IBM CrossWorlds
WebSphere® Business Integration for
Retail Distribution

Installation Guide

Version 4.1.1

> **Note!**
>
> Before using this information and the product it supports, be sure to read the general information under "Notices and Trademarks" on page 23.

Contents

Introduction

This document 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 IBM® CrossWorlds® core documents:

- IBM CrossWorlds System Installation Guide for Windows
- IBM CrossWorlds System Installation Guide for UNIX
- Technical Introduction to IBM CrossWorlds
- IBM CrossWorlds System Implementation Guide

Before installing

Before following the installation procedure, perform these steps:

- Download the generic, cross-industry, artifacts of the Product Information Management for Retailers Solution from Passport Advantage (www.lotus.com/passportadvantage) and extract to the directory of your choice. Refer to Passport Advantage for downloading instructions.
- Download the solution-specific artifacts of the Product Information Management for Retailers Solution by doing the following:
  1. Go to the Web site www.ibm.com/software/integration/cw/collaborations/support/.
  2. Search for the terms **Product Information Management**.
  3. Select the link **Product Information Management for Retailers Solution**. You are prompted to log in.
  4. Log in by using the same user ID and password you use to submit problems and obtain technical support. (This user ID and password might differ from those used to access Passport Advantage.)
  5. Click on the executable download package for your platform to download the artifacts.
  6. Extract to the directory of your choice.

Supported operating environments

The following operating environments are supported in this release:

- Windows® 2000 (Professional, Server, or Advanced Server) with Service Pack 2
- IBM AIX® 4.3.3
- Solaris™ 7 (2.7) or Solaris 8 (2.8)

Software prerequisites

Before installing the Product Information Management for Retailers Solution, ensure that you have installed the following prerequisites:

- IBM WebSphere Business Integration V4.1.1, *or* each of its individual components:
  - IBM MQSeries® V5.2
  - IBM MQSeries Workflow V3.3.2 with FixPack 2

– IBM CrossWorlds V4.1.1 using VisiBroker (runtime) **Note**: IBM CrossWorlds XML Data Handler is included with CrossWorlds V4.1.1. You must install XML Data Handler FixPack 1.6.4. To download this patch, go to the Web site: www.ibm.com/software/integration/cw/connectors/support/. Click **FixPacks for Version 4.1**, then click **Data Handler 1.6.4 FixPack**.

• IBM DB2® V7.2 FP 5 (Oracle and Microsoft® SQL Server are also supported)

The following IBM CrossWorlds connectors are also used in the Product Information Management for Retailers Solution:

Table 1. Solution connectors

Connectors	Version
IBM CrossWorlds Connector for E-mail	5.0.0
IBM CrossWorlds Connector for JText	4.4
IBM CrossWorlds Connector for MQSeries	1.5.1
IBM CrossWorlds Connector for TPI	2.1.0
IBM CrossWorlds Connector for MQ Workflow	1.2.1
IBM CrossWorlds Connector for JDBC	1.8.1

Solution components

The following tables list the components used to develop this Solution. Note that there are many other existing IBM CrossWorlds collaborations, business objects, and maps that can be utilized in your customized Solution.

Table 2. Collaborations

Name
UCCnetMessageReceive
UCCnetMessageSend
ItemValidation
ItemCollector
Process_Reviewed_Item
Role_Email
ItemStore
IdentifierStore
MessageStore

Table 3. Business objects

Name
Retail_Item
UCCnetGBO_envelope
UCCnet_envelope
SampleObject
UCCnetGBO_storable
UCCnetGBO_identifier

Table 3. Business objects (continued)

Name
UCCnetGBO_RI_S
DataStoreRetail_Item
DataStoreSampleObject
DataStoreUCCnetGBO_identifier
DataStoreUCCnetGBO_storable
SerialItem
SerialMessage
SerialObject
SerialIdentifier
MO_DataHandler_UCCnet_envelope
MO_DataHandler_UCCnetXMLConfig
MO_DataHandler_XMLDataStoreConfig
MO_JTextTPIConnector_Default
Retail_MO_MQSeriesConnectorConfig
MQWF_Retail_Item
Retail_MQWF_WfMessage
Retail_Item_ASBO

Table 4. Maps

Name
Sub_Retailer_additionalProductID_to_UCCnet_envelope_additionalProductID
Sub_Retailer_globalTradeItemNumber_to_UCCnet_envelope_globalTradeItemNumber
Sub_UCCnet_envelope_additionalPartyID_to_Retailer_additionalPartyID
Sub_UCCnet_envelope_additionalProductID_to_Retailer_additionalProductID
Sub_UCCnet_envelope_amount_to_Retailer_amount
Sub_UCCnet_envelope_categoryCode_to_Retailer_categoryCode
Sub_UCCnet_envelope_childItemDetails_to_Retailer_childItemDetails
Sub_UCCnet_envelope_childItem_to_Retailer_childItem
Sub_UCCnet_envelope_entityID_to_UCCnet_envelope_entityID
Sub_UCCnet_envelope_itemHazmatInfo_to_UCCnet_Retailer_itemHazmatInfo
Sub_UCCnet_envelope_to_Retail_item
Sub_UCCnet_envelope_item_to_Retailer_item
UCCnet_envelope_to_UCCnetGBO_envelope
UCCnetGBO_envelope_to_Retail_item
UCCnetGBO_envelope_to_UCCnet_envelope
UCCnetGBO_envelope_to_UCCnetGBO_storable
UCCnetGBO_envelope_to_UCCnetGBO_identifier
UCCnetGBO_RI_S_to_UCCnetGBO_envelope
Retail_Item_to_MQWF_Retail_Item
Retail_MQWF_WfMessage_to_Retail_Item

Table 4. Maps (continued)

Name
Retail_Item_to_Retail_Item_ASBO
Sub_Retail_customer_data_to_Retail_customer_data
Sub_Retail_internals_to_Retail_internals
Sub_Retail_Missing_Attributes_to_Retail_Missing_Attributes
Sub_Retailer_additionalPartyID_to_Retailer_additionalPartyID
Sub_Retailer_additionalProductID_to_Retailer_additionalProductID
Sub_Retailer_alternatePartyID_to_Retailer_alternatePartyID
Sub_Retailer_alternateProductID_to_Retailer_alternateProductID
Sub_Retailer_amount_to_Retailer_amount
Sub_Retailer_childItemDetails_to_Retailer_childItemDetails
Sub_Retailer_childItem_to_Retailer_childItem
Sub_Retailer_documentInformation_to_Retailer_documentInformation
Sub_Retailer_globalTradeItemNumber_to_Retailer_globalTradeItemNumber
Sub_Retailer_itemHazmatInfo_to_Retailer_itemHazmatInfo
Sub_Retailer_itemLinks_to_Retailer_itemLinks
Sub_Retailer_item_to_Retailer_item
Sub_Retailer_itemDetailsRecursive_to_Retailer_itemDetailsRecursive
Sub_Retailer_itemInformation_to_Retailer_itemInformation

Table 5. Messages

Name
CwMapMessages

Table 6. Relationship

Name
CMDTOWPN

Table 7. Workflow process definitions

Name
Retail.fdl

Installing and configuring the solution

This section provides the steps you must complete to set up the basic system.

Installing and compiling components

To install and compile the various system components, complete the following steps. Be sure to follow the instructions appropriate for your platform where indicated.

1. **Windows**: In your download directory, locate the BIRetail.jar file and copy it to your \CrossWorlds\lib folder.
   UNIX: In your download directory, locate the BIRetail.jar file and copy it to your /CrossWorlds/lib folder.
2. **Windows**: Edit the \CrossWorlds\bin\start_server.bat file and modify the classpath to include the BIRetail.jar file.
   UNIX: Edit the /CrossWorlds/bin/CWSharedEnv.sh file and alter the CWCLASSES path to include the BIRetail.jar file as in the following example:

   ```
   CWCLASSES=${CWCLASSES}:${CROSSWORLDS}/lib/BIRetail.jar
   ```
3. Stop and start the IBM InterChange Server (ICS).
4. In the IBM CrossWorlds System Manager (CSM), click **Open from file** and add all the collaboration templates, maps, business objects, and the relationship.
5. Compile all of the templates and maps that were just imported.

Configuring the MetaObjects

To configure the MetaObjects, complete the following steps:

1. Edit the MO_DataHandler_DefaultXMLConfig business object by setting the following attributes:
   - BOPrefix = <Prefix of the filenames to be written> (for example, *Retail_Item*). The actual file names will be appended with sequential numbers.
   - UseNewline = true
2. Edit the MO_JTextConnector_Default business object by setting the following attributes:
   - EventDataHandler = MO_DataHandler_DefaultXMLConfig
   - OutputDataHandler = MO_DataHandler_DefaultXMLConfig
   - OutputDir = <Name of the directory where the files will be written> (for example, C:\CrossWorlds\connector\JText\output). Create this directory if it does not already exist.
   - Eventdir = <Name of the directory where the files will be written> (for example, C:\CrossWorlds\connector\JText\event). Create this directory if it does not already exist.
   - Archivedir = <Name of the directory where the files will be written> (for example, C:\CrossWorlds\connector\JText\archive). Create this directory if it does not already exist.
   - OutputExt = <Output file extension> (The default is *.xml*.)
   - EndBODelimeter = NONE
3. Configure the MO_DataHandler_UCCnetXMLConfig business object by setting the following attributes:

- DefaultEscapeBehavior = true
- IgnoreUndefinedElements = true
- BOPrefix = UCCnet
- DTDPath = *<install_path>*\UCCnet\DTDs\envelope.dtd (**Note**: The value of this attribute assumes use of the UCCnet 2.1 DTD. The attribute value shown is an example only. The actual value must be the fully qualified path to the envelope.dtd file on the user's system.)

4. Configure the MO_JTextTPIConnector_Default business object by editing the following properties:
   - OutputDir = <Name of the directory where the files will be written> (for example, C:\CrossWorlds\connector\JTextTPI\output). Create this directory if it does not already exist.
   - ArchiveDir = <Name of the directory where the files will be written> (for example, C:\CrossWorlds\connector\JTextTPI\output). Create this directory if it does not already exist.
   - EventDir = <Name of the directory where the files will be written> (for example, C:\CrossWorlds\connector\JTextTPI\event). Create this directory if it does not already exist.

5. Configure the MO_Server_DataHandler business object by adding the following to the attributes:
   ```
   Name = text_xml_datastore
   Type = MO_DataHandler_XMLDataStoreConfig
   Card = 1
   ```

6. Configure the Retail_MO_MQSeriesConnectorConfig business object by setting the Default AppSpecific attribute to the following, where *local_CrossWorlds_queue_manager_name* refers to the queue manager used by IBM CrossWorlds:
   ```
   OutputQueue=queue://local_CrossWorlds_queue_manager_name   \
   /MQCONN.OUT?targetClient=1
   ```

Creating the JTextTPIConnector

To create JTextTPIConnector, complete the following steps:

1. Create the JTextTPIConnector Agent, as follows:
   - **Windows**:
     a. In the Windows taskbar, right-click **Start** and select **Open All Users**.
     b. Navigate to the directory where IBM CrossWorlds is installed (for example, *<install_path>*\Programs\CrossWorlds\Connectors Program).
     c. Copy the JTextConnector file and rename it to JTextTPIConnector.
     d. Right-click the JTextTPIConnector file 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 (for example, *<install_path>*\CrossWorlds\connectors\JText\start_JText.bat JTextTPI *ICS_server_name* -c*<install_path>*\CrossWorlds\connectors\JText\JTextAgentConfig.cfg).
   - **UNIX**:
     a. Access the JTextTPIConnector Agent program located in the following directory: *<install_path>*/CrossWorlds/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 IBM CrossWorlds System Manager (CSM), as follows:

   a. Open CSM.

   b. Copy the JTextConnector and rename it JTextTPIConnector.

3. Create the JTextTPIConnector queues in MQSeries. You must create the following queues as local queues and accept the defaults, where *local_CrossWorlds_queue_manager_name* refers to the queue manager used by IBM CrossWorlds and *ICS_server_name* refers to the name of the ICS server. Enter the following at a command prompt:

```
runmqsc local_CrossWorlds_queue_manager_name
DEFINE QLOCAL (AP/JTEXTTPICONNECTOR/ICS_server_name) USAGE (NORMAL)
DEFINE QLOCAL (APA/JTEXTTPICONNECTOR/ICS_server_name) USAGE (NORMAL)
DEFINE QLOCAL (APE/JTEXTTPICONNECTOR/ICS_server_name) USAGE (NORMAL)
DEFINE QLOCAL (IC/ICS_server_name/JTEXTTPICONNECTOR) USAGE (NORMAL)
DEFINE QLOCAL (ICA/ICS_server_name/JTEXTTPICONNECTOR) USAGE (NORMAL)
END
```

Creating the PortConnector queues

Create the PortConnector queues as local queues and accept the defaults, where *local_CrossWorlds_queue_manager_name* refers to the queue manager used by IBM CrossWorlds and *ICS_server_name* refers to the name of the ICS server. Enter the following at a command prompt:

```
runmqsc local_CrossWorlds_queue_manager_name
DEFINE QLOCAL (AP/PORTCONNECTOR/ICS_server_name) USAGE (NORMAL)
DEFINE QLOCAL (APA/PORTCONNECTOR/ICS_server_name) USAGE (NORMAL)
DEFINE QLOCAL (APE/PORTCONNECTOR/ICS_server_name) USAGE (NORMAL)
DEFINE QLOCAL (IC/ICS_server_name/PORTCONNECTOR) USAGE (NORMAL)
DEFINE QLOCAL (ICA/ICS_server_name/PORTCONNECTOR) USAGE (NORMAL)
END
```

Configuring the relationships

To import the CMDTOWPN.txt file into the IBM CrossWorlds System Manager (CSM), complete the following steps:

1. In the CMDTOWPN.txt file, modify the following attributes:

   DatabaseURL = URL for the IBM CrossWorlds database
   LoginName = Database user's name
   Loginpassword = Leave empty

2. In the CSM, click **File > Open From File**, and import the CMDTOWN.txt file.

3. Open the CMDTOWPN definitions and select **Advanced settings**. Set the database password and save the schema.

4. Open the CMDTOWPN definitions. Right-click **CMDTOWPN** and select **Relationship Manager**. Add the relationships listed in the table below:

Table 8. Relationships

WFPGName	Command
Retail_ItemDelete	DELETE
Retail_ItemCreate	CREATE LOAD
Retail_ItemUpdate	UPDATE

Configuring the connectors

Configure the following IBM CrossWorlds connectors to include the appropriate business objects, maps, and configuration properties. Use the values as shown in the tables.

JTextConnector

Table 9. 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

Table 10. Associated maps

Business object name	Map name
Retail_Item	Retail_Item_to_Retail_Item_ASBO

JTextTPIConnector

Table 11. Supported business objects

Business object name	Agent support required?
UCCnetGBO_envelope	No
UCCnet_envelope	Yes
Retail_Item	Yes
MO_DataHandler_UCCnet_envelope	Yes
MO_JTextTPIConnector_Default	Yes

Table 12. Associated maps

Business object name	Map name
UCCnet_envelope	UCCnet_envelope_to_UCCnetGBO_envelope
UCCnetGBO_envelope	UCCnetGBO_envelope_to_UCCnet_envelope

Note: UCCnetGBO_envelope might require an explicit binding to the associated map UCCnetGBO_envelope_to_UCCnet_envelope.

JDBCConnector

Table 13. Supported business objects

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

Table 14. Standard properties

Property name	Value
PollFrequency	No

Table 15. Application configuration properties

Property name	Property value
Application User Name	Database user ID
Application Password	Database user password
ArchiveProcessed	false
EventTableName	null
Database URL	jdbc:db2:*<database_name>*; **Note**: The value provided assumes the database used is DB2.
RDBMS vendor	IBMDB2
JDBCDriverClass	COM.ibm.db2.jdbc.app.DB2Driver

EMailConnector

Table 16. Application configuration properties

Property name	Property value
SMTP_MailHost	SMTP Mail Server
DataHandlerConfigMO	This field should be blank

MQSeriesConnector

Table 17. Supported business objects

Business object name	Agent support required?
Retail_Item	No
Retail_MO_MQSeriesConnectorConfig	Yes
Retail_MQWF_WfMessage	Yes
MO_DataHandler_Default	Yes

Table 18. Application configuration properties

Property name	Property value
ReplyToQueue	queue://*<local_queue_manager>*/MQCONN.REPLY
Channel	CHANNEL1
UnsubscribedQueue	queue://*<local_queue_manager>*/MQCONN.UNSUBSCRIBED
InProgressQueue	queue://*<local_queue_manager>*/MQCONN.INPROGRESS
ConfigurationMetaObject	Retail_MO_MQSeriesConnectorConfig
ArchiveQueue	queue://*<local_queue_manager>*/MQCONN.ARCHIVE
ErrorQueue	queue://*<local_queue_manager>*/MQCONN.ERROR
InputQueue	queue://*<local_queue_manager>*/MQCONN.IN;CWLDINPUTQ

Table 18. Application configuration properties (continued)

Property name	Property value
Hostname	*system_hostname*
Port	MQSeries listener port

Table 19. Associated maps

Business object name	Map name
Retail_item	Retail_MQWF_WfMessage_to_Retail_item

MQWorkflowConnector

Table 20. Supported business objects

Business object name	Agent support required?
Retail_Item	Yes
MQWF_Retail_Item	Yes

Table 21. Application configuration properties

Property name	Property value
MQSeriesHostname	*system_hostname*
MQSeriesPort	The listener port that is defined for the MQWorkflow queue manager
ApplicationUserID	User ID for the MQSeries Workflow user
Application Password	Password for the MQSeries Workflow user

Table 22. Associated maps

Business object name	Map name
MQWF_Retail_Item	Retail_item_to_MQWF_Retail_item

PortConnector

Table 23. Supported business objects

Business object name	Agent support required?
Retail_Item	Yes

Creating and configuring the collaboration objects

Use the tables in this section to set the attributes for your various collaboration objects.

Creating the collaboration objects and making port connections

Create the collaboration objects listed in the following table using the templates indicated, and bind the ports to the appropriate collaborations and connectors. **Note:** Some values in the Collaboration template, Port, Type, and Bind to columns might include spaces to allow them to fit in the table cells. The actual values do

not include spaces.

Table 24. Collaboration objects and ports

Collaboration object	Collaboration template	Port	Type	Bind to
UMR	UCCnet MessageReceive	FromTPI	connector	• TPI (if TPI is used to communicate with UCCnet) • JTextTPI Connector (if the UCCnet API's are used to communicate with UCCnet)
		ToMessage_Store	collaboration	MS1:From
		ToIdentifier_Store	collaboration	IDS1:From
		ToRetail _Processing	collaboration	IV1:From
		ToRetail _Response	collaboration	UMS1:FromRetail
IV1	ItemValidation	From	collaboration	UMR:ToRetail _Processing
		To	connector	MQWorkflow Connector
		Notify	collaboration	RE1:From
		ToMissingData		*Custom*
		LocalItemStore	collaboration	IS1:From
		DestinationApp Retrieve	connector	PortConnector
IV2	ItemValidation	From	collaboration	PRI:reprocess
		To	connector	MQWorkflow Connector
		Notify	collaboration	RE2:From
		ToMissingData		*Custom*
		LocalItemStore	collaboration	IS2:From
		DestinationApp Retrieve	connector	PortConnector
IC	ItemCollector	From	connector	MQSeries Connector
		To	collaboration	PRI:From
		local_store	collaboration	IS3:From
		email	collaboration	RE3:From

Table 24. Collaboration objects and ports (continued)

Collaboration object	Collaboration template	Port	Type	Bind to
PRI	Process_ Reviewed_Item	From	collaboration	IC:To
		Sync	connector	JTextConnector
		mail	collaboration	RE4:From
		respond_to	collaboration	UMS2:FromRetail
		reprocess	collaboration	IV2:From
		local_store	collaboration	IS4:From
UMS1	UCCnet MessageSend	ToTPI_Response	connector	• TPI (if TPI is used to communicate with UCCnet) • JTextTPI Connector (if the UCCnet API's are used to communicate with UCCnet)
		FromRetail	collaboration	UMR:ToRetail _Response
		ToMessage_Store	collaboration	MS2:From
		ToIdentifier_Store	collaboration	IDS2:From
UMS2	UCCnet MessageSend	ToTPI_Response	connector	• TPI (if TPI is used to communicate with UCCnet) • JTextTPI Connector (if the UCCnet API's are used to communicate with UCCnet)
		FromRetail	collaboration	PRI:respond_to
		ToMessage_Store	collaboration	MS3:From
		ToIdentifier_Store	collaboration	IDS3:From
MS1	MessageStore	From	collaboration	UMR:ToMessage _Store
		To	connector	JDBCConnector

Table 24. Collaboration objects and ports (continued)

Collaboration object	Collaboration template	Port	Type	Bind to
		DestinationApp Retrieve	connector	JDBCConnector
MS2	MessageStore	From	collaboration	UMS1:ToMessage _Store
		To	connector	JDBCConnector
		DestinationApp Retrieve	connector	JDBCConnector
MS3	MessageStore	From	collaboration	UMS2:ToMessage _Store
		To	connector	JDBCConnector
		DestinationApp Retrieve	connector	JDBCConnector
IS1	ItemStore	From	collaboration	IV1:LocalItem Store
		To	connector	JDBCConnector
		DestinationApp Retrieve	connector	JDBCConnector
IS2	ItemStore	From	collaboration	IV2:LocalItem Store
		To	connector	JDBCConnector
		DestinationApp Retrieve	connector	JDBCConnector
IS3	ItemStore	From	collaboration	IC:local_store
		To	connector	JDBCConnector
		DestinationApp Retrieve	connector	JDBCConnector
IS4	ItemStore	From	collaboration	PRI:local_store
		To	connector	JDBCConnector
		DestinationApp Retrieve	connector	JDBCConnector
IDS1	IdentifierStore	From	collaboration	UMR:To Identifier_Store
		To	connector	JDBCConnector
		DestinationApp Retrieve	connector	JDBCConnector

Table 24. Collaboration objects and ports (continued)

Collaboration object	Collaboration template	Port	Type	Bind to
IDS2	IdentifierStore	From	collaboration	UMS1:To Identifier_Store
		To	connector	JDBCConnector
		DestinationApp Retrieve	connector	JDBCConnector
IDS3	IdentifierStore	From	collaboration	UMS2:To Identifier_Store
		To	connector	JDBCConnector
		DestinationApp Retrieve	connector	JDBCConnector
RE1	Role_Email	From	collaboration	IV1:Notify
RE2	Role_Email	From	collaboration	IV2:Notify
RE3	Role_Email	From	collaboration	IC:email
RE4	Role_Email	From	collaboration	PRI:mail

Configuring collaboration properties

Configure the collaboration object properties using the values in the following table. Use the default property values unless otherwise listed in this table. **Note:** Some values in the Collaboration property and Value columns might include spaces to allow them to fit in the table cells. The actual values do not include spaces.

Table 25. Collaboration properties and values

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	Pend
	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.

Table 25. Collaboration properties and values (continued)

Collaboration object	Collaboration property	Value
	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
UMS1, UMS2	TOTPI_RESPONSE_MAP	UCCnetGBO_RI_S_to _UCCnetGBO_envelope
	SEND_PEND	true (Pended messages are sent)
	SEND_REJECT	true (Rejected messages are sent)
	FILTER_DUPLICATE	true (when using the IdentifierStore)
	DEBUG	False
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.itemInformation.global TradeItemNumber.gtin
	BUSINESS_POLICY_CMDS	Create
	REQUIRED_ATTRIBUTE _CMDS	Create
	MESSAGE_TYPE _PROCESSING_CMDS	Create
	UTILITY_CLASS	com.ibm.wbi.retail.utils. RetailUtility

Table 25. Collaboration properties and values (continued)

Collaboration object	Collaboration property	Value
	LOG_PENDING_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 or use the default message as supplied by the collaboration.
	REJECT_EMAIL_SUBJECT	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 or use the default message as supplied by the collaboration.
	ERROR_EMAIL_SUBJECT	Item ended in error in ItemValidation
	ERROR_EMAIL_ROLE	Your administrator's mail ID
	SEND_MAIL_ON_ERROR	True
	SEND_MAIL_ON _REJECTION	True
	TEST	False
IC	LOG_ERROR_ITEM	True
	ITEM_IDENTIFICATION_ ATTRIBUTE	item.itemInformation.global TradeItemNumber.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

Table 25. Collaboration properties and values (continued)

Collaboration object	Collaboration property	Value
	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 or use the default message as supplied by the collaboration.
	ERROR_SEND_EMAIL_MSG	Set the message text for notifying that an error was detected while sending the merged item to the To port or use the default message as supplied by the collaboration.
	ERROR_EMAIL_SUBJECT	Internal error occurred
	ERROR_EMAIL_ROLE	Your administrator's mail ID
	SEND_MAIL_ON_ERROR	True
PRI	ITEM_STATUS_ATTRIBUTE	internals.item_status
	ITEM_IDENTIFICATION_ ATTRIBUTE	item.itemInformation.global TradeItemNumber.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 or use the default message as supplied by the collaboration.
	REJECT_EMAIL_SUBJECT	Item rejected by business approval process
	REJECT_EMAIL_ROLE	Your administrator's mail ID
	ERROR_EMAIL_MSG	Set the message text for notifying that an error was detected during processing or use the default message as supplied by the collaboration.
	ERROR_EMAIL_SUBJECT	Item ended in error in Process_Reviewed_Item
	ERROR_EMAIL_ROLE	Your administrator's mail ID

Table 25. Collaboration properties and values (continued)

Collaboration object	Collaboration property	Value
	APPROVED_EMAIL_MSG	Set the message text for notifying that an item has a status of Approved or use the default message as supplied by the collaboration.
	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 _APPROVAL	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 is Rejected or use the default message as supplied by the collaboration.
MS1, MS2, MS3	OBJECT_KEY	correlationID
	MIME_TYPE	text/xml.datastore
	TEST	False
IS1, IS2, IS3, IS4	OBJECT_KEY	internals.correlationID
	MIME_TYPE	text/xml.datastore
	TEST	False
IDS1, IDS2, IDS3	OBJECT_KEY	gtin,version,topic
	MIME_TYPE	text/xml.datastore
	TEST	False
RE1, RE2, RE3, RE4	MSG_RECIPIENT _ATTRIBUTE	internals.message_recipient _role
	MSG_TEXT_ATTRIBUTE	internals.message_text

Table 25. Collaboration properties and values (continued)

Collaboration object	Collaboration property	Value
	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.)

Creating the 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 26. 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 MQSeries Workflow and MQSeries

To configure MQSeries Workflow and MQSeries, complete the following steps:

1. You might have to modify the Workflow graphs to match the queue manager specified in the network information to the IBM CrossWorlds Queue Manager. Use the MQSeries Workflow Buildtime user interface:

    a. Import the Workflow graphs .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 and change the Queue Manager to the appropriate value (that is, to your local IBM CrossWorlds queue manager name).

5) Click **OK**.

c. Update the process by doing the following:

1) Click the **Process** 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) Select **Buildtime** from the menu and click **Export**.

14) Select the **Export deep** checkbox in the **Export flags** section.

15) Click **OK** and save the .fdl file when prompted.

2. Import the MQSeries Workflow graph definitions using the original .fdl file or the one just exported. Enter the following command:

```
fmcibie -i<fdl_filename> -uadmin -ppassword -o -f -t
```

3. Define the MQSeries channels required on the MQSeries Workflow queue manager to communicate with the IBM CrossWorlds queue manager. Enter the following at a command prompt. (The commands shown in this step assume that the IBM CrossWorlds queue manager's name is *local_CrossWorlds_queue_manager_name*, and the MQSeries 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_CrosssWorlds_queue_manager)')
    XMITQ ('local_CrossWorlds_queue_manager_name')
DEFINE CHANNEL ('CW.TO.FMCQM') CHLTYPE (RCVR)
DEFINE QLOCAL ('local_CrossWorlds_queue_manager_name'') USAGE (XMITQ)
END
```

4. Define the MQSeries channels required on the IBM CrossWorlds queue manager to communicate with the MQSeries Workflow queue manager. Enter the following at a command prompt. (The commands shown in this step assume that the IBM CrossWorlds queue manager's name is

local_CrossWorlds_queue_manager_name, and the MQSeries Workflow queue manager's name is *FMCQM*. Enter the appropriate names for your queue managers.)

```
runmqsc local_CrossWorlds_queue_manager_name
DEFINE CHANNEL ('CW.TO.FMCQM') CHLTYPE (SDR) CONNAME
     ('local_hostname(Listener port for MQSeriesWorkflow_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 MQSeries Workflow queue manager. Enter the following at a command prompt (these commands assume that the MQSeries 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.UBSUBSCRIBED) USAGE (NORMAL)
DEFINE QLOCAL ('AP/MQWorkflowConnector/ICS_server_name) USAGE (NORMAL)
DEFINE QLOCAL (CWLDINPUTQ) USAGE (NORMAL)
DEFINE QLOCAL (CWLDRETQ) USAGE (NORMAL)
END
```

6. Define the MQSeries queues required by the IBM CrossWorlds queue manager. Enter the following at a command prompt (these commands assume that the IBM CrossWorlds queue manager's name is *local_CrossWorlds_queue_manager_name*):

```
runmqsc local_CrossWorlds_queue_manager_name
DEFINE QLOCAL (CWLDINPUTQ) USAGE (NORMAL)
DEFINE QLOCAL (CWLDRETQ) USAGE (NORMAL)
DEFINE QLOCAL (MQCONN.REPLY) USAGE (NORMAL)
DEFINE QLOCAL (MQCONN.UNSUBSCRIBED) USAGE (NORMAL)
DEFINE QLOCAL (MQCONN.IN_PROGRESS) USAGE (NORMAL)
DEFINE QLOCAL (MQCONN.ARCHIVED) USAGE (NORMAL)
DEFINE QLOCAL (MQCONN.ERROR) USAGE (NORMAL)
DEFINE QLOCAL (MQCONN.IN) USAGE (NORMAL)
DEFINE QLOCAL (MQCONN.OUT) USAGE (NORMAL)
END
```

7. Verify that the following MQSeries queue required by the MQSeries Workflow queue manager is defined.

FMC.FMCGRP.EXE.XML

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

9. If you want to use an ID other than ADMIN for logging into the MQSeries Workflow Client, add the following WorkFlow graph user IDs to the system:
   - CTGMGR_1
   - CTGMGR_2
   - CTGMGR_3

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