items link in

Use this rule to set where the user can view alternative items for a line item. The user can then replace the line item with an alternative item. You can select any or all of the following types of lists:

- Templates

- Wish Lists

- Registries

- Cart

Alternative items count value

Use this rule to control the maximum number of alternative items shown to the user for a line item in a template, wish list, or registry.

Enable Complementary items in

Use this rule to set where the user can view complementary items for a line item. You can select any or all of the following types of lists:

- Templates

- Wish Lists

- Registries

Disable/enable List type

This rule determines the types of lists that will be disabled or enabled. To enable the list types, you can select any or all of the following types of lists:

- Baby Registry

- Wedding Registry

- Templates

- Wish Lists

Deactivate time for Baby Registry

Use this rule to control the time (in years) after which a baby registry will be deactivated.

Deactivate time for Wedding Registry

Use this rule to control the time (in years) after which a wedding registry will be deactivated.

Complementary items count value

Use this rule to control the maximum number of complementary items shown to the user for a line item in a template, wish list, or registry.

Show Wish Lists widget on HomePage and MyAccount page

This rule determines whether the Wish Lists widget is shown to the user on the Home Page and My Account page. Set this rule to true to show the Wish Lists widget on the Home Page and My Account page. Set this rule to false to hide the Wish Lists widget.

Show Templates widget on HomePage and MyAccount page

This rule determines whether the Templates widget is shown to the user on the Home Page and My Account page. Set this rule to true to show the Templates widget on the Home Page and My Account page. Set this rule to false to hide the Templates widget.

Show Registries widget on HomePage and MyAccount page

This rule determines whether the Registries widget is shown to the user on the Home Page and My Account page. Set this rule to true to show the Registries widget on the Home Page and My Account page. Set this rule to false to hide the Registries widget.

Segmentation

Maximum number of segment members shown

This rule determines the maximum number of members to show when a user clicks the View Users button of the **Membership** tab from the Customer Segmentation Administration page to view the results of segment membership calculation. The default is 5000.

Job Scheduling Administration

This chapter covers the tasks associated with Job Scheduler. For an overview of job scheduling, see "Job Scheduling" on page 63. The latter section also includes important information about setting properties related to job scheduling.

Note:	Two settings define how jobs are run on your Sterling Multi-Channel Selling Solution. See "Job Scheduler Settings" on page 1079.

Enterprise and Storefront Cron Jobs

Some cron jobs affect the entire e-commerce site and are managed only by enterprise administrators. For example, the cron job that maintains the catalog index, the cron job that controls when segment memberships are reprocessed, and the cron job that controls when the nightly segment build process starts, are all enterprise-level cron jobs. There can be only one instance of these cron jobs on a given e-commerce site, and only the enterprise administrator can see and manage them.

It is possible for storefront admins to create these "one instance" cron jobs as well: they also have access to the cron facility. Enterprise administrators must enforce the one-instance rule and ensure that storefront administrators first check with them before creating cron jobs. The following is the list of out-of-the-box cron jobs for which only one instance can exist on an e-commerce site.

- Product Sync

- User Sync

- Nightly Segments Build

- Reprocess Segments

- Maintain Indexsets

Storefront administrators can create and manage their own storefront-specific cron jobs. As a storefront administrator, you can see only your own storefront cron jobs.

There are the following types of cron jobs:

- System cron jobs, such as cache cleaning

- Application cron jobs, such as importing/exporting, sending product expiration notice emails, or synchronizing the Sterling Multi-Channel Selling Solution product catalog with a fulfillment system.

Enterprise and storefront administrators can create only application cron jobs. Only tenant administrators can create system cron jobs.

Note that in a cluster environment, application cron jobs must be initiated by only one member of the cluster. In a cluster environment, you control which server starts the cron job, although you do not control which member of the cluster runs the job. System cron jobs should generally be run on all members of the cluster.

Job Scheduling Tasks

You can perform the following tasks:

- "To Display a Scheduled Job" on page 1098

- "To Create a Job" on page 1100

- "To Modify a Job" on page 1101

- "To Run a Cron Job Immediately" on page 1103

- "To Delete a Job" on page 1103

- "To View the History of a Cron Job" on page 1103

To Display a Scheduled Job

1. Click **Job Scheduler** in the System Administration panel on the Sterling Multi-Channel Selling Solution home page.

FIGURE 762. Cron Job List Page

2. Click the name of a cron job to display the details of the selected job.

FIGURE 763. Cron Job Configuration Page

To Create a Job

Attention:	If you are running multiple instances of the Sterling Multi-Channel Selling Solution, then creating or modifying a cron job will affect any of these instances running off the same Knowledgebase instance.

1. Click **Job Scheduler** in the System Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. Click **Create New Job**.

    The Cron Job Configuration page displays.

FIGURE 764. Cron Job Configuration Page

3. Enter the information about the job.

TABLE 69. Cron Job Configuration Page

Field	Description
Job Name	The name of the cron job
Program	The java implementation class that executes the job

TABLE 69. Cron Job Configuration Page (Continued)

Field	Description
Command Line Arguments	The command line parameters that provide information about the job.
	For example, you can specify that a cron job should time out after 300 seconds (5 minutes) by setting the RequestTimeout parameter as follows:
	RequestTimeout=300
Cron Job Type	The type of the cron job: a system-level cron job (such as cache cleaning) or an application-level cron job (such as importing/exporting). Enterprise and storefront administrators can only create application-level cron jobs. Only tenant administrators can create system-level cron jobs.
	For application-level cron jobs, you enter the username and password required for access to the particular data. For example, if the application-level cron job involves Product Manager, you must enter a username and password with privileges to access Sterling Product Manager.
Frequency	How often will the job be run? Every three days? Every week? Every five minutes? and so on.
Start date and time/ End date and time	The effective start and end period between which dates and times the cron job will run. This, along with Frequency, determines when the job will run. For example, if you entered a frequency of three days, then the job will run every three days from the task start date and time until the task end date and time is reached.
	You can enter the same dates and times for both start date and time, in which case the job will be run only once, at a specific time.

4. Check the box next to **Active** to make the job available to be run.

5. Click **Save All Changes**.

To Modify a Job

Attention:	If you are running multiple instances of the Sterling Multi-Channel Selling Solution, creating or modifying a cron job will affect any of these instances running off the same Knowledgebase instance as the cron job.

1. Click **Job Scheduler** in the System Administration panel on the Sterling Multi-Channel Selling Solution home page.

FIGURE 765. Cron Job List Page

2. Click the name of a cron job to display the details of the selected job.

The details are displayed on the Cron Job Configuration page.

FIGURE 766. Cron Job Configuration Page

3. Enter the information about the job.

   See Table 69, "Cron Job Configuration Page", on page 1100 for a description of the fields.

4. Check the box next to **Active** to make the job available to be run.

5. Click **Save All Changes**.

To Run a Cron Job Immediately

You may need to sometimes run a cron job immediately.

1. Click **Job Scheduler** in the System Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. In the list of cron jobs, identify the job that you want to run immediately.

3. Click **Run Now**.

   The cron job will be immediately scheduled to run, but if jobs are ahead of it in the cron job queue, then it will not run until those jobs have completed.

To Delete a Job

1. Click **Job Scheduler** in the System Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. Check the box next to the job(s) you want to delete.

3. Click the Delete icon (**X**) in the Actions column.

To View the History of a Cron Job

To review how a cron job has run in the past:

1. Click **Job Scheduler** in the System Administration panel on the Sterling Multi-Channel Selling Solution home page.

2. In the list of cron jobs, identify the job whose history you want to view.

3. Click the Show History icon: . The Cron Job History page displays.

FIGURE 767. Cron Job History Page

Cron Jobs

If you install the Sterling Multi-Channel Selling Solution with the reference data, the installation includes the pre-defined cron jobs described in this section.

If you installed the Sterling Multi-Channel Selling Solution with minimal data, only the Cache Cleanup job is included. If you want to implement the other jobs, you must create them by following the steps in "To Create a Job" on page 1100. The following sections contain the information needed to create these jobs.

Note that all cron job timeout values are specified in seconds.

Specifying -1 as a timeout value means that the cron job never times out.

Cache Cleanup

This group of properties determine the frequency and class of the cron job used to clean the cache.

Campaigns Execution

This cron job sends the promotional campaign emails previously set up using Sterling Campaigns. It searches for all the campaigns whose execution date and time is past and sends the emails.

TABLE 70. Campaigns Execution Cron Job

Cron Job Field	Entry
Program	com.comergent.apps.mktMgr.campaigns.bizAPI.CampaignsCron
Command Line Arguments	RequestTimeout=-1
Cron Job Type	Application

CommerceOne PO

CommerceOne posts purchase orders to *debs_home***/WEB-INF/commerceone/**.
This cron job takes the purchase orders in this directory and posts them to the local
installation of the Sterling Multi-Channel Selling Solution.

TABLE 71. CommerceOne PO Cron Job

Cron Job Field	Entry
Program	com.comergent.apps.integrator.COnePO
Cron Job Type	Application

Contract Expiration

Service contracts can include multiple service products with varying expiration
dates. The Contract Expiration cron job searches for service contracts containing
service contractible items whose end dates have passed. It updates the next end date
and final end date in the service contract header information. This information is
critical for running other service contract-related cron jobs such as Create Task for
Contracts Nearing Expiration and Send Email for Contracts Nearing Expiration.
Run this cron job daily if your implementation includes service contracts.

TABLE 72. Contract Expiration Cron Job

Cron Job Field	Entry
Program	com.comergent.apps.serviceContracts.bizAPI.ContractsExpirationCron
Cron Job Type	Application

ContractsToERP

This cron job defines how service contracts are sent to an ERP system.

TABLE 73. ContractsToERP Cron Job

Cron Job Field	Entry
Program	com.comergent.apps.serviceContracts.bizAPI.ContractsERPCron
Cron Job Type	Application

Create Task for Contracts Nearing Expiration

This cron job creates a task to remind a Customer Service Representative that a service contract is nearing its expiration date. You can configure the number of days before the service contract expires to generate the task. The default is 30 days before expiration. Run this cron job daily if your implementation includes service contracts.

TABLE 74. Create Task for Contracts Nearing Expiration Cron Job

Cron Job Field	Entry
Program	com.comergent.apps.serviceContracts.bizAPI.ContractsExpirationTaskCron
Command Line Arguments	NumberDaysBefore=30
Cron Job Type	Application

Export Catalog

Export Catalog provides a template for when you want to schedule an export. You only need to change the command line argument field to point to the correct export set. See "To Export the Catalog Using a Cron Job" on page 430.

TABLE 75. Export Catalog Cron Job

Cron Job Field	Entry
Program	com.comergent.apps.productMgr.dataSynd.CatalogExportCron
Command Line Arguments	ExportSetName=*CatalogExportSet*
Cron Job Type	Application

Export Deleted Catalog Items

Export Deleted Catalog Items tracks deleted catalog items. When a catalog item is deleted, a record is inserted to indicate that the item is no longer available. Export Deleted Catalog Items creates a dXML file for all the deleted items.

TABLE 76. Export Deleted Catalog Items Cron Job

Cron Job Field	Entry
Program	com.comergent.apps.productMgr.dataSynd.DeletedCatalogItemExportCron
Command Line Arguments	ExportSetName=*catalogExportSet*&NumberDaysBefore=*integer*
Cron Job Type	Application

Import Catalog

Import Catalog provides a template for when you import products into the product catalog. See "To Import a Catalog Using a Cron Job" on page 420.

TABLE 77. Import Catalog Cron Job

Cron Job Field	Entry
Program	com.comergent.apps.productMgr.dataSynd.CatalogImportCron
Command Line Arguments	ImportSetName=*CatalogImportSet*
Cron Job Type	Application

Maintain Configuration

This cron job deletes saved configurations of the specified configuration type that are older than the specified age. The default age for deletion is 10 days.

TABLE 78. Maintain Configuration Cron Job

Cron Job Field	Entry
Program	com.comergent.apps.configurator.main.ConfigMaintainanceCron

TABLE 78. Maintain Configuration Cron Job

Cron Job Field	Entry
Command Line Arguments	ConfigType=Config&AgeInDays=10
Cron Job Type	Application

Maintain Indexsets

There can be only one instance of the Maintain Indexsets cron job on a given e-commerce site, and only the enterprise administrator can see and manage it.

TABLE 79. Maintain Indexsets Cron Job

Cron Job Field	Entry
Program	com.comergent.appservices.search.indexBuilder.IndexMaintenanceCron
Command Line Arguments	UpdatedListName=IncrementalUpdateList.xml&EmailAddress=changeme@changeme.changeme&IndexSetName=MasterIndex&IndexSetPath=MasterIndex&IsFullBuild=true&RequestTimeout=-1
Cron Job Type	Application

Nightly Segments Build

This cron job starts the batch process that builds all segments that have a status of Active, Inactive, or Obsolete, and publishes the results of segments that have a status of Active or Obsolete. The command line argument for this cron job is RequestTimeout. Specify the number of seconds until the job times out. A reasonable timeout period is 5 to 10 minutes, or 300 to 600 seconds. The default value, -1, means the request never times out.

TABLE 80. Nightly Segments Build Cron Job

Cron Job Field	Entry
Program	com.comergent.apps.segmentengine.bizAPI.BuildAllSegmentsCron
Command Line Arguments	RequestTimeout=-1
Cron Job Type	Application

Offline Data Set Builder

This cron job enables building a dataset for more efficient off-line synchronization.

TABLE 81. Offline Data Set Builder Cron Job

Cron Job Field	Entry
Program	com.comergent.reference.appservices.synchserver.SynchData MaintenanceCron
Command Line Arguments	BuildType=inc
Cron Job Type	Application

OrdersToERP

This cron job defines how orders are sent to an ERP system. The application cron job user must be assigned the Commerce function.

TABLE 82. OrdersToERP Cron Job

Cron Job Field	Entry
Program	com.comergent.apps.orderMgmt.orders.bizAPI.OrdersERPCron
Cron Job Type	Application

Product Sync

This cron job synchronizes the products in the Sterling Multi-Channel Selling Solution with the products on the fulfillment site. There can be only one instance of the Product Sync cron job on a given e-commerce site, and only the enterprise administrator can see and manage it. This cron job requires certain configuration settings. See the Sterling Selling and Fulfillment Solution Integration Guide for more information.

TABLE 83. Product Sync Cron Job

Cron Job Field	Entry
Program	com.comergent.apps.productMgr.sync.ProductSyncCron
Command Line Arguments	NumProductsToBeSynched=5000&RequestTimeout=-1
Cron Job Type	Application

Reminder Frequency

This cron job emails a reminder to a template owner when it is time to re-order from a template. Change the frequency from the default of once a month to once a day. The system sends the reminder emails at the time that the cron job is run. Set the Reminder Frequency cron job start time so that it runs late at night to prevent emails from being received one business day earlier than intended.

TABLE 84.

Cron Job Field	Entry
Program	com.comergent.apps.templatecarts.bizAPI.TemplateReminder Cron
Cron Job Type	Application

Reprocess Segments

This cron job starts the batch process that re-calculates the segment membership for all segments that have a status of Active, Inactive, or Obsolete.

Cron Job Field	Entry
Program	com.comergent.appservices.customerSegmentation.Segmentation ProcessSegmentsCron
Cron Job Type	Application

Send Email for Contracts Nearing Expiration

This cron job sends an email reminder that a service contract is nearing its expiration date. You can configure the email recipient and the number of days before the end of the service contract to send the email. The default recipient is the owner of the service contract. The default number of days is 30 days before expiration. Run this cron job daily if your implementation includes service contracts.

TABLE 85. Send Email for Contracts Nearing Expiration

Cron Job Field	Entry
Program	com.comergent.apps.serviceContracts.bizAPI.ContractExpiration EmailCron
Command Line Arguments	NumberDaysBefore=30&Recipient=owner
Cron Job Type	Application

Update Catalog

UpdateCatalog calculates product categories that are empty, that is, whether the products within a category are displayable. .

The command line argument for this predefined job is `DaysOffset=`. The default setting is `0`. The calculation is made before the current date according to the setting of `DaysOffset`. For example, if the current date is 4/10/2008, and if the `DaysOffset` is set to `5`, then the calculations will be made based on the status of the categories on 4/15/2008.

The frequency should be set to once a day in minimal data.

TABLE 86. Update Catalog Cron Job

Cron Job Field	Entry
Program	com.comergent.apps.productMgr.suppressPC.UpdateCategoryCron
Command Line Arguments	DayOffset=0
Cron Job Type	Application

User Sync

This cron job synchronizes users between the Sterling Multi-Channel Selling Solution and the fulfillment system. There can be only one instance of the User Sync cron job on a given e-commerce site, and only the enterprise administrator can see and manage it. This cron job requires certain configuration settings. See the Sterling Selling and Fulfillment Solution Integration Guide for more information.

TABLE 87. User Sync Cron Job

Cron Job Field	Entry
Program	com.comergent.apps.profileMgr.userMgr.sync.UserSyncCron
Command Line Arguments	NumUsersToBeSynched=25&RequestTimeout=-1
Cron Job Type	Application

Site System Administration

This chapter describes the tasks associated with managing the Sterling Multi-Channel Selling Solution site. Site system administrators are responsible for:

Overview

There is a distinction between *system administration* and *enterprise administration*:

- System administration is the responsibility of *system administrators*: they manage the basic system properties of the Sterling Multi-Channel Selling Solution and the system cron jobs.

- Enterprise administration is the responsibility of enterprise users: these users manage the building blocks of the enterprise e-commerce system: partners, users, products, price lists, storefronts, and so on.

A system administrator can manage:

- System users: see "System User Administration" on page 1115

- System profile: see "System Profile Administration" on page 1116

- System properties: see "System Property Administration" on page 1117

- System cron jobs: see "System Cron Jobs" on page 1118

- System status: see "System Status" on page 1119

All these tasks are performed from the system administration home page.

To Access the System Administration Home Page

1. Point your browser to the System Administration URL. By default, this is:

   `http://`*server*`:`*port*`/Sterling/en/US/enterpriseMgr/admin`

   Check your site documentation to identify this URL.

2. Log in as a system administrator. When the Sterling Multi-Channel Selling Solution is first installed, the default username/password combination is admin/admin. If other system administrator users have been created, then you can log in using one of these userids.

Attention:	You must change at least the password of the admin user to protect the system from unauthorized access. We suggest that you create a different system administrator user, and then delete the admin user.

FIGURE 768. System Administration Home Page

3. From this page, you can perform the task described in the following sections.

System User Administration

To Create a System Administrator User

1. Log in as a system administrator.

2. Click **System Users**.

FIGURE 769. System User List Page

3. Click **Create User**.

FIGURE 770. Create New User Page

4.   Enter information for the new user as appropriate.

5.   Click **Save**.

The new user information is saved.

6.   You can verify that the new user has been successfully created, by logging out and logging back in as the newly-created user.

System Profile Administration

To Manage the System Administrator Profile

1.   Log in as a system administrator.

2.   Click **View Your Organization Profile**.

FIGURE 771. System Administration Profile Detail Page

3. Modify the profile details as appropriate.

4. Click **Save**.

System Property Administration

System administrators can manage the system-level properties for the Sterling Multi-Channel Selling Solution, including configuring logging settings, job scheduler categories, Configurator settings (number of models to cache, default template directory and page template), whether or not to use session-based caching, and so forth.

To Update a System Property

1. Log in as a system administrator.

2. Click **System Services**.

FIGURE 772. System Administration Properties List Page

3. Click the link to the set of properties that you wish to update.

FIGURE 773. System Administration Properties Set Page

4. Modify the values of properties as required.

5. Click **Save All and Return to List**.

System Cron Jobs

System administrators can mange system cron jobs. Enterprise administrators manage application cron jobs.

To Create a System Cron Job

1. Log in as a system administrator.

2. Click **Job Scheduler**.

FIGURE 774. System Administration Cron Job List Page

3. Click **Create New Cron Job**.

FIGURE 775. System Administration Create New Cron Job Page

4. Enter details for the new system cron job as appropriate.

5. Click **Save All Changes**.

System Status

To View the System Status

1. Log in as a system administrator.

2. Click **System Status**.

FIGURE 776. System Administration System Status Page

3. Review the system status details as appropriate.

File Formats

This appendix provides description of files used by the Sterling Multi-Channel Selling Solution. It covers:

CatalogRequest DTD

The CatalogRequest DTD is:

```
<?xml encoding="UTF-8"?>
<!-- DXML Catalog
    Document Type Declaration (DTD)
    Version 3.0
    01-April-01
    Authors:
```

```
        Comergent
        Contact: (650) 232-6000
        support@comergent.com
        Comergent Proprietary and Confidential
-->
<!ENTITY % MessageHeader SYSTEM "MessageHeader.dtd">
%MessageHeader;
<!ENTITY % RemoteUser SYSTEM "RemoteUser.dtd">
%RemoteUser;
<!ENTITY % Catalog SYSTEM "Catalog.dtd">
%Catalog;
<!ELEMENT dXML (MessageHeader, RemoteUser?, Catalog)>
```

It is a standard Sterling Multi-Channel Selling Solution dXML message envelope.
The authentication information is provided by the RemoteUser element and the
product catalog information is provided in the Catalog element. The user specified
in the RemoteUser element must be granted the appropriate role to execute the
CatalogRequest message type. By default, this message type is granted to the
ProductManager role.

Category Display Style

The **CategoryDisplayStyle.xml** configuration file controls what display styles are
available to display product categories. Each display style is declared using a Style
element. The Name element identifies each style in the Sterling Product Manager
UI.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE CatalogDisplayStyles [
    <!ENTITY % xmlLangCode "CDATA">
    <!ELEMENT Description (#PCDATA)>
    <!ELEMENT CatalogDisplayStyles (Style+)>
    <!ELEMENT MessageType (#PCDATA)>
    <!ELEMENT Name (#PCDATA)>
    <!ATTLIST Name
    xml:lang NMTOKEN "en_US">
    <!ATTLIST Description
    xml:lang NMTOKEN "en_US">
    <!ELEMENT Style (Name*, Description*, MessageType)>
]>
<CatalogDisplayStyles>
    <Style>
        <Name xml:lang="fr_FR">FRSingleLevelCategory</Name>
        <Name>SingleLevelCategory</Name>
        <Description>SingleLevel Category Display</Description>
        <Description xml:lang="fr_FR">FR SingleLevel Category
Display</Description>
```

```
      <MessageType>SingleLevelCategory</MessageType>
    </Style>
    <Style>
      <Name>B2CStyleCategory</Name>
      <Name xml:lang="fr_FR">B2CStyleCategory</Name>
      <Description>Business to customer Category
Display</Description>
      <Description xml:lang="fr_FR">FR Business to customer
Category Display</Description>
      <MessageType>B2CStyleCategory</MessageType>
    </Style>
</CatalogDisplayStyles>
```

Proposal Templates

When a proposal is presented to a contact, it can be rendered as a PDF file that is dynamically generated from an XML representation of the proposal. XSL stylesheets are used to specify how the PDF file is rendered.

Here is a sample proposal template stylesheet:

```
<?xml version="1.0" encoding="UTF-8"?>
<xsl:stylesheet version="1.0" xmlns:fo="http://www.w3.org/1999/XSL/
Format" xmlns:xsl="http://www.w3.org/1999/XSL/Transform">
    <xsl:decimal-format/>
    <xsl:output encoding="utf-8" indent="yes" media-type="text/html"
    method="xml" omit-xml-declaration="no" version="1.0"/>
    <xsl:template match="/">
    <xsl:variable name="currency"
        select="//ProposalPrint/CurrencyCode"/>
    <xsl:variable name="discount"
    select="sum(//ProposalPrint/LineItemList/LineItem/Discount)"/>
    <xsl:variable name="currencySymbol" >
    <xsl:choose>
    <xsl:when test="$currency='EURO'">
    <xsl:value-of select='"&#x20AC;"'/>
    </xsl:when>
    <xsl:when test="$currency='USD'">
    <xsl:value-of select='"$"'/>
    </xsl:when>
    <xsl:when test="$currency='CAD'">
    <xsl:value-of select='"$"'/>
    </xsl:when>
    <xsl:when test="$currency='GBP'">
    <xsl:value-of select='"&#x00A3;"'/>
    </xsl:when>
    <xsl:when test="$currency='YEN'">
    <xsl:value-of select='"&#x00A5;"'/>
```

```
    </xsl:when>
    </xsl:choose>
    </xsl:variable>
    <fo:root xmlns:fo="http://www.w3.org/1999/XSL/Format">
    <fo:layout-master-set>
    <!-- layout for the first page -->
    <fo:simple-page-master margin-bottom="0.25in" margin-left="1in"
        margin-right="1in" margin-top="0.25in" master-name="first"
        page-height="11in" page-width="8.5in">
    <fo:region-body margin-bottom="0.75in" margin-top="0.75in"/>
    <fo:region-before extent="0.75in"/>
    <fo:region-after extent="0.5in"/>
    </fo:simple-page-master>
    <!-- layout for the other pages -->
    <fo:simple-page-master margin-bottom="0.25in" margin-left="1in"
        margin-right="1in" margin-top="0.25in" master-name="rest"
        page-height="11in" page-width="8.5in">
    <fo:region-body margin-bottom="0.75in" margin-top="0.75in"/>
    <fo:region-before extent="0.75in"/>
    <fo:region-after extent="0.5in"/>
    </fo:simple-page-master>
    <fo:page-sequence-master master-name="basicPSM">
    <fo:repeatable-page-master-alternatives>
    <fo:conditional-page-master-reference master-reference="first"
        page-position="first"/>
    <fo:conditional-page-master-reference master-reference="rest"
        page-position="rest"/>
    <!-- recommended fallback procedure -->
    <fo:conditional-page-master-reference master-reference="rest"/>
    </fo:repeatable-page-master-alternatives>
    </fo:page-sequence-master>
    </fo:layout-master-set>
    <!-- end: defines page layout -->
    <!-- actual layout -->
    <fo:page-sequence master-reference="basicPSM">
    <!-- page footer -->
    <fo:flow flow-name="xsl-region-body" font-family="Times Roman"
        font-size="12pt" text-align="left">
    <!-- Quote header block-->
    <fo:block font-weight="bold">Request Date: <xsl:call-template
name="getDate">
    <xsl:with-param name="date" select="//ProposalPrint/UpdateDate"/>
    </xsl:call-template>
    </fo:block>
    <fo:block font-weight="bold">Proposal Title:
    <xsl:if test="//ProposalPrint/ProposalFieldSelection/ProposalTi-
tleFlag ='true'">
    <xsl:value-of select="//ProposalPrint/ProposalFieldSelection/Pro-
posalTitle"/>
```

```
    </xsl:if>
    </fo:block>
    <fo:block font-weight="bold">Proposal ID: <xsl:value-of select="//
ProposalPrint/ShoppingCartKey"/>
    </fo:block>
    <fo:block font-weight="bold">Status: <xsl:value-of select="//Pro-
posalPrint/ProposalStatusString"/>
    </fo:block>
    <fo:block font-weight="bold" space-after="12pt">Expiration Date:
<xsl:call-template name="getDate">
    <xsl:with-param name="date"
        select="//ProposalPrint/ExpectedCloseDate"/>
    </xsl:call-template>
    </fo:block>
    <!-- End user information -->
    <!-- Opening Comments -->
    <xsl:if test="//ProposalPrint/ProposalFieldSelection/Greeting-
Flag ='true'">
    <fo:block space-after="12pt"><xsl:value-of select="//Proposal-
Print/ProposalFieldSelection/Greeting"/></fo:block>
    </xsl:if>
    <!-- standard text -->
    <fo:block space-after="12pt">Per your request, <xsl:value-of
select="//ProposalPrint/PartnerName"/> is pleased to assist you with
your purchase. Please review the information in this proposal and
respond to place the order. This information is subject to change at
any time.</fo:block>
    <fo:block font-weight="bold" space-after="12pt">Currency:
    <xsl:value-of select="$currency"/>
    </fo:block>
    <!-- Call to print out the Standard Cart -->
    <xsl:call-template name="printShoppingCart">
    <xsl:with-param name="currencySymbol"
        select="$currencySymbol"/>
    <xsl:with-param name="displayTotal">true</xsl:with-param>
    <xsl:with-param name="belowTheLine">false</xsl:with-param>
    <xsl:with-param name="printTableHeader">true</xsl:with-param>
    </xsl:call-template>
... Text omitted ...
    </xsl:template>
</xsl:stylesheet>
```

Search Configuration Parameters

The advanced search capabilities of the Sterling Multi-Channel Selling Solution are specified in the **SearchConfigurationParameters.xml** file. A sample file is included here:

```
<SearchConfigurations>
    <SearchSystemConfigurations>
    <AutoReload activated="false" reloadFilePeriod="30"/>
    <BooleanQueryMaxClauseCount value="100000"/>
        <MaxFieldLength value="10000"/>
        <MergeFactor value="2"/>
        <MaxMergeDocs value="2147483647"/>
        <MaxBufferedDocs value="10"/>
        <TermIndexInterval value="128"/>
        <UseCompoundFile value="true"/>
    </SearchSystemConfigurations>
    <IndexSets>
    <!--By convention, the attribute "id" through out the entire docu-
ment should be used by the application programmer to reference enti-
ties in their programs. The attribute "id" will then be resolved into
"key" via some algorithm by the internal processes. Attribute "name"
is added for readibility and is not used to identify entities.-->
    <IndexSet description="MasterIndex" fullBuilderClass="com.comer-
gent.reference.appservices.productService.search.indexBuilder.Cata-
logIndexSetBuilder" id="MasterIndex"
incrementalBuilderClass="com.comergent.reference.appservices.productS
ervice.search.indexBuilder.CatalogIndexSetIncrementalBuilder"
    indexSetPath="MasterIndex_600634">
    <Locales>
    <Locale id="en_US" queryParserClass="com.comergent.api.appser-
vices.search.queryParser.standard.CmgtQueryParser">
    <Analyzers>
    <Analyzer analyzerClass="com.comergent.api.appser-
vices.search.analysis.CatalogSearchAnalyzer"
        description="CatalogAnalyzer" id="search"/>
    <Analyzer analyzerClass="com.comergent.api.appser-
vices.search.analysis.CatalogSearchAnalyzer"
        description="CatalogAnalyzer" id="build"/>
    </Analyzers>
    <DictionaryFile file="CatalogDictionary.mappings"/>
    </Locale>
    </Locales>
    <SearchFields>
    <!--The value of the attribute "key" is the concatenation of keys
from the Builder's path, plus the key from the IndexField's. For the
search to be correct this key value has to be exact. There will be
validation routine built into the loader in the future.-->
    <SearchField active="false" defaultWeight="1.0" id="AssignedPC"
        key="prod.pc.ID" useDictionary="false"/>
    <SearchField active="false" defaultWeight="1.0" id="AssignedFtr"
        key="prod.ftr.ID" useDictionary="false"/>
    <SearchField active="true" defaultWeight="1.0" id="prodID"
        key="prod.ID" useDictionary="true"/>
    <SearchField active="false" defaultWeight="1.0" id="prodSDate"
```

```
        key="prod.SDATE" useDictionary="false"/>
<SearchField active="true" defaultWeight="1.0" id="prodAttach"
    key="prod.attach.DATASHEET" useDictionary="true"/>
<SearchField active="false" defaultWeight="1.0" id="supplierID"
    key="prod.supplier.ID" useDictionary="false"/>
<SearchField active="false" defaultWeight="1.0"
    id="AssignedVisibleFtr" key="prod.ftr.VID"
    useDictionary="false"/>
<SearchField active="true" defaultWeight="1.0" id="prodDesc"
    key="prod.DESC" useDictionary="true"/>
<SearchField active="false" defaultWeight="1.0" id="price"
key="prod.pr.PRICE" useDictionary="false"/>
<SearchField active="false" defaultWeight="1.0" id="prodEDate"
    key="prod.EDATE" useDictionary="false"/>
<SearchField active="true" defaultWeight="1.0" id="prodName"
    key="prod.NAME" useDictionary="true"/>
<SearchField active="true" defaultWeight="1.0" id="ftrDesc"
    key="prod.ftr.DESC" useDictionary="true"/>
<SearchField active="true" defaultWeight="1.0" id="supersession"
    key="prod.SUPER" useDictionary="false"/>
<SearchField active="false" defaultWeight="1.0" id="prodSellable"
    key="prod.SF" useDictionary="false"/>
<SearchField active="false" defaultWeight="1.0" id="prodStat"
    key="prod.STAT" useDictionary="false"/>
<SearchField active="true" defaultWeight="1.0" id="ftrName"
    key="prod.ftr.NAME" useDictionary="true"/>
</SearchFields>
<Builder builderClass="com.comergent.reference.appservices.prod-
uctService.search.indexBuilder.GenericBuilder"
    description="productBuilder" entityClass="com.comergent.api.apps-
ervices.productService.IBizProduct" key="prod">
<IndexFields>
<IndexField id="EndDate" index="true" key="EDATE" store="true"
    tokenize="false"/>
<IndexField id="ProductID" index="true" key="ID" store="true"
    tokenize="true"/>
<IndexField id="Description" index="true" key="DESC" store="false"
    tokenize="true"/>
<IndexField id="ProductStatusCode" index="true" key="STAT"
    store="true" tokenize="false"/>
<IndexField id="StartDate" index="true" key="SDATE" store="true"
    tokenize="false"/>
<IndexField id="HasAssignedSupersession" index="true" key="SUPER"
    store="true" tokenize="false"/>
<IndexField id="SellableFlag" index="true" key="SF" store="true"
    tokenize="false"/>
<IndexField id="Name" index="true" key="NAME" store="true"
    tokenize="true"/>
</IndexFields>
```

```
<Builders>
<Builder builderClass="com.comergent.reference.appservices.prod-
uctService.search.indexBuilder.ProductFeatureBuilder"
    description="productFeatureBuilder" entityClass="com.comer-
gent.reference.appservices.productService.search.index-
Builder.IndexedFeatureBean" key="ftr">
<IndexFields>
<IndexField id="VisibleFeatureKey" index="true" key="VID"
    store="true" tokenize="true"/>
<IndexField id="Description" index="true" key="DESC" store="false"
    tokenize="true"/>
<IndexField id="Name" index="true" key="NAME" store="true"
    tokenize="true"/>
<IndexField id="FeatureKey" index="true" key="ID" store="true"
    tokenize="true"/>
</IndexFields>
<Builders/>
</Builder>
<Builder builderClass="com.comergent.reference.appservices.prod-
uctService.search.indexBuilder.ProductSupplierBuilder"
    description="productSupplierBuilder"
    entityClass="com.comergent.bean.simple.IDataLightWeightPartner"
    key="supplier">
<IndexFields>
<IndexField id="PartnerKey" index="true" key="ID" store="true"
    tokenize="true"/>
</IndexFields>
<Builders/>
</Builder>
<Builder builderClass="com.comergent.reference.appservices.prod-
uctService.search.indexBuilder.ProductCachedPCBuilder"
    description="productCategoryBuilder" entityClass="" key="pc">
<IndexFields>
<IndexField id="ProductCategoryKey" index="true" key="ID"
    store="true" tokenize="true"/>
</IndexFields>
<Builders/>
</Builder>
<Builder builderClass="com.comergent.reference.appservices.prod-
uctService.search.indexBuilder.PriceListBuilder"
    description="productPriceListBuilder" entityClass="" key="pr">
<IndexFields>
<IndexField id="UnitListPrice" index="true" key="PRICE"
    store="true" tokenize="false"/>
</IndexFields>
<Builders/>
    </Builder>
    <Builder builderClass="com.comergent.reference.appser-
vices.productService.search.indexBuilder.ProductAttachmentBuilder"
```

```
            description="productAttachmentBuilder" entityClass=""
            key="attach">
                <IndexFields>
                <IndexField id="DataSheet" index="true" key="DATASHEET"
                    store="false" tokenize="true"/>
                </IndexFields>
            <Builders/>
            </Builder>
            </Builders>
            </Builder>
        </IndexSet>
        </IndexSets>
</SearchConfigurations>
```

Product Mapping File Format

The product mapping file is used by partner administrators to upload product information into the Sterling Multi-Channel Selling Solution. It specifies how their product IDs map to the product IDs maintained by the enterprise. It contains the following:

- Exactly one header line that comprises the parameters listed in Table 88 on page 1129, each separated by a tab.

- One body line for each product included in the list.

TABLE 88. Parameters Required for Product Mapping File

Parameter	Description
Status	Status of the body line for that product. E (existing) if the product is unchanged, I (insert) if this is a new product, and U (update) if the product has been modified.
Pricing SKU	Enterprise product ID
Pricing SKU Authority	The source for the Enterprise product ID (the Enterprise)
Mapped_SKU	Partner's product ID

For example:

```
<Status><Pricing SKU><Pricing SKU Authority><Mapped_SKU>
U    MXDS-7480MatrixAN-MXDS-7480
E    MXDS-7490MatrixAN-MXDS-7490
I    MXDS-7500MatrixAN-MXDS-7500
E    MXDS-7510MatrixAN-MXDS-7510
E    MXDS-7520MatrixAN-MXDS-7520
```

In the preceding example, the partner administrator has made a change in the mapping of product MXDS-7480, status U (for Update), and inserted a mapping for product MXDS-7500, status I (for Insert). All other products are unchanged.

Consequently, when this amended product file is uploaded to the Sterling Multi-Channel Selling Solution, the system processes the changes, and ignores the unchanged products.

Note:	You must take care to ensure that your file follows the format of the product mapping or product availability file exactly. Make sure that no lines precede the header line.

Note that you can import partner product data using a "legacy" form of the product mapping file. In this legacy form, the External Partner ID is used in the SKU Authority column, and the partner SKUs are used in the Pricing SKU column. The use of this format is deprecated and should not be used beyond Release 7.0.1.

Product Availability File Format

The product availability file is used by partner administrators to upload product availability information into the Sterling Multi-Channel Selling Solution. It specifies the amount of inventory held in warehouse locations. The format is a tab-delimited file that contains the following:

- Exactly one header line that comprises the parameters listed in Table 89 on page 1130, each separated by a tab.

- One body line for each product included in the list.

TABLE 89. Parameters Required for Product Availability File

Parameter	Description
Status	Status of the body line for that product. E (existing) if the product is unchanged, I (insert) if this is a new product, and U (update) if the product has been modified.
SKU Name	Distributor's (Sterling Partner.com partner's) product ID.
Warehouse Location	Name of the warehouse; for example, the name of the city in which the warehouse is located.
Availability	Number of the product items that are available to be purchased.
Restock Quantity	Number of product items that will be restocked.

TABLE 89. Parameters Required for Product Availability File (Continued)

Parameter	Description
Restock Date (M/D/YY)	Expected date of the restock.
ETA (M/D/YY)	Estimated time of availability of the product to the customer.

For example:

```
<Status> <Product Name> <Warehouse Location> <Availability> \
<Restock Quantity> <Restock Date (M/D/YY)> <ETA (M/D/YY)>
E UNS-MXDS7480 Houston 8 5 10/6/02 10/11/02
E UNS-MXDS7490 Houston 9 6 10/6/02 10/11/02
U UNS-MXDS7500 Houston 10 7 10/6/02 10/11/02
E UNS-MXDS7510 Houston 6 3 10/6/02 10/11/02
I UNS-MXDS7520 Houston 4 1 10/6/02 10/11/02
```

In this preceding example, the partner administrator has made a change to the availability information for product UNS-MXDS7500 (status U) and inserted new availability information for UNS-MXDS7520 (status I). All other products are unchanged.

Consequently, when this amended product availability file is uploaded to the Sterling Multi-Channel Selling Solution, the system processes the changes, and ignore the unchanged products.

Co-op Account Update File Format

The Co-op Account Update file is used by enterprise administrators to upload updates to Co-op accounts into the Sterling Multi-Channel Selling Solution. It specifies the base amount to be used to calculate the update calculation. The format is a tab-delimited file that contains the following:

- Exactly one header line that comprises the parameters listed in Table 90 on page 1131, each separated by a tab.

- One body line for each account update included in the list.

TABLE 90. Parameters Required for Co-op Account Update File

Parameter[a]	Description
Partner Key*	Partner key of the partner for the account. You can upload updates for several partners at once.
Partner Name	Partner name of the partner for the account.

TABLE 90. Parameters Required for Co-op Account Update File (Continued)

Parameter[a]	Description
Account Key	Account key of the account: if you do not provide this, then a new account is created.
Account Name	Account name of the account.
Base Amount*	Amount used to calculate the increase to the account.
Currency	Currency of base amount.
Available Date* (M/D/YY)	Date on which the funds will be available.
Expiration Date* (M/D/YY)	Date by which funds must be spent.

a. * denotes a required field.

For example:

```
<*Partner Key><Partner Name><Account Key><Account Name><*Base Amount>
<Currency><*Available Date><*Expiration Date>
12  Anderel Promotion Fund1200USD7/25/200412/25/2006
10  OmnitechSpecial Omnitech Fund1200USD7/25/200412/25/2006
```

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