**Sterling Commerce**
*An IBM Company*

# Customer Order Management PCA

## Implementation Guide

Release 7.5

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# Preface

This manual explains the Sterling Customer Order Management PCA and the Reference Implementation provided along with it. This manual also contains information about the various processes and solutions offered by the Sterling Customer Order Management PCA.

## Intended Audience

This manual is intended to provide assistance to individuals who need to configure the Sterling Customer Order Management PCA and implement the features relevant to their business needs.

## Structure

This manual contains the following sections:

### Chapter 1, "Introduction"

This chapter explains the customer order management business challenges and how the Sterling Customer Order Management PCA assists you in solving them.

### Chapter 2, "Navigating in the Configurator"

This chapter discusses how to navigate in the Sterling Customer Order Management Configurator.

### Chapter 3, "Reference Implementation"

This chapter discusses the Sterling Customer Order Management PCA reference implementation.

### Chapter 4, "Common Configurations"

This chapter provides a brief overview of the common configurations that are needed for the Sterling Customer Order Management PCA.

### Chapter 5, "Extending and Customizing the Application"

This chapter explains the process of extending and customizing the Sterling Customer Order Management PCA.

### Chapter 6, "Implementing the Call Center Order Management Features"

This chapter discusses how to implement the customer order management call center features.

### Chapter 7, "Implementing the Store Order Management Features"

This chapter discusses how to implement the store order management features.

### Chapter 8, "Summary of Components"

This chapter discusses the new components for existing Sterling Supply Chain Applications customers.

### Chapter 9, "Performance Tuning"

This chapter explains the steps you need to take to fine-tune the Sterling Customer Order Management PCA for optimal performance.

### Chapter 10, "Integrating with WebSphere Commerce"

This chapter explains how to integrate the Sterling Customer Order Management PCA with WebSphere Commerce.

### Appendix A, "Localizing the Application"

This appendix explains the process of localization in the Sterling Customer Order Management PCA.

## Documentation

For more information about the Sterling Customer Order Management PCA$^®$ components, see the following manuals in the Sterling Customer Order Management PCA$^®$ documentation set:

- *Sterling Customer Order Management PCA$^®$ Release Notes*

- *Sterling Customer Order Management PCA$^{®}$ Installation Guide*

- *Sterling Customer Order Management PCA$^{®}$ Concepts*

- *Sterling Customer Order Management PCA$^{®}$ Implementation Guide*

- *Sterling Customer Order Management PCA$^{®}$ User Guide*

- *Sterling Customer Order Management PCA$^{®}$ Upgrade Guide*

- *Sterling Customer Order Management PCA$^{®}$ Javadocs*

For more information about the Sterling Supply Chain Applications$^{®}$ components, see the following manuals in the Sterling Supply Chain Applications$^{®}$ documentation set:

- *Sterling Supply Chain Applications$^{®}$ Release Notes*

- *Sterling Supply Chain Applications$^{®}$ Installation Guide*

- *Sterling Supply Chain Applications$^{®}$ Upgrade Guide*

- *Sterling Supply Chain Applications$^{®}$ Performance Management Guide*

- *Sterling Supply Chain Applications$^{®}$ High Availability Guide*

- *Sterling Supply Chain Applications$^{®}$ System Management Guide*

- *Sterling Supply Chain Applications$^{®}$ Localization Guide*

- *Sterling Supply Chain Applications$^{®}$ Customization Guide*

- *Sterling Supply Chain Applications$^{®}$ Integration Guide*

- *Sterling Supply Chain Applications$^{®}$ Product Concepts*

- *Sterling Warehouse Management System$^{®}$ Concepts Guide*

- *Sterling Supply Chain Applications Platform$^{®}$ Configuration Guide*

- *Sterling Distributed Order Management$^{®}$ Configuration Guide*

- *Sterling Supply Collaboration$^{®}$ Configuration Guide*

- *Sterling Global Inventory Visibility$^{®}$ Configuration Guide*

- *Sterling Product Management$^{®}$ Configuration Guide*

- *Sterling Logistics Management$^{®}$ Configuration Guide*

- *Sterling Reverse Logistics$^{®}$ Configuration Guide*

- *Sterling Warehouse Management System$^{®}$ Configuration Guide*

- *Sterling Supply Chain Applications Platform® User Guide*
- *Sterling Distributed Order Management® User Guide*
- *Sterling Supply Collaboration® User Guide*
- *Sterling Global Inventory Visibility® User Guide*
- *Sterling Logistics Management® User Guide*
- *Sterling Reverse Logistics® User Guide*
- *Sterling Warehouse Management System® User Guide*
- *Sterling Supply Chain Mobile Application® User Guide*
- *Sterling Supply Chain Analytics® Guide*
- *Sterling Supply Chain Applications® Javadocs*
- *Sterling Supply Chain Applications® Glossary*
- *Sterling Parcel Carrier Adapter® Guide*
- *Sterling Application Server® Installation Guide* (for optional component)

For a description of the various documents in the Sterling Customer Order Management PCA® documentation set, see the Sterling Customer Order Management PCA® documentation home page at:

`<YFS_HOME>/documentation/YCD_doc_home.html`

where `<YFS_HOME>` = `<YANTRA_HOME>/Runtime`

and `<YANTRA_HOME>` is the directory where this PCA and the Sterling Supply Chain Applications® are installed.

## Conventions

The following conventions may be used in this manual:

| Convention | Meaning |
|---|---|
| `...` | An ellipsis represents information that has been omitted. |
| `< >` | Angle brackets indicate user-supplied input. |
| `mono-spaced text` | Mono-spaced text indicates a file name, directory path, attribute name, or an inline code example or command. |

| Convention | Meaning |
| --- | --- |
| / or \ | Slashes and backslashes are file separators for Windows, UNIX and LINUX operating systems. The file separator for the Windows operating system is "\" and the file separator for Unix and Linux systems is "/". The Unix convention is used unless otherwise mentioned. |
| <YANTRA_HOME> | User-supplied location of the Sterling Supply Chain Applications installation directory. |
| <YFS_HOME> | Location of the generated <YANTRA_HOME>/Runtime directory. |

# 1

# Introduction

The Sterling Customer Order Management PCA provides solutions to the challenges found in typical customer order management business scenarios.

The Sterling Customer Order Management PCA presents multi-channel order management solutions by providing:

- A user interface to handle call center order modifications.

- A user interface to handle store walk-in order modifications.

## 1.1 Order Fulfillment Flow

Orders go through a wide range of statuses throughout their fulfillment cycles. Orders are processed by transactions that perform modifications to the orders and their related entities such as shipments, invoices, and returns. These transactions also determine how an order moves from one status to the next. Additionally, an order in a particular status can go through a condition to determine which transaction should process it next.

An order's flow throughout its fulfillment cycle is represented graphically by a pipeline. The pipeline determines the statuses that an order can be in, which transactions process it, and which conditions it must go through in order to be fulfilled. As part of the reference implementation, a pipeline condition is set up utilizing the PCA's pipeline for both Return and Order Fulfillment process types.

For more information about defining process type pipelines, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

The `Customer Order Management Sales Order Fulfillment` pipeline is used to process orders of the `Sales Order` document type within the Sterling Customer Order Management PCA.

Orders in this pipeline can be processed by the following types of transactions:

- Create

- Schedule

- Release

- Ship

- Return

- Close

- Purge

## 1.1.1 Create

The first step in fulfilling an order is capturing it. Orders can be captured by using either the Create Order task of the Customer Order Management application or from a web portal or an external order entry system. The data of the orders is passed to the createOrder API and processed through the `Create Draft Order` and `Create Order` transactions. Both transactions have the same end results since the order is either dropped into `Created`, `Reserved`, or `Back Ordered` status before they are picked up by the `Schedule` transaction. However, using the Create Draft Order transaction places the order into one of two intermediate statuses, either `Draft Order Created` or `Draft Order Reserved`, where most of the order's attributes can still be modified.

Once the order is ready to be processed, it can be confirmed, through the `Confirm Draft Order` transaction.

The next step is for the order to be scheduled for delivery.

## 1.1.2 Schedule

The scheduling process schedules an order so that it can be delivered to the customer. Important shipment attributes such as delivery dates and ship nodes are determined at that point.

The `Schedule` transaction attempts to process orders in the following statuses: `Reserved`, `Back Ordered`, `Unscheduled`, and `Created`. If the orders in `Back Ordered` or `Reserved` status cannot be processed by the `Schedule` transaction, they wait a predefined time interval before being reprocessed. For more information about transactions, see the *Sterling Distributed Order Management Configuration Guide*.

If orders in `Created` status cannot be scheduled because of insufficient inventory, they are dropped into the `Back Ordered` status and wait to be reprocessed.

If the `Schedule` transaction is successful, but the specified ship node on the order line does not have enough inventory for the shipment and needs to procure its inventory from another node, the creation of a chained order is required. The order is dropped into `Awaiting Chained Order Creation` status where once it is processed by the `Chained Order Create` transaction, it waits to be processed for shipment.

If chained order creation is not required, the order is dropped into the `Scheduled` status. If the ship node is a drop-ship node, the next step for the order is creating a chained order.

## 1.1.3 Release

Once the Sterling Customer Order Management PCA has determined one or more ship nodes that can be utilized to ship the ordered merchandise, those nodes are notified with all of the relevant information necessary to send the shipment. This is the Release process.

The `Release` transaction takes orders that are in `Scheduled` status and sends the notification to the nodes. Occasionally, the `Schedule` transaction's inventory picture and the actual inventory picture at the nodes can get out of synch. When this happens, the `Release` sends a notification to a node asking for inventory that does not actually exist. The node then notifies the Sterling Customer Order Management PCA that it cannot fulfill the order due to insufficient inventory, and the order gets backordered from the node. The order is then dropped into `Back Ordered From Node` status, and waits to be reprocessed by the `Schedule` transaction at a later time.

If the node has successfully received the release and it has inventory available, the order can be shipped.

## 1.1.4 Ship

The shipment-related transactions use the information included in the release sent to the warehouse to plan for shipments as efficiently as possible.

When several shipments are going to the same location and can be grouped within the same loads, they can be consolidated together to minimize cost while still meeting the promised delivery dates. If shipment consolidation is required, shipments must be consolidated together before the actual shipment, as represented in the pipeline by the `Consolidate To Shipment` transaction.

Orders can be included in or removed from existing shipments before the actual shipment occurs, with the `Include Order In Shipment` and `Remove Order From Shipment` transactions.

At this point, an order can be considered complete and, in time, is closed and purged from the system. However, if the customer decides to return the merchandise they received, the order's life cycle continues.

## 1.1.5 Return

Once the customer has received a shipment, they may find that there is something wrong with the merchandise. For example, some items in the order may be the wrong color, or may have been damaged in transit. The `Include In Return` transaction creates a return order that must be shipped back to a warehouse to be examined.

After a return is created, it must be received and processed by the warehouse. The return's life cycle is handled by the `Reverse Logistics` pipeline. The `Customer Order Management Sales Order Fulfillment` pipeline listens to the status of the return and updates the status of the order accordingly.

Therefore, when a return is received, the order goes to `Return Received` status through the `Receive Return` listener transaction.

Similarly, if the return is cancelled in the `Reverse Logistics` pipeline, the order goes back to `Shipped` status through the `Remove From Return` listener transaction.

Finally, if after the return was received it is unreceived and sent back to the customer, the return is placed back into `Return Created` status through the `Unreceive Return` listener transaction.

### 1.1.6 Close

Once an order has reached the status of Shipped, Cancelled, or Return Received, it is be closed by the Close Order transaction. By default, closed orders are not searchable in the Sterling Supply Chain Application Consoles unless explicitly specified on the search screen.

### 1.1.7 Purge

After orders have been in a final status like Shipped, Return Received or Cancelled for a specified time, they are purged, which means that the records for those orders are moved from the regular database tables to the history tables. History orders can be reopened at any time, but are by default not searchable in the Sterling Supply Chain Application Consoles unless explicitly specified on the search screen.

# 2

# Navigating in the Configurator

This chapter discusses the layout of the Sterling Customer Order Management Configurator, the various actions that you can perform throughout the application, and the important concepts you need to be aware of before using the application.

## 2.1 Starting the Sterling Customer Order Management Configurator

To access the Sterling Customer Order Management Configurator:

1. Point your browser to
   `http://<hostname>:<portnumber>/yantra/console/login.jsp`

   where,

   - `hostname` is the computer name or IP address of the computer where the Sterling Supply Chain Applications are installed.

   - `portnumber` is the listening port of the computer where the Sterling Supply Chain Applications are installed.

   The browser displays the Sign In window.

2. Enter your login ID and password and click Sign In. The Sterling Supply Chain Application Consoles Home Page displays.

3. From the menu bar, choose Configuration > Launch Customer Order Management Configurator. The Sterling Customer Order Management Configurator opens in a new window.

## 2.2 The Sterling Customer Order Management Configurator Layout

The Sterling Customer Order Management Configurator is a graphical user interface, which you can use to configure different aspects of the Sterling Supply Chain Applications. The different configurations are defined by logical groupings that can be accessed from the Sterling Customer Order Management Configurator's main screen.

Each logical grouping focuses on a particular aspect of the Sterling Customer Order Management Configurator and contains rules, common codes, and settings necessary for the Sterling Customer Order Management PCA to work in a real-world business setting.

The Sterling Customer Order Management Configurator displays groupings by way of an information tree. To expand each grouping, click ⊞ located next to the group's name. When a group expands, each specific configuration associated with that group displays.

Next to each specific configuration, there is an icon, which indicates the user as to the progress of the configuration. When the cursor is placed over the icon, the current status of the configuration displays in a pop-up window.

*Table 2–1   Task Icons*

| Task Icon | Description |
|-----------|-------------|
| | This icon indicates that the task is not complete. |
| | This icon indicates that the task is complete. |
| | This icon indicates that the task is currently locked. |

When you select a group that you want to configure, the Sterling Customer Order Management Configurator tree expands to display the available configuration rules for the selected group. Select a configuration that is not yet completed or still in progress. For certain configurations, under applications you can tweak some advanced configurations. To tweak these advanced configurations, select the Advanced Configuration hyperlink.

To view and change the configurations for a different enterprise organization, click the Load Configuration For Enterprise hyperlink. An organization may not be able to modify all rules within the Sterling Customer Order Management Configurator based on the ownership of the individual configurations. For example, the installation level rules can be only modified by the Hub organization. Additionally, one Enterprise organization may inherit rules from another Enterprise. In such situations, the configuration can be only modified by the Enterprise that owns the organization, and not by the Enterprise that inherits the configuration. If the organization inherits a configuration from another organization, a hyperlink displays next to the configuration's name enabling the user to override the ownership of that configuration. If the organization has previously overridden the ownership, a hyperlink displays next to the configuration's name enabling the user to provide ownership back to the organization from where it was originally inheriting.

## 2.2.1 Using the Online Help

To access the Sterling Customer Order Management Configurator's Online Help, select Help > Online Help.

## 2.2.2 Troubleshooting Errors

You can view the description and cause of any error raised in Sterling Customer Order Management Configurator, and the action to perform to troubleshoot the error.

To view the Sterling Customer Order Management Configurator system error descriptions:

1. From the menu bar, select Help > Troubleshooting. The Error Search screen displays.

2. Enter the applicable search criteria and choose ![binoculars icon]. A list of error codes and their descriptions displays.

3. Choose ![gear icon] to view the cause of the error and the action to perform to troubleshoot the error.

## 2.2.3  Using Special Characters

In the Sterling Customer Order Management Configurator, there may be instances where you need to use special characters during data entry. The Sterling Supply Chain Applications reserve keywords and special characters that can be used internally. For information about using and handling special characters, see the *Sterling Supply Chain Applications Customization Guide*.

# 3

# Reference Implementation

The reference implementation installation scripts set up configuration data in order to demonstrate the Sterling Customer Order Management PCA features.

The Sterling Supply Chain Applications are configured by modules that reflect different aspects of the product. When configuring the Sterling Customer Order Management PCA for the Reference Implementation, the following modules are impacted:

- Platform

- Product Management

- Distributed Order Management

- Inventory Synchronization

## 3.1 Platform

The Sterling Customer Order Management PCA Reference Implementation includes sample organizations in a customer order scenario. In this example, there is a company called XYZ Corporation, which has a company called XYZ-Online serving as the online business channel. Additionally, XYZ-Online owns a node modeled as a basic distribution center. There is another company called XYZ-Retail serving as the retail business channel and having two stores, XYZ S1 and XYZ S11.

Table 3–1 describes the organization model.

*Table 3–1    Organizations*

| Organization Code | Organization Name | Role |
|---|---|---|
| XYZ-CORP | XYZ Corporation | Enterprise |
| XYZ-ONLINE (Inherited from XYZ-CORP) | XYZ Online | Enterprise, Seller |
| XYZ-DC | XYZ Distribution Center | Node |
| XYZ-RETAIL | XYZ Retail | Enterprise, Seller |

XYZ-CORP has sourcing rules and Sales Order document Type rules configured.

XYZ-ONLINE is configured to inherit configuration from the XYZ-CORP organization. Figure 3–1 illustrates the structure of the Sterling Customer Order Management PCA.

*Figure 3–1   Participant Model*
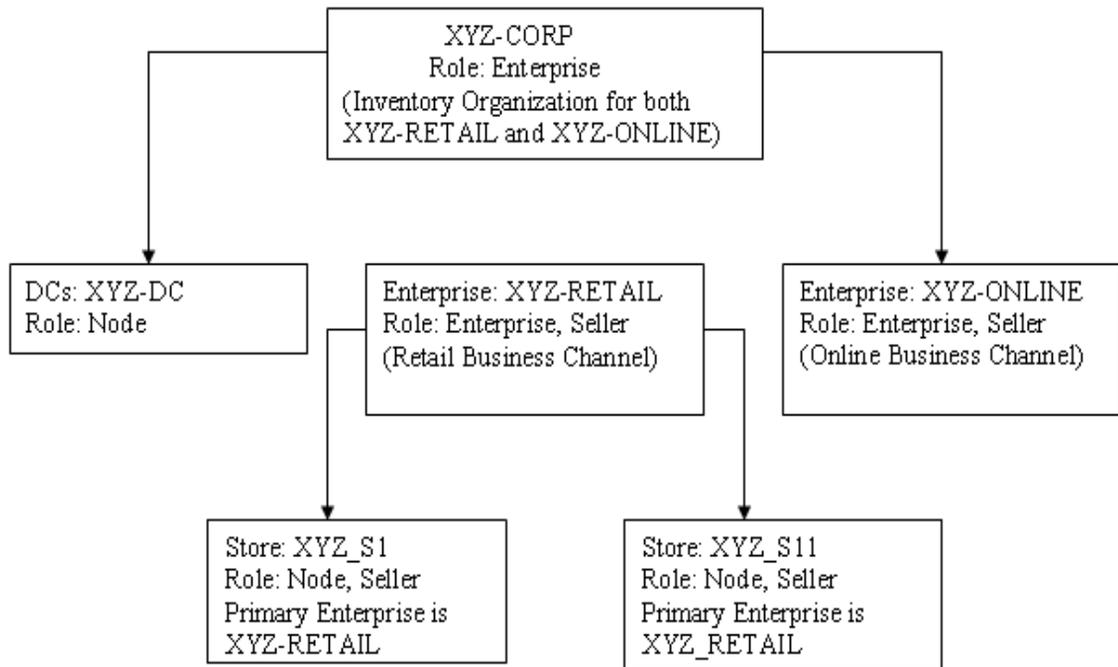


In this figure:

1. XYZ-CORP is the enterprise serving as the inventory organization for both XYZ-ONLINE and XYZ-RETAIL enterprises.

2. XYZ-ONLINE is the enterprise for online business.

   DC is the Application Consoles node owned by XYZ-CORP.

3. XYZ-RETAIL is the enterprise for retail business.

   - DC is the Application Consoles node owned by XYZ-CORP.

   - XYZ_S1 and XYZ_S11 nodes are stores modeled as Seller organizations.

**Organizations for the Call Center Management Application**

When orders are created for Call Center Management application, use the following organizations:

- Enterprise Code of the order must be XYZ-CORP

- Seller Organization Code must be XYZ-ONLINE

**Organizations for the Store Order Management Application**

When orders are created for the Store Order Management application, use the following organizations:

- Enterprise Code of the order must be XYZ-RETAIL

- Seller Organization Code for the order must be the store organization code

## 3.1.1 User Groups for a Call Center

The Sterling Customer Order Management PCA Reference Implementation includes the following sample user groups for a customer order scenario.

*Table 3–2   User Groups for a Call Center*

| User Group | Users | Description |
|------------|-------|-------------|
| XYZ-CORP_CSR | csr-XYZ | Call Center Representative |
| XYZ-CORP_CSRL | csrlead-XYZ | Call Center Representative Lead |

## 3.1.2 User Groups for a Store

The Store Order Management application includes the following sample user groups for a store order scenario.

*Table 3–3   User Groups for a Store*

| User Group | Users | Description |
|---|---|---|
| STORE-MANAGER | xyzs1admin, xyzs11admin | Store Manager |
| STORE-CSR | xyzs1csr, xyzs11csr | Store Customer Sales Representative |

## 3.1.3 Exception Types and Queues

The following exception and queue types are provided:

**Exception Type**

- Verify Address
- Duplicate Order
- Payment Failure
- Order Cancel
- Price Match
- Reship
- Backorder Notice
- Fraud Check Notice
- FTC First Notice
- FTC Second Notice
- UI Exception
- Agent Exception

**Queue Types**

- Verify Address
- Fraud Queue
- Duplicate Order
- Customer Notification
- Payment Declined
- Payment Hard Declined

- Payment Service Unavailable
- Payment Auth Retry Limit Reached
- Validate Price Match
- Reship Items

## 3.2 Product Management

In this setup, XYZ-CORP is the inventory and catalog organization for XYZ-ONLINE and XYZ-RETAIL organizations.

Table 3–4 describes the inventory items defined by the XYZ-CORP organization.

*Table 3–4   XYZ-CORP Items*

| Item ID | Description | Shipping Allowed | Pick up Allowed | Delivery Allowed |
|---------|-------------|------------------|-----------------|------------------|
| TV0001A5F21 | 34″ Widescreen LCD HDTV | May be | Yes | Yes |
| DVP6723040 | Progressive-Scan DVD Player | May be | No | Yes |
| SP5700BL | Home Theater Speaker System | Yes | Yes | Maybe |
| URV800CV | 15-Device Universal Remote | Yes | Yes | Maybe |
| AOE4357 | AOE Computer Game | No | Yes | Maybe |

Table 3–5 provides a list of UOMs that are defined for XYZ-CORP.

*Table 3–5   Item UOMs*

| UOM | Description |
|-----|-------------|
| CASE | Case |
| EACH | Each |

Table 3–6 provides a list of delivery service items that are defined for XYZ-CORP. These delivery items are associated with the items mentioned in Table 3–4.

*Table 3–6   Delivery Service Items*

| Item ID | Description | Unit Of Measure |
|---------|-------------|-----------------|
| Home_Delivery | Home Delivery | UNIT |
| Home_Return | Home Return | UNIT |

Table 3–7 provides a list of delivery service units of measure that are defined for XYZ-CORP.

*Table 3–7   Delivery Service Units Of Measure*

| Unit Of Measure | Description |
|-----------------|-------------|
| HR | Hour |
| UNIT | Unit |

Table 3–8 provides a list of provided service items and their units of measure that are defined for XYZ-CORP.

*Table 3–8   Provided Service Items*

| Item ID | Description | Unit Of Measure |
|---------|-------------|-----------------|
| PSTV0001A5F21 | Installation for TV0001A5F21 | HR |
| PSELECREP | Repair of Electronic Items | HR |

# 3.3 Distributed Order Management

XYZ-ONLINE has a scheduling rule inherited from XYZ-CORP, named SYSTEM, that does not assume infinite inventory after the lead time.

Under Financials, XYZ-ONLINE has a default Payment Rule configured, identical to the rule provided for the DEFAULT Enterprise. Additionally, the Credit Card, Pre-paid, Check, Refund Check, Customer Account, Other Payment Method, and Stored Value Card payment types are configured.

### 3.3.1 Common Configuration Data for Call Center and Store Scenarios

In addition to the data provided as part of the base Sterling Supply Chain Applications installation, the following configurations are added for the XYZ-CORP and XYZ-RETAIL organizations:

**Note Reasons**

- Called Customer
- Called Issuing Bank
- Cleared Held Order
- Marketing Opt-In
- Backordered Information
- Hold Information
- Order Hold
- New Item Information
- Fulfillment Options Change Information
- Delivery Appointment Change Information
- Delivery Instructions Change Information
- Order Cancellation Information
- Return Information
- Reship Information
- Shipping Address Change Information
- Price Match Information
- Customer Appeasement Information
- New Promotion Information
- Payment Change Information
- Order Entry
- FTC Notification

**Modification Reasons**

- Cancel – Address Undeliverable
- Cancel – Customer Requested
- Cancel – Duplicate Order
- Cancel – FTC Auto Cancel
- Cancel – Item No Longer Available
- Customer – Address Change
- Customer – Consent to Delay
- Customer – Level of Service Change
- Payment Change – Credit Card Over Limit
- Payment Change – Order Over Settled
- Payment Change – Order Under Settled
- Fulfillment – Alternate Ship Node

**Hold Types**

- Duplicate Order
- Fraud Check
- Address Verification

**Sales Order Charge Categories**

- Discount
- Handling
- Personalization
- Shipping
- Customer Appeasement
- Price Match

**Return Order Charge Categories**

- Discount
- Handling
- Personalization

- Shipping

**Sales Order Charge Names**

- Discount
- Handling
- Personalization
- Shipping
- Customer Appeasement
- Price Match

**Return Order Charge Names**

- Discount
- Handling
- Personalization
- Shipping

**Order Types**

- Regular
- Gift Order
- Exchange Order

**Fulfillment Types**

- Fulfillment Type for Return
- Fulfillment Type for Product Sourcing
- Store Fulfillment
- More Store Search

**Cancel Reasons**

- Change of Mind
- Cheaper Price Found
- Late/Failed Delivery
- Unacceptable Delivery Time Promised

- Product No Longer Available
- Fraudulent Order
- Address Undeliverable
- Duplicate Order
- Other

**Appeasement Reasons**

- Late Shipment
- Damaged Item
- Bad Phone Experience
- Bad Delivery Experience
- Bad Online Experience

**Instruction Types**

- Delivery

**Return Reasons**

- Damaged Items
- Change Of Mind
- Lower Price Found
- Missing Parts
- Loose Parts
- Cargo Damaged
- Other

## 3.3.2 Additional Configuration Data for a Call Center Scenario

In addition to the common configurations data, the following configurations are added for the call center scenario:

**Reship Reasons**

This set up is provided for the XYZ-CORP organization.

- Missing Item
- Missing Container
- Wrong Item
- Cargo Loss
- Damaged or Defective

**Resource Pools**

- XYZ-DC_RES_POOL: This resource pool is given for XYZ-DC node.

**Payment Types**

The set up is provided for XYZ-ONLINE enterprise.

- Credit Card
- Check
- Pre-paid
- Stored Valued Card
- Refund Check
- Customer Account
- Other Payment Method

**Payment Rules**

The set up is provided for XYZ-ONLINE enterprise.

- XYZ-ONLINE_DEFAULT

## 3.3.3 Additional Configuration Data for a Store Order Management Scenario

In addition to the common configuration data that is provided, the following configurations are added for the store order management scenario:

**Payment Type**

The set up is provided for the XYZ-RETAIL organization and each store.

- Credit Card
- Check

- Pre-paid

- Stored Valued Card

- Refund Check

- Customer Account

- Other Payment Method

**Payment Rules**

The set up is provided for the XYZ-RETAIL organization and each store.

- XYZ-RETAIL_DEFAULT

**Resource Pools**

- XYZ_S1_RES_POOL: This resource pool is given for XYZ_S1 store.

- XYZ_S11_RES_POOL: This resource pool is given for XYZ_S11 store.

## 3.3.4  Sample Orders

To demonstrate various features of Sterling Customer Order Management PCA the following types of orders are provided as a part of transaction data:

- Demonstration1

- Demonstration2

- Demonstration3

- Demonstration4

- Demonstration5

### 3.3.4.1 Demonstration1

An order of type demonstration1 is used to demonstrate the following scenarios for both product and service items:

- Order Summary

  - A few items in the completed status and a few in the incomplete status

  - Support for different fulfillment methods such as pickup, shipment, and delivery

- &ndash; High priority notes at the header level
- &ndash; Line level notes
- &ndash; Alerts that exist on the order
- Price match
- Customer appeasement
- Increase line quantity
  - &ndash; Quantities of a few items can be increased
  - &ndash; Quantities of a few items cannot be increased
- Add coupon code—A discount on the order total
- Change shipping address
- Add items
- Change payment method
- Gift Options

### 3.3.4.2 Demonstration2

An order of type demonstration2 is used to demonstrate the following scenarios for both product and service items:

- Initiate Return/In store Returns:
  - &ndash; A few non-returnable items on a returnable order
  - &ndash; A few partial/fully returnable items
  - &ndash; A pre-configured return policy that makes a few items non-returnable
  - &ndash; Return order item that requires a pickup appointment
- Track an item
  - &ndash; A few shipped items
  - &ndash; A hyperlink to the tracking number
- Adding an item—Addition of items is not allowed
- Cancel order—Cancellation of items is not allowed
- Open Box Items—Indicator for the open box items

- Alternate Item ID

### 3.3.4.3  Demonstration3

An order type of demonstration3 is used to demonstrate the following scenarios for both product and service items:

- View payment details—Some refunds, multiple payment methods
- Returns/Exchanges views—A few items returned, refunded, and exchanged

### 3.3.4.4  Demonstration4

An order of type demonstration4 is used to demonstrate the following scenarios:

- Cancel Order
  - Non-cancellation of a few items
  - Partial/Full cancellation of a few items
  - Cancellation of a few pickup and delivery items that are in or beyond the "Included in Shipment" status

### 3.3.4.5  Demonstration5

An order of type demonstration5 is used to demonstrate the following scenarios for both product and service items:

- Change Fulfillment Options
  - Changing of fulfillment options from pickup to delivery and take an appointment for the new delivery line
  - Changing of fulfillment options from delivery to pickup
- Change Delivery Appointment/Instructions
  - Changing of appointments is not allowed
  - Delivery items with multiple appointments and the ability to change any one appointment
  - Adding delivery instructions
4. Fulfillment Summary
  - Different fulfillment options

- Level of Services

- Items with or without availability

5. Reservations—Items with or without availability

### 3.3.5 Sample Payment Methods

Table 3–9 provides a few sample credit card numbers supported in the Sterling Customer Order Management PCA.

*Table 3–9   Sample Credit Card Numbers*

| Credit Card Type | Description | Sample Card Number |
|---|---|---|
| VISA | Visa | 4561235642315415 |
| AMEX | Amex | 3471265413987218 |
| CARTE_BLANCHE | Carte Blanche | 36897541586340 |
| DISCOVER | Discover | 6011218943526543 |
| JCB | JCB | 213116874316851 |
| MASTERCARD | Master Card | 5421332132165462 |

### 3.3.6 Sample Promotion Codes

The Sterling Customer Order Management PCA supports the following reference implementation promotion codes:

- FREESHIP—This promotion is applied to an order if the order total is greater than $100.

- SALEONTV—This promotion is applied to an order line that has the "TV0001A5F21" Item ID.

## 3.4 Inventory Synchronization

XYZ-CORP is configured as an Inventory Organization. Therefore, an ATP rule, named XYZ-CORP-DEFAULT, has been specified. This is identical to the rule supplied for the DEFAULT Enterprise.

### 3.4.1 Resource Pools

The Sterling Customer Order Management PCA provides the following resource pools as part of the reference implementation:

*Table 3–10   Resource Pools*

| Resource Pool ID | Ship Node |
|---|---|
| XYZ-DC_RES_POOL | XYZ-DC |
| XYZ_S1_RES_POOL | XYZ_S1 |
| XYZ_S11_RES_POOL | XYZ_S11 |
| XYZ-DC_PS_RES_POOL | XYZ_DC |
| XYZ_S1_PS_RES_POOL | XYZ_S1 |
| XYZ_S11_PS_RES_POOL | XYZ_S11 |

A service slot group, called A is defined for XYZ-CORP. The resource pools specified in Table 3–10 use the service slot group A.

Table 3–11 describes the service slots defined for the slot group A.

*Table 3–11   Service Slots Defined for Slot Group A*

| Service Slot Description | Start Time | End Time |
|---|---|---|
| Morning | 08:00:00 | 12:00:00 |
| Afternoon | 13:00:00 | 17:00:00 |

The following calendar names are provided as part of the store order management reference implementation:

- Calendar_XYZ_S1—This is defined for the XYZ_S1 store.

- Calendar_XYZ_S11—This is defined for the XYZ_S11 store.

### 3.4.2 Inventory Adjustments

The inventory is made available for each store and distribution center. For XYZ_S1 and XYZ_S11 stores, and XYZ_DC distribution center, the inventory is available for various items as described in Table 3–12.

*Table 3−12   Available Inventory*

| Item | Quantity |
|------|----------|
| TV0001A5F21 | 1000 |
| DVP6723040 | 1000 |
| SP5700BL | 1000 |
| URV800CV | 1000 |
| AOE4357 | 1000 |

# 4

# Common Configurations

This chapter provides a brief overview of the common configurations that are needed for the Sterling Customer Order Management PCA. For more information about configuring each of these components, references to the appropriate Sterling Supply Chain Applications documents have been provided.

## 4.1 Creating a New Enterprise Organization

An Enterprise represents an organization that owns and controls all transactions in the Sterling Customer Order Management PCA. An Enterprise in the Sterling Customer Order Management PCA controls the flow of documents such as a sales order and is considered as the owner of the document.

To create a new Enterprise:

1. From the Sterling Customer Order Management Configurator screen, select the Create A New Enterprise hyperlink. The Create Organization pop-up screen displays.

2. Enter information in the applicable fields.

3. Click 💾. The new Enterprise is created.

4. Click the Load Configuration For Enterprise hyperlink. The Organization pop-up screen displays.

5. Choose the Enterprise organization from the Organization drop-down list.

# 4.2 Configuring Initial System Setup

The Sterling Customer Order Management PCA provides some advanced system setups that allow you to configure system-wide elements such as locales and units of measure. These will typically be configured once during the start of an implementation.

## 4.2.1 Defining Units of Measure for Quantity

You can define units of measure for quantity. For more information about defining quantity units of measure, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

## 4.2.2 Defining Units of Measure for Service Quantity

You can define units of measures for service quantity. For more information about defining service quantity units of measure, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

## 4.2.3 Defining Units of Measure for Dimension

You can define units of measure for dimension. For more information about defining dimension units of measure, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

## 4.2.4 Defining Units of Measure for Volume

You can define units of measure for volume. For more information about defining volume units of measure, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

## 4.2.5 Defining Units of Measure for Weight

You can define units of measure for weight. For more information about defining weight units of measure, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

### 4.2.6 Defining Units of Measure for Time

You can define units of measure for time. For more information about defining time units of measure, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

### 4.2.7 Configuring Installation Rules

You can set up rules that need to be defined when the application is installed. This may include rules that determine how inventory items are identified and consolidated, provide flexibility in drop shipping orders, and provide capability to encrypt primary payment type attributes. For more information about defining installation rules, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

### 4.2.8 Defining Locales

You can define locales that enable businesses to associate them to multiple organizations and users. For more information about defining locales, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

### 4.2.9 Defining Countries

You can set up common codes for country codes used when setting up locales. This common code identifies the country that the locale is located in. For more information about defining country codes, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

### 4.2.10 Defining Languages

You can set up common codes for language definitions used when setting up locales. This common code identifies the language used in the locale. For more information about defining language codes, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

### 4.2.11 Defining Date Formats

You can set up common codes for date formats used when setting up locales. This common code format identifies the format how date is entered at a locale. For more information about defining date formats, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

### 4.2.12 Defining Time Formats

You can set up common code formats for time formats used when setting up locales. This common code format identifies how time is entered at a locale. For more information about defining time formats, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

### 4.2.13 Defining Date and Time Formats

You can set up common code formats for date and time formats used when setting up locales. This common code format identifies the format how dates with time are entered at a locale. For more information about defining date/time formats, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

### 4.2.14 Defining Currencies

Currency definitions define symbols of each currency and indicate Euro currency membership and expiration date, if applicable. For more information about defining currency definitions, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

### 4.2.15 Configuring Currency Conversions

Currency conversion enables you to set up exchange rates from one currency to another. These exchange rates are used to translate between currencies used by organizations as defined by their locale. For more information about defining currency conversions, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

## 4.3 Configuring an Enterprise Profile

An Enterprise represents the organization that owns and controls all transactions in the Sterling Customer Order Management PCA. An Enterprise in the Sterling Customer Order Management PCA controls the flow of documents, such as a sales order, and considered the owner of the document. Most business rules and fulfillment processes for an order are defined by the Enterprise. On a sales order, the Enterprise is also assigned the role of the Seller organization in most cases. However, in some cases, if a higher level organizational unit wants to control and enforce business rules or document flow of all its subsidiaries, that

organizational unit is assigned an Enterprise role and its subsidiary organizations are assigned Seller and Buyer roles.

Even though most business rules are controlled by the Enterprise, pricing rules are always controlled by the Seller organization in both sales and purchase situations. For more information about defining enterprise attributes, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

# 4.4 Managing the Supply Chain Network Model

You can define your complete catalog of product items including items, categories, and classifications. Use this configuration when the product items are maintained within the Sterling Supply Chain Applications.

## 4.4.1 Defining Shipping Nodes and Stores

You can define ship nodes from where products are shipped and delivered. You can create node types and classify them. For more information about creating node types, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

## 4.4.2 Defining Carriers

You can define carriers for your business. To define a carrier, create a carrier as the role for an organization and define the carrier attributes. For more information about defining carrier attributes, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

## 4.4.3 Defining Vendors

You can define vendors for your business. A vendor can be a seller organization, shipping node, or both. To define a vendor, choose Seller as the role for an organization and configure the seller attributes. For more information about defining seller attributes, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

## 4.4.4 Configuring the Fulfillment Network Model

You can configure the fulfillment network model to describe the relationship between various supply chain participants. For more

information about configuring the fulfillment network model, see the *Sterling Distributed Order Management Configuration Guide*.

### 4.4.5 Defining Region Match Preferences

As an advanced configuration, you can specify the level at which addresses can be matched with regions for each country. For more information about defining region match preferences, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

### 4.4.6 Configuring Region Levels

A region level classifies regions into distinct categories. As an advanced configuration, you can specify region levels such as Country, State, County, City, and so forth, based on the levels at which you want to aggregate your regions, and define the address field that corresponds to a region level. Region levels also provide the capability to create a region hierarchy. For more information about defining region levels, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

### 4.4.7 Configuring Region Schemas

A region schema is the complete hierarchical set of regions that define a given geography. As an advanced configuration, you can configure a region as a specific territory. For example, you can define a region for a state, city, or town. For more information about defining region schemas, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

### 4.4.8 Defining Node Types

As an advanced configuration, you can define node types to allow a user to classify nodes into various categories. For more information about defining node types, see the *Sterling Distributed Order Management Configuration Guide*.

## 4.5 Managing Products & Categories

The Sterling Customer Order Management PCA provides you with the capability to manage all products and services through catalogs and catalog organizations.

### 4.5.1 Configuring Units of Measure

You can configure standard units of measure to associate with your items and locales. For more information about configuring units of measure, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

### 4.5.2 Managing Products

You can define product items that you sell. For more information about defining product items, see the *Sterling Product Management Configuration Guide*.

### 4.5.3 Defining Product Categories

You can use product categories to browse for similar products. For more information about defining categories, see the *Sterling Product Management Configuration Guide*.

### 4.5.4 Defining Types of Product Classifications

You can define the types of product classification that you require. To define the types of product classification, define a classification definition and associate an item attribute with it. For more information about defining classification definitions, see the *Sterling Product Management Configuration Guide*.

### 4.5.5 Defining Classification Values

You can define various values for a classification type in a classification hierarchy. For more information about defining a classification hierarchy, see the *Sterling Product Management Configuration Guide*.

### 4.5.6 Defining Alternate Identifications for an Item

As an advanced configuration, you can specify the types of alternate identification for an item. For more information about defining item alias types, see the *Sterling Product Management Configuration Guide*.

## 4.5.7 Defining Association Types for an Item

As an advanced configuration, you can specify the association types for an item. For more information about defining item association types, see the *Sterling Product Management Configuration Guide*.

# 4.6 Configuring Delivery and Installation

In addition to shipped products, the Sterling Customer Order Management PCA provides the capability to manage the execution of delivery services and provided services.

Delivery Services are billable services that are directly associated with a product on a sales order or a return order. For example, the delivery of a high-definition television.

Provided Services are billable services that are offered to enhance the life or usability of a product associated with a sales order. For example, the application of fabric protection on a sofa or installation service for a home theater system.

Delivery Services and provided services are also defined as items by the Catalog Organization and are available to all organizations that share that Catalog Organization.

## 4.6.1 Defining Slot Groups

All delivery and installation promises are made against a time slot. You can define these slots against which appointment promises are made. For more information about defining slot groups, see the *Sterling Global Inventory Visibility Configuration Guide*.

## 4.6.2 Defining Service Skills

You can define a master list of service skills that can be associated to services offered. For more information about defining service skills, see the *Sterling Product Management Configuration Guide*.

## 4.6.3 Defining Delivery Service UOM Master

Units of measure are the various units a delivery service can be offered in. For more information about defining master units of measure, see the *Sterling Product Management Configuration Guide*.

### 4.6.4 Defining Delivery Service Types

Delivery service types are used to determine the capacity UOM and complexity level of delivery services. For more information about defining delivery service types, see the *Sterling Product Management Configuration Guide*.

### 4.6.5 Defining Options Offered with Delivery Services

You can define a master list of options that are offered with various delivery services. For more information about defining delivery service options, see the *Sterling Product Management Configuration Guide*.

### 4.6.6 Defining Delivery Services

You can define the delivery services offered. For more information about configuring delivery services, see the *Sterling Product Management Configuration Guide*.

### 4.6.7 Defining Installation Service UOM Master

You can configure the units of measure an installation service can be offered in. For more information about defining master units of measure, see the *Sterling Product Management Configuration Guide*.

### 4.6.8 Defining Installation Service Types

Provided service types are used to determine the capacity UOM and complexity level of provided services. For more information about defining service types, see the *Sterling Product Management Configuration Guide*.

### 4.6.9 Configuring Options Offered with Installation Services

You can define a master list of options that are offered with various installation services. For more information about defining provided service options, see the *Sterling Product Management Configuration Guide*.

## 4.6.10 Defining Installation Services

You can define various installation services offered. For more information about defining provided service items, see the *Sterling Product Management Configuration Guide*.

## 4.6.11 Defining Address-Related Questions

You can define a list of questions that helps in understanding the physical characteristics of a customer's location. For more information about configuring questions, see the *Sterling Distributed Order Management Configuration Guide*.

## 4.6.12 Defining Types of Capacity and Service Classifications

You can configure product-level control parameters for setting up capacity and service association rules. You can choose the applicable product classifications to use for the purpose of capacity and service association. For more information about defining classification definitions, see the *Sterling Product Management Configuration Guide*.

## 4.6.13 Configuring Sourcing Rules for Delivery

You can configure a set of sourcing rules that helps identify the location from where deliveries should be made for a given customer address. For more information about defining sourcing rules for delivery service items, see the *Sterling Distributed Order Management Configuration Guide*.

## 4.6.14 Defining Node Groups for Installation Services

You can create a group of nodes that can be used when determining sourcing for installation services. This configuration is similar to configuring node groups for shipping products. For more information about defining distribution groups, see the *Sterling Distributed Order Management Configuration Guide*.

## 4.6.15 Defining Sourcing Rules for Installation

You can define a set of sourcing rules that helps identify the location from where installation services should be made for a given customer

address. For more information about defining sourcing rules for provided service items, see the *Sterling Distributed Order Management Configuration Guide*.

### 4.6.16  Defining Resource Pools

Resource pools represent sets of resources that provide the services. For more information about defining resource pools, see the *Sterling Warehouse Management System Configuration Guide*.

### 4.6.17  Configuring Service Supervisors

You can configure the supervisor that is associated with a node for a given seller organization. For more information about configuring service supervisors, see the *Sterling Distributed Order Management Configuration Guide*.

### 4.6.18  Configuring Capacity Rules

As an advanced configuration, you can configure rules that affect capacity like setting the default capacity reservation expiration time. For more information about defining capacity rules, see the *Sterling Global Inventory Visibility Configuration Guide*.

### 4.6.19  Defining Service Complexity Levels

As an advanced configuration, you can define service complexity levels for provided service items and delivery service items. For more information about defining service complexity levels, see the *Sterling Product Management Configuration Guide*.

### 4.6.20  Configuring Additional Capacity

As an advanced configuration, you can configure additional capacity for a delivery service type and region level combination. For more information about defining additional capacity, see the *Sterling Product Management Configuration Guide*.

## 4.6.21 Selecting Region Usage for Resource Pools

As an advanced configuration, you can select the region schema that is used when defining the specific regions that a resource pool can service. For more information about defining region usage for resource pools, see the *Sterling Global Inventory Visibility Configuration Guide*.

## 4.6.22 Configuring the Service Appointment Calendar View

You can configure the default view of the appointment calendar and display it.

To configure the default view of the appointment calendar:

1. From the Sterling Customer Order Management Configurator > Configure Delivery and Installation > Advanced Configuration, select Configure Delivery Appointment Calendar View.

2. Choose the appropriate options. For field value descriptions, see Table 4–1.

3. Click 🖫 to save your changes.
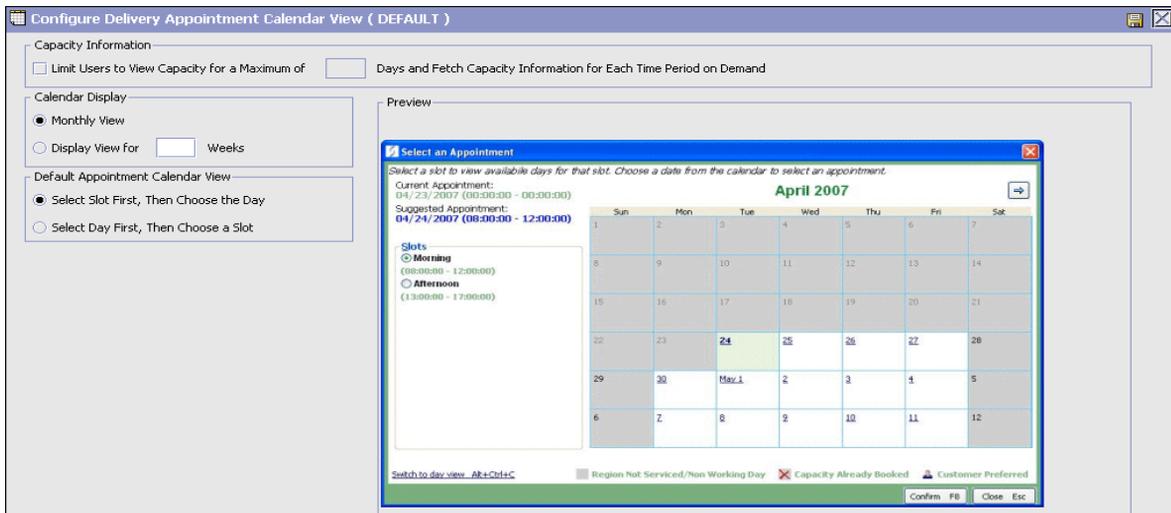
*Table 4–1   Delivery Appointment Calendar View*

| Fields | Description |
|---|---|
| **Capacity Information** | |
| Limit Users to View Capacity for a Maximum of <number_of_days> Days and Fetch Capacity Information for Each Time Period on Demand | Check this box and enter the maximum number of days you want to allow the users to view the capacity information. <br><br> • If you check this box, the user can view the capacity information for the specified number of days. Also, the system retrieves the capacity information for each time period on demand instead of retrieving for all time periods. <br><br> • If you uncheck this box, the user can view the capacity information for an infinite number of days or until the future capacity is unavailable. |
| **Calendar Display** | |
| Monthly View | Choose this option if you want the calendar to display the monthly view. |
| Display View for <number_of_weeks> Weeks | Choose this option and enter the number of weeks to display in the calendar. You may enter any number between 1 and 6. <br><br> The default value is 0. |
| **Default Appointment Calendar View** | |
| Select Slot First, Then Choose the Day | Choose this option if you want to select the slot before selecting the day for service appointments. |
| Select Day First, Then Choose a Slot | Choose this option if you want to select the day before selecting a slot for service appointments. |
| **Preview** | |
| Based on the option chosen, a preview of the appointment calendar displays. | |

# 4.7 Defining Customers

This configuration allows you to define B2B customers and consumers. These customers and consumers place orders with your business. This configuration provides additional information about the customers such

as their appointment slot preferences, additional contact information, and answers to address questions, and so forth.

### 4.7.1 Configuring Customer Rules

You can configure customer classifications that can be associated to customers as well as the slot group to use for defining customer slot preferences. For more information about defining customer rules, see the *Sterling Distributed Order Management Configuration Guide*.

### 4.7.2 Configuring Contact Types

You can configure the contact types when specifying the contact information of a customer on work order notes. For more information about defining contact types, see the *Sterling Distributed Order Management Configuration Guide*.

### 4.7.3 Defining Customer Definitions

You can define the B2B customers and consumers that place orders with your business. For more information about defining customer definitions, see the *Sterling Distributed Order Management Configuration Guide*.

## 4.8 Configuring Order Promising Rules

To ensure that all customer orders are fulfilled accurately and efficiently, the Sterling Customer Order Management PCA provides rich order promising functionality.

### 4.8.1 Selecting Complexity Level Required for Sourcing Rules

You can determine how to make sourcing decisions at a high level. For more information about defining basic sourcing configuration, see the *Sterling Distributed Order Management Configuration Guide*.

## 4.8.2 Defining Fulfillment Types

Fulfillment types define the rules for making accurate customer order promises. For more information about defining fulfillment types, see the *Sterling Distributed Order Management Configuration Guide*.

## 4.8.3 Defining Order Sourcing Classifications

This provides another control parameter that can be used when setting up sourcing rules. For more information about defining order sourcing classifications, see the *Sterling Distributed Order Management Configuration Guide*.

## 4.8.4 Defining Types of Sourcing and Procurement Classifications

You can configure product-level control parameters for setting up sourcing and procurement rules. In this configuration, you choose which product classifications should be used for the purposes of sourcing and procurement. For more information about defining classification definitions, see the *Sterling Product Management Configuration Guide*.

## 4.8.5 Defining Scheduling Rules

Scheduling rules control when an order is scheduled and what constraints should be applied when scheduling an order. For more information about defining scheduling rules, see the *Sterling Distributed Order Management Configuration Guide*.

## 4.8.6 Configuring Landed Cost Computation Rules

The Sterling Customer Order Management PCA provides highly advanced optimization algorithms that can use landed cost computations to select shipping nodes that minimize the cost. For more information about configuring landed cost optimization, see the *Sterling Distributed Order Management Configuration Guide*

## 4.8.7 Configuring Rules for Determining Forwarding/Transfers

You can set up rules that control how product transfers should be handled between two nodes. For more information about defining forwarding/transfer rules, see the *Sterling Distributed Order Management Configuration Guide*.

## 4.8.8 Defining Node Groups

You can define sets of nodes that represent a logical group. The logical group can then be used in your sourcing rules. For more information about defining distribution groups, see the *Sterling Distributed Order Management Configuration Guide*.

## 4.8.9 Configuring Sourcing Rules

You can configure sourcing rules to determine the node, external organization, or group of nodes to use to ship a product. For more information about defining sourcing rules for product items, see the *Sterling Distributed Order Management Configuration Guide*.

## 4.8.10 Defining Node Groups for Transfers or Procurement

You can create a group of nodes that can be used when determining sourcing for transfers or procurements. This configuration is similar to configuring node groups for shipping products. For more information about defining distribution groups, see the *Sterling Distributed Order Management Configuration Guide*.

## 4.8.11 Configuring Sourcing Rules for Transfers or Procurement

You can configure rules to determine the nodes from where a transfer or procurement can be made to a given shipping node when enough inventory is not available in the shipping node. For more information about defining procurement rules, see the *Sterling Distributed Order Management Configuration Guide*

## 4.8.12 Configuring Transit Time Computation Rules

You can specify how transit time is calculated for the order scheduling operation. For more information about defining logistics attributes, see the *Sterling Distributed Order Management Configuration Guide*.

## 4.8.13 Configuring Store Pickup Rules

This configuration enables you to select the default settings when searching for alternate stores to fulfill an order.

To configure store pickup rules:

1. From the Sterling Customer Order Management Configurator, select Order Promising Rules.

2. Select Modifications to Store Pickup Rules.

3. Select the appropriate options for the store pickup rules. For field value descriptions, see Table 4–2.

4. Click 🖫 to save your changes.



*Table 4–2   Store Pickup Rules*

| Field | Description |
|-------|-------------|
| Allow Pickup | Check this box to allow users to see store pickup options in the Sterling Customer Order Management PCA. |
| Distance Radius to Consider When Finding Nearby Stores | Enter a number to determine the radius to consider when finding nearby stores. |

*Table 4–2   Store Pickup Rules*

| Field | Description |
| --- | --- |
| Distance Radius to Consider When Finding More Stores | Enter a number to determine the radius to consider when finding more stores. |
| Distance UOM | Select from the drop-down list the unit of measurement to use when defining the distance radius. |
| Standard Search Fulfillment Type | Select the standard search fulfillment type from the drop-down list. When this option is selected, the Sterling Customer Order Management PCA will use this fulfillment type when searching for item availability in the alternate stores search screen. This fulfillment type is used in a sourcing rule that determines the correct set of nodes to consider. For example, you may specify a fulfillment type that corresponds to a sourcing rule representing all nodes of the type 'store'. This ensures that all store nodes are considered when searching for alternate stores. |
| Extended Search Fulfillment Type | Select the extended search fulfillment type from the drop-down list. When this option is selected, the Sterling Customer Order Management PCA will use this fulfillment type when performing an extended stores search in the alternate store search screen. This fulfillment type is used in a sourcing rule that determines the correct set of nodes to consider for an extended store search. For example, you may specify a fulfillment type that corresponds to a sourcing rule representing all nodes of type 'store', including distribution centers that allow customer pickup. |

## 4.8.14 Configuring Miscellaneous Scheduling and Reservation Rules

As an advanced configuration, you can configure miscellaneous scheduling and reservation rules. These rules control the behavior of order reservation and scheduling. For more information about defining fulfillment rules, see the *Sterling Distributed Order Management Configuration Guide*.

### 4.8.15 Selecting Region Schema used for Order Promising

As an advanced configuration, you can select the region schema used for order promising. Regions provide a geography level control parameter in sourcing rules. For more information about defining sourcing region selection, see the *Sterling Distributed Order Management Configuration Guide*.

### 4.8.16 Overriding Promising Parameters for Individual Items

As an advanced configuration, you can override promising parameters for individual items, such as minimum notification time. For more information about defining item level controls, see the *Sterling Distributed Order Management Configuration Guide*.

### 4.8.17 Overriding Promising Parameters for Individual Nodes

As an advanced configuration, you can override promising parameters, such as minimum notification time, at the ship node level. For more information about defining node level controls, see the *Sterling Distributed Order Management Configuration Guide*.

## 4.9 Configuring Payment Handling

The Sterling Customer Order Management PCA can be used to carry out the critical payment related processes during order management processing and enables you to integrate with external payment processing systems such as CyberSource or PaymentTech. Payment processing involves payment authorization, settlement, and invoicing.

### 4.9.1 Configuring Basic Rules for Payment Handling

You can configure general rules for payment handling. For more information about defining additional payment rules, see *Sterling Distributed Order Management Configuration Guide*.

## 4.9.2 Configuring Payment Rules

You can configure payment rules to determine how authorizations and charges are handled at a high level. For more information about defining payment rules, see *Sterling Distributed Order Management Configuration Guide*.

## 4.9.3 Defining Payment Types

You can define various tender types that your business accepts. For more information about defining payment types, see the *Sterling Distributed Order Management Configuration Guide*.

## 4.9.4 Defining Credit Card Types

This configuration allows the configuring of different credit card types.

To configure credit card types:

1. From the Sterling Customer Order Management Configurator, select Configure Payment Handling.

2. Under Configure Payment Handling, select Define Credit Card Types.

3. Click ➕ to add new credit card types.

4. Enter information in the applicable fields. For field value descriptions, see Table 4–3.

5. Click 💾 to save your changes.
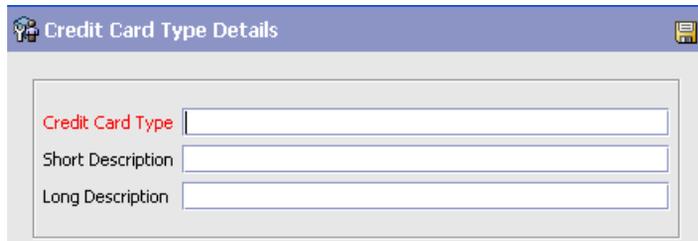
*Table 4–3   Credit Card Type Details*

| Field | Description |
|---|---|
| Credit Card Type | Enter the type of the credit card. |
| Short Description | Enter a short description of the credit card type. |
| Long Description | Enter a long description of the credit card type. |

## 4.9.5 Configuring Payment Failure Rules

This is an advanced configuration that allows you to configure payment failure rules.

To configure payment failure rules:

1. From the Sterling Customer Order Management Configurator screen, select Configure Payment Handling.

2. Under Configure Payment Handling, select the Advanced Configurations link under Configure Payment Rules.

3. Select Configure Payment Failure Rules.

4. Enter information in the applicable fields. For field value descriptions, see Table 4–4.

5. Click 🖫 to save your changes.

| Payment Failure Rules : Sales Order ( DEFAULT ) | 🖫 ☒ |
|---|---|
| Send notification when number of payment failures reach  3   due to hard decline | |
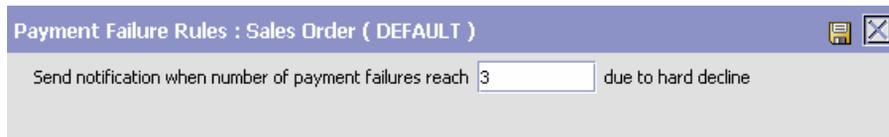
*Table 4–4   Payment Failure Rules*

| Field | Description |
|---|---|
| Send notification when number of payment failures reach <n> due to hard decline | Enter the number of payment failures to be reached before notification is sent out. |

## 4.9.6 Payment Processing Rules Determination

This is an advanced configuration that allows you to configure the payment processing rules at the enterprise level or seller organization.

For more information about payment processing rules determination, see the *Sterling Distributed Order Management Configuration Guide*.

# 4.10 Configuring Order Administration

Once an order is captured it needs to be modified at various points throughout its life-cycle. For example, the customers may decide to have their order shipped to their work address instead of their home address, or a payment method that was declined could be replaced with another method. Also, if an order encounters a processing error, a CSR Lead may need to give a credit to a customer in order to keep the customer satisfied.

The Sterling Customer Order Management PCA understands the typical modifications that are frequently made to the orders and provides a task-based call center user interface to perform these modifications.

The Sterling Customer Order Management PCA also provides configurable rules to control how and when modifications can be performed.

The following tasks are available under Configure Order Administration:

## 4.10.1 Configuring Order Entry Rules

The Sterling Customer Order Management PCA provides an Order Entry Controller Wizard that enables you to configure the Order Entry user interface and the configuration choices for your order entry process.

To access the Order Entry Controller Wizard:

1.  From the Sterling Customer Order Management Configurator, select Configure Order Administration.

2.  Under Configure Order Administration, select Configure Order Entry Rules. The Order Entry Rules screen displays the current configuration choices for order entry.

3. To change the current or default order entry configuration, click Change Configuration. As you make decisions, the wizard displays information in two panels: the left panel displays the current decision choices you can make and the right panel displays a summary of all of the configuration choices you have made.

**4.** Select which screen you want to use to start the order entry task. To display the customer identification screen first during order entry, choose the 'Show Customer Identification Step First' option. To display the Item Entry screen first during order entry, choose the 'Show Item Entry Step First' option.

You are then prompted to indicate the type of customer search you want to perform when identifying customers.
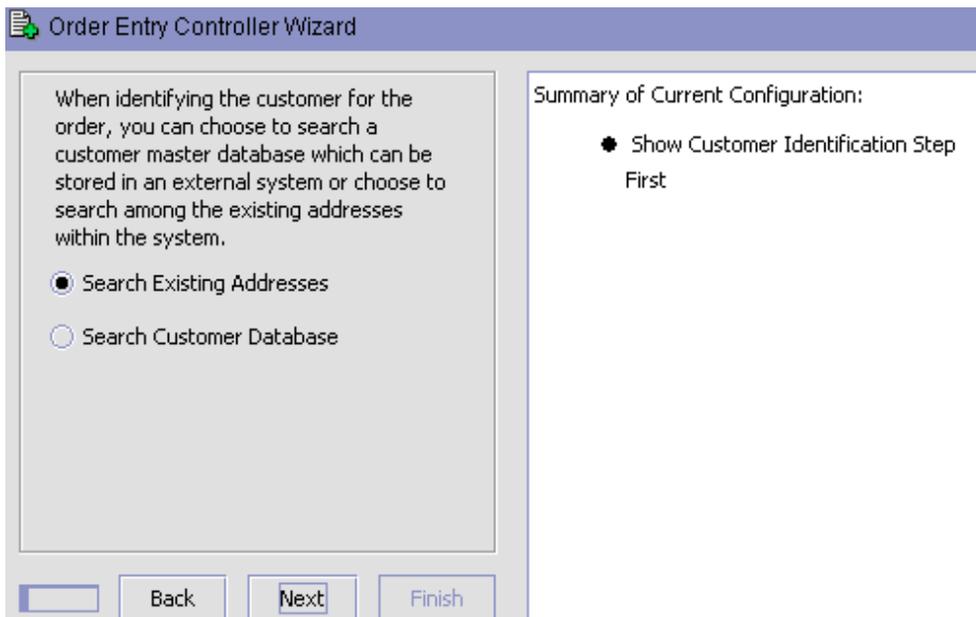


**5.** To search for customers based on the address that is already existing in the Sterling Customer Order Management PCA, choose the 'Search Existing Addresses' option.

**6.** To search for customers using an external customer master database, choose the 'Search Customer Database' option.

**7.** If you choose to search for customers using existing addresses, you are prompted to indicate the type of customer you want to locate in your searches.

By default, the Sterling Customer Order Management PCA searches for both customers and business customers when performing a search using the existing addresses. On this screen you can indicate whether you want to include or exclude business customers from searches using the existing addresses.

8. If you choose to search for customers using the customer master database, you are prompted to indicate the type of customer you want to locate in your searches.

**Order Entry Controller Wizard**

When searching a customer master database, you may allow the user to select the customer type during the search (consumer or business). If you only model one type of customer in your customer database, you may choose to hide these search criteria. You may also choose to default the appropriate customer type for the search.

☑ Enable Customer Type Search

Customer Type to Default in Search:

○ Consumer

◉ Business

Summary of Current Configuration:

• Show Customer Identification Step First
• Search Customer Database
• Default Customer Type Search: Business

[Back] [Next] [Finish]

On this screen you can also enable the user to select the customer type during a search by checking the 'Enable Customer Type Search' box. Enabling this option causes the customer type search criteria to appear on the customer identification screen in the order entry user interface. If this box is checked, you can choose which customer type is the default search option.

After determining the default customer type for searches, you are prompted to indicate the fulfillment methods that need to be available and also the default fulfillment method for items on the order.
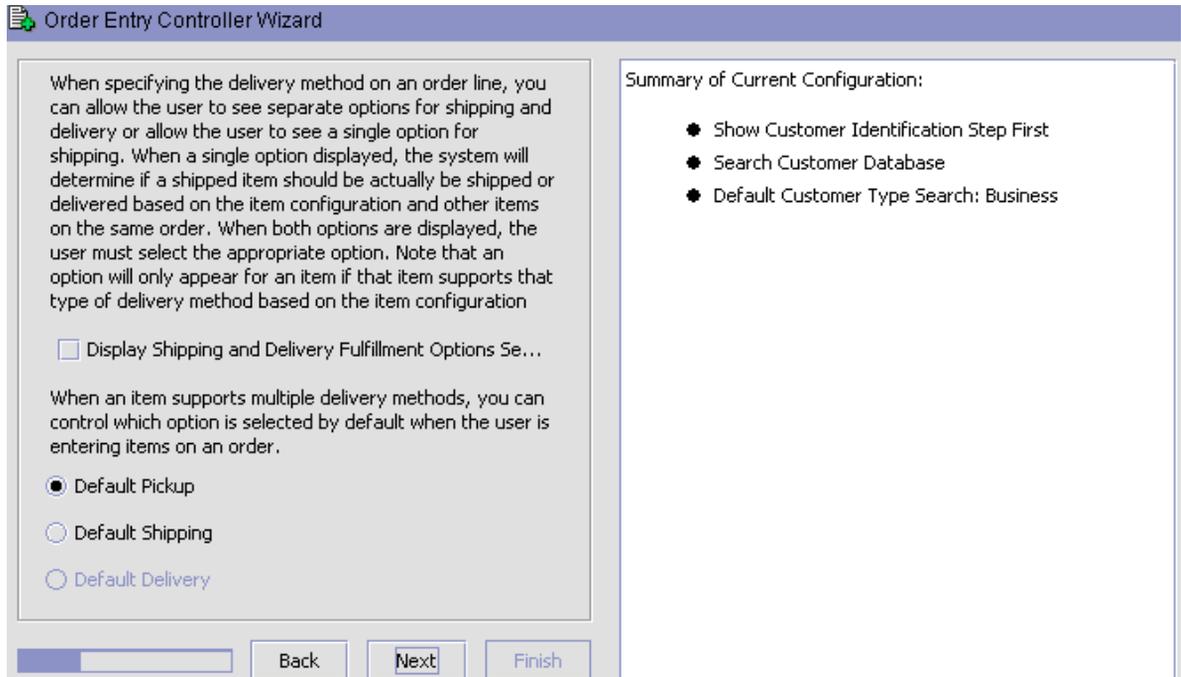
9.  Check the Display Shipping and Delivery Fulfillment Options Separately box to display delivery and shipping as separate fulfillment options in the call center and store order management screens.

    Choose any one of the following options when entering items on an order:

    •   If you want to enable pickup as the default option, choose the 'Default Pickup' option.

    •   If you want to enable shipping as the default option, choose the 'Default Shipping' option.

    •   If you want to enable delivery as the default option, choose the 'Default Delivery' option. This option is enabled only if you check the Show Delivery as Separate Fulfillment Method box.
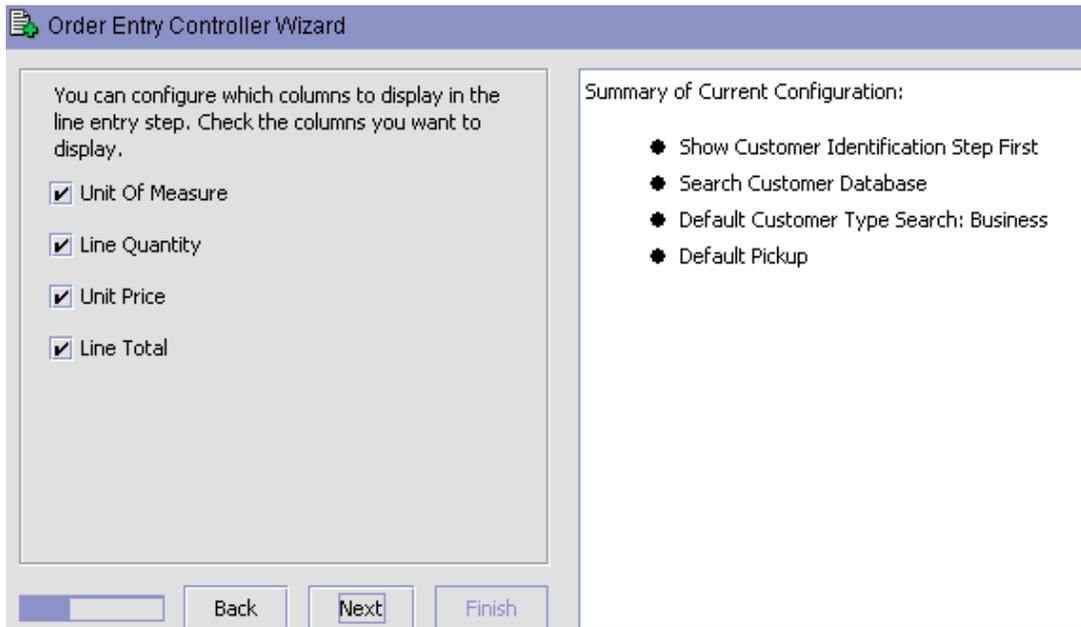
10. After choosing the default fulfillment method, check the boxes of the appropriate columns you want to display in the user interface for order line entries.
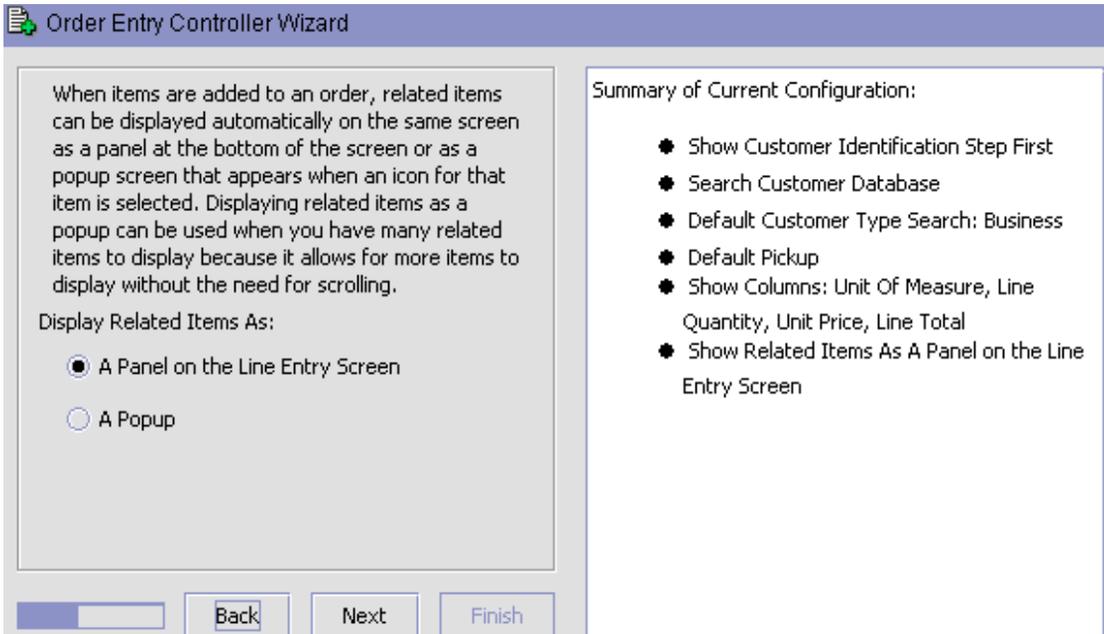
11. After selecting appropriate columns you want to display in the user interface, you can now configure to display the related items as a panel on the line entry screen or as a separate pop-up.

You are now prompted to configure the item association types that you want to display on the Order Entry screen.

On this screen you can configure which item association types display in the Order Entry screen as well as the type of relationship that needs to be created when associating the item type to the item.

Using the association types table provided here, you can select the association types to display and the order line relationship types to save in the screen by checking the boxes in the 'Show In UI' column.

You can configure the relationship type to associate a service with it by selecting the provided service relationship type from the drop-down list.

12. Click the Finish button to close the Order Entry Controller wizard and save your settings.

## 4.10.2 Defining Hold Types

An order can be put on hold for multiple reasons. In this configuration, a user can define various types of holds that can be associated to an order. For more information about defining hold types, see the *Sterling Distributed Order Management Configuration Guide*.

> **Note:** When a new hold type is defined, an exception type with the same name as the hold type should be created. This enables the alert management for the newly added hold type.

## 4.10.3 Configuring Price Match Rules

This configuration allows you to control the criteria that determines when a price match can be performed on an item in an order.

To configure price match rules:

1. From the Sterling Customer Order Management Configurator, select Configure Order Administration.

2. Under Configure Order Administration, select Price Match Rules.

3. Enter information in the applicable fields. For field value descriptions, see Table 4–5.

4. Click 📇 to save your changes.

*Table 4—5   Price Match Rules Details*

| Field | Description |
| --- | --- |
| Maximum Number of Days After Order Date to Allow Price Match | Enter the maximum number of days after an order date to allow price matching of am item. |
| Maximum No Hassle Unit Price Difference | Enter the maximum unit price difference for an order to qualify for no hassle price matching. |
| Maximum No Hassle Unit Price Difference (%) | Enter the maximum unit price difference percentage for an order to qualify for no hassle price matching. |
| Maximum No Hassle Line Quantity | Enter the maximum item quantity for an order to qualify for no hassle price matching. |
| Default Number of Days for Price Matches to Expire | Enter the default number days allowed to pass before a price match expires. |
| Price Match Percentage Applied | Enter the price match percentage applied to an order. |
| Price Match Recorded As | Select one of the following: Change in Order Line's Unit Price or Discount Charge on Order Line. |

*Table 4–5   Price Match Rules Details*

| Field | Description |
|---|---|
| Charge Category | Select the charge category as Price Match from the drop-down list. |
| Charge Name | Select the charge name from the drop-down list. |

## 4.10.4 Configuring Order Modification Rules

You can configure the types of modifications allowed on an order or an order line when it is in a given status. For more information about defining modification rules, see the *Sterling Distributed Order Management Configuration Guide*.

## 4.10.5 Configuring Work Order Modification Rules

Work orders are created for performing delivery and installation services. For more information about defining modification rules, see the *Sterling Distributed Order Management Configuration Guide*.

## 4.10.6 Defining Appeasement Reasons

This configuration provides a list of reason codes that are available during the customer appeasement process.

To configure appeasement reasons:

1. From the Sterling Customer Order Management Configurator, select Configure Order Administration.

2. Under Configure Order Administration, select Define Appeasement Reasons.

3. Enter information in the applicable fields. For field value descriptions, see Table 4–6.

4. Click 🖫 to save your changes.

*Table 4–6   Appeasement Reason Details*

| Field | Description |
|---|---|
| Appeasement Reason | Enter a name for the appeasement reason. |
| Short Description | Enter a short description of the appeasement reason. |
| Long Description | Enter a more detailed description of the appeasement reason. |

## 4.10.7  Defining Cancellation Reasons

This configuration provides a list of reason codes that are available during the cancellation process.

To configure cancellation reasons:

**1.** From the Sterling Customer Order Management Configurator, select Configure Order Administration.

**2.** Under Configure Order Administration, select Cancellation Reasons.

**3.** Enter information in the applicable fields. For field value descriptions, see Table 4–7.

**4.** Click 🖫 to save your changes.

*Table 4–7   Cancellation Reason Details*

| Field | Description |
|---|---|
| Cancellation Reason | Enter a name for the cancellation reason. |
| Short Description | Enter a short description of the cancellation reason.s |
| Long Description | Enter a more detailed description of the cancellation reason. |

## 4.10.8 Defining Reship Reasons

This configuration provides a list of reason codes that are available during the reship process.

To configure reship reasons:

1. From the Sterling Customer Order Management Configurator, select Configure Order Administration.

2. Under Configure Order Administration, select Reship Reasons.

3. Enter information in the applicable fields. For field value descriptions, see Table 4–8.

4. Click 🖫 to save your changes.
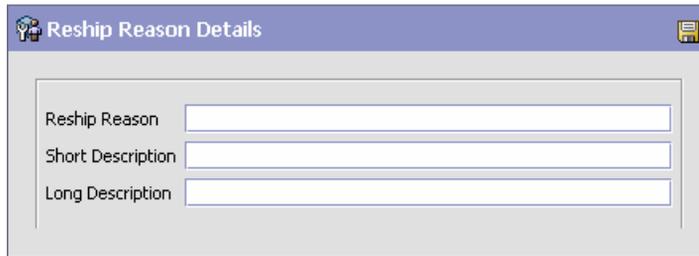


*Table 4–8   Reship Reason Details*

| Field | Description |
|---|---|
| Reship Reason | Enter a name for the reship reason. |
| Short Description | Enter a short description of the reship reason. |
| Long Description | Enter a more detailed description of the reship reason. |

## 4.10.9 Defining Price Override Reasons

This configuration provides a list of reason codes that are available for price override.

To configure price override reasons:

1. From the Sterling Customer Order Management Configurator, select Configure Order Administration.

2. Under Configure Order Administration, select Define Price Override Reasons.

3. Enter information in the applicable fields. For field value descriptions, see Table 4–9.

4. Click 🖫 to save your changes.



*Table 4–9   Price Override Reasons Details*

| Field | Description |
|---|---|
| Price Override Reasons | Enter a name for the price override reason. |
| Short Description | Enter a short description of the price override reason. |
| Long Description | Enter a more detailed description of the price override reason. |

## 4.10.10 Defining Charge Override Reasons

This configuration provides a list of reason codes that are available for charge override.

To configure charge override reasons:

1. From the Sterling Customer Order Management Configurator, select Configure Order Administration.

2. Under Configure Order Administration, select Define Charge Override Reasons.

3. Enter information in the applicable fields. For field value descriptions, see Table 4–10.

4. Click 🖫 to save your changes.



*Table 4–10   Charge Override Reason Details*

| Field | Description |
|---|---|
| Charge Override Reasons | Enter a name for the charge override reason. |
| Short Description | Enter a short description of the charge override reason. |
| Long Description | Enter a more detailed description of the price override reason. |

## 4.10.11 Configuring Open Box Options

The open Box items are defect items that were returned by the customers. Such items are put on display and sold at a discounted price. You can define how an enterprise handles open box items.

To configure the handling options for open box items:

1. From the Sterling Customer Order Management Configurator, select Configure Order Administration.

2. Select Configure Open Box Options.

**3.** Enter information in the applicable fields. For field value descriptions, see Table 4–11.

**4.** Click 💾 to save your changes.



*Table 4–11   Configure Open Box Handling Options*

| Fields | Description |
|---|---|
| Allow Addition of Open Box Items to Orders | Check this box if you want to allow users to add open box items to an order. |
| Tag Identifier for Open Box ID | Select the appropriate tag attribute from the drop-down list that identifies the open box items.<br><br>**Note:** This option is available only if you check the 'Allow Addition of Open Box Items to Orders' box. |
| Product Class for Open Box Items | Select the appropriate product class from the drop-down list for the open box items. |
| Fulfillment Methods Supported for Open Box Items: | Check the boxes of the appropriate fulfillment method for open box items.<br><br>•  Pickup—indicates to pick up open box items at a store.<br><br>•  Shipping—indicates to ship open box items.<br><br>•  Delivery—indicates to deliver open box items. |

## 4.10.12 Defining Note Types

Note types help to classify notes into various categories. When entering notes, choose note type as one of the defined note reasons for a document type. For more information about configuring a document's

note reasons, see the *Sterling Distributed Order Management Configuration Guide*.

## 4.10.13 Defining Order Types and Line Types

As an advanced configuration, you can define order types and line types. Orders and order lines can be categorized into multiple types such as urgent, high priority, or normal.

For more information about defining order types, see the *Sterling Distributed Order Management Configuration Guide*.

For more information about defining line types, see the *Sterling Distributed Order Management Configuration Guide*.

## 4.10.14 Configuring Order Validations Required

You can control the levels of validation required for an order. For more information about configuring a document's order validation, see the *Sterling Distributed Order Management Configuration Guide*.

## 4.10.15 Configuring Alternate Item Identifier Display

As a part of advanced configuration, you can configure to use alternate item identifiers for the same item.

To configure alternate item identifier display:

1. From the Sterling Customer Order Management Configurator, select Configure Order Administration.

2. Select Advanced Configurations.

3. Select Configure Alternate Item Identifier Display.

4. Enter information in the applicable fields. For field value descriptions, see Table 4–12.

5. Click 🖫 to save your changes.
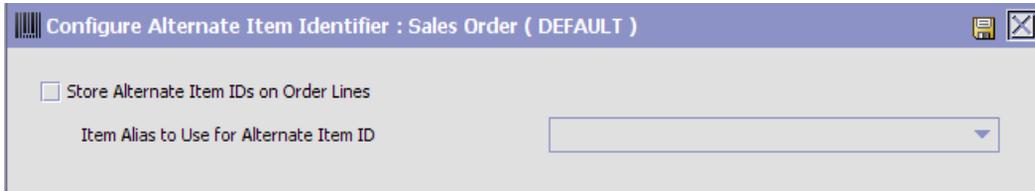
*Table 4–12   Configure Alternate Item Identifier Display*

| Field | Description |
| --- | --- |
| Store Alternate Item IDs on Order Lines | Check this box if you want to store the alternate item identifiers on the Customer Order Management User Interface. |
| | This will allow you to scan the alternate item identifier and enhance the system to store and display. |
| Item Alias to Use for Alternate Item ID | Select the appropriate item alias for the alternate item ID that identifies the original item from the drop down list. For more information about defining item alias types, see the *Sterling Product Management Configuration Guide*. |
| | You can select the item alias only if the 'Store Alternate Item IDs on Order Lines' in the Customer Order Management User Interface rule is enabled. |

## 4.10.16  Configuring Add Line Rules

This is an advanced configuration that allows you to control the number of days (post order creation) after which line additions are not allowed.

To add line rules:

1. From the Sterling Customer Order Management Configurator, select Configure Order Administration.

2. Select the Advanced Configurations link.

3. Select Add Line Rules.

4. Enter information in the applicable fields. For field value descriptions, see Table 4–13.

5. Click 🖫 to save your changes.

*Table 4—13   Add Line Rules*

| Field | Description |
|-------|-------------|
| Maximum number of days after order date to allow adding an order line | Enter the maximum number of days after an order date to allow the adding of an order line. |

## 4.10.17 Configuring Available Gift Options

This is an advanced configuration that enables you to configure the gift options provided in the Sterling Customer Order Management PCA screens.

To configure the gift options:

1. From the Sterling Customer Order Management Configurator, select Configure Order Administration.

2. Select the Advanced Configurations link.

3. Select Configure Available Gift Options.

4. Choose the available gift option rules that you want to configure. For field value descriptions, see Table 4—14.

5. Click 🖫 to save your changes.

*Table 4−14   Available Gift Options*

| Field | Description |
|-------|-------------|
| Items Being Shipped | Check this box to indicate that the items that have a fulfillment method of "Shipment" can be gift items. |
| Items Being Picked Up | Check this box to indicate that the items that have a fulfillment method of "Pickup" can be gift items. |

> **Note:**   When configuring gift options, ensure that you configure the "Change Mark For" and "Gift Flag Modifications" modification types in the Sterling Supply Chain Applications Configurator.

## 4.10.18 Configuring Address Verification Rules

This is an advanced configuration that allows you to control the system behavior when the address verification system is not available.

To configure address verification rules:

1. From the Sterling Customer Order Management Configurator, select Configure Order Administration.

2. Select the Advanced Configurations link.

3. Select Address Verification Rules.

4. Check the Keep the order on hold when the address verification system is down box.

5. Click 💾 to save your changes.

| Address Verification Rules : Sales Order ( DEFAULT ) | 💾 ☒ |
|---|---|
| ☑ Keep order on hold when address verification system is down | |
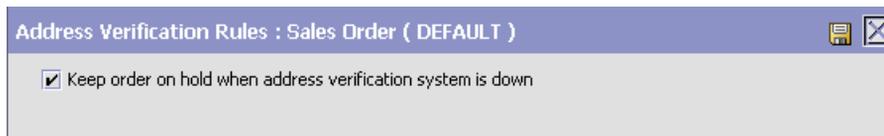
## 4.10.19 Configuring Country and State Display Rules

You can configure how the country and state entry fields display on certain screens in the Sterling Customer Order Management PCA.

### Configuring the State Drop-Down Menu

In the Sterling Customer Order Management PCA, the country drop-down menu contains a list of all the countries. This drop-down menu can be hidden if your enterprise accommodates only one country.

If you want a drop-down menu of states to display in the Sterling Customer Order Management PCA, create a region schema that adheres to the following standards:

- The first level of regions must be countries.

- The second level of regions must be states.

- The region level names must be "Country" and "State".

This new region schema can then be selected from the "Region Schema to Use for State Selection" in this configuration.

In the Sterling Customer Order Management PCA, when a country is selected from the Country drop-down menu the system finds the corresponding region within the configured region schema that represents that country. All child regions with a region level of "State" are shown in the State drop-down menu. If no region level of "State" is found, the State drop-down menu changes to a text field to enable you to type in the name of the state manually.

To configure the country and state display:

1. From the Sterling Customer Order Management Configurator, select Configure Order Administration.

2. Select the Advanced Configurations link.

3. Select Configure Country and State Display Options.

4. Enter information in the applicable fields. For field value descriptions, see Table 4–15.

5. Click 🖫 to save your changes.

*Table 4−15   Configure Country and State Display Options*

| Field | Description |
|---|---|
| Region Schema to Use for State Selection | Select a region schema to use for the State drop-down menu. |
| Allow Country to be Entered for Screens that Check Item Availability | Check this box to allow the Country drop-down menu to display on screens that check for item availability. <br> **Note**: The Country drop-down menu always displays in the Address Panel. |

## 4.10.20 Defining Instruction Types

As an advanced configuration, you can define a master list of instruction types. For more information about configuring a document's instruction types, see the *Sterling Distributed Order Management Configuration Guide*.

## 4.10.21 Defining Custom Modification Types

As an advanced configuration, the system categorizes all order modifications into modification type. All rules for controlling modifications are associated to these modification types. For more information about defining custom modification types, see the *Sterling Distributed Order Management Configuration Guide*.

## 4.10.22 Configuring which Modifications Trigger Re-pricing

As an advanced configuration, you can identify modification types that must trigger order re-pricing. For more information about defining modifications impacting pricing, see the *Sterling Distributed Order Management Configuration Guide*.

## 4.10.23 Defining Charge Categories and Names

As an advanced configuration, you can define various charge categories and names that are associated to an order. For more information about defining charge definitions, see the *Sterling Distributed Order Management Configuration Guide*.

## 4.10.24  Configuring Transaction Specific Rules

As an advanced configuration, you can configure transaction specific rules. This is a miscellaneous set of rules that are associated to specific business transaction. For more information about defining transaction rules, see the *Sterling Distributed Order Management Configuration Guide*.

## 4.10.25  Configuring Availability Check and Reservation Options

You can specify when availability checks and item reservations occur.

To configure the availability check and reservation options:

1. From the Sterling Customer Order Management Configurator, select Order Administration.

2. Select Advanced Configurations.

3. Select Configure Availability Check and Reservation Options.

4. Check the appropriate box to configure the availability check and reservation options. For field value descriptions, see Table 4–16.

5. Click 🖫 to save your changes.

---
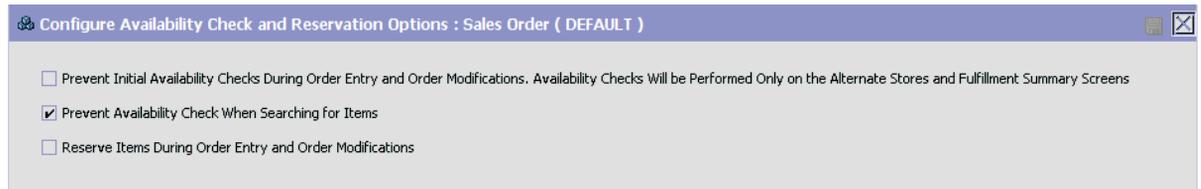
**⚙ Configure Availability Check and Reservation Options : Sales Order ( DEFAULT )**                                    🖫 ⊠

☐ Prevent Initial Availability Checks During Order Entry and Order Modifications. Availability Checks Will be Performed Only on the Alternate Stores and Fulfillment Summary Screens

☑ Prevent Availability Check When Searching for Items

☐ Reserve Items During Order Entry and Order Modifications

---

*Table 4–16   Availability Check and Reservation Options*

| Field | Description |
|-------|-------------|
| Prevent Initial Availability Checks During Order Entry and Order Modifications. Availability Checks Will Be Performed Only on the Alternate Stores and Fulfillment Summary Screens | Check this box to perform an availability check in the Alternate Stores and Fulfillment Summary screens. |
| Prevent Availability Check When Searching for Items | Check this box to prevent an availability check when searching for an item. |
| Reserve Items During Order Entry and Order Modifications | Check this box to reserve items when entering or modifying an order. |

## 4.10.26 Defining Unit of Measure Display Rules

This is an advanced configuration that enables you to define which units of measure to display in the Sterling Customer Order Management PCA screens. Based on this configuration, either the transaction UOM or the inventory UOM displays.

To define the unit of measure display values:

1. From the Sterling Customer Order Management Configurator, select Configure Order Administration.

2. Select the Advanced Configurations link.

3. Select Define Customer Order Management Unit Of Measure Display Rules.

4. Choose the applicable Unit Of Measure display rules. For field value descriptions, see Table 4–17.

*Table 4–17   Unit of Measure Display Rules*

| Field | Description |
|-------|-------------|
| The Unit Of Measure In Which The Order Was Placed | Choose this option to display the order line UOM in the Sterling Customer Order Management PCA user interface as it is specified on the order. |
| The Unit Of Measure In Which Inventory Is Stored | Choose this option to display the order line UOM in the Sterling Customer Order Management PCA user interface as it is maintained for the item in inventory. |
| Do Not Show Unit of Measure | Choose this option to not display the UOM of an order line in the Sterling Customer Order Management PCA. |

**5.** Click 🖫 to save your changes.

## 4.10.27 Configuring Print Options

You can specify when an order invoice is printed.

To configure order invoice print options:

**1.** From the Sterling Customer Order Management Configurator, select Order Administration.

**2.** Select Advanced Configurations.

**3.** Select Configure Print Options.

**4.** Select the appropriate radio button to configure when an order is printed. For field value descriptions, see Table 4–18.

**5.** Click 🖫 to save your changes.
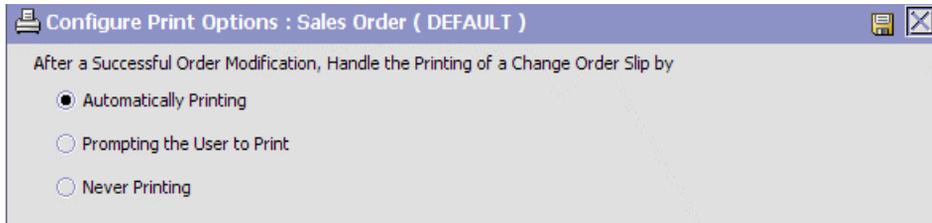
*Table 4–18   Configure Print Options*

| Field | Description |
| --- | --- |
| Automatically Printing | Choose this option to automatically print a change order slip after each order. |
| Prompting the User to Print | Choose this option to prompt the user to print a change order slip after every order modification. |
| Never Printing | Choose this option to never prompt the user and never automatically print a change order slip. |

## 4.10.28  Configuring User Interface Payment Handling

You can specify whether external payments are external to the call center, store, or external to both.

To configure external payment options:

1.  From the Sterling Customer Order Management Configurator, select Order Administration.

2.  Select Advanced Configurations.

3.  Select Configure User Interface Payment Handling.

4.  Check the appropriate box to specify if payment is handled externally to the call center or the store user interface. For field value descriptions, see Table 4–19.

5.  Click 📇 to save your changes.
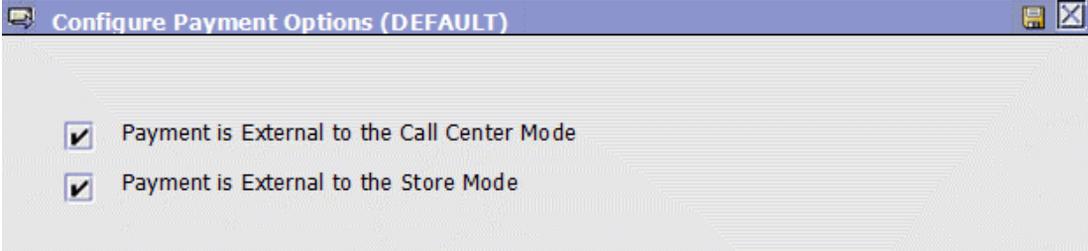
*Table 4–19   Payment Handling Options*

| Field | Description |
| --- | --- |
| Payment is External to the Call Center | Check this box to specify that the Sterling Customer Order Management PCA handles payments externally to the Call Center. |
| | When this option is selected, the Sterling Customer Order Management PCA does not prompt the user to enter payment information when creating or modifying an order at the call center. It is assumed that the payment is handled in the store or by an external system such as a point-of-sale system. |
| | **Note:** If you check this box, ensure to check the "Payment is External to the Store" box. |
| Payment is External to the Store | Check this box to specify that the Sterling Customer Order Management PCA handles payments externally to the Store. |
| | When this option is selected, the Sterling Customer Order Management PCA does not prompt the user to enter payment information when creating or modifying an order in the store. It is assumed that the payment is handled at the call center or by an external system such as a point-of-sale system. |

> **Note:** If payment is handled externally, ensure to remove permissions for the Add Payment, View Payment Details, and Change Payment Method tasks.

## 4.10.29 Configuring Special Order Modification Rules

You can configure to allow cancellation or modification of fulfillment options for delivery and pickup order lines that are beyond the released status.

To configure the modification rules for delivery and pickup lines that are released:

1. From the Sterling Customer Order Management Configurator, select Order Administration.

2. Under Order Administration, select Advanced Configurations.

3. Select Configure Special Order Modification Rules.

4. Check the appropriate box to allow modification or cancellation. For more field value descriptions, see Table 4–20.

5. Click 🖫 to save your changes.
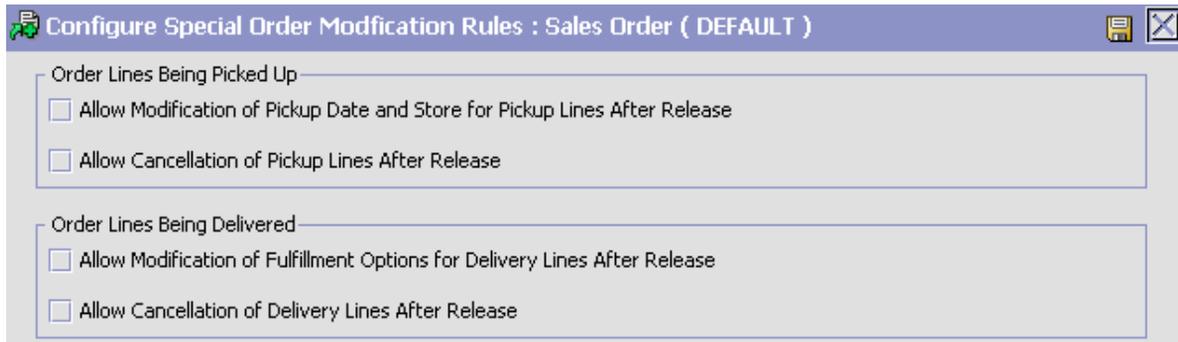
*Table 4–20   Configure Special Order Modification Rules*

| Field | Description |
|-------|-------------|
| **Order Lines Being Picked Up** | |
| Allow Modification of Pickup Date and Store for Pickup Lines after Release | Check this box to enable the modification of pickup lines after they are released. |
| Allow Cancellation of Pickup Lines after Release | Check this box to enable the cancellation of pickup lines after they are released. |
| **Order Lines Being Delivered** | |
| Allow Modification of Fulfillment Options for Delivery Lines after Release | Check this box to allow modification of fulfillment options for delivery lines that are released. |
| Allow Cancellation of Delivery Lines after Release | Check this box to allow cancellation of delivery lines that are released. |

## 4.10.30 Configuring Information Recorded During Level of Service Selection

You can configure to enable users to record committed dates when the user selects the level of service.

To enable users to record committed dates:

1. From the Sterling Customer Order Management Configurator, select Order Administration.

2. Select Advanced Configurations.

3. Select Configure Information Recorded During Level of Service Selection. For field value descriptions, see Table 4–21.

4. Click 🖫 to save your changes.
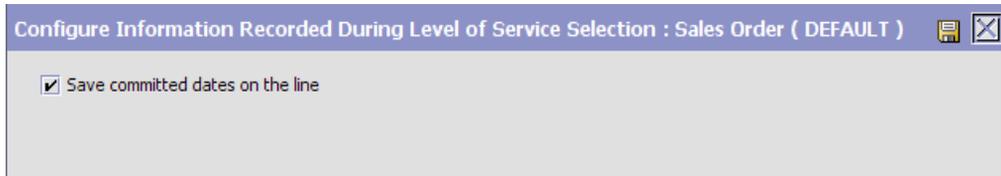
*Table 4—21   Configure Information Recorded During Level of Service Selection*

| Field | Description |
|-------|-------------|
| Save committed dates on the line | Check this box to use the committed date for the order. |

### 4.10.31 Configuring Line Relationship Types

As an advanced configuration, you can define the line relationship types for an item.  In the Sterling Supply Chain Applications, ensure that you check the Consider For Sorting box available in the Line Relationship Type Details window. For more information about defining a line relationship type, see the *Sterling Distributed Order Management Configuration Guide*.

## 4.11 Configuring Outbound Logistics

Sterling Customer Order Management PCA Logistics Management provides the capabilities for managing and executing an inbound or outbound delivery process. It accepts, stores and then manages the execution of a delivery plan accounting for complex, multi-step, multi-leg, and multi-mode movement of goods, including practices such as merge-in-transit, continuous movement, lane optimization and cross-docking. It coordinates all activities among all parties in the delivery chain, and pro-actively monitors events and notifies participants when deviations have occurred. Shipment and delivery records are tied to the original sales or purchase orders for management of dependencies among orders and shipments. It provides post-delivery reconciliation of performance, comparing actual vs. promised, SLA metric analysis, participant performance, and so forth.

### 4.11.1 Defining Carriers

You can define carriers that control logistics for your business. To define a carrier, you have to choose Carrier as the role for an organization and configure the carrier attributes.

For more information about assigning the organization's roles and participant associations, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

For more information about defining carrier attributes, see *Sterling Supply Chain Applications Platform Configuration Guide*.

### 4.11.2 Defining Carrier Services

You can set up codes to identify different carrier services a carrier uses to ship orders. For more information about configuring cross application carrier services, see the *Sterling Logistics Management Configuration Guide*.

### 4.11.3 Defining Types of Routing Guide Classifications

You can configure product-level control parameters for setting up routing rules. You can choose which product classifications to use for the purpose of routing guides. For more information about defining classification definitions, see the *Sterling Product Management Configuration Guide*.

### 4.11.4 Configuring Outbound Constraints

You can configure outbound constraints that describe conditions that control how shipping is done. These include whether certain items can be shipped together, whether to use Economic Shipping Parameters, and how routing is performed. For more information about defining outbound constraints, see the *Sterling Distributed Order Management Configuration Guide*.

### 4.11.5 Defining Shipment Modes

You can define shipment modes to indicate how an order is being shipped. For more information about defining shipment modes, see the *Sterling Distributed Order Management Configuration Guide*.

# 4.12 Configuring Business Process Models and Monitoring Rules

The life-cycle of an order is long and complex. It starts with accurately capturing the customer's order into a system and then accurately fulfilling the order through delivery. After the customer receives their shipment, the order may need to be returned and the merchandise inspected to determine whether or not it can be repaired and placed back into inventory.

Orders go through a wide range of statuses throughout their fulfillment cycles. Orders are processed by transactions that perform modifications to the orders and their related entities such as shipments, invoices, and returns. These transactions also determine how an order moves from one status to the next. Additionally, an order in a particular status can go through a condition to determine which transaction should process it next.

An order's flow throughout its fulfillment cycle is represented graphically by a pipeline. The pipeline determines the statuses that an order can be in, which transactions process it, and which conditions it must go through in order to be fulfilled.

## 4.12.1 Configuring Order Fulfillment Process

You can configure transactions, statuses, pipelines, and services associated with the order fulfillment process. For more information about defining process type pipelines, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

## 4.12.2 Configuring Shipping Process

You can configure transactions, statuses, pipelines, and services associated with the shipping process for an order. For more information about configuring an order document's shipment specific components, see the *Sterling Distributed Order Management Configuration Guide*.

## 4.12.3 Configuring Delivery and Installation Process

You can configure transactions, statuses, pipelines, and services associated with the delivery and installation process for an order. For

more information about defining value added services process model, see the *Sterling Distributed Order Management Configuration Guide*.

## 4.12.4 Configuring Return Fulfillment Process

You can configure transactions, statuses, pipelines, and services associated with the return fulfillment process. For more information about defining process type details, see the *Sterling Reverse Logistics Configuration Guide*.

## 4.12.5 Configuring Receipt Process

You can configure transactions, statuses, pipelines, and services associated with the receipt process. For more information about defining process type details, see the *Sterling Reverse Logistics Configuration Guide*.

## 4.12.6 Defining Order Milestones

You can define milestones for the fulfillment process of a sales order. For more information about defining milestones, see the *Sterling Distributed Order Management Configuration Guide*.

## 4.12.7 Defining Order Monitoring Events

You can define your own monitoring events for the fulfillment process of a sales order. You can also control which event to raise when an alert is detected by the order monitor. For more information about defining monitoring events, see the *Sterling Distributed Order Management Configuration Guide*.

## 4.12.8 Defining Milestones for Returns

You can define milestones for the fulfillment process of a return order. For more information about defining milestones, see the *Sterling Reverse Logistics Configuration Guide*.

## 4.12.9 Defining Monitoring Events for Returns

You can define monitoring events for the fulfillment process of a return order. You can also control which event to raise when an alert is detected

by the return order monitor. For more information about defining monitoring events, see the *Sterling Reverse Logistics Configuration Guide*.

## 4.12.10 Configuring Transactions and Events for Inventory, Item, and UI

As an advanced configuration, you can configure transactions, events, and services associated to miscellaneous processes in the Sterling Customer Order Management PCA including inventory, item, and UI related processes. For more information about defining transactions, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

# 4.13 Configuring Inventory Synchronization

When promising orders to customers, it can be challenging to offer them an exact inventory picture across all nodes. The inventory that is used to promise orders is not necessarily on-hand. It could be in transit or a purchase order could have just been placed and the retailer may feel comfortable with using a certain percentage of that future supply to fulfill the future demand.

## 4.13.1 Configuring Inventory Related Rules

You can configure rules associated with inventory availability, monitoring, and costing. For more information about configuring inventory rules, see the *Sterling Global Inventory Visibility Configuration Guide*.

## 4.13.2 Configuring Supply and Demand Types

As an advanced configuration, you can define various supply and demand types. For more information about defining supply types, demand types, and considerations, see the *Sterling Global Inventory Visibility Configuration Guide*.

## 4.13.3 Configuring Availability Safety Factors

As an advanced configuration, you can specify safety factors to apply to each supply type when using them for answering availability questions.

For more information about inventory availability safety factor, see the *Sterling Global Inventory Visibility Configuration Guide*.

## 4.13.4 Configuring how Supply and Demand are Changed with Order Status

As an advanced configuration, you can control the movement of quantity in different supply and demand types as an order progresses through its life-cycle. The status inventory types are used to associate statuses with specific supply and demand types according to the organization. For more information about defining status inventory types, see the *Sterling Distributed Order Management Configuration Guide*.

## 4.13.5 Configuring Inventory Node Type Rules

As an advanced configuration, you can configure inventory node type rules. These rules allow for the configuration of inventory level node type rules to determine whether to apply on-hand and future safety factors to inventory. For more information about configuring inventory node type rules, see the *Sterling Global Inventory Visibility Configuration Guide*.

# 4.14 Configuring Pricing

This configuration allows you to define price lists. If you use an external pricing engine, you can skip this configuration entirely.

## 4.14.1 Defining Price Lists

You can specify the prices of your items. Pricing can be defined based on quantity ordered and/or region. For more information about price lists, see the *Sterling Distributed Order Management Configuration Guide*.

## 4.14.2 Defining Price Programs

Price programs are sets of price lists with effective start and end dates. An order is associated to a price program and when the system is pricing an order, it looks through the price lists associated to the order's price program and calculates the appropriate price. For more information about price programs, see the *Sterling Distributed Order Management Configuration Guide*.

### 4.14.3  Selecting Region Schema for Pricing Definition

As an advanced configuration, you can select the region schema for pricing. The Sterling Customer Order Management PCA supports pricing based on geography. For more information about defining pricing by region, see the *Sterling Distributed Order Management Configuration Guide*.

## 4.15  Configuring Returns Administration

Sterling Customer Order Management PCA Reverse Logistics delivers condition-based returns processing, including execution and management of associated processes, such as exchange orders, refurbishment and repair requests, and return disposition. With chained order capability, Reverse Logistics can link multiple returns or repair requests to original sales orders, providing repair life-cycle tracking. It manages reverse inventory tracking back to the appropriate node based upon appropriate business rules. It handles return receipts, disposition, and initiates the crediting process.

### 4.15.1  Configuring Return Order Modification Rules

You can configure the modification rules for a return order to allow users to perform modifications on a return order that is in a particular status. For more information about defining modification rules, see the *Sterling Reverse Logistics Configuration Guide*.

### 4.15.2  Defining Return Reasons

This configuration provides a list of reason codes that are available during the return process.

To configure return reasons:

1. From the Sterling Customer Order Management Configurator, select Configure Order Administration.

2. Under Configure Order Administration, select Return Reasons.

3. Enter information in the applicable fields. For field value descriptions, see Table 4–22.

4. Click 🖫 to save your changes.

*Table 4–22   Return Reason Details*

| Field | Description |
|---|---|
| Return Reasons | Enter a name for the return reason. |
| Short Description | Enter a short description of the return reason. |
| Long Description | Enter a more detailed description of the return reason. |
| RE-price Sales Order | Check this to reprice the sales order with the reduced qty. |

## 4.15.3 Defining Charge Override Reasons

This configuration allows the users to define charge override reasons.

To configure charge override reasons:

1. From the Sterling Customer Order Management Configurator, select Configure Return Administration.

2. Under Configure Return Administration, select Define Charge Override Reasons. For field value descriptions, see Table 4–23.

3. Enter information in the applicable fields.

4. Click 🖫 to save your changes.

*Table 4–23   Charge Override Reasons Details*

| Field | Description |
|---|---|
| Charge Override Reasons | Enter the name of the charge override reasons. |
| Short Description | Enter a short description of the charge override reason. |
| Long Description | Enter a more detailed description of the charge override reason. |

## 4.15.4 Defining Receiving Disposition Codes

This configuration provides a list of receiving disposition codes that are available during the return process.

To configure receiving disposition codes:

1. From the Sterling Customer Order Management Configurator, select Configure Return Administration.

2. Under Configure Order Administration, select Return Reasons.

3. Enter information in the applicable fields. For field value descriptions, see Table 4–24.

4. Click 🖫 to save your changes.

*Table 4–24   Disposition Details*

| Field | Description |
|-------|-------------|
| Receiving Disposition | Enter a name for the receiving disposition. |
| Short Description | Enter a short description of the receiving disposition. |
| Product Class | Select a product class for the receiving disposition. |
| Damaged | Check this box to indicate that the disposition is for damaged items. |
| Final Disposition | Check this box to indicate that the disposition is a final disposition. |

## 4.15.5 Defining Return Types and Return Line Types

As an advanced configuration, you can define return types and return line types. Return orders and lines can be categorized into multiple types such as exchange and credit. This configuration allows you to define a valid list of return types, line types, and other codes that help in this categorization. For more information about configuring a document's attributes, see the *Sterling Distributed Order Management Configuration Guide*.

## 4.15.6 Configuring Return Receipt Handling

As an advanced configuration, you can define rules to determine how return receipts must be handled. For more information about defining receipt preferences, see the *Sterling Reverse Logistics Configuration Guide*.

### 4.15.7 Defining Charge Categories and Names

As an advanced configuration, you can define charge definitions that can be associated with orders and invoices by creating charge categories. For more information about defining charge definitions, see the *Sterling Reverse Logistics Configuration Guide*.

## 4.16 Configuring Alert Management

Sterling Customer Order Management PCA's Supply Chain Event Management provides fully integrated event configuration, status and event monitoring and alert handling capabilities. It provides the underlying mechanism for setting and monitoring conditions or events that drive transactional activity within the critical supply chain processes such as fulfillment, inventory management, and purchasing. The event engine enables processes to be modeled and managed based upon events occurring rather than within a pre-defined, hard-coded application procedure. Exceptions can be handled automatically as well as through configurable exception consoles with full tracking, automatic escalation and resolution with complete audit history.

### 4.16.1 Defining Alert Types

You can classify the different alerts or exceptions that are raised by the system. For more information about defining exception types, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

### 4.16.2 Defining Alert Queues

You can define alert queues that can be used to group related alerts. Users can subscribe to one or more queues and can process alerts from their subscribed queues. For more information about configuring alert queues, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

### 4.16.3 Configuring User Alert Notifications

This configuration enables you to notify users about an alert. An alert message hyperlink displays when an alert is raised. On clicking the link, the Alert Tree screen displays.

> **Note:** To notify users about alerts raised in their respective queues, ensure that the queues to which the user is subscribed are audited

To configure the user alert notifications:

1. From the Sterling Customer Order Management Configurator, select Configure Alert Management.

2. Under Configure Alert Management, select Configure User Alert Notifications.

3. Choose the appropriate button to indicate users about alert notifications. For field value descriptions, see Table 4–25.

4. Click 🖫 to save your changes.

*Table 4–25   User Alert Notifications*

| Field | Description |
|---|---|
| Notify User Whenever an Alert is Assigned to the Current User | Choose this to notify the current user that an alert assigned.<br><br>If this option is chosen, you must set the time interval (in minutes) for the Sterling Customer Order Management PCA to search for new alerts. The default time is set to 5 minutes. |
| Notify Users Whenever an Alert is Added to a Queue the User is Subscribed To | Choose this to notify users about an alert added to a queue to which that user is subscribed.<br><br>If this option is chosen, you must set the time interval (in minutes) for the Sterling Customer Order Management PCA to search for new alerts. The default time is set to 5 minutes.<br><br>By default, this option is selected. |
| Never Notify Users About Alerts | Choose this if you do not want to notify users about alerts. |
| Polling Interval in Minutes | Enter the polling interval in minutes to poll for new alerts for which users need to be notified. The polling interval should be a valid number between 1 and 99,999. |

# 4.17 Configuring User Security

Security Management enables you to ensure that each user accesses only the information that is appropriate for carrying out their tasks. A user is limited to access only those resources to which they have permission.

## 4.17.1 Defining User Roles

You can define different user roles or user groups for your organization. For more information about defining user groups, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

## 4.17.2 Defining Users

This configuration enables you to define users for your organization.

### Defining Users for a Call Center

Table 4–26 provides the menu description for call center users.

*Table 4–26   Menus for Call Center Users*

| Users | Menu Description |
| --- | --- |
| All Users | COM Menu |

### Defining Users for a Store

Table 4–27 provides the menu description for store users.

*Table 4–27   Menus for Store Users*

| Users | Menu Description |
| --- | --- |
| Store CSR (for stores having some location) | Default Store CSR Menu |
| Store Admin (for stores having some location) | Default Store Menu |
| No Location Store User | Default No Location Store Menu |

For more information about defining users, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

## 4.17.3 Configuring Data Security

As an advanced configuration, you can define data security groups and associate users to them. You cannot associate one user to multiple data security groups. For more information about defining data security groups, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

The Sterling Customer Order Management PCA enables users to log in from one store to another store. To provide this capability, configure the data security group, which provides access to specific nodes and adds users to that data security group. For more information about defining data security groups, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

# 4.18 Configuring System Administration

The System Management module enables you to manage integration and agent servers, view the properties of your application servers, enable database caching, and increase trace log output for APIs, user exits, services, and agents.

The System Management module provides features to administer and monitor various components that make up the Sterling Customer Order Management PCA application. The System Management Console provides a complete picture of the Sterling Customer Order Management PCA application while it is running. Additionally, the health monitor agent can alert system administrators when a problem happens such as an application server going down or an agent server not processing tasks.

## 4.18.1 Configuring System Purge Criteria

You can define parameters to use when purging system-related records from the Sterling Customer Order Management PCA. For more information about defining purge criteria, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

## 4.18.2 Configuring Sales Order Purge Criteria

You can define parameters to use when purging sales order-related records from the Sterling Customer Order Management PCA. For more information about configuring a document's purge criteria, see the *Sterling Distributed Order Management Configuration Guide*.

## 4.18.3 Configuring Work Order Purge Criteria

You can define parameters to use when purging work order-related records from the Sterling Customer Order Management PCA. For more information about defining purge criteria, see the *Sterling Warehouse Management System Configuration Guide*.

## 4.18.4 Configuring Return Order Purge Criteria

You can define parameters to use when purging return order-related records from the Sterling Customer Order Management PCA. For more information about configuring a document's purge criteria, see the *Sterling Reverse Logistics Configuration Guide*.

### 4.18.5 Defining Agent Criteria Groups

You can configure the agent criteria groups that classify the nodes. This is a node level configuration that indicates whether the agent is handling high or low volume data. For more information about defining agent criteria groups, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

### 4.18.6 Defining Initial Context Factory Codes

You can configure additional initial context factory codes to define the class providing an initial context implementation for the application server to enable remote java clients to connect. For more information about defining initial context factory codes, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

### 4.18.7 Defining View Servers

You can view a list of configured servers for agents and services. You can specify server parameters like monitor start time and idle wait time. For more information about viewing the list of configured servers, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

### 4.18.8 Configuring Health Monitor Rules

You can configure parameters for monitoring the health of your Sterling Customer Order Management PCA. For more information about defining health monitor rules, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

## 4.19 Extending and Customizing the Application

The user interfaces within the Sterling Customer Order Management PCA can be customized to meet your specific business needs. For more information about customizing the application, see Chapter 5, "Extending and Customizing the Application".

### 4.19.1 Configuring User Exit Management

You can configure user exits to enable business logic extensions to the various transactions. The transactions invoke user exits so that you may

plug-in custom logic by implementing these pre-defined user exits. For more information about defining user exit implementations, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

## 4.19.2 Customizing the Application Menus

You can define menus to allow users to view them after logging into the application. For more information about defining menus, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

## 4.19.3 Defining Extended Application Resources

You can define new resources that you can use to enable your extended components that are permission-controlled. When you create a resource, you can grant or revoke permission to this resource through the user role configuration. For more information about defining resources, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

The reference implementation provided by the Sterling Customer Order Management PCA provides transactional and configurational data to demonstrate the functionality of all features that are introduced in the Sterling Customer Order Management PCA. Additionally, you can use the data provided in the reference implementation as a starting point for your implementation of the Sterling Customer Order Management PCA. Although the data provided needs to be used exactly as it is given, it helps you to understand how to configure the Sterling Customer Order Management PCA to suite your business needs.

## 4.19.4 Defining Themes

You can define new color themes that are used in the Sterling Supply Chain Applications Console and Sterling Supply Chain Applications Configurator screens. For more information about defining themes, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

## 4.19.5 Defining Custom Common Code Types

You can configure custom common code types for your application. Common codes are values that enable a user to choose from options rather than having to enter the data manually. For more information about defining custom common code types, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

## 4.19.6 Defining Custom Common Codes

You can configure common code values for the custom common code types for your application. For more information about defining custom common code values, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

## 4.19.7 Defining Custom Error Codes

You can define custom error codes and the descriptions to be used along with the default error codes. For more information about defining custom error codes, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

# 4.20 Configuring Store Specific Tasks

The Sterling Customer Order Management PCA enables you to configure specific tasks for a store belonging to a particular enterprise.

## 4.20.1 Defining Store Users

You can define the user of a store belonging to the Enterprise. A user is a single person assigned with a certain task, such as Hub Administrator or store manager, depending on what role the user plays in the organization. For more information about defining users, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

## 4.20.2 Configuring Store Devices

You can configure store devices such as printers, weighing scale, and so forth. For more information about defining a device type, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

## 4.20.3 Configuring Store Print Documents

You can configure the print documents pertaining to a store such as receiving worksheet, cycle count worksheet, and so forth. For more information about defining print documents, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

### 4.20.4 Configuring Return Order Receiving Preferences

You can configure the return order receiving preferences pertaining to a store. For more information about defining receiving preferences, see the *Sterling Warehouse Management System Configuration Guide*.

### 4.20.5 Configuring Data Security

As an advanced configuration, you can control access to data by the users. If a user is not associated with a data security group, the user is considered to have default access. For more information about defining data security groups, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

### 4.20.6 Configuring Barcodes

As an advanced configuration, you can configure barcodes. Barcodes are machine-readable symbols comprising black-and-white patterns of bars and stripes, or in some cases checkerboard-like grids. Bits of information are encoded within bar codes. This data is read by bar code scanners, and often used in conjunction with databases. For more information about defining bar codes, see the *Sterling Warehouse Management System Configuration Guide*.

# 5

# Extending and Customizing the Application

The user interfaces within the Sterling Customer Order Management PCA can be customized to meet your specific business needs. Tools are provided to help you make customizations for the following:

- Customizing the Order Entry Screens
- Extending Actions on the Order Search and Item Search Screens
- Table Lazy Loading
- Shared Tasks
- User Interface Customization
- Opening New Related Tasks in the Order Editor

## 5.1 Customizing the Order Entry Screens

This section explains how to:

- Replace the existing order entry screens with customized screens.
- Customize the create order navigation panel.

### Replacing the Existing Order Entry Screens with Customized Screens

You can replace the following order entry screens with customized screens:

- Customer Identification: Shipping Address screen—This screen creates or updates an order with the shipping address by calling the createOrder or changeOrder API respectively.

- Customer Identification: Billing Address screen—This screen updates an order with the billing address by calling the changeOrder API.

- Order Line Entry screen—This screen creates or updates an order with new order lines by calling the createOrder or changeOrder API respectively.

- Payment Confirmation: Simple Payment Confirmation screen—This screen updates the order with new payment methods and the amount to be charged against each payment method. You can confirm the order by calling the confirmDraftOrder API.

- Payment Confirmation: Return and Exchange Payment Confirmation screen—This screen updates an order with new payment methods and the amounts to be charged against each payment method for return and exchange orders. You can confirm the exchange order by calling the confirmDraftOrder API.

### Customizing the Create Order Navigation Panel

The Sterling Customer Order Management PCA enables you to customize the Create Order Navigation panel in an extension plug-in. The extension plug-in must register a new metadata XML with the Customer Order Management plug-in. The metadata XML must adhere to the following structure:

```
<?xml version="1.0" encoding="UTF-8"?>
<BreadCrumbs>
 <WizardEntity Sequence="" id="" Impl=""  Category=""/>
<BreadCrumbs>
```

You can register the metadata XML during the start up of the extension plug-in by invoking the following static method:

```
YCDOrderEntryUtils.registerNavigationPanelMetaData(Element
navigationPanelMetaDataToRegister)
```

# 5.2 Extending Actions on the Order Search and Item Search Screens

In order to extend the actions in the Order Search and Item Search screens, in the Sterling Customer Order Management PCA, the Sterling RCP provides the following action classes:

### Order Search

```
com.yantra.pca.ycd.rcp.tasks.orderSearch.actions.YCDViewOrderD
etailsAction
```

### Item Search

```
com.yantra.pca.ycd.rcp.tasks.itemSearch.actions.YCDItemViewDet
ails
```

These action classes do not display on the Sterling RCP Extensibility Tool. For more information about customizing screens, see the *Sterling Supply Chain Applications Customization Guide*.

## 5.3 Table Lazy Loading

Some screens in the Sterling Customer Order Management PCA may retrieve a large amount of data from the application server. These screens are optimized to load data in a particular way to ensure not to freeze the user interface. For example, in the Search List screen, when the user enters the search criteria and clicks the Search button, the search results display in the Results table. Depending on the table size, the table displays a maximum of "n" number of items without using the scroll bar. For instance, if the search fetches more than 100 records, the system takes a longer time to load all 100 records. To reduce the data loading time, the system first fetches and displays "n" records in the table. Later, it fetches and displays the remaining records as soon as they are received.

The Sterling Customer Order Management PCA supports lazy loading in the Alert Search, Order Search, and Item Search list screens. This can be configured by setting the following properties in the `<YFS_HOME>/Runtime/resources/yfs.properties` file:

- `yfs.rcp.ui.pagesize`—This property defines the number of records that the Sterling Customer Order Management PCA retrieves in the first API call when a user clicks the Search button. The default value for this property is 30.

- `yfs.ui.maxrecords`—This is an existing property. It defines the maximum number of records that the Sterling Customer Order Management PCA displays in the list screens. The default value for this property is 200.

### 5.3.1 Configuring Table Lazy Loading

The Sterling Customer Order Management PCA supports lazy loading in the list screens for Alert Search, Order Search, and Item Search. This can be configured by setting the following properties in the `<YFS_HOME>/Runtime/resources/yfs.properties` file:

- `yfs.rcp.ui.pagesize`—This property defines the number of records that the Sterling Customer Order Management PCA retrieves in the first API call, when a user clicks the Search button. The default value for this property is 30.

- `yfs.ui.maxrecords`—This is an existing property. It defines the maximum number of records that the Sterling Customer Order Management PCA displays in the list screens. The default value for this property is 200.

## 5.4 Shared Tasks

This section explains the various shared tasks that are registered with the Sterling Customer Order Management PCA. For more information about shared tasks, see the *Sterling Supply Chain Applications Customization Guide*.

### 5.4.1 Address Panel Shared Task

The Sterling Customer Order Management PCA provides the Address Verification screen as a shared task. This shared task is used to open the Address Verification screen as a pop-up window or dialog box in any user interface (UI) that references the Sterling Customer Order Management PCA.

The following is the input XML for the Address Panel task:

```
<PersonInfo AVSMode="" AddressLine1="" AddressLine2="" AddressLine3=""
AddressLine4="" AddressLine5="" AddressLine6="" AlternateEmailID="" Beeper=""
City="" Company="" Country="" DayFaxNo="" DayPhone="" Department="" EMailID=""
EveningFaxNo="" EveningPhone="" FirstName="" HttpUrl="" JobTitle="" LastName=""
Latitude="" Longitude="" MiddleName="" MobilePhone="" OtherPhone="" PersonID=""
PersonInfoKey="" State="" Suffix="" Title="" ZipCode="" />
```

The following is the output XML for the Address Panel task:

```
 <PersonInfo AVSMode="" AddressLine1="" AddressLine2="" AddressLine3=""
```

```
AddressLine4="" AddressLine5="" AddressLine6="" AlternateEmailID="" Beeper=""
City="" Company="" Country="" DayFaxNo="" DayPhone="" Department="" EMailID=""
EveningFaxNo="" EveningPhone="" FirstName="" HttpUrl="" JobTitle="" LastName=""
Latitude="" Longitude="" MiddleName="" MobilePhone="" OtherPhone="" PersonID=""
PersonInfoKey="" State="" Suffix="" Title="" ZipCode="" />
```

The name space used for the output XML is "PersonInfo".

## 5.4.2 Order Notes Shared Task

The Sterling Customer Order Management PCA provides the Order Notes screen as a shared task. This shared task is used to open the Order Notes screen as a pop-up window or dialog box in any UI that references the Sterling Customer Order Management PCA.

The following is the input XML for the Order Notes task:

```
<Order OrderHeaderKey="" Status=""/>
```

The following is the output XML for the Order Notes task:

```
<Notes>
     <Note ContactReference="" ContactType="" ContactUser=""
        NoteText="" Priority="" ReasonCode=""/>
   </Notes>
```

The name space used for the output XML is "Note".

## 5.4.3 Service Appointment Calendar Shared Task

The Sterling Customer Order Management PCA provides the Service Appointment Calendar screen as a shared task. This shared task is used to view the calendar or select an appointment from the calendar.

The following is the input XML for the Service Appointment Calendar task:

```
<?xml version="1.0" encoding="UTF-8"?>
<!--Change Delivery Appointment Shared Task Input XML-->
<WorkOrder EnterpriseCode="" Timezone="" WorkOrderKey=""
PreferredResourcePoolId="" PreferredServiceResourceId="" CurrentApptSeq="">
   <WorkOrderAppointments>
      <WorkOrderAppointment PromisedApptStartDate="" PromisedApptEndDate=""
      ApptSeq=""/>
   </WorkOrderAppointments>
   <SuggestedAppointment ApptStartTimeStamp="" ApptEndTimeStamp=""/>
```

```
</WorkOrder>
```
The following is the output XML for the Service Appointment Calendar task:

```
<?xml version="1.0" encoding="UTF-8"?>
<!--Change Delivery Appointment Shared Task Output XML-->
<SuggestedAppointment ApptEndTimestamp="" ApptStartTimestamp=""/>
```

The name space used for the output XML is "CurrentAppointment".

# 5.5 User Interface Customization

This section explains the user interface customizations supported by the Sterling Customer Order Management PCA.

## 5.5.1 Special Themes

This section describes the special themes needed when implementing the Sterling Customer Order Management PCA.

### 5.5.1.1 Mandatory Fields

In the Sterling Customer Order Management PCA, certain screens have mandatory fields. You can customize the display of mandatory fields by creating a custom theme and modifying the entry in your custom theme. For more information about user interface themes, see Section A.1, "User Interface Themes".

### 5.5.1.2 Smileys

The Sterling Customer Order Management PCA uses emoticons. Each of these emoticons are configured by defining a theme starting with a "Smiley" string. For instance, you can display the ☹ (sad) emoticon by using the "SmileySad" theme.

# 5.6 Opening New Related Tasks in the Order Editor

The Sterling Customer Order Management PCA provides an Order Editor in which you can open new related tasks by specifying:

• Editor ID

```
com.yantra.pca.ycd.rcp.editors.YCDOrderEditor
```

- Input

```
<Order CustomerFirstName=" " CustomerLastName=" "
DocumentType=""    EnterpriseCode=""    OrderHeaderKey="" OrderNo=" "
SellerOrganizationCode=""      isHistory=" ">
    <PriceInfo Currency=" " />
</Order>
```

For more information about using editor, see the *Sterling Supply Chain Applications Customization Guide*.

# 6

# Implementing the Call Center Order Management Features

This chapter describes the call center order management features supported by the Sterling Customer Order Management PCA.

## 6.1 Alternate Item Identifier

In some retail environments, the enterprise may use a different item identifier than what has been configured in the enterprise's global catalog. These enterprises use this alternate item identifier to scan and search for product or service items in the user interface. The alternate item identifiers are supported for product and service items.

### 6.1.1 Solution

The Sterling Customer Order Management PCA allows you to configure the item alias for alternate item identifiers. For more information about configuring item aliases for alternate item identifiers, see Section 4.10.15, "Configuring Alternate Item Identifier Display".

When users scan or enter the alternate item identifiers in the Sterling Customer Order Management PCA application console, the translateBarCode API is called to retrieve the original item information for the scanned alternate item identifiers. The Sterling Customer Order Management PCA also provides the ability to store an alternate item identifier on an order line.

## 6.1.2 End-User Impact

You can scan the alternate item identifiers into all item entry fields throughout the user interface.

## 6.1.3 Implementation

If you want to use the alternate item ID instead of the original item ID, configure the:

- Store Alternate Item IDs on Order Lines rule.

- Rule to set the item alias for alternate item identifiers.

  For more information about configuring the rules to display the alternate item identifier, see Section 4.10.15, "Configuring Alternate Item Identifier Display".

- Bar code translation for an item alias configured for an alternate item identifier. For more information about defining bar codes, see the *Sterling Warehouse Management System Configuration Guide*.

  > **Note:** To display the item alias on all screens, you must set the display attributes for the item. To set the display attributes, configure the item attributes and modify the resource bundle key. For more information about configuring item display attributes, see Section 6.6, "Configuring Item Display Options".

## 6.1.4 Reference Implementation

The reference implementation items are associated with the alternate item identifiers. The following implementations are defined for the XYZ Corp organization:

- When configuring an item, you can specify the alternate item identifier in the Item Alias field.

- If you configure the Alternate Item ID rule, the alternate item identifier gets stamped on the order line.

# 6.2 Order Capture

For orders to be fulfilled within the Sterling Customer Order Management PCA, the relevant data must be captured from a web portal or other external order entry system. This involves accurately storing all of the information relevant to an order internally, and once that is done, ensuring that the information captured is valid, and can be processed.

The order capture process includes:

- Order Creation
- Order Validation

## 6.2.1 Order Creation

The Sterling Customer Order Management PCA receives order related data entered through customer order channels such as a retailer web site, and captures them internally so that they can be processed.

This order creation process includes:

- Create Order
- Field Capture
- Order Delay

### 6.2.1.1 Create Order

This task enables you to identify a customer and create an order for the customer. You can enter multiple order lines for an order, modify fulfillment options and appointments, and confirm the payment information as requested by the customer.

### Solution

This section explains the complete process of order entry.

### Identifying a Customer and Entering the Order Line Details

In the call center order management application, you can enter or modify the customer and order line details for an order. Using the Customer Screen Sequence and Line Entry Sequence rules, you can configure the Customer Identification and Add Line screens.

By configuring the order entry rules using the Order Entry Controller Wizard, you can choose to search for customers using addresses already existing in the Sterling Customer Order Management PCA or search for customers using an external customer master database. For more information about configuring the order entry rules, see Section 4.10.1, "Configuring Order Entry Rules".

### Enabling Search on Business Customers

By configuring the Business Customers Enabled rule, you can enable the search on business customers. For detailed information about fine-tuning the Customer Search screen for optimal performance, see Chapter 9, "Performance Tuning".

### Identifying Items and Checking for Availability

When you scan product or service item identifiers or alternate item identifiers using a barcode scanner, the translateBarCode API is called to translate and validate the barcode of the item. The getItemListForOrdering API is called to retrieve descriptions, price, accessories, and units of measure for the item. The getFulfillmentOptionsForLines API is used to determine the available fulfillment options, which includes delivery, shipping, and pickup for the newly added order lines. The YCDOverrideDeliveryMethodUE user exit is used to override fulfillment methods. This user exit provides the ability to override the logic of enabling a fulfillment method. The default implementation is not provided and you can use your own implementation for this user exit. The user can disable the availability checks when the inventory is maintained externally as the user is aware of the inventory availability details. If the Prevent Initial Availability Checks During Order Entry and Order Modifications rule is disabled or set to 'N', the availability check will not be performed and the calls to getFulfillmentOptionsForLines, findInventory, or its derivation APIs will be eliminated. This aids in better performance and pace in capturing the order. Based on the configuration, Delivery and Shipping are displayed as separate fulfillment methods.

> **Note:** The translateBarCode API is called only when you press the TAB key after scanning the item barcode. The scanner must be configured to send out a TAB message immediately after scanning the barcode. This configuration may change based on the device.

### Enabling and Choosing Service Appointments

After adding items to the order using the changeOrder API, if you choose the Delivery option, the generateWorkOrder API is used to create the delivery lines and generate work orders. You can change the delivery appointment for the customer, if applicable.

### Disabling Pick up from Store for all Items

You can configure the user interface to never show the pick up fulfillment method if the enterprise does not support that fulfillment method.

### Changing Delivery Lines After Release

If the Allow Modification of Delivery Lines after Release rule is enabled, you can modify the order lines even after the order lines with the delivery fulfillment method are moved to the "Released" status.

### End-User Impact

None.

### Implementation

To implement order entry rules:

1. Log on to the Sterling Customer Order Management Configurator. For more information about logging in to the application, see Section 2.1, "Starting the Sterling Customer Order Management Configurator".

2. From the Sterling Customer Order Management Configurator, click Configure Order Administration > Advanced Configurations > Order Entry Rules.

3. Check the Appointment Scheduling Required box to enable delivery appointment for an order.

4. Check the Enable Business User box to enable search on business customers.

5. Choose the appropriate default order fulfillment method.

6. In the Store Order Entry Screen Sequence panel, enter the appropriate sequence for the Customer Identification and Item Selection screens.

7. Click Save.

### Reference Implementation
None.

### 6.2.1.2 Field Capture

When an order is captured by the Sterling Customer Order Management PCA, a certain number of fields are passed so that the order can be processed.

The information that can be passed on to the Sterling Customer Order Management PCA to process an order can be divided into the following groups:

- Address Information

- Customer Information

- Item and Line Information

- Pricing and Payment Information

- Fulfillment Information

- Additional Order Information

### Address Information

The following address information fields can be passed on to the Sterling Customer Order Management PCA:

*Table 6–1   Address Information fields*

| Field | Description |
| --- | --- |
| Ship To Address | The address to which the order is being shipped. |
| Bill To Address | The address to which the bill for the order is sent. |

*Table 6–1   Address Information fields*

| Field | Description |
|-------|-------------|
| Is Address Verified Flag | This flag indicates whether the address has been verified by an external address verification system. For more information about address verification, see Section 6.2.2.3, "Address Verification". |
| All Addresses Verified Flag | This flag indicates whether all addresses on the order have been verified by an external address verification system. For more information about address verification, see Section 6.2.2.3, "Address Verification". |

## Customer Information

The following customer information fields can be passed at the `<Order>` level on to the Sterling Customer Order Management PCA by calling the createOrder or changeOrder API:

*Table 6–2   Customer Information fields*

| Field | Description |
|-------|-------------|
| Customer ID | The identifier of the customer on the order. This field maps to the Bill To ID field in the database. |
| Special Care Flag | This flag indicates whether this is a special care customer. |
| IP Address | The IP address of the computer from which the order was placed. This field is referred to as SourceIPAddress in the input XML to the APIs. |
| Customer Phone Number | The daytime phone number of the customer who placed the order. This attribute can be passed at the order header level, and if not, it is defaulted to the customer daytime phone number of the bill-to address. This field is referred to as CustomerPhoneNo in the input XML to the APIs. |
| Customer First Name | The first name of the customer who placed the order. This attribute can be passed at the order header level, and if not, it is defaulted to the customer first name of the bill-to address. This field is referred to as CustomerFirstName in the input XML to the APIs. |

*Table 6–2   Customer Information fields*

| Field | Description |
|-------|-------------|
| Customer Last Name | The last name of the customer who placed the order. This attribute can be passed at the order header level, and if not, it is defaulted to the customer last name of the bill-to address. This field is referred to as CustomerLastName in the input XML to the APIs. |
| Customer E-Mail ID | The e-mail ID of the customer who place the order. This attribute can be passed at the order header level, and if not, it is defaulted to customer e-mail ID of the bill-to address. This field is referred to as CustomerEMailID in the input XML to the APIs. |

### Alternate Customer Search Screen

If customer information is stored in the Sterling Customer Order Management PCA database, you can use an alternate Customer Search instead of the standard address search.

### Solution

You can replace the default Address Entry screen in the order entry task with the Customer Search screen. The Customer Search screen is identical to the default Address Entry screen except that the Customer Search screen uses the getCustomerList API instead of the getPersonInfoList API.

### End-User Impact

The end user can search against the customer database or addresses already in the database depending on how this feature is implemented.

### Implementation

If you decide to use the Customer Search screen instead of the default Address Entry screen, you must use the order entry controller wizard to configure the order entry rules appropriately.

To configure the rules for the Customer Search screen, see Section 4.10.1, "Configuring Order Entry Rules".

### Reference Implementation

None.

### Special Customization Information

The Customer Search screen and Address Entry screen contain validations to ensure that the end user enters enough information for a search. If these screens are extended to contain additional informational fields, these validations are not performed. This enables you to create validations based on the fields that you added. For more information about customizing screens, see the *Sterling Supply Chain Applications Customization Guide*.

### Item and Line Information

The following item and line information fields can be passed on to the Sterling Customer Order Management PCA:

*Table 6–3   Item and Line Information fields*

| Field | Description |
|---|---|
| Item ID | The identifier of the item on an order line. |
| Quantity | The quantity of the item ordered on an order line. |
| Item Promised Date | The shipping date displayed by the front-end system. Typically, retailer web sites display next to an item 'usually ships within 24 hours', or 'usually ships within 1-3 business days'. That projected date is the Item Promised Date. |
| Line Dependencies and Relationships | The relationships, if any, that exist between certain order lines. For example, an order may require all of its order lines to be shipped together. That relationship would be defined here. |

### Pricing and Payment Information

The following pricing and payment information fields can be passed on to the Sterling Customer Order Management PCA:

*Table 6–4   Pricing and Payment Information fields*

| Field | Description |
|---|---|
| Payment Method | The payment method used on the order. |
| Price | The price for an item. |
| Charges | The amount of charges applied to the order. |

*Table 6–4    Pricing and Payment Information fields*

| Field | Description |
|---|---|
| Taxes | The tax amount applied to the order. |
| List of Promotions Applied to the Order | The list of possible promotions that can be used on the order. For example, free shipping on orders above $20, or a 10% discount on a specific category of goods. |

## Fulfillment Information

The following fulfillment information fields can be passed on to the Sterling Customer Order Management PCA:

*Table 6–5    Fulfillment Information fields*

| Field | Description |
|---|---|
| Carrier Service Level | The type of service used to ship the order. For example, a customer could want a next day air delivery, or a standard delivery that would take 5 business days, depending on how much they are willing to spend. This attribute helps the Sterling Customer Order Management PCA select a carrier for the order. |
| Fulfillment Option | The fulfillment mode of the order:<br><br>• Ship To Home<br>• Delivery<br>• Store Pick-up |

## Additional Order Information

The following additional order information fields can be passed on to the Sterling Customer Order Management PCA:

*Table 6–6    Additional Order Information fields*

| Field | Description |
|---|---|
| Order Date | The date on which the order was initially placed. |
| Channel | The channel through which the order was entered. For example, this could be a web portal, a mail order, or a phone call. |
| Enterprise Code | The enterprise code on the order. |

### 6.2.1.3 Order Delay

A customer may want to modify an order after it has been captured, for example to add quantity to a line, or change a ship-to address. Once an order is scheduled, most of its attributes can no longer be changed. Therefore, it is necessary to delay the scheduling of an order for a certain amount of time in case a customer wants to make a change to their order.

### Solution

To solve this business requirement, an order should be prevented from being scheduled until a certain number of hours has elapsed after order capture. In that time period, the order can be modified. Therefore, all orders should be delayed at order capture time to allow for these last minute modifications.

The length of the delay depends on your specific business practices.

### End-User Impact

An order is modifiable by a customer service representative for a certain amount of time, during which the order is not picked up by the scheduling agent.

### Implementation

When calling the createOrder API to initially capture an order from a front-end system into the Sterling Customer Order Management PCA, set the `EarliestScheduleDate` attribute in the input XML to a date that corresponds to the current time + the number of hours that the order should be delayed for.

For more information about the createOrder API, see the *Sterling Supply Chain Applications Javadocs*.

## 6.2.2 Order Validation

When an order is captured by the Sterling Customer Order Management PCA, it needs to be verified as a valid order that can be paid for, sent to the correct address, and is the order that the customer meant to enter in the front-end system.

The order validation process includes:

- Duplicate Order Validation

- Address Verification
- Fraud Check

### 6.2.2.1 Duplicate Order Validation

When placing an order on the front-end system, a customer may inadvertently click the Submit button twice, thereby creating two duplicate orders. To avoid this scenario, every order that is captured must be checked against orders with similar attributes.

### Solution

When a draft order is confirmed, or an order is created, the `YCD_DUPLICATE_ORDER` hold is applied to the order. The hold prevents any transaction from processing the order, and is processed by the Duplicate Order agent, which is derived from the Process Order Hold Type base transaction.

Details for the Duplicate Order agent are described below:

### Attributes

*Table 6–7   Duplicate Order Agent Attributes*

| Attribute | Value |
|---|---|
| Base Transaction ID | PROCESS_ORDER_HOLD_TYPE |
| Base Document Type | 0001 (Sales Order) |
| Base Process Type | ORDER_FULFILLMENT (Order Fulfillment) |
| Abstract Transaction | Yes |
| APIs Called | checkDuplicateOrder |

**Criteria Parameters**

*Table 6–8   Duplicate Order Agent Criteria Parameters*

| Parameter | Description |
|---|---|
| Action | This field is used internally by the Sterling Customer Order Management PCA. The only valid value is Get. Please do not modify this field. |
| Number of Records to Buffer | Optional. Number of records to retrieve and process at one time. If left blank or specified as 0 (zero), it defaults to 5000. |
| CollectPendingJobs | If this parameter is set to "N", the agent does not collect information on the pending jobs for this time-triggered transaction. This pending job information is used to monitor the agent in the System Management Console.<br><br>By default, CollectPendingJobs is set to Y. It can be helpful to set it to N if one particular time-triggered transaction is performing a significant amount of getPendingJobs queries, and the overhead cost is too high. |
| Next Task Queue Interval | The number of hours to wait before attempting to check for duplicate orders again. If not set, the default value is 5 hours from the current time. |

**Statistics Tracked**
None.

**Pending Job Count**
The number of orders that need to be checked for duplicates.

**Events Raised**
The following events are raised by this time-triggered transaction:

*Table 6–9   Events Raised by the Duplicate Order Agent*

| Transaction/Event | Key Data | Data Published | Template Support? |
|---|---|---|---|
| ON_DUPLICATE_ORDER | OrderHeaderKey, OrderNo | VERIFY_ADDRESS.0001.VERIFY_ADDRESS_FAILED.0001.xml | Yes |
| ON_HOLD_TYPE_STATUS_CHANGE | modifyOrder_dbd.txt | PROCESS_ORDER_HOLD_TYPE.ON_HOLD_TYPE_STATUS_CHANGE.xml | Yes |
| ON_SUCCESS | modifyOrder_dbd.txt | PROCESS_ORDER_HOLD_TYPE.ON_SUCCESS.xml | Yes |

The Duplicate Order agent calls the YFSProcessOrderHoldTypeUE user exit, which is implemented as the YCD_ProcessCustOrdMgmtHolds_1.0 service as illustrated in Figure 6–1.

*Figure 6–1   The YCD_ProcessCustOrdMgmtHolds_1.0 Service*
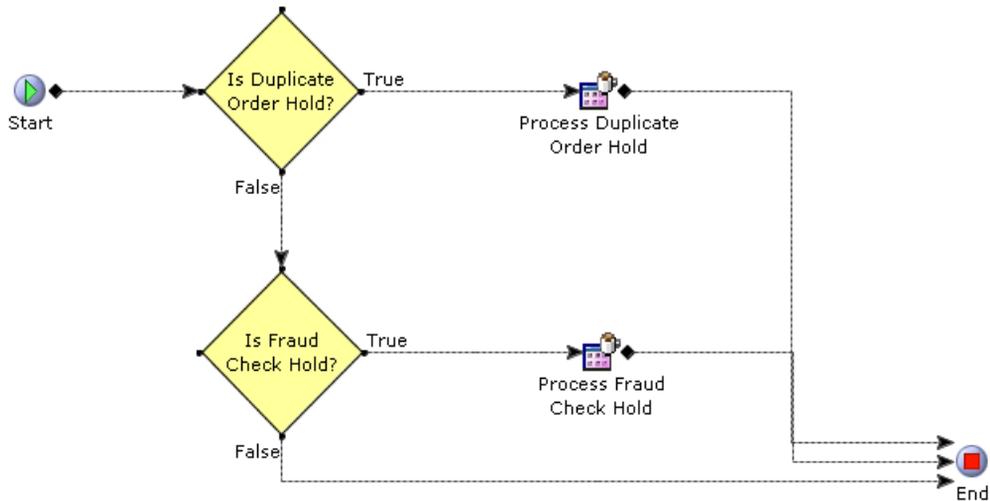


In this case, the processDuplicateOrderHold custom API is called, which in turn calls the checkDuplicateOrder API, which finally calls the YCDProcessDuplicateOrderCheckUE user exit.

The user exit takes the following file as its input XML:

```
<YFS_HOME>/template/userexit/processDuplicateOrderCheck.0001.x
ml
```

The XML is then passed on to the YCD_ProcessDuplicateOrderCheck_1.0 service as illustrated in Figure 6–2.

*Figure 6–2    The YCD_ProcessDuplicateOrderCheck_1.0 Service*
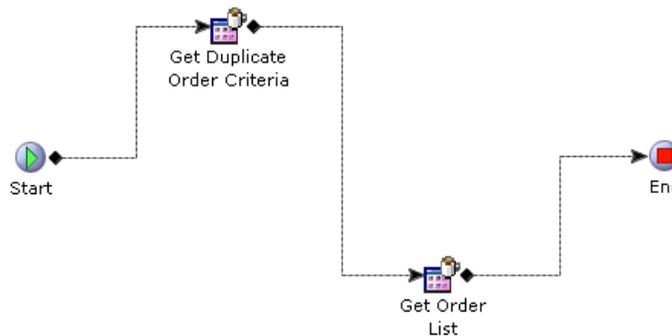


In this service, the getOrderList API is called using the output of the getDuplicateOrderCriteria custom API as input. If more then one record is returned by the getOrderList API call, then the order is a potential duplicate.

By default, the criteria for a duplicate order are the following:

- Bill To ID: if the identifier of the customer on the orders is identical.

- Total Amount: if the total amount on the orders are within $5 of each other.

- Order Date: if the timestamp on the orders are within 20 seconds of each other.

- Enterprise Code: if the enterprise code on the orders is identical.

- IP Address: if the IP address of the customer on the orders is identical.

In that case, the ON_DUPLICATE_ORDER event is raised by the Duplicate Order agent, which invokes the YCD_DuplicateOrderAlert_1.0 service through the YCDOnDuplicateOrder action. The YCD_DuplicateOrderAlert_1.0 service sends an alert to the Duplicate Order queue, which is monitored by default by the user.

### End-User Impact

The user is notified through an alert of possible duplicate orders. They must either cancel the order if it is a duplicate, or remove the Duplicate Order hold if it is a valid order.

### Implementation

To use this feature, you should ensure that the YCD_DUPLICATE_ORDER hold type is implemented for the enterprise that performs your duplicate order checks. Since the hold type provided by the Sterling Customer Order Management PCA is for the DEFAULT Enterprise, your Enterprise should either inherit its configuration from DEFAULT, or have a copy of this hold type implemented.

In the YCD_DuplicateOrderAlert_1.0 service, the alert sent to the Duplicate Order queue uses the following XSL by default:

`<YFS_HOME>/template/exception_console/YCD_DuplicateOrderAlert.xsl.sample`

This XSL should be copied to a file named YCD_DuplicateOrderAlert.xsl, customized as needed, and its path and name should be specified in the Template Name field of the Alert properties.

You can customize all services and user exits to adapt to changing business needs. You can also customize the getDuplicateOrderCriteria custom API to return the exact set of criteria that you use to determine whether an order is duplicate.

### 6.2.2.2 Phone Number and E-Mail Address Verification

When an end user defines or changes a phone number or e-mail address, it needs to be verified that it has been correctly entered.

### Solution

The Sterling Customer Order Management PCA checks that each phone number and e-mail address entered is valid.

The phone number validation logic verifies that there are either ten or eleven digits entered in the field.

Once a phone number has been validated, the Sterling Customer Order Management PCA removes all non-digit characters from the phone number field and formats it: $(\#\#\#) - \#\#\# - \#\#\#\#$.

> **Note:** The Sterling Customer Order Management PCA will only validates phone numbers located in the United States. The validation logic can be extended in the extension behavior class to work with other countries, if required. For more information about creating extension behavior, see the *Sterling Supply Chain Applications Customization Guide*.

The Sterling Customer Order Management PCA validates e-mail addresses using the following criteria:

- The first character must be a letter.

- There is an ampersand (@) and at least one period (.) following the ampersand.

- There is at least one character before the ampersand.

- There is at least one character between the ampersand symbol and the period.

- There are between two to four characters after the period.

- There are no spaces in the e-mail address.

If any of these validations fail, the Sterling Customer Order Management PCA displays an error message to notify the user of the incorrect field.

### 6.2.2.3 Address Verification

When a customer defines or changes an address, it needs to be verified as being an existing, valid address. You may want to verify addresses on the order for any of the following reasons:

- To ensure that the order is shipped to an address that actually exists and that the user has entered it correctly

- To ensure that the ship-to address is not a known fraudulent address

- To ensure that the address is stored in the Sterling Customer Order Management PCA as a standardized address that all carrier services can understand and process

The Sterling Customer Order Management PCA has an understanding of when such validations should occur.

### Solution

The approach used by the Sterling Customer Order Management PCA to meet this requirement is to place orders that have been identified as needing verification on an address verification hold, which is processed by the Address Verification agent. The Address Verification agent interacts with an external address verification system (AVS) through a user exit.

The Sterling Customer Order Management PCA keeps track of which addresses have already been verified. Each address record maintains the IsAddressVerified flag with the value Y if the address has been recognized as being valid. If all the addresses on the order are valid, the AllAddressesVerified flag is set to Y, at the order header level.

During order capture, the AllAddressesVerified flag can be passed as "Y" in the input XML of the createOrder API, and in that case, the Sterling Customer Order Management PCA will not attempt to verify any addresses on the order unless one of them is changed.

When passing an unverified address on an order, either at order capture time or when changing the order, ensure that the AllAddressesVerified flag at the order level is passed as N, else the hold is not applied, and no alert is raised.

The following scenario can mandate address verification:

• Initial Order Capture

If, as a result of either of these scenarios, the order is placed on the address verification hold and the The Address Verification Agent processes it. Orders on this hold cannot be scheduled or released.

### Initial Order Capture

When the order is initially captured by the Sterling Customer Order Management PCA using the createOrder API, the customer's ship-to and bill-to addresses should be validated.

Address validation, however, could have already been completed by the front-end system for some or all of the addresses on the order. For example, the bill-to address is often validated by the credit card

authorization process. The ship-to address could also have been validated up front.

If the `AllAddressesVerified` flag is passed as `N`, the Sterling Customer Order Management PCA places the order on the address verification hold, and the Address Verification agent tries to validate all addresses with `IsAddressVerified` passed as `N`. Both these flags are passed in the input XML of the createOrder API as follows:

```
<Order ... AllAddressesVerified="" ...>
    <OrderLines>
        <OrderLine>
        ...
            <PersonInfoShipTo IsAddressVeriried="">
            ...
        </OrderLine>
    </OrderLines>
    ...
    <PersonInfoShipTo ... IsAddressVerified="" .../>
    <PersonInfoBillTo ... IsAddressVerified=""... />
    ...
</Order>
```

Fore more information about the createOrder API, see the *Sterling Supply Chain Applications Javadocs*.

### The Address Verification Agent

The Address Verification agent picks up orders that are placed on the address verification hold. For each address in an order that needs to be validated, the agent calls the verifyAddress API, which in turn calls the YCDVerifyAddressWithAVSUE user exit to interact with the AVS.

If the AVS confirms that all addresses are valid, the agent removes the hold on the order. If the address is invalid, the agent rejects the hold.

When an address is not valid, the AVS returns multiple possible close matches if it can. The agent handles this situation in the same way as if the AVS had indicated an invalid address: it rejects the hold on the order and raises an alert. The agent does not reprocess the order unless an address is changed manually.

In the event that the AVS is not online, the agent can be configured to either remove the hold from the order and process it, or reject it, to be reprocessed by the agent at a later time.

The time interval between the agent rejecting a hold and reprocessing that hold is configurable.

The flow chart in Figure 6–3 illustrates the behavior of the Address Verification agent:

*Figure 6–3   The Address Verification Agent*
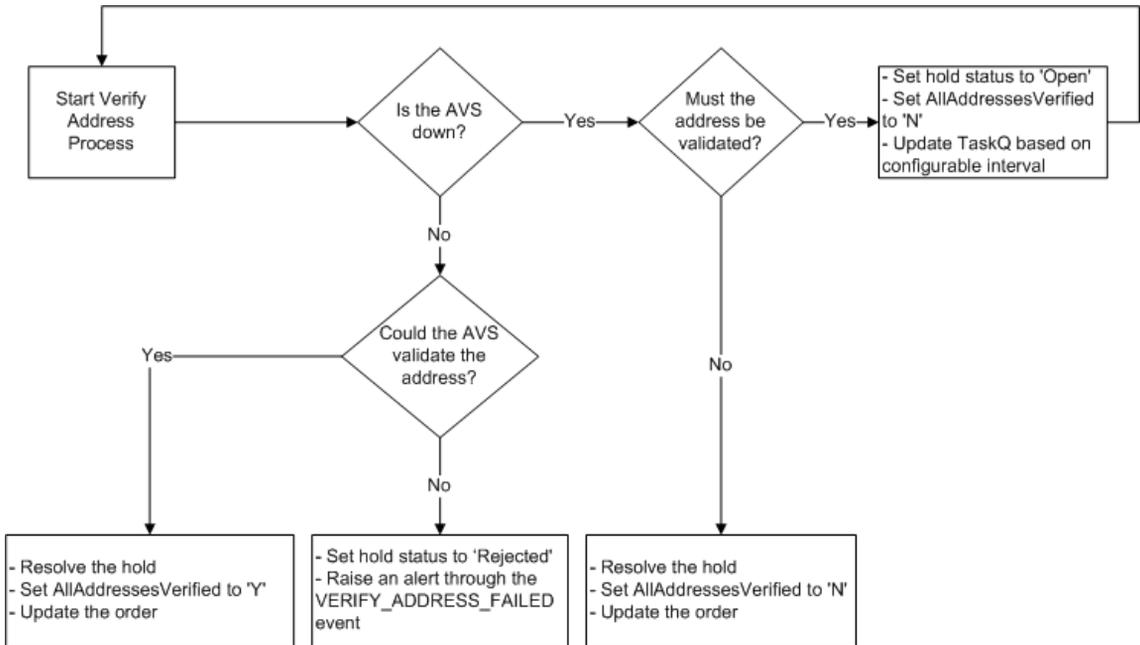


The details for the address verification agent are as follows:

**Attributes**

*Table 6–10   Address Verification Agent Attributes*

| Attribute | Value |
|---|---|
| Base Transaction ID | PROCESS_ORDER_HOLD_TYPE |
| Base Document Type | 0001 (Sales Order) |
| Base Process Type | ORDER_FULFILLMENT (Order Fulfillment) |

*Table 6–10   Address Verification Agent Attributes*

| Attribute | Value |
|---|---|
| Abstract Transaction | No |
| APIs Called | verifyAddress |

**Criteria Parameters**

*Table 6–11   Address Verification Agent Criteria Parameters*

| Parameter | Description |
|---|---|
| Action | This field is used internally by the Sterling Customer Order Management PCA. The only valid value is `Get`. Please do not modify this field. |
| Number of Records to Buffer | Optional. Number of records to retrieve and process at one time. If left blank or specified as `0` (zero), it defaults to `5000`. |
| CollectPendingJobs | If this parameter is set to `N`, the agent does not collect information on the pending jobs for this time-triggered transaction. This pending job information is used to monitor the agent in the System Management Console.<br><br>By default, `CollectPendingJobs` is set to `Y`. It can be helpful to set it to `N` if one particular time-triggered transaction is performing a significant amount of `getPendingJobs` queries, and the overhead cost is too high. |
| Next Task Queue Interval | The number of hours to wait before attempting to process an address again. This value is used in conjunction with the MUST_VERIFY_ADDRESS rule. If not set, the default value is 5 hours from the current time. |

**Statistics Tracked**
None.

**Pending Job Count**
The number of orders that need to have addresses verified.

### Events Raised

The following events are raised by this time-triggered transaction:

*Table 6−12   Events Raised by the Address Verification Agent*

| Transaction/Event | Key Data | Data Published | Template Support? |
|---|---|---|---|
| VERIFY_ADDRESS_FAILED | OrderHeaderKey, OrderNo | VERIFY_ADDRESS.0001.VERIFY_ADDRESS_FAILED.001.xml | Yes |

### End-User Impact

Upon order capture, the user and Fraud Analyst end users is notified of the addresses that have failed verification through alerts. Unverified addresses are marked with the ⚠ in their order detail screens. If at one point the addresses that had been unverified on an order are verified, the associated alerts are closed automatically.

When an address is modified in the Sterling Supply Chain Application Consoles, the AVS is called to verify it. The end user can check a box to override that validation if they feel that the provided address is right despite the AVS verification failure. If an address validation fails and the AVS returns multiple addresses, the end user can select an address from a list, or choose none and override the validation.

### Implementation

To use the address verification feature, the following steps need to be completed:

- Implementing the User Exit

- Implementing the Agent

- Creating a Hold Type for your Enterprise

### Implementing the User Exit

The user exit allows the Sterling Customer Order Management PCA to interact with the AVS and modify the order for which the AVS was called appropriately.

The YCDVerifyAddressWithAVSUE user exit is called from the verifyAddress API. The user exit returns an XML output, which is same as

the verifyAddress API output. This API expects the user exit to return an XML in the following format:

```
<?xml version="1.0" encoding="UTF-8" ?>
<PersonInfoList TotalNumberOfRecords="">
<PersonInfo AVSReturnCode="" AddressLine1="" AddressLine2="" AddressLine3=""
AddressLine4="" AddressLine5="" AddressLine6="" City="" Country=""
IsAddressVerified="" Latitude="" Longitude="" State="" TaxGeoCode="" ZipCode=""
/>
</PersonInfoList>
```

For more information about the YCDVerifyAddressWithAVSUE user exit, see the *Sterling Supply Chain Applications Javadocs*.

The value of the `AVSReturnCode` attribute depends on the outcome of the call to the AVS by the user exit:

- VERIFIED if the address is valid.

- FAILED if the address is not valid.

- AVS_DOWN if the AVS system could not be connected with.

### Implementing the Agent

The Address Verification agent can be configured to process orders without verifying addresses when the AVS is down, or to keep them on hold until the AVS is available.

For more information on setting the behavior of the agent when the AVS is down, see Section 4.19, "Extending and Customizing the Application".

> **Warning:**   The Customer Order Management Rules home page is not permission controlled. Be sure to disable access to this page when the Sterling Customer Order Management PCA is deployed into a production environment.

The amount of time that the agent waits before attempting to reprocess an address that could not be verified can be configured in the Sterling Supply Chain Applications Configurator: under the Criteria Parameters tab in the Agent Criteria Definitions of the Address Verification time-triggered transaction of the `Sales Order` document type, set the Next Task Queue Interval parameter to the number of hours that the

Sterling Customer Order Management PCA should wait before attempting to verify the address again.

### Creating a Hold Type for your Enterprise

The hold type applied to orders that have failed address verification is YCD_VERIFY_ADDRESS. By default, this hold type is defined for the DEFAULT Enterprise. If your implementation defines a different Enterprise to perform the address verification, you should either ensure that your configuration is inherited from the DEFAULT Enterprise, or that you create a copy of the YCD_VERIFY_ADDRESS hold type for your Enterprise.

### 6.2.2.4 Fraud Check

Your business may maintain a list of known fraudulent IP addresses, or a list of customers that have placed fraudulent orders in the past. Orders should be validated by specific fraud checks at order capture time, and fraud analysts should be notified of the failures.

### Solution

The fraud check mechanisms are very specific to business needs and practices. Because of this, the Sterling Customer Order Management PCA provides a general framework for fraud checks.

All orders are placed on the YCD_FRAUD_CHECK hold upon order creation or draft order confirmation. This hold prevents any transaction from processing the order, and is processed by the Fraud Check agent once the Duplicate Order hold has been resolved. For more information about duplicating an order validation, see Section 6.2.2.1, "Duplicate Order Validation". The Fraud check agent is derived from the Process Order Hold Type base transaction.

The details of the Fraud Check agent are as follows:

### Attributes

*Table 6–13  Fraud Check Agent Attributes*

| Attribute | Value |
| --- | --- |
| Base Transaction ID | PROCESS_ORDER_HOLD_TYPE |
| Base Document Type | 0001 (Sales Order) |
| Base Process Type | ORDER_FULFILLMENT (Order Fulfillment) |

*Table 6–13   Fraud Check Agent Attributes*

| Attribute | Value |
|---|---|
| Abstract Transaction | Yes |
| APIs Called | checkFraudOnOrder |

**Criteria Parameters**

*Table 6–14   Fraud Check Agent Criteria Parameters*

| Parameter | Description |
|---|---|
| Action | This field is used internally by the Sterling Customer Order Management PCA. The only valid value is Get. Please do not modify this field. |
| Number of Records to Buffer | Optional. Number of records to retrieve and process at one time. If left blank or specified as 0 (zero), it defaults to 5000. |
| CollectPendingJobs | If this parameter is set to N, the agent will not collect information on the pending jobs for this time-triggered transaction. This pending job information is used for monitoring the agent in the System Management Console. |
| | By default, CollectPendingJobs is set to Y. It can be helpful to set it to N if one particular time-triggered transaction is performing a significant amount of getPendingJobs queries, and the overhead cost is too high. |
| Next Task Queue Interval | The number of hours to wait before attempting to process an order for fraud check.  If not set, the default value is 5 hours from the current time. |

**Statistics Tracked**
None.

**Pending Job Count**
The number of orders that need to be checked for fraud.

### Events Raised

The following events are raised by this time-triggered transaction:

*Table 6–15   Events Raised by the Fraud Check Agent*

| Transaction/Event | Key Data | Data Published | Template Support? |
|---|---|---|---|
| ON_FRAUDULENT_OR DER | OrderHeaderKey, OrderNo | FRAUD_CHECK.0001.O N_FRAUDULENT_ORDE R.0001.xml | Yes |
| ON_HOLD_TYPE_STA TUS_CHANGE | modifyOrder_dbd .txt | PROCESS_ODER_HOLD _TYPE.ON_HOLD_TYPE _STATUS_CHANGE.xml | Yes |
| ON_SUCCESS | modifyOrder_dbd .txt | PROCESS_ORDER_HOL D_TYPE.ON_SUCCESS. xml | Yes |

The Fraud Check agent calls the YFSProcessOrderHoldTypeUE user exit, which is implemented as the YCD_ProcessCustOrdMgmtHolds_1.0 service as illustrated in Figure 6–4.

*Figure 6–4   The YCD_ProcessCustOrdMgmtHolds_1.0 Service*
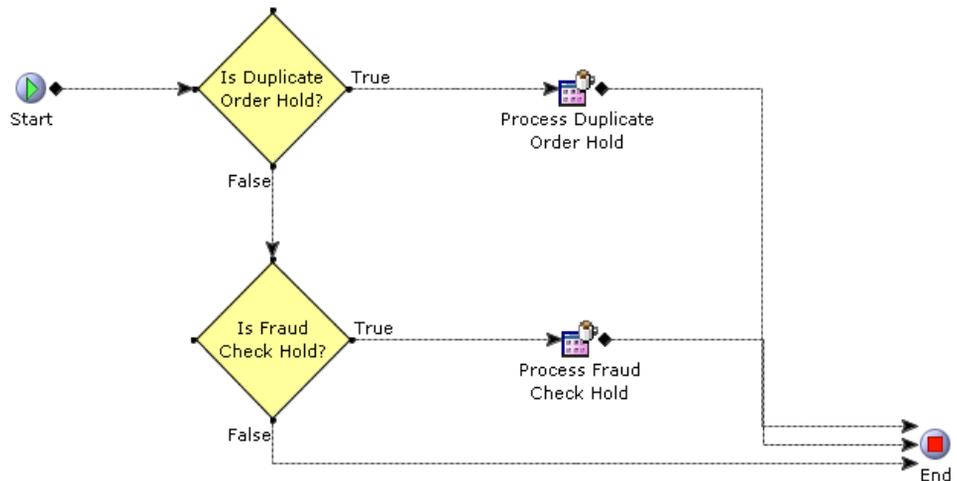


In this case, the processFraudCheckHold custom API is called, which in turn calls the checkFraudOnOrder API, which finally calls the YCDProcessFraudCheckOnOrderUE user exit.

The user exit takes the following file as its input XML:

`<YFS_HOME>/template/userexit/processOrderFraudCheck.0001.xml`

If the user exit returns a message to the agent that indicates possible fraud, the ON_FRAUDULENT_ORDER event is raised, and the YCDFraudCheckAlert_1.0 service is invoked through the YCDOnFraudulentOrder action.

The YCD_FraudCheckAlert_1.0 service sends an alert to the Fraud Queue queue, which is monitored by the Fraud Analyst user.

If the user exit returns a message indicating that the order is not fraudulent, the agent will automatically resolve the hold. The processFraudCheckHold API, on the other hand, will not.

### End-User Impact

When an order fails the fraud check, an alert is sent to the queue monitored by the Fraud Analysts. After analyzing the order, the Fraud Analyst either cancels it if it turns out to be fraudulent, or removes the hold so that it can be processed normally.

### Implementation

To use this feature, you should ensure that the YCD_FRAUD_CHECK hold type is implemented for the Enterprise that performs the fraud checks. Since the hold type provided by the Sterling Customer Order Management PCA is for the DEFAULT Enterprise, your Enterprise should either inherit its configuration from the DEFAULT Enterprise, or have a copy of this hold type implemented.

In the YCD_FraudCheckAlert_1.0 service, the alert sent to the Fraud Check queue uses the following XSL by default:

`<YFS_HOME>/template/exception_console/YCD_FraudCheckAlert.xsl.sample`

This XSL should be copied to a file named YCD_FraudCheckAlert.xsl, customized as needed, and its path and name should be specified in the Template Name field of the Alert properties.

All of these services can be customized as needed to fit your business needs, as well as the user exits.

The YCDProcessFraudCheckOnOrderUE user exit should return the response code of the fraud check in the FraudCheckResponseCode

attribute, at the `Order` element level. This attribute value should be 'FAILED' if the fraud check failed, and 'SUCCESS' if the fraud check succeeded. Additionally, a `FraudCheckResponseMessage` element should be passed directly under the `Order` element with `FraudCheckResponseMessage` elements underneath, each with a `Text` attribute:

```
<Order ... FraudCheckResponseCode="" ...>
    <FraudCheckResponseMessages>
        <FraudCheckResponseMessage Text=""/>
    </FraudCheckResponseMessages>
    ...
</Order>
```

# 6.3 Searching for Alternate Store Pickup Locations

The Sterling Customer Order Management PCA provides a way to search across stores to determine which ones have items available for pickup.

## 6.3.1 Solution

The Sterling Customer Order Management PCA provides an Alternate Stores screen that displays a list of items and nearby stores where the item is available. You can configure which stores should be displayed in this screen.

## 6.3.2 End-User Impact

None.

## 6.3.3 Implementation

The Alternate Store locations screen enables you to search for stores using two different fulfillment types. If the Distance Radius to Consider When Finding Nearby Stores checkbox is unchecked, the getSurroundingNodeList API searches within the defined radius using the Distance Radius to Consider When Finding Nearby Stores rule. If the Distance Radius to Consider When Finding More Stores checkbox is checked, the getSurroundingNodeList API searches within the defined radius using the More Store Search rule.

For more information about defining fulfillment types or configuring sourcing rules, see the *Sterling Distributed Order Management Configuration Guide*.

## 6.3.4 Reference Implementation

The Sterling Customer Order Management PCA provides the reference implementation for the 'Distance Radius to Consider When Finding Nearby Stores' and 'Distance Radius to Consider When Finding More Stores' rules for your enterprise. The default value for 'Distance Radius to Consider When

Finding Nearby Stores' is 25 and the default value for 'Distance Radius to Consider When Finding More Stores' is 50.

# 6.4 Order Inquiry

Customers often enquire information about orders they have placed. For example shipment information. In such situations, the Sterling Customer Order Management PCA needs to respond to order inquiries by publishing information about the orders captured internally to the external systems.

## 6.4.1 Solution

After an order has been captured, the detailed information about the order, shipments, containers, and the return orders associated with that order can be retrieved.

The Sterling Customer Order Management PCA user interface (UI) allows users to search and view orders that are purged into their corresponding history tables. When these purged orders are accessed through the UI, they are restored to the non-history tables by calling the restoreOrder API.

The Sterling Supply Chain Applications provides the getSalesOrderDetails API, which takes the following XML as input:

```
<Order DocumentType="" EnterpriseCode="" LastOrderLineKey="" MaximumRecords=""
OrderHeaderKey="" OrderNo="">
<SpecificOrderLines>
<OrderLine OrderLineKey="" PrimeLineNo="" SubLineNo=""/>
</SpecificOrderLines>
</Order>
```

For more information about the getSalesOrderDetails API, see the *Sterling Supply Chain Applications Javadocs*.

## 6.4.2 End-User Impact

None.

## 6.4.3 Implementation

The getSalesOrderDetails API can return the `OverallStatus` attribute for orders and order lines. This attribute's value is based on the YFSGetOverallStatusUE user exit.

For more information about APIs and user exits, see the *Sterling Supply Chain Applications Javadocs*.

> **Note:**  In the Sterling Customer Order Management PCA, if you want to view order lines that have Delivery as a fulfillment method and are already delivered, ensure that the Create Shipments for Products being Delivered in addition to Work Order box is unchecked in the Sterling Supply Chain Applications Configurator. This is defined as part of the process type's primary information. For more information about defining a process type's primary information, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

# 6.5 Item Inquiry

During an order creation process, a user may want to search for an item. Based on the search criteria, a list of items displays. The user may also want to view additional information such as availability, price, promotions, and specifications for each item.

## 6.5.1 Solution

The Sterling Customer Order Management PCA provides the ability to search for product and service items. Additionally, it also displays small or large icons of each item that exist in your catalog.

This section explains the Item Inquiry process and solution offered by the Sterling Customer Order Management PCA.

### Retrieving Item Information

The getItemListForOrdering API retrieves a list of items based on the input criteria. This item list includes additional information such as pricing, availability, and promotions.

The YFSGetExternalPricesForItemListUE user exit is implemented if pricing is retrieved from an external system. The YFSGetPromotionsForItemListUE user exit is implemented if promotions are displayed.

### Disabling Availability Checks

You can disable availability checks in the item inquiry screens to avoid frequent inventory requests on your inventory system. You can still inquire on an item's availability in the Item Detail screen even when the default availability check is disabled.

### Disabling Pickup From Store for All Items

You can configure the user interface to never show the pickup fulfillment method if the enterprise does not support that fulfillment method.

## 6.5.2 End-User Impact

None.

## 6.5.3 Implementation

This section details the steps to implement to perform item inquiry.

### Displaying Item Images

In the Sterling Customer Order Management PCA application, whenever an item needs to be selected or identified the appropriate item images display along with the item details. The items are associated with large or small images. These images reside on different servers and can be retrieved when needed. To configure the server to fetch the images, define entries such as name, protocol, base URL, and so forth in the locations.ycfg. You can create more than one URL to display different types of images.

> **Note:** You must create the IMAGE URL to fetch images from the server. You can configure the IMAGE URL to get images of type gif, jpeg, png, and so forth.

> **Note:** The screens within the Sterling Customer Order Management PCA application have been designed for small item images of 32 X 32 pixels in size and large item images of 180 X 180 pixels in size. Sterling Commerce strongly recommends that your images conform to these sizes for ideal display within the screens.

For more information about configuring connection settings to fetch images from the server, see the *Sterling Supply Chain Applications Installation Guide*.

If pickup from store is allowed, log in to the Sterling Customer Order Management Configurator to configure the store pickup rules. For more information about configuring the store pickup rules, see Section 4.8.13, "Configuring Store Pickup Rules".

### Disabling Availability Checks

If the Prevent Availability Check When Searching for Items rule is enabled or is set to "Y", the inventory availability check is not performed and the calls to findInventory API or its derivation APIs are eliminated. This aids in better performance and pace in capturing the order.

## 6.5.4 Reference Implementation

This section describes the default values provided for item inquiry.

1. If pickup from store is allowed for items of the order, the distance to consider when finding the nearby stores is 25 miles.

2. The default YFSGetExternalPricesForItemListUE user exit and the YFSGetPromotionsForItemList implementation accepts the following Item IDs:

   - TV0001A5F21

   - DVP6723040

   - SP5700BL

   - URV800CV

   - AOE4357

3.  The default YFSGetPromotionsForItemListUE user exit implementation accepts the following promotions:

    -   Buy two get one free

    -   20% discount on all accessories

    -   24 months no interest

All rules configured for Item Inquiry are defined for the "XYZ-ONLINE" organization.

4.  The Prevent Availability Check When Searching for Items rule is defaulted to "Y".

# 6.6 Configuring Item Display Options

You may want to display certain item attributes to different enterprises as the description in the Sterling Customer Order Management PCA user interface. For example, one retailer may consider the item attributes 'ItemID' and 'Item Description' to be the most important attributes, while a different retailer may consider 'ItemID' and 'Manufacturer' to be the most important attributes to display in the user interface.

## 6.6.1 Solution

The Sterling Customer Order Management PCA enables you to configure which item attributes are displayed throughout the user interface. This is done by first configuring the item attributes associated with the item and then editing the resource bundle key.

## 6.6.2 End-User Impact

The end user sees the primary item attributes you configure, in the format you specify, throughout the Sterling Customer Order Management PCA user interface.

## 6.6.3 Implementation

To configure which item attributes are available for display:

1.  Create a new classification and associate it with the classification purpose "Display Attributes". For more information about defining

classifications, see the *Sterling Product Management Configuration Guide*.

**a.** From the Sterling Customer Order Management Configurator, select Manage Products and Categories.

**b.** Under Manage Products and Categories, select Define Types of Product Classification. The Classification Definitions tab displays.

**c.** Choose ✚. The Classification Details pop-up window displays.



**d.** In Classification Name, enter the name of the classification.

**e.** From the Item Attribute drop-down list, select the item attribute you want to associate with the classification.

> **Note:** The item attributes in the drop-down may display with underscores or without spacing. Disregard this.

**f.** In Description, enter a brief description of the classification.

**g.** Choose 🖫 .

**h.** From Classification Definition window, select the Classification Purposes tab.

**i.** Choose ✚. The Classification Purpose Details pop-up window displays.

**j.** Choose the "Item Display Attributes" classification purpose from the Purpose Description drop-down menu.

> **Note:** You cannot assign more than one classification definition to a classification purpose.

**k.** Choose the classification definition that you want to bind a classification purpose to from the Classification Definition To Bind drop-down menu.

**l.** Choose 🖫.

**2.** Modify the resource bundle.

The Sterling Customer Order Management PCA uses resource bundle keys to display item information on all screens. The resource bundle keys define the formatting and sequencing of the item attributes you choose when configuring the classification values.

To allow new or modified item attributes to display on a screen in the Sterling Customer Order Management PCA, you must edit the ItemDisplay bundle keys.

To edit the ItemDisplay bundle keys:

**a.** From the Sterling Customer Order Management PCA root directory > Plugins, select the `plugins\com.yantra.pca.ycd.rcp_1.0.0` folder.

**b.** Select the `yantra.pca.ycd_format_bundle.properties` file located in the `com.jar` file.

**c.** In the `yantra.pca.ycd_format_bundle.properties` file, search for the following bundle keys:

   **—** ItemDisplayConfigurationForLineDisplay

- ItemDisplayConfigurationForLineDisplayNoAttributeList
- ItemShortDescDisplayConfiguration
- ItemShortDescDisplayConfigurationNoAttributeList
- ItemIDDisplayConfiguration
- ItemIDDisplayConfigurationNoAttributeList

You can modify the value that appears to the right side of the equal sign ("=") in these bundle entries. The right side can contain any formatting characters, such as dashes, semicolons, and so forth. The right side can also contain place holders for the item attributes that you have made available through the configuration in the following format: {x}, where 'x' is an integer representing the index of the item attribute you want to display.

For example, a classification has the following item attributes:



| Item Attribute | Description | Is Key Attribute |
| --- | --- | --- |
| ShortDescription | ShortDescription | ☐ |
| ColorCode | ColorCode | ☐ |
| UnitOfMeasure | UnitOfMeasure | ☐ |
| ItemID | ItemID | ☐ |

The place holders are available in the same sequence as the display attributes. In this example, the following place holders are available for use in the resource bundle:

```
#{0}-ShortDescription
 {1}-ColorCode
 {2}-UnitOfMeasure
 {3}-ItemID
```

The resource bundle can be changed from this:

```
ItemIDDisplayConfiguration={3},{2},{0}
```

which displays the item ID, the unit of measure, and the short description in the Sterling Customer Order Management PCA user interface, to this:

```
ItemIDDisplayConfiguration={3},{0},{2}
```

which displays the item ID, the short description, and the unit of measure in the Sterling Customer Order Management PCA user interface.

## 6.6.4 Reference Implementation

None.

# 6.7 Customer Appeasement

Sometimes you may have to appease the customer when a customer reports of not being satisfied with any of the services provided. For instance, a customer may report problems faced when placing an order online or report of receiving a damaged item. In such situations, you need to perform the appeasement task to make amends for the bad experiences.

## 6.7.1 Solution

This section explains the customer appeasement process and the solution offered by the Sterling Customer Order Management PCA.

### Selecting Appeasement Reasons

The customers may call a user to report various reasons for which a user needs to perform an appeasement action on the customer's order. The appeasement may apply to the entire order or only some of the items in the order. The getCommonCodeList API is invoked, which retrieves all common codes that match the input criteria. The reasons for appeasement are configured using the YCD_APPEASEMENT_RSN common code. You can configure reasons such as damaged item, bad phone experience and so forth to enable the appeasement action.

**Selecting An Appeasement Offer**

The YCDGetAppeasementOffersUE user exit returns the appeasement offers. This user exit provides an option to plug in custom logic to retrieve appeasement offers. The offers provided depend on the selected appeasement reason and order total details. For example, you can provide 10% discount on the current order. Using the YCDGetAppeasementOffersUE user exit, you can implement different appeasement offers, if applicable.

If the appeasement applies to the current order, the recordInvoiceCreation API is called which creates a CREDIT_MEMO invoice for the appeasement. If the selected appeasement offer applies for future orders, the YCDSendFutureOrderCustomerAppeasementUE user exit is invoked. This user exit implementation has the responsibility (like informing the promotion engine) to apply the appeasement on future orders of the same customer.

## 6.7.2 End-User Impact

None.

## 6.7.3 Implementation

You can configure to provide a list of reason codes that are available during the customer appeasement process. For more information about defining appeasement reasons, see Section 4.10.6, "Defining Appeasement Reasons".

## 6.7.4 Reference Implementation

This section explains the various factory setups that need to be configured:

1. Create a new charge category called CUSTOMER_APPEASEMENT and describe it as Customer Appeasement. This is billable.

2. Create a new charge name called CUSTOMER_APPEASEMENT and describe it as Customer Appeasement.

3. Configure the following appeasement reasons as common codes:

   • Late Shipment

   • Damaged Items

- Bad Delivery Experience
- Bad Online Experience
- Bad Phone Experience

4. The default implementation of the YCDGetAppeasementOffersUE user exit returns the following offers:

- FLAT_AMOUNT_ORDER (if the offer provides a flat amount discount. The discount is applied only at the order header level)
  - A flat discount of $10 is returned.

- PERCENT_ORDER (if the offer provides a percentage discount on the current order. The discount is applied at both order and order line level).
  - A discount of 10% is returned on the order.

- PERCENTAGE_FUTURE_ORDER (if the offer provides a percentage discount on the future order).
  - A discount of 5% for the future order is returned.

- VARIABLE_AMOUNT_ORDER (if the offer allows the user to enter the discount amount. The discount is applied only at the order header level).
  - This is a flat discount and the amount is entered by the user.

5. The default implementation of the YCDSendFutureOrderCustomerAppeasementUE user exit does not return any offer because it is the implementation of the logic to send the future order appeasement offer to the promotion engine.

This set up is provided for "XYZ-CORP" organization.

# 6.8 Alert and Queue Management

The Alert Management task provides the ability for the user to create, resolve, and assign alerts. Alerts are generated automatically when the system raises certain events happen, or they may be manually created by the users. For example, when a payment authorization fails for an order, the system generates an alert. The user can then call the customer and request for a different payment method. Alternatively, the user can create an alert for the supervisor when the customer requests a price

match that exceeds the 'No Hassle' price match check. The Sterling Customer Order Management PCA provides the comprehensive visibility to alerts assigned to the users, move alerts to a different queue and so forth.

## 6.8.1 Solution

The Sterling Customer Order Management PCA provides features that enable you to create appropriate types of alerts and process them in a timely and efficient manner.

Using the Alert Type configuration, you can define types of alerts that can get raised in a system. You can use queues to group related alerts. Users can be subscribed to one or more queues and can process alerts from their subscribed queues.

### Designing Custom Alert Resolution Panels

The Sterling Customer Order Management PCA provides visibility to alerts and resolve them using the Alert Details screen. This screen is unique and displays different alert resolution panels in the screen depending on the alert type that is being viewed. For example, if you are viewing a duplicate order alert (an alert raised when the system detects that two or more orders have been entered in the system that may be duplicates because they have similar attributes), the Alert Detail screen lists the orders that are potential duplicates so that the users can view the order details and cancel appropriate orders.

The Sterling Customer Order Management PCA provides pre-defined alert types. Additionally, you may define new resolution panels for your own custom alert types

### Alert Notification

The Sterling Customer Order Management PCA notifies the user about the latest open Priority 1 alerts. The user is notified of the alerts in any of the following ways:

- The Alert Message Status hyperlink displays on the CSR message panel, which displays:

  - Open alerts that are assigned to the current user.

  - Priority 1 alerts that are added to the queues to which the current user is subscribed.

The getExceptionList API is called to retrieve all open and priority 1 alerts, consolidate them, and display the number of open alerts.

> **Note:** If there are no priority 1 alerts assigned to the queue to which the user is subscribed, the total number of follow-up alerts display.

- The Alert Notification panel pops up at the specified time interval based on the configuration. This is indicated by a beep. The getExceptionList API is called to retrieve the latest open and priority 1 alerts, consolidate them, and display the number of open alerts.

## 6.8.2 End-User Impact

The users can view popup notifications of new alerts based on the configuration. The users have the ability to disable this notification after logging into the application.

## 6.8.3 Implementation

You can define alert types as needed. When configuring your alert type, in the alert type configuration, you can specify a java class that is an instance of the SWT composite class (org.eclipse.swt.widgets.Composite) as the resolution form. You must create this composite and include components that helps the users to resolve alerts for that specific alert type. You can call APIs within the composite if you require additional information in that panel. If you do not want to design a new composite for any of the custom alert types, you can leave the Resolution Form field blank in the alert type configuration. If you do not enter any information in this field, the default resolution panel are used. The default resolution panel displays the data from the Alert Details column of the alert table (YFS_INBOX).

You can group similar type of alerts into queues and assign them to the users. For more information about assigning alerts and queues, see Section 4.16, "Configuring Alert Management".

Configure the following rules to notify users about the alerts raised:

- Notify User Whenever an Alert is Assigned to the Current User

- Notify Users Whenever an Alert is Added to a Queue The User is Subscribed

- Never Notify Users About Alerts

- Poll for New Alerts Every <number_of_minutes> Minutes

For more information about alert notification, see Section 4.16, "Configuring Alert Management".

### 6.8.4 Reference Implementation

By default, the following alert types are provided:

- YCD_VERIFY_ADDRESS

- YCD_PAYMENT_FAILURE

- YCD_DUPLICATE_ORDER

- YCD_ORDER_CANCEL_NOTICE

- YCD_PRICE_MATCH

- YCD_RESHIP

The resolution types provided for the following alert types are:

- YCD_VERIFY_ADDRESS

- YCD_PAYMENT_FAILURE

- YCD_DUPLICATE_ORDER

- YCD_ORDER_CANCEL_NOTICE

Alerts types, queues, and queue subscriptions are defined for the "XYZ-CORP" organization.

## 6.9 Payment Processing

In a customer order scenario, each order has to be paid whenever it is placed. You can use different payment types to pay for an order. To process these payment types different requests need to be made to payment servers. For example, a credit card needs to be validated as not being fraudulent, having sufficient funds, and charged.Whereas, a stored value card (SVC) needs to be validated only for sufficient funds and charged.

The commonly used payment types need to be made available to the customers placing orders. The payment types need to be validated and charged by external payment validation servers.

## 6.9.1 Solution

An unlimited number of payment methods can be used on an order. The payment methods are based on the following payment types defined in the Sterling Customer Order Management PCA:

- Credit Card

- Stored Value Card

- Pre-paid

- Check

- Refund Check

Through user exit implementations, the Sterling Customer Order Management PCA interacts with the payment servers to authorize and charge the payment methods, if applicable. It is assumed that the front-end system attempts to validate and charge the payment methods up front, and the Sterling Customer Order Management PCA attempts to validate any unauthorized or uncharged amount at the time of order capture, or when a payment method is modified on the order.

When any payment method validations or charges fail, the system invokes configurable services to send alerts to queues that are monitored by user groups.

### 6.9.1.1 Credit Card

Credit cards always need to be checked for fraudulent activity and funds availability by a payment system. It is assumed that the front-end systems attempt to check the credit cards up front for fraud, and attempt to authorize them. If the validation and authorization are successful, the order are captured with the authorization details. However, if the payment verification system is down, or if a payment type is changed on the order, payment verification may need to be completed by the Sterling Customer Order Management PCA.

When an order is captured, the request collection agent creates an authorization and charge request for any unauthorized amount. The

requestCollection API is called and creates an authorization or charge request, which is picked up by the executeCollection API. The executeCollection API in turn calls the YFSCollectionCreditCardUE user exit, which communicates with the external payment systems.

If the credit card is authorized, the order is processed normally. If the user exit returns a response code indicating that something is wrong with the credit card, the order is not processed, and an alert is sent to the appropriate queue depending on why the credit card failed the authorization.

For more information about implementing the credit card payment method, see Section 6.9.3.1, "Credit Card Implementation".

### 6.9.1.2 Stored Value Card

Unlike credit cards, a stored value card (SVC) is always assumed not fraudulent, since it is issued by the store itself. However, SVCs need to be checked for available funds. Similar to credit cards, this is assumed to be completed by the front-end system, but any SVC payment method not validated for funds is processed by the Sterling Customer Order Management PCA.

When an order is captured, the Request Collection agent creates a charge request for any uncharged amount, which is picked up by the Payment Execution agent. The  Request Collection agent calls the payment server to get the available funds using the YFSGetFundsAvailableUE user exit. The default implementation for this user exit is not provided.

The executeCollection API calls the YFSCollectionStoredValueCardUE user exit for the payment collection.

If the SVC is successfully charged, the order is processed normally. If the user exit returns a response code indicating that the SVC could not be processed, either because of unavailable funds or due to the payment system being unavailable, the order is not processed, and an alert is sent to the appropriate queue.

For more information implementing the credit card payment method, see Section 6.9.3.2, "Stored Value Card Implementation".

### 6.9.1.3 Pre-paid

An entire order or a part of the an order may be charged before the order is captured. For example, a customer may place an order in a store, which can be picked up from there at a later time, at another store, or shipped to their home. Full or partial payment can be made for that order, and the store operator can create that order online providing all payment information.

The amount that has already been paid at the time of order capture falls under the Pre-paid payment method.

When adding the pre-paid payment method to an order, the following fields are captured by the Sterling Customer Order Management PCA:

- Transaction Number (corresponds to Payment Reference #1)
- Register Number (corresponds to Payment Reference #2)
- Store Tender Type (corresponds to Payment Reference #3)

### 6.9.1.4 Check

An entire order or a part of the order can be paid using a check. The Sterling Customer Order Management PCA assumes that a check payment method is pre-charged and pre-approved. The check amount should be specified, and is marked as the collected amount.

When adding the check payment method to an order, the following fields are captured into the Sterling Customer Order Management PCA:

- Check Number (corresponds to Payment Reference #1)
- Check Amount (corresponds to Payment Reference #2)
- Check Reference (corresponds to Payment Reference #3)

### 6.9.1.5 Refund Check

When a check or small amount of money need to be refunded to the customer, a refund check can be issued and mailed to them.

The request collection agent creates a request for the refund amount. A refund check is always assumed to be valid, and there is no authorization mechanism. The charge request is picked up by the executeCollection API, which calls the YFSCollectionOthersUE user exit to interact with the payment system.

For more information about implementing the refund check payment method, see Section 6.9.3.3, "Return Check Implementation".

> **Note:** Although the Refund Check payment type is available on a sales order, it must only be used in the context of a return.

## 6.9.2 End-User Impact

The payment processing of the Sterling Customer Order Management PCA affects users of the Sterling Supply Chain Application Consoles in the following ways:

- Certain user groups can view alerts raised by failed payment validations or charges. The users who can view the alert details depends on the alert services configuration. The end users resolve alerts by calling the customers and replacing the payment method on the order. For more information about implementing alert services, see Section 6.9.3.4, "Payment Processing Error Handling".

- When modifying orders, the users are able to select the available payment types as payment methods on the orders.

- The strike limit is displayed on the order, and if that limit exceeds, an alert is raised. For more information about strike limit configuration, see Section 6.9.3.5, "Strike Limit Configuration".

## 6.9.3 Implementation

All payment processing goes through the executeCollection API. This API calls the appropriate user exits depending on the payment method being used. The those user exits call the system defined payment services. These services are pointers to the customizable payment service implementations, which call the external payment server to perform authorizations and charges.

Depending on the response codes returned by the payment server, the user exits raise an event which invokes services responsible for sending alerts to the appropriate queues if certain user groups need to be notified of the outcome of the payment verification attempt. For more information about error handling in payment processing, see Section 6.9.3.4, "Payment Processing Error Handling".

Figure 6–5 depicts the flow of payment processing in the Sterling Customer Order Management PCA.

*Figure 6–5   Payment Processing*
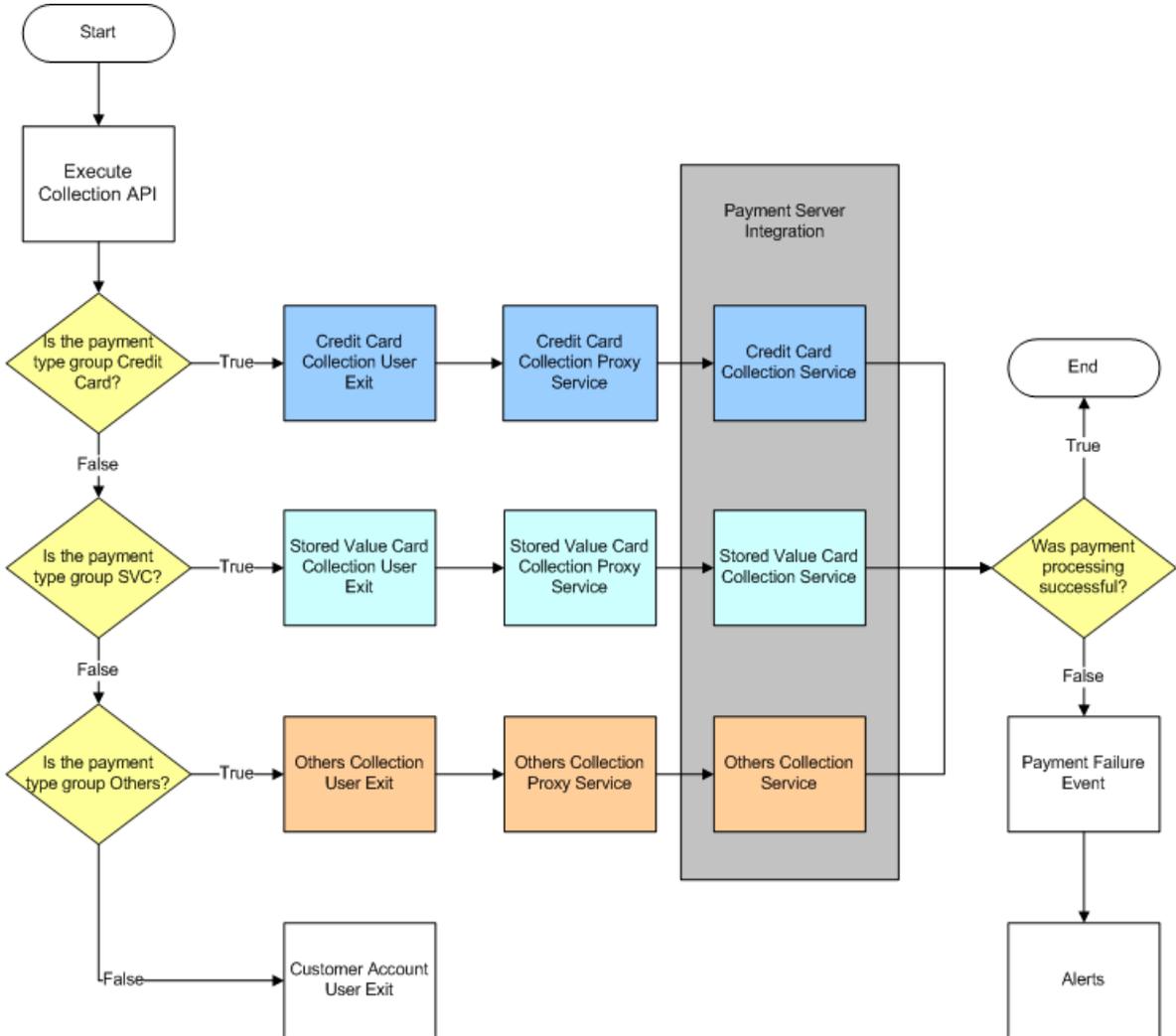
The following topics are covered in this section:

- Credit Card Implementation
- Stored Value Card Implementation
- Return Check Implementation
- Payment Processing Error Handling
- Alert Services
- Strike Limit Configuration

### 6.9.3.1  Credit Card Implementation

In order for a credit card to be validated as a payment method, you must implement the YFSCollectionCreditCardUE user exit. It takes its input from the executeCollection API. From that input, the following XML is created, and passed to a java class which in turn calls the YCD_ExecuteCollectionCreditCard_Proxy_1.0 service, a pointer to the YCD_ExecuteCollectionCreditCard_1.0 service which is responsible for integrating with the external payment system:

```
<Payment AuthorizationId="" BillToAddressLine1="" BillToCity="" BillToCountry=""
BillToDayPhone="" BillToEmailId="" BillToFirstName="" BillToId="" BillToKey=""
BillToLastName="" BillToState="" BillToZipCode="" bPreviouslyInvoked=""
ChargeTransactionKey="" ChargeType="" CreditCardExpirationDate=""
CreditCardName="" CreditCardNo="" CreditCardType="" Currency=""
CustomerAccountNo="" CustomerPONo="" DocumentType="" EnterpriseCode=""
MerchantId="" OrderHeaderKey="" OrderNo="" PaymentReference1=""
PaymentReference2="" PaymentReference3="" PaymentType="" RequestAmount=""
ShipToAddressLine1="" ShipToCity="" ShipToCountry="" ShipToDayPhone=""
ShipToEmailId="" ShipToFirstName="" ShipToId="" ShipTokey="" ShipToLastName=""
ShipToState="" ShipToZipCode="" SvcNo="">
```

You should create your own custom service to handle the integration with the external payment system, and modify the YCD_ExecuteCollectionCreditCard_Proxy_1.0 service to point to your service.

To modify YCD_ExecuteCollectionCreditCard_Proxy_1.0 service to use your own custom service, perform following steps:

**1.** Launch the Sterling Supply Chain Applications Configurator.

2. From Distributed Order Management > Document Specific > Sales Order > Fulfillment > Fulfillment Process Model > Service Repository > Payment Processing.

3. From the application rules side panel, select YCD_ExecuteCollectionCreditCard_Proxy_1.0 service.

4. Select the Execute Collection Check API component.

5. Select the Arguments tab.

6. Click ➕. The Service Argument window displays as shown in .

7. In Argument Name, enter ServiceName.

8. In Argument Value, enter the name of your own custom service.

*Figure 6–6 System Argument Window for API Component*
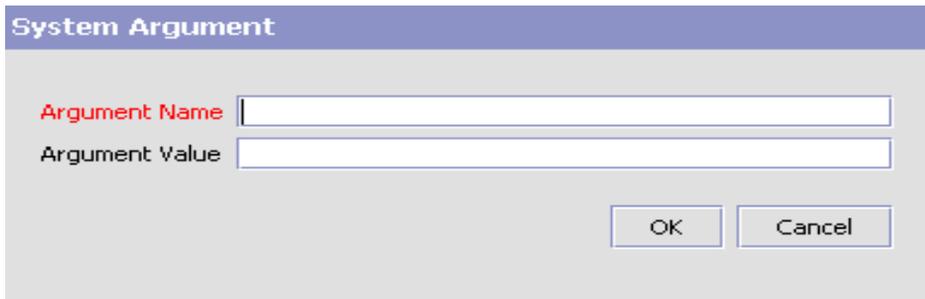


**Note:** The Sterling Customer Order Management PCA reference implementation provides a demo service YCD_ExecuteCollectionCreditCard_1.0 service to integrate with the external payment system.

The expected output of the YCD_ExecuteCollectionCreditCard_Proxy_1.0 service is in the following XML format:

```
<Payment ResponseCode="" AsynchRequestProcess="" AuthAVS="" AuthCode=""
AuthorizationAmount="" AuthorizationExpirationDate="" AuthorizationId=""
AuthReturnCode="" AuthReturnFlag="" AuthReturnMessage="" AuthTime=""
BPreviousInvocationSuccessful="" CollectionDate="" DisplayPaymentReference1=""
HoldOrderAndRaiseEvent="" HoldReason="" InternalReturnCode=""
```

```
InternalReturnFlag="" InternalReturnMessage="" PaymentReference1=""
PaymentReference2="" PaymentReference3="" RequestID="" RetryFlag=""
SCVVAuthCode="" SuspendPayment="" TranAmount="" TranRequestTime=""
TranReturnCode="" TranReturnFlag="" TranReturnMessage="" TranType=""/>
```

The value of the `ResponseCode` attribute returned by the user exit determines how to handle the order, if the payment method fails the validation:

If the payment processing fails for any reason, the `COLLECTION_FAILED` is raised by the YFSCollectionCreditCardUE user exit. The event calls the `YCDOnCollectionFailure` action, which invokes the YCD_ProcessCollectionFailure_1.0 service, responsible for calling the appropriate alert service depending on the ResponseCode.

- APPROVED—This response code returns if the authorization or charge was successful.

- HARD_DECLINᴇ—This response code returns if the authorization or charge fails because the card is invalid. For example, a lost or stolen credit card.

  In this case, the order's strike count is increased by 1. The strike count represents how many times an order has had its payment declined with a `HARD_DECLINE` response code. The maximum allowed number of strikes is configurable. For more information about strike limit configuration, see Section 6.9.3.5, "Strike Limit Configuration".

  - If the strike count is higher than the maximum allowed number of strikes, the payment method is marked not to retry authorization, suspended, updated with the failure details, and the YCD_PaymentAuthRetryLimitAlert_1.0 alert service invoked. The alert is sent to the Payment Auth Retry Limit Reached queue, which is monitored by the Fraud Analyst Group users.

  - If the strike count is lower than the maximum allowed number of strikes, the payment method is marked not to retry authorization, suspended, updated with the failure details, and the YCD_PaymentHardDeclinedAlert_1.0 alert service is invoked. The alert is sent to the Payment Hard Declined queue, which is monitored by the Fraud Analyst Group users.

- SOFT_DECLINE and BANK_HOLD—This response code is returned if the authorization or charge fails because the card was declined. For example, an invalid CVV number or insufficient funds.

The payment method is marked not to retry authorization, suspended, updated with the failure details, and the YCD_PaymentDeclinedAlert_1.0 alert service invoked. The alert is sent to the `Payment Declined` queue, which is monitored by the CSR Group users.

- SERVICE_UNAVAILABLE—This response code returns if the credit card authentication service could not be reached.

  The payment method is marked as retry charge, is not suspended, not updated with the failure details, and the YCD_PaymentServiceUnavailableAlert_1.0 alert service is invoked. The alert is sent to the Payment Service Unavailable queue, which is monitored by the System Group users.

For more information about error handling in payment processing, see Section 6.9.3.4, "Payment Processing Error Handling".

### 6.9.3.2 Stored Value Card Implementation

The Stored Value Cards do not need to be authorized. It needs to be only charged. In order for stored value cards to be charged, you must implement the YFSCollectionStoredValueCardUE user exit. This user exit takes its input from the executeCollection API. From that input, the following XML is created, and passed to a java class which in turn calls the YCD_ExecuteCollectionSVC_1.0_Proxy service, a pointer to the YCD_ExecuteCollectionSVC_1.0 service responsible for integrating with the external payment system:

```
<Payment AuthorizationId="" BillToAddressLine1=""
BillToCity="" BillToCountry="" BillToDayPhone=""
BillToEmailId="" BillToFirstName="" BillToId="" BillToKey=""
BillToLastName="" BillToState="" BillToZipCode=""
bPreviouslyInvoked="" ChargeTransactionKey="" ChargeType=""
CreditCardExpirationDate="" CreditCardName="" CreditCardNo=""
CreditCardType="" Currency="" CustomerAccountNo=""
CustomerPONo="" DocumentType="" EnterpriseCode=""
MerchantId="" OrderHeaderKey="" OrderNo=""
PaymentReference1="" PaymentReference2="" PaymentReference3=""
PaymentType="" RequestAmount="" ShipToAddressLine1=""
ShipToCity="" ShipToCountry="" ShipToDayPhone=""
ShipToEmailId="" ShipToFirstName="" ShipToId="" ShipTokey=""
ShipToLastName="" ShipToState="" ShipToZipCode="" SvcNo="">
```

You should create your own custom service to handle the integration with the external payment system, and modify the YCD_ExecuteCollectionSVC_Proxy_1.0 service to point to your service.

To modify YCD_ExecuteCollectionSVC_Proxy_1.0 service to use your own custom service, perform following steps:

1. Launch the Sterling Supply Chain Applications Configurator.

2. From Distributed Order Management > Document Specific > Sales Order > Fulfillment > Fulfillment Process Model > Service Repository > Payment Processing

3. From the application rules side panel, select YCD_ExecuteCollectionSVC_Proxy_1.0 service.

4. Select the Execute Collection Check API component.

5. Select the Arguments tab.

6. Click ![plus icon]. The Service Argument window displays as shown in .

7. In Argument Name, enter ServiceName.

8. In Argument Value, enter the name of your own custom service.

> **Note:** The Sterling Customer Order Management PCA reference implementation provides a demo service YCD_ExecuteCollectionSVC_1.0 service to integrate with the external payment system.

The expected output of the user exit is in the following XML format:

```
<Payment ResponseCode="" AsynchRequestProcess="" AuthAVS=""
AuthCode="" AuthorizationAmount="" AuthorizationId=""
AuthReturnCode="" AuthReturnFlag="" AuthReturnMessage=""
DisplayPaymentReference1="" DisplaySvcNo=""
HoldOrderAndRaiseEvent="" HoldReason="" PaymentReference1=""
PaymentReference2="" PaymentReference3="" RequestID=""
RetryFlag="" SuspendPayment="" SvcNo="" TranAmount=""
TranRequestTime="" TranReturnCode="" TranReturnFlag=""
TranReturnMessage="" TranType=""/>
```

The value of the `ResponseCode` attribute returned by the user exit determines how the order is handled if the payment method fails the validation:

- APPROVED—This response code is returned if the charge was successful.

- DECLINED—This response code is returned if the charge failed.

  The payment method is marked not to retry charge, suspended, updated with the failure details, and the YCD_PaymentDeclinedAlert_1.0 alert service invoked. The alert is sent to the `Payment Declined` queue, which is monitored by the CSR Group users.

- SERVICE_UNAVAILABLE—This response code is returned if the authentication service could not be reached.

  The payment method is marked as retry charge, is not suspended, not updated with the failure details, and the YCD_PaymentServiceUnavailableAlert_1.0 alert service invoked. The alert is sent to the Payment Service unavailable queue, which is monitored by the System Group users.

For more information about error handling in payment processing, see Section 6.9.3.4, "Payment Processing Error Handling".

### 6.9.3.3 Return Check Implementation

In order for a charge to be issued for the refund check, you must implement the YFSCollectionOthersUE user exit.

The executeCollection API passes its output to the user exit. From that input, the following XML is created, and passed to the YCD_ExecuteCollectionRefundCheck_Proxy_1.0 proxy service, which is the pointer to the YCD_ExecuteCollectionRefundCheck_1.0 service responsible for integrating with the external payment system:

```
<Payment AuthorizationId="" BillToAddressLine1=""
BillToCity="" BillToCountry="" BillToDayPhone=""
BillToEmailId="" BillToFirstName="" BillToId="" BillToKey=""
BillToLastName="" BillToState="" BillToZipCode=""
bPreviouslyInvoked="" ChargeTransactionKey="" ChargeType=""
CreditCardExpirationDate="" CreditCardName="" CreditCardNo=""
CreditCardType="" Currency="" CustomerAccountNo=""
```

```
CustomerPONo="" DocumentType="" EnterpriseCode=""
MerchantId="" OrderHeaderKey="" OrderNo=""
PaymentReference1="" PaymentReference2="" PaymentReference3=""
PaymentType="" RequestAmount="" ShipToAddressLine1=""
ShipToCity="" ShipToCountry="" ShipToDayPhone=""
ShipToEmailId="" ShipToFirstName="" ShipToId="" ShipTokey=""
ShipToLastName="" ShipToState="" ShipToZipCode="" SvcNo="">
```

You must create your own custom service to integrate with the external payment system, and modify the YCD_ExecuteCollectionRefundCheck_Proxy_1.0 service to point to your service.

To modify YCD_ExecuteCollectionRefundCheck_Proxy_1.0 service to use your own custom service, perform following steps:

1. Launch the Sterling Supply Chain Applications Configurator.

2. From Distributed Order Management > Document Specific > Sales Order > Fulfillment > Fulfillment Process Model > Service Repository > Payment Processing

3. From the application rules side panel, select YCD_ExecuteCollectionRefundCheck_Proxy_1.0 service.

4. Select the Execute Collection Check API component.

5. Select the Arguments tab.

6. Click ➕. The Service Argument window displays as shown in .

7. In Argument Name, enter ServiceName.

8. In Argument Value, enter the name of your own custom service.

> **Note:** The Sterling Customer Order Management PCA reference implementation provides a demo service YCD_ExecuteCollectionRefundCheck_1.0 service to integrate with the external payment system.

The expected output of the YCD_ExecuteCollectionRefundCheck_Proxy_1.0 service is in the following XML format:

```
<Payment AuthCode="" AuthorizationAmount="" AuthorizationId=""
AuthReturnCode="" AuthReturnFlag="" AuthReturnMessage=""
DisplayPaymentReference1="" HoldOrderAndRaiseEvent=""
HoldReason="" RequestID="" RetryFlag="" SuspendPayment=""
TranAmount="" PaymentReference1="" PaymentReference2=""
PaymentReference3="" TranReturnCode="" TranReturnFlag=""
TranReturnMessage="" TranType=""/>
```

The user exit should return the `PaymentReference1`, `PaymentReference2` and `PaymentReference3` as Check Number, Check Amount, and Check Reference, respectively.

### 6.9.3.4 Payment Processing Error Handling

When user exits receive response codes from the Payment Server, they raise the COLLECTION_FAILED event if the collection fails for any reason. That event calls the YCDOnCollectionFailure action, which invokes the YCD_ProcessFailure_1.0 service.

This service examines the response code and calls one of the defined alert services to send notification to the appropriate queue. Figure 6–7 illustrates the Process Collection Failure service.

*Figure 6–7   The YCD_ProcessCollectionFailure_1.0 Service*
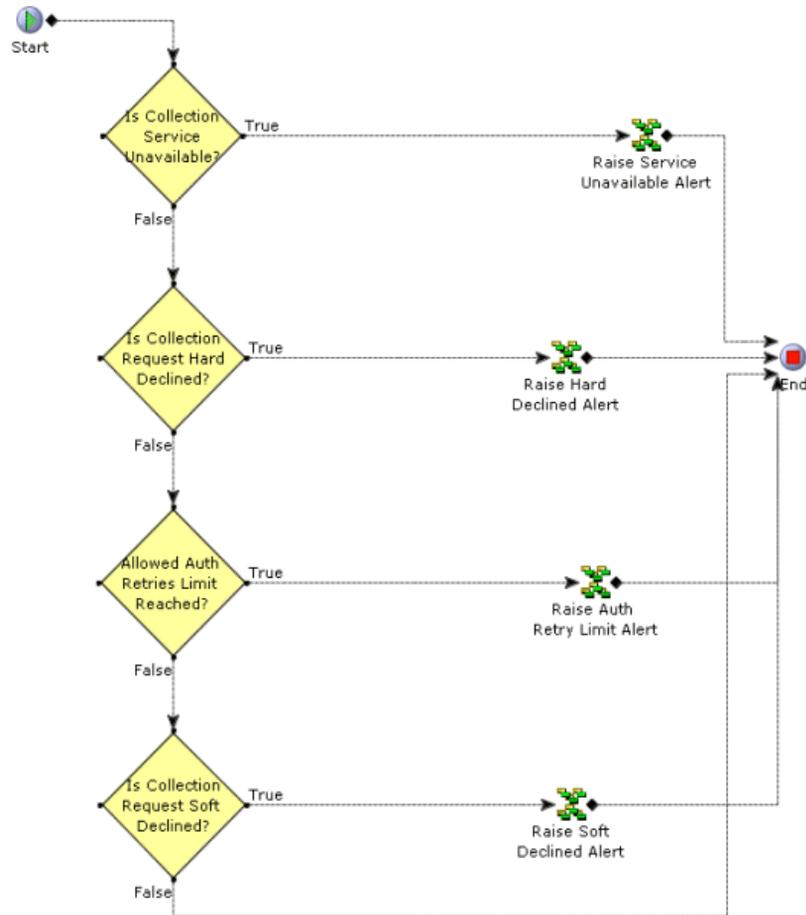


All services can be accessed through the Sterling Supply Chain Applications Configurator in the Platform module at the Sales Order document type level, in the Payment Processing branch service definitions tree.

The XML passed by the COLLECTION_FAILED event to the YCD_ProcessCollectionFailure_1.0 service is found in the following file:

`<YFS_HOME>/documentation/api_javadocs/XML/`YFS_PAYMENT_EXECUT ION.CHARGE_FAILED_XML.xml

For an example of how an error in payment processing is handled in the Sterling Customer Order Management PCA, see Section , "Example: HARD_DECLINE response code on credit card collection attempt".

For a list of the alert services defined by default in the Sterling Customer Order Management PCA, see Section 6.9.3.4.1, "Alert Services".

**Example: HARD_DECLINE response code on credit card collection attempt**

If the Payment Server returns the HARD_DECLINE response code to the YFSCollectionCreditCardUE user exit on an order that hasn't been declined before, it raises the COLLECTION_FAILED event, which invokes the YCD_ProcessCollectionFailure_1.0 service through the YCDOnCollectionFailure action.

This service evaluates the XML output of the COLLECTION_FAILED event, whether or not the payment service is available (which is false). Then, the service evaluates whether the collection service is hard declined (which is true).

Therefore, the YCD_PaymentHardDeclinedAlert_1.0 service invokes, which sends an alert to the Payment Hard Declined queue, which is typically monitored by the user as illustrated in Figure 6–8.

*Figure 6–8   The YCD_PaymentHardDeclinedAlert_1.0 Service*



### 6.9.3.4.1  Alert Services

By default, the following services are defined by in the Sterling Customer Order Management PCA to send alerts in case of payment failure:

- YCD_PaymentHardDeclinedAlert_1.0

- YCD_PaymentServiceUnavailableAlert_1.0

- YCD_PaymentAuthRetryLimitAlert_1.0

- YCD_PaymentDeclinedAlert_1.0

If you need to change the queue to which payment alerts are sent, you can edit the Alert Queue Name field on the General tab in the alert properties for the appropriate service.

### 6.9.3.5 Strike Limit Configuration

A strike is given to an order when a credit card is declined by the payment server with HARD_DECLINE as a response code. An order that has had several credit cards declined because they were stolen or invalid can be considered to be fraudulent. You may want to build a mechanism that cancels the order automatically in that case.

You can define how many strikes an order can receive before an alert is sent to the fraud analyst. For more information about configuring the strike limit, see Section 4.9.5, "Configuring Payment Failure Rules".

# 6.10 Order Monitoring

After the orders have been captured, validated, paid for, and their processing has begun, they need to be monitored to ensure that customers are notified when the order is about to ship, or whether the promised delivery dates are going to be met.

Currently, the Sterling Customer Order Management PCA supports the following aspects of order monitoring:

- Federal Trade Commission Compliance

- Shipment Notification

- Order Cancellation Notification

## 6.10.1 Federal Trade Commission Compliance

The United States Federal Trade Commission (FTC) defines rule that retailers must follow when dealing with customer orders. One of them deals with mail or telephone order merchandise rules.

This rule states that:

- A notification must be sent to a customer if the promised ship date cannot be met, and specifying a second promised ship date.

- If the second promised ship date cannot be met, the order should be cancelled.

In a retail scenario, ship dates should be calculated based on business advertising. For example, if a web site promises that items that are on-hand is shipped within ten days, the promised ship date should be ten days past the date of the order capture. If a time frame is not advertised by the retailer, the FTC stipulates that an order must be shipped within thirty days of the order capture.

If it becomes apparent that the ship date will not be met, a second ship date must be calculated, that cannot be more than 30 days past the first ship date. A notification should be sent to the customer informing them of the shipment failure, along with the second ship date. If for any reason the notice could not be received by the customer, the order is expected to be cancelled by the end of the day corresponding to the first ship date.

After a second ship date has been calculated, and before that date, it becomes apparent that the order will not be completely delivered on time, a notification should be sent to the customer stating that the ship date is unknown, and the order should be cancelled on the second ship date.

> **Note:** For all of the above cases, if a customer does not have an e-mail address, an alert is raised.

### 6.10.1.1  Solution

The Sterling Customer Order Management PCA monitors orders from end-to-end and assists you in abiding by the FTC rules by tracking. To do this, three values: the first promised delivery date, the second promised delivery date, and the back ordered quantity on an order line for which the customer has been notified. This solution focuses on promised delivery dates instead of the promised ship dates because the delivery date is the driving date as far as the customer is concerned.

### Dates calculation

The first promised delivery date is determined to be equal to the following, in order of priority:

1. The first promised delivery date specified at order creation time
2. The requested delivery date
3. The system date + a fixed number of days

The second delivery date is defaulted to first delivery date + 30 days, since it is the maximum second delivery date allowed by the FTC.

When passing the first promised delivery date to the createOrder or changeOrder API, use ActualDate and specify DateTypeId as YCD_FIRST_PDD:

```
<OrderDates>
    <OrderDate ActualDate="20050807" DateTypeId="YCD_FIRST_PDD"/>
</OrderDates>
```

When passing the second promised delivery date to the createOrder or changeOrder API, use ActualDate and specify DateTypeId as YCD_SECOND_PDD:

```
<OrderDates>
    <OrderDate ActualDate="20050906" DateTypeId="YCD_SECOND_PDD"/>
</OrderDates>
```

Any call to the changeOrder API to change an order with a modification type of ADD_LINE re-runs this logic for new order lines.

### Backorder Notifications

When the quantity of an order line is backordered, an e-mail notification is sent to the customer informing them of the backorder through the ON_BACKORDER event which is raised by the Schedule Order, the Release Order, and the Change Release transactions. Since the ON_BACKORDER event is raised every time the Schedule Order, Release Order or Change Release transaction backorders a line (including an already backordered line or a line that has been backordered at one point in the past), the quantity that the customer has been notified is tracked so that they only receive a notification for newly backordered lines. Therefore, if a line is backordered by Schedule Order, the customer is notified of the backorder at that time. If the line gets scheduled by Schedule and then backordered by Release Order or Change Release, the customer will not be notified a second time.

### First Delivery Failure Notification

The first FTC notification is sent 48 hours before the first promised delivery date if the customer has an e-mail address, or 120 hours before the second promised delivery date. This is achieved by defining a monitoring rule that raises events when a line does not have its entire

quantity shipped or cancelled. The events are consolidated at the order level.

Each line, with the applicable quantity, is included in the notice to the customer, along with a second promised delivery date. The notice informs the customer that the order will likely not be delivered on the first promised date, and that if the customer does not reply, it is assumed that the delay is approved.

### Second Delivery Failure Notification

Like the first FTC notification, the second is sent 120 hours before the second promised delivery date, if the order is not completely shipped or cancelled. The notification is identical to that of the first delivery failure notification, except that it states that if the customer does not explicitly request the order to remain open, it is cancelled automatically on the second promised delivery date.

### Auto-cancellation Notice

On the second promised delivery date, any remaining open quantity on the order is cancelled, and a notification is sent to the customer informing them of the cancellation in compliance with FTC regulations. All cancelled quantity on the order is listed in the notification, even if some of the quantity was cancelled prior to auto-cancellation.

> **Note:** All notifications, by default, are sent to the user alert queue.

### 6.10.1.2 End-User Impact

When a notification needs to be sent to a customer who do not have an e-mail address, an alert is sent to a queue. By default, this alert is monitored by the user.

The user has to contact the customer, either by phone or mail, and inform them of the problem with the order.

### 6.10.1.3 Implementation

The services called by the Sterling Customer Order Management PCA to send notifications to customers can be customized as needed.

The following services can be found in the Sterling Supply Chain Applications Configurator, in the Platform Module under the `Sales Order` document type:

- YCD_FTCFirstNotificationMail_1.0—This service is used to raise the first notification alert to inform the customer. It is invoked by the YCDFTCMonFirstDelayNoticeMail monitor event. Figure 6–9 illustrates this service.

*Figure 6–9   The YCD_FTCFirstNotificationMail_1.0 service*
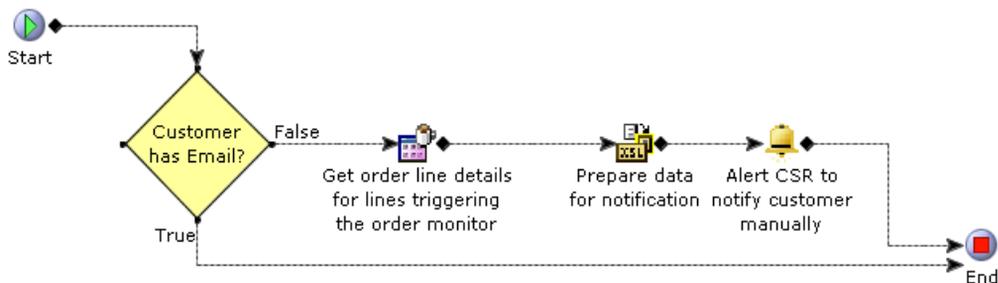


- YCD_FTCFirstNotificationEmail_1.0—This service is used to e-mail the first notification to the customer. It is invoked by the YCDFTCMonFirstDelayNoticeEmail monitor event. Figure 6–10 illustrates this service.

*Figure 6–10   The YCD_FTCFirstNotificationEmail_1.0 service*
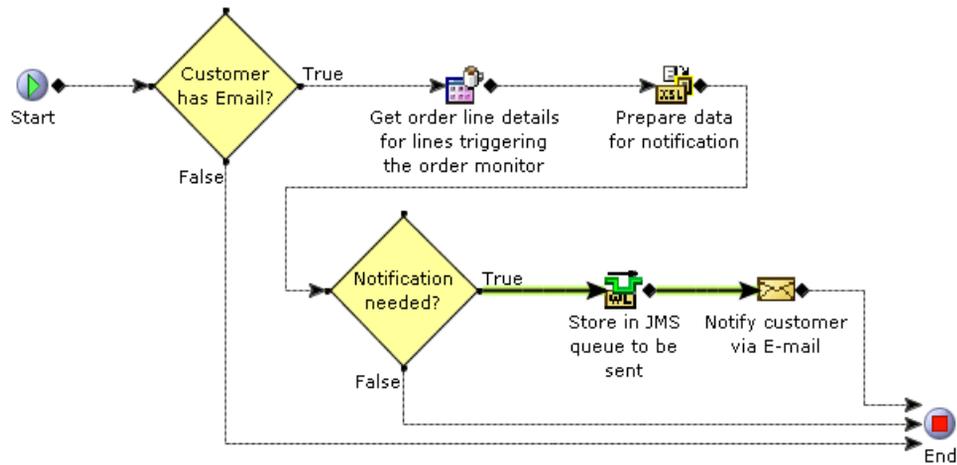


- YCD_FTCSecondNotification_1.0—This service is used to raise the second notification alert to inform customer or e-mail directly if the customer has an e-mail address. It is invoked by the YCDMonSecondDelayNotice monitor event. Figure 6–11 illustrates this service.

*Figure 6–11   The YCD_FTCSecondNotification_1.0 service*
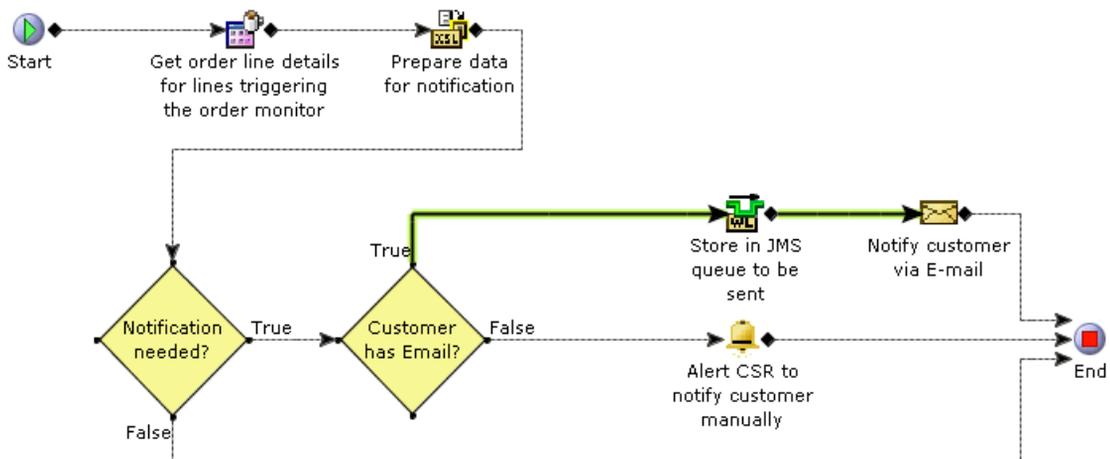


- YCD_FTCAutoCancel_1.0—This service is used for sending notifications when the order is automatically cancelled. The notification is sent when the changeOrder API cancels the order. For more information about order cancellation notification, see Section 6.10.3, "Order Cancellation Notification". This service is invoked by the YCDFTCMonAutoCancel monitor event. Figure 6–12 illustrates this service.

*Figure 6–12   The YCD_FTCAutoCancel_1.0 service*
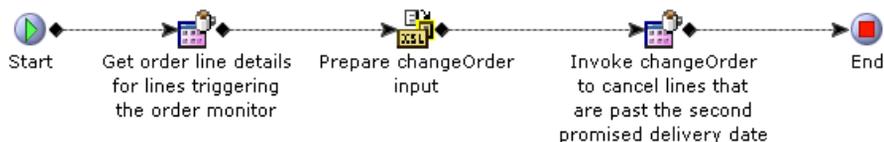


- YCD_OnBackorder_1.0—This service is invoked by the YCDOnBackorder action, called by the ON_BACKORDER event raised by the Schedule Order, Release Order and Change Release transactions when a backorder occurs. It calls the handleBackorder API, which in turns invokes the YCD_SendBackorderNotification_1.0 service. Figure 6–13 illustrates this service.

*Figure 6–13　The YCD_OnBackorder_1.0 service*
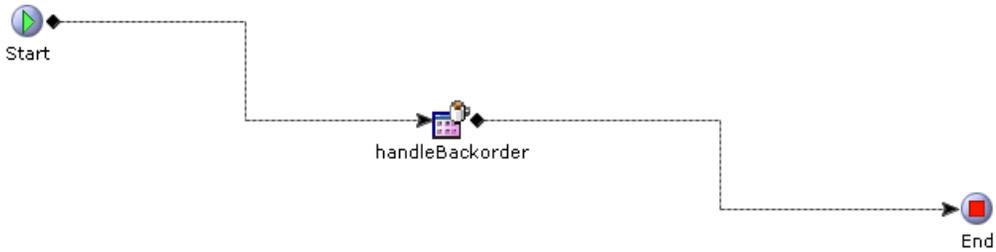


- YCD_SendBackorderNotification_1.0—This service can either send an e-mail to the customer or raise an alert depending on whether the customer has an e-mail address defined. It is invoked by the handleBackorder API. Figure 6–14 illustrates this service.

*Figure 6–14　The YCD_SendBackorderNotification_1.0 service*
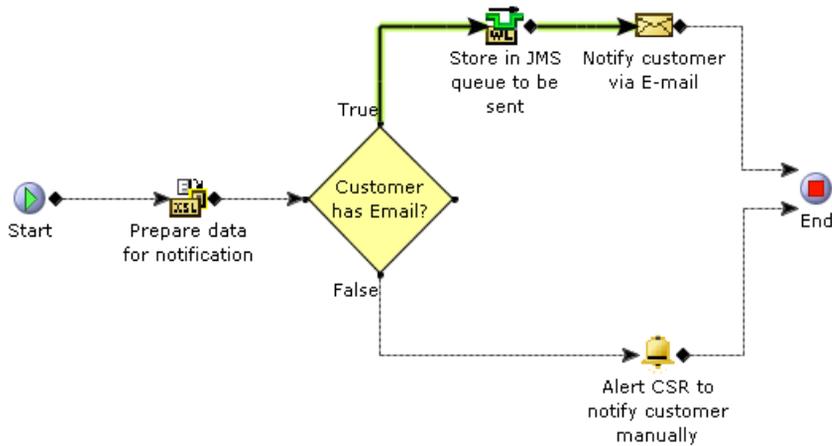


- YCD_UpdateBackorderOnCancel_1.0—This service is invoked by the YCD_CancelOrderNotification_1.0 service upon order cancellation. It removes the appropriate backordered quantity that the customer has been notified from the order line. For example, if an order with 6 backordered quantity has a quantity of 3 cancelled, the backordered quantity that the customer has been notified is reduced to 3. Figure 6–15 illustrates this service.
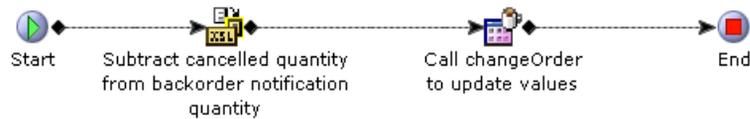
- YCD_SetOrderDefaults_1.0 and
  YCD_SetOrderDefaultsOnChange_1.0—These two services are
  invoked as the beforeCreateOrderUE and beforeChangeOrderUE
  user exits, respectively, which are called by the createOrder and
  the changeOrder APIs. For more information about user exits and
  APIs, see the *Sterling Supply Chain Applications Javadocs*. These
  services are used, in part, to set the promised delivery dates.
  Under the Arguments tab of the Set Order Promised Dates
  component in both services, configure the advertised promised
  date used to calculate the first promised delivery date and how
  many days after the first promised date the second promised date
  is set to by default (this value cannot exceed 30). Figure 6–16
  illustrates this service.

Depending on the service you are configuring, you may need to configure
the Alert or E-mail sender components.

### Configuring the Alert Component

If the service raises an alert, the Alert component must be configured
accordingly. In particular, set the Alert Queue Name field to the queue
where the alert must be sent, which by default is set to the user queue.
Additionally, specify the XSL used for the template of the alert in the
Template Name field.

For more information about default XSLs, see Section , "Configuring
Templates".

For more information about component nodes, see the *Sterling Supply
Chain Applications Platform Configuration Guide*.

### Configuring the E-mail Component

If the service sends an e-mail notification, the E-mail component must be configured accordingly. In particular, set the E-mail Server field to the ID of the mail server used to send notifications. Additionally, specify the XSL used for the template of the e-mail in the Template Name field.

The Configuring Templates section provides more information about default XSLs.

For more information about the e-mail component, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

### Configuring Templates

The XSL components are used to convert output XMLs into HTML messages sent to the customers through the e-mail components of the services. By default, the names of all XSL files provided by the Sterling Customer Order Management PCA end with a `.sample` extension. Copy these into a new XSL file without the `.sample` extension, customize your XSL files as needed, and update the Template Name field of the E-mail Sender components of the relevant services.

The following XSLs are used as the templates of the notification e-mail components in the default implementation of this feature:

- `<YFS_HOME>/template/email/YCD_FTCFirstNotification.xsl.sample` : This XSL formats the HTML message that is sent by e-mail to the customer for the first notification.

- `<YFS_HOME>/template/email/YCD_FTCSecondNotification.xsl.sample`: This XSL formats the HTML message that is sent by e-mail to the customer for the second notifiation.

- `<YFS_HOME>/template/email/YCD_CancelOrderNotification.xsl.sample`: This XSL formats the HTML message that is sent by e-mail to the customer for the auto cancel notifiation.

- `<YFS_HOME>/template/email/YCD_OnBackorder.xsl.`sample: This XSL formats the HTML message that is sent by e-mail to the customer for the backorder notifiation.

- `<YFS_HOME>/template/exception_console/YCD_FTCFirstNotification.xsl.sample`: This XSL formats the HTML message that is sent to the user so that they can inform the customer of the first notification alert if they do not have an e-mail address.

- `<YFS_HOME>/template/exception_console/YCD_FTCSecondNotificati on.xsl.sample`: This XSL formats the HTML message that is sent to the user so that they can inform the customer of the second notification alert if they do not have an e-mail address.

- `<YFS_HOME>/template/exception_console/YCD_CancelOrderNotifica tion.xsl.sample`: This XSL formats the HTML message that is to the user so that they can inform the customer of the auto cancellation alert if they do not have an e-mail address.

- `<YFS_HOME>/template/exception_console/YCD_FTCOnBackorder.xsl. sample`: This XSL formats the HTML message that is sent to the user so that they can inform the customer about the backorder alert if they do not have an e-mail address.

## 6.10.2 Shipment Notification

When an order ships out of a warehouse, it is important that the customers are notified of the shipment as a confirmation that everything is going well with the order.

### 6.10.2.1 Solution

The Sterling Customer Order Management PCA provides a shipment notification agent, which sends an e-mail to the customer containing all shipments for a given day. For each shipment entry in the YFS_SHIPMENT table, the NOTIFICATION_SENT flag is maintained, which indicates whether the notification for that shipment has been sent to the customer.

One consolidated notification is sent for all shipments in a given day that the customer has not been notified. The shipment notification does not contain line item details if the shipment is not packed in a container.

To achieve this, the Shipment Notification time-triggered transaction is defined at the `Sales Order` document type level. The transaction reads task queue entries, and if some shipments qualify for notification, the sEND_NOTIFICATION event is raised, which calls the YCD_ShipmentNotificationEmail_1.0 service, that is responsible for sending an e-mail to the customer.

The details of the shipment notification agent are as follows:

**Attributes**

*Table 6–16   Shipment Notification Agent Verification Agent Attributes*

| Attribute | Value |
|---|---|
| Base Transaction ID | SHIPMENT_NOTIFICATION |
| Base Document Type | 0001 (Sales Order) |
| Base Process Type | ORDER_FULFILLMENT (Sales Order) |
| Abstract Transaction | None |
| APIs Called | None |

**Criteria Parameters**

*Table 6–17   Shipment Notification Agent Criteria Parameters*

| Parameter | Description |
|---|---|
| Action | This field is used internally by the Sterling Customer Order Management PCA. The only valid value is Get. Do not modify this field. |
| Number of Records to Buffer | Optional. Number of records to retrieve and process at one time. If left blank or specified as 0 (zero), it defaults to 5000. |
| CollectPendingJobs | If this parameter is set to "N", the agent does not collect information on the pending jobs for this time-triggered transaction. This pending job information is used to monitor the agent in the System Management Console. |
| | By default, CollectPendingJobs is set to "Y". It can be set to "N" if one particular time-triggered transaction is performing a significant amount of getPendingJobs queries, and the overhead cost is too high. |

**Statistics Tracked**
None.

**Pending Job Count**
The number of orders for which a shipment notification has to be sent.

**Events Raised**

The following events are raised by this time-triggered transaction:

*Table 6–18   Events Raised by the Shipment Notification Agent*

| Transaction/Event | Key Data | Data Published | Template Support? |
|---|---|---|---|
| SEND_NOTIFICATION | order_dbd.txt | SHIPMENT_NOTIFICA TION.SEND_NOTIFIC ATION.0001.xml | Yes |

### 6.10.2.2 End-User Impact

None.

### 6.10.2.3 Implementation

When the Shipment Notification agent raises the SEND_NOTIFICATION event, the XML used as input to the YCD_ShipmentNotificationEmail_1.0 service is in:

```
<template>/event/SHIPMENT_NOTIFICATION.SEND_NOTIFICATION.0001.
xml
```

> **Note:**  Sterling Commerce recommends that the Shipment Notification agent be run once a day, at the end of the day.

You can customize the YCD_ShipmentNotificationEmail_1.0 service as needed. By default, this service checks whether the customer has an e-mail address, and if that is the case sends the e-mail using the E-mail Sender component. Figure 6–17 illustrates YCD_ShipmentNotificationEmail_1.0 service.

*Figure 6–17   The YCD_ShipmentNotificationEmail_1.0*
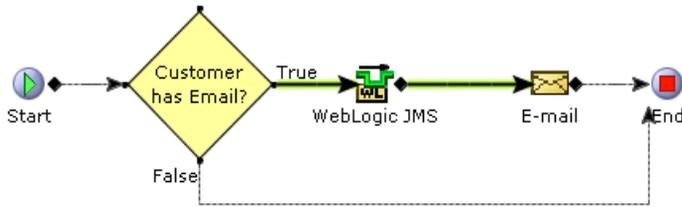


You must specify the e-mail server and e-mail server listener port in the properties of the E-mail Sender component. In the Body Template field, specify XSL used to generate the HTML message that is sent to the customer. By default, the XSL used is in the following file:

`<YFS_HOME>/template/email/YCD_ShipmentNotification.xsl.sample`

Copy this XSL file, remove the `.sample` extension, customize it as needed, and specify it in the Body Template field of the E-mail Sender component.

For more information about service builder nodes and parameters, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

## 6.10.3  Order Cancellation Notification

You may cancel the orders for various reasons: when a customer does not want the order that is placed, by mistake, a duplicate is created, or the payment methods on the order turn out to be fraudulent.As soon as you cancel the order, make sure you send a notification to the customer.

### 6.10.3.1  Solution

The Sterling Customer Order Management PCA provides a service that handles e-mail notification when an order is successfully cancelled.

When an order is cancelled through the changeOrder API, the ON_CANCEL event is raised, which invokes the YCD_CancelOrderNotification_1.0 service through the YCDOnCancel action.

Before sending the notification, the service attempts to close all open alerts on the order if all order lines in that order have been cancelled. A notification is sent to the customer if they have an e-mail address

defined. Otherwise, an alert is sent to the user to indicate that the user must inform the customer about the order cancellation.

Orders that are automatically cancelled when promised delivery dates are not met can be notified to the customer using this feature. For more information about order cancellation due to passed promised delivery dates, see Section 6.10.1, "Federal Trade Commission Compliance". The message sent to the customer depends on the reason, either an automatic cancellation or a regular cancellation. Figure 6–18 illustrates the YCD_CancelOrderNotification_1.0 service.

*Figure 6–18   YCD_CancelOrderNotification_1.0 Service*
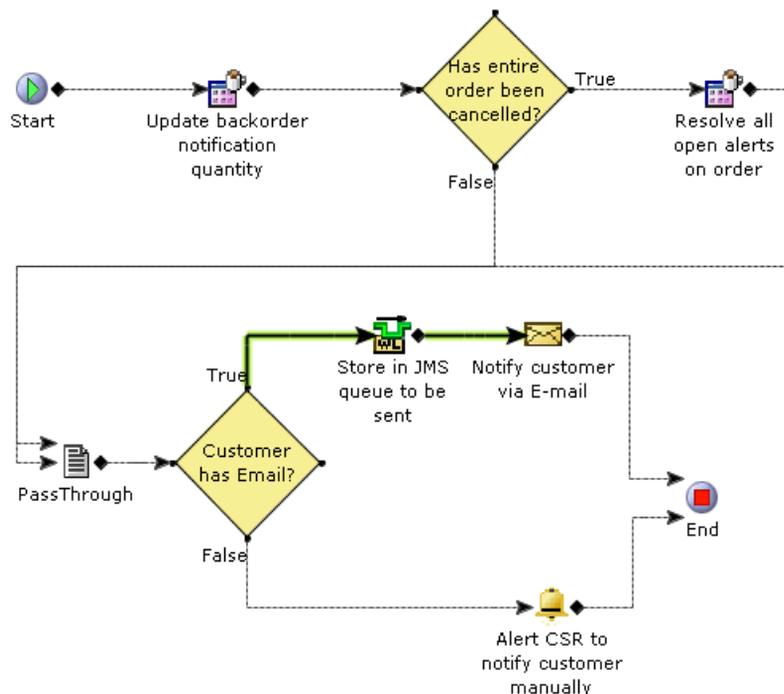


This service calls the getOrderDetails API to retrieve the relevant order information, and passes it on to an e-mail service that will send the information to the customer, in html format, converted by an XSL.

Although the solution above is provided with the Sterling Customer Order Management PCA, you may need to enhance the service to account for the e-mail service being potentially down. The suggested solution is

instead if calling the getOrderDetails API, pass on the output XML of the ON_SUCCESS event to a queue of your choice (for example, a JMS queue), and check to see if the e-mail server is up. If it is down, leave the notification in the queue, and try to reprocess it at a later time. If it is up, call the XSL to convert the XML in the queue to HTML, and send the e-mail to the customer.

### 6.10.3.2 End-User Impact

If an ordered is cancelled and the customer does not have an e-mail address defined, an alert is sent to the `Customer Notification` queue. By default, the user monitors this queue and informs the customer about cancellation.

### 6.10.3.3 Implementation

Unless you do not want to use this feature, ensure that the `ON_CANCEL` event is active in the Change Order transaction, and that the `YCDOnCancel` action invokes the YCD_CancelOrderNotification_1.0 service.

By default, this feature is turned off because the ON_SUCCESS event is disabled. If you want to use this feature, enable the ON_SUCCESS event for the Confirm Draft Order and Create Order transactions in the Sterling Supply Chain Applications Configurator, for the Consumer Direct Order Fulfillment document type.

The template used by the E-mail Sender component of the service to format the output XML of the getOrderDetails API into an HTML that is e-mailed to the customer is found in the following file:

`<YFS_HOME>/template/email/YCD_CancelOrderNotification.xsl.sample`.

Copy this file, name it `CancelOrderNotification.xsl`, customize it as needed, and specify the XSL used to generate the HTML message in the Body Template field of the service's E-mail Sender component.

# 6.11 Order Maintenance

You can modify orders that are created and captured in the Sterling Customer Order Management PCA. For example, customers may call the user to change the payment type on their order, their bill-to address, or

because they are dissatisfied with a late shipment. Therefore, it is very important to maintain orders.

The Sterling Customer Order Management PCA provides the following order maintenance features:

- Resolving Holds
- Changing Payment Method
- Add Line
- Add Multiple Items to an Order
- Change Gift Options
- Price Match
- Reship
- Initiate Return
- Add Coupon
- Cancel Order
- Track an Item
- Order Notes
- Changing Service Instructions
- Changing Service Appointments
- Changing Fulfillment Options
- Fulfillment Summary
- Increasing Order Line Quantity
- Reservations
- Changing Order Address

## 6.11.1 Resolving Holds

The Sterling Customer Order Management PCA enables you to resolve holds applied to an entire order or to just certain order lines. In some retail environments, holds are automatically applied to an order during order modifications. A user resolve these holds only if the user belongs to a user group that has permissions to resolve holds on orders and order

lines. A user cannot manually put an order on hold within the Sterling Customer Order Management PCA user interface.

### 6.11.1.1 Solution

The Sterling Customer Order Management PCA enables a user to manually resolve holds on orders and order lines. It also provides the ability to control which users can resolve which types of holds.

### 6.11.1.2 End-User Impact

A user can resolve holds on an order or an order line if that user belongs to a user group that has permissions to resolve holds. Once the hold on the order is resolved, the user can modify the order or order line.

### 6.11.1.3 Implementation

To resolve holds on an order or order line, configure the following rules to grant permissions:

- Any User Can process this Hold

- Users Belonging To The Following User Groups Can Process This Hold

For more information about hold types, see the *Sterling Distributed Order Management Configuration Guide*.

### 6.11.1.4 Reference Implementation

The YCD_HOLD_INFO Note Type is applicable for order holds. You can use the data provided in the Reference Implementation to grant permissions to CSRs to remove address verification and duplicate order holds.

## 6.11.2 Changing Payment Method

The Sterling Customer Order Management PCA supports different types of payment. This section explains the change payment method process.

### Adding or Changing a Payment Method

Different payment types can be used to pay for an order. Sometimes, a customer may want to add a new payment method or change the existing payment method.

### Credit Card Validation

All credit cards follow a pattern in their number depending on their type. For example, the first two digits of all MasterCard credit cards are between 51 and 55, and the total length of a MasterCard card number is 16. An American Express card number has either 34 or 37 as its first two digits, and has a total length of 15.

Additionally, all numbers of a credit card follow a pattern, which can be validated with Luhn's algorithm. However, this algorithm only ensures that the given credit card number is a valid number. It does not ensure that it exists in any bank database.

It is useful to run this validation every time a new credit card number is added to save payment processing validations, which will fail every time against an invalid number.

### Viewing Sensitive Payment Information

The sensitive payment information such as a credit card number, SVC number, customer's account number, and so forth are encrypted. The Sterling Customer Order Management PCA provides the capability to view decrypted sensitive payment information for users who have these permissions.

For more information about administering user group permissions, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

#### 6.11.2.1 Solution

The credit card number is validated as follows:

1. Prefix and Length Validation
2. Luhn's Algorithm

### Prefix and Length Validation

Table 6–19 specifies the exact numbers to prefix for a card number of a specific card type, and how many digits the card number must contain. For example, American Express cards all start with either 34 or 37 as their first digits, and contain 15 digits.

> **Note:** The JCB credit card type has two entries in Table 6–19. This is due to the fact that a JCB card can follow the prefix system listed in the table.

*Table 6–19   Credit Card Types*

| Credit Card Type | Prefix | Length |
|---|---|---|
| American Express | 34, or 37 | 15 |
| MasterCard | 51 through 55 | 16 |
| Visa | 4 | 13 or 16 |
| Diners Club and Carte Blanche | 36, 38, or 300 through 305 | 14 |
| Discover | 6011 | 16 |
| JCB | 2123 or 1800 | 15 |
| JCB | 3 | 16 |

When a credit card type is selected and a credit card number is entered in the Sterling Supply Chain Application Consoles, the system validates the number prefixed and length. If both are valid, the system executes Luhn's algorithm.

### Luhn's Algorithm

Luhn's algorithm determines whether or not a credit card number is valid. For a given credit card number:

1. Double the value of every other digit from right to left, beginning with the second to last digit.

2. Add the digits of the results of Step 1 to the remaining digits in the credit card number.

3. If the result mod 10 is equal to 0, the number is valid. If the result mod 10 is not equal to 0, the validation fails.

**Example**

A credit card of type Visa is added with the number 4624 7482 3324 9080.

This credit card number starts with 4, as it should be in all Visa cards. It also has 16 digits, which is valid for a Visa card. Now, execute Luhn's algorithm:

**a.** Double the value of every other digit from right to left, beginning with the second to last digit.

**4**6**2**4 **7**4**8**2 **3**3**2**4 **9**0**8**0:

- – 8*2 = 16
- – 9*2 = 18
- – 2*2 = 4
- – 3*2 = 6
- – 8*2 = 16
- – 7*2 = 14
- – 2*2 = 4
- – 4*2 = 8

**b.** Add the digits of the results of the previous step to the remaining digits in the credit card number.

- – The digits of the result of Step a amount to the following:
- – 1+6+1+8+4+6+1+6+1+4+4+8 = 50
- – The remaining digits in the credit card number amount to the following:
- – 6+4+4+2+3+4+0+0 = 23
- – The sum of the two sub results is:
- – 23+50 = 73

**c.** If the result mod 10 is equal to 0, the number is valid. If the result mod 10 is not equal to 0, the validation fails.

73 mod 10 is 3, therefore the card number is not valid.

A Visa credit card of number 4624 7482 3324 9780, on the other hand, passes the validation.

In the Action field:

- To activate a payment method, select Activate from the drop-down list.

- To suspend a payment method for charge, select Suspend for Charge from the drop-down list.

- To suspend a payment method for charge and refund, select Suspend For Charge And Refund from the drop-down list.

If you want to add new payment method, click Add Payment Method.

### 6.11.2.2 End-User Impact

After you enter the credit card number, click Save. The system validates the credit card number.

### 6.11.2.3 Implementation

The Sterling Customer Order Management PCA allows you to configure different credit card types. For more information about configuring different credit card types, see Section 4.9.4, "Defining Credit Card Types".

### 6.11.2.4 Reference Implementation

The following are the default payment types that are configured:

- Credit Card

- Pre-paid

- Check

- Refund Check

- Customer Account

- Stored Value Card

- Other Payment Method

The Sterling Customer Order Management PCA supports the following pre-defined credit card types:

- American Express

- Master Card

- Visa

- Diners Club
- Carte Blanche
- Discover
- JCB

## 6.11.3 Add Line

After placing an order, a customer may want to add new product pr
service items to the order, if the customer has forgotten to place the
order for product or service items earlier, or if it was unavailable at the
time of placing the initial order.

### 6.11.3.1 Solution

The call center order management application provides an add line task
which you can use to add order lines to the existing order. This section
explains the complete process of adding a new order line to an existing
order.

### Validating Whether A New Item Can Be Added

The Sterling Customer Order Management PCA allows you to validate
whether you can add a new order line to an existing order based on the
following criteria:

- Order Age—You can configure the number of days after an order is
  created to allow the addition of new order lines to an existing order.

- Order Modification rule—You can configure the order statuses for
  which the add line action is allowed.

### Searching For An Item To Be Added

The getItemListForOrdering API is called that retrieves a list of items
based on the input criteria. The list of items includes additional
information such as pricing, availability and promotions.

### Choosing The Fulfillment Option And Quantity

If an item is available that can be added to an order line, choose the
required quantity and the delivery option. The
getFulfillmentOptionsForLines API is used to obtain the available
fulfillment options, which include delivery, shipping, and pickup options

for a set of new or existing order lines. The customer can also view details about the nearby stores from where the customer can pick the item.

The getSurroundingNodeList API is called that provides a list of stores within a specified radius, from where the item can be picked up. To configure the radius for stores from where the items can be picked up, the following rules are considered:

- Distance To Consider rule—You can configure the distance from the current location for stores from where the customer can pick the items.

- UOM To Consider rule—You can configure the UOM for the distance of stores from the current location.

If the user enters the delivery address and selects the 'ship to' carrier service code, the getFulfillmentOptionsForLines API is used to determine the availability of 'delivery address' and 'carrier service' the user has input.

> **Note:** If the getFulfillmentOptionsForLines API determines that both delivery and shipping are allowed, the fulfillment method is given the preference and the UI displays the fulfillment method as "Available to Deliver".

To display the carrier service information, the Y_ANY carrier organization must be implemented with the associated carrier services.

### Choosing Accessories

The getItemListForOrdering API is used to determine the accessories for an item. The user can select fulfillment options and the quantity for each of the selected accessories.

### Choosing A Delivery Appointment

After adding the items to an order using the changeOrder API, the generateWorkOrder API is used to create any delivery lines (if the chosen delivery option is 'Delivery'), and generate work orders for the delivery lines.

The user can change appointment for any generated work order, if necessary.

### Configuring Reasons For Overriding Item Price

The item prices can be overridden during the Add Line process using the YCD_PRICEOVERRIDE common code. You can configure reasons such as substitution, price adjustment, and price match to allow override.

### 6.11.3.2 End-User Impact

The user will not be able to add new order lines to an existing order after the configured amount of days are passed. Addition of order lines to an order also depends on the status of the order. Addition of order lines is done through the status modification rules. The modification types performed for the Add Line process include:

- Add Line

- Associate Delivery Line With Product Line

- Change Appointment

### 6.11.3.3 Implementation

This section describes how to configure the Add Line rule:

1. Log in to the Sterling Customer Order Management Configurator. For more information about logging in to the application, see Section 2.1, "Starting the Sterling Customer Order Management Configurator".

2. From the Sterling Customer Order Management Configurator, select Configure Order Administration > Advanced Configurations > Add Line Rules.

3. In the Maximum Number Of Days After Order To Allow Adding An Order Line field, enter the number of days allowed to add an order line.

4. From the Sterling Supply Chain Applications Configurator, select Configure Order Administration > Configure Order Modification Rules > Add Line > Order.

5. Select the order statuses for which the add line action is allowed.

6. From the Sterling Customer Order Management Configurator, select Order Promising > Store Pickup Rules.

- Check The Enterprise Allows Pickup From Store Fulfillment box to indicate that an item is available for pick up.

- In Distance To Consider When Finding Nearby Stores field, enter the appropriate distance.

- In Distance UOM, enter the appropriate UOM for the distance.

**7.** Click Save.

To define the Y_ANY carrier service.

**1.** From the Sterling Customer Order Management Configurator, select Configure Outbound Logistics > Define Carriers > Roles and Participation > Carrier Attributes > Parcel Services.

**2.** Define the Y_ANY carrier service. For more information about defining carrier services, see the *Sterling Logistics Management Configuration Guide*.

### 6.11.3.4 Reference Implementation

This section explains the default values that are provided to configure rules to add an order line.

- The maximum number of days allowed after an order is created to allow addition of new order lines to an existing order is 30.

- If pickup from a store is allowed for the items of the order, the distance radius to consider when finding nearby stores is 25 miles.

The following reasons are configured in the YCD_PRICEOVERRIDE common code:

- Substitution

- Price Adjustment

- Price Match

All rules for the Add Line task are defined for the "XYZ-ONLINE" organization.

## 6.11.4 Add Multiple Items to an Order

After placing an order, a customer may want to add more of an item, new items or service items to the order. The call center order management application enables you to add multiple items to an order.

### 6.11.4.1 Solution

This section explains the process of adding multiple items to an order.

### Validating Whether New Items Can Be Added

The call center order management application enables you to validate if new order lines can be added to an existing order based on any of the following criteria:

- Order Age—You can configure the number of days after an order is created to allow the addition of new order lines to an existing order.

- Order Modification rule—You can configure the order statuses for which you can add multiple items to an order.

### Identifying an Item and Checking for Availability

When you scan items of the order using the barcode scanner, the translateBarCode API is used to translate and validate the barcode of the item. You can also scan the alternate item identifiers. You can search for service items. The getItemListForOrdering API is called to retrieve description, price, accessories, and unit of measure of the item scanned. The getFulfillmentOptionsForLines API is used to determine the available fulfillment options which include delivery, shipping, and pickup for the newly added order lines. The user can disable the availability checks when the inventory is maintained externally as the user is aware of the inventory availability details.

### Handling Related Items

Related items are the accessories that are associated with an item. For example, if a customer places an order for a television, and the remote control is an accessory for the television, then the remote control is added as a related item to the order. If the item has a service item associated with it, the service item will also be displayed as an item in the Related Items panel or the pop-up window.

When the related items are added to the order, the fulfillment methods for related items are the same as the parent item. If the related item does not support the fulfillment method, the fulfillment option of the related item is set to the default fulfillment method. When you select the parent item to modify the fulfillment option, the related lines associated with it are also selected for modification.

To add relationships between lines, you need to configure the association types to be displayed on the user interface. For more information about association types, see Section 4.10.1, "Configuring Order Entry Rules". You also need to configure a Relationship Type to be used with the association type. For more information about configuring relationship types, see Section 4.10.31, "Configuring Line Relationship Types".

### Configurable Order Line Entry Fields

Depending on what attributes you need during order entry and addition of an order line, you may want to display or hide certain columns in the line entry screen. In such situations, you can configure whether or not to display specific columns in the order line entry panel. For example, some retailers may use a single unit of measure for all items and do not want to display the same unit of measure each time.

The following columns can be configured to display or not to display in the line entry screen:

- Unit of Measure
- Line Quantity
- Line Price
- Line Total

### Disabling Pick up from Store for all Items

You can configure the user interface to never show the pick up fulfillment method if the enterprise does not support that fulfillment method.

### Changing Delivery Lines After Release

You can modify order lines that have the fulfillment method as delivery, and are above the "Released" status.

### 6.11.4.2 End-User Impact

The user will not be able to add new order lines to an existing order after the configured amount of days are passed. Addition of order lines to an order depends on the current status of the order.

Based on the status modification rules, you can add order lines. The modification types performed for the Add Line process include:

- Add Line

- Associate Delivery Line With Product Line

- Change Appointment

When the user adds related items to an order, the fulfillment method is defaulted to the fulfillment method of the parent item.

The user will not be shown certain columns in the order line entry screen if the user has configured not to display.

### 6.11.4.3 Implementation

This section describes how to configure the Add Line rule.

### Configuring Add Line Rule

You can configure the Add Line rule.

To configure the Add Line rule:

1. Log in to the Sterling Customer Order Management Configurator. For more information about logging in to the application, see Section 2.1, "Starting the Sterling Customer Order Management Configurator".

2. From the Sterling Customer Order Management Configurator, select Configure Order Administration > Advanced Configurations > Add Line Rules.

3. In the Maximum Number Of Days After Order To Allow Adding An Order Line field, enter the number of days allowed to add an order line.

4. From the Sterling Supply Chain Applications Configurator, select Configure Order Administration > Configure Order Modification Rules > Add Line > Order.

5. Select the order statuses for which you want to allow users to add items to an order.

6. From the Sterling Customer Order Management Configurator, select Order Promising > Store Pickup Rules.

   - Check The Enterprise Allows Pickup From Store Fulfillment box to indicate that an item is available for pick up.

   - In Distance To Consider When Finding Nearby Stores field, enter the appropriate distance.

   - In Distance UOM, enter the appropriate UOM for the distance.

**Disabling Availability Check**

If Prevent Initial Availability Checks during Order Entry and Order Modifications rule is disabled or set to 'N', the availability check will not be performed and the calls to findInventory API or its derivation APIs will be eliminated. This aids in better performance and pace in capturing the order.

**Handling Related Items**

To ensure that the related lines display below the primary lines in a table, the getSalesOrderDetails API is called, which enables order lines sorting. The order lines can be sorted by passing the 'ITEM' value to the getSalesOrderDetails API. If you change the default sort order and want to retrieve the initial sort order, you can use the Clear Sort menu item in the tables.

**Configuring Order Line Entry Fields**

In the Order Entry Controller Wizard, you can uncheck any of the following rules to display or not to display certain columns in the order line entry screen:

- Unit of Measure

- Line Quantity

- Line Price

- Line Total

To display the columns, the default value for these rules are always set to "Y".

### 6.11.4.4  Reference Implementation

None.

## 6.11.5  Change Gift Options

A customer may want to place an order for some gift items. In such situations, you can configure the available gift options to ensure that the selected items are marked as gift items.

### 6.11.5.1 Solution

The Sterling Customer Order Management PCA user interface provides screens to set and clear gift information on order lines. You can configure which of the fulfillment methods allow gift options to be recorded in the user interface. The getSalesOrderDetails API is called to get the sales order details. It also lists order lines that are marked as gift items.

### 6.11.5.2 End-User Impact

Depending on the configuration, the user can enter gift options for lines being shipped, lines being picked up, or both.

### 6.11.5.3 Implementation

You can configure the gift options for the following items:

- Items being Picked Up

- Items being Shipped.

Ensure that you configure the status modification rules. Otherwise, an error message displays. For more information about configuring the available gift options, see Section 4.10.17, "Configuring Available Gift Options".

> **Note:** This task is permission-controlled. If you want to modify permissions for this task, you must also modify permissions for the following actions:
>
> - Mark Shipping Lines As a Gift actions
> - Enter Gift Recipient Info

### 6.11.5.4 Reference Implementation

The Items being Picked Up and Items being Shipped rules are set to "Y" for XYZ-ONLINE and XYZ-RETAIL organizations.

## 6.11.6 Price Match

A customer may sometimes find that an item is available for a cheaper price from a different retailer. In such situations, the user can investigate the customer's claims and perform the necessary price match action.

### 6.11.6.1  Solution

The Sterling Customer Order Management PCA provides rich functionality to perform price matches. User interfaces are provided for the users to perform the price match task while ensuring that the user acts in accordance with the price match policies.

### Validating That An Item Can Be Price Matched

The Sterling Customer Order Management PCA provides the ability to determine which items a user can price match. In the price match screens, the YCDCanPriceMatchBePerformedUE user exit is called to determine which items can be price matched. By default, the logic provided in the default implementation user exit considers the price match window rule. This rule specifies the exact time period the user is expected to price match. For example, you can use this rule if you have a 15 day guaranteed price period. You may provide different validation logic by creating your own implementation for this user exit.

### Checking For Prior Price Matches

Once the user selects the item to perform price match, the user enters details such as the competitor's name, competitor's price, the difference in shipping charges (the competitor's shipping charges compared to your shipping charges), and the minimum quantity that must be ordered to get the advertised price as stated by the customer.

This information is passed to the checkOrderPriceMatch API. This API checks to see if any prior price matches have been performed for the same price match details. The getPriceMatchCompetitors API is called to return all competitors for the enterprise. If a price match is already performed, the user can again perform the price match. Since the users do not need to manually investigate the price match, the call time for common price match calls reduces. The YCDGetPriceMatchCompetitorsUE user exit can be used to return all competitors for the enterprise from an external system and also find if the competitor and retailer are the same. The attribute "isRetailer" should be returned as "Y", if the competitor is the same as the retailer. This user exit is not implemented.

If the Sterling Customer Order Management PCA finds one or more similar price matches for the same item and competitor combination, the user is given the option of selecting one of the close matching price matches. For example, if the customer requests a price match with Competitor A for $30.00 for Item B, and there was a prior price match

for the same competitor and item for $32.00, the user is presented with the option to accept the higher price or to manually investigate the price match details.

By default, the Sterling Customer Order Management PCA searches for prior prices matches that have been recorded in the standard price match table (YFS_PRICE_MATCH). It is also possible to search for prior price matches using the YCDcheckOrderPriceMatchUE user exit. If you record your price matches in an external system, implement this user exit to interface with the external system and check for the prior price matches. The YCDcheckOrderPriceMatchUE user exit can return actual, possible price match, suggest if manual verification is necessary, or reject the price match after validating with an external system.

### Investigating Price Match And Checking for the "No Hassle" condition

If the system does not find previous price matches, or if the user chooses to manually investigate the price match information, the user must verify the price match details reported by the customer are accurate. To verify that the price match information is accurate, the user may have to browse the competitor's web site or look into the competitor's sales flyers. The user then enters the price match details and performs a "No Hassle" price match check.

The Sterling Customer Order Management PCA allows you to define the "No Hassle" criteria for which the system allows price matches. If the information verified by the user meets the No Hassle criteria, then the price match is allowed. Otherwise, the users will either have to reject the customer's price match request or create a follow-up alert to intimate their supervisor.

The Sterling Customer Order Management PCA allows you to configure the following "No Hassle" rule:

- Maximum Price Percentage Difference—This is the maximum percentage price difference rule that allows to price match an item. The maximum percentage difference between the current item's price and the competitor's price can be configured to disallow the price match action if this difference exceeds.

- Maximum Item Price Difference—According to this rule the price match action is allowed for items whose price difference falls within the configured range.

- Maximum Ordered Quantity—The maximum ordered item quantity should not exceed a certain limit to allow the price match action.

When the user performs the "No Hassle" price check, the system compares the price match information against the rules that have been configured using the checkNoHasslePriceMatch API. By default, this API only considers the rules mentioned above. You may implement different "No Hassle" logic by implementing the checkNoHasslePriceMatchUE user exit.

### Saving Price Match Information

When the user performs a new price match, the system saves the new price match information. In case of absolute and possible price matches, the applyPriceMatch API calls the changeOrder API. In case of manual price match, the applyPriceMatch API calls the changeOrder API and managePriceMatch API. These APIs reads enterprise rules (PRICE_MATCH_RECORDED_AS) to determine how to apply the price match. The user can record price match as a charge in the unit price, or apply with the charge category as discount. The charge name is according to the PRICE_MATCH_CHARGE_NAME rule.

The new price match information is saved using the managePriceMatch API. This API records the price match details in the YFS_PRICE_MATCH table. Additionally, it is possible to record this price match information externally by implementing the managePriceMatchUE user exit.

The price change that is saved on the order can be controlled by some other price match rules. You can configure the percentage of the competitor's price to perform price match. For example, you can actually price match 110% of the competitor's price. You can also configure to know how the order price is changed. You may either change the unit price of the order line or add a discount charge category on the order that represents the price difference.

### 6.11.6.2 End-User Impact

The rules that are configured control how the user can perform a price match.

### 6.11.6.3 Implementation

You can configure to control the criteria that determines when a price match can be performed on an item in an order. For more information

about configuring price match rules, see Section 4.10.3, "Configuring Price Match Rules".

### 6.11.6.4 Reference Implementation

This section explains the default values that are provided as a part of the reference implementation to configure rules to perform price match for an item.

1. Maximum No Hassle Unit Price Difference(%)—This is the maximum percentage price difference rule according to the 'No Hassle' criteria to allow price match for an item. By default, the percentage price difference value for items is set to 25% to disallow the price match action for items that exceed this limit.

2. Maximum No Hassle Unit Price Difference—This rule gives the maximum difference in price of the items, according to the 'No Hassle' criteria to allow the price match action. By default, this value is set to $100.

3. Maximum No Hassle Line Quantity—According to this rule, the price match of an item will not meet the 'No Hassle' criteria if the ordered quantity exceeds the configured limit. By default, the value of the maximum order quantity is set to 10.

4. Maximum Number of Days after Order Date to Allow Price Match—You can configure the number of days after which you can disallow the price match action for an item. The default value of the price match window is set to 14 days.

5. Price Match Recorded As—When the user accepts the price match, the price match is stored in two different ways. You can record price match in two different ways:

   • Record the price match details such that you can modify the unit price of the item.

   • Create a new charge category or charge name called Price Match defined by the Charge Name rule that can be marked as a discount. The "Price Match Recorded As" is defaulted to indicate that the unit price of the item can be modified.

> **Note:** If you apply price match more than once for an item, apply it as a Charge and not as Unit Price. When you apply the price match as a Charge, the changeOrder API appropriately adjusts the previous charges.

6. Default Number of Days for Price Matches to Expire—You can configure for a certain period such that no price match is allowed after this period has elapsed. By default, this period is set to 30 days.

7. Price Match Percentage Applied—This rule is read and applied as a percentage discount on the difference between the retailer and the competitor price only if the isRetailer attribute (which the getPriceMatchCompetitorUE user exit returns) is set to "N". This indicates that the retailer is not as same as the competitor. The default price match percentage applied is 100%.

All rules for Price Match are defined for the "XYZ-ONLINE" organization.

## 6.11.7 Reship

A customer may report that the item ordered is either not received or damaged in transit. In such situations, the item may need to be reshipped or the customer has to be refunded for the shipment.

### 6.11.7.1 Solution

A user would typically reship a shipment when the system indicates that an item has been shipped but the customer claims of not having received it. This section explains the complete Reship process.

### Tracking An Item

Reship of an item is possible if it is in the 'shipped' or 'delivered' status. Therefore, the user must first track the item and investigate the current status of the item to determine whether reship is possible or not.

### Configuring Reasons For Reship

The reasons for reshipping an item are configured using RESHIP_REASON common code. You can configure reship reasons such as missing items, missing container, wrong item and so forth to allow performing reship action.

### Validating That An Item Can Be Reshipped

Before reshipping an item, you must ensure that the following conditions are met:

- The order line must have enough available quantity that has not already been reshipped.

- The reship of an item is allowed only after certain number of elapsed days. This is to ensure that sufficient time is allowed for the item to reach the customer. For example, we can configure the MINIMUM_RESHIP_WINDOW as 5 days to ensure that a reship is possible only after 5 days after placing an order.

The validity of the item to be reshipped is checked using the validateReship API. The validateReship API validates that the order lines passed as input are valid for being reshipped. You may implement other validations using the validateReshipUE user exit, if applicable.

If the item is not valid for reshipping, but needs to be reshipped, the user can override the reship validation, if the users have permissions to do so, or create a follow-up alert for their supervisor.

### Reshipping And Refunding An Item

After validating, the user can either reship or refund the items. The reship or refund options are provided based on the availability of the items.

If the customer chooses the for reship option, the reshipOrderLines API is called which creates new order lines to fulfill reshipment of order lines passed in the input. Attributes on the new order lines created by the reshipOrderLines API can be controlled by the ReshipOrderLines document template for the order's document type, as well as by the YFSreshipOrderLinesUE user exit. Additional validations may be done by this user exit. This user exit may cause the API to return different reship message.

Sometimes, the ordered item may be out of stock, or the customer might not want the item. In such situations, the user would have to refund the items. If refund is involved, a return is created for the order line with line type as 'Credit'.

> **Note:** The order lines are not reserved when you reship an item.

### 6.11.7.2 End-User Impact

None.

### 6.11.7.3 Implementation

This section explains how to configure the reasons for reshipping an item and how to configure the minimum reship window days.

1.  Log in to the Sterling Customer Order Management Configurator. For more information about logging in to the application, see Section 2.1, "Starting the Sterling Customer Order Management Configurator".

2.  From the Sterling Customer Order Management Configurator, select Configure Order Administration > Reship Reasons.

3.  Enter appropriate reasons for reshipping the item.

4.  From the Sterling Customer Order Management Configurator, select Configure Order Administration > Advanced Configurations > Configure Transaction Specific Rules.

5.  In the Reship Order panel, enter the appropriate number of days in the Minimum Reship Window field.

### 6.11.7.4 Reference Implementation

This section explains the reference implementation configured to allow reship of an item for XYZ-CORP.

1.  The minimum reship window period is set to five days which specifies the minimum number of days to be elapsed after which reship is allowed.

2.  The following reasons are configured in the RESHIP_REASON common code:

    *   Missing Item
    *   Missing Container
    *   Wrong Item

- Cargo Loss

- Damaged or Defective Item

# 6.11.8 Initiate Return

The Initiate Return task is performed by a user when a customer wants to return or exchange the ordered items. This task can be performed for items that are in the shipped, delivered, or pick-up status.

### 6.11.8.1 Solution

This section explains in detail the complete process of initiating a return. The user may perform the initiate return task for any of the following reasons:

- In case of Simple Return, the customer returns only the items without any exchanges. In such situations, only the return order is created and the item is returned.

- In case of Even Exchange, the customer will want to return an item and receive an exchange for a similar item. In such situations, return and exchange orders are created for that order. The item that the customer returns can be exchanged with a similar item.

- In case of Uneven Exchange, both return and exchange orders are created for that order. The item that is returned is exchanged with another item.

### Selecting Return Quantity

A return can be created for an entire order or some items of the order. The getOrderLineStatusList API is used to get a list of returnable order lines. The getOrderLineList API is used to show the non-returnable order lines. The getOrderLinesWithTransactionQuantity API is used to merge getOrderLineStatusList and getOrderLineList APIs in order to show returnable and non-returnable items.

### Validating That An Item Can Be Returned

According to the return policy, you can validate to determine whether or not return an item. The YCDGetReturnPolicyUE is used to implement the Return policies. You can configure the Return Window Days that will disallow the return action after the configured number of days are

elapsed. The YCDGetReturnPolicyUE is implemented in the following manner:

The getItemList API is called to get the item details of the order. According to the return policy:

- Items cannot be returned if:
  - The item is not returnable.
  - If the order has passed the configured return window days.
- Items can be returned if:
  - The item is returnable.
  - A credit can be done on an item without receipt.

You can override all policies returned by the YCDgetReturnPolicyUE implementation. You can modify the default Return policies by creating your own implementation for the YCDGetReturnPolicyUE.

### Configuring Reasons For Return

The reasons for returning an item can be configured in the RETURN_REASON common code. You can configure reasons such as damaged items, missing items, change of mind, and so forth to allow the Initiate return action.

### Determining The Return Method

The getReturnMethod API is used to determine the return method for all items. This API determines if items can be returned to the call center, or a store, or if they can be picked up. This API then calls the YCDGetReturnMethodUE that applies a standard user exit template and passes the result to the user exit. The default implementation is not provided for this user exit. If you choose the "Ship To Return Center" return method, the RETURN_FULFILLMENT fulfillment type is used to determine the correct return center to receive the item.

### Disabling Pick up from Store for all Items

You can configure the user interface to never show the pick up fulfillment method if the enterprise does not support that fulfillment method.

> **Note:** The order lines are not reserved when you initiate a return.

### 6.11.8.2 End-User Impact

None.

### 6.11.8.3 Implementation

A list of return reasons that are available during the return process are provided. For more information about defining return reasons, see Section 4.15.2, "Defining Return Reasons".

To support the 'credit without receipt' feature a new pipeline has been introduced.
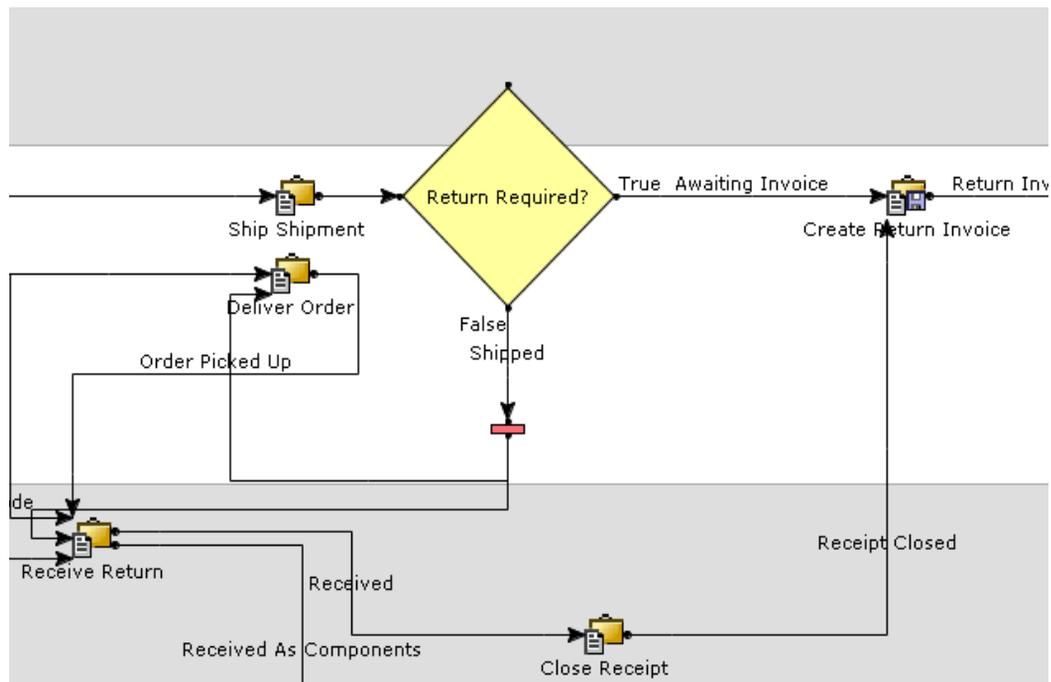


The "Return Required?" condition is introduced between the Ship Shipment transaction and Receive Return transaction. This condition

checks if the line type is "Credit". If the line type is credit, the flow goes to the Create Return Invoice transaction, otherwise the flow goes to the Receive Return transaction. For more information about the create return invoice transaction, see the *Sterling Reverse Logistics Configuration Guide*.

### 6.11.8.4 Reference Implementation

This section explains the default reasons that are configured for initiating a return.

1. For each item, the return window is set to 30 days. Therefore, the customer cannot return the items if the current date exceeds 30 days from the date on which the order was placed.

2. The following reasons are configured in the RETURN_REASON common code:

   - Damaged Items

   - Change Of Mind

   - Lower Price Found

   - Missing Parts

   - Loose Parts

   - Damaged Cargo

   - Other

## 6.11.9 Add Coupon

This feature allows a user to add coupons or promotion codes for an order that has been placed.

### 6.11.9.1 Solution

This section explains the add coupon or promotion code process.

### Searching For Orders For Which Promotions Need To Be Added

The getSalesOrderDetails API is called to search orders for which you need to add promotions.

**Validation Of The Promotion**

Before applying a promotion to the order, check the validity of the promotion. The YCDPromotionValidationUE user exit validates the promotion code entered. If the input is valid, the changeOrder API is called to modify the new promotion added. If the input is invalid, an error message appears. The YFSOrderRepricingUE is executed whenever the reprice_order flag is set to "Y" for the "Change Promotion" modification type.

### 6.11.9.2 End-User Impact

None.

### 6.11.9.3 Implementation

This section explains the configuration settings for adding a coupon or a promotion code to an order.

1. Log in to the Sterling Customer Order Management Configurator. For more information logging in to the application, see Section 2.1, "Starting the Sterling Customer Order Management Configurator".

2. In the Sterling Supply Chain Applications Configurator:

   Set the StatusModificationTypeKey to "PROMO_AWARD", by following these steps:

   a. From the Sterling Supply Chain Applications Configurator menu bar, select Distributed Order Management > Document Specific > Sales Order > Fulfillment > Order Modification > Modifications Impacting Pricing.

   b. Click Details. In the Modification Type List screen, add the Change Promotion and Remove Promotion modification types to the list of modifications that impact pricing.

### 6.11.9.4 Reference Implementation

This section explains the default implementation of the user exits used for the Add Coupon task.

1. The default implementation of the YCDPromotionValidationUE user exit returns VALID = "N" for any promotion Id that starts with "X" to indicate that it is an invalid promotion Id.

2. The default YFSOrderRepricingUE user exit implementation accepts the following promotion codes:

- FREESHIP—This promotion is applied to an order if the order total is greater than $100.

- SALEONTV—This promotion is applied to an order line that has the "TV0001A5F21" Item ID.

The above listed promotions Ids are case-sensitive. If you pass any other promotion Id to the YCDPromotionValidationUE user exit, the promotion Id is not applied to the order.

The YFSOrderRepricingUE user exit implementation does not perform any repricing when you remove any promotion.

All rules for adding a coupon or promotion code are configured for the XYZ-ONLINE organization.

## 6.11.10 Cancel Order

A customer may want to cancel an entire order, or just certain product or service items of the order.

### 6.11.10.1 Solution

The Sterling Customer Order Management PCA provides the ability to cancel the entire order or just certain product or service items of the order.

### Selecting The Cancel Quantity

The customers can choose to cancel the entire order, if all ordered items need to be cancelled, or cancel a part of the order if only some items of the order need to be cancelled.

### Cancelling Related Lines

When you select a parent item that has related product or service lines for cancellation, the related lines are automatically selected for cancellation.

### Configuring Reasons For Cancellation

The reasons for cancelling an item can be configured in the CANCEL_REASON common code. You can configure reasons such as

change of mind, cheaper price found, and so forth to allow the Cancel action.

### Cancelling Pick up Lines After Release

If the Allow Cancellation of Pickup Lines after Release rule is enabled, you can cancel the order lines even after the order lines with the pickup fulfillment method are moved to the "Released" status. This is achieved by calling the following APIs:

- getSalesOrderDetailsWithLocalQty API—This API gets the sales order details.

- changeOrder API—This API cancels the lines on the order and release, if associated with the order line.

- changeShipment API—This API cancels the shipment lines associated with the order line.

### Cancelling Delivery Lines After Release

If the Allow Cancellation of Delivery Lines after Release rule is enabled, you can cancel the order lines that have the Delivery fulfillment method and are moved to the "Released" status, but not shipped. This is achieved by calling the following APIs:

- getSalesOrderDetailsWithLocalQty API—This API gets the sales order details.

- changeOrder API—This API cancels the lines on the order and release associated with the order line.

- changeShipment API—This API cancels the shipment lines associated with the order line.

### 6.11.10.2 End-User Impact

When the user selects a line for cancellation that has related lines, the related lines are automatically selected for cancellation. Based on the rules configured for cancellation of released lines, the end users can cancel delivery and pickup order lines that are above the released status.

### 6.11.10.3 Implementation

You can define reason codes that are available during the cancellation process. For more information about defining cancellation reasons, see Section 4.10.7, "Defining Cancellation Reasons".

> **Note:** Cancellation of an order is permission controlled. You can cancel an order only if you belong to a particular user group that is assigned permissions.

### 6.11.10.4 Reference Implementation

This section explains the default reasons that are configured for cancelling an entire order or a part of an order.

The following reasons are configured in the "CANCEL_REASON" common code:

- Change of Mind
- Cheaper Price Found
- Late/Failed Delivery
- Unacceptable Delivery Time Promised
- Product No Longer Available
- Fraudulent Order
- Address Undeliverable
- Duplicate Order
- Other

## 6.11.11 Track an Item

The customers may sometimes need to know the status of the orders. For example, if a customer does not receive items that were ordered, then the customer can call the user to enquire about the shipment status.

### 6.11.11.1 Solution

If you implement the YCDgetTrackingNumberURLUE user exit, the tracking number displays as a hyperlink. The

YCDgetTrackingNumberURLUE user exit provides the option of plugging in custom logic to get TrackingNumber URL. This user exit is implemented to suggest the Tracking Number URL for the given Tracking Number, Carrier, Carrier Service, and ScacAndService. When the user clicks this hyperlink, the appropriate carrier's website displays where the user can view the container's tracking information.

If there are any holds applied on the order, the getHoldTypeList API is called, which displays these holds.

Refer Table 6–20 for different order statuses and the corresponding screen display.

*Table 6–20   Order Status and Screen Display*

| Order Status | Screen Display |
| --- | --- |
| Scheduled/Released | • If the fulfillment method is 'Shipment', you can view the estimated ship date, estimated delivery date, item Id and description, and the item quantity. |
| | • If the fulfillment method is 'Pickup', you can view the estimated pickup date, item Id and description, and the item quantity. |
| | • If the fulfillment method is 'Delivery' and if the order has associated work orders, you can view the workorder information, otherwise you can view the estimated ship date, estimated delivery date, item Id and description, and the item quantity. |
| Created/Reserved/ Back Ordered | • If the fulfillment method is 'Shipment', you can view the estimated ship date, estimated delivery date, item Id and description, and the item quantity. |
| | • If the fulfillment method is 'Pickup', you can view the estimated pickup date, item Id, description, and the item quantity. |
| | • If the fulfillment method is 'Delivery', you can view the estimated delivery date, item Id and description, and the item quantity. |

*Table 6–20   Order Status and Screen Display*

| Order Status | Screen Display |
|---|---|
| Cancelled | If the fulfillment method is 'Shipment', 'Delivery', or 'Pickup', you can view the cancel date and cancel quantity. |
| Included in shipment/Shipped | • If the items are Included in Shipment, you can view the 'estimated to ship on' date, the estimated delivery date, and the item quantity. You can view the shipped-on date, and the estimated delivery date. The View shipment, Reship shipment, and the reship container hyperlinks are available for a single order.<br><br>• If the fulfillment method is 'pickup', the shipment information is recorded. You can view the 'picked up on' date, and the pickup quantity, and the store name. |
| Work Order Created | If an appointment is configured, you can view the recent, open delivery appointment dates. |
| Work Order Completed | You can view the date on which the items were delivered to the customer, completed appointment date, completed delivery date and time, and the item quantity. |

If the order is in "Work Order Created" or "Work Order Completed" status, you can view the item's identifier, quantity, and the unit price information.

If an order has associated work orders, based on the Process Type Details configuration options, you can view the shipment and container information. You can view all work orders and the related information such as work order cancelled, back ordered, or container details.

If a shipment contains containers as well as work orders, the system first displays the work order details and later the container information.

If a work order is cancelled, you will not be able to view any information.

If an order is on hold, you can view the hold details and the associated alert details for the hold, if any.

### 6.11.11.2 End-User Impact

None.

### 6.11.11.3 Implementation

None.

### 6.11.11.4 Reference Implementation

None.

## 6.11.12 Order Notes

A user may need to enter some notes for an order describing the actions performed against the order, for future reference. The order notes are either system generated or entered by the user. Each task in the Sterling Customer Order Management PCA is associated with a unique note type.

### 6.11.12.1 Solution

This section explains the system generated and user entered notes for an order.

### System Generated Notes

The system automatically generates notes for an order, when any of the following events occur:

- Back Order—The system generates notes if an order is back ordered.

- Change in the Hold Type Status—The system generates notes if a hold when applied to an order is in "Rejected" status or if the hold status changes from "Rejected" to "Resolved".

- Chained Order Created—The system generates notes when a chained order is created.

- FTC Notification—The system generates notes if the FTC monitor sends any notification.

You can enable or disable the system generated notes.

To enable the system generated notes, invoke appropriate service on the following events:

- Back order—Invoke the YCD_Log_Note_For Order_backOrdered_2.0 service on this event.

- Change in the Hold Type status—Invoke the YCD_Log_Note_On_Hold_Type_Status_Change_2.0 service on this event.

- Chained Order Created—Invoke the YCD_Log_Note_On_Chained_Order_Created_2.0 service on this event.

To disable the system generated notes, remove the service from the following events:

- Back order—Remove the YCD_Log_Note_For Order_backOrdered_2.0 service from the YCDOnBackorder action.

- Change in the Hold Type status—Remove the YCD_Log_Note_On_Hold_Type_Status_Change_2.0 service from the YCDOnHoldType action.

- Chained Order Created—Remove the YCD_Log_Note_On_Chained_Order_Created_2.0 service from the YCDOnChainedOrderCreated action.

### Notes Entered By The User

The user may enter notes for an order, if applicable. The user can enter notes at the task level and prioritize them.

### 6.11.12.2 End-User Impact

None.

### 6.11.12.3 Implementation

The information regarding note types used in the COM task flows is given in Table 6–21.

*Table 6–21   UI Note Types*

| Task | Note Type |
|------|-----------|
| Customer Appeasement | YCD_CUSTOMER_APPEASE |
| Price Match | YCD_PRICE_MATCH |

*Table 6–21   UI Note Types*

| Task | Note Type |
|------|-----------|
| Add Line | YCD_NEW_ITEM_INFO |
| Changing Fulfillment Options | YCD_DELIVERY_OPTIONS |
| Changing Service Appointments | YCD_DELIVERY_APPT |
| Changing Service Instructions | YCD_DELIVERY_INSTR |
| Cancel Order | YCD_CANCEL_INFO |
| Initiate Return | YCD_RETURN_INFO |
| Changing Order Address | YCD_SHIPPING_ADDRESS |
| Reship | YCD_RESHIP_INFO |
| Add Coupon | YCD_NEW_PROMOTION |
| Change Payment Method | YCD_PAYMENT_CHANGE |

### 6.11.12.4  Reference Implementation

This section explains the default Note Types Codes and the Contact Types that are configured.

1. The Note Types are configured for system generated notes and task based notes.

   - The following are the Note Types configured for system generated notes:

     – Backorder Information

     – Hold Information

     – Chained Order Information

     – FTC Notification Information

   - The following are the Note Types configured for the task based notes:

     – Order Cancellation Information

     – Return Information

- New Item Information

- Fulfillment Options Change Information

- Delivery Appointment Change Information

- Service Instructions Change Information

- Shipping Address Change Information

- Reship Information

- Price Match Information

- New Promotion Information

- Customer Appeasement Information

- Payment Change Information

- FTC Notification Information

**2.** The following are the Contact Types that are configured:

- Phone

- E-mail

## 6.11.13 Changing Service Instructions

You can use this task to change instructions for orders that are associated with delivery lines or service lines.

### 6.11.13.1 Solution

At the time of delivery, if a customer requests to change the service instruction for a product or service item, you can modify the service instructions as requested. For each delivery line, you can modify the service instructions in the text box that has been provided. The Sterling Customer Order Management PCA allows you to modify instructions for deliveries or services that are not complete.

### 6.11.13.2 End-User Impact

None.

### 6.11.13.3 Implementation

None.

### 6.11.13.4  Reference Implementation

A new note reason code called YCD_DELIVERY_INSTR is configured.

# 6.11.14  Changing Service Appointments

When a customer wants to change the date and time of delivery lines or service lines, you can modify the service appointments.

### 6.11.14.1  Solution

When a customer wants to change the delivery or service appointment for an order, a calendar displays from which the user can select the appropriate appointment for the customer. When the customer chooses the time slot for delivery, the calendar displays information such as working or non-working days, capacity available days, and so forth.

The Sterling Customer Order Management PCA provides multiple ways to take appointments. You can take appointments by selecting the time slot and viewing the days available for the selected time slot. Alternatively, you can select a day in the calendar and view the slots available on that day.

You can configure to display the required weeks on the calendar.

### Modifying Delivery Lines After Release

If the Allow Modification of Delivery Lines After Release rule is enabled, you can change the service appointments of order lines that have the Delivery fulfillment method and are not in the Shipped status.

### 6.11.14.2  End-User Impact

You can modify service appointments for customers such as available days, customer preferred, and so forth. You can also change the calendar view.

### 6.11.14.3  Implementation

This section explains the rules to be configured to change the service appointments calendar view.

To change the service appointment calendar view, configure the following rules:

- Calendar Display

- Default Appointment Calendar View

For more information about configuring the service appointment calendar view, see Section 4.6.22, "Configuring the Service Appointment Calendar View".

### 6.11.14.4 Reference Implementation

The instruction type provided and the note reason configured for changing a delivery appointment are:

- An instruction type called 'DELIVERY' has been provided for work orders.

- A new note reason code called YCD_DELIVERY_APPT has been configured.

## 6.11.15 Changing Fulfillment Options

When a customer requests a change in the fulfillment options for an item, you can modify the fulfillment options as requested. For example, a customer may request the delivery of ordered items, but later decides to pick up the items from a store. In such situations, the user can modify the fulfillment options for the items or a provided service line.

> **Note:** In the Change Fulfillment Options screen, all order lines that are associated with drop ship lines are disabled.

### 6.11.15.1 Solution

This section explains how to modify the fulfillment options.

### Changing The Fulfillment Option For An Order Or An Order Line

The user can change the fulfillment options and the address for an order. The fulfillment options that are available are shipment, delivery, and pickup.

If the rule to enable stores is configured, the items are available for pickup from a store. The options available for pickup are based on the option selected by the user. The getFulfillmentOptionsForLines API returns all fulfillment options that are applicable for the order line.

- If the selected option is "Ship", the items are shipped to the specified address.

- If the selected option is "Delivery", the items are delivered to the customer's doorstep.

- If the selected option is "Pickup", the user has a choice to choose to pick up from the current store or to select another store by entering the country and zip code details.

The getFulfillmentOptionsForLines API is used to determine the availability of the 'delivery address' and 'carrier service' that the user has supplied.

The generateWorkOrder API checks for order lines marked for delivery and determines if it has a delivery service associated with it, and if not, the generateWorkOrder API creates one and then creates a work order.

The YCDOverrideDeliveryMethodUE user exit is used to override fulfillment methods. This user exit provides the ability to override the logic of enabling a fulfillment method. The default implementation is not provided and you can use your own implementation for this user exit.

If the UsedForOrdering attribute is set to "Y", the information about all the carrier services displays.

The order dates for each order line displays based on the fulfillment methods of the order line.

- Pickup—The value of the ReqShipDate attribute from the OrderLine element displays.

- Ship—The order dates display based on:
  - The date range of the CommittedDate attribute values within the OrderDates element displays as follows:
    - The minimum date is considered from the OrderDate element having DateTypeId attribute value as MIN_DELIVERY.
    - The maximum date is considered from the OrderDate element having DateTypeId attribute value as MAX_DELIVERY.
  - If the minimum date and maximum date for the CommittedDate attribute value are blank, the date range of the ExpectedDeliveryDate attribute value within Details element in the OrderStatus element displays.

- Delivery—The value of the PromisedApptStartDate attribute displays, if there is a work order associated with the orderline. Otherwise, the order dates do not display.

### Disabling Availability Checks

The user can disable availability checks when inventory is maintained externally as the user is aware of the inventory availability details.

### Disabling Fulfillment Methods

A user can select only the supported fulfillment methods for order lines. The fulfillment methods that are not supported are disabled. For instance, if an item does not support the "Pickup" fulfillment method, upon selecting the order line, the pick up option is disabled. Based on the configuration, Delivery and Shipping are displayed as separate fulfillment methods.

### Disabling Pickup From Store for All Items

You can configure the user interface to never show the pickup fulfillment method if the enterprise does not support that fulfillment method.

### Validating Fulfillment Options

A user may skip the customer identification details when creating an order and proceeding to the next screen. When the Change Fulfillment Options screen displays, if the user moves to the next screen, the system validates that the fulfillment method is added to every order line. The user must enter the Ship To Address, if the fulfillment method is "Shipping", the Deliver To Address if the fulfillment method is "Delivery". If the fulfillment method is "Pickup", the Pick up Store must be entered.

### Selection of Related Lines

When the user wants to modify the fulfillment option for the parent item, the related lines associated with it are also selected for modification.

### Changing Service Instructions And Appointments

A user can modify the service instructions. A user can also take appointments for deliveries for a customer by selecting the available time slot and date from the calendar. The generateWorkOrder API considers the new work orders and existing work orders, if any. If the work orders

are in the "Failed" or "Cancelled" status, or if an appointment is not taken, the generateWorkOrder API returns a suggested appointment.

### Changing Pickup Lines

A user can modify pickup lines even if they are in the "Released" status, and until the items are picked up and are not in the "Shipped" status. The user can change the ship node and fulfillment method for the pick up line. The changeRelease API is called to backorder an order line that is in the "Released" status.

### Changing Delivery Lines

A user can modify delivery lines even if they are in the "Released" status and are not in the "Shipped" status. The user can change the ship node and the fulfillment method for a delivery line if the 'Allow Modification of Delivery Lines after Release" option is enabled. The changeRelease API is called to backorder an order line that is in the "Released" status.

### Payment Confirmation Details

Due to the change in fulfillment options, if the payment information changes, the system displays the updated payment details. If the customer wants to make additional payments, the user must select the payment method.

### 6.11.15.2 End-User Impact

This section explains the impact on the user.

### Disabling Availability Checks

The user is not shown the availability details in any store on the Add Multiple Lines, Order Entry, Change Fulfillment Options, Change Order Addresses, and Item Inquiry screens.

### Changing Pickup Lines

The user is allowed to modify the order lines that have the pickup fulfillment method even after the status is changed to "Released" or after.

### Changing Delivery Lines

The user is allowed to modify the order lines that have the delivery fulfillment method even after the status is changed to "Released" or after.

### 6.11.15.3  Implementation

This section details the rules to be configured to change the fulfillment options.

### Disabling Availability Checks

If the Prevent Initial Availability Checks During Order Entry and Order Modifications rule is enabled, the inventory availability check is not performed and the calls to the getFulfillmentOptionsForLines, findInventory, or any derivation APIs are eliminated. This aids in better performance and pace when capturing the order.

### Changing Pickup Lines

To modify the pickup lines that are in the "Released" status or above, check the Allow Modification of Pickup Dates and Store for Pickup Lines after Release box for the Enterprise.

### Changing Delivery Lines

To modify the delivery lines that are in the "Released" status or later, check the Allow Modification of Fulfillment Options for Delivery Lines After Release box for the Enterprise.

### 6.11.15.4  Reference Implementation

This section explains the reference implementation provided for the following tasks:

### Disabling Availability Checks

The Prevent Initial Availability Checks During Order Entry and Order Modifications rule is defaulted to ensure that availability checks are performed.

### Changing Pickup Lines

The Allow Modification of Pickup Dates and Store for Pickup Lines after Release rule is defaulted to allow modification of lines after release.

### Changing Delivery Lines

The Allow Modification of Fulfillment Options for Delivery Lines after Release rule is defaulted to allow modification of lines after release.

The Allow Cancellation of Delivery Lines after Release rule is also defaulted to allow modification of lines after release.

## 6.11.16 Fulfillment Summary

The Fulfillment Summary screen provides the complete scenario of how the order is configured and fulfilled. Based on the fulfillment method, the order lines can be grouped. Within each fulfillment method, the order lines can be grouped as follows:

- Ship To Address for shipping

- Ship Node for pickup

The Fulfillment Summary screen provides visibility to order information, line items, quantity, price, fulfillment time, fulfillment date, available date, and delivery date. This screen also provides the ability to:

- Set the order lines as gift items

- Select the replacement nodes for pickup

- Modify the fulfillment option of the order line

- Cancel lines

### 6.11.16.1 Solution

This section explains the functionality of the Fulfillment Summary screen.

### getOrderFulfillmentDetails API

This API calls the getSalesOrderDetails, getPossibleSchedules, and getCarrierServiceOptionsForOrdering APIs. It returns information such as availability of items, level of service, and so forth, that are added to the order line. This information is used to display the Fulfillment Summary screen.

From the Fulfillment Summary screen, you can view or modify the following:

- Availability of Items
- Changing the Carrier Service for Shipping
- Changing the Pickup Date of the Item
- Changing Fulfillment Method
- Handling Related Items
- Cancelling Items
- Reserving Items
- Marking Items as Gifts
- Changing the Pickup Location
- Overriding Availability

### Availability of Items

The item availability is displayed depending on the date. The getPossibleSchedule API returns the date, which determines whether or not the items are available.

### Changing the Carrier Service for Shipping

The getCarrierServiceOptionsForOrdering API provides a list of carrier service options and their estimated dates for items that have fulfillment method as "Shipping". By implementing the GetCarrierServiceOptionsForOrderingUE user exit, you can obtain the cost of each carrier service.

### Changing the Pickup Date of the Item

You can change the pickup date for an item by selecting the preferred date from the calendar. Only the dates on or after the ProductShipDate are enabled on this calendar.

### Changing Fulfillment Method

The fulfillment method can be changed for an item if the item supports the new fulfillment method. This is possible by choosing the action you

want to change from "Shipping" to "Change to Pick up" or from "Change to Pickup" to "Shipping".

### Handling Related Items

The related items are selected automatically when the parent item and the related lines have the same fulfillment method.

### Cancelling Items

Items that are in a status that supports cancellation can be cancelled by selecting the Cancel action.

### Reserving Items

Items can be reserved upon confirmation or when moving to the next screen.

### Marking Items as Gifts

You can mark selected items as gift items by clicking the Gift Options button.

### Changing the Pickup Location

The pickup location can be changed by clicking the Pick Locations button for the selected order lines. This button displays in the Pickup panel.

### Overriding Availability

The inventory availability can be overridden only in the Pickup panel, when logged in at the store from where the user wants to pickup inventory. Overriding of availability is possible only if the user logs in at the current store from where you perform pickup, and belongs to a user group that has permission to override inventory availability.

The order dates for each order line displays based on the fulfillment methods of the order line.

- Pickup—The value of the ReqShipDate attribute from the OrderLine element displays.

- Ship—The order dates display based on:

    - The date range of the CommittedDate attribute values within the OrderDates element displays as follows:

- The minimum date is considered from the OrderDate element having DateTypeId attribute value as MIN_DELIVERY.

- The maximum date is considered from the OrderDate element having DateTypeId attribute value as MAX_DELIVERY.

  - If the minimum date and maximum date for the CommittedDate attribute value are blank, the date range of the ExpectedDeliveryDate attribute value within Details element in the OrderStatus element displays.

- Delivery—The value of the PromisedApptStartDate attribute displays, if there is a work order associated with the orderline. Otherwise, the order dates do not display.

### 6.11.16.2 End-User Impact
This section explains the impact on the user.

### Handling Related Items
When the user selects the parent item, the related lines having the same fulfillment method as the parent item is also selected.

### 6.11.16.3 Implementation
This section explains the configuration for fulfillment summary.

1. Log in to the Sterling Customer Order Management Configurator.

   For more information about logging in to the Sterling Customer Order Management Configurator, see Section 2.1, "Starting the Sterling Customer Order Management Configurator".

2. From the Sterling Customer Order Management Configurator, select Configure Information Recorded During Level of Service Selection. The Configure Information Recorded During Level of Service Selection screen displays.

3. Configure the Save committed dates on the line rule.

### 6.11.16.4 Reference Implementation
The Compute Expected Dates When Requested Dates On The Pickup Order Lines Are Changed rule is set to "Y" for XYZ-CORP and XYZ-RETAIL organizations.

# 6.11.17 Reservations

The reservation of items is performed to confirm availability and resolve issues when handling multiple customers simultaneously. For example, if two CSRs are assisting two different customers for the same item, which is the only available item, and if the item is not reserved, then both CSRs might sell the item by checking the availability status. In such situations, reservations are essential.

## 6.11.17.1 Solution

This section describes the functionality of reservations.

### Creating Reservations

To reserve items, you must perform an availability check by calling the getOrderFulfillmentDetails API. Using the availability information, the reservation is created by calling the changeOrder API. If the Reserve Items During Order Entry and Order Modifications rule is enabled, reservations are created during order creation, line additions, and when modifying fulfillment options.

## 6.11.17.2 Implementation

This section explains the rules to configure item reservations.

To reserve items:

1. Log in to the Sterling Customer Order Management Configurator.

   For more information about logging in to the Sterling Customer Order Management Configurator, see Section 2.1, "Starting the Sterling Customer Order Management Configurator".

2. From the Sterling Customer Order Management Configurator, select Configure Order Administration > Advanced Configurations > Configure Availability Check and Reservation Options. The Configure Availability Check and Reservation Options screen displays.

3. Configure the Reserve Items During Order Entry and Order Modifications rule. The default value is "N".

> **Note:**   When reserving the Sterling Customer Order Management PCA, ensure that you uncheck the Create Reservation on Order Creation box. For more information about the Create Reservation on Order Creation checkbox, see the *Sterling Supply Chain Applications Platform Configuration Guide*.

> **Note:**   **If** the Reserve Items During Order Entry and Order Modifications rule is enabled, and in the Fulfillment Summary Screen, if the system fails to reserve some items, the user cannot go to the next screen.

### 6.11.17.3  End-User Impact

None.

### 6.11.17.4  Reference Implementation

By default, the Reserve Items During Order Entry and Order Modifications rule is set to "N" for XYZ-CORP and XYZ-RETAIL organizations.

## 6.11.18  Increasing Order Line Quantity

When a customer wants to increase the quantity of one or more items on an order that is already placed, you can increase the order line quantity as requested but cannot increase the quantity of the provided service lines.

> **Note:** If the service line is a related line and you increase the quantity of the parent item, based on the configuration, the quantity of the service line automatically increases. For more information about configuring provided services, see the *Sterling Product Management Configuration Guide*.

### 6.11.18.1 Solution

This section explains how the store representative can increase the order line quantity.

### Entering Additional Item Quantity

The user can modify order lines that are enabled. When the `Modification Allowed` attribute returned by the getSalesOrderDetailsWithLocalQty API is set to "Y", you can update the item quantity for that order line. If the `Modification Allowed` attribute is set to "N", the order line is disabled. Therefore, you cannot update the item quantity.

The getFulfillmentOptionsForLines API is called with ReqEndDate as an input to verify whether the additional item quantity can be fulfilled along with the existing order quantity. The ReqEndDate is the farthest available ExpectedShipmentDate taken from the Details element under the order status of the order line. The ShipNode is passed from the OrderStatus element having the Details element from where the ExpectedShipmentDate is taken.

If the getFulfillmentOptionsForLines API returns the `HasAnyUnavailableQty` attribute value as "N", the adjustment can be fulfilled and the additional item quantity can be added to the order. If the value of the `HasAnyUnavailableQty` attribute is set to "Y", the additional item quantity requested by the customer cannot be added to the order. In such situations, a warning icon displays on the screen along with the available item quantity that can be added to the order.

If the getFulfillmentOptionsForLines API returns a different delivery date for the additional item quantity that is not the same as the original delivery date, an appropriate message displays on the screen.

> **Note:** The order lines are not reserved when you increase the order line quantity.

### Validating whether the Items are Present in the Store

The user needs to verify if the requested additional item quantity is present in the store. If the minimum order line status is in the "Released" status or exceeds this status, a warning message displays that prompts the user to manually check whether the items are present in the store.

### Adding Notes and Confirming Payment

The user can enter appropriate notes when updating the item quantity for an order. If the payment information is updated, the system displays the updated payment details.

### 6.11.18.2 End-User Impact

None.

### 6.11.18.3 Implementation

As a part of Increasing Order Line Quantity task implementation:

1. Log in to the Sterling Customer Order Management Configurator.

   For more information about logging in to the Sterling Customer Order Management Configurator, see Section 2.1, "Starting the Sterling Customer Order Management Configurator".

2. From the Sterling Customer Order Management Configurator, select Configure Order Administration > Configure Order Modification Rules. The Modification Rules: Order Fulfillment screen displays.

3. In Group By drop-down list, select Modification Type.

4. From Order Fulfillment > Add Note > Line, right-click Sent To Store.

5. Select Allow Modification.

6. From Order Fulfillment > Add Note > Order, right-click Sent To Store.

7. Select Allow Modification.

### 6.11.18.4 Reference Implementation

None.

## 6.11.19 Changing Order Address

A customer may want to change or modify the addresses on an order after placing the order. In such situations, you can modify the addresses as requested.

### 6.11.19.1 Solution

This section explains the process of changing the order address.

### Disabling Availability Checks

The user can disable availability checks when inventory is maintained externally as the user is aware of the inventory availability details. If the Prevent Availability Checks During Order Entry and Order Modifications rule is enabled or set to "Y", the inventory availability check is not performed and the calls to the getPossibleSchedules, findInventory, or any derivation APIs are eliminated. This aids in better performance and pace in capturing the order.

### Validating the Address Information

When the user has to enter an order address for a new customer, or modify an existing address, the validity of the address needs to be verified.

The validity of the address needs to be verified when the address of a new customer is to be entered or when the existing address of a customer needs to be modified. For more information about address verification, see Section 6.2.2.3, "Address Verification".

### Modifying Delivery Lines After Release

If the Allow Modification of Delivery Lines After Release rule is enabled, you can change the shipping address of order lines that have the Delivery fulfillment method and are not in the Shipped status.

> **Note:** The order lines are not reserved when you change the shipping address.

### 6.11.19.2 End-User Impact

None.

### 6.11.19.3 Reference Implementation

By default, the Prevent Availability Checks During Order Entry and Order Modifications rule is set to "N" for XYZ-CORP and XYZ-RETAIL organizations.

# 7

# Implementing the Store Order Management Features

This chapter describes the store order management features supported by the Sterling Customer Order Management PCA.

## 7.1 Alternate Item Identifier

The alternate item identifier can be used to scan and search for product or service items in the store application. For more information about alternate item identifiers, see Section 6.1, "Alternate Item Identifier".

## 7.2 Order Capture

Data must be captured for fulfilling an order in a store. The order capture process includes order creation and order validation. For more information about order capture, see Section 6.2, "Order Capture".

## 7.3 Searching for Alternate Store Pickup Locations

The Sterling Customer Order Management PCA provides an ability to search for availability of items for pickup across stores. For more information about alternate stores, see Section 6.3, "Searching for Alternate Store Pickup Locations".

# 7.4 Order Inquiry

A customer may walk into a store to inquire about any order placed in the store. In such situations, the Sterling Customer Order Management PCA needs to respond to order inquiries by publishing information about these orders captured to the external systems. The order inquiry process and implementation supported in a store is similar to the order inquiry process in a call center.

The order inquiry process in the store order management scenario enables you to search for draft orders and orders that are created in a store. For more information about order inquiry, see Section 6.4, "Order Inquiry".

# 7.5 Item Inquiry

A customer may walk into a store to inquire about an item. In such situations, the store representative needs to search for the item based on certain search criteria. The item inquiry process and implementation supported in a store are similar to the item inquiry process in a call center.

To search for an item based on the item types:

1. Create a new classification and associate it with the "Specifications" classification purpose.

2. Define a Classification Hierarchy for the new classification and associate it with the item attribute groups and attribute values.

For more information about

For more information about defining classifications, see the *Sterling Product Management Configuration Guide*.

The Item Inquiry screen displays the list of item types based on the configuration. The getClassificationPurposeList API is called to load item types. For the selected item type, the getCategoryList and getItemAttributeGroupsForCategory APIs are called to load categories and attributes dynamically.

The store order management feature supports barcode scanning for items. Barcode scanning is used to identify items when a customer walks into a store with an item. The translateBarCode API is called to return the item Id, which calls the getItemListForOrdering API. This returns an item

element which is used to open the Item Details screen. You can also scan the alternate item identifiers. For more information about item inquiry, see Section 6.5, "Item Inquiry".

> **Note:** The translateBarCode API is called only when you press the TAB key after scanning the item barcode. The scanner must be configured to send out a TAB message immediately after scanning the barcode. This configuration may change based on the device.

# 7.6 Configuring Item Display Options

The Sterling Customer Order Management PCA enables you to configure which item attributes need to be displayed throughout the user interface. For more information about configuring item display options, see Section 6.6, "Configuring Item Display Options".

# 7.7 Customer Appeasement

When a customer is not satisfied or has had a bad experience with any of the services that were provided, you can present them with the option to appease them. For example, a customer may walk in to a store to report having received a damaged item. In such situations, you need to perform an appeasement task to make amends for the bad experience. For more information about customer appeasement, see Section 6.7, "Customer Appeasement".

# 7.8 Alert and Queue Management

The alert management task enables the user to create, assign, and resolve alerts. The new alerts that are raised can be notified to the user based on certain configurations, such as poll time. The Sterling Customer Order Management PCA provides a comprehensive visibility to alerts assigned to the users, alerts moved to a different queue, and so forth.

For more information about alert and queue management, see Section 6.8, "Alert and Queue Management".

# 7.9 Payment Processing

In the store order management scenario, each order has to be paid when it is placed. The customer can use different types of payment to pay for an order. For more information about payment processing and implementation, see Section 6.9, "Payment Processing".

# 7.10 Order Monitoring

Once orders are captured, they need to be monitored so that the customers are notified about the order status. For more information about order monitoring, see Section 6.10, "Order Monitoring".

# 7.11 Order Maintenance

You can modify orders that are created and captured in the Sterling Customer Order Management PCA. The following order maintenance features are supported in the store order management scenario:

- Resolving Holds
- Changing Payment Method
- Adding Multiple Items to an Order
- Create Order
- Change Gift Options
- Open Box Items
- Add Coupon
- Cancel Order
- Track an Item
- Creating Store Returns
- Order Notes
- Changing Service Instructions
- Changing Service Appointments
- Fulfillment Summary
- Reservations

- Price Match

- Initiate Return

- Changing Fulfillment Options

- Increasing Order Line Quantity

- Changing Order Address

## 7.11.1 Resolving Holds

The Sterling Customer Order Management PCA provides visibility to holds applied to an entire order or to just certain order lines, and enables you to resolve them. An order can be placed on hold with various hold types, either automatically or manually. For more information about resolving holds, see Section 6.11.1, "Resolving Holds".

## 7.11.2 Changing Payment Method

Different types of payment are supported in the store order management scenario. For more information about the process and implementation of changing a payment method, see Section 6.11.2, "Changing Payment Method".

## 7.11.3 Adding Multiple Items to an Order

Once an order is created, the customer may want to add a few more product or service items to that order. The store order management application enables you to add multiple items to an order. For more information about adding multiple items, see Section 6.11.4, "Add Multiple Items to an Order".

## 7.11.4 Create Order

This task enables you to identify a customer and create an order for the customer. You can enter multiple order lines for an order, modify fulfillment options and appointments, and confirm the payment information as requested by the customer.

### 7.11.4.1 Solution

This section explains the complete process of order entry.

### Identifying a Customer and Entering the Order Line Details

In the store order management application, you can enter or modify the customer and order line details for an order. Using the Customer Screen Sequence and Line Entry Sequence rules, you can configure the Customer Identification and Add Line screens.

The getPersonInfoList API is called to retrieve a list of all addresses that match your search criteria. After you select the appropriate address from the list, the getCustomerList API is called to get the identifier of the customer.

### Enabling Search on Business Customers

By configuring the Business Customers Enabled rule, you can enable the search on business customers. For detailed information about fine-tuning the Customer Search screen for optimal performance, see Chapter 9, "Performance Tuning".

### Handling Related Items

Related items are the accessories that are associated with an item. For example, if a customer places an order for a television, and the remote control is an accessory for the television, then the remote control is added as a related item to the order. If the item has a service item associated with it, the service item will also be displayed as an item in the Related Items panel or the pop-up window.

When the related items are added to the order, the fulfillment methods for related items will be the same as for the parent item. If the related item does not support the fulfillment method, the fulfillment option of the related item is set to the default fulfillment method. When you select the parent item to modify the fulfillment option, the related lines associated with it are also selected for modification.

To add relationships between lines, you need to configure the association types to be displayed on the user interface. For more information about association types, see Section 4.10.1, "Configuring Order Entry Rules". You also need to configure a Relationship Type to be used with the association type. For more information about configuring relationship types, see Section 4.10.31, "Configuring Line Relationship Types".

### Identifying Items and Checking for Availability

When you scan product or service item identifiers or alternate item identifiers using a barcode scanner, the translateBarCode API is called to translate and validate the barcode of the item. The getItemListForOrdering API is called to retrieve descriptions, price, accessories, and units of measure for the item. The getFulfillmentOptionsForLines API is used to determine the available fulfillment options, which includes delivery, shipping, and pickup for the newly added order lines. The user can disable the availability checks when the inventory is maintained externally as the user is aware of the inventory availability details.

> **Note:** The translateBarCode API is called only when you press the TAB key after scanning the item barcode. The scanner must be configured to send out a TAB message immediately after scanning the barcode. This configuration may change based on the device.

### Enabling and Choosing Service Appointments

By configuring the Appointment Scheduling Required rule, you can enable the delivery appointment for an order in the Order Entry task flow.

After adding items to the order using the changeOrder API, if you choose the Delivery option, the generateWorkOrder API is used to create the delivery lines and generate work orders. You can change the delivery appointment for the customer, if applicable.

### 7.11.4.2 End-User Impact

None.

### 7.11.4.3 Implementation

To implement order entry rules:

1. Log on to the Sterling Customer Order Management Configurator. For more information about logging in to the application, see Section 2.1, "Starting the Sterling Customer Order Management Configurator".

2. From the Sterling Customer Order Management Configurator, click Configure Order Administration > Configure Order Entry Rules.

**3.** Configure the rules as needed. For more information about configuring the order entry rules, see Section 4.10.1, "Configuring Order Entry Rules".

**Disabling Availability Check**

If the Prevent Initial Availability Checks During Order Entry and Order Modifications rule is disabled or set to 'N', the availability check will not be performed and the calls to getFulfillmentOptionsForLines, findInventory, or its derivation APIs will be eliminated. This aids in better performance and pace in capturing the order.

### 7.11.4.4 Reference Implementation

None.

## 7.11.5 Change Gift Options

You can identify certain items as gifts in an order. You can configure which of the fulfillment methods allow gift options to be recorded in the user interface. For more information about changing gift options, see Section 6.11.5, "Change Gift Options".

## 7.11.6 Open Box Items

Open box items are display items that are returned with minute defects and are sold at a discounted rate. You can add the open box items to an order.

### 7.11.6.1 Solution

The Sterling Customer Order Management PCA provides the ability to add open box items to an order and to view the open box items on existing orders.

Typically, open box items are assigned a unique identifier to differentiate them from the other items. In Sterling Customer Order Management PCA, the unique identifiers for the available open box items are stored as item tag attributes. For more information about defining a product item's inventory information, see the *Sterling Product Management Configuration Guide*.

Open box items must be assigned a different product class to ensure that they do not appear in normal item availability inquiries and are not promised to orders for regular items.

Open box identifiers can be entered in the user interface in the create order and add line screens. The getSalesOrderDetails API retrieves the sales order details that contain the OrderLineInvAttRequest element as an output template. The user interface uses the getTagListForOrdering API to validate the open box ID and get the corresponding item information for that open box ID such as the Item ID, Unit of Measure, Product Class, and Price Details. The createOrder or changeOrder APIs are called with open box unique identifiers and passed to the OrderLineInvAttRequest element as input.

### 7.11.6.2 End-User Impact
None.

### 7.11.6.3 Implementation
This section explains the configuration needed to add an open box item to an order.

1. Log in to the Sterling Customer Order Management Configurator. For more information about logging in to the application, see Section 2.1, "Starting the Sterling Customer Order Management Configurator".

2. In the Sterling Supply Chain Applications Configurator, set the following rules:

   - Allow Addition of Open Box Items to Orders—Enable this rule to allow open box items to be added to orders.

   - Tag Identifier for Open Box ID—Select the appropriate item tag attribute that is used to track the unique open box identifier from the drop-down list.

     > **Note:** In the user role configuration, you can grant or revoke permission to the "Add Open Box" resource if you want to control the capability to add open box items at a user level.

   - Product Class for Open Box Items—Select the appropriate product class that represents open box items from the drop-down list.

This product class is used to differentiate open box items from regular availability checks and order promising.

- Fulfillment Methods Supported for Open Box Items—Select the appropriate fulfillment method to use for open box items. The following types of fulfillment method are supported for open box items:
    - Pickup
    - Shipping
    - Delivery

### 7.11.6.4 Reference Implementation

A new item, AOE4357 Computer Game CD is added to the XYZ-CORP organization with Batch No as the open box unique identifier.

## 7.11.7 Add Coupon

This feature allows a user to add coupons or promotion codes for an order that has been placed. For more information about adding coupons to orders, see Section 6.11.9, "Add Coupon".

## 7.11.8 Cancel Order

A customer may want to cancel an entire order, or just certain product or service items on the order. The items on an order can be cancelled as long as they have not been shipped. For example, you can cancel items that are included in the shipment but still present in the store.

In the store order management scenario, depending on the store enterprise configurations, a store representative can cancel order lines that are not shipped from a local store, even if permissions are not assigned. The getSalesOrderDetailsWithLocalQty API determines whether or not an order line can be cancelled. If the cancellation request has some items beyond Released status, the store representative must first validate if the items can be cancelled. The order lines can be cancelled even after the order lines with the pick up fulfillment method are moved to the released status. The changeOrder API is called to cancel the lines on the order and release, if associated with the order line. The changeShipment API is called to cancel the shipment lines associated

with the order line. This API is called only when the shipment line is associated with an order line.

As a part of Cancel Order task implementation:

1. Log in to the Sterling Customer Order Management Configurator.

   For more information about logging in to the Sterling Customer Order Management Configurator, see Section 2.1, "Starting the Sterling Customer Order Management Configurator".

2. From the Sterling Customer Order Management Configurator, select Configure Order Administration > Configure Order Modification Rules. The Modification Rules: Order Fulfillment screen displays.

3. In Group By drop-down list, select Modification Type.

4. From Order Fulfillment > Add Note > Line, right-click Sent To Store.

5. Select Allow Modification.

6. From Order Fulfillment > Add Note > Order, right-click Sent To Store.

7. Select Allow Modification.

For more information about cancelling an order, see Section 6.11.10, "Cancel Order".

## 7.11.9 Track an Item

The customers may sometimes need to know the status of the orders. For example, if a customer does not receive items that were ordered, then the customer can call the user to enquire about the shipment status. For more information about tracking an item, see Section 6.11.11, "Track an Item".

## 7.11.10 Creating Store Returns

You can perform the Creating Store Returns task when a customer wants to return or exchange the ordered items. The process of creating store returns and its implementation is similar to the process of initiating a return in the call center order management application.

The store order management application enables you to scan items using a barcode scanner. The translateBarcode API is called to translate and validate the bar code of the item. You can also scan the alternate item identifiers.

> **Note:** The translateBarCode API is called only when you press the TAB key after scanning the item barcode. The scanner must be configured to send out a TAB message immediately after scanning the barcode. This configuration may change based on the device.

On confirming the payment information, the `processReturnCompletionUE` user exit is created. The default implementation of this user exit is as follows:

On confirming the payment information, there are two multi-API calls.

- The first multi-API includes the following APIs calls:
  - The confirmOrder API contains return order header key as input to confirm a return order. If the order has exchange information, this API contains exchange order header key as input to confirm the exchange order.
  - The changeOrderStatus API is called to move the return status from Created to Authorized.
  - The scheduleOrder API is called to schedule and release the return.
  - The startReceipt API is called to create a receipt for the return.
- The second multi-API includes the following API calls:
  - The RecordReceiptInOneStep API is called to record the receipt and save the disposition code on the receipt.
  - The closeReceipt API is called with the receipt key of the newly created or recorded receipt as input.
  - The createOrderInvoice API is called with the order header key and the appropriate transaction identifier as inputs to create a return invoice.

As a part of reference implementation, the following Return Disposition Codes are configured for the Create Store Return task:

- Sent For Repair
- Scrapped

- Restocked

For more information about returns and exchanges, see Section 6.11.8, "Initiate Return".

> **Note:** The order lines are not reserved when you create store returns.

## 7.11.11 Order Notes

A user may need to enter some notes for an order describing the actions performed against the order, for future reference. The order notes are either system generated or entered by the user. The store order management feature allows the user to add notes to an the order line. This helps the user to track any important events at the order line level.

As a part of the reference implementation, the following Contact Types are configured:

- Phone

- E-mail

- In Person

For more information about adding notes to an order, see Section 6.11.12, "Order Notes".

## 7.11.12 Changing Fulfillment Options

You can use this task to change fulfillment options for orders that are associated with the delivery lines.

The getShipmentList API returns a list of shipments associated with the order for a particular node.

If an item has to be delivered or picked up from a local store for which the order status is greater than "Released" and not shipped, the item is most likely to be present in the store. In such situations, the store representative can verify whether the item is present in the store and modify the fulfillment options as requested by the customer by using the getSalesOrderDetailsWithLocalQty API.

For more information about changing the fulfillment options, see Section 6.11.15, "Changing Fulfillment Options".

> **Note:** You can configure the user interface to never show the pick up fulfillment method if the enterprise does not support that fulfillment method.

### 7.11.13 Changing Service Instructions

At the time of delivery, if a customer requests to change the service instructions for a product or service item, you can modify the service instructions as requested. For more information about changing service instructions, see Section 6.11.13, "Changing Service Instructions".

### 7.11.14 Changing Service Appointments

When a customer wants to change the date and time of delivery of the ordered items, you can modify the service appointments. For more information about changing service appointments, see Section 6.11.14, "Changing Service Appointments".

### 7.11.15 Fulfillment Summary

Order lines can be grouped based on their fulfillment methods. Within each fulfillment method, the order lines can be grouped as follows:

- Ship To Address for shipping

- Ship Node for pickup

For more information about fulfillment summary, see Section 6.11.16, "Fulfillment Summary".

### 7.11.16 Reservations

The reservation of items is performed to confirm availability and resolve issues when handling multiple customers simultaneously. For more information about reservations, see Section 6.11.17, "Reservations".

### 7.11.17 Price Match

A customer may sometimes find that an item is available at a cheaper price from a different retailer. In such situations, the store representative can investigate the customer's claims and perform the necessary price

match action. For more information about price matching an item, see Section 6.11.6, "Price Match".

## 7.11.18 Initiate Return

The Initiate Return task is performed by a user when a customer wants to return or exchange the ordered items. For more information about initiating a return, see Section 6.11.8, "Initiate Return".

## 7.11.19 Increasing Order Line Quantity

When a customer wants to increase the quantity of one or more items on an order that is already placed, the user can increase the order line quantity as requested. For more information about increasing an order line quantity, see Section 6.11.18, "Increasing Order Line Quantity".

## 7.11.20 Changing Order Address

A customer may want to change or modify the addresses on an order after placing the order. In such situations, you can modify the addresses as requested by the customer. For more information about changing the order address, see Section 6.11.19, "Changing Order Address".

# 7.12 Performing Order Print Tasks

A customer may visit a store to either place an order or make some modifications to an existing order that may result in some payment changes. In such situations, you must issue an order slip of the transaction to the customer.

Printers are configured as devices. For more information about defining devices, see the *Sterling Warehouse Management System Configuration Guide*.

## 7.12.1 Create Order and Order Summary Prints

When you confirm a draft order, you must issue the customer a Order Sales Slip that has a snapshot of the order. Typically, the snapshot displays order lines and payment details.

The Order Sales Slip is also printed from the Order Summary screen when the customer needs the summary of the order.

### 7.12.1.1 Solution

On confirming the draft order, the system invokes the print service component. Whenever a customer requests for an order slip, you can click the Print Order Summary related task to print the Order Sales Slip.

### 7.12.1.2 End-User Impact

None.

### 7.12.1.3 Implementation

The following service can be found in the COM PCA Print transaction of the Sterling Supply Chain Applications Configurator:

YCD_PrintOrderSummary_3.0 service—This service is used to print the Sales Order Slip. It is invoked by the callPrintOrderSummaryService event of the COM PCA transaction. Figure 7–1 illustrates this service.

*Figure 7–1   YCD_PrintOrderSummary_3.0 service*
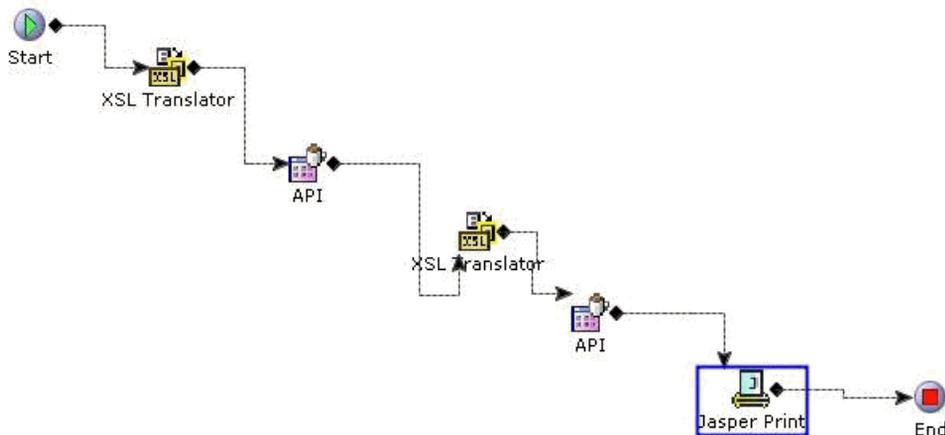


### 7.12.1.4 Reference Implementation

None.

## 7.12.2 Change Order Print

When you make modifications such as order cancellation, adding a coupon, increase in the order line quantity, changes in the fulfillment

options, and so forth to an existing order, the Change Order Slip is
generated.

### 7.12.2.1  Solution

After performing the order modifications, the print service component is
invoked.

### 7.12.2.2  End-User Impact

None.

### 7.12.2.3  Implementation

The following service can be found in the COM PCA Print transaction of
the Sterling Supply Chain Applications Configurator:

YCD_PrintChangeOrderSummaryPrintReport_3.0 service—This service is
used to print the Change Order Slip. It is invoked by the
callPrintChangeOrderService event of the COM PCA transaction.
Figure 7–2 illustrates this service.

*Figure 7–2   YCD_PrintChangeOrderSummaryPrintReport_3.0*
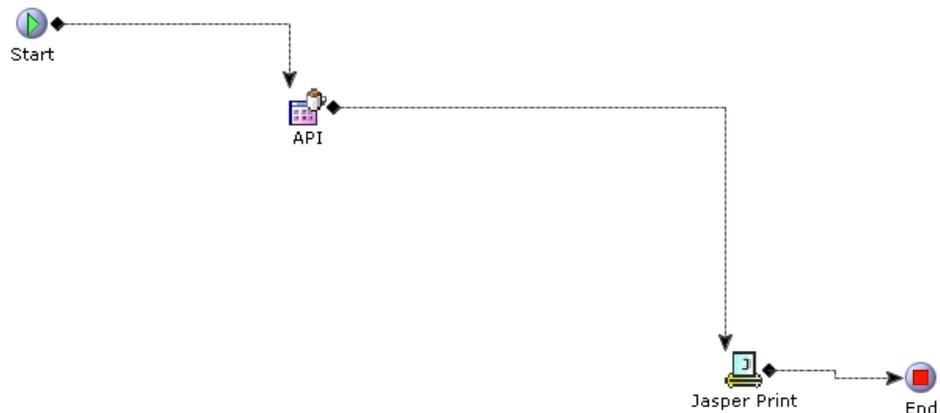


### 7.12.2.4  Reference Implementation

None.

### 7.12.3 Return or Exchange Order Prints

When a customer returns items to a store, a Return Order Slip must be printed. If the customer has requested for exchange of items, the Exchange Order Slip provides information about the exchange order.

#### 7.12.3.1 Solution

When a customer returns items to a store or exchanges any item, the print service component is invoked.

#### 7.12.3.2 End-User Impact

None.

#### 7.12.3.3 Implementation

The following services can be found in the COM PCA Print transaction of the Sterling Supply Chain Applications Configurator:

YCD_PrintReturnOrderSummary_3.0 service—This service is used to print the Return Order Slip. It is called by the callPrintReturnOrderSummaryService event of the COM PCA transaction. Figure 7–1 illustrates this service.

YCD_PrintExchangeOrderSummary_3.0 service—This service is used to print the Exchange Order Slip. It is called by the callPrintExchangeOrderSummaryService event of the COM PCA transaction. Figure 7–1 illustrates this service.

#### 7.12.3.4 Reference Implementation

None.

## 7.13 User Security

User Security enables you to ensure that users access only the required information for carrying out their tasks. This requires you to set up user groups and associate users to the user groups. The Sterling Customer Order Management Configurator enables you to create users and user groups and assign permissions.

## 7.13.1 Solution

A user has the privilege to change the password or the user group of another user.

### Changing a Password

A user can change a password in the Change Password screen. The modifyUserHierarchy API is invoked to change the password. Table 7–1 describes the various validations that the system performs before changing the password.

For more information about the modifyUserHierarchy API, see the *Sterling Supply Chain Applications Javadocs*.

*Table 7–1  Change Password Validations*

| Validation | Result |
|---|---|
| If the old password and the new password match | An error message displays. |
| If the new password and the confirmed password do not match | An error message displays. |
| If the old password is incorrect | An error message displays. |
| If the old password field is blank | An error message displays. |

### Managing Users

A store administrator can either change the credentials of a user or transfer a user to another store. To get a list of all users, the getUserList API is invoked. To get the list of all user groups, the getUserGroupList API is called. The modifyUserHierarchy API is invoked, to apply the changes made to user credentials.

To transfer a store user from one store to another, the getOrganizationHierarchy API is called which validates the store to which the user was transferred. However, the store administrators cannot choose to transfer themselves to another store.

### 7.13.2 End-User Impact

None.

### 7.13.3 Implementation

None.

### 7.13.4 Reference Implementation

None.

# 8

# Summary of Components

This chapter explains the various components that are included in this PCA. It is assumed that the user is familiar with the Sterling Supply Chain Applications and understands which components need to be added or modified.

This chapter explains the following components:

* Database Extensions for the Sterling Customer Order Management PCA
* APIs and User Exits
* Services
* Monitor Events
* Hold Types
* Transactions
* Events

## 8.1 Database Extensions for the Sterling Customer Order Management PCA

To implement the Sterling Customer Order Management PCA, the following tables have been extended:

* YFS_ORDER_HEADER
* YFS_ORDER_LINE
* YFS_SHIPMENT
* YFS_PRICE_MATCH

### YFS_ORDER_HEADER

*Table 8–1   YFS_ORDER_HEADER Extensions*

| Column Name | Data Type | Description |
|---|---|---|
| ALL_ADDRESSES_VERIFIED | Char (1) | This flag determines whether or not the addresses in this order have been verified by an address verification program. |
| COMPL_GIFT_BOX_QTY | Number (3) | The number of complimentary gift boxes to be given with the order. |
| NO_OF_AUTH_STRIKES | Number (1) | Indicates the number of failed credit card authorizations with HARD_DECLINE as reason code for the order. |
| SOURCE_IP_ADDRESS | Varchar2 (20) | The IP address of the system from which the customer placed order. |
| CUSTOMER_FIRST_NAME | Varchar2 (40) | The first name of the customer who placed the order. |
| CUSTOMER_LAST_NAME | Varchar2 (40) | The last name of the customer who placed the order. |
| CUSTOMER_PHONE_NO | Char (40) | The daytime phone number of the customer who placed the order. |
| CUSTOMER_ZIP_CODE | Varchar2 (35) | The address zip code of the customer who placed the order. |

### YFS_ORDER_LINE

*Table 8–2   YFS_ORDER_LINE Extensions*

| Column Name | Data Type | Description |
|---|---|---|
| BACKORDER_NOTIFICATION_QTY | Number (14,4) | Indicates the backordered quantity for which the last customer notification was sent. |
| IS_PRICE_MATCHED | Char (1) | This flag determines whether the price match was performed for the item. |

### YFS_SHIPMENT

*Table 8–3   YFS_SHIPMENT Extensions*

| Column Name | Data Type | Description |
|---|---|---|
| NOTIFICATION_SENT | Char (1) | This flag determines whether or not the customer has been informed about this shipment. |

### YFS_PRICE_MATCH

*Table 8–4   YFS_PRICE_MATCH Extensions*

| Column Name | Data Type | Description |
|---|---|---|
| PRICE_MATCH_KEY | Char (24) | The primary key for the YFS_PRICE_MATCH table. |
| ENTERPRISE_CODE | Char (24) | Enterprise that performed the price match |
| ITEM_ID | Char (40) | The identifier of the Item for which the price match was performed. |
| UNIT_OF_MEASURE | Varchar2 (40) | The unit of measure of the item for which price match has to be performed. |
| COMPETITOR | Char (40) | The competitor's name who offered a lower price of the item. |
| SHIPPING_CHARGES | Number (15) | The difference in retailer's and the competitor's shipping charges. |

*Table 8–4  YFS_PRICE_MATCH Extensions*

| Column Name | Data Type | Description |
|---|---|---|
| MINIMUM_QUANTITY | Number (14) | The minimum quantity required to offer a lower price. |
| NEW_UNIT_PRICE | Number (19) | The final price allowed for the price match (incorporates the shipping charges). |
| REGION_CITY | Varchar2 (40) | If the price that was matched is offered only in a specific region, this field stores the region's city. |
| REGION_STATE | Varchar2 (40) | If the price that was matched is offered only in a specific region, this field stores the region's state. |
| EXPIRATION_DATE | Datetime (17) | The date on which the price offered by the competitor expires. If the field is left blank, the system defaults the date to 30 days. |
| CURRENCY | Varchar2 (20) | Indicates the type of currency used when applying a price match of an item. |
| NO_HASSLE_OVERRIDDEN | Char (1) | Indicates whether or not the data entered adheres to the Enterprise rules for Price Match. |
| CREATETS | sysdate | Indicates the timestamp when the record was created. |
| MODIFYTS | sysdate | Indicates the timestamp when the record was last modified. |
| CREATEUSERID | Varchar2 (40) | Indicates the user who created the record. |
| MODIFYUSERID | Varchar2 (40) | Indicates the user who modified the record. |
| CREATEPROGID | Varchar2 (40) | Indicates the program that created the record. |
| MODIFYPROGID | Varchar2 (40) | Indicates the program that modified the record. |
| LOCKID | Number (5) | Indicates the integer used to track and prevent concurrent modifications. |

### YFS_ASSC_RELATIONSHIP

*Table 8–5   YFS_ASSC_RELATIONSHIP Extensions*

| Column Name | Data Type | Description |
| --- | --- | --- |
| ASSC_RELATIONSHIP _KEY | Char (24) | The primary key for the YFS_ASSC_RELATIONSHIP table. |
| ENTERPRISE_CODE | Char (24) | Enterprise for which the association types are configured to be displayed. |
| ASSOCIATION_TYPE | Varchar2 (20) | The association type to be displayed. |
| RELATIONSHIP_TYPE | Varchar2 (40) | The relationship type indicates the relationship between the order lines. |
| SHOW_IN_UI | Char (1) | This attribute indicates whether or not the association type has to be displayed. |
| CREATETS | sysdate | Indicates the timestamp when the record was created. |
| MODIFYTS | sysdate | Indicates the timestamp when the record was last modified. |
| CREATEUSERID | Varchar2 (40) | Indicates the user who created the record. |
| MODIFYUSERID | Varchar2 (40) | Indicates the user who modified the record. |
| CREATEPROGID | Varchar2 (40) | Indicates the program that created the record. |
| MODIFYPROGID | Varchar2 (40) | Indicates the program that modified the record. |
| LOCKID | Number (5) | Indicates the integer used to track and prevent concurrent modifications. |

# 8.2 APIs and User Exits

Table 8–6 provides a list the APIs introduced in the Sterling Customer Order Management PCA, and the features that are affected.

*Table 8–6   APIs and User Exits*

| API or User Exit | Features Affected |
| --- | --- |
| getAssociationRelationshipList | Order Creation |
| verifyAddress | Address Verification |
| getSalesOrderDetailsWithLocalQty | Cancel Order, Changing Fulfillment Options, Increasing Order Line Quantity |
| YCDSendFutureOrderCustomerAppeasementUE | Customer Appeasement |
| checkDuplicateOrder | Duplicate Order Validation |
| checkFraudOnOrder | Fraud Check |
| getReturnMethod | Initiate Return |
| getOrderLinesWithTransactionQuantity | Initiate Return |
| applyPriceMatch | Price Match |
| checkNoHasslePriceMatch | Price Match |
| checkOrderPriceMatch | Price Match |
| getPriceMatchCompetitors | Price Match |
| managePriceMatch | Price Match |
| listCarrierService | Changing Fulfillment Options |
| getOrderFulfillmentDetails | Fulfillment Summary |
| getUserGroupList | Managing Users |
| YCDPromotionValidationUE | Add Coupon |
| YCDVerifyAddressWithAVSUE | Address Verification |
| YCDProcessReturnCompletionUE | Creating Store Returns |
| YCDGetAppeasementOffersUE | Customer Appeasement |
| YCDProcessDuplicateOrderCheckUE | Duplicate Order Validation |
| YCDProcessOrderFraudCheckUE | Fraud Check |
| YCDGetReturnPolicyUE | Initiate Return |

*Table 8–6   APIs and User Exits*

| API or User Exit | Features Affected |
|---|---|
| YCDGetReturnMethodUE | Initiate Return |
| YCDCanPriceMatchBePerformedUE | Price Match |
| YCDCheckNoHasslePriceMatchUE | Price Match |
| YCDCheckOrderPriceMatchUE | Price Match |
| YCDGetPriceMatchCompetitorsUE | Price Match |
| YCDManagePriceMatchUE | Price Match |
| YCDGetTrackingNumberURLUE | Track an Item |
| YCDOverrideDeliveryMethodUE | Order Creation, Changing Fulfillment Options |

For more information about these APIs and user exits, see the *Sterling Customer Order Management PCA Javadocs*.

# 8.3  Services

The following services are introduced in the Sterling Customer Order Management PCA, and can be found in the service definitions of the `Sales Order` document type:

- Order Maintenance Services

- Customer Notification Services

- Order Capture Services

- Payment Processing Services

- Order Printing Services

## 8.3.1  Order Maintenance Services

*Table 8–7   Order Maintenance Services*

| Service | Feature Affected |
|---------|------------------|
| YCD_FTCAutoCancel_1.0 | Federal Trade Commission Compliance |
| YCD_OnBackorder_1.0 | Federal Trade Commission Compliance |
| YCD_ResolveAddressHold_1.0 | Address Verification |
| YCD_ResolveOrderAlerts_1.0 | Address Verification |
| YCD_SetOrderDefaultsOnChange_1.0 | Federal Trade Commission Compliance |
| YCD_UpdateBackorderOnCancel_1.0 | Federal Trade Commission Compliance |

## 8.3.2  Customer Notification Services

The following customer notification services are introduced in the Sterling Customer Order Management PCA.

*Table 8–8   Customer Notification Services*

| Service | Feature Affected |
|---------|------------------|
| YCD_CancelOrderNotification_1.0 | Federal Trade Commission Compliance |
| YCD_FTCFirstNotificationEmail_1.0 | Federal Trade Commission Compliance |
| YCD_FTCFirstNotificationMail_1.0 | Federal Trade Commission Compliance |
| YCD_FTCSecondNotification_1.0 | Federal Trade Commission Compliance |
| YCD_SendBackorderNotification_1.0 | Federal Trade Commission Compliance |
| YCD_ShipmentNotificationEmail_1.0 | Shipment Notification |

### 8.3.3 Order Capture Services

The following order capture services are introduced in the Sterling Customer Order Management PCA.

*Table 8–9   Order Capture Services*

| Service | Feature Affected |
|---------|------------------|
| YCD_DuplicateOrderAlert_1.0 | Duplicate Order Validation |
| YCD_ProcessCustOrdMgmtHolds_1.0 | Duplicate Order Validation |
| YCD_ProcessDuplicateOrderCheck_1.0 | Duplicate Order Validation |
| YCD_SetOrderDefaults_1.0 | Federal Trade Commission Compliance |
| YCD_VerifyAddressFailedAlert_1.0 | Address Verification |

### 8.3.4 Payment Processing Services

The following payment processing services are introduced in the Sterling Customer Order Management PCA.

*Table 8–10   Payment Processing Services*

| Service | Feature Affected |
|---------|------------------|
| YCD_ExecuteCollectionCreditCard_Proxy_1.0 | Payment Processing |
| YCD_ExecuteCollectionRefundCheck_Proxy_1.0 | Payment Processing |
| YCD_ExecuteCollectionSVC_Proxy_1.0 | Payment Processing |
| YCD_PaymentAuthRetryLimitAlert_1.0 | Payment Processing |
| YCD_PaymentDeclinedAlert_1.0 | Payment Processing |
| YCD_PaymentHardDeclinedAlert_1.0 | Payment Processing |
| YCD_PaymentServiceUnavailableAlert_1 | Payment Processing |
| YCD_ProcessCollectionFailure_1 | Payment Processing |

### 8.3.5 Order Printing Services

The following order printing services are introduced in the Sterling Customer Order Management PCA.

*Table 8−11   Order Printing Services*

| Service | Feature Affected |
|---|---|
| YCD_PrintOrderSummary_3.0 | Create Order and Order Summary Prints |
| YCD_PrintReturnOrderSummary_3.0 | Return or Exchange Order Prints |
| YCD_PrintExchangeOrderSummary_3.0 | Return or Exchange Order Prints |
| YCD_PrintChangeOrderSummaryPrintReport_3.0 | Change Order Print |

## 8.4 Monitor Events

The following monitor events are introduced in the Sterling Customer Order Management PCA:

*Table 8−12   Monitor Events*

| Monitor Event | Feature Affected |
|---|---|
| YCD_FTCFirstDelayNoticeMail | Federal Trade Commission Compliance |
| YCD_FTCFirstDelayNoticeEmail | Federal Trade Commission Compliance |
| YCD_FTCSecondDelayNotice | Federal Trade Commission Compliance |
| YCD_FTCAutoCancel | Federal Trade Commission Compliance |

## 8.5 Hold Types

The following hold types are introduced in the Sterling Customer Order Management PCA:

*Table 8−13   Hold Types*

| Hold Type | Feature Affected |
|---|---|
| YCD_DUPLICATE_ORDER | Duplicate Order Validation |

*Table 8–13   Hold Types*

| Hold Type | Feature Affected |
|-----------|------------------|
| YCD_VERIFY_ADDRESS | Address Verification |
| YCD_FRAUD_CHECK | Fraud Check |

# 8.6 Transactions

The following transactions are introduced in the Sterling Customer Order Management PCA:

*Table 8–14   Transactions*

| Transaction Name | Feature Affected | Events |
|------------------|------------------|--------|
| Duplicate Order | Duplicate Order Validation | On Duplicate Order |
| Address Verification | Address Verification | Address Verification Failed |
| Shipment Notification | Shipment Notification | Send Notification |
| COM PCA PRINT | Create Order and Order Summary Prints | Print Order Summary |
| COM PCA PRINT | Return or Exchange Order Prints | Print Return Order Summary |
| COM PCA PRINT | Return or Exchange Order Prints | Print Exchange Order Summary |
| COM PCA PRINT | Change Order Print | Print Change Order |

# 8.7 Events

The following transaction events were implemented in the Sterling Customer Order Management PCA:

*Table 8−15   Events*

| Transaction | Event |
| --- | --- |
| Change Order | On Cancel |
| Change Order | On Success |
| Change Order Release | On Backorder |
| Change Order Release | On Cancel |
| Confirm Draft Order | On Success |
| Create Order | On Success |
| Release Order | On Cancel |
| Release Order | On Backorder |
| Schedule Order | On Backorder |

# 9

# Performance Tuning

This chapter explains the steps you need to take to fine-tune the Sterling Customer Order Management PCA for optimal performance.

## 9.1 Database Management

For Database Management, Sterling Commerce recommends that you add the following custom indices to the YFS_PERSON_INFO table:

- A new custom index on the following columns:
  - UPPER (LAST_NAME)
  - UPPER (FIRST_NAME)
- A new custom index on the DAY_PHONE column.

If you want to enable users to search for the Manufacturer's name in the Quick Access screen, Sterling Commerce recommends that you add a new custom index on the MANUFACTURER_NAME column in the YFS_ITEM table. Also ensure that you add custom indices for all item attributes for which searches are enabled.

For more information about custom indices, see the *Sterling Supply Chain Applications Performance Management Guide*.

## 9.2 Enabling Reference Data Caching

The caching feature is enabled using the `yfs.dbcache.classes` parameter in the `yfs.properties` file. Sterling Commerce recommends that you add the `com.yantra.yfs.dbclasses.YFS_Assc_RelationshipDBCacheHome` to the `yfs.dbcache.classes` parameter value. For more information

about enabling reference data caching, see the *Sterling Supply Chain Applications Performance Management Guide*.

# 9.3  Rule Caching

The following rules are cached when you launch the client applications:

- ENCRYPT_CREDIT_CARD_PAYMENT_TYPE_GROUP
- ENCRYPT_STORED_VALUE_CARD_PAYMENT_TYPE_GROUP
- ENCRYPT_CUSTOMER_ACCOUNT_PAYMENT_TYPE_GROUP
- ENCRYPT_OTHER_PAYMENT_TYPE_GROUP
- YCD_USE_TRANSACTIONAL_QUANTITY
- YCD_DISTANCE_TO_CONSIDER
- YCD_DISTANCE_UOM_TO_CONSIDER
- YCD_ALLOW_COUNTRY_ENTRY
- YCD_POSTPONE_AVAILABILITY_CHECK
- YCD_AVAILABILITY_CHECK_IN_ITEM_INQUIRY
- YCD_OPENBOX_ENABLED
- YCD_OPENBOX_TAG_ATTR
- YCD_OPENBOX_DEL_PICKUP_ONLY
- YCD_OPENBOX_DEFAULT_PRODUCTCLASS
- YCD_PAYMENT_ENTERED_EXTERNALLY
- YCD_PRINT_AT_ORDER_MODIFY
- YCD_USE_ALT_ITEM_ID
- YCD_ITEM_ALIAS
- YCD_STATE_DROP_DOWN_REGION_SCHEMA
- YCD_ENABLE_GIFT_SHIPMENT
- YCD_ENABLE_GIFT_PICKUP
- YCD_RESERVATION_REQUIRED
- YCD_ALERT_POLING_INTERVAL

- YCD_ALERT_CONFIG
- YCD_USE_COMMITTED_DATES
- YCD_DEFAULT_DELIVERY_METHOD
- YCD_SHOW_DELIVERY_AS_FULFILLMENT_METHOD
- YCD_SERVICE_RELATIONSHIP
- YCD_MODIFY_DEL_POST_REL
- USE_ENTERPRISE_CODE_FOR_PAYMENT

# 10

# Integrating with WebSphere Commerce

The integration between the Sterling Customer Order Management PCA and WebSphere Commerce provides a solution that combines the two products in a single system that supports the order life cycle.

This chapter explains how the WebSphere Commerce application integrates with the Sterling Customer Order Management PCA. Sterling Customer Order Management PCA events and user exits have been implemented to interact with the WebSphere Commerce application through exposed web services. This enables the Sterling Customer Order Management PCA to utilize some inherent features of the WebSphere Commerce application.

## 10.1 Configuring Agent Servers

When running the WebSphere Commerce application with secured web services, you must configure the Sterling Customer Order Management PCA and applicable agent servers with the proper trustStore and keyStore files and password as parameters into the Java JVM. This enables Sterling Customer Order Management PCA application servers to make web service calls to the WebSphere Commerce application.

> **Note:** When running the
> YCDWCI_REALTIME_MONITOR_AVAILABILITY and
> YCDWCI_REALTIME_MONITOR_FULLSYNC agents, you
> need to configure the agent server's classpath with the
> `ywcbe.jar` file and the axis jar files.

## 10.2 Order Repricing Using WebSphere Commerce

The orderRepricing user exit utilizes a web service call to the WebSphere Commerce Order Preprocessing web service. The user exit implementation takes an existing order, calls the WebSphere Commerce Order Pre-processing service, and returns the results to the existing order. This user exit is implemented as the Sterling Customer Order Management PCA YCDWCI_PreprocessOrder_3.0 service.

This user exit does not call the WebSphere Commerce web service when a new order is created in the Sterling Customer Order Management PCA. However, a reference implementation is provided to enable the orderRepricing user exit when certain status modifications occur on an order. If the reference implementation's configuration data is installed, this service is triggered when the following changes occur:

- New order lines are added to the order

- The quantity of an order line is modified

- The carrier service is modified

- The delivery method is modified

- The ship to address is changed

- The delivery code is changed

- An order line is cancelled

- A promotion is added or removed

To implement this user exit for order repricing using WebSphere Commerce, you must use the orderRepricing user exit template that incorporates all of the attributes that are contained in the `orderRepricing.xml.sample` file located in the `<YFS_HOME>\template\userexit\extn` directory. If you have not

previously implemented this user exit, rename this sample file to `orderRepricing.xml.` The changes are picked up when you restart the application server.

Some exception cases that are not handled by this implementation are:

- An order is modified and, after calling the WebSphere Commerce Order Preprocessing service, returns an additional order line. This order line can not be added to the order.

- Promotion awards are not tracked as an award; however, a discount is added to the order or line.

- There is no translation of Unit of Measure between WebSphere Commerce and the Sterling Customer Order Management PCA; both systems must be configured with a common set of Unit of Measure codes.

- All repricing occurs at the line level, all discounts and charges returned by the WebSphere Commerce Order Preprocessing service occur at the line level, therefore the Sterling Customer Order Management PCA only considers line level changes.

The YCDWCI_PreprocessOrder_3.0 service executed within the Order Repricing user exit is provided. If you want to extend this service, you can use the provided source code as a starting point. The source code is located in the `Documentation\code_examples\wci` directory.

> **Note:**   By default, when installing the Sterling Customer Order Management PCA's reference implementation, the Order Repricing user exit is implemented with a demo user exit. To utilize the order repricing user exit provided as part of the WebSphere Commerce integration, you must remove the implementation with the class `com.yantra.pca.ycd.demo.YCDOrderRepricingForPromotionsUEImpl` from the user exit implementation list in the Sterling Customer Order Management Configurator.

# 10.3 Payment Processing Using WebSphere Commerce

WebSphere Commerce application provides a mechanism for Sterling Supply Chain Applications to access third-party payment services for

authorizing and charging credit cards, store value cards, and electronic checks. To incorporate this mechanism into the Sterling Customer Order Management PCA, the Execute Collection user exits and proxy services make web service calls to the WebSphere Commerce Payment Processing web service with authorization and charge requests.

To implement this, the Sterling Customer Order Management PCA provides the following services:

- YCDWCI_ExecuteCollectionCreditCard_3.0

- YCDWCI_ExecuteCollectionSVC_3.0

- YCDWCI_ExecuteCollectionCheck_3.0

These services are called by the YCD_ExecuteCollectionCreditCard_Proxy_1.0, YCDWCI_ExecuteCollectionSVC_Proxy_1.0, and YCDWCI_ExecuteCollectionCheck_Proxy_3.0 user exits respectively.

These services are very similar in the sense that each service calls the WebSphere Commerce Payment Service and passes the proper payment instructions when required. Depending on the charge type of the Sterling Supply Chain Applications call, the payment service receives different input as described in Table 10–1, "Payment Processing Calls to WebSphere Commerce".

*Table 10–1   Payment Processing Calls to WebSphere Commerce*

| Charge Type | Requested Amount | WebSphere Commerce Action Code |
|---|---|---|
| AUTHORIZATION | Any | Approve |
| CHARGE (NO AUTHORIZATION) | Any | ApproveAndDeposit |
| CHARGE | Positive Amount | Deposit |
| CHARGE | Negative Amount | Credit |

> **Note:** Refunds checks are not supported with the WebSphere Commerce Payment Processing integration.

Depending on the payment type, the Sterling Supply Chain Applications call the applicable user exit. For more information about payment processing in general, see Section 6.9, "Payment Processing". These user exits have been configured to send the WebSphere Commerce Payment Processing service the input it is expecting for the specific payment type.

Once the results are returned from the web service the first thing that occurs is a response code check. If the WebSphere Commerce web service responds without calling the external payment service, a WebSphere Commerce action code is returned. Sterling Customer Order Management PCA services treat these codes as the response code used for pre-validation checks which occur before the external system is called. These are compared against the ycd_wci_response_code_map.xml. A complete list of these action codes is located in the WebSphere Commerce documentation at http://publib.boulder.ibm.com/infocenter/wchelp/v6r0m0/topic/com.ibm. commerce.base.doc/messages/rgx_ecsymptomdb.htm and http://publib.boulder.ibm.com/infocenter/wchelp/v6r0m0/topic/com.ibm. commerce.api.doc/com/ibm/commerce/ras/ECMessageKey.html depending on the type of error that is encountered.

If the WebSphere Commerce web service returns with a response from the external payment system, a PaymentSystemName and ResponseCode are returned in the resulting output. This information is validated against the same ycd_wci_response_code_map.xml file to return a Response Code that is understood by the Sterling Customer Order Management PCA. For more information about implementing payment processing, see Section 6.9, "Payment Processing".

Depending on the results and the payment type requested, the output is translated into the expected results for the proxy service that called it. The source code has been provided for these custom API services. If you are interested in extending these services, the mapping of the attributes for the execute collection user exits that are input in to the WebSphere Commerce Payment Processing service call and returned to the Sterling Customer Order Management PCA can be viewed in the source code. An example of the source code is located in the Documentation\code_examples\wci directory.

> **Note:** In order for WebSphere Commerce to create Charges and Discounts within the Sterling Customer Order Management PCA, the validation on the Charge Category and Charge Name combination must be disabled for the document types being used. This is provided as part of the WebSphere Commerce reference implementation for the Corporate Enterprise's sales and return document types.
>
> Some items are configured to have some discounts on WebSphere Commerce and the discount names are passed through the output xml of Order Preprocess Service. The Sterling Customer Order Management PCA translates those names as they are returned in the OrderRepricing Output XML. However, the Charge Names or Discount Names might not be configured in the Sterling Customer Order Management PCA. For that purpose Sterling Customer Order Management PCA sets the Validate Charge Name attribute value to No for sales orders.

## 10.4 Inventory Updates Using WebSphere Commerce

The Sterling Customer Order Management PCA provides WebSphere Commerce with the inventory information necessary to populate a cache that is used during Order Capture. To do this, there are several initial configuration steps you must perform in the Sterling Customer Order Management PCA to enable it to provide the required information to WebSphere Commerce.

To configure the Sterling Customer Order Management PCA for inventory updates using WebSphere Commerce:

1.  To implement inventory updates using WebSphere Commerce, you must use an event template that incorporates all of the attributes that are contained in the `REALTIME_ATP_MONITOR.REALTIME_AVAILABILITY_CHANGE.xml.sample` located in the `<YFS_HOME>\template\event\extn` directory. If you have not previously implemented this event, rename this sample file to `REALTIME_ATP_MONITOR.REALTIME_AVAILABILITY_CHANGE.xml`. The changes are picked up when you restart the application server.

2. Next, you must create a distribution group from which the organizations source inventory items. This distribution group should include all applicable nodes because this is the list of nodes used to produce the inventory picture for the each item. Using the Sterling Customer Order Management Configurator, configure this distribution group as the default distribution group in the basic configuration. Select Applications > Distributed Order Management > Cross Applications > Order Promising > Sourcing and Scheduling. For more information about configuring product item specific distribution groups, see the *Sterling Global Inventory Visibility Configuration Guide*.

3. Select Applications > Global Inventory Visibility > Inventory Rules (Monitor Rules Tab), to configure the inventory organization with ATP monitor rules. Check the Use Activity-Based Mode box to indicate the mode in which the Real-Time Availability Monitor is activated. Create an ATP Monitor Rule as an Event-Based ATP Monitor Rule. A default ATP monitoring rule is provided as part of the Sterling Customer Order Management PCA Reference Implementation.

4. When creating items in the catalog, configure them with the ATP Monitor Rule. The ATP Monitor Rule determines the threshold levels on an item.

> **Note:** To adjust threshold levels on an item, this is the applicable monitor rule setting. All items using the same threshold should use the same monitor rule. When you configure this attribute, the Real-Time Availability Monitor picks up the inventory for the item.

The Sterling Customer Order Management PCA default factory setup also provides the following agents:

- YCDWCI_REALTIME_MONITOR_AVAILABILITY—provides as an implementation of the Availability update agent with the RaiseEventsOnAllAvailabilityChanges Agent attribute set to "Y" and the Option set to 1.

- YCDWCI_REALTIME_MONITOR_FULLSYNC—provides an implementation of the Full Sync availability agent with the Corporate Enterprise Code set for the Inventory Organization.

Running the Full Sync agent updates the WebSphere Commerce inventory cache with all items configured with an ATP Monitor Rule in the Sterling Customer Order Management PCA catalog.

Running the Update agent updates the WebSphere Commerce inventory cache whenever a change is made to the inventory availability.

These agents trigger the ON_REALTIME_AVAILABILITY_CHANGE event of the REALTIME_ATP_MONITOR transaction. This event calls the YCDWCI_AdjustInventory_7.3 service. This service takes the item availability information returned by the event and translates the data into valid input for the WebSphere Commerce Inventory Service call. This input is then added to a JMS queue. A second service, YCDWCI_ProcessInventory_7.3, asynchronously reads the messages from the JMS queue and calls the WebSphere Commerce web service that adjusts the inventory in that inventory picture.

To learn more about integrating with JMS systems, please see the *Sterling Supply Chain Applications Integration Guide*.

The YCDWCI_AdjustInventory_7.3 service executed within the YCDWCIUpdateInventory event is provided. If you are interested in extending this service, you can use the provided source code as a starting point. The source code is located in the `Documentation\code_examples\wci` directory.

# A

# Localizing the Application

This chapter explains how to localize the Sterling Customer Order Management PCA.

## A.1 User Interface Themes

The user interface theme files specify the screen colors, display fonts, and images to use. The display fonts are dependent on the languages that need to be supported. However, some fonts may not support all languages. When setting up a theme, choose a font that displays the specific language you need or choose a font that displays for a particular locale. For example, when setting up a Japanese locale, customize the theme to use a font that displays Japanese characters such as Hiragana.

To localize the Sterling Customer Order Management PCA user interface:

1. Save:

    a. `com.yantra.pca.ycd_sapphire.ythm,`
       `com.yantra.pca.ycd_earth.ythm,` and
       `com.yantra.pca.ycd_jade.ythm` located in the
       `YANTRA_HOME/Applications/com/reference` folder.

For more information about localizing a theme, see the *Sterling Supply Chain Applications Localization Guide*.

## A.2 Literals

The Sterling Customer Order Management PCA uses resource bundles that contain literals or text displayed on the screens. The Sterling Customer Order Management PCA enables you to customize and localize resource bundles based on the user's locale. In addition, literals used in

the customized screens have their own resource bundles, and are considered during the localization process.

For more information about literals, see the *Sterling Supply Chain Applications Localization Guide*.

If you have customized the Sterling Customer Order Management PCA applications, you must localize those customizations also. For more information about customizing the Sterling Rich Client Platform Interface, see the *Sterling Supply Chain Applications Customization Guide*.

> **Note:** Literals cannot be localized in the following places:
> - Condition Builder
> - Order/Shipment Monitor
> - Hard-coded literals in APIs

## A.2.1 Resource Bundles

The Sterling Customer Order Management PCA always releases complete resource bundles in the com.yantra.pca.ycd_bundle.properties file with the localized versions of the Sterling Customer Order Management PCA. Incremental updates are not provided. If you localize the Sterling Customer Order Management PCA, it is your responsibility (or that of your third-party localization company) to compare and validate the differences between the resource bundles shipped with the product to those you have localized.

The Sterling Supply Chain Applications Customer Order Management application uses the resource bundle files to define literals for the user interface.

To localize the client application resource bundles:

1. Save the:

    a. `com.yantra.pca.ycd_bundle.properties` bundles as `com.yantra.pca.ycd_bundle_lang_[country]_[variant].prope rties` located in the `YANTRA_HOME/Applications/com/reference` folder.

**b.** `com.yantra.pca.ycd_Message_bundle.properties` as `com.yantra.pca.ycd_Message_bundle_lang_[country]_[varian t].properties` located in the `RCP_EXTN_FOLDER`.

**c.** `com.yantra.pca.ycd_format_bundle.properties` as `com.yantra.pca.ycd_format_bundle_lang_[country]_[variant ].properties` located in the `RCP_EXTN_FOLDER`.

Here, lang is the language to which you want to localize, country is the Country Code, and variant is the Time Zone or the Variant Component.

> **Note:** After saving the bundle files as mentioned above, you must create the Sterling Customer Order Management PCA client applications. For more information about creating a client application, see the *Sterling Customer Order Management PCA Installation Guide*.

For more information about resource bundles, see the *Sterling Supply Chain Applications Localization Guide*.

To localize the resource bundles server application:

**1.** Copy the:

**a.** `<YANTRA_HOME>/Applications/COM_Add-in/resources/ycdbundle .properties` file and save it as `<YANTRA_HOME>/Applications/COM_Add-in/resources/ycdbundl e_<language>_<country>.properties`.

## A.3 Localizing Address and Store Node Information

When the Address and Store Node information are provided, a bundle key is also provided for all single line displays.

- For a Store Node:

  The standard display is formatted as per the Common_Binding_Store_Node key in `com.yantra.pca.ycd_bundles.properties`. For example, a bundle record looks like:

  `Common_Binding_Store_Node={8}, {9} ({1})`

The Common_Binding_Store_Node key is passed to the following method in YRCPlatformUI:

`getFormattedString` (String key, String[] data) along with the String[] array whose contents should match the place holders defined in the Common_Binding_Store_Node key.

- For Address Records:

  The standard display is formatted as per the Common_Binding_Address key in `com.yantra.pca.ycd_bundles.properties`. For example, a bundle record looks like:

  `Common_Binding_Address={0} - {6}, {7}`

  The Common_Binding_Address key is passed to the following method in YRCPlatformUI:

  `getFormattedString` (String key, String[] data) along with the String[] array whose contents should match the place holders defined in the Common_Binding_Address key.

# A.4 Factory Setup Data

Besides storing your transactional data, the database also stores configuration data, such as error codes and item descriptions of various attributes. This means that the database may need to store values in a language-specific format. If these database literals are not localized, screen literals display inconsistently, with some displaying in the localized language and others displaying in English.

For more information about localizing factory setup data, see the *Sterling Supply Chain Applications Localization Guide*.

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