IDOC_AAE To File with all Configurations

September 6, 2012 | 2,266 Views |

Swathi Bobbity
more by this author

SAP HANA Cloud Platform Integration for process services

Context

The main purpose of this document is for leveraging the new feature i.e., IDOC_AAE (Java stack IDOC adapter) introduced in SAP PI 7.3 where as ABAP stack IDOC adapter was used till PI 7.11 version.This document will be useful who want to go with single stack from PI 7.3/PI 7.31 (AEX) and connect with SAP ECC using IDOC adapter, even dual stack (ABAP+Java) can use this IDOC_AAE adapter to connect to SAP apart from ABAP stack IDOC adapter.

Audience

SAP PI consultants, who are new to PI 7.3/7.31/AEX, want to leverage the IDOC_AAE adapter (Java stack)

Issues

1)Unable to post idoc into ECC from PI(ABAP Stack).

Error:Authorisation issue in sm58.

Solution:S_IDOCCTRL and B_ALE_RECV roles added by securities team

2) Error in sm58 on posting idoc from ECC(Using Java AAE)

Error: Bean IDOC_INBOUND_ASYNCHRONOUS not found on host

Solution: Please make sure that the user has sufficient authorizations. You need the S_IDOCDEFT (EDI_TCD = “WE30”; ACTVT = “03”) authorization.

3) Problem in port setting (Not mandatory)

The default Sender port field is not mandatory but sometimes if you face issue then go for the below mentioned solution

Solution:Go to NWA

A. Path:Configurations ->infrastructure->application resources
B. Javaidoc resource adapter ->properties tab

Set the default Sender port field of your PI system

4) Authorisation issues

Error : No RFC authorization for function module IDOCTYPE_READ_COMPLETE.

Solution: You need to give to Service User, the right roles and authorization object to execute RFC function

Contents of the blog

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a)Configurations in NWA.

b)Configurations at the Sender System (SAP ECC).

c)Design the Scenario in the Enterprise Service Repository.

d)Configure the Scenario in Integration Directory.

e)Testing the scenario.

Introduction

The purpose of this document is to show all the steps needed to configure an IDoc_AAE to file scenario

This document will help SAP PI consultants to understand the ALE (Application Link Enabling) and NWA settings needed to complete this scenario.

Systems involved in developing the scenario

Sender system : SAP ECC (SAPDEV_100) Client No -100

PI system : SAP NETWEAVER PI 7.3 (PIDEV_100)) Client No-100

Receiver : Local File Directory (NFS)

Brief Overview of Configurations

a) Configurations in NWA

Settings in Application Resources

Create JCO RFC Provider destination

b) Configurations at the Sender System (SAP ECC)

Create RFC Destination

Create Port

Create Logical System

Create Partner Profile

c) Design the Scenario in the Enterprise Service Repository

Import the Required IDoc from Sender SAP ECC System

Create Data Type for File structure

Create Message Type for DataType

Create Service Interface

Create Message Mapping doing simple one to one mapping

Create Operation Mapping

d) Configure the Scenario in Integration Directory

Assign Business System for sender ECC

Create Configuration Scenario

Create Receiver Business component

Create Sender Communication Channel

Create Receiver Communication Channel

Create Integrated Configuration

e) Testing the scenario

Trigger the IDoc from ECC

Check the triggered idoc message in PI Adapter engine in RWB

Check whether the Message is received in your file system.

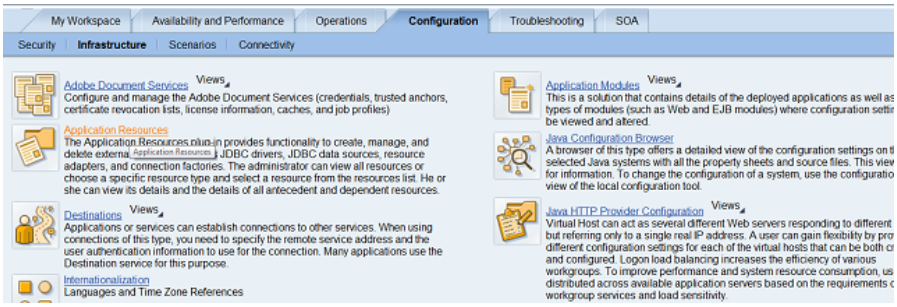
Detailed description of the steps

a) Configurations in NWA

Open NWA page

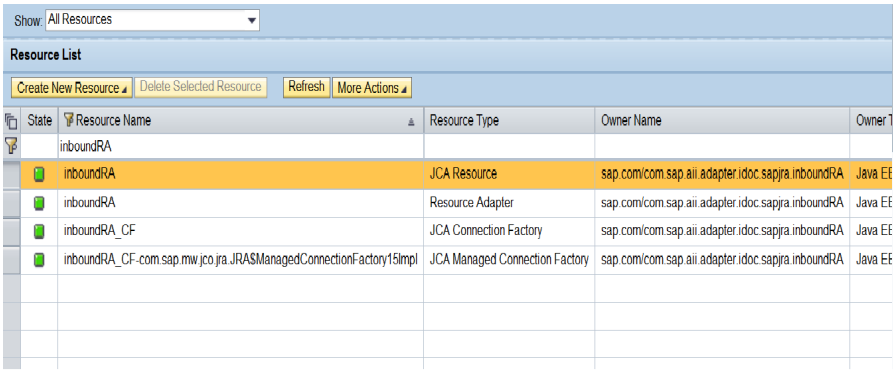
1) In NWA navigate to the below path:

Configuration –> Infrastructure —-> Application Resources



Enter “inboundRA” in the Resource Name and click on filter icon

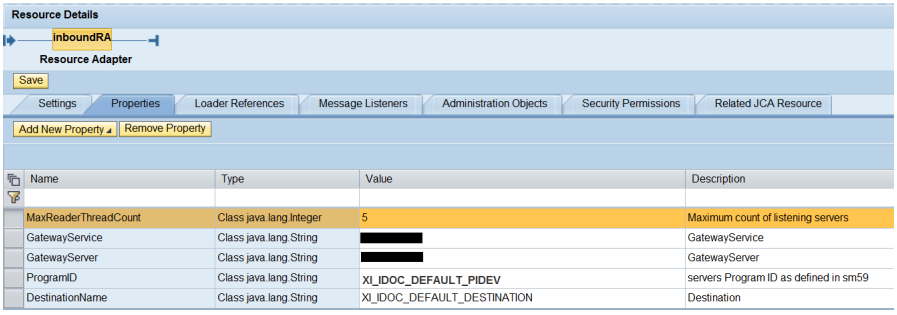
Select Resource Adapter, inboundRA



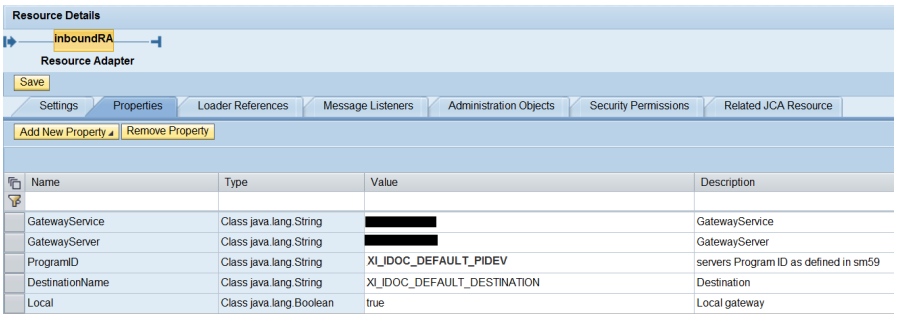
Click on “Properties”

Enter a value for “MaxReaderThreadCount” between 5 to 10

Enter “true” for Local



XI_IDOC_DEFAULT_PIDEV,PIDEV refers to the PI system ID.



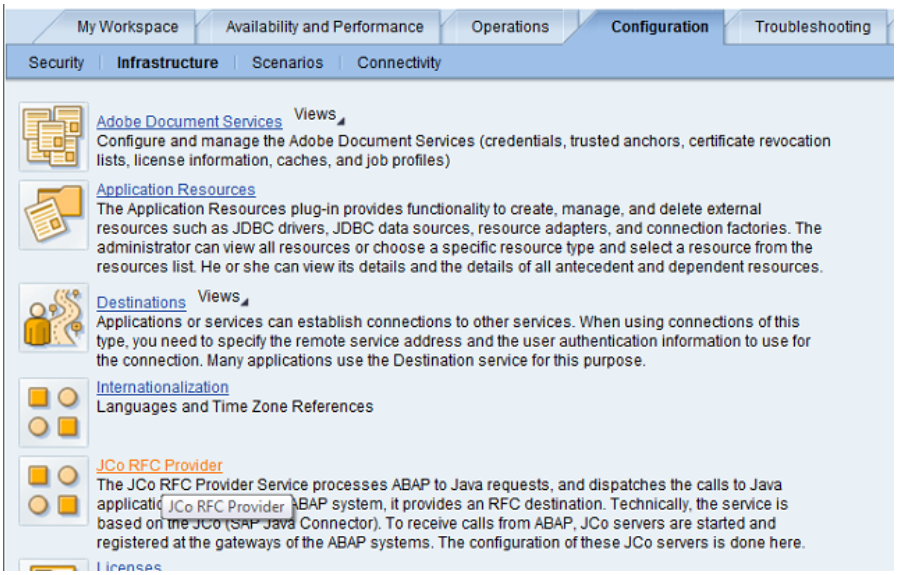
The ProgramID visible here, XI_IDOC_DEFAULT_ PIDEV, must be used when creating the RFC destination of type T on the ECC system

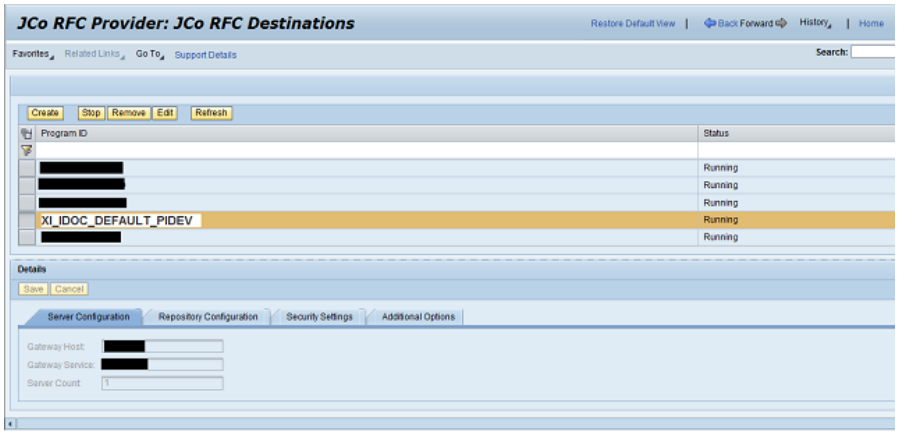
2) Create JCO RFC Provider destination

In NWA navigate to the below path:

Configuration –>Infrastructure –>JCO RFC Provider

Create JCO RFC Provider destination with name XI_IDOC_DEFAULT_ PIDEV in NWA where PIDEV refers to the PI System ID.





Enter Gateway host and gateway service of your PI system.

b)Configurations at the Sender System (SAP ECC)

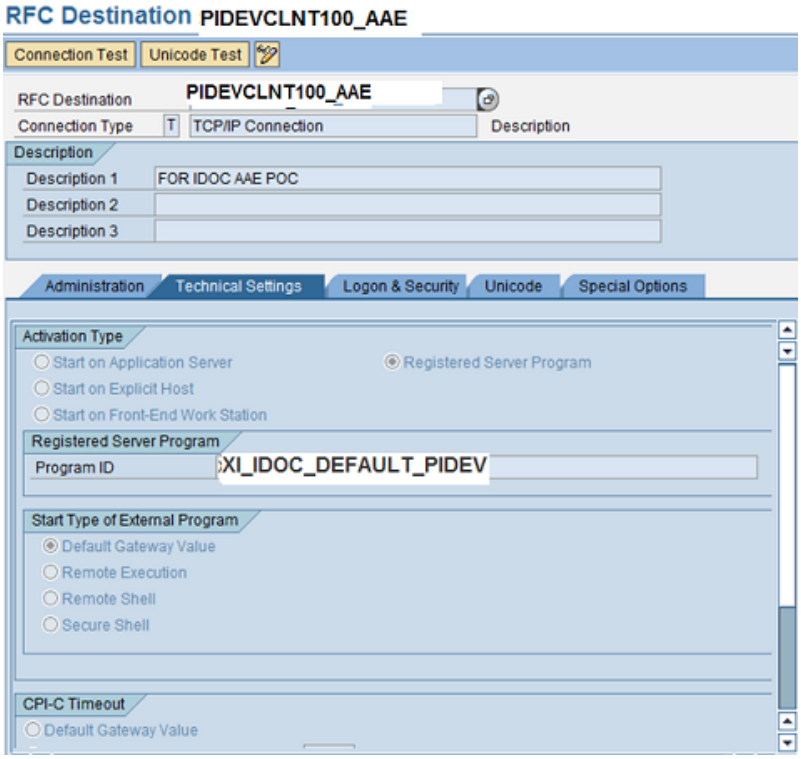
This section describes all the configurations needed in the Sender SAP System (ECC) for sending an IDoc to PI

1. Create RFC Destination

On your SAP ECC system in order to send the IDOCs you need to create an RFC destination of type T (TCP/IP)

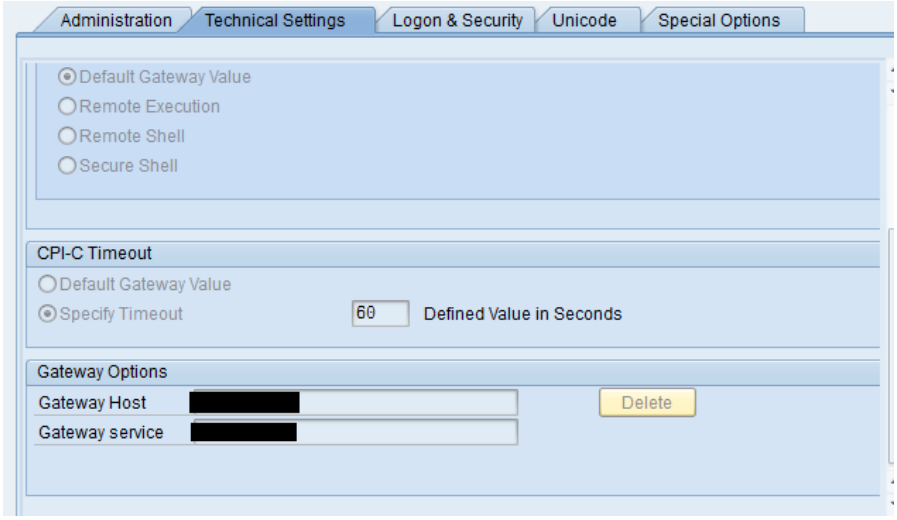
Go to Transaction SM59 create a new RFC destination of Type T

1. Select the radio button Registered Server Program
2. In the program ID enter the program ID from inboundRA of NWA(explained in the later part of the document)
3. Enter the gateway host and gateway service of your PI server



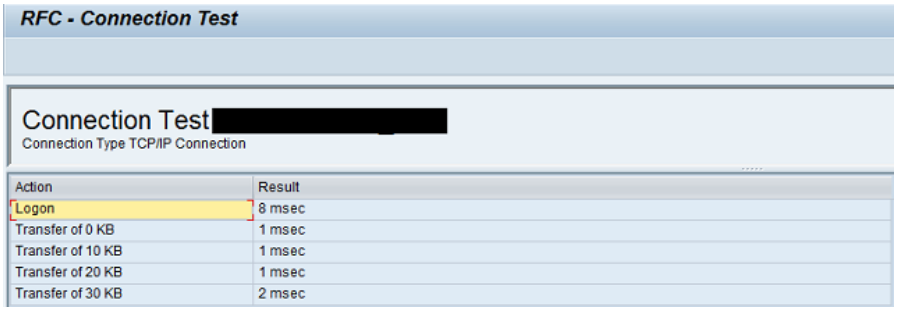
In PIDEVCLNT100_AAE and XI_IDOC_DEFAULT_PIDEV , PIDEV refers to the PI system ID.

Scroll down and fill the following details



Enter Gateway host and gateway service of your PI system.

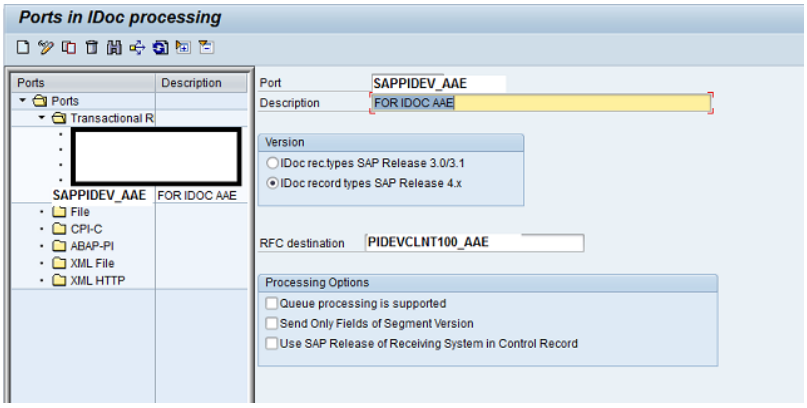
After you configure that you should be able to check the configuration using the test connection button on the RFC destination.



2. Create Port

Goto Transaction WE21

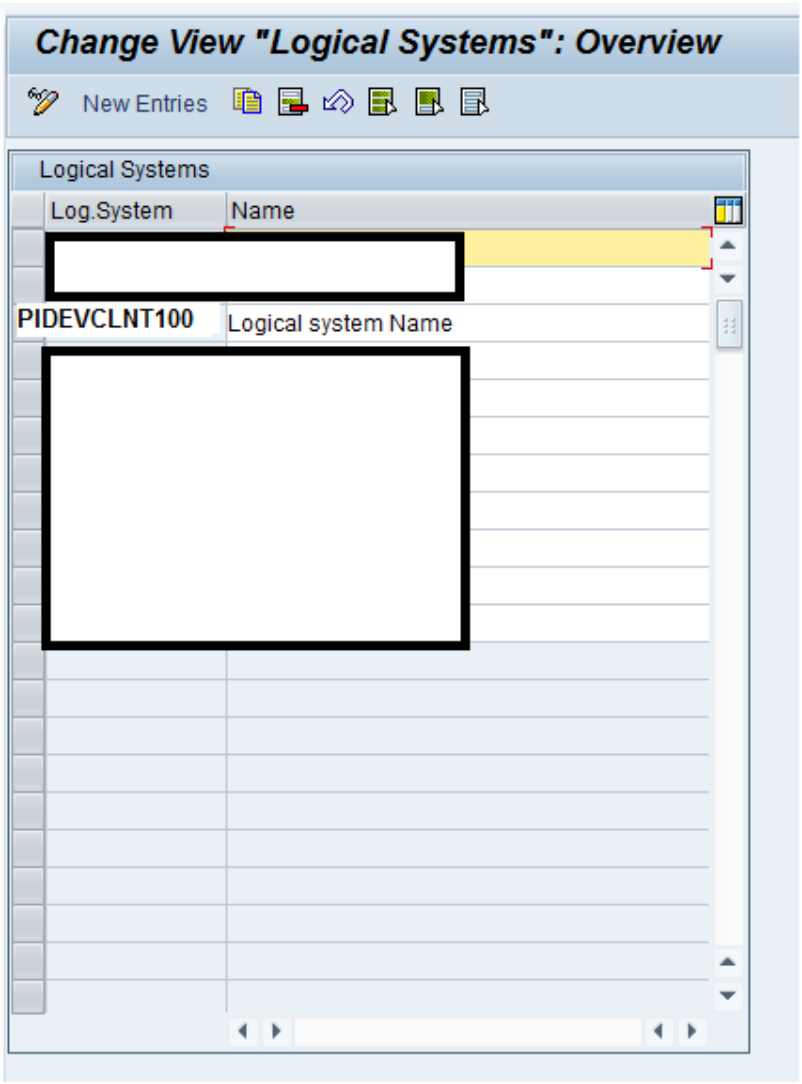
1. Click on the Transactional RFC from Ports (left tree panel)
2. Click on Create Button
3. Give Port Name(SAP<SID>)here or select generate port name and click on continue. In my example I have given as SAPPIDEV _AAE(PIDEV is PI System Id and _AAE for better understanding)
4. Give the description of the port and select RFC destination of type T created above. Now click on save.



3. Create Logical System

Goto Transaction BD54

1. Click on create Button
2. Give name for your Logical System PIDEVCLNT100(<SID>CLNT<ClintNo.>)where PIDEV is PI System ID and 100 is client Number .
3. Now click on save

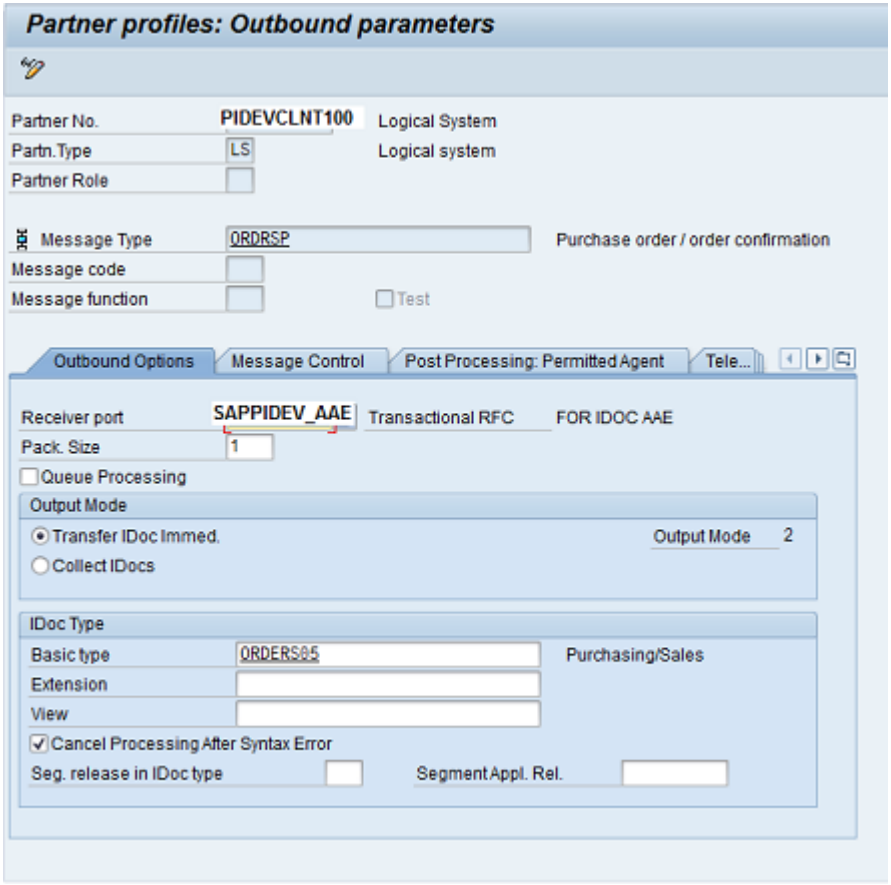


4. Create Partner Profile

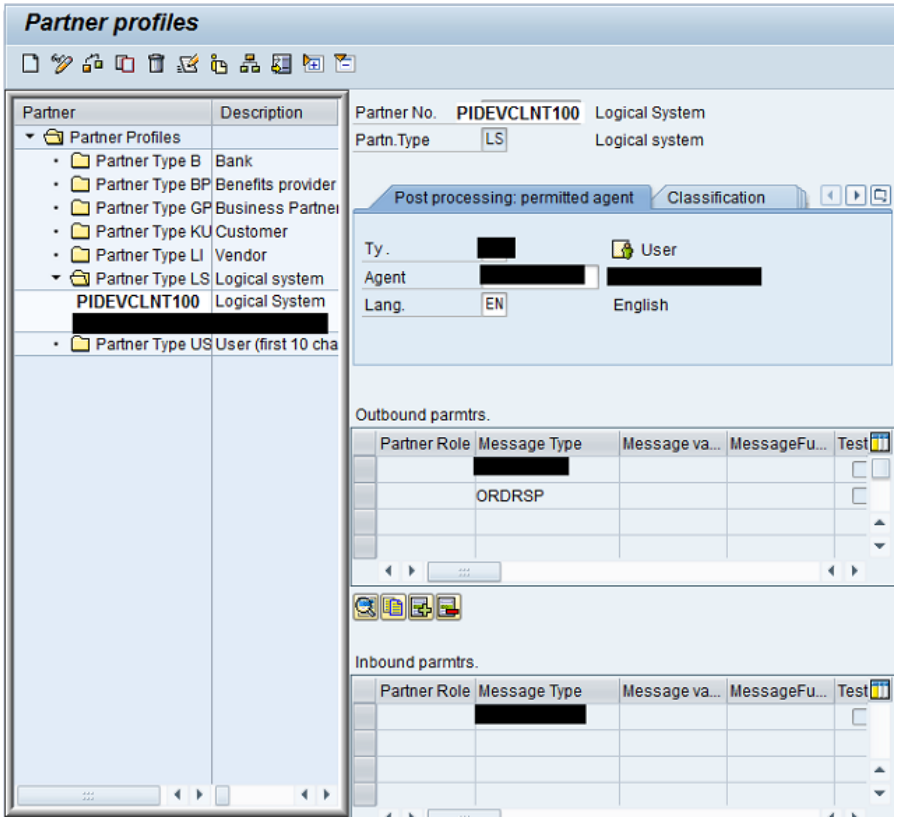
Create Partner Profile with outbound parameter (WE20) to be send to the PI receiver system

1. Go to Transaction WE20
2. Select Partner Type LS
3. Click on Create Button
4. Give Logical System Name which we have just created in step 3 as Partner No, Partner Type should be LS , Agent (some valid data) ,Language (EN). Now click on Save
5. Now create an Outbound Parameter.

- Select the required Message Type.
- Select the Receiver Port (which we have created in step 2 SAPPIDEV _AAE in this example).
- Select Transfer IDoc Immediately option in Output mode for Immediate Testing. Select Basic Type Save.
- Enter all credentials in the post processing permitted agent tab.



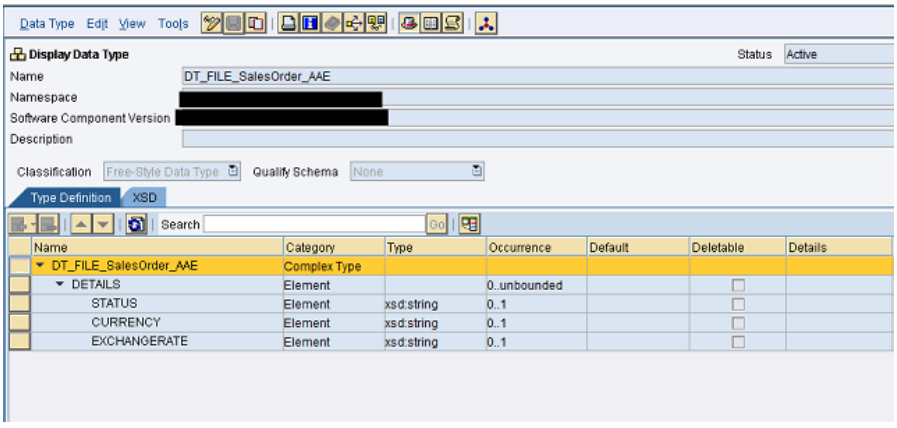
We can see Message Type is added in the outbound parameter.



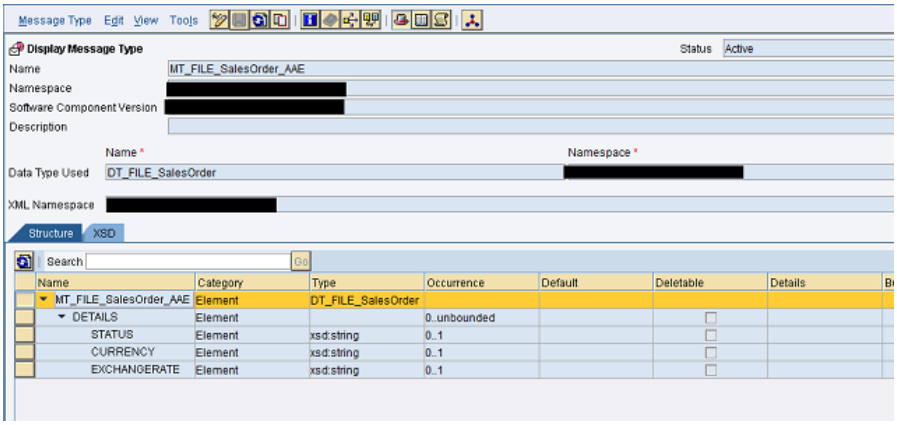
c) Design the Scenario in the Enterprise Service Repository

1) Import the Required IDoc from Sender SAP ECC System

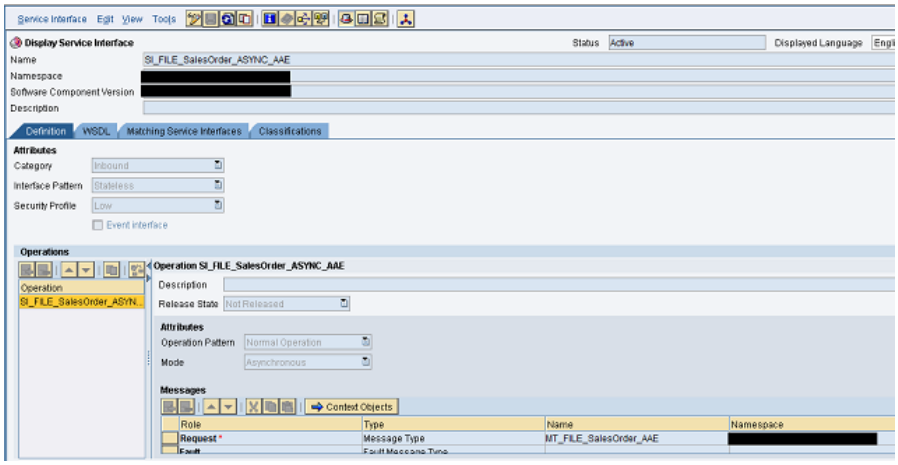
2) Create Data Type for File structure



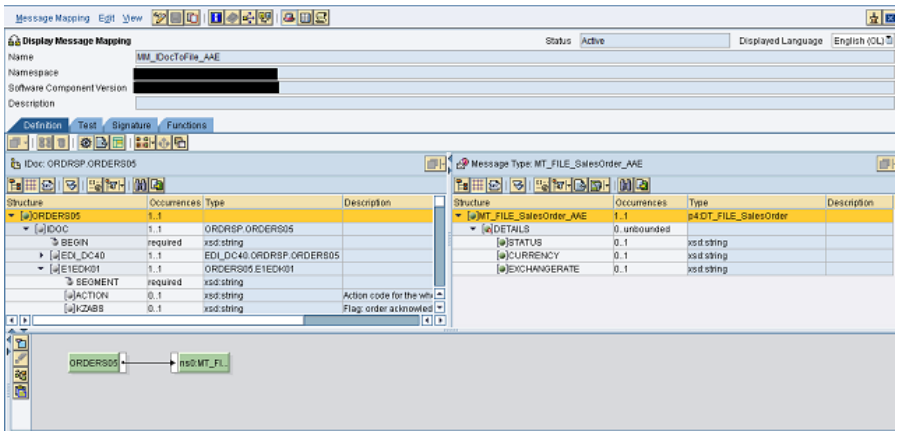
3) Create Message Type for DataType



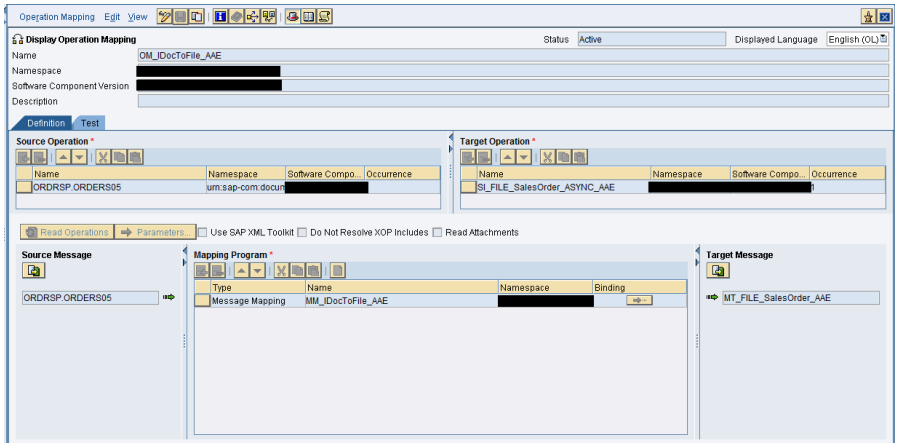
4) Create Inbound Service Interface for File



5) Create Message Mapping doing simple one to one mapping



6) Create Operation Mapping



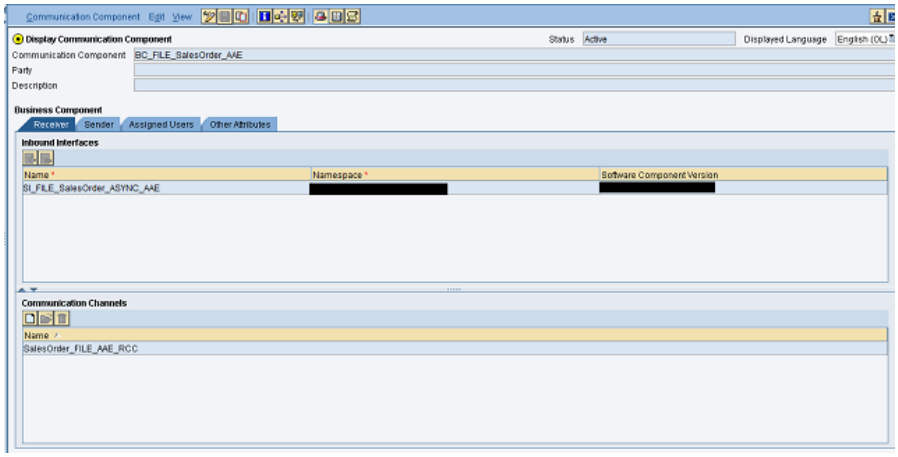
d)Configure the Scenario in Integration Directory

Prerequisites

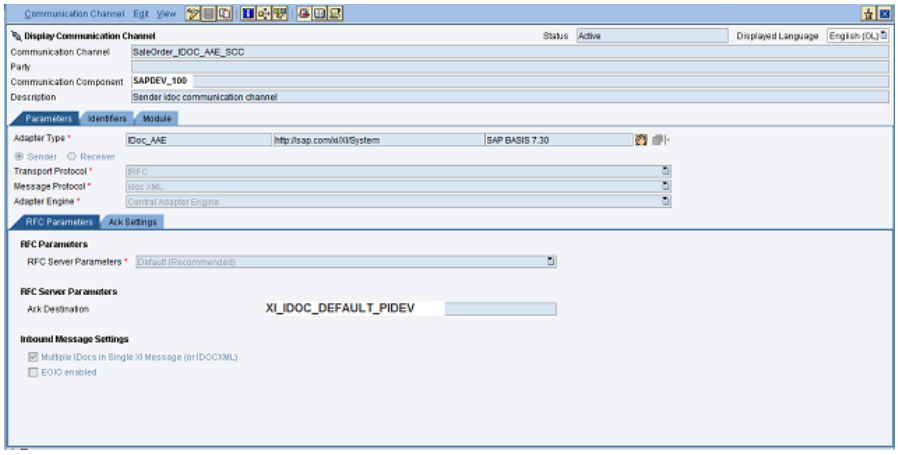
1)Assign Business System for sender ECC

2)Create Configuration Scenario

3)Create Receiver Business component



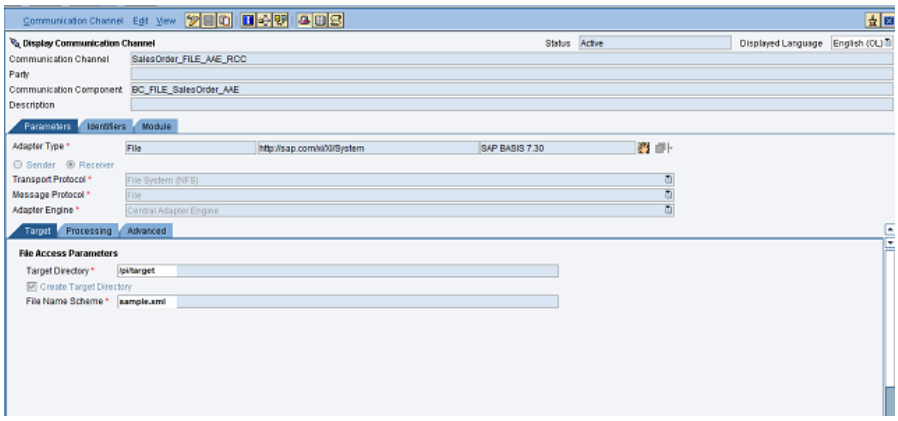
4)Create Sender Communication Channel using IDOC_AAE adapter



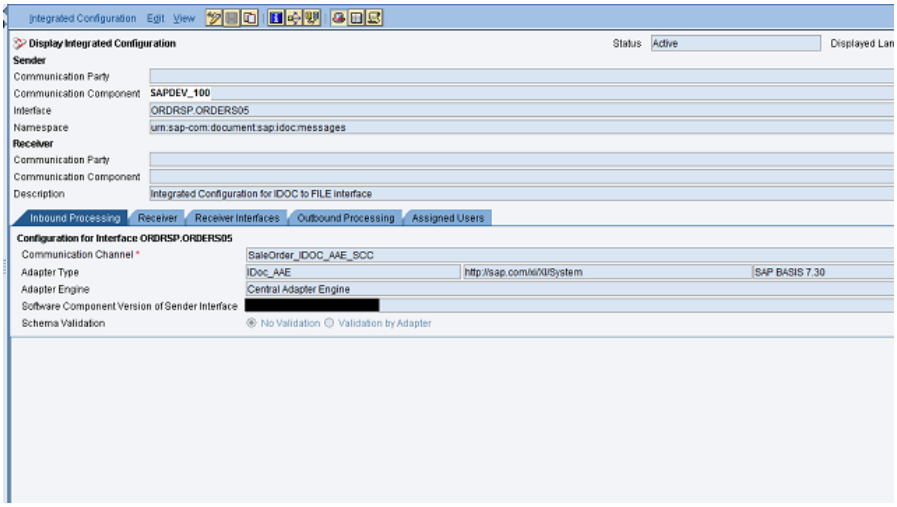
Select Default(recommmended) in RFC Server Parameters

The Ack Destination can be left blank or the value given as above

5)Create Receiver Communication Channel



6)Create Integrated Configuration



Select appropriate sender and receiver components, channels in different tabs of integrated configuration.

e)Testing the scenario

1)Trigger the Idoc from ECC system.

- Enter the tcode we19 to trigger the idoc
- Search with message type of idoc(ORDRSP) that you want to trigger, and then select the idoc type (ORDERS05)
- We will get Idoc with all its segments
- Click on the control segment that is EDIDC in this idoc and fill all the sender and receiver details like Port,Partner No and partner type.
- Then select any other data segment and populate values in the idoc
- We will get a message as IDoc sent to SAP system or external program
- After entering values click on the tab standard outbound processing on the top to trigger the idoc.

2) Check the triggered idoc message in PI Adapter engine

Navigate to Runtime work bench

Go to Message Monitoring Link, Select Adapter Engine from the combo box Messages from component and click on display button

You can see the message here with success status

3) Check whether the Message is received in your file system.

Since we have selected NFS in our channel, we check it in al11 tcode in PI system.

Go to the target directory that you specified in your channel. You can find your file being placed there.

Alert Moderator

28 Comments

You must be Logged on to comment or reply to a post.

Alejandro Ferrara

November 19, 2012 at 4:53 pm

Good guide. I followed all steps and Idocs are getting stucked in ABAP. SM58 says **Error: Bean IDOC_INBOUND_ASYNCHRONOUS not found on host** as you said in Issues (2).

Could you tell me wich user must I check the authorizations? You don't specify it in the solution.

Thank you in advance.

Swathi Bobbity Post author

November 21, 2012 at 9:28 am

The user who is trying to post the idoc from ECC should have sufficient authorisations.

Khadim Diouf

July 5, 2016 at 4:03 pm

which user do you mean? Do you mean my own user while testing via WE19?

Regards
Khadim Diouf

Sunil Mavachee

January 23, 2013 at 3:41 am

good work swathi, keep updated.!

regards,
sunil m

Carlos Ocampos

April 10, 2013 at 10:32 am

Good work!
But just one comment:
You don't need to do the second step in NWA.
2) Create JCO RFC Provider destination

JCO RFC Provider destination is not neccesary for this config.

Kind regards.

Sascha Wenninger

April 15, 2013 at 5:03 am

That's correct. The JCo RFC Provider is not needed, and this setup works without it.

Bhargava krishna Talasila

May 21, 2013 at 9:07 am

Good work Swathi, It helped me allot….

Bhargava krishna Talasila

June 7, 2013 at 5:43 am

Hi Swathi,

i have one query..

As you mentioned in b) step 1) RFC destination

Enter the gateway host and gateway service of your PI server.

I think this should be ECC host and gateway service.

im getting error ” Program id not registered “.

please Confirm me..

Regards
Bhargava krishna

Senthilnathan Natarajan

July 12, 2013 at 2:41 pm

hi Bhargava,
I am getting the same error “Program id not registered” when I test in ECC SM59.
How did you solve it?
Many Thanks in adavnce.

Senthil

Bhargava krishna Talasila

July 13, 2013 at 3:09 am

Did you register the program id in SAP Gateway and in NWA?

Also you need to provide ECC gateway host and service details in NWA –> Application resources–> inbound RA –> resource adapter –>properties..

Check that.. once.. hope it will work..

Regards
Bhargava krishna

Senthilnathan Natarajan

July 13, 2013 at 3:54 am

Hi Krishna,
After providing the ECC gateway host/service in NWA->properties, I am able to get the RFC detsination working.
Thanks for pointing me in the right direction.

Senthil

Muniyappan Marasamy

July 9, 2013 at 4:50 pm

Hi Swathi,

This is one well explained superb blog. thanks for sharing.

Regards,
Muniyappan.

Ambrish Mishra

July 9, 2013 at 5:03 pm

Very detailed and well-written.

cheers,
Ambrish

Jorge Huedo

August 21, 2013 at 3:40 pm

Hi guys,
I'm trying to perform this configuration but I'm stuck with the RFC Destination in ECC.

Let's recap what I have done:

- Create Destination in PI (XI_IDOC_DEFAULT_DESTINATION)
- Config the inboundRA
  - 5 and true, and the PI Gateway (I'm not 100% sure about this).
  - Also our program id XI_IDOC_DEFAULT_P21
- Create destination in sm59 type T using our program id and as gateway the pi gateway.

And I'm having the next error:

Logon Connection Error
Error Details Error when opening an RFC connection
Error Details ERROR: access denied for tp XI_IDOC_DEFAULT_P21 from host ecchost
Error Details LOCATION: SAP-Gateway on host P21CE73 / 3301
Error Details COMPONENT: SAP-Gateway
Error Details COUNTER: 278
Error Details MODULE: D:/depot/bas/740_REL/src/krn/si/gw/gwxxreg.c
Error Details LINE: 667
Error Details RETURN CODE: 748
Error Details SUBRC: 0
Error Details RELEASE: 740
Error Details TIME: Wed Aug 21 16:29:23 2013
Error Details VERSION: 2

I know that the program id is working because if I change it return that the program id is not valid, also the technical user I'm using has SAP_ALL so it shouldn't be a problem.

Any ideas?
Thanks.
Jorge

Bhargava krishna Talasila

August 21, 2013 at 4:27 pm

Hi Jorge,

you need to provide ECC gateway host and service details in NWA –> Application resources–> inbound RA –> resource adapter –>properties..

It is connection issue, re-check your gateway host and service details.

Please check it once.

Regards
Bhargava krishna

Satish Dhanalakoti

October 16, 2013 at 10:44 pm

Hi,

We too faced the same issue and we fixed it by modifying the Reginfo file of PI and ECC system.

By definition, the Gateway host and service should be of PI server only in NWA and in ECC's RFC.

Please make the changes in Reginfo file to allow the program-id to be registered and accessed in ECC.

Regards,
Satish Dhanalakoti

Jorge Huedo

October 17, 2013 at 8:15 am

Thanks Satish,
We found that from PO 7.4 the security in gateway is activated by default.
We had two diferents PIs one in 7.3.1 and another in 7.4 and with the default installation was working in the 7.3.1 and not in the 7.4.

We set the parameter gw/acl_mode =
0 in the PO box worked fine.
Thanks
Jorge

Arun Kumar

January 11, 2014 at 11:57 pm

Good document .
As already a couple of colleagues pointed out, no need to set up JCO RFC provider .
Program id set in InboundRA adapater properties will be used for setting up TCP/IP destination in ECC side
Gateway service of PI should work just fine (in the adapter properties setting local gateway property ;true') as long as the gateway service name is specified correctly with PI host name and ACL parameter is set to allow registerign services and using externally
Regards
Arun

Zhang Chao

January 21, 2014 at 1:51 am

So clearly!

RAVI REDDY

March 3, 2014 at 5:40 am

Very well explained……

thanks & Regards
E. RC reddy

jafer shaik

March 6, 2014 at 12:29 pm

I have done all the NWA CONFIGURATIONS,I am confused while triggering the IDOC through WE19 T.code what we have to give the Sender and Receiver PORT,Partner No for trigerring. Please help me out this is a IDOC_AAE to FILE scenario Single stack SAP PI 7.3

Stenish Peter S

April 29, 2014 at 1:43 pm

Wow! Very nice blog. Thanks for sharing 🙂

Aditya Sharma

May 19, 2014 at 5:21 pm

The most important thing missing is integrated configuration.Definition of inbound/outbound interfaces in business component and systems is missing too.
It would have been better because without it still some hit and trial has to be done.

Jignesh Shah

August 14, 2014 at 4:16 am

Hi ,

Nice blog!!

In ABAP Stack we have the metadata load via trasaction, how we can do the metadata upload in 7.31 java stack.

durga gidugu

October 7, 2014 at 3:25 pm

I think I'm late to the party, looks like the MaxReaderThreadCount plays crucial role. In my case we had IDOC's stuck in SM58 and RFC to PI server was failing with erro "PROGRAM REGISTER FAILED"

The value of ThreadCount for the inboundRA was set to 5 which was earlier 0, restarted the services and it works all fine. Also gw/acl_mode parameter to be set on PI server

BTW.. good blog swathi.!

raja sekhar modu

October 27, 2014 at 7:08 am

hi swathi

very nice page about idoc_aae.
keep posting about single stack scenarios. want to learn new things .

Thanks in advance.

chandar t

October 29, 2014 at 10:44 am

Hi Swathi,

Thanks for the nice blog. Can you please carify on BD64, model veiw controller setting is required here or not?

Thanks,
Chandar T

Philomena steffy

May 2, 2016 at 10:45 am

Hi Swathi,

I have a doubt of what needs to be filled in sender and receiver information while triggering outbound IDoc(we19).

Regards,
Philo