

Sterling Store Associate Mobile



Application Guide

Version 3.2.02

Sterling Store Associate Mobile



Application Guide

Version 3.2.02

Note

Before using this information and the product it supports, read the information in "Notices" on page 51.

Copyright

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Chapter 1. Introduction to Sterling Store Associate Mobile

The IBM® Sterling Store Associate Mobile application is used to access and use information on product and inventory availability so as to handle customer inquiries anytime and anywhere in a retail store. The application can also give store associates the ability to save the sale, and handle out-of-stock situations in an efficient manner.

Sterling Store Associate Mobile is a client/server application where the client component runs on Apple iPod Touch devices and the server component runs on a J2EE application server. The Sterling Store Associate Mobile server component is integrated with the IBM Sterling Selling and Fulfillment Foundation.

Intended Audience

This manual provides installation and administration information for individuals responsible for installing and maintaining Sterling Store Associate Mobile.

Conventions

The following conventions are used in this manual:

Table 1. Conventions

Convention	Meaning
< >	Angle brackets indicate user-supplied input.
mono-spaced text	Mono-spaced text indicates a file name, directory path, attribute name, or an inline code.
/ 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 installation directory.

Chapter 2. Pre-requisites for Installing Sterling Store Associate Mobile

Before using the Sterling Store Associate Mobile the following have to be installed:

IBM Sterling Selling and Fulfillment Foundation:

- Sterling Selling and Fulfillment Foundation, Release 8.5 HF40 or above, or Release 9.1, or Release 9.2 and the corresponding Sterling Call Center Business Intelligence Operational Reports and Sterling Store Business Intelligence Operational Reports components.
- All the Catalog items must be indexed using Lucene, which is available with Sterling Selling and Fulfillment Foundation. For more information about indexing catalog items, refer to the *Catalog Management: Concepts Guide*.
- The store should support the backroom pick process. Ensure that your enterprise uses the pipeline provided by the IBM Sterling Store application.

Sterling Store Associate Mobile Client Application:

- For more information about Sterling Store Associate Mobile Client Application system requirements, go to the IBM Support Portal at <http://www-947.ibm.com/support/entry/portal/Planning>.

Sterling Store Associate Mobile Server Application:

- Sterling Store Associate Mobile, Release 3.2.02 components.

Chapter 3. System Requirements

For more information about system requirements, go to the IBM Support Portal at <http://www-947.ibm.com/support/entry/portal/Planning>.

Chapter 4. Security Guidelines

It is recommended that you refer to the *Sterling Selling and Fulfillment Foundation: Secure Deployment Guide* for security recommendations for running the Sterling Store Associate Mobile application.

Chapter 5. Installation Checklist

About this task

When installing the components used by Sterling Store Associate Mobile, follow the sequence of tasks provided in the checklist:

Procedure

1. Ensure that you have the necessary system requirements to install and run Sterling Store Associate Mobile
2. Install the Java Software Development Kit (JDK) and the patches specific to your system.
3. Set up your security infrastructure.
4. Install and configure the application servers.
5. Install the application on UNIX/Linux or Windows.
6. Configure the properties to use with the LDAP servers, logging, and so forth.
7. Configure the utilities for installation.
8. Set up the application server for use with Sterling Store Associate Mobile on WebLogic, WebSphere, or JBoss.
9. Build your Enterprise Archive (EAR) on WebLogic, WebSphere, or JBoss.
10. Deploy the EAR to your application server as appropriate on WebLogic, WebSphere, or JBoss.

Chapter 6. Installing and Configuring Application Tier

For installing and configuring the application server and web server, refer to the *Sterling Selling and Fulfillment Foundation: Installation Guide*.

Chapter 7. Install Sterling Store Associate Mobile Server (GUI-Based) on Windows

About this task

To install the Sterling Store Associate Mobile server in GUI-mode on Windows, perform the following steps:

Procedure

1. Copy the **SCIIInstallWizard.jar** and **SSA_3.2.02.jar** files from your installation CD to a directory.
2. Start the installation process. From a command prompt, enter the following command:

```
<JAVA_HOME>\bin\java -Djavataskargs="-XX:MaxPermSize=<value_1>"  
-Dcomptaskargs="-J-Xms<value_2> -J-Xmx<value_3>" -jar SCIIInstallWizard.jar
```
3. Click **Next** to start the installation program.
4. Type the path of your JDK directory, or search for it using the **Select Folder** button.
 - If you want a local copy of the JDK to be created in your installation, click **Yes**.
 - If you do not want a local copy of the JDK to be created in your installation, click **No**. Ensure that you have downloaded version 2.7.1 of xerces and xalan from Apache prior to running the installation. Copy the following files into the `jre/lib/endorsed` directory of your JDK:
 - serializer.jar
 - xalan.jar
 - xercesImpl.jar
 - xml-apis.jar
5. Click **Next**.
6. Choose an installation directory. Enter the directory or click **Select Folder** where you can navigate to the folder that you want to use as the installation directory. This directory is referred to as **<INSTALL_DIR>** in subsequent prompts. After selecting the folder, click **Next**.
7. The **Please Confirm Install Jar Location** screen opens and displays the path for the **SSA_3.2.02.jar** file. To confirm the location, click **Next**. Or you can search for the file using the **Select File** button, select the file, and then click **Next**.
8. The **Select JDK** screen is displayed. Click the appropriate button to specify whether you want a 32-bit or 64-bit JDK. The default is 64-Bit. Click **Next** to continue.
9. The **Checklist for Installation Process** screen is displayed. The screen displays a read-only checklist of activities that the installation program will perform. The following tasks and prompt are shown:
 - Verification of Sufficient Disk Space
 - Verify the selected JDK is supported
 - Perform Installation of Sterling Store Associate Mobile Components

- The Installation location is also shown on the screen. This is the directory you chose earlier, followed by the subdirectory name **Foundation**. The GUI installer installs into the **Foundation** subdirectory. Click **Next**.
10. On the **Installation Progress** screen, click **Install** to proceed with the installation. If you want to see detailed information about the progress of the installation, click **Show Details**, then click **Install** . This information will also be available after installation in the <INSTALL_DIR>\PreInstallSI.log file.
 11. When the installation is finished, the message Installation Wizard completed. Please see the installation guide for next steps is displayed. Click **OK** to close the message box. The **Installation Progress** screen displays the status **Complete** as its heading and the message BUILD SUCCESSFUL in the Output box

Chapter 8. Install Sterling Store Associate Mobile Server (GUI-Based) on Unix or Linux

About this task

To install the Sterling Store Associate Mobile server in GUI-mode on unix or Linux, perform the following steps:

Procedure

1. Copy the `SCIIInstallWizard.jar` and `SSA_3.2.02.jar` files from your installation CD to a directory.
2. If you are working on Unix/Linux operating systems, ensure the following:
 - The `<INSTALL_DIR>` has the necessary permissions.
 - For opening the GUI, use a connectivity client to connect to your Unix/Linux account. Set the display to use your X server as a client using the following command:

```
export DISPLAY=<server>:0.0
```
3. Start the installation process. From a command prompt, enter the following command:

```
<JAVA_HOME>/bin/java -Djavataskargs="-XX:MaxPermSize=<value_1>"  
-Dcomptaskargs="-J-Xms<value_2> -J-Xmx<value_3>" -jar SCIIInstallWizard.jar
```
4. Click **Next** to start the installation program.
5. Type the path of your JDK directory, or search for it using the **Select Folder** button.
 - If you want a local copy of the JDK to be created in your installation, click **Yes**.
 - If you do not want a local copy of the JDK to be created in your installation, click **No**. Ensure that you have downloaded version 2.7.1 of xerces and xalan from Apache prior to running the installation. Copy the following files into the `jre/lib/endorsed` directory of your JDK:
 - `serializer.jar`
 - `xalan.jar`
 - `xercesImpl.jar`
 - `xml-apis.jar`
6. Click **Next**.
7. Choose an installation directory. Enter the directory or click **Select Folder** where you can navigate to the folder that you want to use as the installation directory. This directory is referred to as `<INSTALL_DIR>` in subsequent prompts. After selecting the folder, click **Next**.
8. The **Please Confirm Install Jar Location** screen opens and displays the path for the `SSA_3.2.02.jar` file. To confirm the location, click **Next**. Or you can search for the file using the **Select File** button, select the file, and then click **Next**.
9. The **Select JDK** screen is displayed. Click the appropriate button to specify whether you want a 32-bit or 64-bit JDK. The default is 64-Bit. Click **Next** to continue.

10. The **Checklist for Installation Process** screen is displayed. The screen displays a read-only checklist of activities that the installation program will perform. The following tasks and prompt are shown:
 - Verification of Sufficient Disk Space
 - Verify the selected JDK is supported
 - Perform Installation of Sterling Store Associate Mobile Components
 - The Installation location is also shown on the screen. This is the directory you chose earlier, followed by the subdirectory name **Foundation**. The GUI installer installs into the **Foundation** subdirectory. Click **Next**.
11. On the **Installation Progress** screen, click **Install** to proceed with the installation. If you want to see detailed information about the progress of the installation, click **Show Details**, then click **Install** . This information will also be available after installation in the <INSTALL_DIR>/PreInstallSI.log file.
12. When the installation is finished, the message Installation Wizard completed. Please see the installation guide for next steps is displayed. Click **OK** to close the message box. The **Installation Progress** screen displays the status **Complete** as its heading and the message BUILD SUCCESSFUL in the Output box

Chapter 9. Install Sterling Store Associate Mobile Server (Silent Install) on Windows

About this task

The Sterling Store Associate Mobile server can be installed using a silent install. You can create and use a silent installation file, which automates part of the installation process and limits manual interaction with the installation program. You can create the silent installation file using a text editor. When you are finished editing the file, record its name and location.

The silent install file properties are as follows:

Entry	Description
INSTALL_DIR=<INSTALL_DIR>	Installation directory. Note: This property cannot point to a pre-existing directory, and the path name cannot contain spaces or the installation will fail.
ACCEPT_LICENSE=Y	Because the silent installer does not bring up an explicit license dialog, please specify your acceptance of the licensing terms by including this property in your silent install file. Note: To review the license file prior to installation, browse to the ProductFiles folder on your product CD and open Readme.htm
ADDITIONAL_ANT_JAVA_TASK_ARGS = -XX:MaxPermSize=512m ADDITIONAL_ANT_COMPILER_TASK_ARGS = -J-Xms256m -J-Xmx1408m -J-verbose:gc	These parameter values are written to the sandbox.cfg file during installation. After installation, you can tune them if you are seeing Out-of-Memory errors.
DB_VENDOR=NODB	Database is not supported.
NO_DBVERIFY=true	When set to true during installation, dbverify will not run. This means that Sterling Store Associate Mobile will not generate DDL to make the database like the XML entity repository.
REINIT_DB=false	When set to false, the Sterling Store Associate Mobile installation will complete successfully, but no database operation will be performed as part of the installation process
JDK64BIT=<true/false>	Specifies whether you are using a 32-bit JDK or a 64-bit JDK. Default=true
STERLING_FOUNDATION_PRODUCT_LABEL=ssa	Specifies the product label.
STERLING_FOUNDATION_PRODUCT_VERSION=3.2.02	Specifies the product version you are installing.

Entry	Description
JAVADOC_PRODUCT_LABEL=IBM Store Associate Mobile 3.2	Specifies the Javadocs to be installed.
APP_DCL_FILE=SSADynamicclasspath.cfg	Set the dynamic classpath of the Installation to SSADynamicclasspath.cfg

Procedure

1. From the installation CD, copy the **SSA_3.2.02.jar** to a directory.
2. If you are using FTP to copy the file, verify that your session is set to binary mode.
3. Set up your silent installation file. Record the path to your silent installation file
4. At a command prompt, type the following commands, which include paths to the JDK, the **SSA_3.2.02.jar** file, and the silent installation file
 - If you are installing a new Sterling Store Associate Mobile system, enter the following:

```
<JAVA_HOME>\bin\java -jar SSA_3.2.02.jar -f install.silent
```
 - After the installation process begins, you can follow the progress of your installation through the following log file.

```
<INSTALL_DIR>\InstallSI.log file
```

Note: The installation displays the message Installation has completed successfully when done.

Chapter 10. Install Sterling Store Associate Mobile Server (Silent Install) on Unix or Linux

About this task

The Sterling Store Associate Mobile server can be installed using a silent install. You can create and use a silent installation file, which automates part of the installation process and limits manual interaction with the installation program. You can create the silent installation file using a text editor. When you are finished editing the file, record its name and location.

The silent install file properties are as follows:

Entry	Description
INSTALL_DIR=<INSTALL_DIR>	Installation directory. Note: This property cannot point to a pre-existing directory, and the path name cannot contain spaces or the installation will fail.
ACCEPT_LICENSE=Y	Because the silent installer does not bring up an explicit license dialog, please specify your acceptance of the licensing terms by including this property in your silent install file. Note: To review the license file prior to installation, browse to the ProductFiles folder on your product CD and open Readme.htm
ADDITIONAL_ANT_JAVA_TASK_ARGS = -XX:MaxPermSize=512m ADDITIONAL_ANT_COMPILER_TASK_ARGS = -J-Xms256m -J-Xmx1408m -J-verbose:gc	These parameter values are written to the sandbox.cfg file during installation. After installation, you can tune them if you are seeing Out-of-Memory errors.
DB_VENDOR=NODB	Database is not supported.
NO_DBVERIFY=true	When set to true during installation, dbverify will not run. This means that Sterling Store Associate Mobile will not generate DDL to make the database like the XML entity repository.
REINIT_DB=false	When set to false, the Sterling Store Associate Mobile installation will complete successfully, but no database operation will be performed as part of the installation process
JDK64BIT=<true/false>	Specifies whether you are using a 32-bit JDK or a 64-bit JDK. Default=true
STERLING_FOUNDATION_PRODUCT_LABEL= ssa	Specifies the product label.

Entry	Description
STERLING_FOUNDATION_PRODUCT_VERSION=3.2.02	Specifies the product version you are installing.
JAVADOC_PRODUCT_LABEL=IBM Store Associate Mobile 3.2	Specifies the Javadocs to be installed.
APP_DCL_FILE=SSADynamicclasspath.cfg	Set the dynamic classpath of the Installation to SSADynamicclasspath.cfg

Procedure

1. From the installation CD, copy the **SSA_3.2.02.jar** to a directory.
2. Make sure you set the language setting. If the base locale for the system is English, make the following system change: set the LANG environment variable to en_US and set umask to 002.
3. If you are using FTP to copy the file, verify that your session is set to binary mode.
4. Set up your silent installation file. Record the path to your silent installation file
5. At a command prompt, type the following commands, which include paths to the JDK, the **SSA_3.2.02.jar** file, and the silent installation file
 - If you are installing a new Sterling Store Associate Mobile system, enter the following:

```
<JAVA_HOME>/bin/java -jar SSA_3.2.02.jar -f install.silent
```
 - After the installation process begins, you can follow the progress of your installation through the following log file.

```
<INSTALL_DIR>/InstallSI.log file
```

Note: The installation displays the message Installation has completed successfully when done.

Chapter 11. Install Sterling Store Associate Mobile Client

About this task

To install the client application:

Procedure

Download the Sterling Store Associate Mobile application from the iTunes App Store and install the application to your iPhone or iPod touch.

Chapter 12. Configuring Utilities

The Sterling Store Associate Mobile uses the following utilities :

Installation Utilities

Installation utilities enable you to install Sterling Store Associate Mobile. These utilities are present in the <INSTALL_DIR>/bin directory.

- **install3rdparty**

This utility copies supplied resources into the Sterling Store Associate Mobile directory structure, and can append added jar files to the global classpath, agent classpath, or application server EAR file.

- **installService**

This utility installs programs for specific tasks, like a regression test jar file or a patch jar file.

- **setupfiles**

This utility checks the various initial product settings files (*.in) files for variables and updates the corresponding files with the values defined in the sandbox.cfg file to create the final files that are used by the product during runtime.

Chapter 13. Configure Sterling Store Associate Mobile

About this task

Before using the Sterling Store Associate Mobile application, you must perform the following client and server configurations:

Procedure

1. On the client, configure the following profiles in the application settings:

- Development
- Test
- Production

The following table describes the parameters that must be set for each of these listed profiles:

Table 2. Profile Parameter Settings

Parameters	Description
User ID	Optional. The value entered will be the default user identifier.
Server URL	URL of the Sterling Store Associate Mobile server, for example, https://<IP Address>.
Server Port	Port number of the Sterling Store Associate Mobile server, for example, 7001.
Context Root	The value of this parameter must be set to ssa.
Image Server	Location on the image server where the images are stored, for example, https://<IP Address>.
Distance to Consider	Distance to be considered while searching for nearby stores.
Distance UOM	The unit of measure for the Distance to Consider parameter, for example, Mile.

Notes:

- If you do not want to use the development profile, or test profile, or both, do not configure them.
- Prefix http:// or https:// to the Server URL based on the protocol.

Note: In production mode, https should be used for securing communication between Sterling Store Associate Mobile client and Sterling Store Associate Mobile server.

- Ensure that the Server URL is accessible from your network. You may have to configure the VPN on your mobile device in order to do so.
2. On the server, perform the configurations specified below.
 - To configure the print service for orders:
 - Override the **printOrderSummary** action to print the order summary. Additionally, set the value of the **inputNs** parameter to **printOrderSummary_Input**.

The application provides the input to the **printOrderSummary** action in the following format:

```
<Order OrderHeaderKey="" OrderNo="" ShipNode="">
```

```
<Print PrinterId=""/>
</Order>
```

Table 3. *printOrderSummary Parameter Description*

Elements	Description
OrderHeaderKey	The unique identifier of the order.
OrderNo	The order identifier.
ShipNode	The store to which you are logged in.
PrinterID	The unique identifier of the printer to use for printing the order.

The application expects the output in the following format:

```
<Order OrderHeaderKey="" >
<Print ResultCode="" ResultDescription=""/>
</Order>
```

Table 4. *printOrderSummary Output Parameter Description*

Elements	Description
OrderHeaderKey	The unique identifier of the order.
ResultCode	The value of this element is SUCCESS only if printing is successful.
ResultDescription	If the printing is unsuccessful, a print failure message is displayed with the value of this element as the message body.

When an order is successfully confirmed, the **Send to Printer** text box is displayed and the **Print** button is enabled. You can invoke the print service by clicking the **Print** button. To change the printer ID, you can either enter the printer ID in the text box or scan the printer ID.

Note: To disable the **yfs.sam.printer.disable** property, set the value to Y.

- To configure ship nodes with an appropriate address, phone number, e-mail ID, latitude, and longitude, in the `<INSTALL_DIR>\properties\yfs.properties_ssa_ext` file, modify the values of the properties, as described here:
 - If you want your store to accept calls from the store associates of other stores, set the value of **yfs.sam.inventoryView.phone.disable** property to N. Otherwise, set the value to Y.
 - If you want your store to accept e-mails from the store associates of other stores, set the value of **yfs.sam.inventoryView.email.disable** property to N. Otherwise, set the value to Y.
 - If you want to display your store on a map view, set the value of **yfs.sam.inventoryView.mapView.disable** property to N. Otherwise, set the value to Y.
 - If you want your store to pick orders, set the value of **yfs.sam.inventoryView.pick.disable** property to N. Otherwise, set the value to Y.
 - If you want your store to ship orders, set the value of **yfs.sam.inventoryView.ship.disable** property to N. Otherwise, set the value to Y.

Here, `<INSTALL_DIR>` refers to the location at which Sterling Store Associate Mobile , Release 3.2.02 is installed.

It is recommended that you set the value to N for any two of the following properties. If you set the value to N for all the following properties, the **yfs.sam.inventoryView.phone.disable** property will be given the least priority.

- **yfs.sam.inventoryView.pick.disable**
- **yfs.sam.inventoryView.phone.disable**
- **yfs.sam.inventoryView.email.disable**
- To add a promotion on the home page, provide the list of comma-separated image filenames for the `yfs.sam.homeView.ItemsUnderPromotion` property.
For example:
yfs.sam.homeView.ItemsUnderPromotion=Item01.png,Item02.png,Item03.png

Note: Notes entered for the addition of coupon task is saved in the order using the `SSA_ADD_PROMOTION` note type. Similarly, the notes entered for the deletion of a coupon task is saved in the order using the `SSA_REMOVE_PROMOTION` note type.

- To customize labels and error messages, modify the `<INSTALL_DIR>\resources\ssabundle.properties` file.
Here, `<INSTALL_DIR>` refers to the location at which Sterling Store Associate Mobile, Release 3.2.02 is installed.
- To customize the e-mail template, override `<INSTALL_DIR>\repository\xapi\template\source\ssa\email\storeassist\template_mail.xml`, which is the out-of-the-box template.
Here, `<INSTALL_DIR>` refers to the location at which Sterling Store Associate Mobile, Release 3.2.02 is installed.

Chapter 14. Configure PADSS Server

About this task

To enable the Payment Application Data Security Standard (PA-DSS) tokenization of credit card and store value card numbers:

Procedure

1. Set the value of `yfs.sam.PADSS.disable` to N, if it is not already set to N.
2. Set up your PA-DSS server.
3. Set the value of `yfs.sam.PADSSServerURL` to the URL of your PA-DSS server (format: `https://<host>:<port>/ssdcs/tokenize`). The application calls the URL you provided with the following parameters:

Parameters	Description
<code>ssdcsAuthenticationToken</code>	For Integration with Sterling Selling and Fulfillment Foundation 8.5, this parameter is blank. For Integration with Sterling Selling and Fulfillment Foundation 9.1 and above, a valid token is sent from the Sterling Store Associate Mobile Client.
<code>ssdcsRedirectUrl</code>	For Integration with Sterling Selling and Fulfillment Foundation 8.5, this parameter is blank. For Integration with Sterling Selling and Fulfillment Foundation 9.1 and above, an output Java Server Page(JSP) to be used is sent from the Sterling Store Associate Mobile Client.
<code>ssdcsDataToTokenize</code>	The Primary Account Number (PAN).
<code>ssdcsDataType</code>	Set to <code>ssdcsCreditCardNumber</code> for credit card or <code>ssdcsStoredValueCardNumber</code> for stored value card.
<code>ssdcsDataTypeDetail</code>	Provides the Payment Type being used.
<code>ssdcsResultCode</code>	Passed as INITIAL to tokenize Immediately.

4. The application expects the output in the following format:

```
<Tokenize>
<TokenInformation DataType="" Token="" DisplayValue=""
AdditionalResultData=""/>
<ResultInformation ResultCode="" FailReason="" ResultDescription=""/>
</Tokenize>
```

Elements	Description
<code>DataType</code>	This should be set to CREDIT_CARD or STORED_VALUE_CARD.
<code>Token</code>	This should be set to the PAN.
<code>DisplayValue</code>	This should be set to the PAN to be displayed on the user interface.
<code>AdditionalResultData</code>	This should be set to the CREDIT CARD Type for credit card or <code>PaymentReference3</code> for stored value card.
<code>ResultCode</code>	This should be set to SUCCESS if tokenization is successful.

Elements	Description
FailReason	This should be set to the reason why tokenization failed. This value is displayed as the error message if tokenization fails.
ResultDescription	This should be set to the description of the result. Reserved for future releases.

Chapter 15. Integrating Sterling Store Associate Mobile with Sterling Selling and Fulfillment Foundation

Sterling Store Associate Mobile integrates with Sterling Selling and Fulfillment Foundation using two-way SSL authentication for availing services like calling api and getting data. This communication happens through the AuthorizationOnlyApiServlet.

Enabling Access to AuthorizationOnlyApiServlet

To enable access to AuthorizationOnlyApiServlet customize the web.xml file of EAR to include the following:

```
<context-param>
<param-name>bypass.uri.X</param-name>
<param-value>/interop/AuthorizationOnlyApiServlet</param-value>
</context-param>
<context-param>
<param-name>request.validation.bypass.uri.yfc.X</param-name>
<param-value>/interop/AuthorizationOnlyApiServlet</param-value>
</context-param>
<servlet id="Servlet_X">
<servlet-name>AuthorizationOnlyApiServlet</servlet-name>
<servlet-class>com.yantra.interop.client.AuthorizationOnlyApiServlet</servlet-class>
</servlet>
<servlet-mapping id="ServletMapping_X">
<servlet-name>AuthorizationOnlyApiServlet</servlet-name>
<url-pattern>/interop/AuthorizationOnlyApiServlet</url-pattern>
</servlet-mapping>
```

Note: In the above table X takes a numeric value. Ensure that the id fields are unique in web.xml file.

Restricting Access to the AuthorizationOnlyApiServlet

To restrict access to the AuthorizationOnlyApiServlet, make the following changes in web.xml file of Sterling Selling and Fulfillment Foundation EAR:

```
<security-constraint>
<web-resource-collection>
<web-resource-name>AuthorizationOnlyApiServlet</web-resource-name>
<url-pattern>/interop/AuthorizationOnlyApiServlet</url-pattern>
<http-method>GET</http-method>
<http-method>POST</http-method>
</web-resource-collection>
<auth-constraint>
<role-name>mobileuser</role-name>
</auth-constraint>
</security-constraint>
<login-config>
<auth-method>CLIENT-CERT</auth-method>
<realm-name>default</realm-name>
</login-config>
<security-role>
<role-name>mobileuser</role-name>
</security-role>
```

Note: In the above table replace the mobileuser with a user name of your choice.

Configuring Application Servers

Configure Weblogic

The following configurations have to be made on Weblogic application server:

1. Make the following changes in the weblogic.xml of Sterling Selling and Fulfillment Foundation EAR

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE weblogic-web-app PUBLIC "-//BEA Systems, Inc.//DTD Web Application
8.1//EN" "http://www.bea.com/servers/wls810/dtd/weblogic810-web-jar.dtd">
<weblogic-web-app>
<security-role-assignment>
<role-name>mobileuser</role-name>
<principal-name>mobileuserGroup</principal-name>
</security-role-assignment>
</weblogic-web-app>
```

Note: The role-name should be same as that provided in web.xml file.

2. In **Environment > Servers**
 - Make sure if the SSL Listen Port is Enabled
 - In the **SSL** tab select **Advanced**:
 - Set the **Two Way Client Cert Behavior** to **Client Certs Requested and but not Enforced**
3. In **>Security Realms>Users and Groups**
 - Choose the realm you want to edit and create a group. By default Weblogic creates a realm called myrealm. Ensure that the web.xml file has the realm-name tag set to myrealm .
 - Create a user with the same name as provided in role-name tag of web.xml file and assign them to this group.
 - Create a user group with the same name as provided in the principal-name tag of the weblogic.xml.
4. In **Security Realms>Providers**
 - Select **DefaultIdentityAsserter**.
 - Add **X.509** to the chosen **Active Types**.
 - Under **Provider Specific**:
 - Set **Default User Name Mapper Attribute Type** to "CN".
 - Select **Use Default User Name Mapper** in the checkbox.

Configuring WebSphere

1. Ensure that you have a deployment manager with administrative security turned on.
2. Deploy the Sterling Selling and Fulfillment Foundation in a server within the deployment manager.
3. In **Users and Groups->Manage Groups** and **Manage Users** Create Users and Groups.
 - Ensure that the user name is same as provided in role-name tag of web.xml file and assign them to this group.
4. In **Enterprise Applications >Security role to user/group mapping**. WebSphere reads the web.xml file and populates the user role in the table. Map the user role to the group created in Step 3.
5. In **Security** click **Global security**
 - Select **Enable application security** checkbox.

6. Select **CellDefaultSSLSettings** under **SSL configurations** in **SSL certificate and key management**.
 - Under **Quality of protection (QoP)** settings, set Client Authentication to Supported

Note: Ensure that virtual hosts are setup.

Configuring jboss

Perform the following configurations on Sterling Selling and Fulfillment Foundation:

1. Edit the `<JBOSS_HOME>/server/<app_dir>/deploy/jboss-web.deployer/META-INF/jboss-service.xml` file to define a security domain with the following details:

```
<mbean code="org.jboss.security.plugins.JaasSecurityDomain"
name="jboss.security:service=SecurityDomain">
<constructor>
<arg type="java.lang.String" value="domain_name">
</arg>
</constructor>
<attribute name="KeyStoreURL">Path_To_Keystore_File
</attribute>
<attribute name="KeyStorePass">Keystore_Password
</attribute>
</mbean>
```

Note: The above configuration will create a security domain with the name "domain_name". The value of KeyStoreURL will contain the path to the keystore which has the certificates to be trusted by Sterling Selling and Fulfillment Foundation.

2. Edit the `<JBOSS_HOME>/server/<app_dir>/deploy/jboss-web.deployer/server.xml` file to set the certificatePrincipal property of the Realm element to `org.jboss.security.auth.certs.SubjectCNMapping` and define a port for https connection as follows:

```
<Connector port="https port"
protocol="HTTP/1.1" SSLEnabled="true"
maxThreads="150" scheme="https" secure="true"
clientAuth="want" sslProtocol="TLS" keystorePass="Keystore_Password"
keystoreFile=Path_To_Keystore_File
truststoreFile=Path_To_Truststore_File
truststorePass="Truststore_Password"/>
```

3. Edit the `<JBOSS_HOME>/server/<app_dir>/conf/login-config.xml` file to create an application policy with the following details:

```
<application-policy name="domain_name">
<authentication>
<login-module code="org.jboss.security.auth.spi.CertRolesLoginModule"
flag="required">
<module-option name="password-stacking">useFirstPass
</module-option>
<module-option name="securityDomain">java:/jaas/domain_name</module-option>
<module-option name="rolesProperties">roles.properties
</module-option>
<module-option name="ignorePasswordCase">true
</module-option>
</login-module>
</authentication>
</application-policy>
```

4. Create a file named `roles.properties` under `<JBASS_HOME>/server/<app_dir>/deploy/jboss-web.deployer` directory and provide a user-role name mapping. For example: `storeassociate=storeassociate`

Note: The role name defined in `role.properties` file and CN in the identity certificate of Sterling Store Associate Mobile server should be same as the `role-name` used in `web.xml`. Ensure that the user name and CN are in lower case.

5. Ensure that `KeyStoreURL` used above has the complete "client certificate" added into it under the alias which is same as the CN of the identity certificate of Sterling Store Associate Mobile server.
6. Assign the newly created security domain to Sterling Selling and Fulfillment Foundation by modifying the `jboss-web.xml` in `WEB-INF` to include the following:

```
<jboss-web>
<security-domain>java:/jaas/domain_name</security-domain>
</jboss-web>
```

Authentication is vital to security. Sterling Store Associate Mobile mandates that external authentication mechanism be implemented for authenticated access to the Sterling Store Associate Mobile application. It is recommended that you refer to the *Sterling Selling and Fulfillment Foundation: Properties Guide* for implementing a lightweight directory access protocol (LDAP) or Java Authentication and Authorization Service (JAAS) compliant security module for authentication. For information on deploying Sterling Selling and Fulfillment Foundation and integrating with LDAP, see the *Sterling Selling and Fulfillment Foundation: Properties Guide*.

Chapter 16. Two Way SSL Authentication

This section describes the configurations that are required to establish a two-way SSL connection. In two-way SSL authentication, both the server and client present a certification authority (CA) certified certificate to establish their identity to the other party. Here, the Sterling Store Associate Mobile server application acts as the client and the IBM Sterling Selling and Fulfillment Foundation acts as the server.

There are two types of keystores used to configure SSL:

- Identity Store: This contains the identity certificate of a server which will be presented to the clients during SSL connections.
- Trust Store: This contains the CA root certificates which the client trusts while accepting SSL connections.

Before configuring two-way SSL, ensure that both the IBM Sterling Selling and Fulfillment Foundation and Sterling Store Associate Mobile server have each others' CA root certificate in their trust store.

Configure Properties in Sterling Store Associate Mobile Server

To establish two-way SSL, the following configurations are required:

Before building the EAR file to be deployed on IBM Sterling Selling and Fulfillment Foundation, make the following modifications for the `yifclient.properties` file:

Property	Description
<code>yif.apifactory.protocol</code>	Set the property to the HTTPS.
<code>yif.httpapi.url</code>	Set the value to the URL for <code>AuthorizationOnlyApiServlet</code> . Ensure that the protocol is HTTPS. For example: <code>https://<host>:<port>/<context-root>/interop/AuthorizationOnlyApiServlet</code> . Here, the host refers to the IBM Sterling Selling and Fulfillment Foundation.
<code>yif.httpapi.disableKeyStore</code>	Make sure this property does not exist in the file.
<code>yif.httpapi.disableTrustStore</code>	Make sure this property does not exist the file.
<code>yif.httpapi.urlStreamHandler</code>	Set the property to <code>sun.net.www.protocol.https.Handler</code> .
<code>javax.net.ssl.keyStore</code>	Set the value to the complete path of the identity keystore. The certificate within this keystore should have CN same as <code>role-name</code> field used while restricting access to the <code>AuthorizationOnlyApiServlet</code> .
<code>javax.net.ssl.keyStorePassword</code>	Set the value to the password of the identity keystore.
<code>javax.net.ssl.trustStore</code>	Set the value to the complete path of the trust keystore.
<code>javax.net.ssl.trustStorePassword</code>	Set the value to the password of the trust keystore .

Configure Endpoints on server-side of the Sterling Store Associate Mobile

Configure the following endpoints:

- SSA
- SMC

The endpoint should point to the `AuthorizationOnlyApiServlet`, similar to `yif.httpapi.url` property mentioned above. Ensure that the protocol is HTTPS. For more information about how to direct API calls to specific servers, see the *Sterling Selling and Fulfillment Foundation: Customizing APIs*.

Chapter 17. Deploying Sterling Store Associate Mobile

Build the Sterling Store Associate Mobile application and deploy it on the server application from the <INSTALL_DIR>/bin directory by using the following command:

- For Windows:

```
.\buildear.cmd -Dearfile=<ear> -Dwarfiles=ssa  
-Dappserver=<your application server>  
-Dsupport.multi.war=false -Dnowebservice=true -Dnoejb=true
```

- For UNIX or Linux:

```
./buildear.sh -Dearfile=<ear> -Dwarfiles=ssa  
-Dappserver=<your application server> -Dsupport.multi.war=false  
-Dnowebservice=true -Dnoejb=true
```

Note: The following are the possible values for the command line options:

Table 5. Command Line Option Description

Command Line Option	Description
<INSTALL_DIR>	the directory at which Sterling Store Associate Mobile installed.
<your application server>	weblogic, websphere, or jboss
<ear>	ssa.ear: the store associate application EAR file. ssadocs.ear: the store associate documentation EAR file.

Setting Up the WebLogic Script File to Support JVM

To set up the WebLogic script file:

Add the following properties to the startWebLogic.sh (or .cmd) file.

Table 6. WebLogic Property Description Table

Property	Description
JAVA_OPTIONS	Java command line options for running the server. Depending on your JVM vendor, specify as follows: <ul style="list-style-type: none">• For IBM, set this value to -Xms768m -Xmx768m• For JRockit, set this value to -Xms768m -Xmx768m• For Sun, set this value to -XX:MaxPermSize=512m -Xms768m• For HP, set this value to -XX:MaxPermSize=512m -Xms768m
-Dvendor	System Property. Specify the argument to the java command. Can be shell or weblogic depending on whether datasource is being used or not. -Dvendor=shell

Table 6. WebLogic Property Description Table (continued)

Property	Description
-DvendorFile	System Property. Specify the argument to the java command. -DvendorFile=/servers.properties

Configuring WebSphere to Support JVM

Select **Server Infrastructure > Java and Process Management > Process Definition**

> **Java Virtual Machine.** Edit the generic JVM arguments dialog to include the following values:

Table 7. WebSphere Property Description Table

Property	Description
-Dvendor	System Property. If you are using Application Server Connection Pooling, use -Dvendor=websphere. Otherwise, use -Dvendor=shell.
-DvendorFile	System property. Specify as an argument to the java command. -DvendorFile=/servers.properties

Setting up JBoss Script File to Support JVM

To set up the JBoss script file, add the following to <JBOSS_HOME>/bin/run.conf file :

Table 8. JBoss Property Description Table

Property	Description
JAVA_OPTS	Depending on your JVM vendor, specify as follows: -Xms<value> -Xmx<value> For example, for HP UX 11i on Itanium, set this value to -XX:MaxPermSize=512m -Xms768m -Xmx768m
-Dvendor	System Property. If you are using Application Server Connection Pooling, use -Dvendor=jboss. Otherwise, use -Dvendor=shell.
-DvendorFile	System property. Specify as an argument to the java command. -DvendorFile=/servers.properties

Chapter 18. Sterling Store Associate Mobile Data Validation

The Sterling Store Associate Mobile application provides the data validation functionality for validating data entered by the user. The data validation is performed by the Sterling Store Associate Mobile client application user interface(UI). The data entered in each text field or search bar will be validated against a set of data validation rules, before sending the data to the Sterling Store Associate Mobile server. The data validation feature cannot be disabled and supports only en_US locale.

Data Validation Rules

The data validation rules supported by Sterling Store Associate Mobile are listed in the following table:

Table 9. Data Validation Table

Data Type	Maximum Length	Minimum Length	RegxRule	User Interface
CustomerName	150	0	^[a-zA-Z\.\.]*\$	Name text field in Email Request screen.
EmailQuantity	20	0	^[0-9]*\$	Quantity text field in Email Request screen.
PrinterID	40	0	^[a-zA-Z0-9\.\.]*\$	Printer ID text field in Printer Setting and Order Summary screens.
AddressLine	70	0	^[a-zA-Z0-9\.,#]*\$	Address text field in Shipping Address, Billing Address and Credit Card screens.
CartQuantity	10	0	^[0-9]*\$	Text field in Cart screen.
Cardholder Name	150	0	^[a-zA-Z\.\.]*\$	Cardholder Name text field in Credit Card screen.
City	35	0	^[a-zA-Z\.\.]*\$	City text field in Shipping Address, Billing Address and Credit Card screen.
CreditCard Number	20	0	^[0-9]*\$	Display Credit card number text field in Credit Card screen.
Country or Region	40	0	^[a-zA-Z\.\.]*\$	Country or Region text field in Shipping Address, Billing Address and Credit Card screens.
EmailID	150	0	^\$ ^([a-z0-9_+]+)(\.[a-z0-9_+]+)*@[a-z0-9_+](\.[a-z0-9_+]+)*\.[a-z]{2,4}\$	Email ID text field in Shipping Address, Billing Address and Credit Card screens.
FirstName	64	0	^[a-zA-Z\.\.]*\$	First Name text field in Shipping Address, Billing Address and Credit Card screens

Table 9. Data Validation Table (continued)

Data Type	Maximum Length	Minimum Length	RegxRule	User Interface
GiftCard Number	20	0	^[0-9]*\$	Gift card number text field in Gift Card screen.
LastName	64	0	^[a-zA-Z\.\.]*\$	Last Name text field in Shipping Address, Billing Address and Credit Card screens.
Price	10	0	^[0-9]*\$	Price text field in Price Override and Credit Card screens. Tender Value text field in Gift Card screen.
Password	100	0	^.*\$	Password text field in Login screen.
PhoneNo	40	0	^[a-zA-Z0-9\+\-\(\)\.]*\$	Phone number text field in Shipping Address, Billing Address and Credit Card screens.
GiftCard Reference	100	0	^[a-zA-Z0-9\.\.]*\$	Reference field in Gift Card screen.
SearchItem	100	1	^.*\$	Search Bar text field in Item Search screen.
SearchCustomer	100	0	^[a-zA-Z0-9\.\.]*\$	Customer Search bar text field in Customer Search screen.
SearchCoupon	100	0	^[a-zA-Z0-9\.\.]*\$	Coupon Search Bar text field in Coupons screen.
State	35	0	^[a-zA-Z\.\.]*\$	State text field in Shipping Address, Billing Address and Credit Card screens.
UserID	50	0	^[a-zA-Z0-9\.\.]*\$	User ID text field in Login screen.
ZipCode	35	0	^[0-9\-\.]*\$	ZipCode text field in Shipping Address, Billing Address and Credit Card screens.

Chapter 19. How Do I Format the Phone Numbers Entered in the Customer Search Screen?

About this task

In the Sterling Store Associate Mobile Application, when a user searches for customers using the phone number, only numeric characters will be accepted. However, some organizations may store the phone numbers in a particular format, for example, (555)555 5555, 555-555-5555, and so on. In such situations, the phone number must be formatted before the `getCustomerContactList` API is called. To ensure that the phone number is formatted, perform the following tasks:

Procedure

1. Override the `sms-getCustomerContactList` mashup in the `sa_mashups.xml` file. For more information about extending mashups, refer to the topic "Extending Mashups Using Override Extensibility (Web UI Framework)" in the *Sterling Selling and Fulfillment Foundation: Customizing the Web UI Framework* and follow the instructions provided in the topic to automatically override a mashup.
2. Ensure that the class that overrides the mashup action extends the `com.sterlingcommerce.ui.web.platform.mashup.SCUIXAPIMashup` class.

Chapter 20. How Do I Search for Customer Based on the Credit Card Token?

About this task

In the Sterling Store Associate Mobile Application, a user can search for customers based on the Primary Account Number token used for credit cards. This is enabled by passing a Tokens element in the input XML of the `getCustomerContactList` API.

```
<CustomerContact>

<Tokens>

<Token Value="token info"/>

</Tokens>

</CustomerContact>
```

The Tokens element contains a list of tokens for each of the credit card payment methods stamped on the order. You can customize the customer search functionality to retrieve additional information in the search results by customizing the `smcommon-getCustomerContactList` mashup to use a custom class that extends the `com.ibm.smc.actions.SMCGetCustomerContactListAction` class. This enables the Tokens element to be used to call a third party service to get additional information for the search results.

To customize the customer search functionality to retrieve additional information in the search results, perform the following tasks:

Procedure

1. Override the `smcommon-getCustomerContactList` mashup in the `smcommon_mashups.xml` file. For more information about extending mashups, refer to the topic "Extending Mashups Using Override Extensibility (Web UI Framework)" in the *Sterling Selling and Fulfillment Foundation: Customizing the Web UI Framework* and follow the instructions provided in the topic to automatically override a mashup.
2. Ensure that the class that overrides the mashup action extends the `com.ibm.smc.actions.SMCGetCustomerContactListAction` class.

Chapter 21. Does Sterling Store Associate Mobile Support Internationalization?

The Sterling Store Associate Mobile Application supports internationalization in the context of the following data:

- Date format
- Currency
- User interface labels and literals

Chapter 22. What Are the Issues That I May Encounter?

The following table describes the errors that you may encounter when using this application, and the causes and resolution for the same.

Error	Cause	Solution
Unable to connect because you do not have the Manage Mobile Device permission to log in to the Sterling Store Associate Mobile application.	You have not configured the mobile device permissions correctly in the Sterling Store Associate Mobile application, in the context of the User ID with which you are attempting to log in.	Configure the mobile device permissions correctly in the Sterling Store Associate Mobile application, in the context of the User ID with which you are attempting to log in.
Unable to log in to the Sterling Store Associate Mobile application.	The user name or password that you have entered are invalid.	Enter a valid user name and password.
Unable to connect because the secure connection has failed.	Your HTTPS setting is set to On, but you are trying to connect to a nonsecure port.	Connect to a secure port.
Unable to connect because of untrusted server certificate.	The Sterling Store Associate Mobile application has the HTTP Authentication turned On and is using a CA (Certificate Authority) certificate, but you do not have a valid CA public certificate installed on your iPhone or iPod touch.	Ensure that a valid CA public certificate is installed on your iPhone or iPod touch.
The connection times out when you log in to the Sterling Store Associate Mobile application.	This could be due to the following reasons: <ul style="list-style-type: none"> • Failure on the side of your iPhone or iPod touch service provider • Your IP address and port are not configured correctly. 	<ul style="list-style-type: none"> • Contact your iPhone or iPod touch service provider • Configure your IP address and port correctly.
After upgrading to Sterling Store Associate Mobile application, Release 3.2.02, the application's version number and build number is not updated.	Apple Inc. does not provide the capability to modify the version and build number in the iPhone or iPod touch application settings.	After upgrading to Sterling Store Associate Mobile application, Release 3.2.02, launch the application, the version number and build number will be automatically updated.

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