

IDOC to RNIF Scenario Using SAP XI/PI a Walkthrough



Applies to:

SAP XI 3.0 and Above, Rosettanet (RNIF) Adapter. For more information, visit the [Data Management and Integration homepage](#).

Summary

This technical article is aimed to explain and provide a clear, step-by-step walkthrough to implement IDOC to RNIF scenario. Also this would give a clear picture how to configure the RNIF (RosettaNet Implementation Framework) Adapter with various parameters in SAP XI (eXchange Infrastructure)/PI (Process Integration).

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Author Bio



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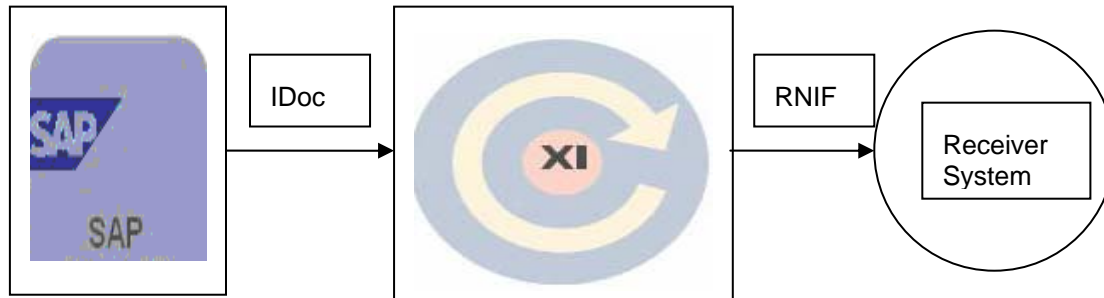
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Introduction

This document will explain about IDoc to RNIF business scenario which has the receiver RNIF communication channel configuration using the SAP XI. At sender side Custom defined Purchase Order IDOC (ORDERS.ORDER05.ZORDCMPT) and receiver side RNIF (Rosettanet Implementation Framework) file. (In this example, it is the PIPSG3A4PurchaseOrderRequest).

Business Scenario



Pre-Requisites

Basic knowledge of XI, IDocs, XML etc.

Integration Repository

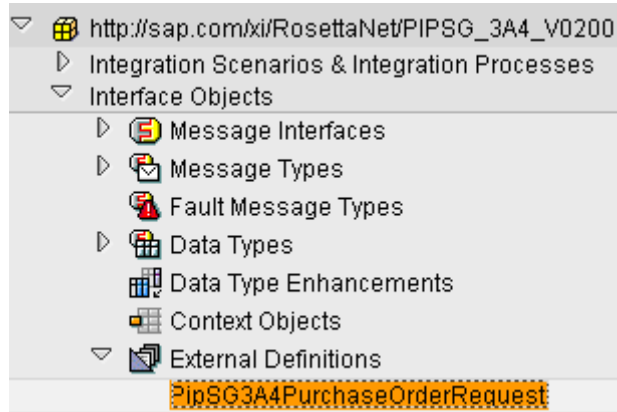
- Import the software component that is created in the SLD
- Create the namespace in the Integration Repository.
- For sender Import the Customer IDOC ORDERS.ORDER05.ZORDCMPT (This customer IDOC enhanced based on Standard IDOC ORDERS05).

Sender User Defined Idoc structure:

Structure	Category	Type
Structure	XSD	WSDL
Structure	Category	Type
▼ ZORDCMPT	Element	
▼ IDOC	Element	ORDERS.ORDER05.ZORD...
BEGIN	Attribute	xsd:string
▶ EDI_DC40	Element	EDI_DC40.ORDER05.ZORD...
▶ E1EDK01	Element	ZORDCMPT.E1EDK01
▶ E1EDK14	Element	ZORDCMPT.E1EDK14
▶ E1EDK03	Element	ZORDCMPT.E1EDK03
▶ E1EDK04	Element	ZORDCMPT.E1EDK04
▶ E1EDK05	Element	ZORDCMPT.E1EDK05
▶ E1EDKA1	Element	ZORDCMPT.E1EDKA1
▶ E1EDK02	Element	ZORDCMPT.E1EDK02
▶ E1EDK17	Element	ZORDCMPT.E1EDK17
▶ E1EDK18	Element	ZORDCMPT.E1EDK18
▶ E1EDK35	Element	ZORDCMPT.E1EDK35
▶ E1EDK36	Element	ZORDCMPT.E1EDK36
▶ E1EDKT1	Element	ZORDCMPT.E1EDKT1
▶ E1EDP01	Element	ZORDCMPT.E1EDP01
▶ E1CUCFG	Element	ZORDCMPT.E1CUCFG
▶ E1EDL37	Element	ZORDCMPT.E1EDL37
▶ E1EDS01	Element	ZORDCMPT.E1EDS01

Receiver structure:

For receiver download the Standard software component ROSETTANET 1.0 from service market place and Copy into XI/PI integration Repository Export location. Then import into XI/PI Integration Repository. As per our Requirement, we import the corresponding DTD file 'PIPSG3A4PurchaseOrderRequest' using external definitions. Please find the below screen shot.



Receiver dtd file:

The screenshot shows the 'Display External Definition' dialog box with the following details:

- Name:** PipSG3A4PurchaseOrderRequest
- Namespace:** http://sap.com/xi/RosettaNet/PIPSG_3A4_V0200
- Software Component Version:** 2.0 of rosettanet.org
- Description:** Custom PIP SG_3A4 V02.00.00 for Seagate processes
- Category:** dtd | Messages | From the First ELEMENT
- File *:** SG_3A4_MS_V02_00_PurchaseOrc
- Source:** (empty)

Below the dialog box, the 'Imported Document' tab is active, showing the XML DTD content:

```
<!ELEMENT Pip3A4PurchaseOrderRequest (
  fromRole ,
  GlobalDocumentFunctionCode ,
  PurchaseOrder ,
  thisDocumentGenerationDateTime ,
  thisDocumentIdentifier ,
  toRole ) >

<!ELEMENT fromRole
  ( PartnerRoleDescription ) >

<!ELEMENT PartnerRoleDescription (
  ContactInformation? ,
  GlobalPartnerRoleClassificationCode ,
  PartnerDescription ) >

<!ELEMENT ContactInformation (
  contactName? ,
  EmailAddress? ,
  facsimileNumber?
```

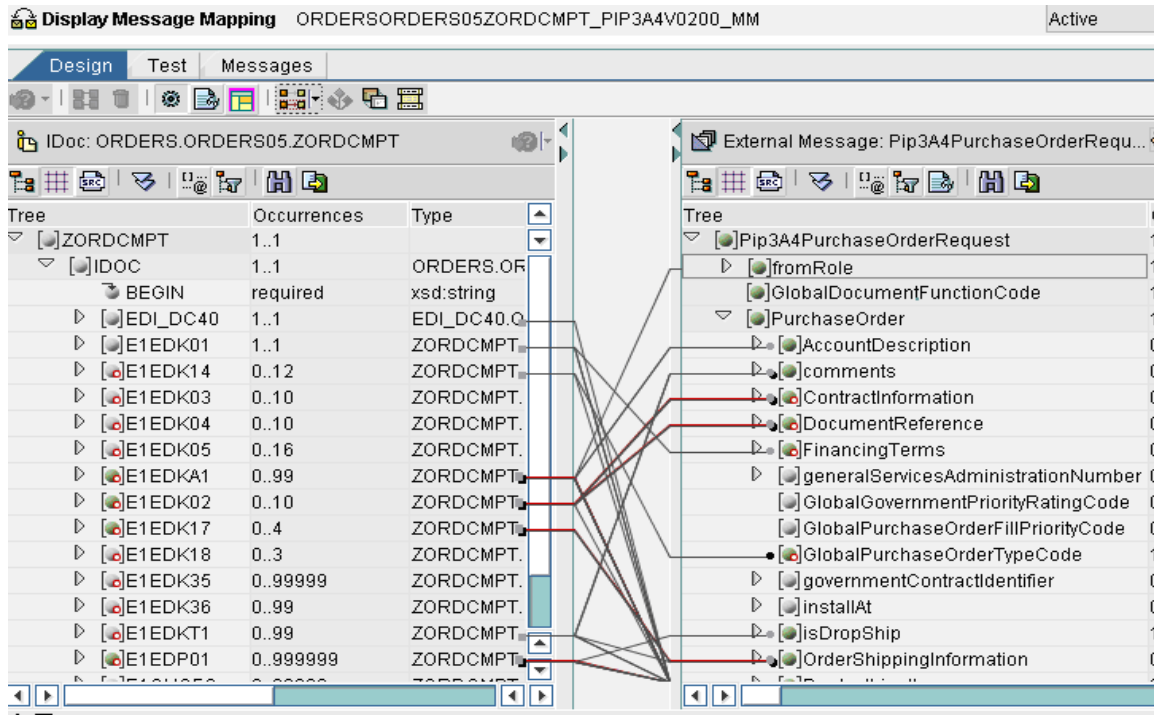
Message Interface:

Sender is the IDoc so no need to create the message type and message interface

Create the message interface for receiver (PIP3A4PurchaseOrderRequest) based on External schema (PIPSG3A4PurchaseOrderRequest), as category Inbound and Mode as Asynchronous.

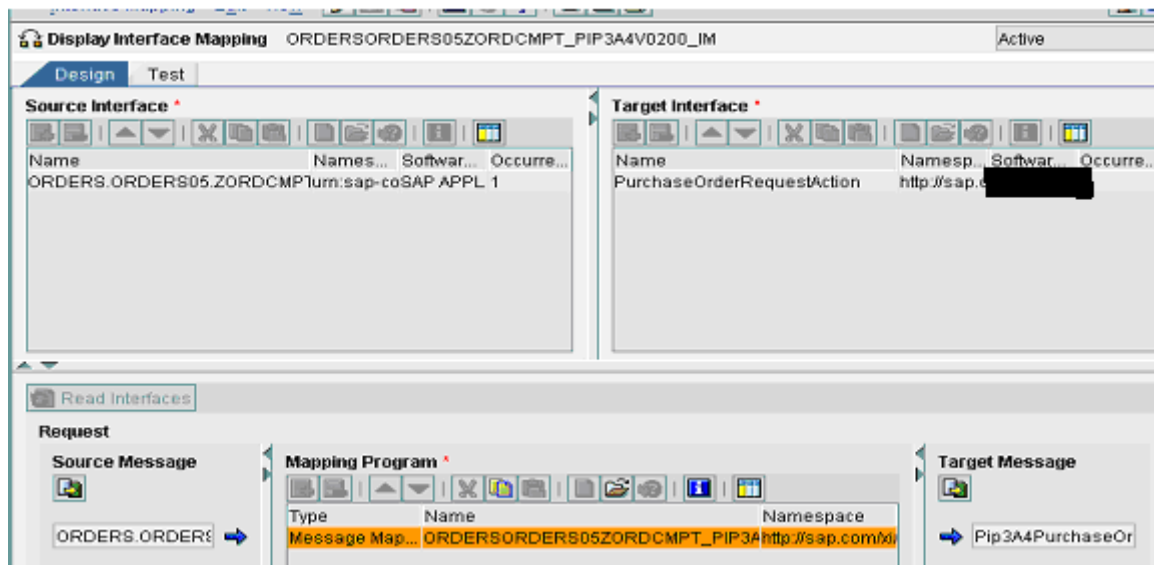
Message Mapping:

Perform the message mapping according to the specific requirement.



Interface Mapping:

Create the interface mapping and select the Source (ZORDCMPT) and Target (PIPSG3A4PurchaseOrderRequest) Interfaces. After giving the source and target interfaces click on read interfaces button and select the corresponding message mapping.



Activate all the IR objects. Integration Repository part is completed.

Integration Directory

Add the Business system or create the business service and configure the communication channel to that business system/service.

Sender Communication channel:

Here we do not require sender communication channel as well as sender agreement Since IDOC Adapter resides at ABAP Stack.

Receiver Communication channel:

Display Communication Channel Status: Active

Communication Channel: PurchaseOrderRequest_Receiver_CC

Party: [REDACTED]

Service: PIP3A4_V0200_Seller

Description: [REDACTED]

Parameters Identifiers Module

Adapter Type * RNIF http://sap.com/xi/XI/System SAP BASIS 6.40

Sender Receiver

Transport Protocol * HTTPS

Message Protocol * RNIF 2.0

Adapter Engine * Integration Server

Process Specification Target Advanced

Configuration Type Two-Action Asynchronous Request

Message Standard

Agency RosettaNet

Version 2.0

Location

Current [REDACTED]

Partner [REDACTED]

Message Exchange Settings

Number of Retries * 3

Time to Acknowledge Receipt * 0 Days 2 Hours 0 Minutes 0 Seconds

Time to Perform * 1 Days 0 Hours 0 Minutes 0 Seconds

For more information on communicational channel parameters check this link

<https://www.sdn.sap.com/irj/scn/go/portal/prtroot/docs/library/uuid/c0222aba-0516-2c10-67a9-d8d37af83861>

Adapter Type: RNIF11

Transport Protocol: HTTPS

Message Protocol: RNIF 2.0

Adapter Engine: Integration Server.

Note: In the Adapter engine either we can choose the Integration Server or Non central adapter engine.

Process Specification Tab

Configuration type: Two-Action Asynchronous Request.

Note: In the configuration type based on our requirement either we can choose Single-Action Asynchronous Request or Two-Action Asynchronous Request.

Message Exchange Settings

Number of Retries: This value represents the number of retries from the partner.

Time to acknowledge Receipt: This is the interval time between subsequent retries of Business Action messages in case an acknowledgement is not received from the partner.

Note: Time to acknowledge receipt is available only for receiver communication channel.

Time to Perform: This Value we have to take from the 'Time to Perform' column of the PIP specification's Business Activity Performance Controls table.

PIP Details	
Code *	3A4
Version *	V02.00
Business Transaction Activity *	Request Purchase Order
Requesting Action *	Purchase Order Request Action
Current Role *	Buyer
Partner Role *	Seller
Current Business Service Code *	Buyer Service
Partner Business Service Code *	Seller Service
Document Schema Specification *	3A4_MS_V02_00_PurchaseOrderRequest.dtd

Security Settings	
<input checked="" type="checkbox"/>	Sign Action Message
<input checked="" type="checkbox"/>	Sign Signal Message
<input checked="" type="checkbox"/>	Non-Repudiation of Origin and Content
<input checked="" type="checkbox"/>	Non-Repudiation of Receipt Acknowledgement

PIP Details

Code: PIP standard code.

Ex: 3A4

Version: This is available in the front page of the PIP specification and is shorter than the PIP Version.

Ex: V02.02 is the version identifier while V02.02.01 is the PIP version.

Business Transaction Activity: This value we have to take from the 'Activity Name' column from the PIP specification's Business Activity Descriptions table.

Requesting Action: This value we have to take from the Business Action in Functional Service View (FSV) column of the PIP specification's Business Action - Business Document Mapping table.

Current Role: This value we have to take from the corresponding 'From Role' element in the PIP specification corresponding to the currently executing PIP, Activity and Action.

Partner Role: This value we have to take from the corresponding 'To Role' element in the PIP specification corresponding to the currently executing PIP, Activity and Action.

Current Business Service code: This value we have to take from the corresponding 'From Service' element in the PIP specification corresponding to the currently executing PIP, Activity and Action.

Partner Business Service code This value we have to take from the corresponding 'To Service' element in the PIP specification corresponding to the currently executing PIP, Activity and Action.

Document Schema Specification: This field specifies the DTD of the corresponding action.

Note: This field is only available for the receiver communication channel.

Security Settings

Sign Action Message: This selection determines the action message is required to be signed before sending.

Sign Signal Message: This selection determines the signal message is required to be signed before receiving.

Non-Repudiation of Origin and Content: We may check or uncheck depending on the standard.

Non-Repudiation of Receipt Acknowledgement: We may check or uncheck depending on the standard.

In the Target Tab

The screenshot shows a configuration window with two main sections: 'Transport Parameters' and 'Authentication'.

Transport Parameters:

- URL ***: A text field containing a redacted value.
- Persist Duration**: A set of spinners for 'Days' (30), 'Hours' (0), 'Minutes' (0), and 'Seconds' (0).

Authentication:

- Authentication Mode**: A dropdown menu set to 'Certificate Logon'.
- Keystore View ***: A text field containing 'service_ssl'.
- Keystore Entry ***: A text field containing a redacted value.

Transport Parameters

URL: Enter the partner address to which the adapter sends the RosettaNet Signal Message.

Ex: https://test.com

Persist Duration: Based on this Duration time during which the message will be persisted on the messaging system store.

Ex: 30 Days

Authentication

You can enter values here are determined by the Transport Protocol entered earlier.

Authentication Mode: Here we have two options either Username/Password or Certificate Logon. If you choose Certificate Logon, specify the values for 'Keystore Entry' and 'Keystore View'.

Keystore View: You can enter the path to key store entries in the J2EE engine containing the private key of the XI party.

Ex: SslService.

Keystore Entry: You can enter the name of private key of the XI party.

Ex: SslCredentials.

Receiver Determination, Interface Determination and Receiver Agreement

These steps should be created which are very straight forward.

Receiver Determination:

Display Receiver Determination Status: Active

Sender

Party: _____

Service: _____

Interface: ORDERS.ORDERS05.ZORDCMT

Namespace: urn:sap-com:document:sap:idoc:messages

Receiver

Party: *

Service: *

Description: _____

Type of Receiver Determination

Standard Extended

Configured Receivers

Condition	Party	Service
{ZORDCMT/IDOC/EDI_DC40/RCVPRN = 10...	_____	PIP3A4_V0200_Seller

If No Receiver Is Found, Proceed as Follows:

Terminate Message Processing with Error (Restart Possible)

End Message Processing Without Error (Restart not Possible)

Continue Message Processing with the Following Receiver: Party: _____ Service: _____

Configuration Overview for Receiver Determination

Receiver (Partner Service) ^	Interface Mapping	Receiver Agreement (Communication Channel)
_____ PIP3A4_V0200_Seller		
PurchaseOrderRequestAction	ORDERSORDERS05ZORDCMT_PIP3A4V0200_IM	PurchaseOrderRequest_Receiver_CC

Interface Determination:

Display Interface Determination Status: Active

Sender

Party: _____

Service: _____

Interface: ORDERS.ORDERS05.ZORDCMT

Namespace: urn:sap-com:document:sap:idoc:messages

Receiver

Party: _____

Service: PIP3A4_V0200_Seller

Description: _____

Type of Interface Determination

Standard Enhanced

Quality of Service

Maintain Order At Runtime

Configured Inbound Interfaces

Inbound Interface		Interface Mapping		
Name	Namespace	Name	Namespace	Software Component Version
1 PurchaseOrderRequestActi	http://sap.com/xi/RosettaNe	ORDERSORDERS05ZORDCMF	http://sap.com/xi/RosettaNet/PIP	_____

Receiver Agreement:

Display Receiver Agreement Status **Active**

Sender

Party _____

Service _____

Receiver

Party _____

Service PIP3A4_V0200_Seller

Interface PurchaseOrderRequestAction

Namespace http://sap.com/xi/RosettaNet/PIP3A4_V0200

Description _____

Receiver Communication Channel * PurchaseOrderRequest_Receiver_CC

Header Mapping

Sender Party _____

Sender Service PIP3A4_V0200_Buyer

Receiver Party _____

Receiver Service _____

Security Settings

Trust Model Direct

Encryption Settings

Level None

Current Certificate for Signing

Algorithm SHA-1

Keystore View * service_ssl

Security Settings

Algorithm SHA-1

Keystore View * service_ssl

Keystore Entry * _____

Partner Certificate for Signing

Keystore View * TrustedCAs

Keystore Entry * _____

Activate all the ID objects; with this we have finished our Integration Directory Configuration.

Related Content

<http://rosettanet.org>

http://help.sap.com/saphelp_nw70/helpdata/EN/2c/7198403de08368e10000000a1550b0/content.htm

http://help.sap.com/saphelp_nw70/helpdata/EN/65/fc934258a5c76ae10000000a155106/content.htm

http://help.sap.com/saphelp_nw70/helpdata/EN/8d/759342b2f2c46ae10000000a155106/content.htm

http://help.sap.com/saphelp_nw70/helpdata/EN/2c/7198403de08368e10000000a1550b0/content.htm

http://help.sap.com/saphelp_nwpi71/helpdata/en/14/ef2940cbf2195de10000000a1550b0/frameset.htm

http://help.sap.com/saphelp_nw70/helpdata/EN/e7/1c934258a5c76ae10000000a155106/frameset.htm

<https://www.sdn.sap.com/irj/scn/go/portal/prtroot/docs/library/uuid/709a019d-b3e6-2a10-b79d-f964136c1cb5>

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