

Sterling Commerce

An IBM Company

Selling and Fulfillment Foundation: Customizing the Swing Interface Guide

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Preface

This manual describes the Applications Manager user interface and walks you through the tasks necessary for customizing it to suit your business needs.

Intended Audience

This manual is intended for use by those who are responsible for customizing Selling and Fulfillment Foundation.

Structure

This document contains the following chapters:

Chapter 1, "Checklist for Customization Projects"

This chapter describes a checklist of the tasks you need to perform to customize the different components of Selling and Fulfillment Foundation.

Chapter 2, "Extending the Swing User Interface for the Applications Manager"

This chapter describes how to customize the user interface for the Applications Manager.

Selling and Fulfillment Foundation Documentation

For more information about the Selling and Fulfillment Foundation components, see the following manuals:

- *Selling and Fulfillment Foundation: Release Notes*

- *Selling and Fulfillment Foundation: Installation Guide*
- *Selling and Fulfillment Foundation: Upgrade Guide*
- *Selling and Fulfillment Foundation: Configuration Deployment Tool Guide*
- *Selling and Fulfillment Foundation: Performance Management Guide*
- *Selling and Fulfillment Foundation: High Availability Guide*
- *Selling and Fulfillment Foundation: System Management Guide*
- *Selling and Fulfillment Foundation: Localization Guide*
- *Selling and Fulfillment Foundation: Customization Basics Guide*
- *Selling and Fulfillment Foundation: Customizing APIs Guide*
- *Selling and Fulfillment Foundation: Customizing Console JSP Interface for End User Guide*
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- *Selling and Fulfillment Foundation: Using Sterling RCP Extensibility Tool Guide*
- *Selling and Fulfillment Foundation: Integration Guide*
- *Selling and Fulfillment Foundation: Product Concepts Guide*
- *Sterling Warehouse Management™ System: Concepts Guide*

- *Selling and Fulfillment Foundation: Application Platform Configuration Guide*
- *Sterling Distributed Order Management™: Configuration Guide*
- *Sterling Supply Collaboration: Configuration Guide*
- *Sterling Global Inventory Visibility™: Configuration Guide*
- *Catalog Management™: Configuration Guide*
- *Sterling Logistics Management: Configuration Guide*
- *Sterling Reverse Logistics™: Configuration Guide*
- *Sterling Warehouse Management System: Configuration Guide*
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- *Sterling Selling and Fulfillment Suite™: Glossary*
- *Parcel Carrier: Adapter Guide*
- *Selling and Fulfillment Foundation: Multitenant Enterprise Guide*
- *Selling and Fulfillment Foundation: Password Policy Management Guide*
- *Selling and Fulfillment Foundation: Properties Guide*
- *Selling and Fulfillment Foundation: Catalog Management Concepts Guide*
- *Selling and Fulfillment Foundation: Pricing Concepts Guide*
- *Business Center: Item Administration Guide*

- *Business Center: Pricing Administration Guide*
- *Business Center: Customization Guide*
- *Business Center: Localization Guide*

Conventions

In this manual, Windows refers to all supported Windows operating systems.

The following conventions may be used in this manual:

Convention	Meaning
. . .	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.
/ 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.
<INSTALL_DIR>	User-supplied location of the Selling and Fulfillment Foundation installation directory. This is only applicable for Release 8.0 or later.
<INSTALL_DIR_OLD>	User-supplied location of the Selling and Fulfillment Foundation installation directory (for Release 8.0 or later). Note: This is applicable only for users upgrading from Release 8.0 or later.
<YANTRA_HOME>	User-supplied location of the Sterling Supply Chain Applications installation directory. This is only applicable for Releases 7.7, 7.9, and 7.11.

Convention	Meaning
<YANTRA_HOME_OLD>	User-supplied location of the Sterling Supply Chain Applications installation directory (for Releases 7.7, 7.9, or 7.11). Note: This is applicable only for users upgrading from Releases 7.7, 7.9, or 7.11.
<YFS_HOME>	For Releases 7.3, 7.5, and 7.5 SP1, this is the user-supplied location of the Sterling Supply Chain Applications installation directory. For Releases 7.7, 7.9, and 7.11, this is the user-supplied location of the <YANTRA_HOME>/Runtime directory. For Release 8.0 or above, the <YANTRA_HOME>/Runtime directory is no longer used and this is the same location as <INSTALL_DIR>.
<YFS_HOME_OLD>	This is the <YANTRA_HOME>/Runtime directory for Releases 7.7, 7.9, or 7.11. Note: This is only applicable for users upgrading from Releases 7.7, 7.9, or 7.11.
<ANALYTICS_HOME>	User-supplied location of the Sterling Analytics installation directory. Note: This convention is used only in the <i>Selling and Fulfillment Foundation: Business Intelligence Guide</i> .
<COGNOS_HOME>	User-supplied location of the IBM Cognos 8 Business Intelligence installation directory. Note: This convention is used only in the <i>Selling and Fulfillment Foundation: Business Intelligence Guide</i> .
<MQ_JAVA_INSTALL_PATH>	User-supplied location of the IBM WebSphere® MQ Java components installation directory. Note: This convention is used only in the <i>Selling and Fulfillment Foundation: System Management and Administration Guide</i> .
<DB>	Refers to Oracle®, IBM DB2®, or Microsoft SQL Server® depending on the database server.
<DB_TYPE>	Depending on the database used, considers the value oracle, db2, or sqlserver.

Note: The Selling and Fulfillment Foundation documentation set uses the following conventions in the context of the product name:

- Yantra is used for Release 7.7 and earlier.
- Sterling Supply Chain Applications is used for Releases 7.9 and 7.11.
- Sterling Multi-Channel Fulfillment Solution is used for Releases 8.0 and 8.2.
- Selling and Fulfillment Foundation is used for Release 8.5.

Checklist for Customization Projects

This chapter provides a high-level checklist for the tasks involved in customizing or extending Selling and Fulfillment Foundation.

1.1 Customization Projects

Projects to customize or extend Selling and Fulfillment Foundation vary with the type of changes that are needed. However, most projects involve an interconnected series of changes that are best carried out in a particular order. The checklist identifies the most common order of customization tasks and indicates which guide in the documentation set provides details about each stage.

1. Prepare your development environment

Set up a development environment that mirrors your production environment, including whether you deploy Selling and Fulfillment Foundation on a WebLogic, WebSphere, or JBoss application server. Doing so ensure that you can test your extensions in a real-time environment.

You install and deploy Selling and Fulfillment Foundation in your development environment following the same steps that you used to install and deploy Selling and Fulfillment Foundation in your production environment. Refer to Selling and Fulfillment Foundation system requirements and installation documentation for details.

An option is to customize Selling and Fulfillment Foundation with Microsoft COM+. Using COM+ provides you with advantages such as increased security, better performance, increased manageability of server applications, and support for clients of mixed environments. If

this is your choice, see the *Selling and Fulfillment Foundation: Customization Basics Guide* about additional installation instructions.

2. Plan your customizations

Are you adding a new menu entry, customizing the Sign In screen and logo, creating new themes, customizing views and wizards, or adding new screens? Each type of customization varies in scope and complexity. For background, see the *Selling and Fulfillment Foundation: Customization Basics Guide*, which summarizes the types of changes that you can make.

Important guidelines about file names, keywords, and other conventions are found in the *Selling and Fulfillment Foundation: Customization Basics Guide*.

3. Extend the Database

For many customization projects, the first task is to extend the database so that it supports the other UI or API changes that you make later. For instructions, see the *Selling and Fulfillment Foundation: Extending the Database Guide* which include information about the following topics:

- Important guidelines about what you can and cannot change in the database.
- Information about modifying APIs. If you modify database tables so that any APIs are impacted, you must extend the templates of those APIs or you cannot store or retrieve data from the database. This step is required if table modifications impact an API.
- How to generate audit references so that you improve record management by tracking records at the entity level. This step is optional.

4. Make other changes to APIs

Selling and Fulfillment Foundation can call or invoke standard APIs or custom APIs. For background about APIs and the services architecture in Selling and Fulfillment Foundation, including service types, behavior, and security, see the *Selling and Fulfillment Foundation: Customizing APIs Guide*. This guide includes information about the following types of changes:

- How to invoke standard APIs for displaying data in the UI and also how to .save the changes made to the UI in the database.
- Invoke customized APIs for executing your custom logic in the extended service definitions and pipeline configurations.
- APIs use input and output XML to store and retrieve data from the database. If you don't extend these API input and output XML files, you may not get the results you want in the UI when your business logic is executing.
- Every API input and output XML file has a DTD and XSD associated to it. Whenever you modify input and output XML, you must generate the corresponding DTD and XSD to ensure data integrity. If you don't generate the DTD and XSD for extended Application XMLs, you may get inconsistent data.

5. Customize the UI

Sterling Commerce applications support several UI frameworks. Depending on your application and the customizations you want to make, you may work in only one or in several of these frameworks. Each framework has its own process for customizing components like menu items, logos, themes, and etc. Depending on the framework you want, consult one of the following guides:

- *Selling and Fulfillment Foundation: Customizing Console JSP Interface for End User Guide*
- *Selling and Fulfillment Foundation: Customizing the Swing Interface Guide*
- *Selling and Fulfillment Foundation: Customizing User Interfaces for Mobile Devices Guide*
- *Selling and Fulfillment Foundation: Customizing the RCP Interface Guide* and *Selling and Fulfillment Foundation: Using the Sterling RCP Extensibility Tool Guide*
- *Customizing the Web UI Framework Guide*

6. Extend Transactions

You can extend the standard Selling and Fulfillment Foundation to enhance the functionality of your implementation of Selling and Fulfillment Foundation and to integrate with external systems. For background about transaction types, security, dynamic variables, and extending the

Condition Builder, see the *Selling and Fulfillment Foundation: Extending Transactions Guide* *Selling and Fulfillment Foundation: Extending the Condition Builder Guide* . These guides includes information about the following types of changes:

- How to extend Selling and Fulfillment Foundation Condition Builder to define complex and dynamic conditions for executing your custom business logic and using a static set of attributes.
- How to define variables to dynamically configure properties belonging to actions, agents, and services configurations.
- How to set up transactional data security for controlling who has access to what data, how much they can see, and what they can do with it.
- How to create custom time-triggered transactions. You can invoke and schedule these custom time-triggered transactions in much the same manner as you invoke and schedule Selling and Fulfillment Foundation standard time-triggered transactions. Finally, you can coordinate your custom, time-triggered transactions with external transactions and run them either by raising an event, calling a user exit, or invoking a custom API or service.

7. Build and deploy your customizations or extensions

After performing the customizations that you want, you must build and deploy your customizations or extensions. First, build and deploy these customizations or extensions in the test environment for verification. When you are ready, repeat the same process to build and deploy your customizations and extensions in the production environment. For instructions, see the *Selling and Fulfillment Foundation: Customization Basics Guide* which includes information about the following topics:

- How to build and deploy standard resources, database, and other extensions (such as templates, user exits, java interfaces).
- How to build and deploy Enterprise-Level extensions.

Extending the Swing User Interface for the Applications Manager

2.1 About Extending the Swing User Interface

The Presentation Framework allows you to customize how information is displayed without changing the way it functions. You can customize the user interface for the Applications Manager in several ways. Each customization is accomplished through a combination of configuration changes made in the Applications Manager and changes to Java Swing code.

After you are satisfied with all of the customizations you have made to the Applications Manager UI, create and deploy the extended UI-specific JAR files.

The main purpose of user interface extensibility is to enable any database extensions to be integrated into the graphical user interface.

Extensibility includes the following modifications:

- Adding any icons (or buttons) and labels
- Adding any text fields and checkboxes
- Hiding any non-mandatory components
- Reorganizing the components that are displayed on-screen

Note: If you extend the Swing user interface, when you install upgrades and services packs you need to read the upgrade documentation and carefully reconcile changes that have taken place in the default screens of Selling and Fulfillment Foundation. Some changes may be mandatory while some may not be.

You may modify the following types of screens:

- Search screens
- Detail screens
- List screens

The explorer screens (screens that contain only a tree) are not extensible.

2.2 Extending Organization and Item Detail Screens in the Applications Manager

When you extend a table used by the Item Details screen or the Organization Details screen, this adds a pop-up action icon to the main screen. This icon enables access to a pop-up screen that contains all of the relevant extended fields.

For example, when you extend the organization table, a pop-up access icon is added to the default organization screen. When the user clicks this icon, a pop-up screen displays all of the extended attributes that are relevant to this table.

Typically, extended attributes on the pop-up screen appear as text input boxes. In the case of the Item Detail screen, any item attribute that is specified as a classification displays as a classification lookup. This lookup enables the user to select any classification value that has been configured as described in the *Catalog Management: Configuration Guide*.

Fields on the pop-up screen can be grouped together. These groups are displayed in alphabetical order on the screen. Likewise, the fields within each group are displayed in alphabetical order.

To add extended attributes to a pop-up:

1. Copy the <INSTALL_DIR>/repository/entity/extensions/Extensions.xml.sample file as <INSTALL_DIR>/extensions/global/entities/<your_filename>.xml file OR modify your existing extension XML file.
2. Edit the <your_filename>.xml file and specify a DataType attribute for your new column. The new attribute should be a new data type that has not been defined previously in the datatypes.xml file.
3. Edit your datatypes.xml file in <INSTALL_DIR>/repository/datatypes directory and add an entry for your new data type using the following attributes:
 - **DisplayInUI** - Required. Specifies whether the field should automatically display in the new pop-up screen.
 - **DisplayGroup** - Optional. Groups the display of extended fields on the new pop-up screen. When this field is specified, all extended fields with the same DisplayGroup attribute are grouped together and displayed in alphabetical order beneath a title that is set to the value of the DisplayGroup attribute.

For example, attributes for the newly added ExtnMyField data type are specified as follows:

```
<DataType Name='ExtnMyField' Type='CHAR' Size='35'>
<UIType Size="30" UITableSize="30" DisplayInUI="true" DisplayGroup="My_
Group"/>
</DataType>
```

2.3 Extending Search and Detail Screens in the Applications Manager

The Applications Manager menu structure contains a hierarchical collection of the following types of items:

- Menu – Contains child menu items
- Resource – Contains no child menu items, and instead, points to a resource

The Applications Manager menu structure cannot be modified.

Note: You need Net Beans 3.2 IDE to extend search and detail screens in the Applications Manager.

Each screen within the Applications Manager is associated with a Form Class and a Java Behavior Class. The Form Class is responsible for painting the controls on the screen and the Behavior Class is responsible for populating data in the screen and responding to events that occur in the screen, such as choosing Save.

When navigating to a screen within the Applications Manager, the Form Class of the corresponding screen is loaded and the Behavior Class populates the data in the screen.

The Applications Manager screens are defined in an XML file. This file contains the unique screen ID, Form Class, and Behavior Class for each screen. This file must be extended in order to extract the Applications Manager screens as described in the following steps:

To extend a search or detail screen:

1. From the Applications Manager, navigate to the screen that you want to extend.
2. After the screen loads, press CTRL-M, which displays the window with the Form Name (which is the resource ID for the screen), the Form Class name, and XML data information.
3. Note the Form Name (resource ID) and Form Class Name.
4. The `<INSTALL_DIR>/xapidocs/code_examples/configuisrc/scfoundationuisrc.jar` file contains the source code corresponding to all Form classes. There is a corresponding `.form` file and a `.java` file. The `.form` file is used by NetBeans and is required only if you use the NetBeans 3.2 IDE.
5. Copy the `.java` and `.form` files corresponding to the Form Class Name that you had noted into your own directory structure. The copy you make should have a different class name. Make sure you do not copy it anywhere under `com.yantra` because that is reserved strictly for products of Selling and Fulfillment Foundation.
6. Add the following JAR files to the CLASSPATH. This can be done in NetBeans 3.2 by mounting the JAR file.

- `jgo.jar`
- `platui.jar`
- `ycmui.jar`
- `yifui.jar`
- `xercesImpl.jar`

You need to do this in order to compile the Java file.

7. Add the package name to the top of the form. Put the appropriate class name in the code (should be the same Java class that you originally copied as the file name created in step 5).

The copied Java class must extend the original.

8. Set the Variables Modifier option in Net Beans to `public`. The default value is `private`. This option can usually be found in Tools > Options > Form Objects > Expert Tab.
9. Remove `super.init()` from the `init()` function.
10. At the end of the `init()` function, add the following line:

```
checkVars();
```

11. Make the necessary changes to the new form. To set the properties of the new controls, see [Table 2–1, "XML Binding"](#). Only the following changes are permitted:
 - Rearranging any components on the user interface
 - Hiding any non-mandatory components
 - Adding any buttons and labels
 - Adding any text fields and checkboxes
12. Compile the `.java` file, create a JAR file named `yfsextn.jar` that contains only the `.class` file, and put it in the `<INSTALL_DIR>/extensions/global/webpages/yfscommon/` directory.
13. Enter the name of the newly added `yfsextn.jar` file in the `<INSTALL_DIR>/repository/eardata/platform/war/yfscommon/jarlist.txt`.

14. Rename the `<INSTALL_DIR>/repository/xapi/template/merged/configresource/extn_application.xml.sample` file to `"extn_application.xml"`.
15. Edit the `extn_application.xml` file to include the Form Name (the resource ID that you noted in step 3) and the Override Form Class Name (the complete path of the new class name that overrides the existing `Selling and Fulfillment Foundation` class).

2.4 XML Binding in the Swing User Interface

All the forms in the Swing user interface follow the Model-View-Controller (MVC) paradigm. The form itself acts as the View, so it only has presentation logic. All the business logic is in a separate Controller class. The model for every form is an XML-DOM Element.

To further simplify the presentation logic, the core classes in `<yfs>` support a form of XMLBinding of different types of controls to the DOM model. This enables the form designer to bind the different controls on a form to different parts of the DOM. At run-time the infrastructure keeps the DOM and the controls synchronized. When the DOM is changed the changes are reflected on the control, and the reverse is true as well.

The following controls can be bound:

- `Javax.swing.JTextComponent` (and any subclasses)
- `Javax.swing.JTable`

The binding semantics control are described in detail below.

2.4.1 Binding Common to All Controls

Given an input XML, parts of the XML can be bound to controls based on an `XMLBindingString`. Each string is evaluated in XSL syntax and the first match is used as the value of the binding.

Assume the bound XML is the following:

```
<Order OrderNo='23' OrderDate='20010101' >  
<ShipToAddress City='Nashua' />  
</Order>
```

Table 2–1 illustrates the XMLBinding.

Table 2–1 XML Binding

XML Binding String	Example Value
Xml:/Order/@OrderNo	23
Xml:/Order/@OrderDate	20010101
Xml:/Order/ShipToAddress/@City	Nashua
Xml:/Order/ShipToAddress	Evaluates to the ShipToAddress Node

2.4.2 Name Property

Every Swing control has a bean property name that can be set by using the `setName(String)` function. The value of this property should be an `XMLBindingString` that specifies the `XMLData` that is to be bound to that control.

2.4.3 Binding for JTextField

In addition to the Name property, the following `TextField` properties can be set for any text field.

Table 2–2 JTextField Properties

Property	Syntax
Data Type Only Integer, Date and String are supported	<pre>txtField1.putClientProperty("YFCXMLBinding.dataType", "Integer") txtField1.putClientProperty("YFCXMLBinding.dataType", "Date") txtField1.putClientProperty("YFCXMLBinding.dataType", "String")</pre>
Associated Label This is the <code>JLabel</code> associated with the text field	<pre>txtField1.putClientProperty("YFCXMLBinding.associatedLabel", "lblField1")</pre>
Mandatory If Mandatory property is set to "true" and the field is left blank, the label associated with the text field changes color. This is triggered on the <code>lostfocus</code> event of the text field.	<pre>txtField1.putClientProperty("YFCXMLBinding.isMandatory", "true")</pre>

2.5 Extending List Screens in the Applications Manager

To add, remove, and re-arrange columns in the list screen within the Applications Manager complete the following steps:

To extend list screens:

1. Copy <INSTALL_
DIR>/repository/xapi/template/merged/configresource/generic
screens_modifications.xml.sample to <INSTALL_
DIR>/extensions/global/template/configresource/genericscree
ns_modifications.xml.

For an example of the format of this file, see [Example 2–1](#).

Example 2–1 List Modification XML File Structure

```
<ScreenModifications>
  <resourceId of the list form you want to extend>
    <ListInfo>
      <Absolute>
        <List AttributeName="" ColumnTitle="" DataType=""/>
        <List AttributeName="" ColumnTitle="" DataType=""/>
      </Absolute>
      <Add>
        <List AttributeName="" ColumnTitle="" DataType=""/>
      </Add>
      <Remove>
        <List AttributeName="" ColumnTitle="" DataType=""/>
      </Remove>
    </ListInfo>
  </resourceId of the list form you want to extend>
</ScreenModifications>
```

2. Edit the genericscreens_modifications.xml file and insert entries for the resource IDs that correspond with the list screens that you want to extend.

Tip: In order to determine the Resource ID for a specific list screen, complete the following steps:

- a. From within the Applications Manager, select the User Group screen.
- b. Click the Permission tab to display a hierarchical view of all permissions.
- c. Search the permission tree to find the list screen that you want to extend.
- d. Hover your mouse over the node to display the Resource ID using the tool tip.

3. Enter the ListInfo element attributes, using the descriptions listed in [Table 2–3, "Elements in the List Modification XML File"](#).

Table 2–3 Elements in the List Modification XML File

ListInfo Element	Purpose
Absolute	Replaces the current columns of a list with the new columns you specify in the List elements. Overrides Add and Remove.
Add	Adds one or more columns to the list screen. Add and Remove are mutually exclusive with Absolute.
Remove	Removes one or more columns from the list screen. Add and Remove are mutually exclusive with Absolute.
List	The List element is a sub-element of the Absolute, Add, or Remove element. Adds the following attributes (which must be specified): <ul style="list-style-type: none"> • AttributeName - The name to display in the list attribute. • ColumnTitle - The title to display in the list in the attribute. • DataType - The data type to display in the new column. Must be a valid DataType Name within the datatypes.xml file.

4. Open the <INSTALL_DIR>/repository/datatypes/datatypes.xml file to determine which data type you should specify in the DataType attribute.
5. If the data type you need is not in the file, create a new data type, filling in the element attributes using the descriptions listed in Table 2–4, "Elements in the datatypes.xml File".

Table 2–4 Elements in the datatypes.xml File

DataType Element	Purpose
Name	Identifier of the DataType. Must exactly match the List element DataType attribute used in the genericscreens_modifications.xml file.
Type	Adds the following attributes (of which, Type and Size must be specified): <ul style="list-style-type: none"> • CHAR - Attribute Size • DATE - Attribute Size • NUMBER - Attributes Size, DecimalDigits (optional), NegativeAllowed (optional), ZeroAllowed (optional) • VARCHAR2 - Attribute Size

6. Save your changes to the genericscreens_modifications.xml file and close it.
7. Select the refresh cache icon that fits your needs as follows:
 - If you want to update one entity and its child resources - Select the specific entity and select the  Refresh Entity Cache icon
 - If you want to update all resources - Select the  Refresh Cache icon
8. Run Selling and Fulfillment Foundation again to test your changes.

2.6 Creating and Modifying User Themes in the Applications Manager

User themes determine the set of colors used for graphical user interface elements such as screens, labels, and table headers.

2.7 Creating and Modifying Custom Error Codes

In the Applications Manager, you can create error codes to be thrown for any exception specified in your custom code. The associated cause, action and description defined while creating the error code should be available in your user interface. Custom error code values should not contain any Selling and Fulfillment Foundation-reserved keywords.

Custom error codes are also used for failure reasons thrown by the password validation user exits. These user exit exceptions are thrown when a user attempts to save the password changes in the console. A sample implementation of these user exits using Java's built-in MD5 routines are provided in `<INSTALL_DIR>/xapidocs/code_examples/pwcrypt` directory. For more information on these user exits refer to the *Selling and Fulfillment Foundation: Javadocs*.

For more information on creating or modifying custom error codes refer to the presentation component in the *Selling and Fulfillment Foundation: Application Platform Configuration Guide*.

2.8 Customizing Symbols for Node Types in the Applications Manager

In the Fulfillment Network Model in the Applications Manager, node types are displayed as symbols of various shapes, colors and sizes. Using the provided `extn_mapmanager.xml.sample` file you can modify the look and feel of these node types on the Fulfillment Network Model. For more information on the Fulfillment Network Model, refer to the *Selling and Fulfillment Foundation: Application Platform Configuration Guide*.

To customize node type symbols:

1. Rename the `<INSTALL_DIR>/repository/xapi/template/merged/configresource/extn_mapmanager.xml.sample` file to "`extn_mapmanager.xml`".
2. Edit the `extn_mapmanager.xml` file to include the node type you are customizing and the include the applicable information.

Valid values for `ShapeType` are:

- `Ellipse`
- `Rectangle`

- RoundRectangle
- Diamond
- TriangleUp
- TriangleDown
- TriangleLeft
- TriangleRight
- Marker

For `Color` and `Selected Color`, specify any hex code or standard color name.

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