

*IBM WebSphere Business Integration Collaborations
for Product Information Management Version 10.1
IBM WebSphere Business Integration Collaborations
for UCCnet Message Manager Version 4.3.1 IBM
WebSphere Business Integration Collaborations
Version 4.5*



Installation Guide

Note!

Before using this information and the product it supports, be sure to read the general information under “Notices and Trademarks” on page 43.

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Version 4, Release 5 of *IBM WebSphere Business Integration Collaborations* (5724-C12)

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Version 1, Modification 1 of the *IBM WebSphere Business Integration Collaborations for Product Information Management* (5724-H64)

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Installation guide

The Installation guide describes how to install and configure components of the Product Information Management for Retailers solution. In order to implement the solution, you will need to refer to and be familiar with the following:

- System Installation Guide for Windows®
- System Installation Guide for UNIX®
- System Administration Guide
- Technical Introduction to IBM® WebSphere® InterChange Server
- Implementation Guide for WebSphere InterChange Server

Obtaining solution components

Before following the installation procedure, obtain the software you want to install from Passport Advantage (www.lotus.com/passportadvantage). Refer to Passport Advantage for downloading instructions. Refer to the section “Installing the components” on page 7 for instructions on extracting and installing the components.

The artifacts of the Product Information Management for Retailers solution include the following collaborations:

- **IBM WebSphere Business Integration Collaboration for Product Information Management.** The nine templates included with this product do the following:
 - Validate the item data, help manage the item approval process, and route the approved item information to other enterprise systems.
 - Manage the processes used to temporarily store, update, retrieve, and delete data (such as business objects, messages, or unique product identifiers) during the review and approval processes. As a result, required item information is available to the trading partner as long as an item is being processed, even if the approval process spans days, weeks, or even months.
 - Extract email message text, subject text, and recipient(s) from configurable attributes in a triggering business object, and use those attribute values as input to the sendEmail API. The attributes of the business object can contain the actual message text, subject text, or address(es), or point to filenames that contain those values.
- **IBM WebSphere Business Integration Collaboration for UCCnet® Message Manager.** The two templates included with this product handle all dialog necessary for communication with UCCnet, providing a streamlined process for receiving XML data from the UCCnet standard product registry, for initiating processing of this data, and for sending responses back to UCCnet.

Assorted business objects, maps, and other components necessary for solution operation are also included with these collaborations.

Solution components

The following tables list the components used to develop the Product Information Management for Retailers solution. Note that there are many other existing IBM WebSphere Business Integration collaborations, business objects, and maps that can be utilized in your customized solution.

Table 1. Collaboration templates

Name	Location
UCCnetMessageReceive	BIA_CT_UCCnetMM.jar repository file
UCCnetMessageSend	BIA_CT_UCCnetMM.jar repository file
ItemValidation	BIA_CT_PIM.jar repository file
ItemCollector	BIA_CT_PIM.jar repository file
ItemDispatcher	BIA_CT_PIM.jar repository file
Process_Reviewed_Item	BIA_CT_PIM.jar repository file
Role_Email	BIA_CT_PIM.jar repository file
DataStore	BIA_CT_PIM.jar repository file
ItemStore	BIA_CT_PIM.jar repository file
IdentifierStore	BIA_CT_PIM.jar repository file
MessageStore	BIA_CT_PIM.jar repository file

Table 2. Business objects

Name	Location
Retail_Item	BIA_BO_PIM.jar repository file
UCCnetGBO_envelope	BIA_BO_UCCnetMM.jar repository file
UCCnetDTD_envelope	BIA_BO_UCCnetMM.jar repository file
UCCnetTPIDTD_envelope	BIA_BO_UCCnetMM.jar repository file
UCCnetXSD_envelope	BIA_BO_UCCnetMM.jar repository file
UCCnetTPIXSD_envelope	BIA_BO_UCCnetMM.jar repository file
SampleObject	BIA_BO_PIM.jar repository file
UCCnetGBO_storable	BIA_BO_UCCnetMM.jar repository file
UCCnetGBO_identifier	BIA_BO_UCCnetMM.jar repository file
UCCnetGBO_RI_S	BIA_BO_UCCnetMM.jar repository file
DataStoreRetail_Item	BIA_BO_PIM.jar repository file
DataStoreSampleObject	BIA_BO_PIM.jar repository file
DataStoreUCCnetGBO_identifier	BIA_BO_PIM.jar repository file
DataStoreUCCnetGBO_storable	BIA_BO_PIM.jar repository file
SerialItem	BIA_BO_PIM.jar repository file
SerialMessage	BIA_BO_PIM.jar repository file
SerialObject	BIA_BO_PIM.jar repository file
SerialIdentifier	BIA_BO_PIM.jar repository file
MQWF_Retail_Item	BIA_BO_PIMSamples.jar repository file
Retail_Item_ASBO	BIA_BO_PIMSamples.jar repository file

Note: In the table below, some values might include spaces to allow them to fit in the table cells. The actual values do not include spaces.

Table 3. Maps

Name	Location
MQWF_Retail_Item_to_Retail_Item	BIA_NM_PIMSamples.jar repository file

Table 3. Maps (continued)

Name	Location
Retail_Item_to_MQWF_Retail_Item	BIA_NM_PIMSamples.jar repository file
Retail_Item_to_Retail_Item_ASBO	BIA_NM_PIMSamples.jar repository file
UCCnetDTD_envelope_to_UCCnetGBO_envelope	BIA_NM_UCCnetMM.jar repository file
UCCnetGBO_envelope_to_Retail_Item	BIA_NM_UCCnetMM.jar repository file
UCCnetGBO_envelope_to_UCCnetDTD_envelope	BIA_NM_UCCnetMM.jar repository file
UCCnetGBO_envelope_to_UCCnetGBO_identifier	BIA_NM_UCCnetMM.jar repository file
UCCnetGBO_envelope_to_UCCnetGBO_storable	BIA_NM_UCCnetMM.jar repository file
UCCnetGBO_envelope_to_UCCnetTPIDTD_envelope	BIA_NM_UCCnetMM.jar repository file
UCCnetGBO_envelope_to_UCCnetTPIXSD_envelope	BIA_NM_UCCnetMM.jar repository file
UCCnetGBO_envelope_to_UCCnetXSD_envelope	BIA_NM_UCCnetMM.jar repository file
UCCnetGBO_RI_S_to_UCCnetGBO_envelope	BIA_NM_UCCnetMM.jar repository file
UCCnetTPIDTD_envelope_to_UCCnetGBO_envelope	BIA_NM_UCCnetMM.jar repository file
UCCnetTPIXSD_envelope_to_UCCnetGBO_envelope	BIA_NM_UCCnetMM.jar repository file
UCCnetXSD_envelope_to_UCCnetGBO_envelope	BIA_NM_UCCnetMM.jar repository file

Table 4. Messages

Name
CwMapMessages

Table 5. Relationship

Name
CMDTOWPN

Table 6. Repository files

Name
BIA_BO_PIM.jar
BIA_BO_PIMSamples.jar
BIA_BO_UCCnetMM.jar
BIA_CT_PIM.jar
BIA_CT_UCCnetMM.jar
BIA_NM_PIMSamples.jar
BIA_NM_UCCnetMM.jar
BIA_REL_PIMSamples.jar

Table 7. Library file for collaboration templates

Name
BIRetail.jar

Table 8. Workflow process definitions

Name
Retail.fdl

Supported operating environments

The following operating environments are supported in this release:

- Windows 2000 (Professional, Server, or Advanced Server) with Service Pack 3
- IBM AIX® 5.2
- Solaris™ 8 (2.8)

Hardware prerequisites

The Product Information Management for Retailers solution has the same processor, memory, disk space, and high-availability requirements as an IBM WebSphere InterChange Server installation, as detailed in the System Installation Guide for Windows and System Installation Guide for UNIX. For installation of the solution, two self-extracting, executable Windows files are used. The following disk space is required for downloading and extracting the two Windows files:

Table 9. Installation disk space requirements for the Product Information Management for Retailers solution

Collaboration name	Disk space required for downloaded self-extracting executable file:	Disk space required for set of extracted installer files:	Disk space required for installed files:
UCCnet Message Manager	22.8 MB (the self-extracting executable file can be deleted after it is run)	23.1 MB (the installer files can be deleted after they are run)	6.4 MB
Product Information Management	21.5 MB (the self-extracting executable file can be deleted after it is run)	21.8 MB (the installer files can be deleted after they are run)	5.1 MB

Software prerequisites

Ensure that you have installed the following prerequisites appropriately for your platform:

- IBM WebSphere InterChange Server V4.2.1
- IBM WebSphere Business Integration Toolset V4.2.1
- IBM DB2® V8.1 (Oracle and Microsoft® SQL Server databases are also supported) **Note:** When using DB2, a C compiler must be installed on the same

server on which the ICS resides so that the stored procedures can be compiled during the relationship deployment. This is not required for Microsoft SQL Server or Oracle databases.

- IBM WebSphere MQ V5.3
- IBM WebSphere MQ Workflow V3.4
- IBM WebSphere Business Integration Data Handler for XML V2.4.1.

Note: Refer to section “Configuring the system environment” on page 6 for additional setup information for the IBM WebSphere Business Integration Data Handler for XML V2.4.1

- IBM WebSphere Business Integration Adapters V2.3.1, which include the following:
 - IBM WebSphere Business Integration Adapter for WebSphere MQ Workflow V2.4.0
 - IBM WebSphere Business Integration Adapter for e-Mail V5.1.0
 - IBM WebSphere Business Integration Adapter for JText V5.3.0
 - IBM WebSphere Business Integration Adapter for Trading Partner Interchange V3.3.0
 - IBM WebSphere Business Integration Adapter for iSoft V1.2.0
 - IBM WebSphere Business Integration Adapter for JDBC V2.3.0

Note: Systems supporting the UCCnet Document Type Definition (DTD) only (such as those using IBM WebSphere Business Integration Collaborations V4.2.x), are not upward-compatible with systems supporting both the UCCnet Document Type Definition (DTD) and UCCnet XML Schema Definition (XSD) (such as those based on IBM WebSphere Business Integration Collaborations V4.2.1.1 and later).

Installation instructions for IBM WebSphere InterChange Server, IBM WebSphere Business Integration Toolset, and IBM WebSphere MQ, are provided in the System Installation Guide for Windows or System Installation Guide for UNIX. Installation instructions for IBM WebSphere MQ Workflow, IBM WebSphere Business Integration Data Handler for XML, the database, and individual IBM WebSphere Business Integration Adapters, are detailed in their respective installation documents.

Installing and configuring the solution

This installation guide provides step-by-step instructions for installing and configuring the Product Information Management for Retailers solution. It is recommended that you proceed through the sections in order:

1. “Configuring the system environment” on page 6 details how to set up the system environment to run the Product Information Management for Retailers solution on all supported platforms.
2. “Installing the components” on page 7 instructs how to import artifacts and install them in the ICS repository, ensuring that the solution code is accessible to your system.
3. “Creating and configuring the metaobjects” on page 8 instructs how to create and configure the metaobjects required to properly process UCCnet messages.
4. “Creating and configuring the connectors” on page 12 describes how to create and configure the connectors needed to operate the Product Information Management for Retailers solution.

Notes:

- a. The term "connector" used throughout refers to the runtime portion of an IBM WebSphere Business Integration Adapter. References to specific connectors are related to specific adapters, for example, "EmailConnector" refers specifically to the runtime component of an IBM WebSphere Business Integration Adapter for e-Mail.
 - b. If you are exchanging messages with UCCnet through an AS2/EDIINT interface protocol, you use a TPIConnector or iSoftConnector, depending on the connectivity type used. If you are exchanging messages through the UCCnet Command Line Utility (CLU) or testing your installation, you use a JTextTPIConnector or JTextISoftConnector, depending on the connectivity type used. "AS2 channel connector" used throughout can refer to a TPIConnector, iSoftConnector, JTextTPIConnector, or JTextISoftConnector, depending on the connectivity type used and the protocol used to exchange messages.
5. "Creating and configuring the collaboration objects" on page 24 details the collaboration objects that must be created from the collaboration templates, and how to set each collaboration object's port connections and configuration properties.
 6. "Deploying the solution" on page 38 details how to deploy the solution.
 7. "Configuring the relationship" on page 39 describes the database configuration entries needed for the relationship.
 8. "Creating the Retail database and tables" on page 40 details how to set up the Retail database for the solution.
 9. "Configuring WebSphere MQ Workflow and WebSphere MQ" on page 40 instructs how to configure WebSphere MQ Workflow and WebSphere MQ for use with the solution.

Configuring the system environment

Complete the following steps to ensure that the solution code is accessible to your system. Be sure to follow the instructions appropriate for your platform where indicated.

1. Edit the DATAHANDLER path, as follows:

Windows

- a. Edit the `<WebSphereICS_Installation_dir>\bin\start_server.bat` file to ensure that the beginning of the DATAHANDLER path includes the CwXMLDataHandler.jar file, as shown in the following example:
`DATAHANDLER=%CROSSWORLDS%\DataHandlers\CwXMLDataHandler.jar`
- b. Edit the `WebSphereICS_Installation_dir\bin\CWConnEnv.bat` file to ensure that the beginning of the DATAHANDLER path includes the CwXMLDataHandler.jar file, as shown in the following example:
`DATAHANDLER=%CROSSWORLDS%\DataHandlers\CwXMLDataHandler.jar`

UNIX

- a. Edit the `WebSphereICS_Installation_dir/bin/CWSharedEnv.sh` file and alter the DATAHANDLER path to include the CwXMLDataHandler.jar file, as shown in the following example:
`DATAHANDLER=${CWCLASSES}:${CROSSWORLDS}/DataHandlers/CwXMLDataHandler.jar`
- b. Edit the `WebSphereICS_Installation_dir/bin/CWConnEnv.sh` file and alter the DATAHANDLER path to include the CwXMLDataHandler.jar file, as shown in the following example:
`DATAHANDLER=${CWCLASSES}:${CROSSWORLDS}/DataHandlers/CwXMLDataHandler.jar`

2. Edit the CWCLASSES path, as follows:
 - **Windows:** Edit the `<WebSphereICS_installation_dir>\bin\start_server.bat` file by appending the end of the CWCLASSES path to include the BIRetail.jar file, as shown in the following example:
`CWCLASSES=...;%CROSSWORLDS%\lib\BIRetail.jar`
 - **UNIX:** Edit the `<WebSphereICS_installation_dir>/bin/CWSharedEnv.sh` file and alter the CWCLASSES path to include the BIRetail.jar file, as shown in the following example:
`CWCLASSES=${CWCLASSES}:${CROSSWORLDS}/lib/BIRetail.jar`
3. If you are running the System Manager from the WebSphere Studio Workbench SDK, edit the `<WebSphereICS_installation_dir>\bin\cwtools.cfg` file by adding the BIRetail.jar file and its appropriate path information to the line `classpath=` in this file, as in the following example:
`classpath=<directory_location_of_BIRetail.jar_file>\BIRetail.jar`
4. Configure the ICS with email information by doing the following:
 - a. Open the System Manager.
 - b. Connect to the ICS.
 - c. Right-click on the ICS name and select **Edit Configuration**.
 - d. On the **E-mail** tab, select **Connector mail** from the **E-mail send type** menu.
 - e. Close the Edit Configuration window and save it when prompted.

Note: The EmailConnector requires that the E-mail collaboration template be active on the server. The E-mail collaboration template is installed by default during installation of the ICS, and must always be active, although it might not appear in any Component Library, and does not appear on the System Monitor screen. If it is necessary to drop the ICS repository and redeploy the Product Information Management for Retailers solution from the System Manager, you must restore the E-mail collaboration template to the repository by entering the following command:

 - **Windows:**
`repos_copy -sICS_server_name -uICS_admin_ID -pICS_admin_password \ -ai -i<ICS_installation_path>\repository\Email.jar -xcompilepackage`
 - **UNIX:**
`repos_copy -sICS_server_name -uICS_admin_ID -pICS_admin_password \ -ai -i<ICS_installation_path>/repository/Email.jar -xcompilepackage`

This command activates the E-mail collaboration template and does not require a restart of the ICS.
5. Stop the ICS.
6. Start the ICS in design mode (-design parameter).

Installing the components

Complete the following steps to ensure that the solution code is accessible to your system. Be sure to follow the instructions appropriate for your platform where indicated.

1. If the ICS is not already started, start it in design mode (-design parameter).
2. Install the artifacts downloaded from www.lotus.com/passportadvantage into the same directory in which the ICS is installed by performing the following steps (see the section “Obtaining solution components” on page 1 for information on how to obtain the artifacts from Passport Advantage):

- a. Move each downloaded artifact executable file to a temporary directory.
 - b. Run each executable file. Three files are extracted from each:
 - media.inf
 - setup.jar
 - setupwin32.exe (installer executable file for Windows operating systems)
 - c. Run the setupwin32.exe installer executable file for each artifact to install the components.
3. On UNIX systems, transfer the file `<WebSphereICS_installation_dir>\lib\BIRetail.jar` from the Windows system to the UNIX system by using File Transfer Protocol (FTP) in binary mode. Place it in the `<WebSphereICS_installation_dir>/lib/` directory.
 4. Append files, as follows:
 - **Windows:** Append the file `<WebSphereICS_installation_dir>\samples\CwMapMessages.txt` to the end of the file `<WebSphereICS_installation_dir>\DLMs\messages\CwMapMessages.txt`.
 - **UNIX:**
 - a. Transfer the file `<WebSphereICS_installation_dir>\samples\CwMapMessages.txt` to the UNIX system by using FTP in ASCII mode.
 - b. Append this file to the end of the file `<WebSphereICS_installation_dir>/DLMs/messages/CwMapMessages.txt`.
 5. Import the repository files into the System Manager as follows:
 - a. Create a new Integration Component Library (ICL).
 - b. Right-click the new ICL name, and select **Import Repository File**.
 - c. Use the Browse button to navigate to where the repository .jar files are located and select one of the files.
 - d. Click **Open**.
 - e. Click **Finish**.
 - f. Repeat this process for each of the remaining repository files.

See the Implementation Guide for WebSphere InterChange Server for more information on this process.

Creating and configuring the metaobjects

You must configure (and in some cases create) the following metaobjects to properly process UCCnet XML messages. To perform these tasks, complete the following steps:

1. Edit the `MO_DataHandler_DefaultXMLConfig` metaobject by setting or adding the following attributes, then save it as `MO_DataHandler_UCCnetXMLConfig`.

Note: In the table below, some values might include spaces to allow them to fit in the table cells. The actual values do not include spaces.

Table 10. Selected attribute values for MO_DataHandler_UCCnetXMLConfig metaobject

Attribute name	Column	Setting
BOPrefix	Default	<ul style="list-style-type: none"> • UCCnetDTD (for iSoft connectivity using the DTD XML definition) • UCCnetXSD (for iSoft connectivity using XSD XML definition) • UCCnetTPIDTD (for TPI connectivity using DTD XML definition) • UCCnetTPIXSD (for TPI connectivity using XSD XML definition)
DTDPath	Default	Path to Envelope.dtd file (for DTD support) or Envelope.xsd file (for XSD support), for example: <code><WebSphereICS_installation_dir>\UCCnet\DTDs\2.2\Envelope.dtd</code> or <code><WebSphereICS_installation_dir>\UCCnet\XSDs\uccnet\2.2\Envelope.xsd</code> . (Note: The value of this attribute assumes use of the UCCnet 2.2 XSD and DTD. The attribute values shown are examples only. The actual value must be the fully qualified path to the Envelope.xsd or Envelope.dtd file on your system. The files are available from the UCCnet eRoom. You must have a valid UCCnet eRoom user ID and password to obtain the files.)
Validation	Default	false
DefaultEscapeBehavior	Default	true
IgnoreUndefinedElements	Default	true

2. Edit the MO_DataHandler_DefaultXMLConfig business object by setting the following attribute:

Table 11. Selected attribute value for MO_DataHandler_DefaultXMLConfig metaobject

Attribute name	Column	Setting
BOPrefix	Default	Retail_Item (the actual filenames will be appended with sequential numbers)

3. Edit the MO_JTextConnector_Default business object by setting the following attributes:

Table 12. Selected attribute values for MO_JTextConnector_Default metaobject

Attribute name	Column	Setting
EventDataHandler	Type	MO_DataHandler_DefaultXMLConfig
OutputDataHandler	Type	MO_DataHandler_DefaultXMLConfig
OutputDir	Default	<Name of the directory where the files will be written> (for example, <code>C:\IBM\WebSphereICS\connectors\JText\output</code>). Create this directory if it does not already exist.
OutputExt	Default	xml
ArchiveDir	Default	<Name of the directory where the files will be written> (for example, <code>C:\IBM\WebSphereICS\connectors\JText\archive</code>). Create this directory if it does not already exist.

Table 12. Selected attribute values for MO_JTextConnector_Default metaobject (continued)

Attribute name	Column	Setting
EventDir	Default	<Name of the directory where the files will be written> (for example, C:\IBM\WebSphereICS\connectors\JText\event). Create this directory if it does not already exist.
EventExt	Default	xml
EndBODelimiter	Default	EOF

4. Do one of the following, depending on the protocol used to exchange messages:
 - If you are exchanging messages through the UCCnet CLU or testing your installation, edit the MO_JTextConnector_Default metaobject in one of the following ways, depending on the connectivity type used:
 - If iSoft connectivity is used, edit the MO_JTextConnector_Default metaobject by setting the following attributes, then save it as MO_JTextISoftConnector_Default.

Table 13. Selected attribute values for MO_JTextISoftConnector_Default metaobject

Attribute name	Column	Setting
EventDataHandler	Type	MO_DataHandler_UCCnetXMLConfig
OutputDataHandler	Type	MO_DataHandler_UCCnetXMLConfig
OutputDir	Default	<Name of the directory where the XML files will be written> (for example, C:\IBM\WebSphereICS\connectors\JTextISoft\out). Create this directory if it does not already exist.
OutputExt	Default	xml
ArchiveDir	Default	<Name of the directory where archive XML files will be written> (for example, C:\IBM\WebSphereICS\connectors\JTextISoft\archive). Create this directory if it does not already exist.
EventDir	Default	<Name of the directory to obtain input XMLs (Events)> (for example, C:\IBM\WebSphereICS\connectors\JTextISoft\event). Create this directory if it does not already exist.
EventExt	Default	xml
EndBODelimiter	Default	EOF

- If TPI connectivity is used, edit the MO_JTextConnector_Default metaobject by setting the following attributes, then save it as MO_JTextTPIConnector_Default.

Table 14. Selected attribute values for MO_JTextTPIConnector_Default metaobject

Attribute name	Column	Setting
EventDataHandler	Type	MO_DataHandler_UCCnetXMLConfig
OutputDataHandler	Type	MO_DataHandler_UCCnetXMLConfig
OutputDir	Default	<Name of the directory where the XML files will be written> (for example, C:\IBM\WebSphereICS\connectors\JTextTPI\output). Create this directory if it does not already exist.
OutputExt	Default	xml

Table 14. Selected attribute values for MO_JTextTPIConnector_Default metaobject (continued)

Attribute name	Column	Setting
ArchiveDir	Default	<Name of the directory where archive XML files will be written> (for example, C:\IBM\WebSphereICS\connectors\JTextTPI\archive). Create this directory if it does not already exist.
EventDir	Default	<Name of the directory to obtain input XMLs (Events)> (for example, C:\IBM\WebSphereICS\connectors\JTextTPI\event). Create this directory if it does not already exist.
EventExt	Default	xml
EndBODelimiter	Default	EOF

- If you are exchanging messages with UCCnet through an AS2/EDIINT interface protocol, do one of the following, depending on the connectivity type used:
 - If iSoft connectivity is used, use the Business Object Designer to create a metaobject called MO_ISoftAdapterConfig with the attributes shown in the following table. The variable *my_p2p_agent_queue_manager_name* represents the name of the iSoft Peer-to-Peer Agent queue manager.

Note: Spaces have been inserted in some entries in the following table to enable the entries to fit in the table cells. The actual entries do not include spaces.

Table 15. Attribute values for MO_ISoftAdapterConfig

Attribute name	Type	Key	Application Specific Information
Default	String	x	OutputQueue=queue:// <i>my_p2p_agent_queue_manager_name</i> / <i>my_outbox_queue_name</i> ; DataEncoding=Text
UCCnet_envelope_ Create	String		The Application Specific Information provided for the Default attribute might be sufficient for your installation. For additional information on this metaobject, refer to the Adapter for iSoft Peer-to-Peer Agent User Guide.

- If TPI connectivity is used, no configuration metaobject is required.
5. Edit the MO_DataHandler_DefaultXMLConfig metaobject by setting the following attribute, then save it as MO_DataHandler_XMLDataStoreConfig.

Table 16. Selected attribute values for MO_DataHandler_XMLDataStoreConfig metaobject

Attribute name	Column	Setting
BOPrefix	Default	Leave blank.

6. Configure the MO_Server_DataHandler metaobject by doing the following:
 - a. Replace the default attribute Dummy with an attribute that contains the following:
 - Name = text_xml_datastore
 - Type = MO_DataHandler_XMLDataStoreConfig

- b. Make sure the Key field is checked for the text_xml_datastore attribute and the Cardinality is set to 1.
7. Edit the MO_DataHandler_Default metaobject by setting the following attribute, then save it as MO_DataHandler_UCCnet_envelope.

Table 17. Selected attribute values for MO_DataHandler_UCCnet_envelope metaobject

Attribute name	Column	Setting
text_xml	Type	MO_DataHandler_UCCnetXMLConfig

8. Set the following attributes in the EmailNotification business object:

Table 18. Selected attribute values for EmailNotification business object

Name	Column	Setting
RecipientName	Default	Email address of recipient.
FromAddress	Default	Email address of sender.

Creating and configuring the connectors

The connectors that must be created and/or configured depend on the individual installation, as follows:

- Configure the JTextConnector in every installation, as detailed in the section “Configuring the JTextConnector” on page 13.
- Configure, or if necessary, create and configure, one of the following connectivity connectors depending on the connectivity type you are using and the protocol you are using to exchange messages:
 - If you are exchanging messages with UCCnet through an AS2/EDIINT interface protocol and are using iSoft connectivity, configure the iSoftConnector, as detailed in the section “Configuring the iSoftConnector” on page 13.
 - If you are exchanging messages with UCCnet through an AS2/EDIINT interface protocol and are using TPI connectivity, configure the TPICConnector, as detailed in the section “Configuring the TPICConnector” on page 15.
 - If you are exchanging messages through the UCCnet CLU or testing your installation, and are using iSoft connectivity, create and configure the JTextISoftConnector, as detailed in the section “Creating and configuring the JTextISoftConnector” on page 17.
 - If you are exchanging messages through the UCCnet CLU or testing your installation, and are using TPI connectivity, create and configure the JTextTPICConnector, as detailed in the section “Creating and configuring the JTextTPICConnector” on page 18.
- Configure the JDBCConnector in every installation, as detailed in the section “Configuring the JDBCConnector” on page 20.
- If you want to use the email capabilities of the Product Information Management for Retailers solution, configure the EmailConnector, as detailed in the section “Configuring the EmailConnector” on page 21.
- Configure two instances of the WebSphereMQWorkflowConnector, as detailed in the section “Creating and Configuring the WebSphereMQWorkflowConnectors” on page 22.
- Configure the PortConnector in every installation, as detailed in the section “Configuring the PortConnector” on page 24.

Note: The connector configuration procedures defined in the following sections assume the connector configuration information is saved to the project, where it is accessed by the connector at startup time. As an alternative, the connector configuration information can be saved to a file and the connector startup procedure can be altered to access that file. For additional information on options for starting your connectors, refer to the System Administration Guide.

Configuring the JTextConnector

Perform the following steps to configure the JTextConnector:

1. Configure this connector to include the appropriate business objects. Use the values shown in the following table.

Table 19. Supported business objects

Business object name	Agent support required?
MO_DataHandler_Default	No
MO_DataHandler_DefaultXMLConfig	Yes
MO_JTextConnector_Default	Yes
Retail_Item_ASBO	Yes
Retail_Item	No

2. Save the configuration (**File > Save > To Project**), then go back to the **Associated Map** tab and set the explicit binding.

Table 20. Associated map

Business object name	Map name
Retail_Item	Retail_Item_to_Retail_Item_ASBO

3. Save the configuration (**File > Save > To Project**), then close the Connector Configurator.
4. If you are using WebSphere MQ as your connector transport, create the JTextConnector queues in WebSphere MQ. You must create the following queues as local queues and accept the defaults, where *local_WebSphere_ICS_queue_manager_name* refers to the queue manager used by the IBM WebSphere ICS and *ICS_server_name* refers to the name of the ICS server. Enter the following at a command prompt:

```
runmqsc local_WebSphere_ICS_queue_manager_name
DEFINE QLOCAL (AP/JTEXTCONNECTOR/ICS_server_name) USAGE (NORMAL)
DEFINE QLOCAL (IC/ICS_server_name/JTEXTCONNECTOR) USAGE (NORMAL)
END
```

Refer to the Adapter for JText User Guide for more information about this connector.

Configuring the iSoftConnector

Configure this connector only if you are using the iSoft Peer-to-Peer Agent and are communicating with UCCnet through an AS2/EDIINT interface protocol. Perform the following steps to configure the iSoftConnector:

1. Set the value of the MQSERIES_JAVA_LIB attribute in the connector startup file (start_iSoft.bat on Windows, start_iSoft.sh on UNIX) to the location of your WebSphere MQ Java™ client libraries (for instance, C:\Program Files\IBM\MQSeries\Java\lib).
2. Configure this connector to include the connector-specific configuration properties and appropriate business objects. Use the values shown in the

following tables. The variable *my_p2p_agent_queue_manager_name* represents the name of the iSoft Peer-to-Peer Agent queue manager.

Table 21. Connector-specific properties

Property name	Value
ArchiveQueue	Queue to which copies of successfully processed messages are sent (for instance, queue://my_p2p_agent_queue_manager_name/archive).
Channel	WebSphere MQ server connector channel for your iSoft Peer-to-Peer Agent queue manager.
ConfigurationMetaObject	MO_ISoftAdapterConfig
DataHandlerConfigMO	MO_DataHandler_UCCnet_envelope
DefaultVerb	Create (add this property if it does not appear in the list of connector-specific properties).
ErrorQueue	Queue to which messages that could not be processed are sent (for instance, queue://my_p2p_agent_queue_manager_name/error).
HostName	The name of the host running the iSoft Peer-to-Peer Agent WebSphere MQ queue manager.
InputQueue	Semi-colon-delimited list of message queues that are polled by the connector for new messages (for instance, queue://my_p2p_agent_queue_manager_name/inbox1; queue://my_p2p_agent_queue_manager_name/inbox2).
InProgressQueue	Message queue where messages are held during processing (for instance, queue://my_p2p_agent_queue_manager_name/in_progress).
Port	Port established for the WebSphere MQ listener of the iSoft Peer-to-Peer Agent's queue manager.
UnsubscribedQueue	Queue to which messages that are not subscribed are sent (for instance, queue://my_p2p_agent_queue_manager_name/unsubscribed).
UseDefaults	true (add this property if it does not appear in the list of connector-specific properties).

Table 22. Supported business objects

Business object name	Agent support required?
MO_DataHandler_UCCnet_envelope	Yes
MO_ISoftAdapterConfig	Yes
<ul style="list-style-type: none"> • UCCnetDTD_envelope (when the DTD XML definition type is used) • UCCnetXSD_envelope (when the XSD XML definition type is used) 	Yes
UCCnetGBO_envelope	No

3. Save the configuration (**File > Save > To Project**), then go back to the **Associated Map** tab and set the explicit bindings.

Table 23. Associated maps

Business object name	Map name
UCCnetDTD_envelope (when DTD XML definition type is used)	UCCnetDTD_envelope_to_UCCnetGBO_envelope
UCCnetXSD_envelope (when XSD XML definition type is used)	UCCnetXSD_envelope_to_UCCnetGBO_envelope
UCCnetGBO_envelope	<ul style="list-style-type: none"> When DTD XML definition type is used: UCCnetGBO_envelope_to_UCCnetDTD_envelope When XSD XML definition type is used: UCCnetGBO_envelope_to_UCCnetXSD_envelope

4. Save the configuration (**File > Save > To Project**), then close the Connector Configurator.
5. If you are using WebSphere MQ as your connector transport, create the iSoftConnector queues in WebSphere MQ. You must create the following queues as local queues and accept the defaults, where *local_WebSphere_ICS_queue_manager_name* refers to the queue manager used by the IBM WebSphere ICS and *ICS_server_name* refers to the name of the ICS server. Enter the following at a command prompt:

```
runmqsc local_WebSphere_ICS_queue_manager_name
DEFINE QLOCAL (AP/ISOFTCONNECTOR/ICS_server_name) USAGE (NORMAL)
DEFINE QLOCAL (IC/ICS_server_name/ISOFTCONNECTOR) USAGE (NORMAL)
END
```

Refer to the Adapter for iSoft Peer-to-Peer Agent User Guide for more information about this connector.

Configuring the TPIContector

Configure this connector only if you are using the TPI server and are communicating with UCCnet through an AS2/EDIINT interface protocol. Perform the following steps to configure the TPIContector:

1. Create the trading partner configuration file `tpcfg.txt`, which includes one tab-delimited line for each trading partner formatted as follows:
Trading Partner ID (tab) XML MIME type

A sample file might look like the following example:

```
#Comment lines start with #
TP1 text/xml
TP2 text/xml
```

2. Set the value of the CYCLONEHOMEDIR attribute in the connector startup file (`start_TPI.bat` on Windows, `start_TPI.sh` on UNIX) to the location of the home directory for your TPI server installation (for instance, `C:\TPIsolo\`).
3. Configure this connector to include the connector-specific configuration properties and appropriate business objects. Use the values shown in the following tables.

Table 24. Connector-specific properties

Property name	Value
ArchiveProcessedDocDir	Directory where processed document meta-events are archived (for instance, <code>C:\TPIsolo\data\uccnet2\archive</code>).
DataHandlerConfigMO	<code>MO_DataHandler_UCCnet_envelope</code>

Table 24. Connector-specific properties (continued)

Property name	Value
DefaultXMLMimeType	text/xml
DocumentOutDir	Directory location where outbound documents are written temporarily before TPI processes them (for instance, C:\TPISolo\data\uccnet2\xmlout).
MetaEventDir	Directory used to persist the TPI event information for recovery purposes (for instance, C:\TPISolo\data\uccnet2\xmlin).
PollQuantity	1 (add this property if it does not appear in the list of connector-specific properties).
TradingPartnerConfigurationFile	Fully qualified name of the trading partner configuration file created in Step 1 above (for instance, C:\IBM\WebSphereICS\connectors\TPI\tpcfg.txt).
WaitForMDN	false (MDNs are not supported by this solution).

Table 25. Supported business objects

Business object name	Agent support required?
MO_DataHandler_UCCnet_envelope	Yes
<ul style="list-style-type: none"> UCCnetTPIDTD_envelope (when the DTD XML definition type is used) UCCnetTPIXSD_envelope (when the XSD XML definition type is used) 	Yes
UCCnetGBO_envelope	No

4. Save the configuration (**File > Save > To Project**), then go back to the **Associated Map** tab and set the explicit bindings.

Table 26. Associated maps

Business object name	Map name
UCCnetTPIDTD_envelope (when DTD XML definition type is used)	UCCnetTPIDTD_envelope_to_UCCnetGBO_envelope
UCCnetTPIXSD_envelope (when XSD XML definition type is used)	UCCnetTPIXSD_envelope_to_UCCnetGBO_envelope
UCCnetGBO_envelope	<ul style="list-style-type: none"> When DTD XML definition type is used: UCCnetGBO_envelope_to_UCCnetTPIDTD_envelope When XSD XML definition type is used: UCCnetGBO_envelope_to_UCCnetTPIXSD_envelope

5. Save the configuration (**File > Save > To Project**), then close the Connector Configurator.
6. If you are using WebSphere MQ as your connector transport, create the TPIConnector queues in WebSphere MQ. You must create the following queues as local queues and accept the defaults, where *local_WebSphere_ICS_queue_manager_name* refers to the queue manager used by the IBM WebSphere ICS and *ICS_server_name* refers to the name of the ICS server. Enter the following at a command prompt:

```
runmqsc local_WebSphere_ICS_queue_manager_name
DEFINE QLOCAL (AP/TPICCONNECTOR/ICS_server_name) USAGE (NORMAL)
DEFINE QLOCAL (IC/ICS_server_name/TPICCONNECTOR) USAGE (NORMAL)
END
```

Refer to the Adapter for Trading Partner Interchange User Guide for more information about this connector.

Creating and configuring the JTextIsoftConnector

Create and configure this connector only if you are using the iSoft Peer-to-Peer Agent and are communicating with UCCnet through the UCCnet CLU or testing your installation. This is a copy of the JTextConnector used to simulate the iSoftConnector. Like the iSoftConnector, the JTextIsoftConnector uses the IBM WebSphere Business Integration Data Handler for XML and generates the same XML output.

Creating the JTextIsoftConnector: To create the JTextIsoftConnector, complete the following steps:

1. Create the JTextIsoftConnector Agent, as follows:

- **Windows:**

- a. In the Windows taskbar, right-click **Start** and select **Open All Users**.
- b. Navigate to the folder on your system that contains the installed connectors by clicking **Programs > IBM WebSphere Business Integration Adapters > Adapters > Connectors**.
- c. Copy the JText Connector short cut and rename it to JTextIsoft Connector.
- d. Right-click the JTextIsoft Connector short cut and select **Properties**.
- e. Click the **Short cut** tab, edit the **Target field**, and set the first command line argument to JTextIsoft, where *ICS_server_name* refers to the name of the ICS server, as shown in the following example:

```
<install_path>\IBM\WebSphereICS\connectors\JText\start_JText.bat \
JTextIsoft ICS_server_name
```

- **UNIX:**

- a. Access the JTextIsoftConnector Agent program located in the following directory: *<install_path>/IBM/WebSphereICS/connectors/JText/*.
 - b. Run JTextIsoft by switching to this directory and entering the following command, where *ICS_server_name* refers to the name of the ICS server:
- ```
start_JText.sh JTextIsoft ICS_server_name
```

2. Create the JTextIsoftConnector using the System Manager, as follows:

- a. Open the System Manager.
- b. Save the JTextIsoftConnector by doing the following:
  - 1) Open the JTextConnector.
  - 2) Click **File > Save As > To Project**.
  - 3) Save the connector as JTextIsoftConnector.

3. Create the JTextIsoftConnector queues in WebSphere MQ. You must create the following queues as local queues and accept the defaults, where *local\_WebSphere\_ICS\_queue\_manager\_name* refers to the queue manager used by the IBM WebSphere ICS and *ICS\_server\_name* refers to the name of the ICS server. Enter the following at a command prompt:

```
runmqsc local_WebSphere_ICS_queue_manager_name
DEFINE QLOCAL (AP/JTEXTISOFTCONNECTOR/ICS_server_name) USAGE (NORMAL)
DEFINE QLOCAL (IC/ICS_server_name/JTEXTISOFTCONNECTOR) USAGE (NORMAL)
END
```

**Configuring the JTextIsoftConnector:** Perform the following steps to configure the JTextIsoftConnector:

1. Configure this connector to include the standard configuration property and appropriate business objects. Use the values shown in the following tables.

*Table 27. Standard property*

| Property name   | Value               |
|-----------------|---------------------|
| ApplicationName | JTextIsoftConnector |

*Table 28. Supported business objects*

| Business object name                                                                                                                                                                    | Agent support required? |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| UCCnetGBO_envelope                                                                                                                                                                      | No                      |
| <ul style="list-style-type: none"><li>• UCCnetDTD_envelope (when the DTD XML definition type is used)</li><li>• UCCnetXSD_envelope (when the XSD XML definition type is used)</li></ul> | Yes                     |
| MO_DataHandler_UCCnet_envelope                                                                                                                                                          | Yes                     |
| MO_JTextIsoftConnector_Default                                                                                                                                                          | Yes                     |

2. Save the configuration (**File > Save > To Project**), then go back to the **Associated Map** tab and set the explicit bindings.

*Table 29. Associated maps*

| Business object name                                          | Map name                                                                                                                                                                                                                                  |
|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| UCCnetDTD_envelope (when the DTD XML definition type is used) | UCCnetDTD_envelope_to_UCCnetGBO_envelope                                                                                                                                                                                                  |
| UCCnetXSD_envelope (when the XSD XML definition type is used) | UCCnetXSD_envelope_to_UCCnetGBO_envelope                                                                                                                                                                                                  |
| UCCnetGBO_envelope                                            | <ul style="list-style-type: none"><li>• When the DTD XML definition type is used:<br/>UCCnetGBO_envelope_to_UCCnetDTD_envelope</li><li>• When the XSD XML definition type is used:<br/>UCCnetGBO_envelope_to_UCCnetXSD_envelope</li></ul> |

3. Save the configuration (**File > Save > To Project**), then close the Connector Configurator.

### Creating and configuring the JTextTPICConnector

Create and configure this connector only if you are using the TPI server and are communicating with UCCnet through the UCCnet CLU or testing your installation. This is a copy of the JTextConnector used to simulate the TPICConnector. Like the TPICConnector, the JTextTPICConnector uses the IBM WebSphere Business Integration Data Handler for XML and generates the same XML output.

**Creating the JTextTPICConnector:** To create JTextTPICConnector, complete the following steps:

1. Create the JTextTPICConnector Agent, as follows:
  - **Windows:**
    - a. In the Windows taskbar, right-click **Start** and select **Open All Users**.

- b. Navigate to the folder on your system that contains the installed connectors by clicking **Programs > IBM WebSphere Business Integration Adapters > Adapters > Connectors**.
  - c. Copy the JText Connector short cut and rename it to JTextTPI Connector.
  - d. Right-click the JTextTPI Connector short cut and select **Properties**.
  - e. Click the **Short cut** tab, edit the **Target field**, and set the first command line argument to JTextTPI, where *ICS\_server\_name* refers to the name of the ICS server, as shown in the following example:
 

```
<install_path>\IBM\WebSphereICS\connectors\JText\start_JText.bat \
JTextTPI ICS_server_name
```
- **UNIX:**
  - a. Access the JTextTPIConnector Agent program located in the following directory: *<install\_path>/IBM/WebSphereICS/connectors/JText/*.
  - b. Run JTextTPI by switching to this directory and entering the following command, where *ICS\_server\_name* refers to the name of the ICS server:
 

```
start_JText.sh JTextTPI ICS_server_name
```
2. Create the JTextTPIConnector using the System Manager, as follows:
  - a. Open the System Manager.
  - b. Save the JTextTPIConnector by doing the following:
    - 1) Open the JTextConnector.
    - 2) Click **File > Save As > To Project**.
    - 3) Save the connector as JTextTPIConnector.
3. Create the JTextTPIConnector queues in WebSphere MQ. You must create the following queues as local queues and accept the defaults, where *local\_WebSphere\_ICS\_queue\_manager\_name* refers to the queue manager used by the IBM WebSphere ICS and *ICS\_server\_name* refers to the name of the ICS server. Enter the following at a command prompt:
 

```
runmqsc local_WebSphere_ICS_queue_manager_name
DEFINE QLOCAL (AP/JTEXTTPICONNECTOR/ICS_server_name) USAGE (NORMAL)
DEFINE QLOCAL (IC/ICS_server_name/JTEXTTPICONNECTOR) USAGE (NORMAL)
END
```

**Configuring the JTextTPIConnector:** Perform the following steps to configure the JTextTPIConnector:

1. Configure this connector to include the standard configuration property and appropriate business objects. Use the values shown in the following tables.

Table 30. Standard property

| Property name   | Value             |
|-----------------|-------------------|
| ApplicationName | JTextTPIConnector |

Table 31. Supported business objects

| Business object name                                                                                                                                                                         | Agent support required? |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| UCCnetGBO_envelope                                                                                                                                                                           | No                      |
| <ul style="list-style-type: none"> <li>UCCnetTPIDTD_envelope (when the DTD XML definition type is used)</li> <li>UCCnetTPIXSD_envelope (when the XSD XML definition type is used)</li> </ul> | Yes                     |
| MO_DataHandler_UCCnet_envelope                                                                                                                                                               | Yes                     |
| MO_JTextTPIConnector_Default                                                                                                                                                                 | Yes                     |



2. Save the configuration (**File > Save > To Project**), then go back to the **Associated Map** tab and set the explicit bindings.

Table 32. Associated maps

| Business object name                                                | Map name                                                                                                                                                                                                                                           |
|---------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| UCCnetTPIDTD_envelope<br>(when the DTD XML definition type is used) | UCCnetTPIDTD_envelope_to_UCCnetGBO_envelope                                                                                                                                                                                                        |
| UCCnetTPIXSD_envelope<br>(when the XSD XML definition type is used) | UCCnetTPIXSD_envelope_to_UCCnetGBO_envelope                                                                                                                                                                                                        |
| UCCnetGBO_envelope                                                  | <ul style="list-style-type: none"> <li>• When the DTD XML definition type is used:<br/>UCCnetGBO_envelope_to_UCCnetTPIDTD_envelope</li> <li>• When the XSD XML definition type is used:<br/>UCCnetGBO_envelope_to_UCCnetTPIXSD_envelope</li> </ul> |

3. Save the configuration (**File > Save > To Project**), then close the Connector Configurator.

## Configuring the JDBCConnector

Perform the following steps to configure the JDBCConnector:

1. Assuming use of DB2 on a Windows system, edit the start\_JDBC.bat file, as follows:
  - a. Modify the SET JDBCDRIVERPATH line, as follows:  
SET JDBCDRIVERPATH="%CROSSWORLDS%\lib\db2java.zip
  - b. Add the following line:  
SET DB2BIN=C:\Program Files\IBM\SQLLIB\BIN
  - c. Add the following to the parameter -Djava.library.path near the end of the file:  
%DB2BIN%
2. Configure this connector to include the standard configuration property, connector-specific configuration properties, and appropriate business objects. Use the values shown in the following tables.

Table 33. Standard property

| Property name | Value |
|---------------|-------|
| PollFrequency | No    |

Table 34. Connector-specific properties

| Property name         | Property value         |
|-----------------------|------------------------|
| Application User Name | Database user ID       |
| Application Password  | Database user password |
| ArchiveProcessed      | false                  |
| EventTableName        | null                   |



Table 34. Connector-specific properties (continued)

| Property name   | Property value                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Database URL    | jdbc:db2:database_name;<br><br><b>Note:</b> The value provided assumes the database used is DB2. The database name represents the Retail database and its tables that are specified in the section “Creating the Retail database and tables” on page 40. If the value of the connector’s AutoCommit attribute is false, the database URL must be appended with SelectMethod=cursor (for instance, jdbc:db2:database_name;SelectMethod=cursor). |
| RDBMS vendor    | IBMDB2                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| JDBCDriverClass | COM.ibm.db2.jdbc.app.DB2Driver                                                                                                                                                                                                                                                                                                                                                                                                                 |
| PollQuantity    | 1 (add this property if it does not appear in the list of connector-specific properties)                                                                                                                                                                                                                                                                                                                                                       |

Table 35. Supported business objects

| Business object name | Agent support required? |
|----------------------|-------------------------|
| SerialItem           | Yes                     |
| SerialMessage        | Yes                     |
| SerialObject         | No                      |
| SerialIdentifier     | Yes                     |

3. Save the configuration (**File > Save > To Project**).
4. If you are using WebSphere MQ as your connector transport, create the JDBCConnector queues in WebSphere MQ. You must create the following queues as local queues and accept the defaults, where *local\_WebSphere\_ICS\_queue\_manager\_name* refers to the queue manager used by the IBM WebSphere ICS and *ICS\_server\_name* refers to the name of the ICS server. Enter the following at a command prompt:

```
runmqsc local_WebSphere_ICS_queue_manager_name
DEFINE QLOCAL (AP/JDBCConnector/ICS_server_name) USAGE (NORMAL)
DEFINE QLOCAL (IC/ICS_server_name/JDBCConnector) USAGE (NORMAL)
END
```

See the Adapter for JDBC User Guide for more information on configuring a JDBCConnector.

## Configuring the EmailConnector

Configure the EmailConnector to include the following connector-specific configuration properties. Use the values shown in the following table.

Table 36. Connector-specific properties

| Property name       | Property value         |
|---------------------|------------------------|
| SMTP_MailHost       | SMTP Mail Server       |
| DataHandlerConfigMO | Leave this field blank |

Refer to the Adapter for e-Mail User Guide for more information about this connector.

## Creating and Configuring the WebSphereMQWorkflowConnectors

The following steps detail how to create and to configure the two instances of the WebSphereMQWorkflowConnector. Configure one instance first. Then make a copy of it to create the second instance.

1. Configure this connector to include the connector-specific configuration properties and appropriate business objects. Use the values shown in the following tables.

Table 37. Connector-specific properties

| Property name        | Property value                                                                               |
|----------------------|----------------------------------------------------------------------------------------------|
| MQSeriesHostname     | <i>system_hostname</i> of the host where the WebSphere MQ Workflow queue manager is running. |
| MQSeriesPort         | The listener port that is defined for the WebSphere MQ Workflow queue manager.               |
| ApplicationUserID    | User ID for the WebSphere MQ Workflow user.                                                  |
| Application Password | Password for the WebSphere MQ Workflow user.                                                 |

Table 38. Supported business objects

| Business object name   | Agent support required? |
|------------------------|-------------------------|
| Retail_Item            | No                      |
| MQWF_Retail_Item       | Yes                     |
| MO_DataHandler_Default | Yes                     |

2. Save the configuration (**File > Save > To Project**), then go back to the **Associated Map** tab and set the explicit bindings.

Table 39. Associated maps

| Business object name | Map name                        |
|----------------------|---------------------------------|
| Retail_Item          | Retail_Item_to_MQWF_Retail_Item |
| MQWF_Retail_Item     | MQWF_Retail_Item_to_Retail_Item |

3. Save the configuration (**File > Save > To Project**)
4. Create the second instance of the WebSphereMQWorkflowConnector Agent as follows:

- **Windows:**

- a. In the Windows taskbar, right-click **Start** and select **Open All Users**.
- b. Navigate to the folder on your system that contains the installed connectors by clicking **Programs > IBM WebSphere Business Integration Adapters > Adapters > Connectors**.
- c. Copy the WebSphereMQWorkflowConnector short cut and rename it to WebSphereMQWorkflow2Connector.
- d. Right-click the WebSphereMQWorkflow2Connector short cut and select **Properties**.
- e. Click the **Short cut** tab, edit the **Target field**, and set the first command line argument to WebSphereMQWorkflow2, where *ICS\_server\_name* refers to the name of the ICS server, as shown in the following example:

```
<install_path>\IBM\WebSphereICS\connectors\WebSphereMQWorkflow\start_WebSphereMQWorkflow.bat \
WebSphereMQWorkflow2 ICS_server_name
```

- **UNIX:**

- a. Access the WebSphereMQWorkflow2Connector Agent program located in the following directory:  
`<install_path>/IBM/WebSphereICS/connectors/WebSphereMQWorkflow/.`
  - b. Run WebSphereMQWorkflow2Connector by switching to this directory and entering the following command, where *ICS\_server\_name* refers to the name of the ICS server:  
`start_WebSphereMQWorkflow.sh WebSphereMQWorkflow2 ICS_server_name`
5. Create the second instance of the WebSphereMQWorkflowConnector as follows:
  - a. Open the System Manager.
  - b. Open the WebSphereMQWorkflowConnector.
  - c. Click **File > Save As > To Project**.
  - d. Save the connector as be WebSphereMQWorkflow2Connector.
6. Create a folder called  
`\IBM\WebSphereICS\connectors\WebSphereMQWorkflow2Connector` and copy `CWWebSphereMQWorkflow.jar` from the WebSphereMQWorkflowConnector folder into this new folder.
7. Modify the properties for WebSphereMQWorkflow2Connector with the values shown in the following tables:
- 8.

Table 40. Standard Properties

| Property name   | Property value       |
|-----------------|----------------------|
| ApplicationName | MQWorkflow2Connector |

Table 41. Connector-Specific Properties

| Property name     | Property value         |
|-------------------|------------------------|
| ArchiveQueue      | MQWFCONN.ARCHIVE2      |
| ErrorQueue        | MQWFCONN.ERROR2        |
| InProgressQueue   | MQWFCONN.IN_PROGRESS2  |
| InputQueue        | CWLDINPUTQ2            |
| OutputQueue       | FMC.FMCGRP.EXE.XML2    |
| ReplyToQueue      | MQWFCONN.REPLYTO2      |
| UnsubscribedQueue | MQWFCONN.UNSUBSCRIBED2 |

9. If you are using WebSphere MQ as your connector transport, create the WebSphereMQWorkflowConnector queues in WebSphere MQ. You must create the following queues as local queues and accept the defaults, where *local\_WebSphere\_ICS\_queue\_manager\_name* refers to the queue manager used by the IBM WebSphere ICS and *ICS\_server\_name* refers to the name of the ICS server. Enter the following at a command prompt:  

```
runmqsc local_WebSphere_ICS_queue_manager_name
DEFINE QLOCAL (AP/WEBSPHEREMQWORKFLOWCONNECTOR/ICS_server_name) USAGE (NORMAL)
DEFINE QLOCAL (IC/ICS_server_name/WEBSPHEREMQWORKFLOWCONNECTOR) USAGE (NORMAL)
DEFINE QLOCAL (AP/WEBSPHEREMQWORKFLOW2CONNECTOR/ICS_server_name) USAGE (NORMAL)
DEFINE QLOCAL (IC/ICS_server_name/WEBSPHEREMQWORKFLOW2CONNECTOR) USAGE (NORMAL)
END
```
10. Update the file `start_WebSphereMQWorkflow.bat` with WebSphere MQ and WebSphere MQ Workflow Java client library paths and Visibroker information as appropriate for your installation.

Refer to the Adapter for WebSphere MQ Workflow User Guide for more information about this connector.

## Configuring the PortConnector

Perform the following steps to configure the PortConnector:

1. Configure this connector to include the appropriate business object. Use the value shown in the following table.

Table 42. Supported business object

| Business object name | Agent support required? |
|----------------------|-------------------------|
| Retail_Item          | Yes                     |

2. If you are using WebSphere MQ as your connector transport, create the PortConnector queues in WebSphere MQ. You must create the following queues as local queues and accept the defaults, where *local\_WebSphere\_ICS\_queue\_manager\_name* refers to the queue manager used by the IBM WebSphere ICS and *ICS\_server\_name* refers to the name of the ICS server. Enter the following at a command prompt:

```
runmqsc local_WebSphere_ICS_queue_manager_name
DEFINE QLOCAL (AP/PORTCONNECTOR/ICS_server_name) USAGE (NORMAL)
DEFINE QLOCAL (IC/ICS_server_name/PORTCONNECTOR) USAGE (NORMAL)
END
```

## Creating and configuring the collaboration objects

Use the information provided in this section to bind the ports and set the attribute values of various collaboration objects.

**Note:** In the tables in this section, some values might include spaces to allow them to fit in the table cells. The actual values do not include spaces.

### Creating and configuring a UCCnetMessageReceive collaboration object and making its port connections

To create and configure a collaboration object based on the UCCnetMessageReceive collaboration template, complete the following steps:

1. Name the collaboration object and bind the ports using the values from the following table.

Table 43. Collaboration object and ports

| Collaboration object | Collaboration template | Port                | Type                 | Bind to               |
|----------------------|------------------------|---------------------|----------------------|-----------------------|
| UMR                  | UCCnet MessageReceive  | FromAS2             | connector            | AS2 channel connector |
|                      |                        | ToMessage_Store     | collaboration object | MS1:From              |
|                      |                        | ToIdentifier_Store  | collaboration object | IDS1:From             |
|                      |                        | ToRetail_Processing | collaboration object | IV1:From              |
|                      |                        | ToRetail_Response   | collaboration object | UMS1:FromRetail       |

2. Set the tracing level for the object.
3. Configure the collaboration object properties using the values from the following table. Use the default property values unless otherwise listed in this

table.

*Table 44. Collaboration object configuration properties*

| Collaboration object | Collaboration property        | Value                                                                                                                                                                                                                                                                                                 |
|----------------------|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| UMR                  | TORETAIL_PROCESSING_MAP       | UCCnetGBO_envelope_to_Retail_Item                                                                                                                                                                                                                                                                     |
|                      | TORETAIL_RESPONSE_MAP         | UCCnetGBO_envelope_to_Retail_Item                                                                                                                                                                                                                                                                     |
|                      | TOMESSAGE_STORE_MAP           | UCCnetGBO_envelope_to_UCCnetGBO_storable                                                                                                                                                                                                                                                              |
|                      | TOIDENTIFIER_STORE_MAP        | UCCnetGBO_envelope_to_UCCnetGBO_identifier                                                                                                                                                                                                                                                            |
|                      | FILTER_FAIL_RESPONSE          | Review                                                                                                                                                                                                                                                                                                |
|                      | FILTER_DUPLICATE              | true (when using the IdentifierStore)                                                                                                                                                                                                                                                                 |
|                      | REQUIRED_ATTRIBUTE_FILE       | Your fully qualified filename for the required attribute list. Leave blank if there are no attributes to check.                                                                                                                                                                                       |
|                      | VENDOR_FILE                   | Your fully qualified filename for the acceptable vendors. Leave blank if all vendors are acceptable.                                                                                                                                                                                                  |
|                      | CATEGORY_FILE                 | Your fully qualified filename for the acceptable categories. Leave blank if all categories are acceptable.                                                                                                                                                                                            |
|                      | CATEGORYMAP_FILE              | Your fully qualified filename of the UDEX category conversions. Leave blank if there are no UDEX category conversions.                                                                                                                                                                                |
|                      | DEBUG                         | false                                                                                                                                                                                                                                                                                                 |
|                      | COMPLEX_FILTER_FILE           | Your fully qualified filename of the complex filtering file. Leave blank if there are no complex filtering rules.                                                                                                                                                                                     |
|                      | UTILITY_CLASS                 | com.ibm.wbi.retail.utils.RetailUtility                                                                                                                                                                                                                                                                |
|                      | ENVELOPE_CORRELATIONID_FIELDS | List of fully qualified field names from the UCCnetGBO_envelope business object to be included in the correlationID attribute. The default value is ROOT.messageHeader.messageIdentifier.Value. Do not change the default value, as it affects the key used for the item store and the message store. |

Table 44. Collaboration object configuration properties (continued)

| Collaboration object | Collaboration property            | Value                                                                                                                                                                                                                                                                              |
|----------------------|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                      | NOTIFICATION_CORRELATIONID_FIELDS | List of fully qualified field names from the UCCnetXSD_envelope_notification business object to be included in the correlationID attribute. The default value is sequenceId. Do not change the default value, as it affects the key used for the item store and the message store. |

## Creating and configuring UCCnetMessageSend collaboration objects and making their port connections

To create and configure collaboration objects based on the UCCnetMessageSend collaboration template, complete the following steps:

1. Name the collaboration objects and bind the ports using the values from the following table.

Table 45. Collaboration objects and ports

| Collaboration object | Collaboration template | Port               | Type                 | Bind to               |
|----------------------|------------------------|--------------------|----------------------|-----------------------|
| UMS1                 | UCCnet MessageSend     | ToAS2_Response     | connector            | AS2 channel connector |
|                      |                        | FromRetail         | collaboration object | UMR:ToRetail_Response |
|                      |                        | ToMessage_Store    | collaboration object | MS2:From              |
|                      |                        | ToIdentifier_Store | collaboration object | IDS2:From             |
|                      |                        |                    |                      |                       |
| UMS2                 | UCCnet MessageSend     | ToAS2_Response     | connector            | AS2 channel connector |
|                      |                        | FromRetail         | collaboration object | PRI:respond_to        |
|                      |                        | ToMessage_Store    | collaboration object | MS3:From              |
|                      |                        | ToIdentifier_Store | collaboration object | IDS3:From             |

2. Set the tracing level for each object.
3. Configure the collaboration object properties using the values from the following table. Use the default property values unless otherwise listed in this table.

Table 46. Collaboration object configuration properties

| Collaboration object | Collaboration property | Value                                |
|----------------------|------------------------|--------------------------------------|
| UMS1, UMS2           | TOAS2_RESPONSE_MAP     | UCCnetGBO_RI_S_to_UCCnetGBO_envelope |

Table 46. Collaboration object configuration properties (continued)

| Collaboration object | Collaboration property | Value                                 |
|----------------------|------------------------|---------------------------------------|
|                      | SEND_REVIEW            | true (Review messages are sent)       |
|                      | SEND_REJECT            | true (Rejected messages are sent)     |
|                      | SEND_ACCEPT            | true (Accepted messages are sent)     |
|                      | FILTER_DUPLICATE       | true (when using the IdentifierStore) |
|                      | DEBUG                  | false                                 |

## Creating and configuring ItemValidation collaboration objects and making their port connections

To create and configure collaboration objects based on the ItemValidation collaboration template, complete the following steps:

1. Name the collaboration objects and bind the ports using the values from the following table.

Table 47. Collaboration objects and ports

| Collaboration object | Collaboration template | Port                    | Type                 | Bind to                 |
|----------------------|------------------------|-------------------------|----------------------|-------------------------|
| IV1                  | ItemValidation         | From                    | collaboration object | UMR:ToRetail_Processing |
|                      |                        | To                      | collaboration object | ID1:From                |
|                      |                        | Notify                  | collaboration object | RE1:From                |
|                      |                        | ToMissingData           |                      | Custom                  |
|                      |                        | LocalItemStore          | collaboration object | IS1:From                |
|                      |                        | DestinationApp Retrieve | connector            | PortConnector           |
|                      |                        |                         |                      |                         |
| IV2                  | ItemValidation         | From                    | collaboration object | PRI:reprocess           |
|                      |                        | To                      | collaboration object | ID2:From                |
|                      |                        | Notify                  | collaboration object | RE2:From                |
|                      |                        | ToMissingData           |                      | Custom                  |
|                      |                        | LocalItemStore          | collaboration object | IS2:From                |
|                      |                        | DestinationApp Retrieve | connector            | PortConnector           |

2. Set the tracing level for each object.
3. Configure the collaboration object properties using the values from the following table. Use the default property values unless otherwise listed in this table.

Table 48. Collaboration object configuration properties

| Collaboration object | Collaboration property        | Value                                                                                                                                                                                             |
|----------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IV1, IV2             | REQUIRED_ATTRIBUTE_FILE       | Your fully qualified attribute file name. Leave blank if there are no required attributes to check.                                                                                               |
|                      | CUST_DATA_MISS_ATTR           | internals.customer_data_missing_attributes                                                                                                                                                        |
|                      | RETAIL_MISS_ATTR_TYPE         | Retail_Missing_Attributes                                                                                                                                                                         |
|                      | RETAIL_MISS_ATTR_NAME         | attribute_name                                                                                                                                                                                    |
|                      | RETAIN_ITEM_IN_LOCAL_STORE    | true (when ItemStore is used)                                                                                                                                                                     |
|                      | ITEM_COMMAND_ATTRIBUTE        | internals.item_command                                                                                                                                                                            |
|                      | ITEM_STATUS_ATTRIBUTE         | internals.item_status                                                                                                                                                                             |
|                      | ITEM_IDENTIFICATION_ATTRIBUTE | item.catalogueItem.tradeItem.tradeItemIdentification.gtin                                                                                                                                         |
|                      | BUSINESS_POLICY_CMDS          | Create                                                                                                                                                                                            |
|                      | REQUIRED_ATTRIBUTE_CMDS       | Create                                                                                                                                                                                            |
|                      | MESSAGE_TYPE_PROCESSING_CMDS  | Create                                                                                                                                                                                            |
|                      | UTILITY_CLASS                 | com.ibm.wbi.retail.utils.RetailUtility                                                                                                                                                            |
|                      | LOG_REVIEW_ITEM               | true                                                                                                                                                                                              |
|                      | LOG_REJECTED_ITEM             | true                                                                                                                                                                                              |
|                      | LOG_ERROR_ITEM                | true                                                                                                                                                                                              |
|                      | EMAIL_MSG_ATTRIBUTE           | internals.message_text                                                                                                                                                                            |
|                      | EMAIL_SUBJECT_ATTRIBUTE       | internals.message_subject                                                                                                                                                                         |
|                      | EMAIL_ROLE_ATTRIBUTE          | internals.message_recipient_role                                                                                                                                                                  |
|                      | REJECT_EMAIL_MSG              | Set the message text for notifying that an item was rejected by business processing. If left blank, the default message as supplied by the collaboration object will be used as the message text. |
|                      | REJECT_EMAIL_SUBJECT          | Retail Item Rejected by ItemValidation                                                                                                                                                            |
|                      | REJECT_EMAIL_ROLE             | Your administrator's mail ID                                                                                                                                                                      |
|                      | ERROR_EMAIL_MSG               | Set the message text for notifying that an error was detected. If left blank, the default message as supplied by the collaboration object will be used as the message text.                       |



Table 48. Collaboration object configuration properties (continued)

| Collaboration object | Collaboration property | Value                        |
|----------------------|------------------------|------------------------------|
|                      | ERROR_EMAIL_SUBJECT    | ItemValidation Error         |
|                      | ERROR_EMAIL_ROLE       | Your administrator's mail ID |
|                      | SEND_MAIL_ON_ERROR     | true                         |
|                      | SEND_MAIL_ON_REJECTION | true                         |
|                      | TEST                   | false                        |

## Creating and configuring ItemDispatcher collaboration objects and making their port connections

To create and configure collaboration objects based on the ItemDispatcher collaboration template, complete the following steps:

1. Name the collaboration objects and bind the ports using the values from the following table.

Table 49. Collaboration objects and ports

| Collaboration object | Collaboration template | Port               | Type                 | Bind to                        |
|----------------------|------------------------|--------------------|----------------------|--------------------------------|
| ID1                  | ItemDispatcher         | From               | collaboration object | IV1:To                         |
|                      |                        | To                 | connector            | WebSphereMQ Workflow Connector |
|                      |                        | Notify             | collaboration object | RE5:From                       |
|                      |                        | LocalItemStore     | collaboration object | IS5:From                       |
|                      |                        | LocalMessage Store | collaboration object | MS5:From                       |
|                      |                        |                    |                      |                                |
| ID2                  | ItemDispatcher         | From               | collaboration object | IV2:To                         |
|                      |                        | To                 | connector            | WebSphereMQ Workflow Connector |
|                      |                        | Notify             | collaboration object | RE6:From                       |
|                      |                        | LocalItemStore     | collaboration object | IS6:From                       |
|                      |                        | LocalMessage Store | collaboration object | MS6:From                       |

2. Set the tracing level for each object.
3. Configure the collaboration object properties using the values from the following table. Use the default property values unless otherwise listed in this table.

Table 50. Collaboration object configuration properties

| Collaboration object | Collaboration property       | Value                                                                                                                                                                       |
|----------------------|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ID1, ID2             | UTILITY_CLASS                | com.ibm.wbi.retail.utils.RetailUtility                                                                                                                                      |
|                      | GLN_CASCADE_GROUPING_FILE    | Your fully qualified name of the GLN Cascade Grouping file. Leave blank if there are no cascaded groups.                                                                    |
|                      | GLN_CASCADE_GROUPING_DEFAULT | Possible values are: Error (Error condition if no grouping file found); Split (split each GLN into a separate message); and Together (send all GLNs together in one group). |
|                      | EMAIL_MSG_ATTRIBUTE          | internals.message_text                                                                                                                                                      |
|                      | EMAIL_SUBJECT_ATTRIBUTE      | internals.message_subject                                                                                                                                                   |
|                      | EMAIL_ROLE_ATTRIBUTE         | internals.message_recipient_role                                                                                                                                            |
|                      | ERROR_EMAIL_ROLE             | Your administrator's mail ID                                                                                                                                                |
|                      | ERROR_EMAIL_MSG              | Set the message text for notifying that an error was detected. If left blank, the default message as supplied by the collaboration object will be used as the message text. |
|                      | ERROR_EMAIL_SUBJECT          | ItemDispatcher error                                                                                                                                                        |
|                      | DEBUG                        | false                                                                                                                                                                       |
|                      | SEND_MAIL_ON_ERROR           | true                                                                                                                                                                        |

## Creating and configuring an ItemCollector collaboration object and making its port connections

To create and configure a collaboration object based on the ItemCollector collaboration template, complete the following steps:

1. Name the collaboration object and bind the ports using the values from the following table.

Table 51. Collaboration object and ports

| Collaboration object | Collaboration template | Port        | Type                 | Bind to                         |
|----------------------|------------------------|-------------|----------------------|---------------------------------|
| IC                   | ItemCollector          | From        | connector            | WebSphereMQ Workflow2 Connector |
|                      |                        | To          | collaboration object | PRI:From                        |
|                      |                        | local_store | collaboration object | IS3:From                        |
|                      |                        | email       | collaboration object | RE3:From                        |

Table 51. Collaboration object and ports (continued)

| Collaboration object | Collaboration template | Port          | Type                 | Bind to  |
|----------------------|------------------------|---------------|----------------------|----------|
|                      |                        | message_store | collaboration object | MS4:From |

2. Set the tracing level for the object.
3. Configure the collaboration object properties using the values from the following table. Use the default property values unless otherwise listed in this table.

Table 52. Collaboration object configuration properties

| Collaboration object | Collaboration property        | Value                                                                                                                                                                                                                         |
|----------------------|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IC                   | LOG_ERROR_ITEM                | true                                                                                                                                                                                                                          |
|                      | ITEM_IDENTIFICATION_ATTRIBUTE | item.catalogueItem.tradeItem.tradeItemIdentification.gtin                                                                                                                                                                     |
|                      | ITEM_STATUS_ATTRIBUTE         | internals.item_status                                                                                                                                                                                                         |
|                      | MISSING_DATA_CHILD_ATTRIBUTE  | internals.customer_data_missing_attributes                                                                                                                                                                                    |
|                      | MISSING_DATA_NAME_ATTRIBUTE   | attribute_name                                                                                                                                                                                                                |
|                      | MISSING_DATA_VALUE_ATTRIBUTE  | attributeValue                                                                                                                                                                                                                |
|                      | 1_COPY_ATTRIBUTE              | internals.item_status                                                                                                                                                                                                         |
|                      | 2_COPY_ATTRIBUTE              | internals.date_processed                                                                                                                                                                                                      |
|                      | 3_COPY_ATTRIBUTE              | internals.time_processed                                                                                                                                                                                                      |
|                      | 4_COPY_ATTRIBUTE              | internals.responder_name                                                                                                                                                                                                      |
|                      | EMAIL_MSG_ATTRIBUTE           | internals.message_text                                                                                                                                                                                                        |
|                      | EMAIL_SUBJECT_ATTRIBUTE       | internals.message_subject                                                                                                                                                                                                     |
|                      | EMAIL_ROLE_ATTRIBUTE          | internals.message_recipient_role                                                                                                                                                                                              |
|                      | ERROR_RETRIEVE_EMAIL_MSG      | Set the message text for notifying that an error was detected when retrieving an item from the local item store. If left blank, the default message as supplied by the collaboration object will be used as the message text. |
|                      | ERROR_SEND_EMAIL_MSG          | Set the message text for notifying that an error was detected while sending the merged item to the To port. If left blank, the default message as supplied by the collaboration object will be used as the message text.      |
|                      | ERROR_EMAIL_SUBJECT           | Internal error occurred                                                                                                                                                                                                       |
|                      | ERROR_EMAIL_ROLE              | Your administrator's mail ID                                                                                                                                                                                                  |

Table 52. Collaboration object configuration properties (continued)

| Collaboration object | Collaboration property | Value |
|----------------------|------------------------|-------|
|                      | SEND_MAIL_ON_ERROR     | true  |

## Creating and configuring IdentifierStore collaboration objects and making their port connections

To create and configure collaboration objects based on the IdentifierStore collaboration template, complete the following steps:

1. Name the collaboration objects and bind the ports using the values from the following table.

Table 53. Collaboration objects and ports

| Collaboration object | Collaboration template | Port                    | Type                 | Bind to                  |
|----------------------|------------------------|-------------------------|----------------------|--------------------------|
| IDS1                 | IdentifierStore        | From                    | collaboration object | UMR:To Identifier_Store  |
|                      |                        | To                      | connector            | JDBCCConnector           |
|                      |                        | DestinationApp Retrieve | connector            | JDBCCConnector           |
|                      |                        |                         |                      |                          |
| IDS2                 | IdentifierStore        | From                    | collaboration object | UMS1:To Identifier_Store |
|                      |                        | To                      | connector            | JDBCCConnector           |
|                      |                        | DestinationApp Retrieve | connector            | JDBCCConnector           |
|                      |                        |                         |                      |                          |
| IDS3                 | IdentifierStore        | From                    | collaboration object | UMS2:To Identifier_Store |
|                      |                        | To                      | connector            | JDBCCConnector           |
|                      |                        | DestinationApp Retrieve | connector            | JDBCCConnector           |

2. Set the tracing level for each object.
3. Configure the collaboration object properties using the values from the following table. Use the default property values unless otherwise listed in this table.

Table 54. Collaboration object configuration properties

| Collaboration object | Collaboration property | Value                                                                                                                                                                                                                                      |
|----------------------|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IDS1, IDS2, IDS3     | OBJECT_KEY             | <ul style="list-style-type: none"> <li>• When XSD XML definition type is used: gtn, topic, dataRecipientGLN, dataSourceGLN, target Market, uniqueCreatorID</li> <li>• When DTD XML definition type is used: gtn, version, topic</li> </ul> |
|                      | GENERATE_KEY           | false                                                                                                                                                                                                                                      |
|                      | MIME_TYPE              | text/xml.datastore                                                                                                                                                                                                                         |

Table 54. Collaboration object configuration properties (continued)

| Collaboration object | Collaboration property | Value |
|----------------------|------------------------|-------|
|                      | TEST                   | false |

## Creating and configuring MessageStore collaboration objects and making their port connections

To create and configure collaboration objects based on the MessageStore collaboration template, complete the following steps:

1. Name the collaboration objects and bind the ports using the values from the following table.

Table 55. Collaboration objects and ports

| Collaboration object | Collaboration template | Port                    | Type                 | Bind to                |
|----------------------|------------------------|-------------------------|----------------------|------------------------|
| MS1                  | MessageStore           | From                    | collaboration object | UMR:ToMessage_Store    |
|                      |                        | To                      | connector            | JDBCCConnector         |
|                      |                        | DestinationApp Retrieve | connector            | JDBCCConnector         |
|                      |                        |                         |                      |                        |
| MS2                  | MessageStore           | From                    | collaboration object | UMS1: ToMessage_Store  |
|                      |                        | To                      | connector            | JDBCCConnector         |
|                      |                        | DestinationApp Retrieve | connector            | JDBCCConnector         |
|                      |                        |                         |                      |                        |
| MS3                  | MessageStore           | From                    | collaboration object | UMS2: ToMessage_Store  |
|                      |                        | To                      | connector            | JDBCCConnector         |
|                      |                        | DestinationApp Retrieve | connector            | JDBCCConnector         |
|                      |                        |                         |                      |                        |
| MS4                  | MessageStore           | From                    | collaboration object | IC:message_store       |
|                      |                        | To                      | connector            | JDBCCConnector         |
|                      |                        | DestinationApp Retrieve | connector            | JDBCCConnector         |
|                      |                        |                         |                      |                        |
| MS5                  | MessageStore           | From                    | collaboration object | ID1:Local MessageStore |
|                      |                        | To                      | connector            | JDBCCConnector         |
|                      |                        | DestinationApp Retrieve | connector            | JDBCCConnector         |
|                      |                        |                         |                      |                        |
| MS6                  | MessageStore           | From                    | collaboration object | ID2:Local MessageStore |
|                      |                        | To                      | connector            | JDBCCConnector         |

Table 55. Collaboration objects and ports (continued)

| Collaboration object | Collaboration template | Port                    | Type      | Bind to        |
|----------------------|------------------------|-------------------------|-----------|----------------|
|                      |                        | DestinationApp Retrieve | connector | JDBCCConnector |

2. Set the tracing level for each object.
3. Configure the collaboration object properties using the values from the following table. Use the default property values unless otherwise listed in this table.

Table 56. Collaboration object configuration properties

| Collaboration object         | Collaboration property | Value              |
|------------------------------|------------------------|--------------------|
| MS1, MS2, MS3, MS4, MS5, MS6 | OBJECT_KEY             | correlationID      |
|                              | GENERATE_KEY           | false              |
|                              | MIME_TYPE              | text/xml.datastore |
|                              | TEST                   | false              |

## Creating and configuring ItemStore collaboration objects and making their port connections

To create and configure collaboration objects based on the ItemStore collaboration template, complete the following steps:

1. Name the collaboration objects and bind the ports using the values from the following table.

Table 57. Collaboration objects and ports

| Collaboration object | Collaboration template | Port                    | Type                 | Bind to             |
|----------------------|------------------------|-------------------------|----------------------|---------------------|
| IS1                  | ItemStore              | From                    | collaboration object | IV1:LocalItem Store |
|                      |                        | To                      | connector            | JDBCCConnector      |
|                      |                        | DestinationApp Retrieve | connector            | JDBCCConnector      |
|                      |                        |                         |                      |                     |
| IS2                  | ItemStore              | From                    | collaboration object | IV2:LocalItem Store |
|                      |                        | To                      | connector            | JDBCCConnector      |
|                      |                        | DestinationApp Retrieve | connector            | JDBCCConnector      |
|                      |                        |                         |                      |                     |
| IS3                  | ItemStore              | From                    | collaboration object | IC:local_store      |
|                      |                        | To                      | connector            | JDBCCConnector      |
|                      |                        | DestinationApp Retrieve | connector            | JDBCCConnector      |
|                      |                        |                         |                      |                     |
| IS4                  | ItemStore              | From                    | collaboration object | PRI:local_store     |

Table 57. Collaboration objects and ports (continued)

| Collaboration object | Collaboration template | Port                    | Type                 | Bind to             |
|----------------------|------------------------|-------------------------|----------------------|---------------------|
|                      |                        | To                      | connector            | JDBCCConnector      |
|                      |                        | DestinationApp Retrieve | connector            | JDBCCConnector      |
|                      |                        |                         |                      |                     |
| IS5                  | ItemStore              | From                    | collaboration object | ID1:LocalItem Store |
|                      |                        | To                      | connector            | JDBCCConnector      |
|                      |                        | DestinationApp Retrieve | connector            | JDBCCConnector      |
|                      |                        |                         |                      |                     |
| IS6                  | ItemStore              | From                    | collaboration object | ID2:LocalItem Store |
|                      |                        | To                      | connector            | JDBCCConnector      |
|                      |                        | DestinationApp Retrieve | connector            | JDBCCConnector      |

2. Set the tracing level for each object.
3. Configure the collaboration object properties using the values from the following table. Use the default property values unless otherwise listed in this table.

Table 58. Collaboration object configuration properties

| Collaboration object         | Collaboration property | Value                   |
|------------------------------|------------------------|-------------------------|
| IS1, IS2, IS3, IS4, IS5, IS6 | OBJECT_KEY             | internals.correlationID |
|                              | GENERATE_KEY           | false                   |
|                              | MIME_TYPE              | text/xml.datastore      |
|                              | TEST                   | false                   |

## Creating and configuring a Process\_Reviewed\_Item collaboration object and making its port connections

To create and configure a collaboration object based on the Process\_Reviewed\_Item collaboration template, complete the following steps:

1. Name the collaboration object and bind the ports using the values from the following table.

Table 59. Collaboration object and ports

| Collaboration object | Collaboration template | Port       | Type                 | Bind to          |
|----------------------|------------------------|------------|----------------------|------------------|
| PRI                  | Process_Reviewed_Item  | From       | collaboration object | IC:To            |
|                      |                        | Sync       | connector            | JTextConnector   |
|                      |                        | mail       | collaboration object | RE4:From         |
|                      |                        | respond_to | collaboration object | UMS2: FromRetail |

Table 59. Collaboration object and ports (continued)

| Collaboration object | Collaboration template | Port        | Type                 | Bind to  |
|----------------------|------------------------|-------------|----------------------|----------|
|                      |                        | reprocess   | collaboration object | IV2:From |
|                      |                        | local_store | collaboration object | IS4:From |

2. Set the tracing level for the object.
3. Configure the collaboration object properties using the values from the following table. Use the default property values unless otherwise listed in this table.

Table 60. Collaboration object configuration properties

| Collaboration object | Collaboration property        | Value                                                                                                                                                                                  |
|----------------------|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PRI                  | ITEM_STATUS_ATTRIBUTE         | internals.item_status                                                                                                                                                                  |
|                      | ITEM_IDENTIFICATION_ATTRIBUTE | item.catalogueItem.tradeItem.tradeItemIdentification.gtin                                                                                                                              |
|                      | EMAIL_MSG_ATTRIBUTE           | internals.message_text                                                                                                                                                                 |
|                      | EMAIL_SUBJECT_ATTRIBUTE       | internals.message_subject                                                                                                                                                              |
|                      | EMAIL_ROLE_ATTRIBUTE          | internals.message_recipient_role                                                                                                                                                       |
|                      | REJECT_EMAIL_MSG              | Set the message text for notifying that an item has a status of Rejected. If left blank, the default message as supplied by the collaboration object will be used as the message text. |
|                      | REJECT_EMAIL_SUBJECT          | item rejected                                                                                                                                                                          |
|                      | REJECT_EMAIL_ROLE             | Your administrator's mail ID                                                                                                                                                           |
|                      | ERROR_EMAIL_MSG               | Set the message text for notifying that an error was detected. If left blank, the default message as supplied by the collaboration object will be used as the message text.            |
|                      | ERROR_EMAIL_SUBJECT           | internal error occurred                                                                                                                                                                |
|                      | ERROR_EMAIL_ROLE              | Your administrator's mail ID                                                                                                                                                           |
|                      | ACCEPTED_EMAIL_MSG            | Set the message text for notifying that an item has a status of Accepted. If left blank, the default message as supplied by the collaboration object will be used as the message text. |
|                      | ACCEPTED_EMAIL_SUBJECT        | item accepted                                                                                                                                                                          |
|                      | ACCEPTED_EMAIL_ROLE           | Your administrator's mail ID                                                                                                                                                           |



Table 60. Collaboration object configuration properties (continued)

| Collaboration object | Collaboration property         | Value                                                                                                                                                                                                                                             |
|----------------------|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                      | APPROVED_EMAIL_MSG             | Set the message text for notifying that an item has a status of Approved. If left blank, the default message as supplied by the collaboration object will be used as the message text.                                                            |
|                      | APPROVED_EMAIL_SUBJECT         | item approved                                                                                                                                                                                                                                     |
|                      | APPROVED_EMAIL_ROLE            | Your administrator's mail ID                                                                                                                                                                                                                      |
|                      | SEND_MAIL_ON_ERROR             | true                                                                                                                                                                                                                                              |
|                      | SEND_MAIL_ON_REJECTION         | true                                                                                                                                                                                                                                              |
|                      | SEND_MAIL_ON_ACCEPTED          | true                                                                                                                                                                                                                                              |
|                      | SEND_MAIL_ON_APPROVAL          | true                                                                                                                                                                                                                                              |
|                      | LOG_ACCEPTED_ITEM              | true                                                                                                                                                                                                                                              |
|                      | LOG_APPROVED_ITEM              | true                                                                                                                                                                                                                                              |
|                      | LOG_REJECTED_ITEM              | true                                                                                                                                                                                                                                              |
|                      | LOG_ERROR_ITEM                 | true                                                                                                                                                                                                                                              |
|                      | DELETE_FROM_LOCAL_STORE        | true                                                                                                                                                                                                                                              |
|                      | RETAIN_ITEM_IN_LOCAL_STORE     | false                                                                                                                                                                                                                                             |
|                      | QUALIFICATION_FAILED_EMAIL_MSG | Set the message text for notifying that the status of the Retail_Item returned from the validating collaboration object is Rejected. If left blank, the default message as supplied by the collaboration object will be used as the message text. |
|                      | SYNC_TO_BACKEND                | true                                                                                                                                                                                                                                              |

## Creating and configuring Role\_Email collaboration objects and making their port connections

To create and configure collaboration objects based on the Role\_Email collaboration template, complete the following steps:

1. Name the collaboration objects and bind the ports using the values from the following table.

Table 61. Collaboration objects and ports

| Collaboration object | Collaboration template | Port | Type                 | Bind to    |
|----------------------|------------------------|------|----------------------|------------|
| RE1                  | Role_Email             | From | collaboration object | IV1:Notify |

Table 61. Collaboration objects and ports (continued)

| Collaboration object | Collaboration template | Port | Type                 | Bind to    |
|----------------------|------------------------|------|----------------------|------------|
| RE2                  | Role_Email             | From | collaboration object | IV2:Notify |
| RE3                  | Role_Email             | From | collaboration object | IC:email   |
| RE4                  | Role_Email             | From | collaboration object | PRI:mail   |
| RE5                  | Role_Email             | From | collaboration object | ID1:Notify |
| RE6                  | Role_Email             | From | collaboration object | ID2:Notify |

2. Set the tracing level for each object.
3. Configure the collaboration object properties using the values from the following table. Use the default property values unless otherwise listed in this table.

Table 62. Collaboration object configuration properties

| Collaboration object         | Collaboration property       | Value                                                                                   |
|------------------------------|------------------------------|-----------------------------------------------------------------------------------------|
| RE1, RE2, RE3, RE4, RE5, RE6 | MSG_RECIPIENT_ATTRIBUTE      | internals.message_recipient_role                                                        |
|                              | MSG_TEXT_ATTRIBUTE           | internals.message_text                                                                  |
|                              | MSG_SUBJECT_ATTRIBUTE        | internals.message_subject                                                               |
|                              | LOG_ERROR                    | true                                                                                    |
|                              | LOG_ALL_MAIL                 | false                                                                                   |
|                              | SUBSTITUTION_VARIABLE_PREFIX | \$( (These characters might have to be changed to meet National Language requirements.) |
|                              | SUBSTITUTION_VARIABLE_SUFFIX | ) (This character might have to be changed to meet National Language requirements.)     |
|                              | FILE_NAME_PREFIX             | @ (This character might have to be changed to meet National Language requirements.)     |

## Deploying the solution

Deploy the solution, as follows:

1. After all of the components of the solution have been configured, compile the maps and collaboration templates in the System Manager.

2. Create a User Project that contains all of the solution components.
3. Use the Deploy wizard to deploy the solution to the WebSphere InterChange Server (running in design mode). The wizard allows you to choose what parts of the solution to deploy. It is recommended that you deploy the solution in stages as follows:
  - a. Deploy the business objects.
  - b. Deploy the maps. Ensure that you have checked the **Compile** option.
  - c. Deploy the relationships. Ensure that you have checked the **Create schema** option.
  - d. Deploy the connectors.
  - e. Deploy the collaboration templates. Ensure that you have checked the **Compile** option.
  - f. Restart the WebSphere InterChange Server.
  - g. Start the System Monitor and start the relationships.
  - h. Deploy the collaboration objects.
4. Restart the ICS.

## Configuring the relationship

Edit the CMDTOWPN relationship using the System Manager, as follows:

1. Open the System Manager.
2. Double-click the CMDTOWPN Static Relationship to open it in the Relationship Designer.
3. Click **Edit > Advanced Settings** and set the following DBMS Settings:
  - URL = URL for the database
  - Login = Database user's name
  - Password = Database user's password
  - Type = Oracle, SQL Server, or DB2
4. Click **OK** to save the settings.
5. In the Relationship Designer, select **Tools > Relationship Manager**.
6. In the Relationship Manager, connect to the ICS, as follows:
  - a. Select **Server > Connect to Server**.
  - b. Specify the **Relationship** as CMDTOWPN.
  - c. Click **Connect** to connect to the ICS.
7. Click **Get Relationships**. **Note:** CMDTOWPN must be deployed and active.
8. Add the Retail\_ItemDelete relationship by performing the following steps:
  - a. Click the **New Relationship** icon in the Relationship Manager tool bar.
  - b. Expand the newly added row by clicking the plus sign (+).
  - c. Right click **WFPGNAME** and select **Add Participant**.
  - d. Click the plus sign (+) next to **WFPGNAME** and enter Retail\_ItemDelete in the **Value** column of the newly added row.
  - e. Right click **COMMAND** and select **Add Participant**.
  - f. Click the plus sign (+) next to **COMMAND** and enter DELETE in the **Value** column of the newly added row.
  - g. Right click **COMMAND** and select **Add Participant** again.
  - h. Enter WITHDRAW in the **Value** column of the newly added row.
  - i. Add the Retail\_ItemCreate and Retail\_ItemUpdate WFPGNames and their commands listed in the table below in a similar fashion.

Table 63. Relationships

| WFPGName          | Command            |
|-------------------|--------------------|
| Retail_ItemDelete | DELETE<br>WITHDRAW |
| Retail_ItemCreate | CREATE<br>LOAD     |
| Retail_ItemUpdate | UPDATE             |

## Creating the Retail database and tables

Create a database with the tables and properties listed in the following table.  
(**Note:** The table assumes that you are using DB2 as your database. Some values might differ for other database software.) The database name must match the database name used in the definition of the Database URL of the JDBCConnector:

Table 64. Database tables and properties

| Table name       | Columns    | Type    | Size      | Nullable | Primary key |
|------------------|------------|---------|-----------|----------|-------------|
| SerialItems      | Objectkey  | VARCHAR | 255 Bytes | No       | Yes         |
|                  | Objectdata | CLOB    | 1 MB      | No       | No          |
|                  |            |         |           |          |             |
| SerialMessages   | Objectkey  | VARCHAR | 255 Bytes | No       | Yes         |
|                  | Objectdata | CLOB    | 1 MB      | No       | No          |
|                  |            |         |           |          |             |
| SerialIdentifier | Objectkey  | VARCHAR | 255 Bytes | No       | Yes         |
|                  | Objectdata | CLOB    | 512 Bytes | No       | No          |

## Configuring WebSphere MQ Workflow and WebSphere MQ

To configure WebSphere MQ Workflow and WebSphere MQ, complete the following steps:

1. You might have to modify the Workflow process definitions to match the queue manager specified in the network information to the IBM WebSphere ICS queue manager. Use the WebSphere MQ Workflow Buildtime user interface:
  - a. Import the Workflow process definitions .fdl file into the Workflow Buildtime by doing the following:
    - 1) Open Workflow Buildtime.
    - 2) From the menu bar, select **Buildtime**.
    - 3) Click **Import**.
    - 4) From the Buildtime menu, locate your .fdl file (that is, Retail.fdl), select the **Overwrite** checkbox, and click **OK**.
  - b. Update the network information by doing the following:
    - 1) In the left pane of the Workflow Buildtime window, click the **Network** tab.
    - 2) Expand the DOMAIN, FMCGRP, and FMCSYS sections.
    - 3) Right-click **CWLDSVR** and click **Properties**.

- 4) In the dialog box, click the **Message Queuing** tab, change the queue name to CWLDINPUTQ2 and change the queue manager to the appropriate value (that is, to your local IBM WebSphere MQ Workflow queue manager name).
- 5) Click **OK**.
- c. Update the process by doing the following:
  - 1) Click the **Processes** tab.
  - 2) Expand the **WSBI-Retail** node.
  - 3) Double-click **Retail\_ItemCreate**.
  - 4) Right-click the **Item\_Approve** process and click **Properties**.
  - 5) Click the **Start** tab and click **Manual**, then close the Properties window.
  - 6) Right-click the **Approval\_Reply** process and click **Properties**.
  - 7) Click the **Start** tab and click **Manual**, then close the Properties window.
  - 8) Double-click **Retail\_ItemUpdate**.
  - 9) Right-click the **Item\_Approve** process and click **Properties**.
  - 10) Click the **Start** tab and click **Manual**, then close the Properties window.
  - 11) Right-click the **Approval\_Reply** process and click **Properties**.
  - 12) Click the **Start** tab and click **Manual**, then close the Properties window.
  - 13) If you want to use an ID other than ADMIN for logging into the WebSphere MQ Workflow Client, add the following WorkFlow process definition user IDs to the system and make them members of role CategoryManager:
    - CTGMGR\_1
    - CTGMGR\_2
    - CTGMGR\_3
  - 14) Select **Buildtime** from the menu and click **Export**.
  - 15) Select the **Export deep** checkbox in the **Export flags** section.
  - 16) Click **OK** and save the .fdl file when prompted.
2. Import the WebSphere MQ Workflow process definitions using the .fdl file just exported. Enter the following command:
 

```
fmcibie -i<fdl_filename> -uadmin -ppassword -o -f -t
```
3. Define the WebSphere MQ channels required on the WebSphere MQ Workflow queue manager to communicate with the IBM WebSphere ICS queue manager. Enter the following at a command prompt. (The commands shown in this step assume that the IBM WebSphere ICS queue manager's name is *local\_WebSphere\_ICS\_queue\_manager\_name*, and the WebSphere MQ Workflow queue manager's name is *FMCQM*. Enter the appropriate names for your queue managers.)
 

```
runmqsc FMCQM
DEFINE CHANNEL ('FMCQM.TO.CW') CHLTYPE (SDR) CONNAME
('local_hostname(Listener port for local_WebSphere_ICS_queue_manager)')
XMITQ ('local_WebSphere_ICS_queue_manager_name')
DEFINE CHANNEL ('CW.TO.FMCQM') CHLTYPE (RCVR)
DEFINE QLOCAL ('local_WebSphere_ICS_queue_manager_name') USAGE (XMITQ)
END
```
4. Define the WebSphere MQ channels required on the IBM WebSphere ICS queue manager to communicate with the WebSphere MQ Workflow queue manager. Enter the following at a command prompt. (The commands shown in this step assume that the IBM WebSphere ICS queue manager's name is

*local\_WebSphere\_ICS\_queue\_manager\_name*, and the WebSphere MQ Workflow queue manager's name is *FMCQM*. Enter the appropriate names for your queue managers.)

```
runmqsc local_WebSphere_ICS_queue_manager_name
DEFINE CHANNEL ('CW.TO.FMCQM') CHLTYPE (SDR) CONNAME
('local_hostname(listener port for WebSphere_MQ_Workflow_queue_manager)')
XMITQ (FMCQM)
DEFINE CHANNEL ('FMCQM.TO.CW') CHLTYPE (RCVR)
DEFINE QLOCAL (FMCQM) USAGE (XMITQ)
END
```

5. Define the following local queues required by WebSphere MQ Workflow queue manager. Enter the following at a command prompt (these commands assume that the WebSphere MQ Workflow queue manager is named *FMCQM*):

```
runmqsc FMCQM
DEFINE QLOCAL (MQWFCONN.ARCHIVE) USAGE (NORMAL)
DEFINE QLOCAL (MQWFCONN.ERROR) USAGE (NORMAL)
DEFINE QLOCAL (MQWFCONN.IN_PROGRESS) USAGE (NORMAL)
DEFINE QLOCAL (MQWFCONN.REPLYTO) USAGE (NORMAL)
DEFINE QLOCAL (MQWFCONN.UNSUBSCRIBED) USAGE (NORMAL)
DEFINE QLOCAL (CWLDINPUTQ) USAGE (NORMAL)
DEFINE QLOCAL (CWLDRETQ) USAGE (NORMAL)
DEFINE QLOCAL (MQWFCONN.ARCHIVE2) USAGE (NORMAL)
DEFINE QLOCAL (MQWFCONN.ERROR2) USAGE (NORMAL)
DEFINE QLOCAL (MQWFCONN.IN_PROGRESS2) USAGE (NORMAL)
DEFINE QLOCAL (MQWFCONN.REPLYTO2) USAGE (NORMAL)
DEFINE QLOCAL (MQWFCONN.UNSUBSCRIBED2) USAGE (NORMAL)
DEFINE QLOCAL (CWLDINPUTQ2) USAGE (NORMAL)
DEFINE QLOCAL (CWLDRETQ2) USAGE (NORMAL)
```

ND

6. Verify that the following WebSphere MQ queue required by the WebSphere MQ Workflow queue manager is defined in the *FMCQM* queue manager.

**FMC.FMCGRP.EXE.XML**

If it is not defined, you can define by entering the following at a command prompt:

```
runmqsc FMCQM
DEFINE QALIAS(FMC.FMCGRP.EXE.XML) DEFPSIST(YES) TARGQ(EXEXMLINPUTQ) CLUSTER(FMCGRP) DEFBIND(NOTFIXED)
END
```

7. Define a similar queue for the second instance of the WebSphereMQWorkflowConnector by entering the following at a command prompt:

```
runmqsc FMCQM
DEFINE QALIAS(FMC.FMCGRP.EXE.XML2) DEFPSIST(YES) TARGQ(EXEXMLINPUTQ2) CLUSTER(FMCGRP) DEFBIND(NOTFIXED)
END
```

8. If you are running WebSphere MQ Workflow and the IBM WebSphere ICS on the same machine, make sure that the port number used by each instance of the WebSphere MQ queue manager is unique (default=1414).

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