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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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**Company:** NBC Universal

**Date:** July 29, 2005

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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.

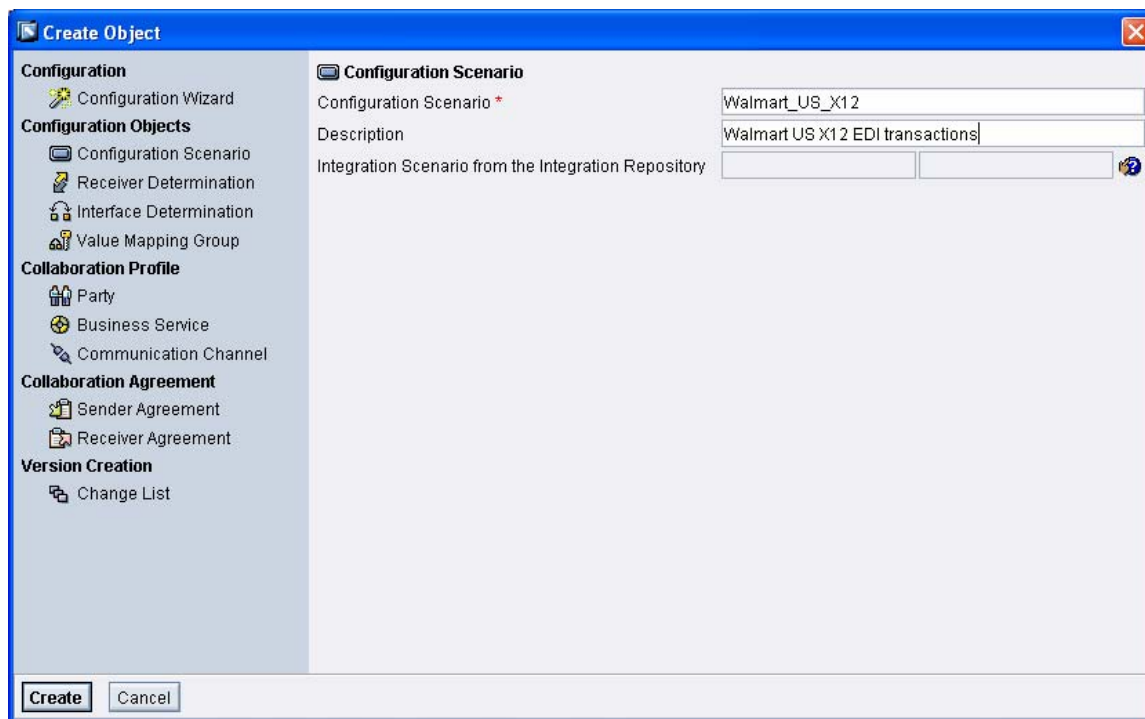
# How to Set up an SAP XI Integration Directory Scenario with Party to Support EDI Partner Processing

## The Scenario

Begin by creating a Scenario.

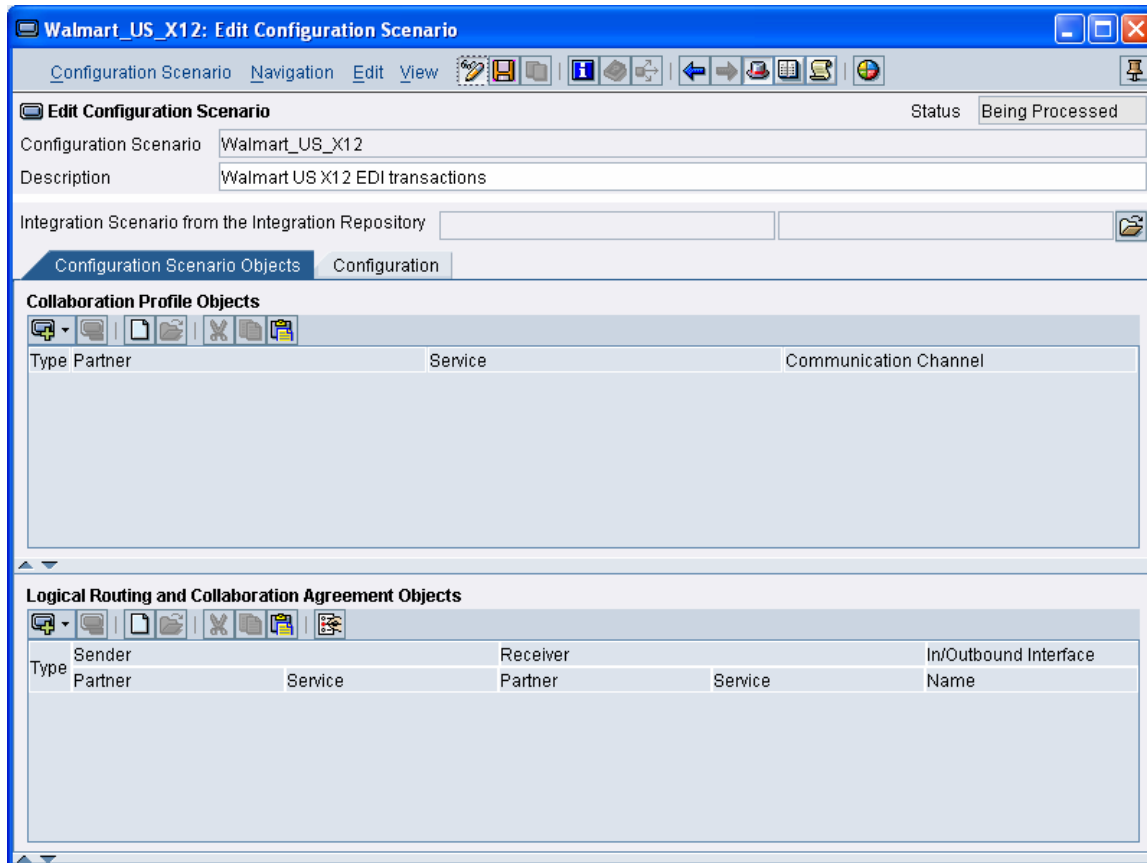
Click Create Object and enter a name for a Configuration Scenario that will be used to manage and route EDI transactions for Walmart US.

Click Create.



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

The Edit Configuration Scenario screen opens. Save and close the scenario.



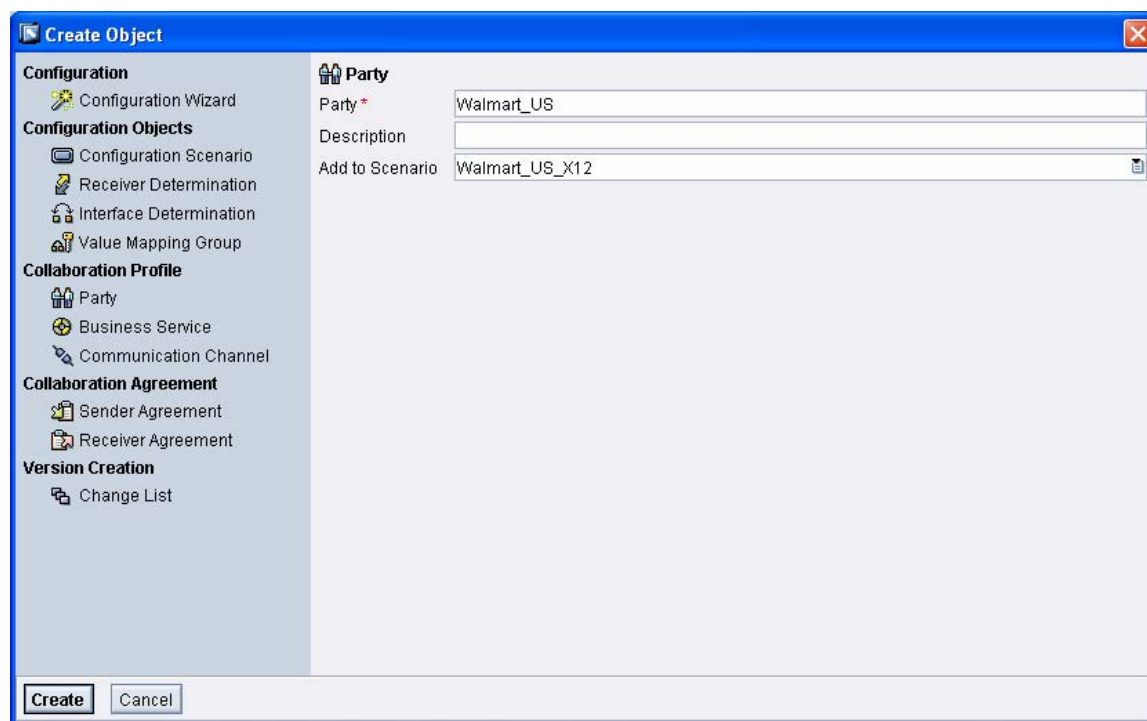
# How to Set up an SAP XI Integration Directory Scenario with Party to Support EDI Partner Processing

## 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.

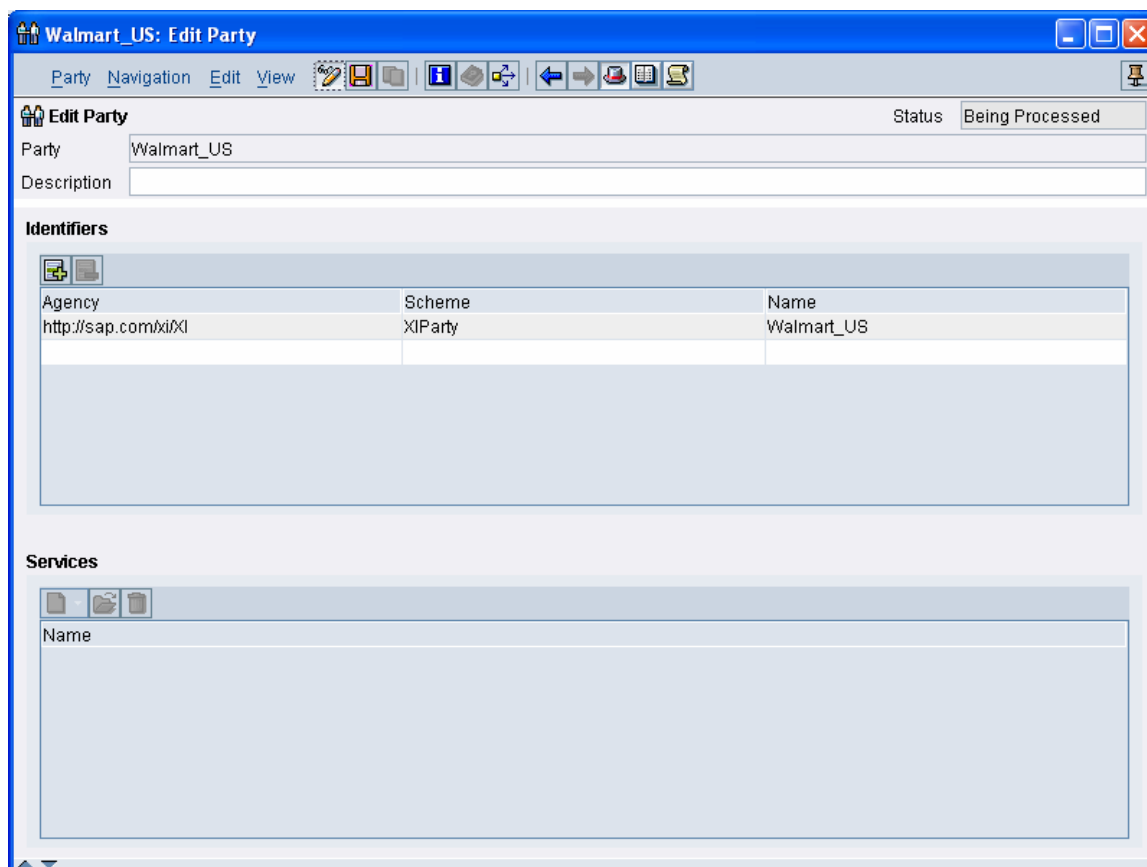
Click Create.



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

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.



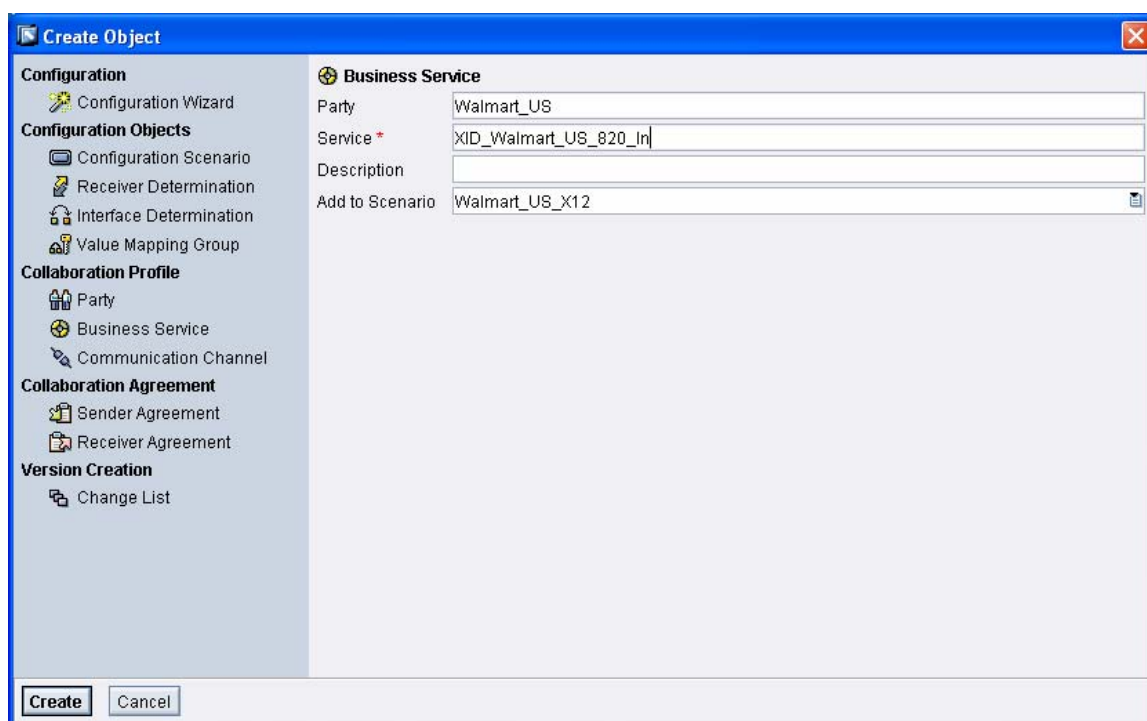


# How to Set up an SAP XI Integration Directory Scenario with Party to Support EDI Partner Processing

## Sender Service

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

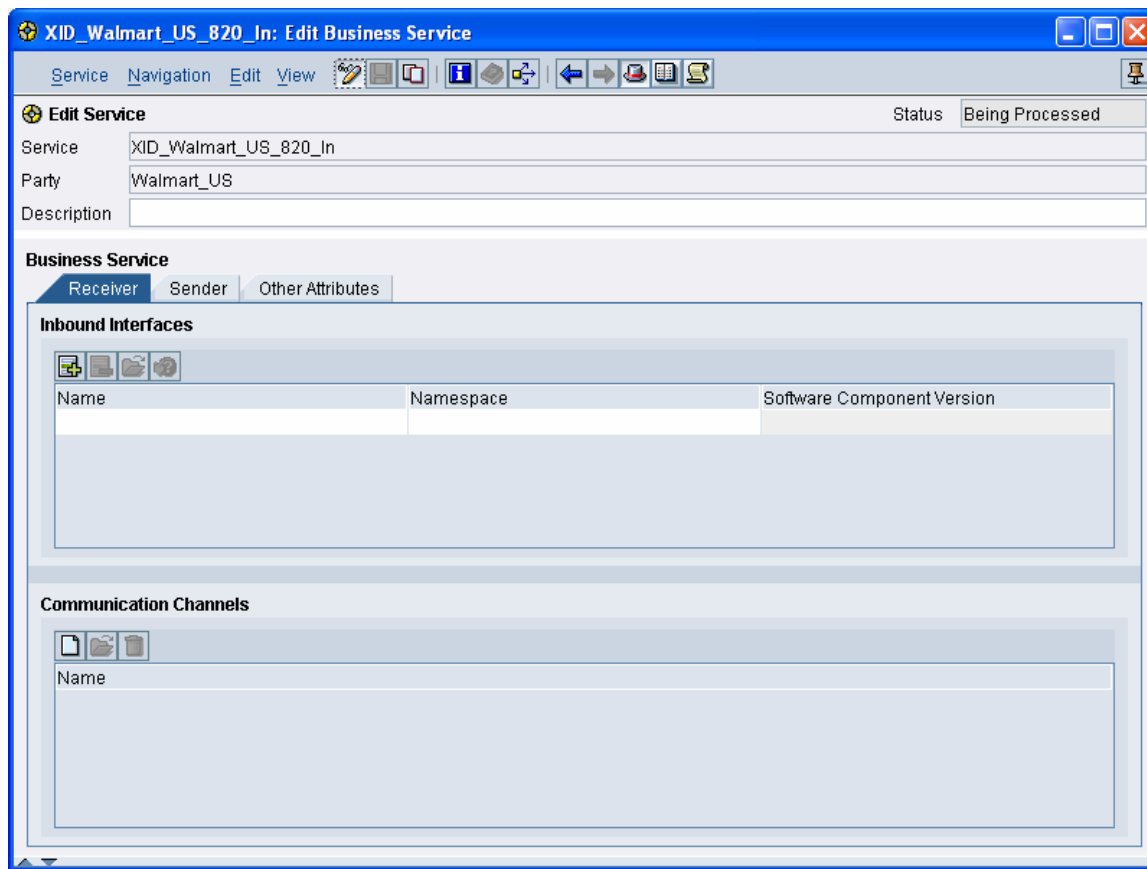
Enter a name for the Service and click Create.



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

The Edit Service screen opens. Save.

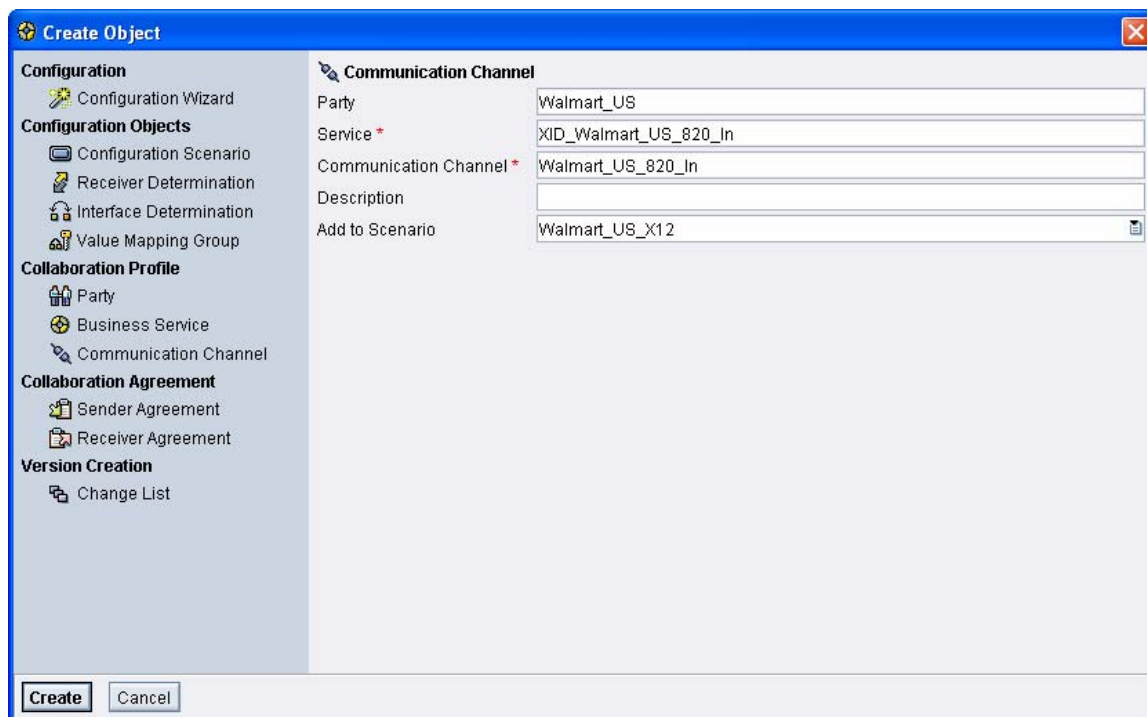
Click the New button above the Communication Channel table control.



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

Communication Channel: File Adapter

The Create Object dialog opens. Enter a name for the Communication Channel and click Create.



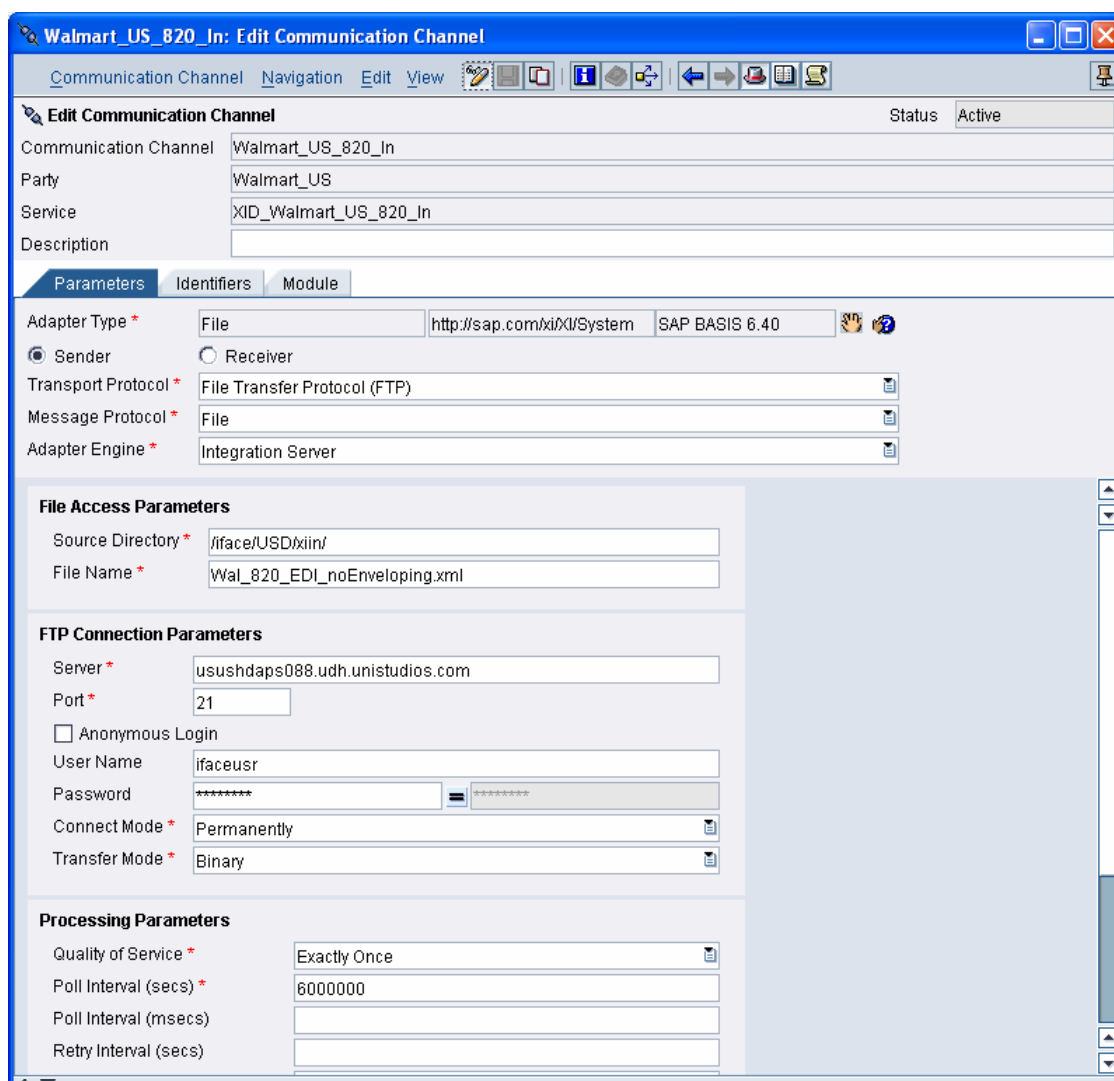
# How to Set up an SAP XI Integration Directory Scenario with Party to Support EDI Partner Processing

Select Adapter Type File from the list that pops up when you click on the question mark next to the hand.  
Click Sender.

Select Transport Protocol FTP, Message Protocol File and Adapter Engine Integration Server.

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

Enter the Username and Password for the server.



The screenshot shows the 'Walmart\_US\_820\_In: Edit Communication Channel' window. The 'Parameters' tab is active, showing the following configuration:

- Communication Channel: Walmart\_US\_820\_In
- Party: Walmart\_US
- Service: XID\_Walmart\_US\_820\_In
- Description: (empty)

**Parameters**

- Adapter Type: File (selected)
- Sender (selected) / Receiver (unselected)
- Transport Protocol: File Transfer Protocol (FTP)
- Message Protocol: File
- Adapter Engine: Integration Server

**File Access Parameters**

- Source Directory: /iface/USD/xiin/
- File Name: Wal\_820\_EDI\_noEnveloping.xml

**FTP Connection Parameters**

- Server: usushdaps088.udh.unistudios.com
- Port: 21
- Anonymous Login: (unchecked)
- User Name: ifaceusr
- Password: (masked with asterisks)
- Connect Mode: Permanently
- Transfer Mode: Binary

**Processing Parameters**

- Quality of Service: Exactly Once
- Poll Interval (secs): 6000000
- Poll Interval (msecs): (empty)
- Retry Interval (secs): (empty)

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.

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

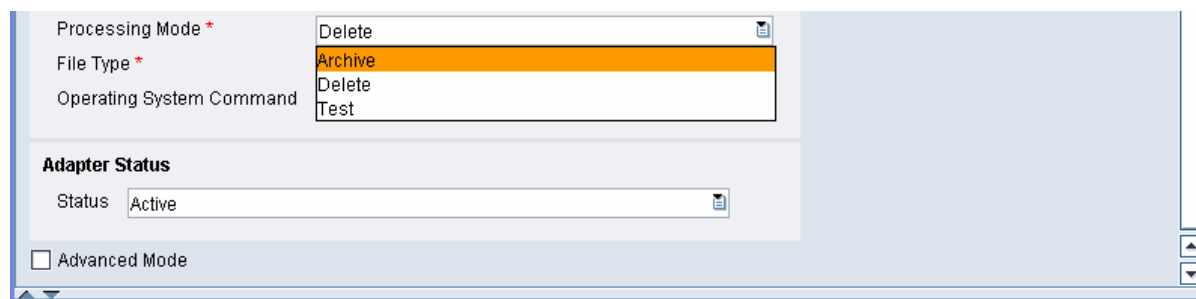
The Processing Parameters includes a Processing Mode field that allows you to select what happens to the file once it has been picked up. Options are Archive, Delete and Test.

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.

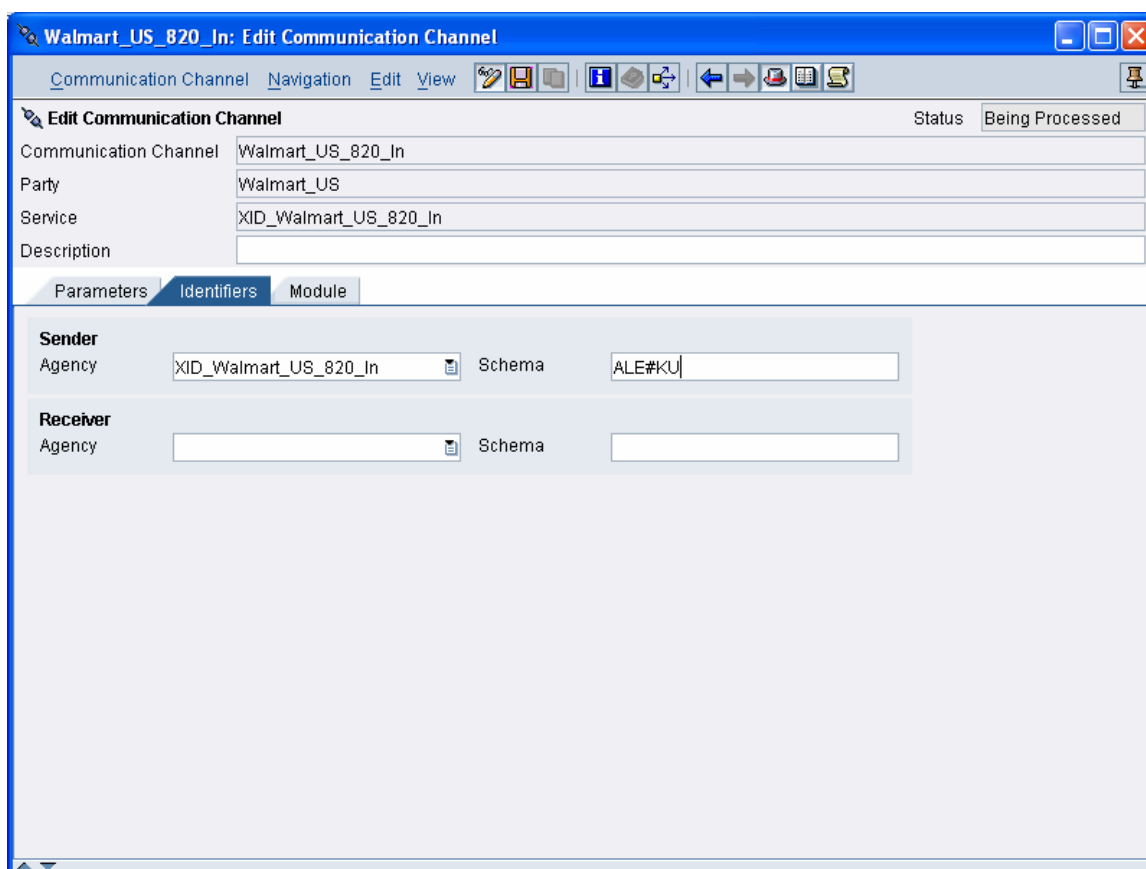


# How to Set up an SAP XI Integration Directory Scenario with Party to Support EDI Partner Processing

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.

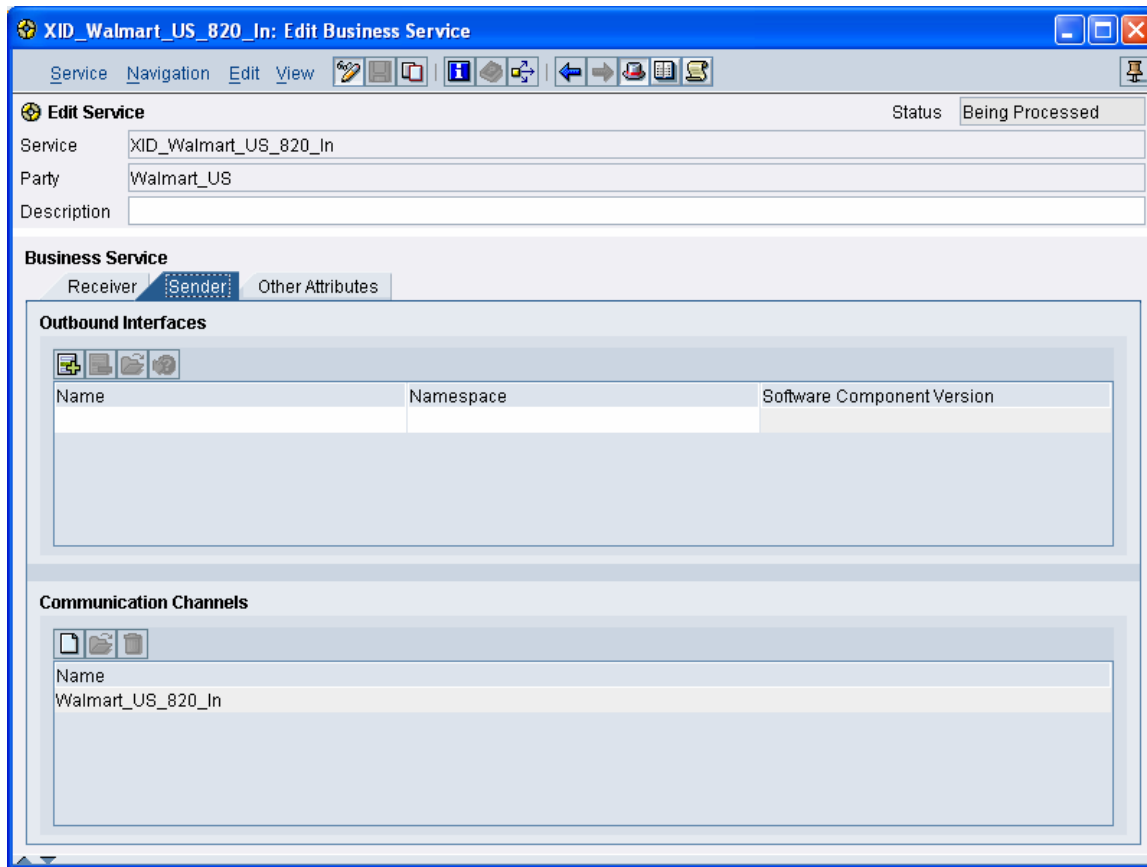
Enter the Service name as the Agency and the Schema as ALE#KU. This links the File Adapter and Service to the Party and identifies the Send Partner as a Customer (Partner Type KU).

Save and close the Communications Channel.



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

The Communication Channel has been added to the Sender tab of the Service.  
Activate the new objects.

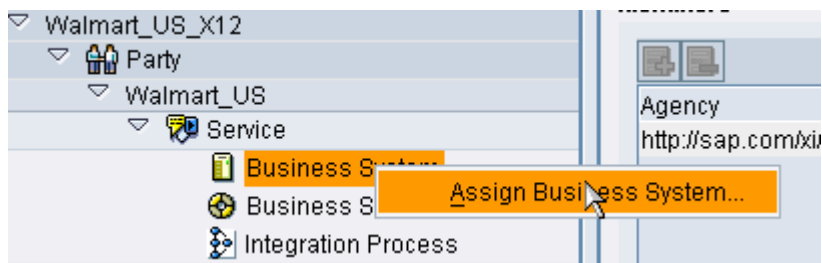


# How to Set up an SAP XI Integration Directory Scenario with Party to Support EDI Partner Processing

## Receiver Service

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

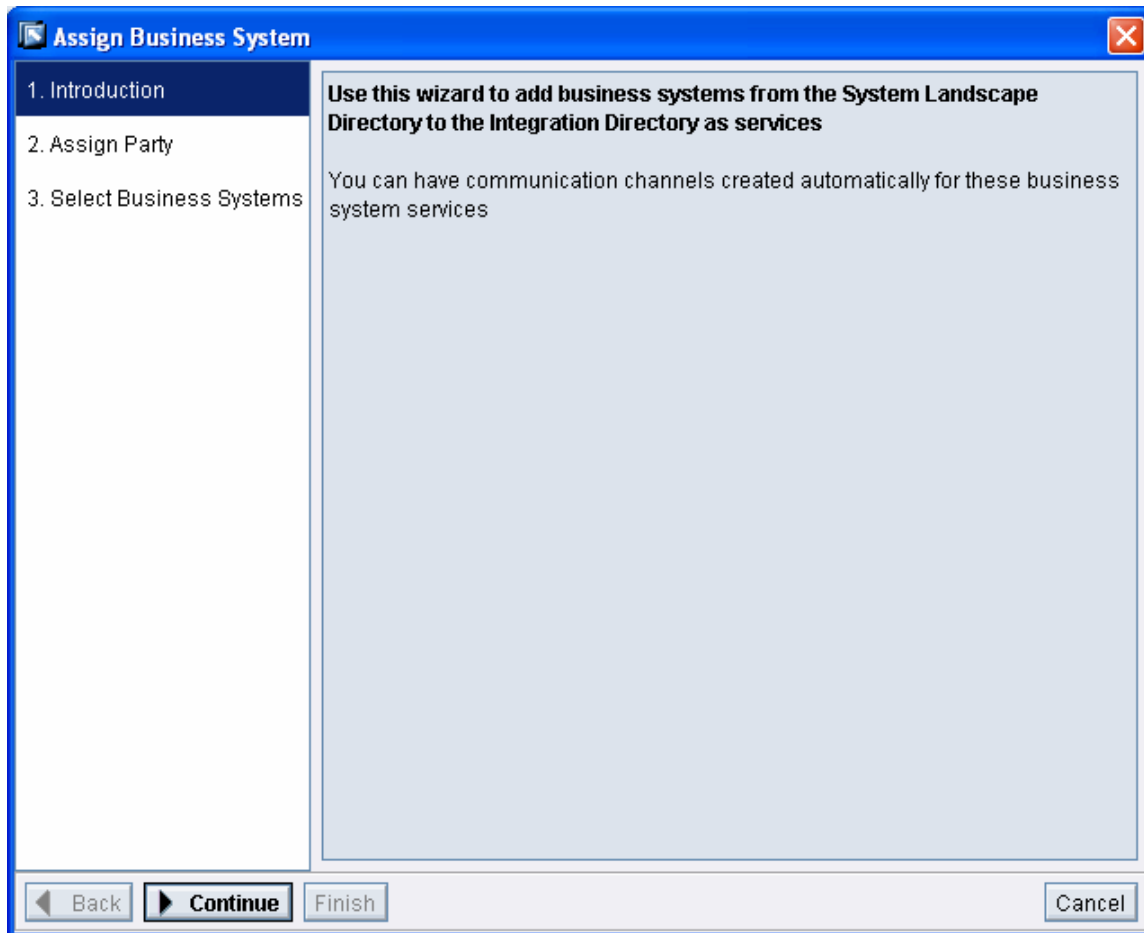
Right click the Business System icon under the Walmart\_US Party Service and select Assign Business System. The Business System could also be created as a Service without Party.



The Business System wizard loads. Click Continue to move to the next screen.



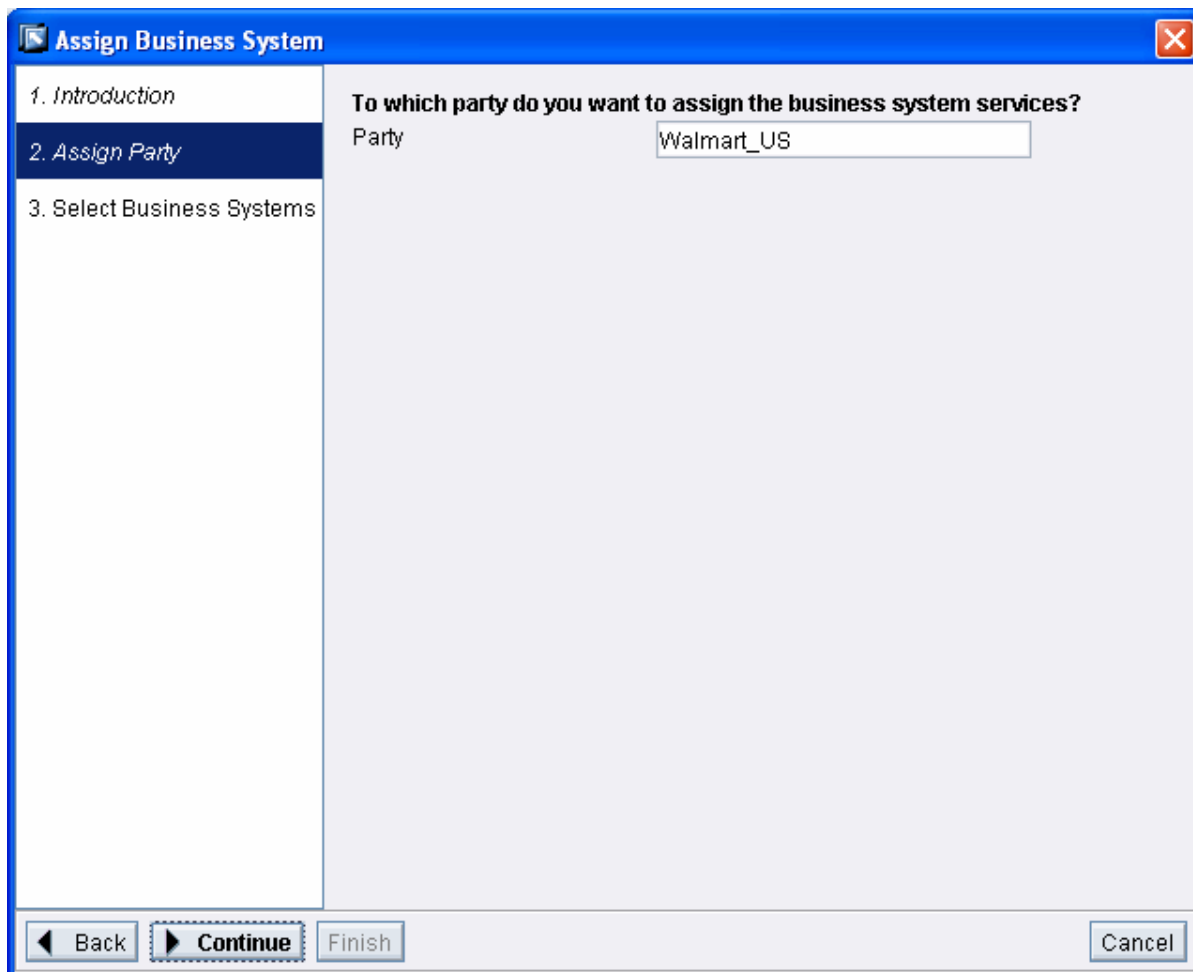
# How to Set up an SAP XI Integration Directory Scenario with Party to Support EDI Partner Processing



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

Assign your party and click Continue.

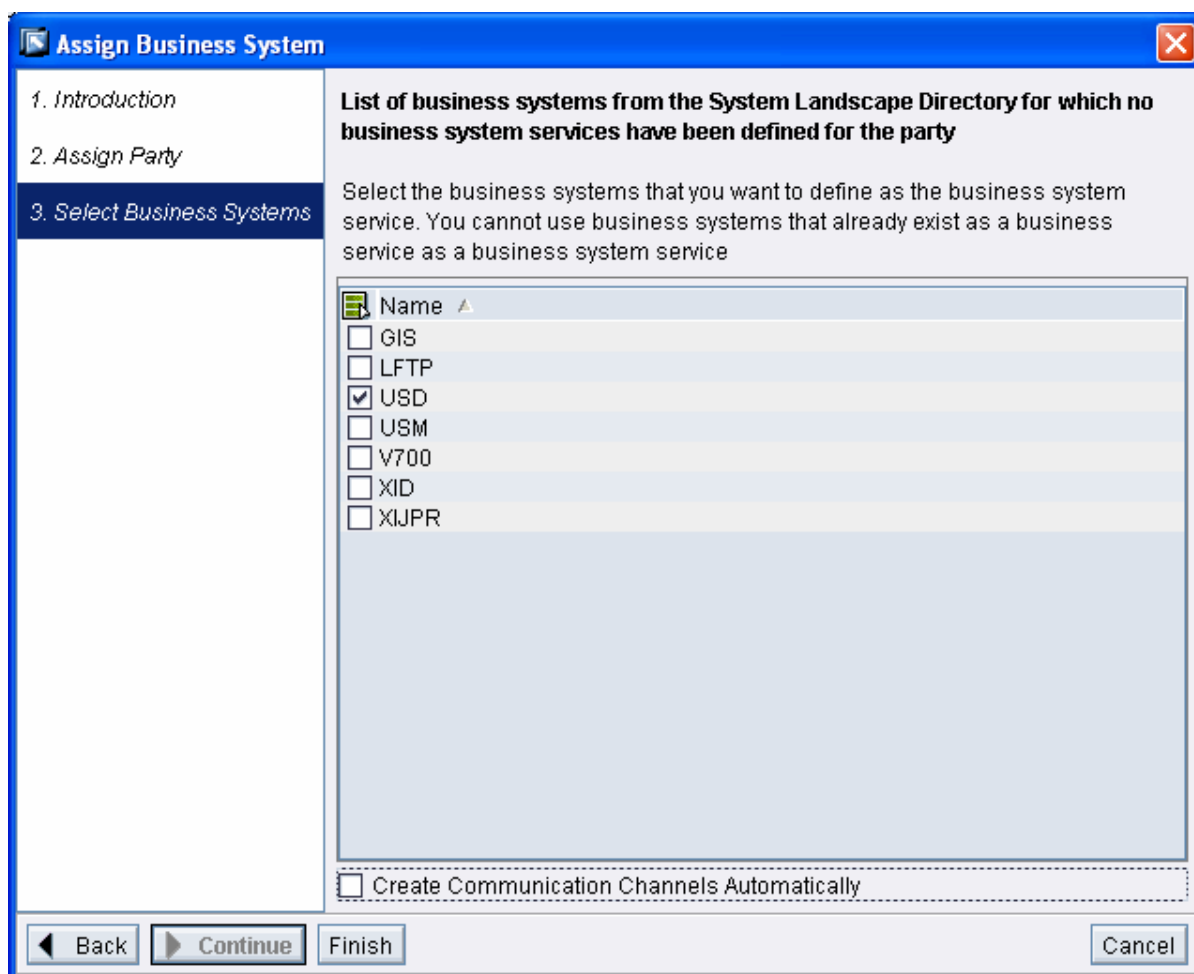
A Business System without Party can also be used.



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

Select your SAP Business System from the list of Business Systems defined in the SLD, in this case, USD. Deselect Create Communication Channel automatically.

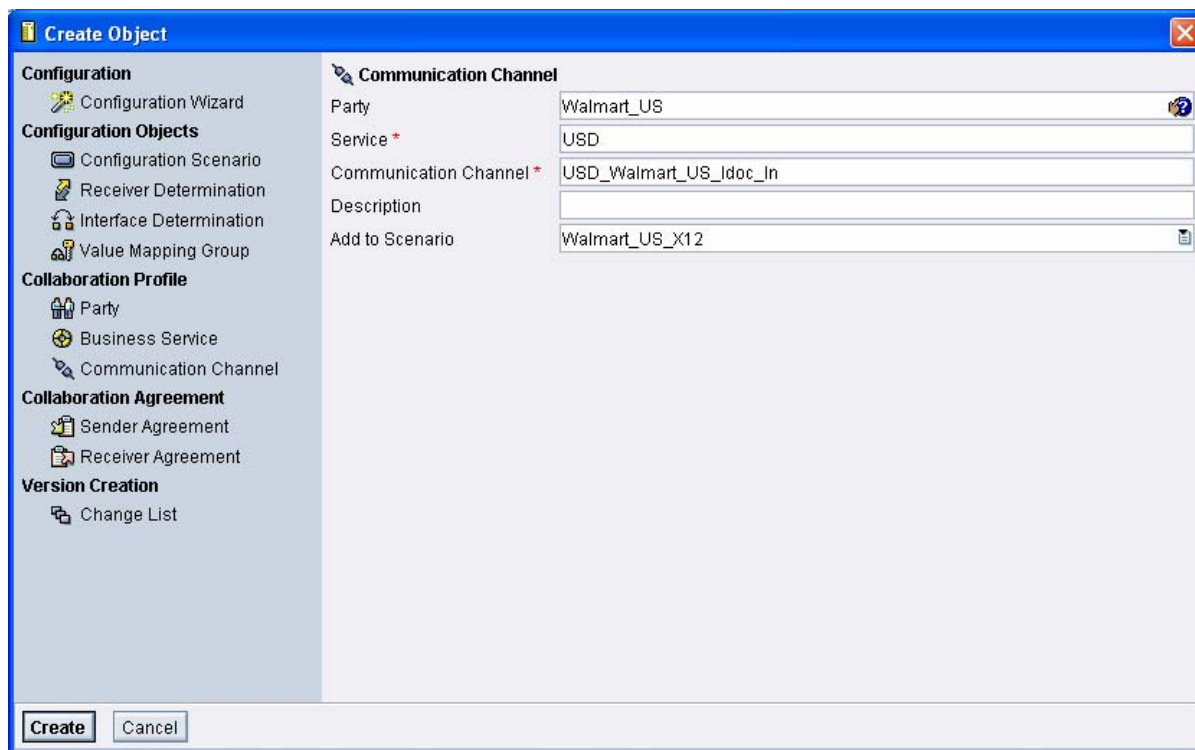
Click Finish. A message screen will appear confirming creation of the Business System. Close.



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

Communications Channel: IDoc Adapter

Create a Communications Channel for the SAP IDoc Adapter.



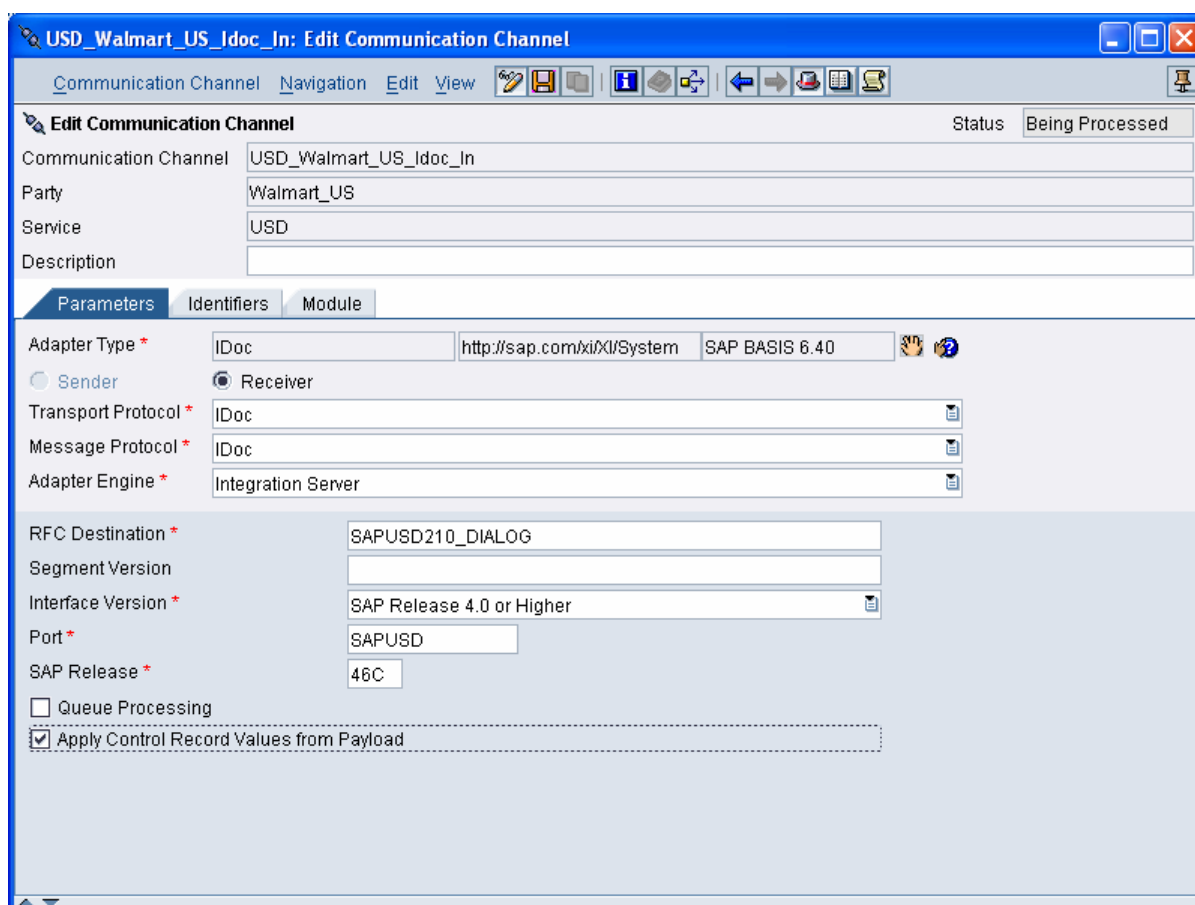
# How to Set up an SAP XI Integration Directory Scenario with Party to Support EDI Partner Processing

Select Adapter Type IDoc and click Receiver.

Select Transport Protocol IDoc, Message Protocol IDoc and Adapter Engine Integration Server.

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.

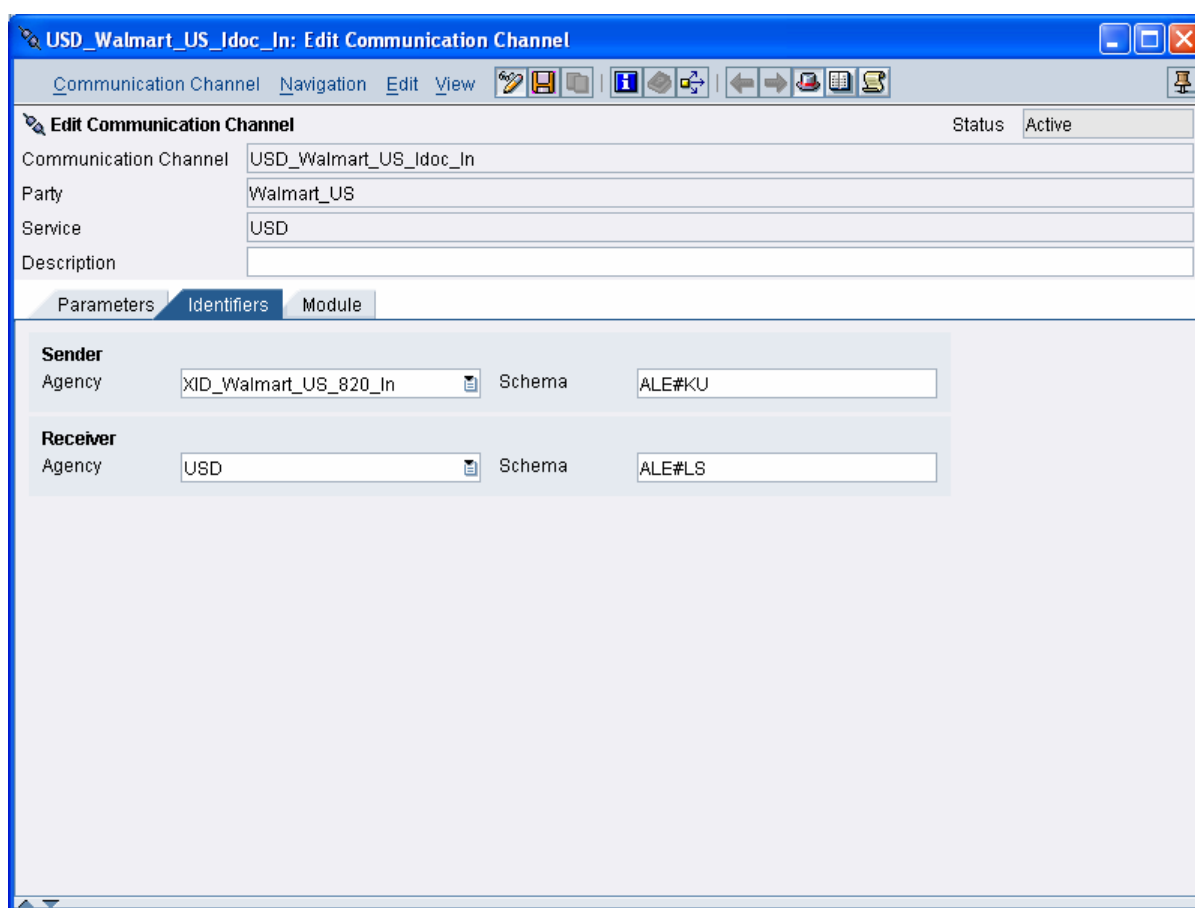


# How to Set up an SAP XI Integration Directory Scenario with Party to Support EDI Partner Processing

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.



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

## 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.

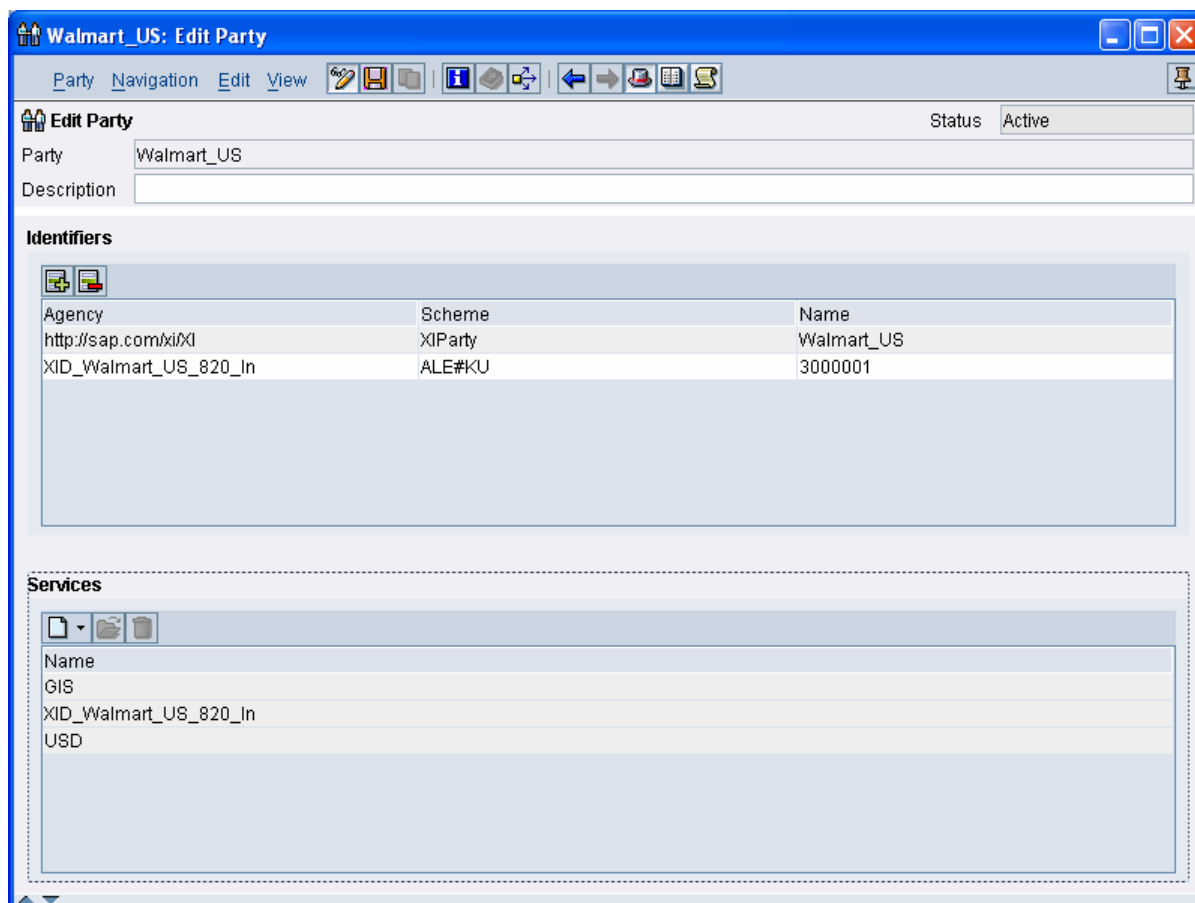
Enter ALE#KU for the Scheme. This identifies the Partner Type as Customer.

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

Party: Walmart\_US

Description:

Status: Active

**Identifiers**

Agency	Scheme	Name
http://sap.com/xi/XI	XIParty	Walmart_US
XID_Walmart_US_820_In	ALE#KU	3000001

**Services**

Name
GIS
XID_Walmart_US_820_In
USD

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

## Receiver Determination

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

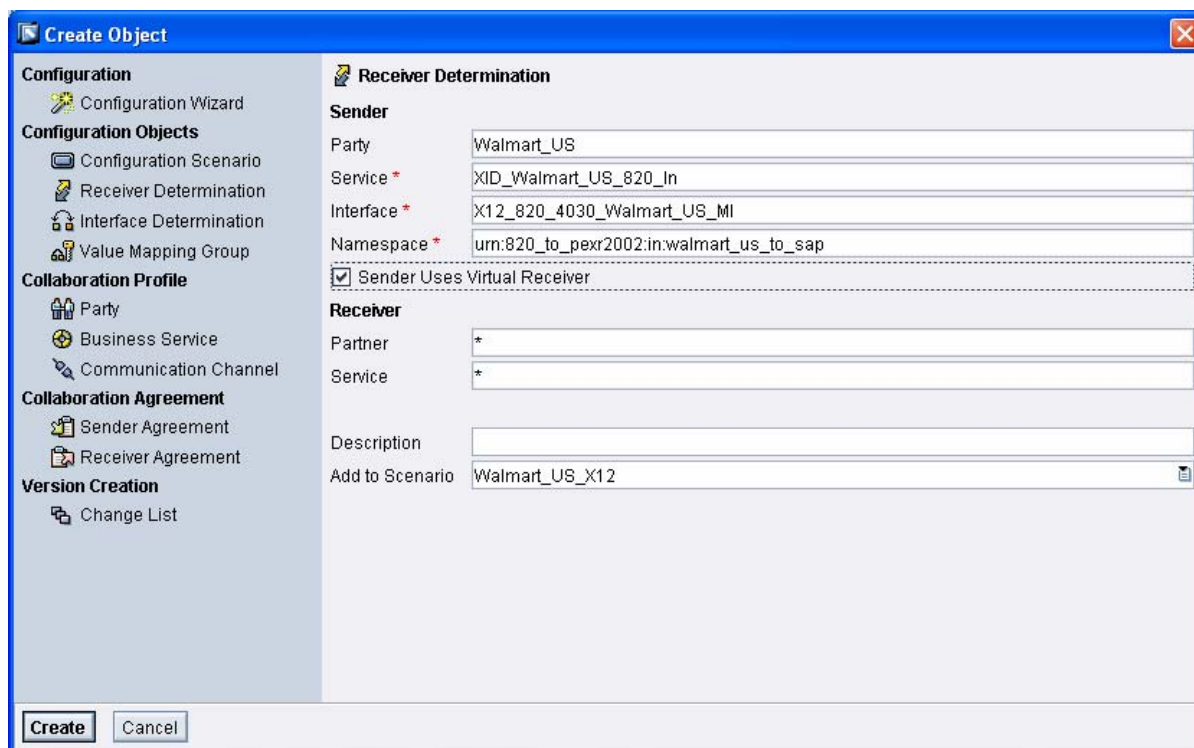
Enter the Party and the Service created for the Inbound File Adapter Communication Channel.

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.



**Create Object**

**Configuration**

- Configuration Wizard

**Configuration Objects**

- Configuration Scenario
- Receiver Determination
- Interface Determination
- Value Mapping Group

**Collaboration Profile**

- Party
- Business Service
- Communication Channel

**Collaboration Agreement**

- Sender Agreement
- Receiver Agreement

**Version Creation**

- Change List

**Receiver Determination**

**Sender**

Party: Walmart\_US

Service \*: XID\_Walmart\_US\_820\_In

Interface \*: X12\_820\_4030\_Walmart\_US\_MI

Namespace \*: urn:820\_to\_pexr2002.in:walmart\_us\_to\_sap

Sender Uses Virtual Receiver

**Receiver**

Partner: \*

Service: \*

Description:

Add to Scenario: Walmart\_US\_X12

**Create** **Cancel**



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

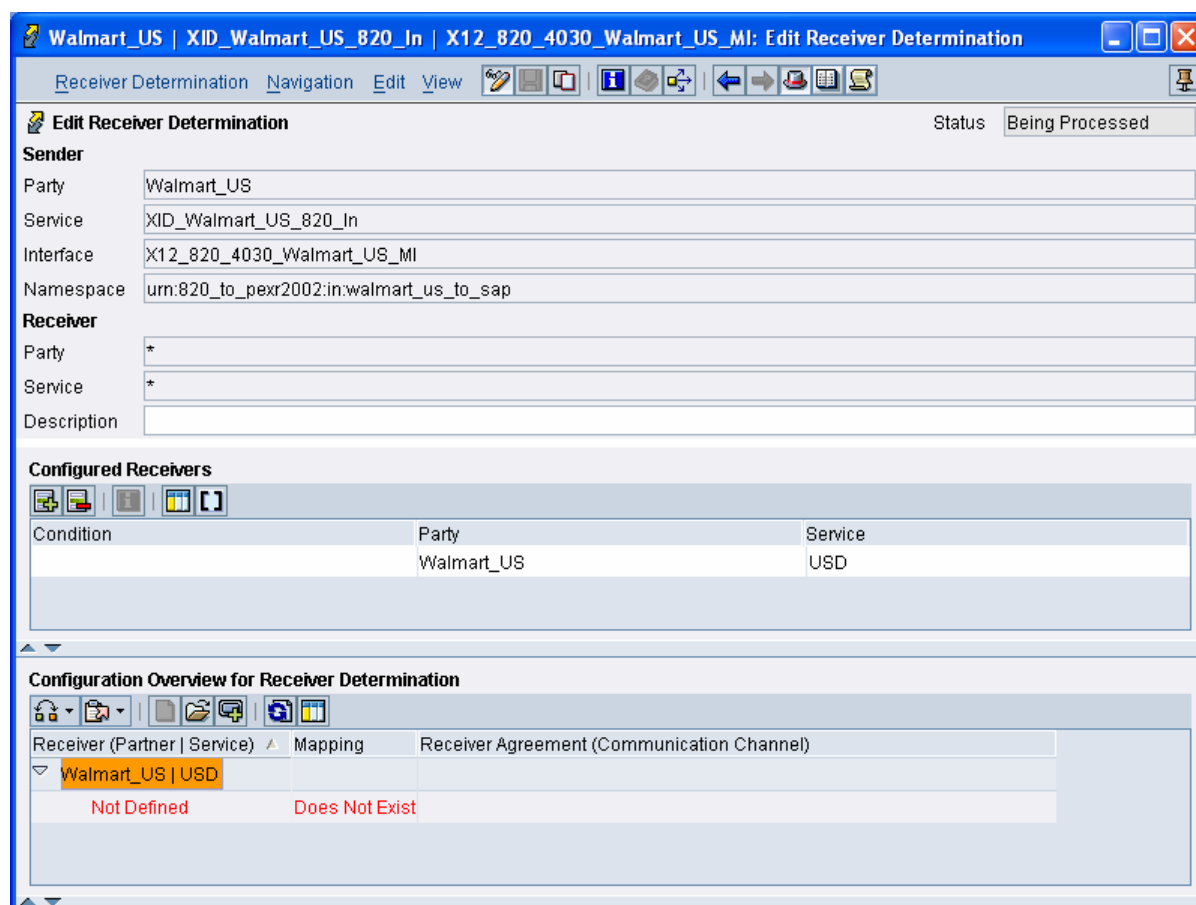


The Edit Receiver Determination screen opens.

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.



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

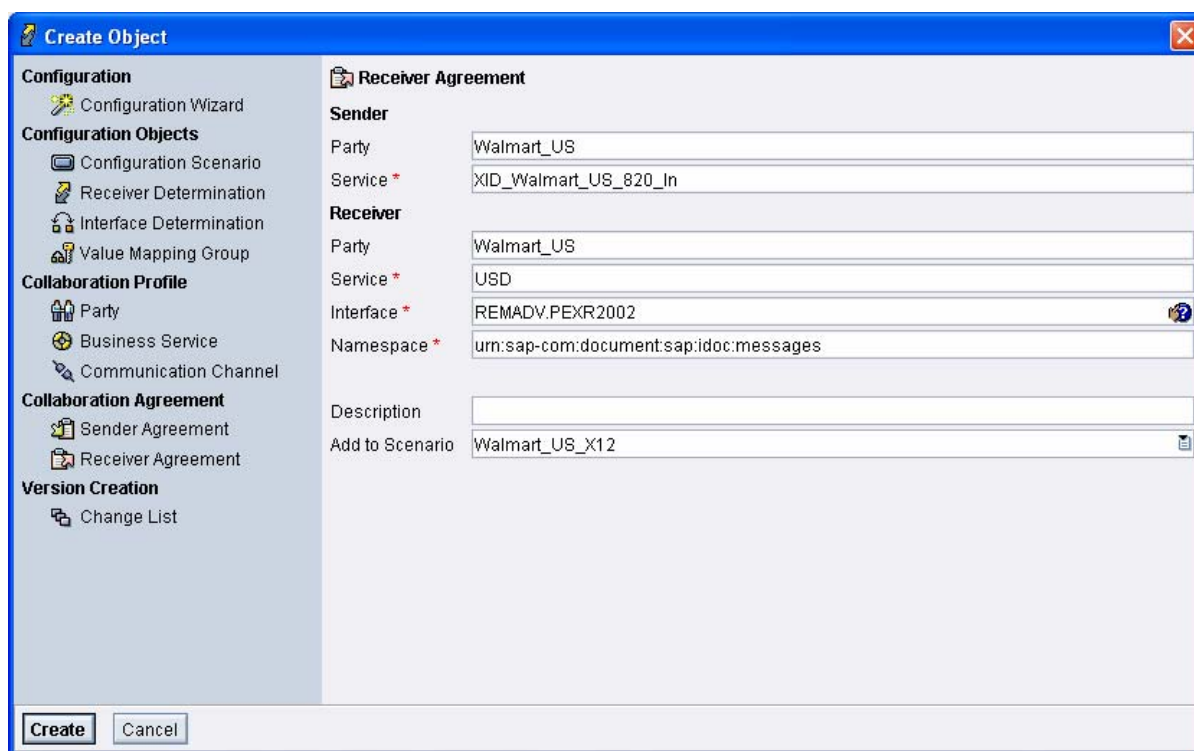
## Receiver Agreement

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.

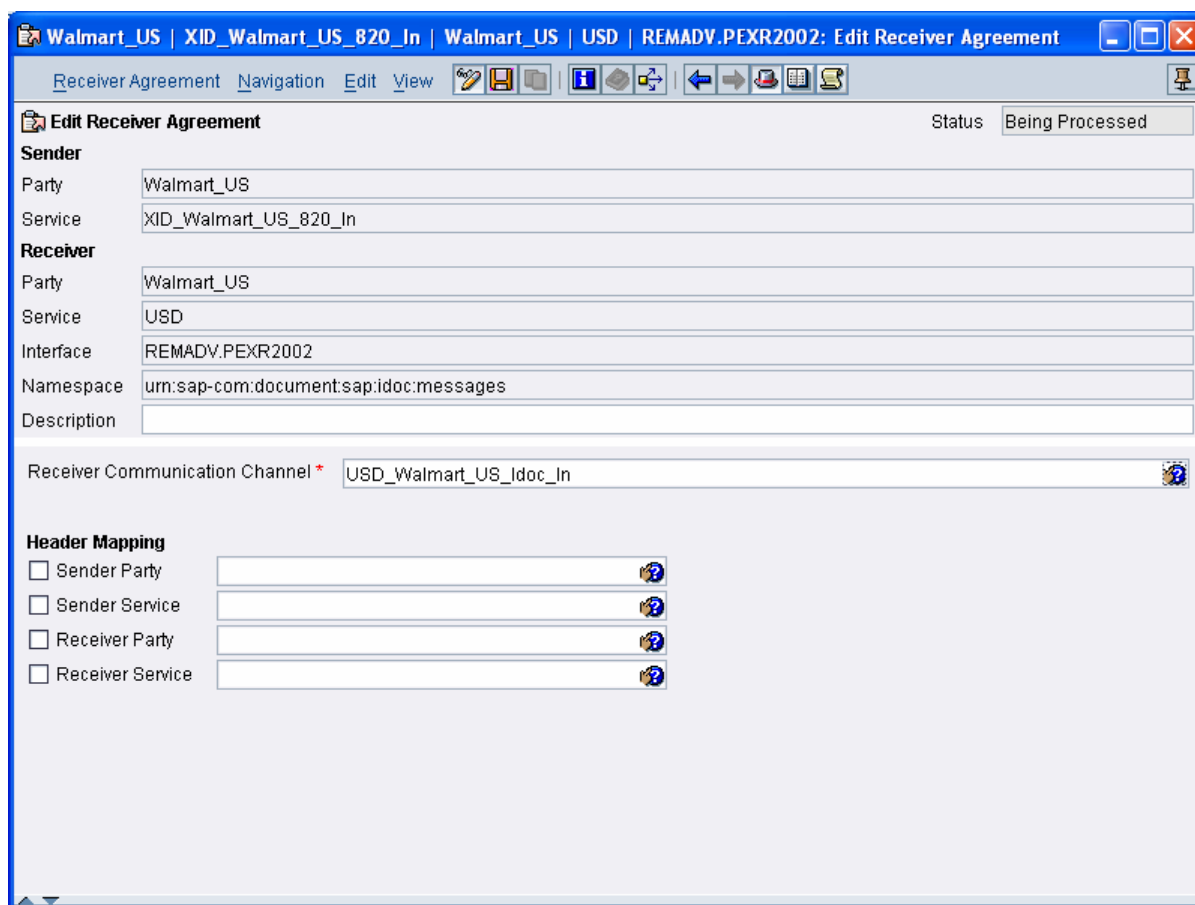


# How to Set up an SAP XI Integration Directory Scenario with Party to Support EDI Partner Processing

The Edit Receiver Agreement screen loads.

Add the IDoc Adapter Communication Channel as Receiver Communication Channel.

Save and close.



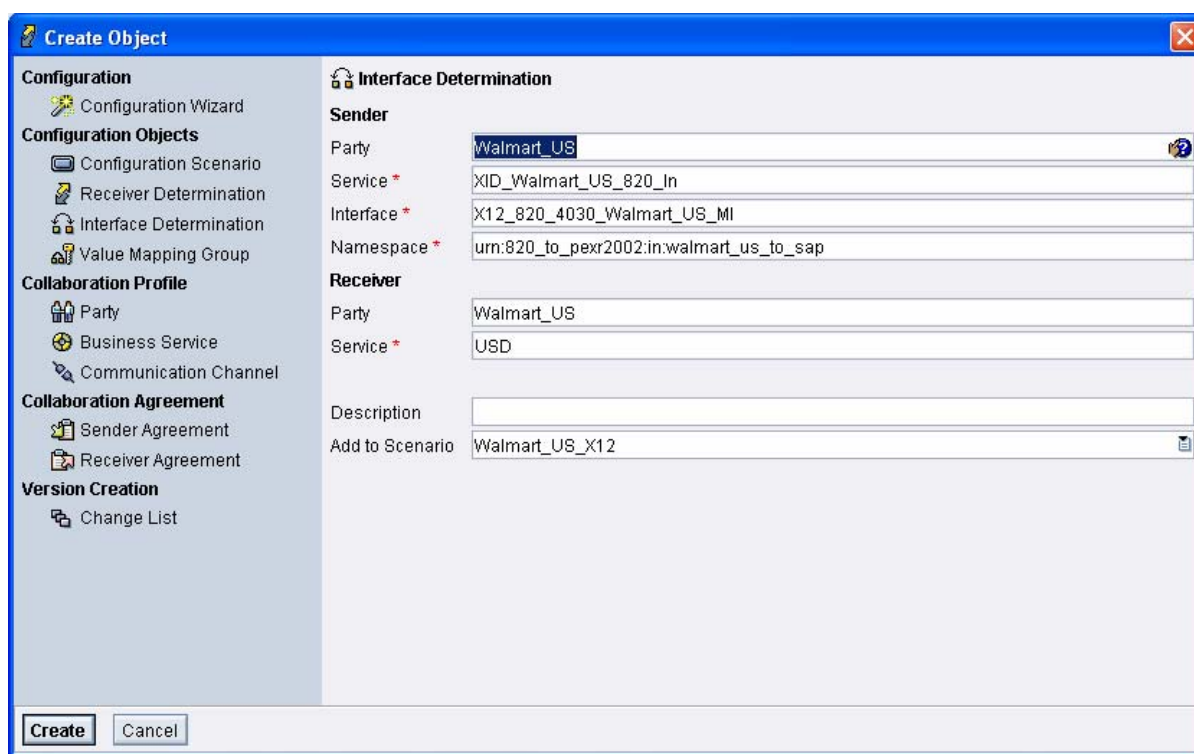
# How to Set up an SAP XI Integration Directory Scenario with Party to Support EDI Partner Processing

## 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.



**Create Object**

**Configuration**

- Configuration Wizard
- Configuration Objects**
  - Configuration Scenario
  - Receiver Determination
  - Interface Determination**
  - Value Mapping Group
- Collaboration Profile**
  - Party
  - Business Service
  - Communication Channel
- Collaboration Agreement**
  - Sender Agreement
  - Receiver Agreement
- Version Creation**
  - Change List

**Interface Determination**

**Sender**

Party: Walmart\_US

Service \*: XID\_Walmart\_US\_820\_In

Interface \*: X12\_820\_4030\_Walmart\_US\_MI

Namespace \*: urn:820\_to\_pexr2002.in:walmart\_us\_to\_sap

**Receiver**

Party: Walmart\_US

Service \*: USD

Description:

Add to Scenario: Walmart\_US\_X12

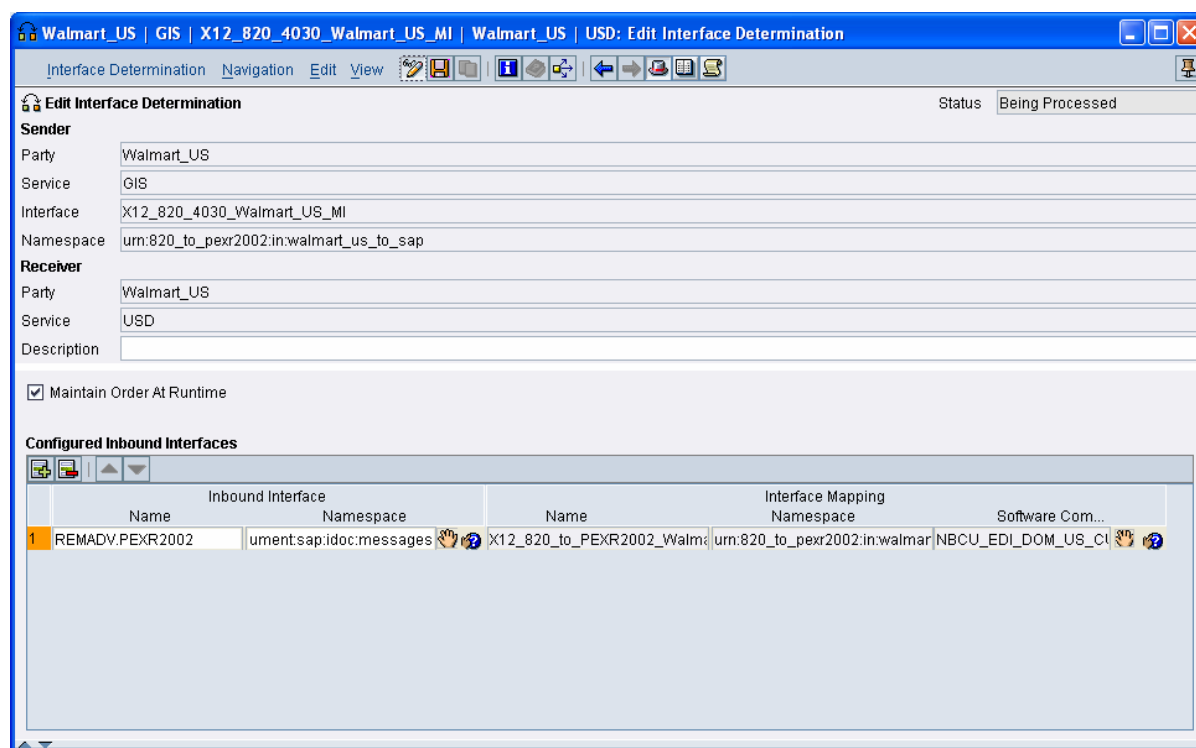
**Create** **Cancel**

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

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.

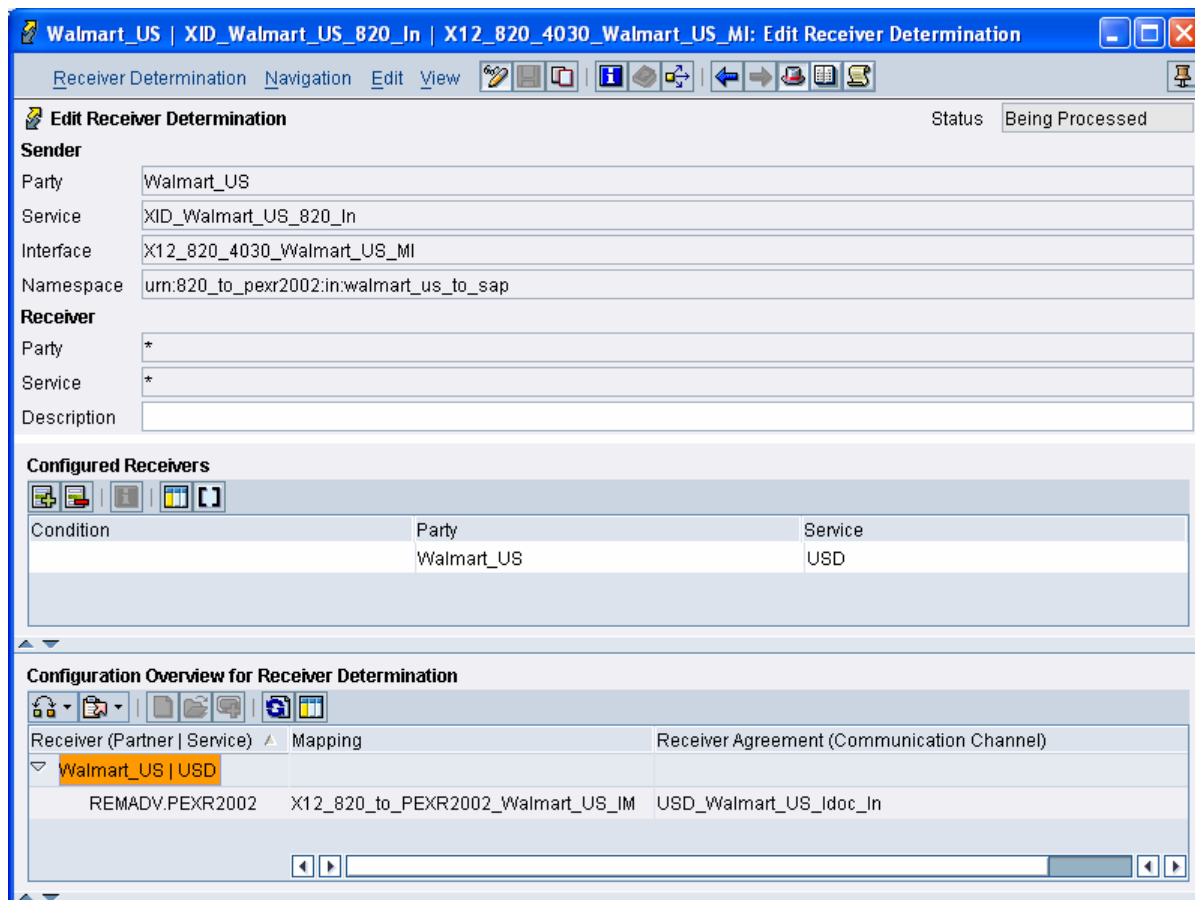
Save and close.



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

Refresh the Receiver Determination in the Edit Receiver Determination screen.

Activate the new objects.



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

## Sender Agreement

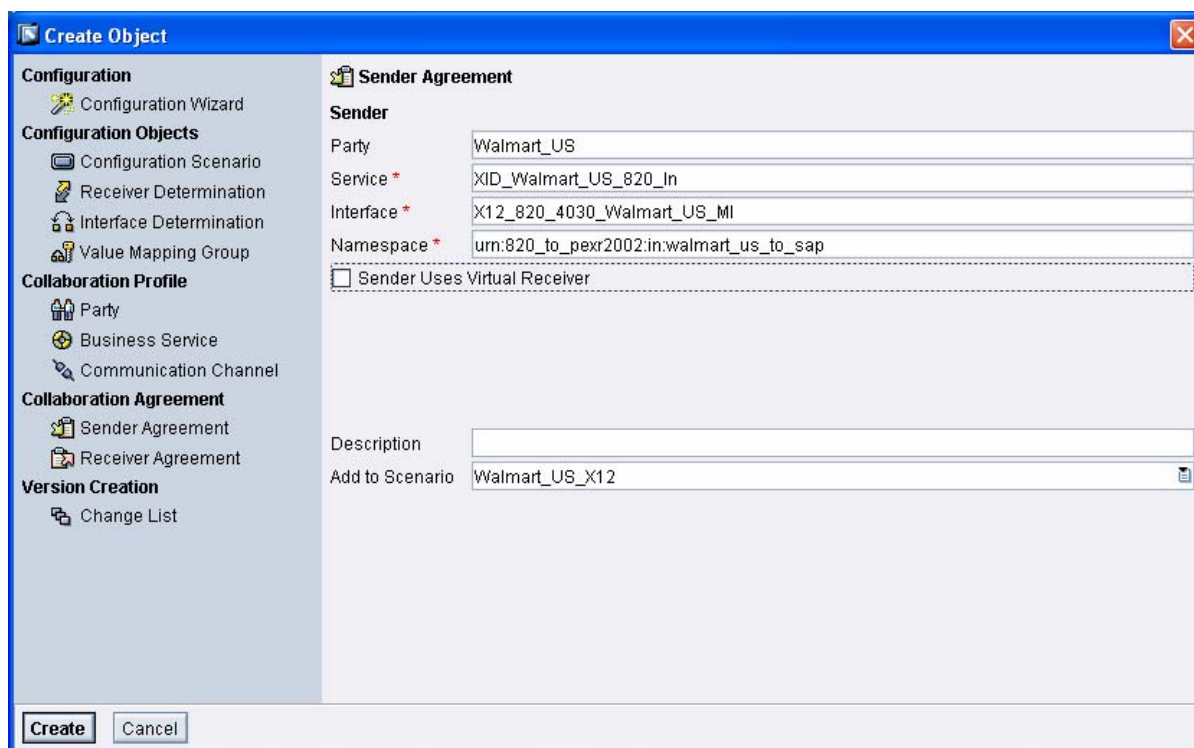
A Sender Agreement is also required.

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.



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

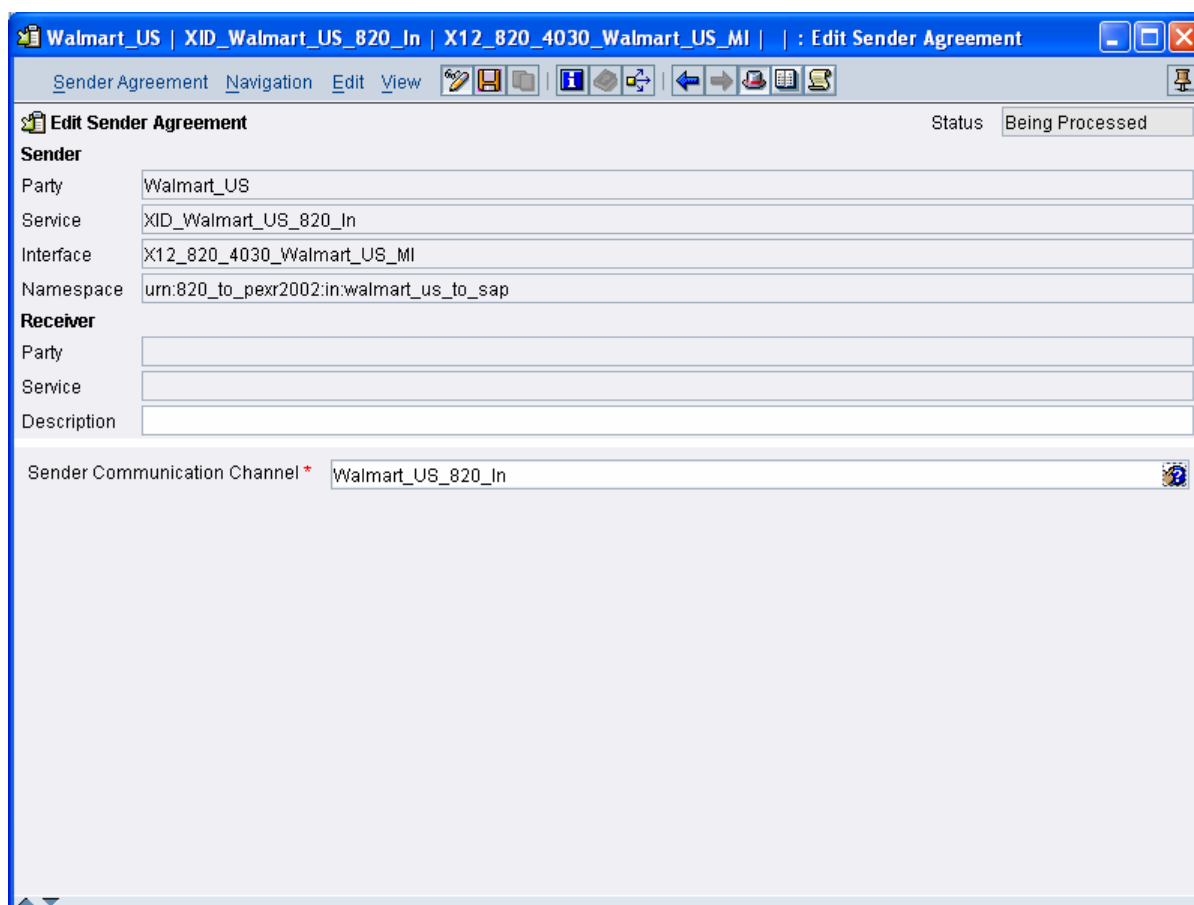


The Edit Sender Agreement screen opens.

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.



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



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.

### Author Bio



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Company: NBC Universal, Universal City, CA

*Acknowledgements: Sincere thanks are due to Philipp Kawicher, our friendly SAP XI Consultant who has patiently helped guide me through the sometimes arcane mysteries of the XI Integration Repository and Directory. The information presented here represents a shared journey of discovery that presented us both with more than one dead end and even the occasional flash of understanding.*

Emmanuel Hadzipetros has been an SAP technical contractor and consultant for more than 11 years, since R3 version 2.2. A certified ABAP consultant, he's long specialized in integrating SAP with external Legacy, Custom, Packaged and Business Partner systems on large and complex projects.

He has intimate and detailed knowledge of the IDoc interface and other standard SAP and external integration tools and technologies and has used this knowledge in more than 10 SAP implementations representing a wide variety of industries in four countries and three continents.

For the last four years Emmanuel has gone Hollywood as a key fixture on two major Studio implementations where he helped lead the SAP development effort in building complex VMI-based EDI transactional processing systems supporting billions of dollars a year in Video and DVD sales.

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.