Tivoli® software

IBM Maximo Enterprise Adapter
Version 7.6

Configuration Guide
(SAP Applications on Advanced Adapter
Engine Extended)

IBM®

Contents

Configuring the adapter in Maximo Asset Management

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As part of installing Maximo Enterprise Adapter for SAP Applications, you must complete configuration tasks in Maximo Asset Management. Maximo configuration tasks require system administrator rights and privileges.

Before you begin

Before you can complete the following configuration steps, you must have Maximo Enterprise Adapter for SAP Applications installed on your system. For information about installing Maximo Enterprise Adapter for SAP Applications, see the *IBM Maximo Enterprise Adapter for SAP Applications 7.6 Installation Guide.*

Specifying the end point for the adapter

The end point defines where and how you send outbound transactions to SAP.

Configure SAP NetWeaver Process Integration as the end point for the adapter. The end point that you configure uses an HTTP Post handler. The handler that the end point uses describes how the adapter sends transactions to SAP.

To specify the end point for the adapter:

1 Open the End Points application:

   Go To > Integration > End Points

2 On the **List** tab, select the SAPPAE end point.

3 On the **End Point** tab, specify the following values for the properties of the SAPPAE end point:

Property	Value
HTTPEXIT	Use the default value.
PASSWORD	The password of the SAP NetWeaver PI user (in the **Encrypted Value** field)
USERNAME	The SAP NetWeaver PI user name
URL	The SAP NetWeaver PI host and, if necessary, port

4 Click **Save**.

Note: For Maximo Asset Management Multitenancy Users

In Maximo Asset Management Multitenancy, the multitenancy manager must create and configure inbound and outbound JMS queues to exchange data with the SAP external system.

Creating and configuring JMS queues

1   In the External Systems application, select the SAP2005 system.

2   Select the Add/Modify Queues action.

3   Click New Row.

4   Add and configure the following inbound and outbound JMS queues:

Inbound continuous queue

Field	Value
Queue JNDI Name	jms/maximo/int/queues/ cqin_<tenantcode>
Queue Connection Factory	jms/maximo/int/cf/intcf
Tenant	<tenantcode>
Sequential check box	Clear
Inbound check box	Select
Maximum Try Count	<count>

Inbound sequential queue

Field	Value
Queue JNDI Name	jms/maximo/int/queues/ sqin_<tenantcode>
Queue Connection Factory	jms/maximo/int/cf/intcf
Tenant	<tenantcode>
Sequential check box	Select
Inbound check box	Select
Maximum Try Count	<count>

Oubound sequential queue

Field	Value
Queue JNDI Name	jms/maximo/int/queues/ sqout_<tenantcode>
Queue Connection Factory	jms/maximo/int/cf/intcf
Tenant	<tenantcode>
Sequential check box	Select
Inbound check box	Clear
Maximum Try Count	<count>

5 On the **System** tab, enter the JMS queue names in the following fields:

- Outbound Sequential Queue
- Inbound Sequential Queue
- Inbound Continuous Queue

6 Click Save.

Enabling the SAP2005 external system

After you install the adapter, you must enable the SAP2005 external system.

To enable the SAP2005 external system:

1 On the **List** tab of the External Systems application, select the SAP2005 external system.

2 On the **System** tab, select the **Enabled** check box.

Activating cron tasks for sequential queues

After you install the adapter, you must activate the JMS sequential queues in Maximo Asset Management.

To activate the JMS sequential queues:

1 In the Cron Task Setup application, select **JMSQSEQCONSUMER** from the list of cron tasks.

2 On the **Cron Task** tab, select the **Active** check box for the SEQQIN and SEQQOUT cron task instances.

3 Click **Save**.

Note: For Maximo Asset Management Multitenancy Users

You must specify the JMS queue names for the inbound and outbound cron task instances.

To specify the JMS queue names:

1   In the Cron Task Setup application, select **JMSQSEQCONSUMER** from the list of cron tasks.

2   On the **Cron Task** tab, select the SEQQIN cron task instance and update the value field of the QUEUENAME cron task parameter to jms/maximo/int/queues/ sqin_<tenantcode>.

3   On the **Cron Task** tab, select the SEQQOUT cron task instance and update the value field of the QUEUENAME cron task parameter to jms/maximo/int/queues/ sqout_<tenantcode>.

4   Click **Save**.

Activating the SAPMASTERDATAUPDATE cron task

You must configure the SAPMASTERDATAUPDATE cron task. This cron task sets any Maximo records that have been archived or deleted in SAP. to Inactive.

The archived or deleted statuses of these records in SAP are included in the following bulk loads:

- Chart of Accounts
- Vendors
- Craft
- GL Components
- Inventory Vendors

Immediately after a bulk load is completed, run the SAPMASTERDATAUPDATE cron task. This cron task sets to "inactive" any Maximo records that correspond to bulk-loaded SAP records that have been archived or deleted in SAP.

If you are run more than one bulk load program, you can run the SAPMASTERDATAUPDATE cron task after you run the last bulk load. To activate the SAPMASTERDATAUPDATE cron task:

1   On the **List** tab of the Cron Task Setup application, select the SAPMASTERDATAUPDATE cron task.

2   On the **Cron Task** tab, select the **Active?** check box for the following required instances of the SAPMASTERDATAUPDATE cron task:

- CHARTOFACCOUNTS
- COMPANIES
- CRAFT
- GLCOMPONENTS
- INVVENDOR

3 Click **Save**.

For more configuration information, including bulk loads and setting Interface Controls, see the *IBM Maximo Enterprise Adapter for SAP Applications 7.6 System Administrator Guide* in the Maximo Enterprise Adapter for SAP Applications Information Center.

Configuring the SAP application server

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You must adapt your SAP system to integrate it with Maximo Asset Management. You must perform installation tasks in the application server that SAP uses.

Installing and configuring the adapter requires system administrator rights and privileges.

Import of ABAP transport programs

You must import the external files of the integration to your SAP client development system. These files contain all ABAP programs and dictionary objects that are needed for the integration.

To complete the installation of Maximo Enterprise Adapter for SAP Applications, use the K900254.D05 transport file. To upgrade your product from a previous version, use the K900256.D05 transport file.

The base installation transport files are in the \Maximo\SAP-side\transports\cofiles folder and the \Maximo\SAP-side\transports\data folder in the Maximo application server directory. If you downloaded a fix pack during your installation of the adapter, the fix pack transport files are in the same folders. Import the fix pack transport files after you import the files from the base installation. Sequential numbers are used for the transport files, so transport files that are part of a fix pack have higher numbers than the base installation transport files.

Customizing IDocs

Intermediate Document (IDoc) customization activates the IDocs you need for your business transactions.

An IDoc is a container for exchanging data between SAP and non-SAP systems. IDocs are created when message types and object methods are distributed. The message type is the format in which the data for a business process is transferred.

The procedures for configuring IDocs for the integration between SAP and Maximo include the following tasks:

- Maintaining the customer distribution model
- Generating partner profiles
- Maintaining partner profiles
- Activating change pointers
- Defining variants for replication of modified master data

The IDocs that you activate in your system depend on the data that you want to send from SAP. The following table shows the IDoc types and the corresponding business processes.

IDoc Types

IDoc	Business process
MATMAS	Material Master changes
HRMD_A	Labor Master changes
INVCON	Goods Receipts Goods Issues Material Stock changes
EKSEKS	Purchase Orders Logistical Invoices Contracts
CREMAS	Vendor Master changes
INFREC	Purchasing Info Record changes

Accessing the Display IMG window

You must complete configuration tasks for the application server that SAP uses. You use SAP Customizing Implementation Guide (IMG) to adjust the SAP system to meet the installation requirements. You start the tasks from the Display IMG window.

1 To open the Display IMG window:

- In the SAP Easy Access menu, select:

    Tools > **Customizing** > **IMG** > **Execute Project**

2 In the Customizing: Execute Project window, click **SAP Reference IMG**.

Maintaining the IDoc distribution model

The IDoc distribution model describes the Application Link Enabling (ALE) message flows between logical systems. You specify the messages that are sent to a logical system.

To create and configure (maintain) the distribution model, complete several tasks:

- Creating model views
- Defining message types in model views
- Setting up filters for message types

Creating a model view

To create a model view:

1 Expand the IMG Structure to the following path:

SAP Netweaver > **Application Server** > **IDoc Interface / Application Link Enabling (ALE)** > **Modeling and Implementing Business Processes** > **Maintain Distribution Model and Distribute Views**

2 Click the clock icon next to **Maintain Distribution Model and Distribute Views**.

3 In the Display Distribution Model window, click the pencil icon to switch to edit mode.

4 In the Change Distribution Model window, click **Create model view**.

5 In the Create Model View window, specify values for the model view short text and the technical name.

6 Click **Continue**. The new model is added to the list of model views on the Change Distribution Model window.

Defining message types in the model view

You must define the message types that are used for transactions going from SAP to Maximo.

The **Sender** value that you specify must match the Business System value you use when you configure SAP NetWeaver Process Integration.

To add message types to the model view:

1 On the Change Distribution Model window, select the model view that you created, and click **Add message type**.

2 In the Add Message Type window, place your cursor in the **Sender** field and select a sender from the selection list. The sender is your application server for ERP.

3 Place your cursor in the **Receiver** field and select a receiver from the selection list. The receiver is your integration server for Process Integration.

4 Place your cursor in the **Message type** field and select a message type, such as HRMD_A, from the selection list. This message type corresponds to labor data in Maximo.

5 Click **Choose**. The message type is added to the model view.

6 If you use the following message types for the MXES Integration model view in your integration, repeat steps 1 through 5 to add each message type:

- HRMD_A (HR plan and master data)

- MATMAS (Material Master)

- INVCON (Inventory controlling IDoc)

- EKSEKS (PO/Invoice)

- CREMAS (Vendor)

- INFREC (Purchasing Info Records

Use the same sender and receiver for all message types that you create for the MXES Integration model view, as shown in the following table:

Message type	Description	Sender	Receiver
HRMD_A	HR plan and master data	Application server for SAP ERP	Integration server for SAP NetWeaver PI
MATMAS	Material Master data	Application server for SAP ERP	Integration server for SAP NetWeaver PI
INVCON	Inventory controlling IDOC	Application server for SAP ERP	Integration server for SAP NetWeaver PI
EKSEKS	Purchasing document for Purchasing and Invoice info system	Application server for SAP ERP	Integration server for SAP NetWeaver PI
CREMAS	Vendor Master data	Application server for SAP ERP	Integration server for SAP NetWeaver PI
INFREC	Purchasing Info Records	Application server for SAP ERP	Integration server for SAP NetWeaver PI

The message types are added to model view in the Change Distribution Model window.

Setting up filters for message types

You can use filtering to improve performance speed. For example, by setting filters, you can reduce the number of IDocs that are created.

Depending on the definition in the Distribution Model, SAP creates IDocs for several business transactions. For example, for creating or changing a material, or for posting the movement of goods. If filters are defined, SAP first checks whether the transaction matches these filters. If yes, SAP creates the IDoc, if not, SAP does not create the IDoc or the IDoc segment.

You can set filters on any of the message types that you create:

- EKSEKS
- HRMD_A
- INVCON
- MATMAS
- CREMAS
- INFREC

You can set filtering on a message type by using the MATMAS message type example as shown in the following steps. You can use the same procedures to set filtering on the other message types.

To set filtering on a message type:

1   In the Change Distribution Model window, expand the tree structure under the MATMAS message type.

2   Double-click **No filter set**.

3   In the Change Filter window, click **Create filter group**.

4   Expand **Data filtering** to show the list of fields that you can use to filter messages for this message type.

5   Double-click a filter group, and then specify the values in the Edit List of Values window.

6   Enter filter values and save your changes. You can filter by criteria such as material group or material type.

Generating partner profiles

You defined the parameters for exchanging data with a partner system by using an IDoc interface. The definitions of the distribution model are used to set up the partner profile. Those settings become the default values of the partner profile.

The next task is to generate the partner profile to activate the distribution model view you created.

To generate the partner profile:

1   In the Display IMG tree structure, expand the **Structure** tree structure to **Generate Partner Profiles**:

    SAP Netweaver > **Application Server** > **IDoc Interface / Application Link Enabling (ALE)** > **Modeling and Implementing Business Processes** > **Partner Profiles** > **Generate Partner Profiles**

2   Click the clock icon next to **Generate Partner Profiles**.

3   In the Generating Partner Profile window, the **User** field shows the default entry for the recipient of email messages. Edit this value as appropriate for your integration.

4   Select the transfer method that is best for your outbound integration.

    You can select the default triggering method, because triggering does not play a role in our integration.

5   Specify the Model View, and click the clock icon. The partner, ports, and outbound parameter are generated automatically. Next, a protocol for the partner, ports, and outbound parameters is shown in the Generating partner profile window.

Ignore any errors in the **Port** message section of the Generating partner profile window. You can address these errors when you configure the partner profile parameters in the next task.

Configuring partner profiles manually

After you create the partner profile, you must configure the connection parameters manually for the communication between SAP and Process Integration. You configure the parameters for all the message types that you created.

To configure your partner profile:

1 In the Display IMG tree structure, expand the **Structure** tree structure to **Maintain Partner Profile Manually**:

Cross-Application Components > Predefined ALE Business Processes > Logistics > Logistics<-> External Systems > External Transportation Planning Systems > Maintain ALE Partner Profiles

2 Click the clock icon next to **Maintain Partner Profile Manually**.

3 Expand **Partner Type LS**.

4 Under **Partner Type LS**, select the Process Integration Server IDoc Adapter. This adapter is the receiving system. Add outbound parameters for each message type of the model view.

5 Click the **Create Outbound Parameter** icon in the Outbound parameters section.

6 Define outbound parameters for each message type of the model view. Configure the **Partner profiles: Outbound parameters** window with the parameters shown in the following tables.

Outbound Options tab parameter	Value
Receiver port	your receiver port number
Output Mode	**Transfer Idoc immed.** option.
IDoc Type: Basic type	Use Basic types from the following table.

For Message Type	select Basic type
EKSEKS	EKSEKS01
HRMD_A	HRMD_A01
INVCON	INVCON02
MATMAS	MATMAS02
CREMAS	CREMAS04
INFREC	INFREC01

7 Click **Save**.

8 Repeat steps 6 and 7 for all message types. Save each message type configuration before you create the next one.

9 If it is necessary for your integration to change the default to specify different receivers, you can do so on the **Post Processing Permitted Agent** tab.

After you add the message types, they are shown in the **Outbound parmtrs.** section of the Partner profiles window.

Activating change pointers

The distribution of material and labor master data is based on change pointers. When you activate change pointers, SAP writes a change pointer to the database for every change in the master record data. A report checks for existing change pointers and creates the necessary IDocs.

If your system did not already activate change pointers already, you can do so.

To activate change pointers:

1 In the Display IMG tree structure, expand the **Structure** tree structure to **Activate Change Pointers Generally**:

> **SAP Netweaver** > **Application Server** > **IDoc Interface / Application Link Enabling (ALE)** > **Modeling and Implementing Business Processes** > **Master Data Distribution** > **Replication of Modified Data** > **Activate Change Pointers - Generally**

2 Select **Activate Change Pointers - Generally**.

3 Select the **Change pointers activated - generally** check box.

4 Click **Save**.

5 In the previous Display IMG window, select **Activate Change Pointers for Message Types**.

6 In the Change View "Activate Change pointers for Message Type": Overview window, select the **active** check boxes for the HRMD_A and MATMAS message types.

> **a** If your integration includes vendor master data transactions, also select the **active** check box for CREMAS.

> **b** If your integration includes purchasing info records, also select the **active** check box for INFREC.

7 Click **Save**.

Defining variants for replication of modified master data

You must define variants to run the RBDMICOD program, the standard SAP report that creates IDocs from change pointers, to distribute the following message types:

- HRMD_A
- MATMAS
- CREMAS
- INFREC

To define variants:

1   In the Display IMG tree structure, expand the Structure tree structure to Define Variants:

   SAP Netweaver > **Application Server** > **IDoc Interface / Application Link Enabling (ALE)** > **Modeling and Implementing Business Processes** > **Master Data Distribution** > **Replication of Modified Data** > **Create IDocs from Change Pointers** > **Define Variants**

2   Select **Define Variants**.

3   In the **Program** field of the ABAP Editor: Initial Screen window, select **RBDMIDOC**.

4   In the **Subobjects** section, select **Variants**.

5   Click **Create**.

6   In the **Message type** field of the Maintain Variant: Report RBDMIDOC, Variant MATMASIDOC window, type MATMAS and click **Attributes**.

7   Add a variant description and click **Save**.

8   In the ABAP: Variants - Initial window, type the variant name HRMD_A.

9   Click **Create**.

10 In the **Message type** field, type HRMD_A and click **Attributes.**

11 Add a variant description and click **Save**.

12 Repeat steps 8-11 for the CREMAS and INFREC variants.

13 Click **Save**.

Run the RBDMIDOC report every 5 minutes.

Configuring custom tables

You must configure the new custom tables for the integration between Maximo and SAP. These tables are provided with the integration.

To access and configure the adapter custom tables, use the SAP transaction code SM30. You can create special authorization groups for the adapter tables and assign only certain users to these authorization groups. To display or query the adapter custom tables, you can use the SAP transaction code SM16. However, to configure the adapter custom tables, you must use the SAP transaction code SM30.

You must configure the following custom tables:

- ZBC_BATCHES
- ZBC_DESTINATION
- ZBC_FILTERS
- ZBC_INBPROGRAMS
- ZBC_RUNTIMES
- ZBC_SAPMXCONFIG

The following instructions are generic. To configure custom tables:

1   Open the Maintain Table Views: Initial window for working with tables. You can use transaction code **SM30**.

2   In the **Table/View** field, specify the table name, for example, ZBC_Filters and click **Enter**. The transport file creates the table with default values. It shows all processes inbound into SAP.

3   In the Data Browser window of the table you specified, click **Execute**.

4   To edit table fields in the Change View window, select the check box in the first column of a row, and click the pencil icon.

     If you double click an entry row, the display mode opens. To change values, use the edit mode.

5   Click save. The changes you save here update the database.

Configuring ZBC_BATCHES

This table holds the Reports, Functions, and Structures for the integration. The information in this table controls a remote function call integration.

Activating and deactivating programs

A flag sets the programs in this table to active or inactive. This table is delivered with default values.

You can set this flag by typing a Y (to activate) or N (to deactivate) in the **Active** field of the program.

Package size

The Package Size controls how many records are in one XML message. The default is 1. The SAP NetWeaver Process Integration server can have performance problems when processing a large amount of small messages. For example, if you download 10,000 vendors from SAP, the default package size of 1 generates 10,000 XML messages. If you increase the package size to 20, you generate only 500 XML messages and performance improves.

However, setting the package size greater than 1 can cause the following issues in Maximo:

- If one record in the XML message is not correct, the entire XML fails. For information about error handling, see the *IBM Maximo Enterprise Adapter for SAP Applications 7.6 System Administrator Guide*.

- The database can run out of open cursors. In this case you increase the amount of open cursors that your database permits.

You must balance the improved performance in SAP NetWeaver Process Integration server against the potential for errors in the adapter and in the database.

Configuring ZBC_DESTINATION

This table controls where SAP data is sent to Maximo.

To maintain this table:

1 In the initial window of this table, click **Create Entries**.

2 Specify the following parameters:

ZBC_DESTINATION field	Value
RFCDEST	your Maximo business system name in Process Integration
DESCRIPTION	Description of your Maximo business system

3 Click **Save**.

4 Optional: If you use more than one instance of Maximo, repeat steps 1-3 for each instance.

Maintaining ZBC_FILTERS

This table controls what data content you send to Maximo. You use this table to set the rules for every receiver that defines the data sent to the Maximo ER structure.

The filtering rule is an "OR" relationship, so you can set up operators and field values.

The receiver must have the same name as the definition of the Maximo Business System in the SAP NetWeaver Process Integration System Landscape Directory and ZBC_Destination.

You can configure the ZBC_FILTERS table for the following possible objects:

ZBC_FILTERS objects

ZBC_FILTERS object	Description
MATMASTER	Material Master
PURCHORDER	Purchase Order
INVOICE	Invoice
GOODSMOV	Goods Movement
CONTRACT	Contracts
CONTRACTAU	Contract Authorization
LABMASTER	Labor Master
CREMASTER	Vendor Master data
INFORECORD	Purchasing Info Record

The ZBC_FILTERS table has the following fields:

ZBC_FILTERS fields

ZBC_FILTERS field	Value
MANDT	SAP Client value
RECEIVER	Maximo destination name
OBJECT	MATMASTER (Material Master IDOC Object name)
RULENUMBER	Condition sequence number for the IDOC object
FIELDNAME	Any field name from the Material Master Message table
OPERATOR	Any SAP Relationship operator
FIELDVALUE	Value to be checked against the operator

For more information about configuring the ZBC_FILTERS table, see the *IBM Maximo Enterprise Adapter for SAP Applications 7.6 System Administrator Guide*.

RULENUMBER

The ABAP program handles the RULENUMBER as follows:

- If the same OBJECT uses the same RULENUMBER more than once, then ABAP handles them all as "AND" conditions [all are true].
- If the same OBJECT has more than one RULENUMBER, ABAP handles it as an "OR" condition.

Maintaining ZBC_INBPROGRAMS

This table controls SAP inbound program processing methods and error handling of inbound programs from Maximo to SAP.

For every process, specify the following modes:

- processing mode
- error handling mode

SAP has two inbound processing modes:

- BAPI (process by BAPI)
- BDC (process by Batch input)

Not all modes apply to each program.

The adapter has two inbound error handling modes:

- INT (Internal messaging system) - The Internal messaging system notifies the Integration server that there are no errors. You must handle errors within the SAP system (this method is the default).

   With this option, you also can specify error notification to the email addresses of up to four SAP users.

   To create email or SAP user notification:

   1 Select recipient.

   2 Specify reception type:

      a B= SAP user for that client

      b U= internet address

   3 Optional: To enable error messages to display on window, select **Express**.

   4 Optional: If you select INT error handling:

      a For BDC processing, you receive batch input maps to reprocess the error.

      b For BAPI processing, you need a program, ZBC_BAPIADMIN, provided with the integration, to reprocess errors.

- EXT (External messaging system) - The External messaging system sends back a return code to the message queue.

The following table shows the processing modes each program uses in this integration.

Processing modes

Ident	Description	Processing mode
MICFI	CREATE FI INVOICE	BDC/BAPI
MICMM	CREATE MM INVOICE	BAPI
MISU	CREATE GOODS ISSUE	BDC/BAPI
MPOI	CREATE PURCHASE ORDER	BDC/BAPI
MPOU	UPDATE PURCHASE ORDER	BDC/BAPI
MPRI	CREATE PURCHASE REQUISITION	BDC/BAPI
MRCV	CREATE RECEIPT	BDC/BAPI
MRSVD	DELETE RESERVATION	BDC
MRSVI	CREATE RESERVATION	BDC/BAPI
MSRVU	UPDATE RESERVATION	BDC
MWI	CREATE WORKORDER	BDC/BAPI
MWU	UPATE WORKORDER	BDC
MLPYI	CREATE LABOR HOURS	BDC/BAPI
MICGL	CREATE GL POSTINGS	BDC/BAPI

Configuring ZBC_RUNTIMES

This table stores the last execution dates of the reports for SAP to Maximo.

You receive this table with default values. Configure it to meet the requirements of your integration.

ATTENTION   Change only the CPUDT and PARAM columns:

Change the last run date (CPUDT) to the actual date of installation, or to the date on which you transport the table to a new environment. A new environment can be a test system or production system.

The PARAM column is customer-specific.

The DESTINATION column must be the SAP NetWeaver Process Integration Business System name (also defined in ZBC_DESTINATION) for all rows. The destination is a logical name, not a physical location. SAP uses it to differentiate the integration rows in this table from all other entries.

Configuring ZBC_SAPMXCONFIG

This table stores the variables and values of Maximo data that are needed during transactions from SAP to Maximo.

This table filters for Maximo PR numbers, so that only PR numbers recognized by Maximo go out.

System name must match the name of the receiver system in the Process Integration System Landscape Directory and ZBC_Destination.

You must set up this table manually.

ZBC_SAPMXCONFIG table

Varname	Description	Required	Dependencies
APINVUPD	Send Inventory (price) update after Invoice (X).	No	None
BAPIME51N	Enter a value of X if you want to use the new SAP PR BAPI (BAPI_PR_CREATE) that supports additional data for the SAP Enjoy Purchase Requisition feature. Leave this field blank if you want to use the standard PR BAPI (BAPI_REQUISITION_CREATE).	No	To use the new SAP PR BAPI, apply the SAP Hotpackage SAPKH6005 in your mySAP ERP 2005 system.
GR_SETCOST	MAXIMO to accept incoming costs on receipts from SAP	No	None
MXBASELANG	Maximo base language	Yes	Receiving system-dependent
MXLANGUAGE	Additional languages per receiver	No	Per receiver
MXPLANT	SAP plant codes for each plant integrated with Maximo. If an item is used in Maximo, the ZBC_FILTERS looks at this field to see if the plant is one that is used in Maximo.	No	Receiving system-dependent
POPREFIX	Prefix that uniquely identifies an outbound PO as a Maximo PO number	No	None
PRPREFIX	Prefix that uniquely identifies an outbound PR as a Maximo PR number	No	None
MX5UPGDATE	Customers who upgraded from Release 5.x SAP adapter R/3 4.7 must manually configure this column to store date of upgrade.	No	None
SEQ_QUEUE	Specify one queue name per receiver. If a queue name is specified here, all records for the receiving system are written into the specified queue. If no queue name is specified, Process Integration uses multiple random queues. When messages are split, Process Integration writes the resulting records to the same queue.	No	Receiving system-dependent
WOPARSETTL	Used for Work Order settling rules	No	Receiving system-dependant

Specify the base language of Maximo. Languages are per receiver system.

Creating integration users in SAP

You must create an integration user in SAP, for example, the MQM user, to permit users to log on externally from the SAP Integration Server to the SAP system.

You need the user name and password you define here when you create a channel on the SAP Business System during the configuration of Process Integration.

To create the integration user:

1 In the SAP Easy Access menu, select **Tools** > **Administration** > **User Maintenance**.

2 Use the Create User Master Record window to create a user with the parameters in the following table:

MQM user

Parameter	Value
User Type	CPIC (Communication)
Initial Password	Specify a password to be used during Process Integration configuration as noted previously in this section.
Authorization Profiles	SAP_ALL and SAP_NEW

3 Optional: Depending on the guidelines of your company, you can restrict the rights of this user to the processes they must run. If you cannot use the SAP_ALL or SAP_NEW authorization profiles, you can grant rights to any of the following transaction codes:

SAP transaction codes

SAP transaction code	Description
KO01	Create internal order
KO02	Change internal order
MB21	Create reservation
MB22	Change reservation
ME51	Create requisition
ME21	Create purchase order
ME22	Change purchase order
MB01	Create goods movement
MB1A	Create goods issue
F-43	Create FI invoice
MIRO	Create MM invoice
FB01	Create general ledger posting
KB21	Enter CO labor hours

4 Test any restrictions you place on the rights of this user.

   • Grant rights for the S_RFC authorization object on the SYST, ZBC_M2S, and ZBC_S2M function groups

   • Grant read table rights

5 On the Maintain User Defaults window, specify:

- Date form: YYYY/MM/DD

- Decimal Notation: Period

Creating number range objects for BAPI error handling

You can configure the correct assignment of error message numbers on transactions you send from Maximo to SAP with BAPI programs. To configure the assignment of error messages, you must add a Number Range Object.

To add a Number Range Object:

1 In the SAP Easy Access menu, choose **Tools** > **ABAP Workbench** > **Development** > **Other Tools** >**Number Ranges** and select **Enter**.

2 Specify ZMXESERROR in the **Object** field, and click **Create**.

3 Specify the following values and save your entries:

No. range object: create values

Field	Value
Short Text	Transaction Number
Long Text	Transaction Number for BAPI Errors
Number length domain	NUM10
Warning %	2.0

4 Click **Yes**.

5 Specify the name of the package and save.

6 Click **Continue**.

7 Click **Number Ranges**.

8 In the Transaction Errors for BAPI Errors window, click **Intervals**. The Maintain Number Range Intervals window appears.

9 Click **Interval** and specify the following values:

Insert interval values

Field	Value
Interval No	01
From Number	0000000001
To Number	9999999999
Current Number	value = maximum value of ZBC_BAPI_ADMIN.MINDEX + 1

To find the value of the **Current Number** field:

    a   Type SE16 in the field of the SAP Easy Access menu.

    b   Select the ZBC_BAPI_ADMIN table.

    c   Sort the output by MINDEX to determine the last number assigned.

    d   Increase this value by 1 and use the new value as the current number. If there are no numbers in the ZBC_BAPI_ADMIN table yet, set the current number to 1.

10 Click **Insert** and save.

For more information about SAP transaction codes used for this integration, see the *IBM Maximo Enterprise Adapter for SAP Applications 7.6 System Administrator Guide.*

Configuring SAP NetWeaver Process Integration

3

You must perform configuration tasks in the SAP NetWeaver Process Integration System Landscape Directory. The System Landscape Directory contains all the information about the information technology landscape of a system.

You must have system administrator rights and authorities to perform the configuration.

Configuring the System Landscape Directory

The SAP NetWeaver Process Integration is a set of applications that you use to configure the components of the integration in SAP. This configuration allows the SAP and Maximo systems to exchange information.

The first Process Integration tools application you must configure is the System Landscape Directory. The System Landscape Directory contains all of the information about the IT landscape of a system. The system landscape is logically divided into the following parts:

- Technical landscape: computers, hardware, systems, and servers
- Business landscape: logical definitions and configurations

Logging on to the System Landscape Directory

Before you configure the System Landscape Directory, you must log on to the System Landscape Directory.

To log on to the SAP System Landscape Directory:

1 Use the SAPGUI to log on to the SAP NetWeaver Process Integration Server.

2 Open the Process Integration Tools home page in a new internet browser window by typing transaction code SXMB_IFR in the command field, and then pressing Enter.

3 Optional: Instead of taking steps 1 and 2, you can access the Process Integration Tools home page directly in a browser window by using the following URL: http://*server_name*:*http_port*/rep/start/index.jsp

4 Select the **System Landscape Directory** link.

5 Type the System Landscape Directory user ID and password, and then click **Log on**.

Adding Maximo to the System Landscape Directory software catalog

The first task in the System Landscape Directory is to register your Maximo integration software with SAP. To do so, you add a new product to the software catalog.

The software catalog contains the information for software products installed on the SAP system. You must add the adapter to the catalog.

To add the adapter to the Process Integration Software Catalog:

1 In the System Landscape Directory home window, select the **Products** link.

2 Click **New Product Version.**

3 Specify the **Name**, **Vendor**, and **Version** fields as shown in the following table:

Field	Value
Name	IBM Maximo Enterprise Adapter for SAP Applications
Vendor	ibm.com
Version	7.6

4 Click **Create**.

5 In the **Name** field, specify IBM Maximo Enterprise Adapter.

6 Click **Create**.

7 Specify the fields as shown in the following table. When you import the Maximo software component version, it must match the values that you type here.

Field	Value
Name (must be in uppercase)	IMEA-INTEGRATE
Version	IMEA75-mySAPERP2005

8 Click **Create**.

9 Return to the System Landscape Directory home window by clicking the **Home** link.

Defining technical systems

You must define a technical system for the Maximo application server. The technical system is the computer that Maximo runs on.

To define a technical system for Maximo:

1 In the System Landscape Directory home window, click the **Technical Systems** link.

2 Open the Technical System wizard by clicking **New Technical System**.

3 Select **Third-Party** as the technical system type, and click **Next**.

4 Specify details about the Maximo system with which you are integrating SAP, as shown in the following table.

Technical System Wizard, System Details field	Value
System Name	The name that you have assigned to your Maximo system
Host Name	The name of the computer where Maximo Asset Management is installed

5 Click **Next**.

6 In the list of available products , select the product that you created earlier, for example, IBM Maximo Enterprise Adapter for SAP.

7 Select the check box for the IMEA-INTEGRATE, IMEA75-mySAPERP2005 component of ibm.com.

8 Click **Finish**. In the Technical System Browser, the message area at the top of the window shows that the third-party system was created.

9 Return to System Landscape Directory home window by clicking the **Home** link.

Creating business systems

The business system is the Maximo server that SAP NetWeaver Process Integration integrates with. The business system is the logical sender and receiver that exchanges messages with SAP NetWeaver Process Integration.

To create a business system for the Maximo server:

1 In the System Landscape Directory home window, select the **Business Systems** link.

2 Open the Business System wizard by clicking **New Business System**.

3 Select **Third-Party** as the type of technical system that this business system is associated with and click **Next**.

4 Select the technical system that you created. Ensure that the **Logical System Name** field is blank.

5 Click **Next.**

6 Specify the logical name of the business application, the Maximo system that you want to integrate SAP with. The default value is Maximo. Use the name that you defined for the Maximo receiver system in the ZBC_SAPMXCONFIG table and click **Next**.

7 Ensure that your product (for example, IBM Maximo Enterprise Adapter for SAP Applications) is visible, that the check box is selected, and click **Next**.

8 Select the Process Integration server name for the SAP integration that you defined as the integration server when you installed the SAP NetWeaver Process Integration system. Because it is a third-party product, the server is predefined as an application system in the **Business System Role** field.

9 Click **Finish**.

10 Return to the Process Integration Tools home window by clicking the **Home** link.

Importing integration objects

You must copy a file of integration objects, and then import the integration objects in the Enterprise Service Repository.

Copying the integration objects file from the xi-repository folder

You can import the integration objects from your computer or from the server. To import the integration objects from the server, you must copy a file from the adapter xi-repository folder to your SAP NetWeaver Process Integration system.

To copy the integration objects file:

1 Copy the following file from the \\MAXIMO\SAP-Side\xi-repository folder on the Maximo application server (*n* = a sequential number):

XI3_0_IMEA-INTEGRATE_IMEA75-mySAPERP2005_of_ibm.com _*n*.tpz

to the following folder on the process integration server (*SID* = the SAP system number):

\\usr\SAP*SID*\SYS\global\xi\repository_server\import

This file contains all the process integration objects that the adapter integration needs.

2 Optional: If you downloaded a fix pack when you installed the adapter, the fix pack might add one or more additional files to the \\MAXIMO\SAP-Side\xi-repository folder on the Maximo application server. A file in the fix pack has a name such as the following example:

XI3_0_IMEA-INTEGRATE_IMEA75-mySAPERP2005_of_ibm.com-objs_x.tpz

If the file is part of a fix pack, the file name contains the string `objs`. The file contains the objects that are fixed in the fix pack. Copy the files by using the same method and location described previously in step 1.

After you copy the file, you import the integration objects in the Enterprise Service Repository.

Importing objects into the Enterprise Service Repository

After you copy the integration objects file to the Process Integration Server, you must import the integration objects into the Enterprise Service Repository.

To import integration objects:

1   In the Process Integration Tools home window, click **Enterprise Service Repository**.

2   Log on to the Enterprise Services Builder and select **Tools** > **Import Design objects**.

3   Select the following installation file from the list:

   XI3_0_IMEA-INTEGRATE_IMEA75-mySAPERP2005_of_ibm.com_x.tpz

   and click **OK**.

4   Click **Import**. The import process uploads the interface and message mapping, design objects, interfaces, and structures.

5   Optional: If you downloaded a fix pack during your installation of the adapter, repeat the import process for all fix pack files in the \\MAXIMO\SAP-Side\xi-repository folder on the Maximo application server. The fix pack files have names like XI3_0_IMEA-INTEGRATE_IMEA75-mySAPERP2005_of_ibm.com-objs_x.tpz. The x immediately before the .tpz extension in the file name is replaced in the actual file name with a number. If you have multiple fix pack files, you must begin with the lowest sequential number.

6   After you import the design source objects, a confirmation window opens. Click **Close**. On the Objects tab of the repository, you can expand **IMEA-INTEGRATE** to view the imported objects.

Configuring integration objects

After you register the integration software in the System Landscape Directory and import integration objects, you must configure the integration objects that you need for exchanging data between SAP and Maximo.

Logging on to the Integration Directory

You configure integration objects in the Process Integration Directory application.

To log on to the Integration Directory:

1   In the Process Integration Tools home window, select the **Integration Directory** link in the Configuration: Enterprise Services Builder module.

2   Log on as the Enterprise Services Builder user.

Assigning services without party

You must assign the previously created Maximo business system as a service without party. A service without party is an application within the network of a company.

To assign the previously created Maximo business system as a service without party:

1   In the Configuration: Enterprise Services Builder window, select the **Objects** tab.

2   Expand the **Communication Component** icon.

3   Right-click **Business System** and select **Assign Business System**.

4   Click **Continue**. Do not type anything in th Assign Party window.

5   Click **Continue**.

6   Select the Maximo business system. Ensure that the **Create Communication Channels Automatically** check box is also selected and click **Finish**.

7   Select the language that you want to use for your configuration documentation and object descriptions.

    The default language setting in this window is the user logon language. In the integration, the original language is English. Selecting a language other than English here does not affect the integration.

    You can write documentation for any object that you create when you configure Process Integration. Process Integration uses the language that you select here for the documentation and descriptions that you write for the objects that you create during configuration.

    The adapter integration maintains its descriptions in English.

8   Click **Apply**.

9   Click **Close**. The new service name is visible under Business System in the tree view.

Creating communication channels for Maximo business systems

You must create and configure the sender and receiver channels for your Maximo business systems. The Maximo Enterprise Adapter for SAP on Advanced Adapter Engine Extended (AEX) uses only HTTP channels to communicate with the Maximo business system.

Creating the HTTP receiver channel for Maximo business systems

1   On the Objects tab of the **Configuration: Integration Builder** window, expand the Communication Component Without Party structure to display the list of business systems.

2   Expand the Maximo business system, and right-click **Communication Channel**.

3 Select **New**.

4 Specify a name for the receiver communication channel, and click **Create**.

5 On the **Parameters** tab, specify the following attributes for the receiver communication channel:

Field	Value
Adapter Type	HTTP_AAE
Direction	Receiver
Transport Protocol	HTTP 1.1
Message Protocol	POST
Adapter Engine	Central Adapter Engine

6 On the **General** tab, specify the following attributes for the receiver communication channel:

Field	Value
Addressing Mode	URL Address
Target Host (This value comes from the technical system that was defined in the System Landscape Directory.)	\<maximohost\>
Target Port	\<maximoport\>
Path	/meaweb/esqueue/ \<Name of the external system that is specified in Maximo Asset Management\>
User Authentication	Anonymous logon

7 On the **Advanced** tab, select the following query parameter check boxes:

- Sender Party
- Sender Service
- Receiver Interface
- Message ID
- Quality of Service
- Queue ID

Note: For Maximo Asset Management Multitenancy Users

Users of Maximo authentication must define a header field for the Maximo receiver communication channel.

To define a header field, specify the following attributes in the **Header fields** section of the **Advanced** tab:

Field	Value
Name	maxauth
Value	< User credentials encoded to base64 format >

To encode user credentials to base64 format, use an online base64 encoder, for example, https://www.base64encode.org. Enter the user credentials in the following format: <username>:<password>.

For example, to generate a base64 code for a username of MAXUSER and a password of MAXuser1, enter the credentials into the base64 encoder as follows: MAXUSER:MAXuser1. These credentials generate the following base64 code: TUFYVVNFUjpNQVh1c2VyMQ==.

Users of Maximo authentication must have access to the following security groups:

- TOOLMGR
- ITEMMGR
- EVERYONE
- ALLSITES
- PURCHASING
- PERSONALCONFIG
- CONTRACTMGR
- STDSVCMGR
- SDREP2

Use the Security Groups application to grant users access to these security groups.

The tenant administrator must specify the following attributes for users of Maximo authentication:

Field	Value
Status	Active
Type	Type 1
Default Insert Site	<Default Insert Site>
Language	<Language>

8 Save the HTTP receiver communication channel.

Creating the HTTP sender channel for Maximo business systems

1 On the Objects tab of the **Configuration: Integration Builder** window, expand the Communication Component Without Party structure to display the list of business systems.

2 Expand the Maximo business system, and right-click **Communication Channel**.

3 Select **New**.

4 Specify a name for the sender communication channel, and click **Create**.

5 On the **Parameters** tab, specify the following attributes for the sender communication channel:

Field	Value
Adapter Type	HTTP_AAE
Direction	Sender
Transport Protocol	HTTP 1.1
Message Protocol	POST
Adapter Engine	Central Adapter Engine

6 Save the HTTP sender communication channel.

Creating communication channels for SAP business systems

You must create and configure the sender and receiver channels for your SAP business systems. The Maximo Enterprise Adapter for SAP on AEX uses IDOC and SOAP channels to communicate with SAP business systems.

Creating the IDOC receiver channel for SAP business systems

1 On the Objects tab of the **Configuration: Integration Builder** window, expand the Communication Component Without Party structure to display the list of business systems.

2 Expand the SAP business system, and right-click **Communication Channel**.

3 Select **New**.

4 Specify a name for the IDOC receiver communication channel, and click **Create**.

5 On the **Parameters** tab, specify the following attributes for the receiver communication channel:

Field	Value
Adapter Type	IDOC_AAE
Direction	Receiver
Transport Protocol	tRFC
Message Protocol	Idoc XML
Adapter Engine	Central Adapter Engine

6 On the **RFC Parameters** tab, specify the following attribute for the receiver communication channel:

Field	Value
RFC Client Parameters	Default
Destination	< RFC destination that is used by the SAP ECC system >

7 Save the IDOC receiver communication channel.

Creating the IDOC sender channel for SAP business systems

1 On the Objects tab of the **Configuration: Integration Builder** window, expand the **Communication Component Without Party** structure to display the list of business systems.

2 Expand the SAP business system, and right-click on **Communication Channel**.

3 Select **New**.

4 Specify a name for the IDOC sender communication channel, and click **Create**.

5 On the **Parameters** tab, specify the following attributes for the sender communication channel:

Field	Value
Adapter Type	IDOC_AAE
Direction	Sender
Transport Protocol	tRFC
Message Protocol	Idoc XML
Adapter Engine	Central Adapter Engine

6 On the **RFC Parameters** tab, specify the following attribute for the sender communication channel:

Field	Value
Ack Destination	< RFC destination that is used by the SAP ECC system >

7 Save the IDOC sender communication channel.

Creating the SOAP receiver channel for SAP business systems

1 On the Objects tab of the **Configuration: Integration Builder** window, expand the Communication Component Without Party structure to display the list of business systems.

2 Expand the SAP business system, and right-click on **Communication Channel**.

3 Select **New**.

4 Specify a name for the SOAP receiver communication channel, and click **Create**.

5 On the **Parameters** tab, specify the following attributes for the receiver communication channel:

Field	Value
Adapter Type	SOAP
Direction	Receiver
Transport Protocol	HTTP
Message Protocol	XI 3.0
Adapter Engine	Central Adapter Engine

6 On the **General** tab, specify the following attributes for the receiver communication channel:

Field	Value
Addressing Type	URL Address
Target URL	http://<saphost>:<sapport>/ sap/xi/engine?type=entry
Authentication Mode	Use logon data for SAP system
User Name	<Integration user for Maximo Asset Management>

7 Save the SOAP receiver communication channel.

Creating the SOAP sender channel for SAP business systems

1 On the Objects tab of the **Configuration: Integration Builder** window, expand the **Communication Component Without Party** structure to display the list of business systems.

2 Expand the SAP business system, and right-click on **Communication Channel**.

3 Select **New**.

4 Specify a name for the SOAP sender communication channel, and click **Create**.

5 On the **Parameters** tab, specify the following attributes for the sender communication channel:

Field	Value
Adapter Type	SOAP
Direction	Sender
Transport Protocol	HTTP
Message Protocol	XI 3.0
Adapter Engine	Central Adapter Engine

6 Save the SOAP sender communication channel.

Configuring integration scenarios

Integration scenarios are templates that are included with the integration. You select the integration scenarios that are specific to your integration requirements. You can use these scenarios as a basis for configuring the information and details of your integration between Maximo and SAP.

When you configure an integration scenario, you specify all parameters of a message exchange in a single integration configuration object.

The following sequence describes the general flow of tasks to complete when configuring each scenario:

1 Apply a scenario from the Enterprise Service Repository.

2 Assign business system services to component actions based on template scenarios.

3 Configure the connections.

4 Generate the scenario.

You can create your own configurations by building transaction flows by using , for example, every object and message type available. To save configuration time, you can review the scenario templates provided with the integration to decide if you can use them for your customization requirements.

Applying integration scenarios

The first task when configuring integration scenarios is to select and transfer a scenario from the Enterprise Service Repository.

To select an integration scenario:

1 In the **Configuration: Integration Builder** window, select **Apply Model from ES Repository** from the **Tools** menu.

2   Select the **Process Integration Scenario** radio button and open the selection list of the **Name** field. The list shows all the integration scenarios in the Enterprise Service Repository.

Scenarios for the integration between Maximo and SAP begin with the **MXES_** prefix.

3   Select a scenario to configure from the list and click **Apply**.

4   Click **Continue**. The default scenario name is entered in the **Configuration Scenario** field. Use the default naming convention, which matches the scenario name in the repository.

5   Click **Finish** and close the wizard.

Configuring scenarios

You must configure an integration scenario in the Model Configurator.

Assigning services to scenario templates

The next configuration step is to assign services (that you defined in the System Landscape Directory) to each scenario template that has one or more actions.

Each scenario can have up to three templates. The templates are displayed in the Component View section of the Model Configurator. Two of them contain process boxes. These boxes are called actions.

To assign services to a scenario template:

1   In the Model Configurator window, select the first template.

2   On the **Business System Components for A2A** tab, open the Communication Component value list.

3   Select the relevant business system communication component and click **Apply**.

Assign SAP business system services to SAP scenario templates, and assign Maximo business system services to Maximo scenario templates.

4   Repeat the above steps until you have assigned a service to each of your templates.

5   Click the connecting arrow between two scenario templates, and specify the following communication channels:

Maximo Asset Management to SAP

Field	Value
Sender business component (Maximo Asset Management):	HTTP Sender Channel
Receiver business component (SAP)	SOAP receiver channel

SAP to Maximo Asset Management – batch reports

Field	Value
Sender business component (Maximo Asset Management):	SOAP Sender Channel
Receiver business component (SAP)	HTTP receiver channel

SAP to Maximo Asset Management – IDOC (first connection)

Field	Value
Sender business component (SAP):	IDOC Sender Channel
Receiver business component (SAP)	SOAP receiver channel

SAP to Maximo Asset Management – IDOC (second connection)

Field	Value
Sender business component (SAP):	SOAP Sender Channel
Receiver business component (Maximo Asset Management)	HTTP receiver channel

6   Repeat steps 1-5 for each connection between two templates.

Ensure that the activation checkbox is selected for the first connection between two templates. For each subsequent connection, clear the activation checkbox to avoid duplicate interfaces being created when you generate the integration scenario.

Generating scenarios

You must generate the integration scenario in the Generate step of the component view of the Model Configurator.

To generate the integration scenario:

1   Click **Create Configuration Objects.**

2   In the General section, select the **Generation** radio button

3   Click **Start**. The Generation Log, a summary of the configuration, shows your configuration entries. You can use this view to check for errors.

4   Expand the **Notes for Using the Log** section for help text.

5 Save or close the log file to continue.

6 Close the Model Configurator and click **Apply.** The **Objects** tab in the **Display Configuration Scenario** window displays the objects that you created.

To review configuration information for objects that you created, select the **Configuration Overview** tab in the **Display Configuration Scenario window.**

You can activate the scenario now, or continue configuring scenarios, and activate them as a group later.

Selecting the next scenarios

Continue selecting and configuring the scenarios that apply to your integration requirements. Do so for transactions that go from SAP to Maximo, and for transactions that go from Maximo to SAP.

Use the procedures already described in the previous sections to select and configure scenarios, assign services, and generate the scenarios.

Repeat this configuration process for each scenario that you use in your integration.

Activating change lists

After you configure the scenarios that you need for your integration, the next step is to activate the change lists to activate the objects.

To activate the change list:

1 Close edit windows.

2 Click the **Change Lists** tab.

3 Right-click **Standard Change List**, and then select **Activate**.

4 Click **Activate**.

Adjusting integrated configuration objects manually

The next set of configuration tasks is to adjust the integrated configuration objects manually. You must edit the expressions that define the conditions for how the interfaces handle transactions between SAP and Maximo.

Integrated configuration objects can have one or more receiver interfaces. The following objects have more than one receiver interface (replace *SAP system* and *Maximo* with the values that you use for both systems), and require conditions to be defined:

- *SAP system*SAP_MATERIALS_TOMX*Maximo*

- *Maximo*MXINVOICE_TOSAP05*SAP system*

- *Maximo*MXWODETAIL_TOSAP05*SAP system*

- *SAP system*SAP_GM_TOMX*Maximo*

The interface that is called depends on the data being sent, based on conditions defined in the integrated configuration object. For example, one condition for sending data might call the reservation interface only if a work order reservation is attached.

Defining conditions for integrated configuration objects

You must define conditions for integrated configuration objects that have more than one receiver interface. The conditions specify which interface is used when handling transactions between SAP and Maximo.

1   On the Objects tab of the Configuration: Integration Builder window, expand the **Integrated Configuration** structure to display the list of generated configuration objects.

2   Open an integrated configuration object that contains more than one interface, and select the Receiver Interfaces tab.

3   Change to edit view by clicking the pencil icon.

4   Select the condition field of the first receiver interface, and click on the value list to open the **Condition Editor**. Ensure that you define the conditions in the same order as specified in the tables below.

5   Use the value list in the **Left Operand** field to specify an XPATH, and type the relevant values from the tables below in the **Right Operand** Field.

The following tables show the values that you must configure for each integrated configuration object:

S2M_MaterialMaster / Material Master from SAP to Maximo

SENDER interface	Condition
SAP_MATERIALS_TOMX	

RECEIVER interface	Condition
MXITEM_FRSAP05	//IDENT=XII
MXINVENTORY_FRSAP05	//WERKS~+*
MXINVBAL_FRSAP05	//LGORT~+*

S2M_MaterialMovement / Material Movements from SAP to Maximo

SENDER interface	Condition
SAP_GM_TOMX	

RECEIVER interface	Condition
MXINVISSUE_FRSAP05	//IDENT=XISU
MXRECEIPT_FRSAP05	//IDENT=XRCVI

M2S_Invoice / Invoice from Maximo to SAP

SENDER interface	Condition
MXINVOICE_TOSAP05	

RECEIVER interface	Condition
SAP_INVOICEMM_TOSAP	//p1:SAP_APTYPE=MM
SAP_INVOICEFI_TOSAP	//p1:SAP_APTYPE=FI

Additional information
- prefix = p1
- namespace = http://www.ibm.com/maximo

SENDER interface	Condition
MXWODETAIL_TOSAP05	

RECEIVER interface	Condition
SAP_WO_TOSAP	
SAP_RESERVATION_TOSAP	//p1:INVRESERVE/@action=Add

Additional information
- prefix = p1
- namespace = http://www.ibm.com/maximo

If the condition requires a namespace prefix (p1), add the prefix and namespace information to the list of namespaces at the bottom of the **Expression Editor**.

6 Ensure that the **Maintain Order at Runtime** checkbox is cleared.

7 Save the integrated configuration object and click the **Change Lists** tab.

8 To activate your changes, right-click **Standard Change List**, and then select **Activate**.

9 Click **Activate** and close. You have completed the installation and basic configuration of the adapter.

For additional configuration and reference information, see the *IBM Maximo Enterprise Adapter for SAP Applications 7.6 System Administrator Guide*.

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