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How to Set up an SAP XI Integration Directory Scenario with Party to Support EDI Partner Processing

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How to Set up an SAP XI Integration Directory Scenario with Party to Support EDI Partner Processing

Applies To:

SAP Exchange Infrastructure v 3.0, SP12, Integration Directory.

Summary

This document details step by step procedures for setting up a basic Scenario with Party in the XI Integration Directory for an inbound EDI X12 820 Payment Advice transmitted by a Customer Partner. These procedures allow generation of IDoc Control Segment values through the user map, including mapping of the Party to the SAP Customer Number in the SNDPRN field of the Control Segment. This is a common situation in an EDI environment where it is necessary to preserve the SAP Partner number in the IDoc Control Segment for, among other things, development, monitoring and Production Support purposes.

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Party Configuration in the Integration Directory

EDI interfaces are electronic transactions between Business Partners. In the SAP world, this usually means that a Customer or Vendor (Partner types KU or LI) exchanges messages with an SAP system (Partner type LS) defined by R3 and XI as a Logical System and by the Partner as a Customer or Vendor.

Without getting into the nitty gritty details of EDI setup in SAP, it’s critical that this Business Partner-Logical System relationship be represented in the IDoc Control Segment: field RCVPRN for Receiving Partner or SNDPRN for Sending Partner.

Some IDocs won’t even post if the correct customer number is not present in the Control Segment. IDoc Basic type PEXR2002, for message type REMADV, for example, will only post a Payment Advice in SAP if the correct Customer Partner can be identified in the Control Segment of the IDoc.

In the X12 EDI world, PEXR2002 corresponds to an 820 transaction.

Preserving the EDI Partner thru XI

XI preserves the Partner-Logical System relationship in the Integration Directory by use of the Party. It’s a straight-forward process but one that still seems to engender some confusion even in experienced XI consultants.

It’s useful, therefore, to document step by step procedures for this extremely important functionality. This is our purpose: to demonstrate the use of the Party in XI to preserve the values of the IDoc Control Segment as defined in our map and to ensure that the Business Partner number does not get overwritten by a Logical System Name as it passes through the XI Pipeline, so that the IDoc can successfully pass the EDI Partner Profile defined for Partner Type KU (Customer).

The following scenario is used to route an inbound X12 820 EDI transaction to a REMADV.PEXR2002 IDoc transformation from a customer (Walmart US) to an SAP Logical System (USD) where it posts to a Payment Advice in Accounts Receivables. “Inbound” is here defined purely from the perspective of SAP: everything into SAP is Inbound, regardless of how any other systems defines it.

A few words about process flow

In this example, the 820 is transferred into an inbound directory on the SAP Application Server by Gentran Integration Server (GIS), which provides basic EDI services such as enveloping, acknowledgements, partner management and communications, and so on. XI picks it up from the inbound directory through a File Adapter service associated with a Party.

In SAP, a Partner Profile for Partner Type KU (Customer) was created for Walmart US (Customer number 3000001) for Inbound Logical Message Type REMADV, Basic Type PEXR2002 with Process Code REMC. The Test flag is not checked and Processing Mode is set to Immediate.

The thinking behind the selection and design of the EDI architecture implied in this description is beyond the scope of the current article. This scenario is not meant as a guide to EDI or XI architecture or design but is presented as is to illustrate the steps required to configure Party communication for EDI through XI into SAP.
The Scenario

Begin by creating a Scenario.

Click Create Object and enter a name for a Configuration Scenario that will be used to manage and route EDI transactions for Walmart US.

Click Create.
The Edit Configuration Scenario screen opens. Save and close the scenario.
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Initial Party Setup

Create the Party by right clicking the Party icon in the navigation pane and clicking New.

Enter your Party name. This scenario assumes that the Party will correspond to the EDI Business Partner and the SAP customer.

Click Create.
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The Edit Party screen opens. Save and Activate.

The party will be linked to the Send Partner field (SNDPRN) in the Control Segment of IDoc PEXR2002 for Walmart 820s.
Sender Service

Create a Business Service for the File Adapter by right clicking Business Service under your Party and clicking New.

Enter a name for the Service and click Create.
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The Edit Service screen opens. Save.

Click the New button above the Communication Channel table control.
Communication Channel: File Adapter

The Create Object dialog opens. Enter a name for the Communication Channel and click Create.
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Select Adapter Type File from the list that pops up when you click on the question mark next to the hand.

Click Sender.


Enter the Server name and Port for the directory where the file will be found.

Enter the Username and Password for the server.

Enter the Source Directory and Name of the file that will be picked up.

Make sure you put a very high number in the Poll Interval while your interface is being configured. This prevents it from becoming active until you’re ready to start testing.
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The Processing Parameters includes a Processing Mode field that allows you to select what happens to the file once it has been picked up. Options are Archive, Delete and Test.

Test leaves the file in place after it's been picked up.

Select Delete and the Adapter will automatically delete the file after it’s been picked up.

Archive sets the Adapter to archive the file: move it to a designated directory with a date and time stamp.

In development mode, Test is useful until the interface is running smoothly. In production, you'll probably want to archive but will first need to consider an archiving strategy.
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In the Identifiers tab of the Communication Channel screen, information will be entered to help the system identify the Sender as a Customer and not a Logical System.

Enter the Service name as the Agency and the Schema as ALE#KU. This links the File Adapter and Service to the Party and identifies the Send Partner as a Customer (Partner Type KU).

Save and close the Communications Channel.
The Communication Channel has been added to the Sender tab of the Service.

Activate the new objects.
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Receiver Service

Set up a Business System for the IDoc Adapter. The SAP Business System must exist in the System Landscape Directory (SLD).

Right click the Business System icon under the Walmart_US Party Service and select Assign Business System. The Business System could also be created as a Service without Party.

The Business System wizard loads. Click Continue to move to the next screen.
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1. Introduction
2. Assign Party
3. Select Business Systems

Use this wizard to add business systems from the System Landscape Directory to the Integration Directory as services.

You can have communication channels created automatically for these business system services.
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Assign your party and click Continue.

A Business System without Party can also be used.
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Select your SAP Business System from the list of Business Systems defined in the SLD, in this case, USD. Deselect Create Communication Channel automatically.

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Communications Channel: IDoc Adapter

Create a Communications Channel for the SAP IDoc Adapter.

![Image of Create Object window]
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Select Adapter Type IDoc and click Receiver.


Enter the RFC Destination for the target SAP Logical System, the IDoc Interface version, Port and SAP Release.

Check the Apply Control Record Values from Payload flag. This is an important step as it prevents XI from overwriting the Control Segment of the IDoc with its own standard ALE Logical System values and accepts Control Segment values from the interface map.
Click the Identifiers tab and enter Sender and Receiver Agency and Schema information.

This identifies the Sender as the Business Service we created for the File Adapter with Partner Type KU (Customer) and the Receiver as the Business System USD we just assigned for the IDoc Adapter with Partner Type LS (Logical System).

Save and close the Communication Channel.
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Update Party

Return to the Party screen and fill out the Identifiers table control.

The Agency is the name of the Business Service we created for the inbound File Adapter.

Enter ALE#KU for the Scheme. This identifies the Partner Type as Customer.

Enter the SAP Customer Number in the Name. This identifies the Customer Number that should appear in the SNDPRN (Sending Partner) field of the IDoc Control Segment.

These values correspond to the Sender Agency values in the Identifier sub-screens of the Communications Channels for the File and IDoc Adapters. They map the SAP Customer to the XI Party.

An Identifier record does not have to be entered for the IDoc Adapter.

Save and Activate.

![Walmart_US: Edit Party](image)
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Receiver Determination

Right click on Receiver Determination in the Scenario navigation panel and select New.

Enter the Party and the Service created for the Inbound File Adapter Communication Channel.

Enter the Sender Interface name for the inbound X12 820 EDI transaction and the Sender Interface Namespace.

Check Sender Uses Virtual Receiver and Partner and Service default to an asterisk.

If you're using a Service without a Party, don't select Virtual Receiver.

Click Create.
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The Edit Receiver Determination screen opens.

Enter the Sending Party and Receiving Service for the IDoc under Configured Receivers and Save. You won’t need to enter the Party if you’re using a Business System without Party as the Receiver.

Configuration Overview for Receiver Determination is updated with the Receiving Party and Service.

Select Receiver Agreement to the right and click New.
Receiver Agreement

The Receiver Agreement dialog opens.

Enter the Sending Party under Receiver. The Service defaults to the Receiver Service entered above.

Select the IDoc as your interface by clicking on the question mark and finding it on the pop-up list. The Namespace will be pulled in automatically.

Click Create.
The Edit Receiver Agreement screen loads.

Add the IDoc Adapter Communication Channel as Receiver Communication Channel.

Save and close.
Interface Determination

Set up Interface Determination by selecting the Mapping column and clicking New.

To skip the Create screen, right click Mapping and select New Specific.

Accept the defaults and click Create.
Select the correct Interface Mapping (for the inbound X12 820) by clicking the question mark next to the hand under the Interface Mapping heading.

The mapping is associated with the namespace in the header of the Interface Edit Determination Screen so only the mappings associated with that namespace should appear in the pop-up.

Save and close.
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Refresh the Receiver Determination in the Edit Receiver Determination screen.

Activate the new objects.
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Sender Agreement

A Sender Agreement is also required.

Select Sender Agreement in the navigation panel and right click to get New.

Enter the Sending Party and Service.

Enter the Sending Interface (the X12 820) and Namespace.

Do not check Sender Uses Virtual Receiver.
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The Edit Sender Agreement screen opens.

Add the Sender’s Communication Channel -- the inbound File Adapter for the X12 820 -- to the Sender Agreement.

Save and close.

Activate the Sender Agreement. Configuration is complete.

Testing

To test the configuration, go to the File Adapter Communication Channel screen and change the Poll Interval value to 60, or some other low value.
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If the file you defined in the Filename field exists in your Source Directory, the file adapter will pick it up within your defined time interval. Use the XI Monitor and any of the standard SAP IDoc monitoring tools (WE02, WE05, BD87, etc.) to monitor the success of your message.

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Emmanuel currently lives with his son Johnny in Westlake Village California. He is SAP EDI Development Lead at NBC Universal Home Entertainment, where he is actively involved in all phases of designing and implementing a dynamic EDI architecture that includes Gentran Integration Server for EDI services, Contivo Analyst for mapping, SAP XI for integration logic and SAP R3 as the enterprise system of record.