IDoc to File Scenario

Pre- requisite to start this development-

Integration Repository - Software Components defined for Sender ECC System and Receiver File System A.

Integration Directory – Business System for ECC sender needs to be defined.

Business Logic behind this development

Sender (ECC) system will Trigger an Idoc to PI.

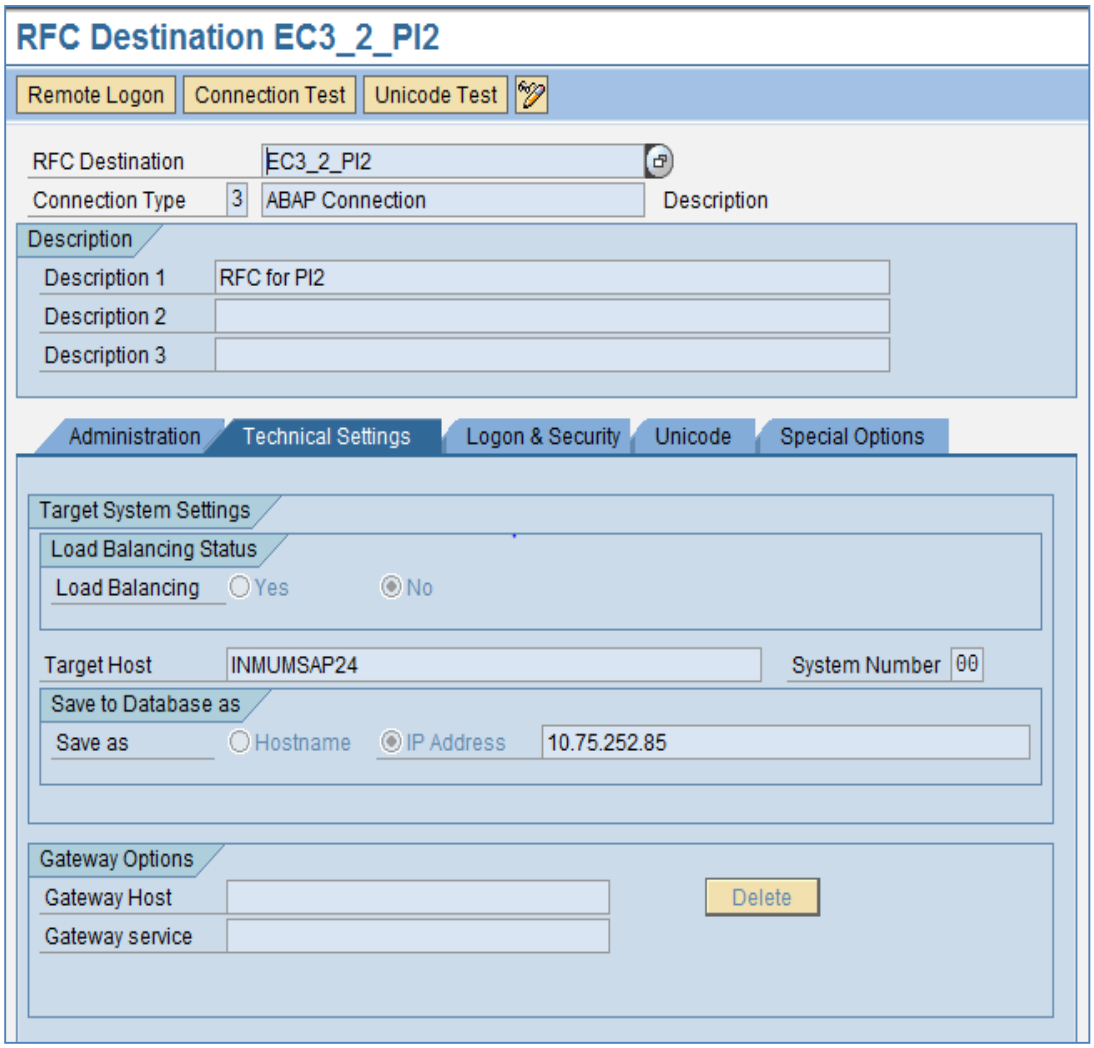
PI will perform the basic transformation/mapping.

The result of mapping needs to be send to the Receiver (File) system as XML File.

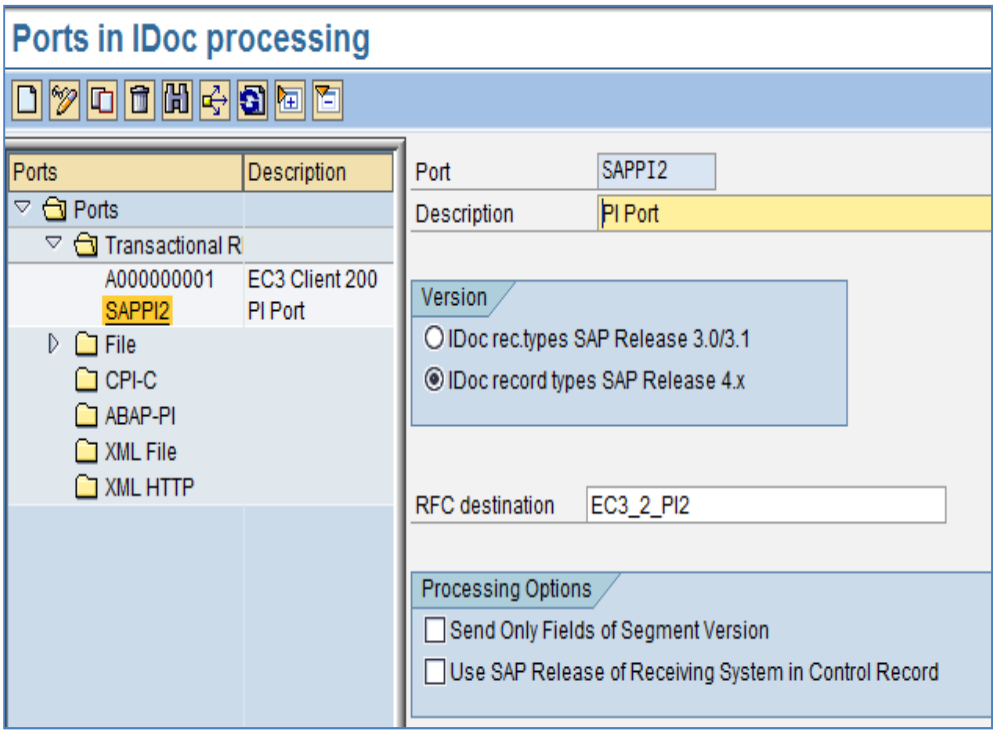
Idoc Configuration

In ECC system -

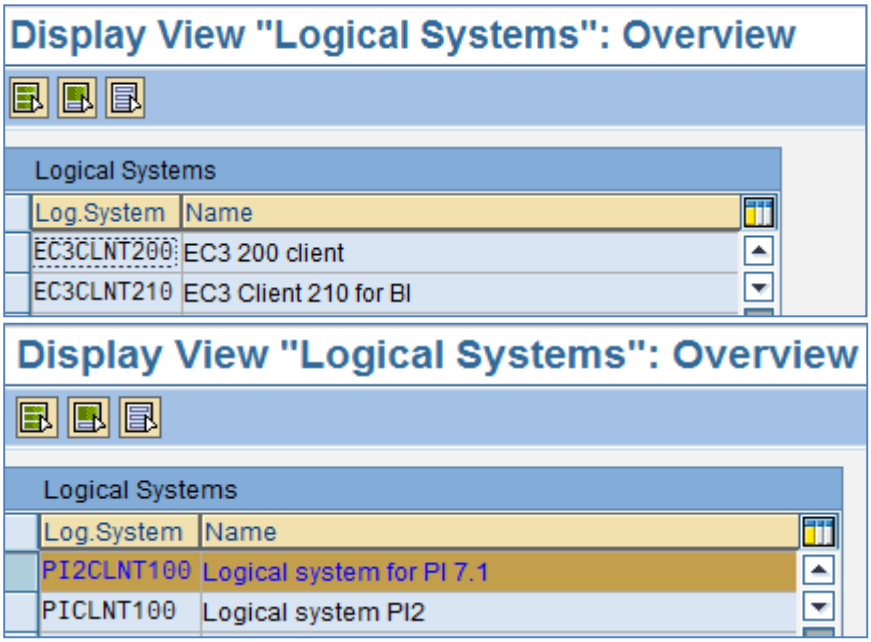
1. Using T-code SM59, create an RFC(ABAP connection) for connecting to PI system as under-



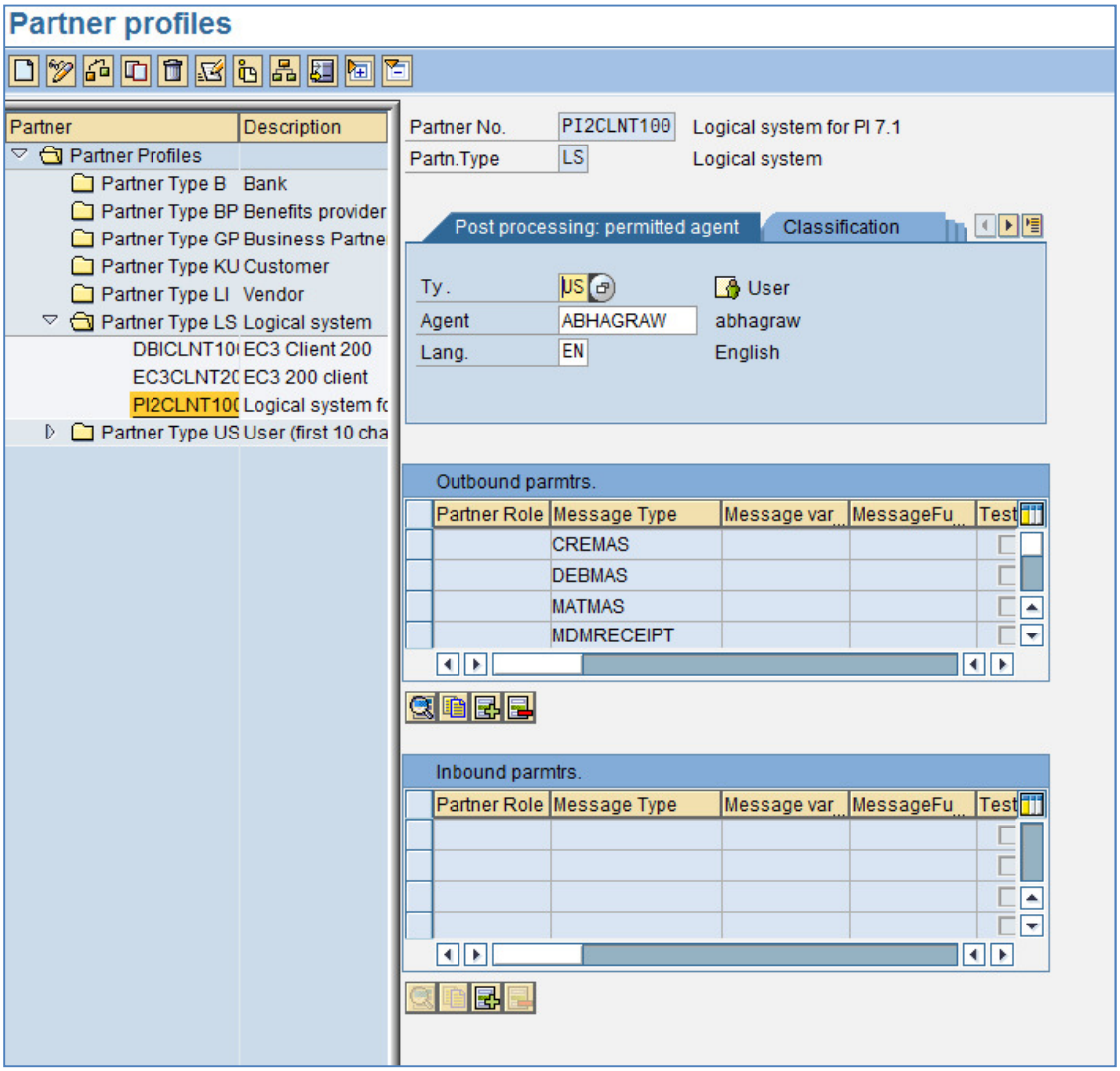
2. Using T-code WE21, create a port(Transactional RFC) and add the RFC destination defined above –

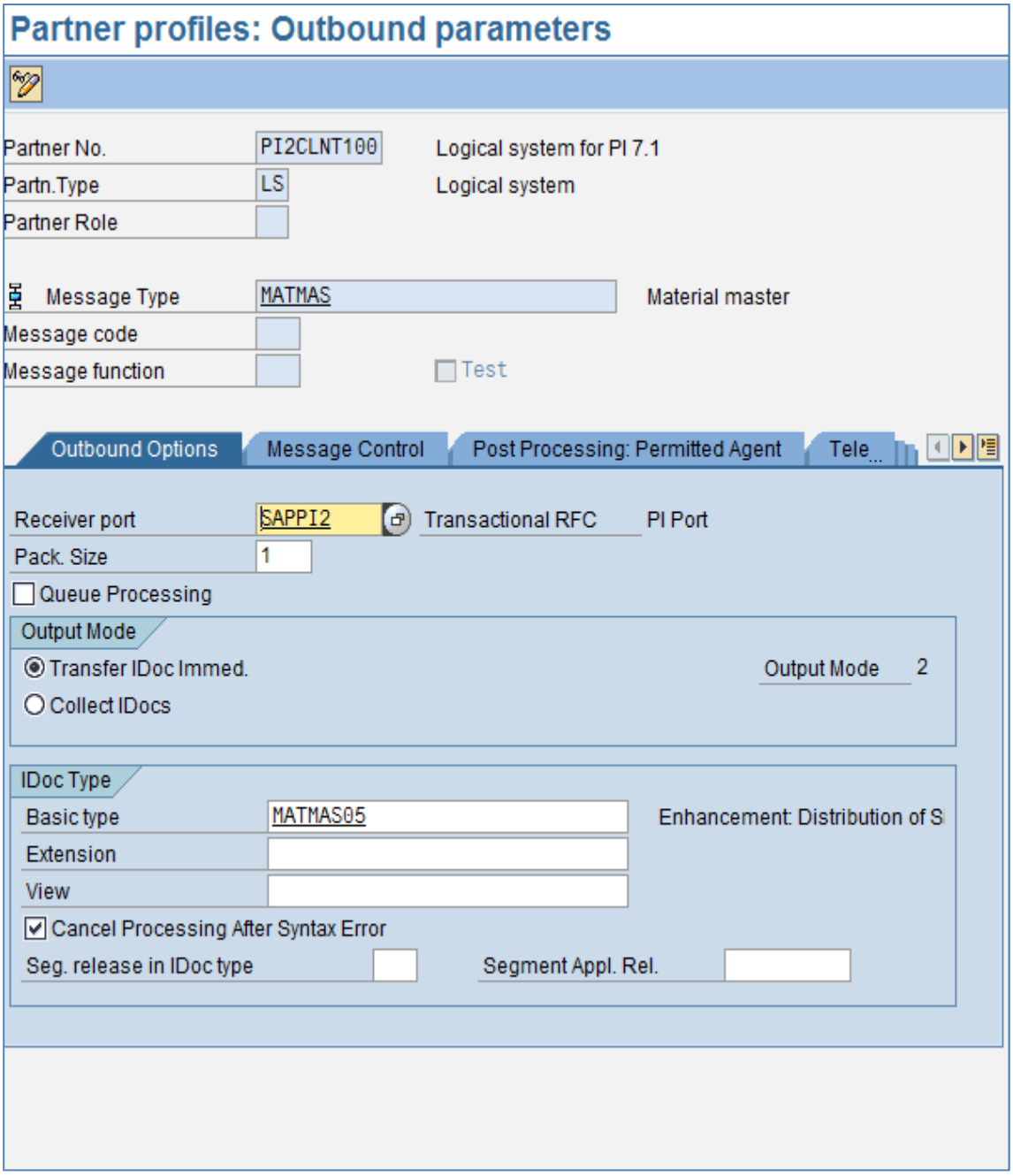


3. Using T-code BD54, define the logical systems for sender and receiver –

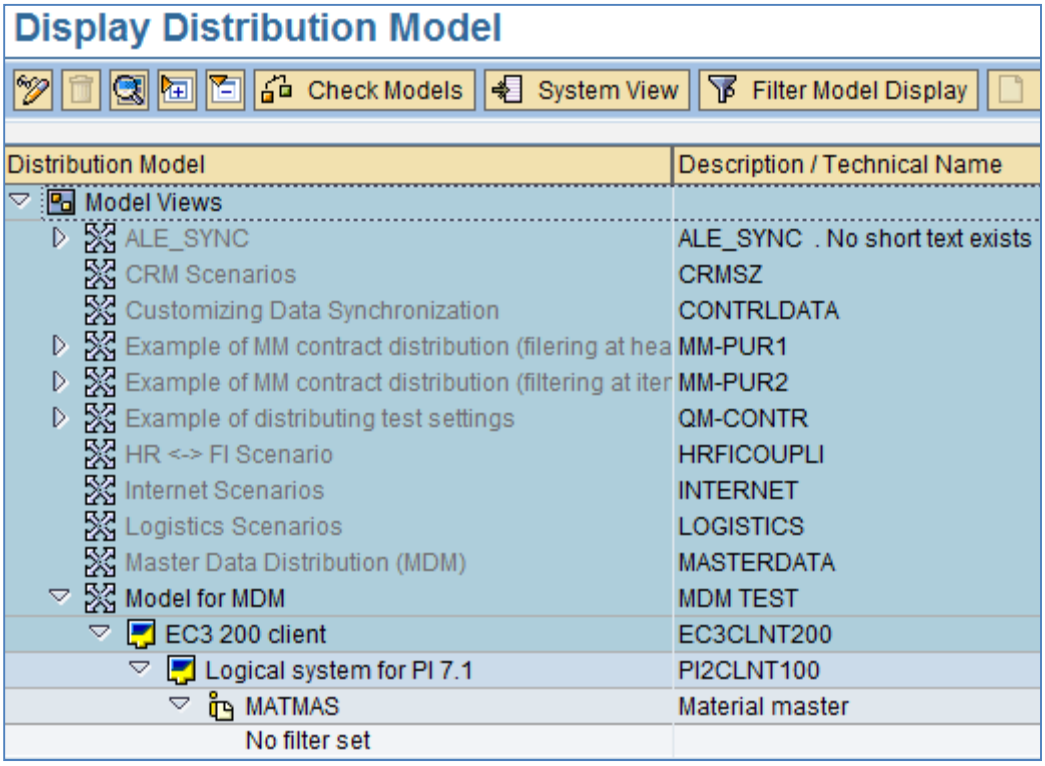


4. Using T-code WE20, create the a partner profile for the sender ECC system. Add the Idoc(MATMAS) in the outbound parameter and specify the port for defined in step2.



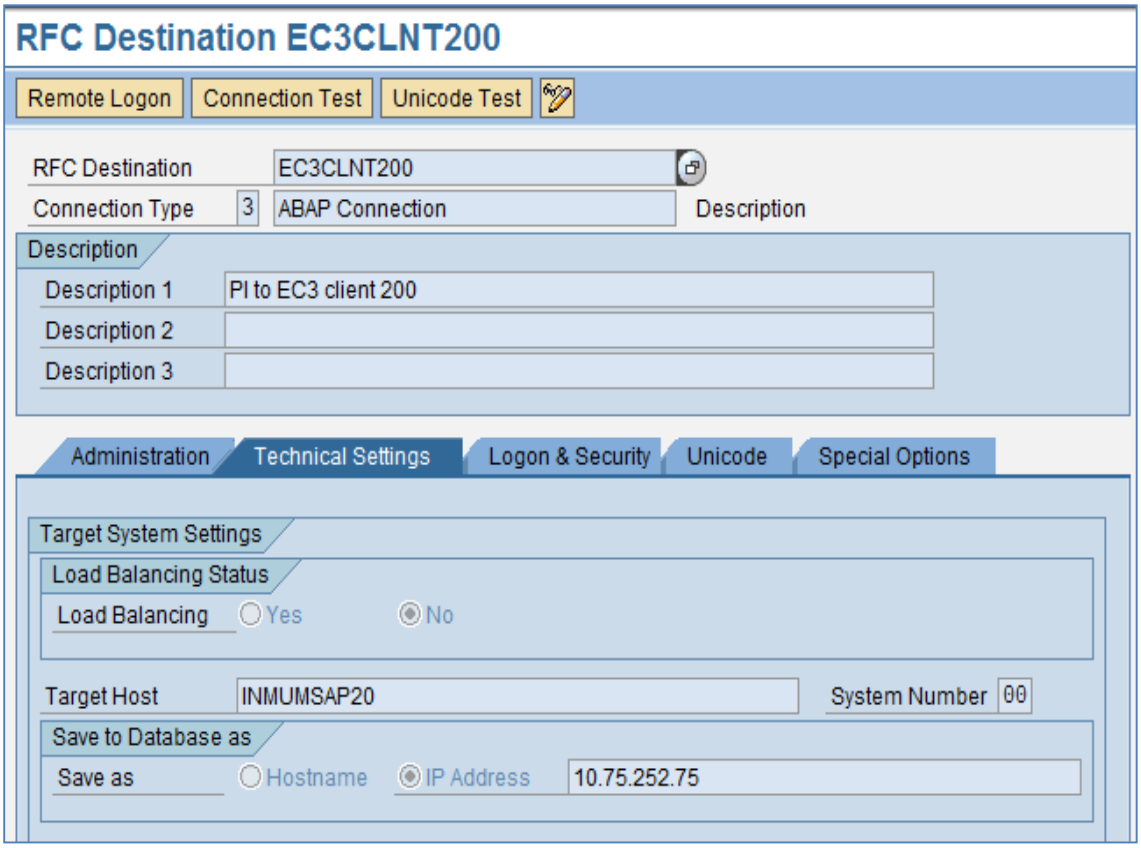

Partner profiles: Outbound parameters
Partner No.
PI2CLNT100
Logical system for PI 7.1
Partn.Type
LS
Logical system
Partner Role
Message Type
MATMAS
Material master
Message code
Message function
Test
Outbound Options
Message Control
Post Processing: Permitted Agent
Tele...
Receiver port
SAPPI2
Transactional RFC
PI Port
Pack. Size
1
Queue Processing
Output Mode
Transfer IDoc Immed.
Output Mode
2
Collect IDocs
IDoc Type
Basic type
MATMAS05
Enhancement: Distribution of S
Extension
View
Cancel Processing After Syntax Error
Seg. release in IDoc type
Segment Appl. Rel.

5. Using T-code WE64, Define the distribution model for sender and receiver system as –

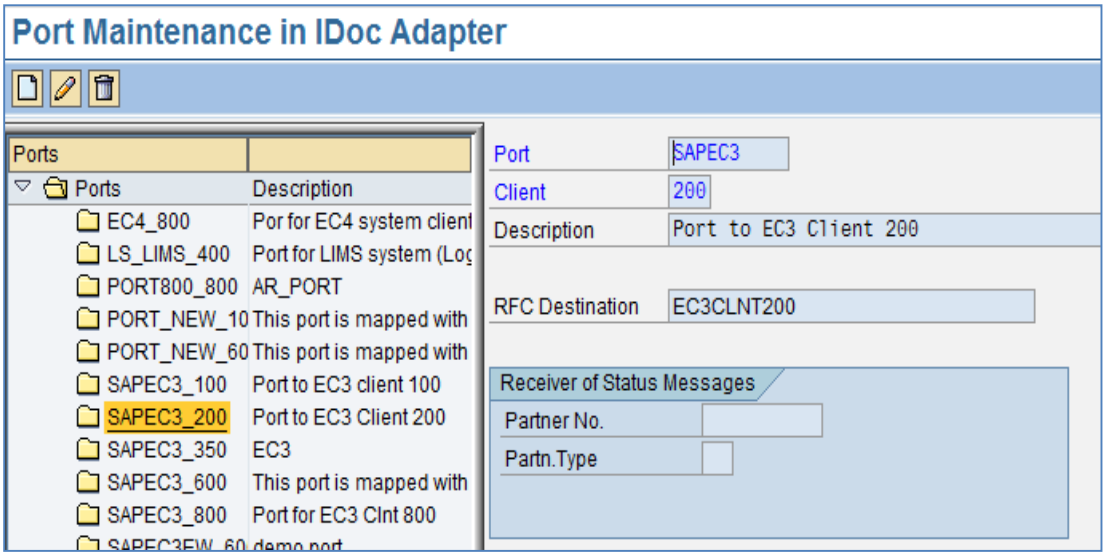


In PI system -

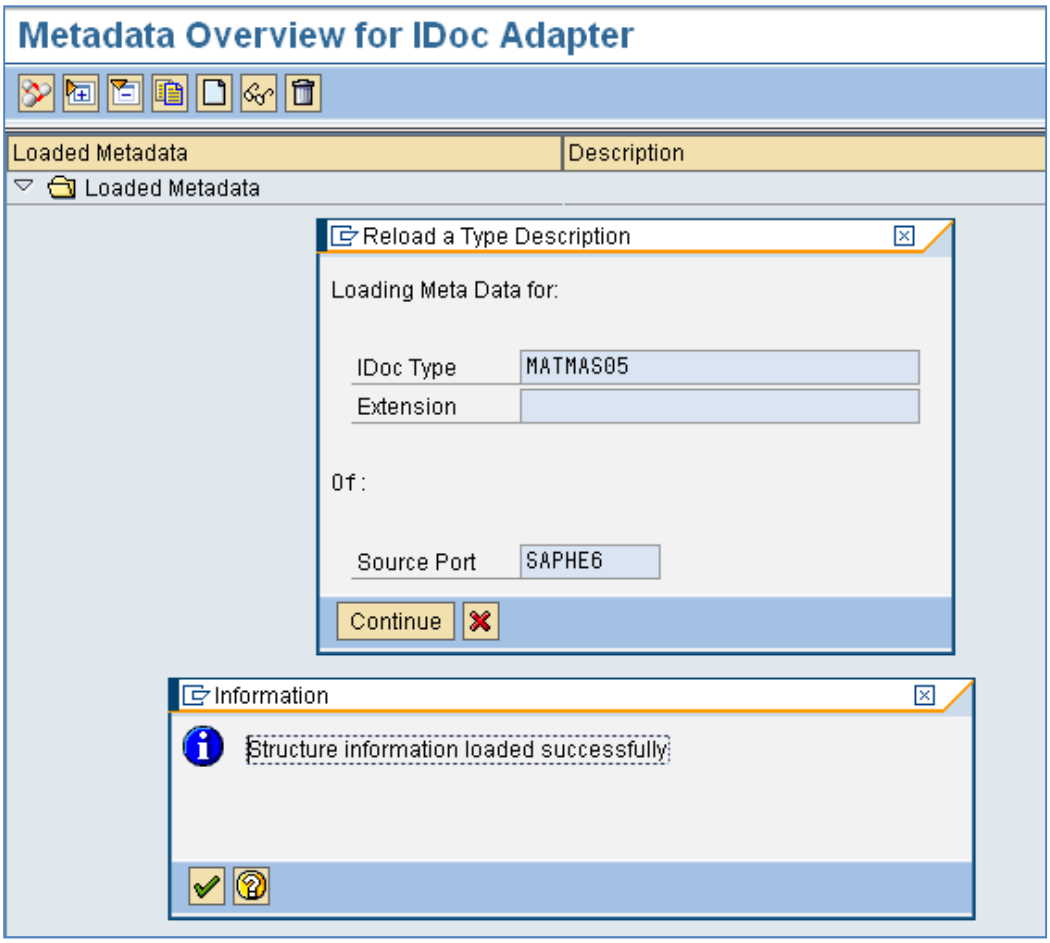
1. Using T-code SM59, create an RFC(ABAP connection) for connecting to ECC system as under –



2. Using T-code IDX1, create an Port(ABAP connection) for connecting to ECC system-



3. Using T-code IDX2, Load the metadata for the idoc to be used from ECC system-

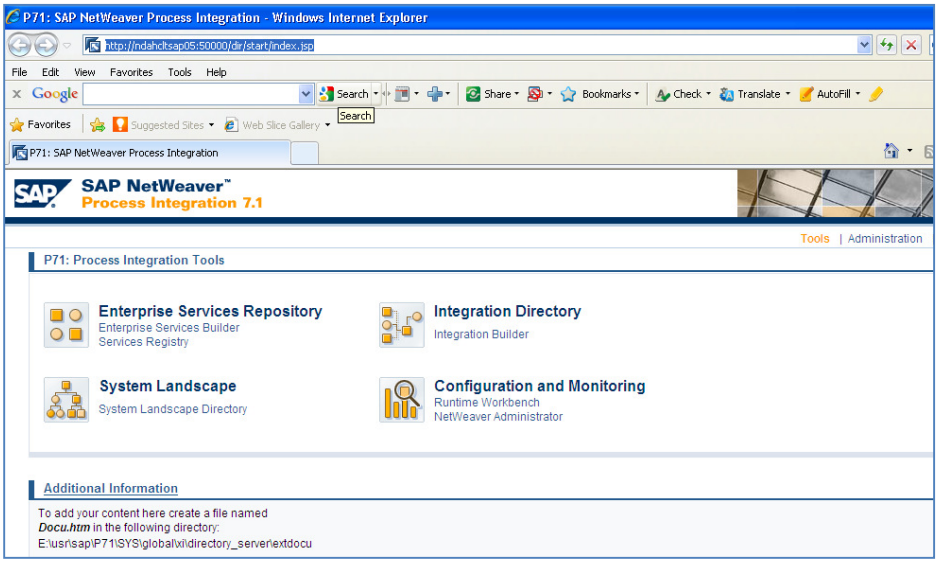


Design

1. **Access to the Process Integration Tools**

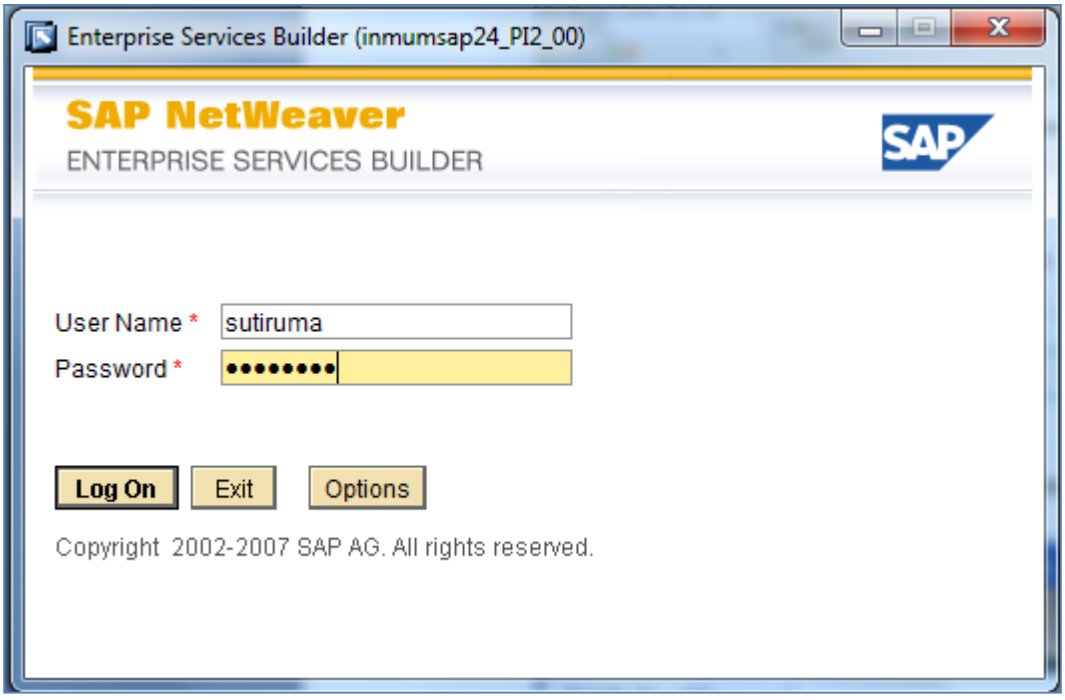
   Link provided.

   For Eg - http://inmumsap24.corp.capgemini.com:50000/dir/start/index.jsp



2. **Access Enterprise Service Repository(ESR)**

   Click on the link Enterprise Service Builder under Enterprise Service Repository. The following screen appears –



   Login to PI7.1 using your user id and password.

3. **Import the software component define in SLD**

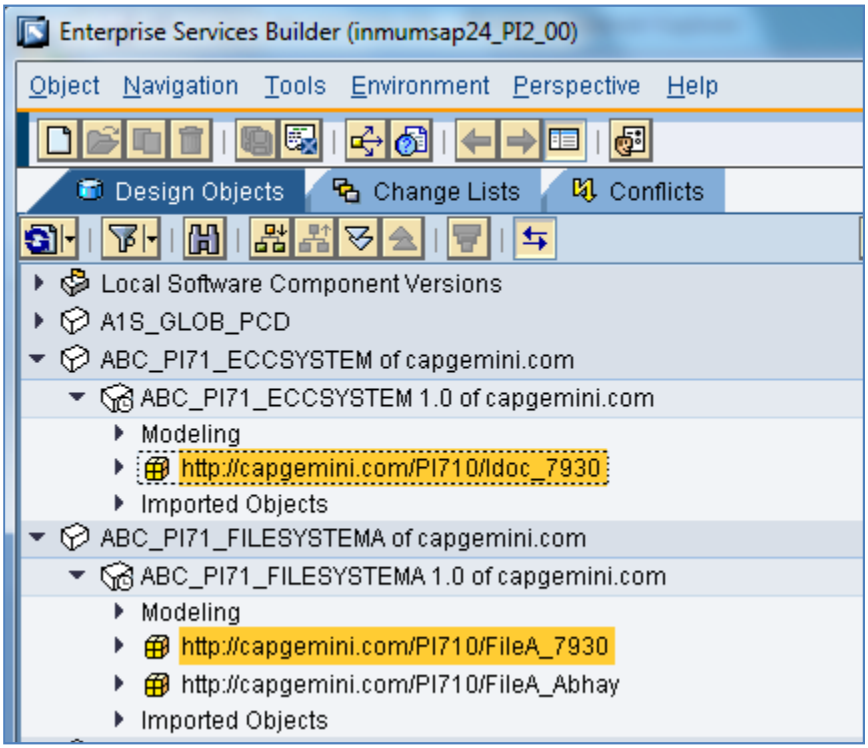
   Import the following software component defined for the scenario into ESR

   1. ABC_PI71_ECCSYSTEM 1.0 of capgemini.com
   2. ABC_PI71_FILESYSTEMA 1.0 of capgemini.com

4. **Define Namespace**

   1. Namespace (http://<*CompanyName*>.com/PI710/Idoc_<*Name/EmpNo*>) for Sender SWCV
   2. Namespace (http://<*CompanyName*>.com/PI710/FileA_<*Name/EmpNo*>) for Receiver SWCV

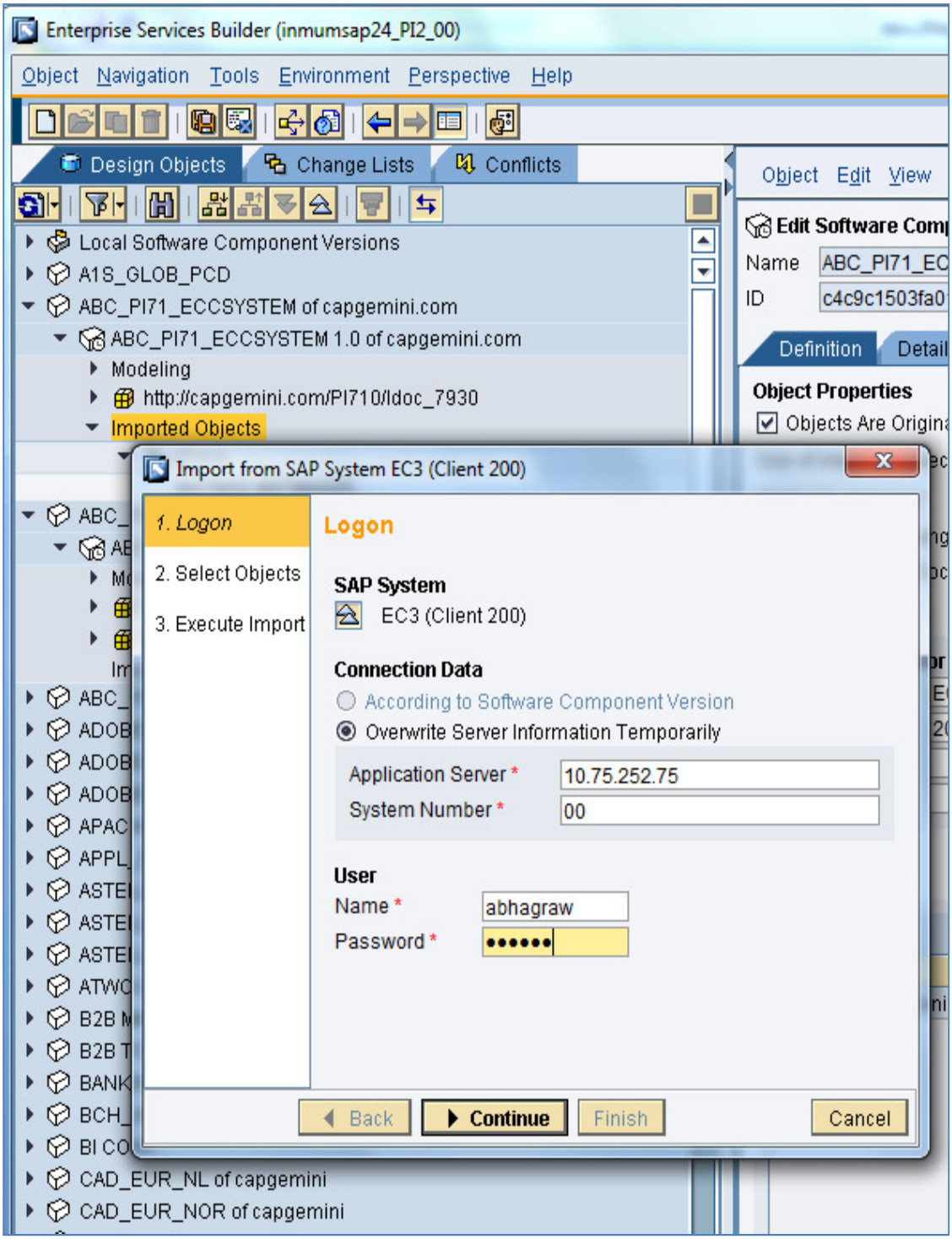
   The ESR screen will look as below once the namespaces are created for sender and receiver system.



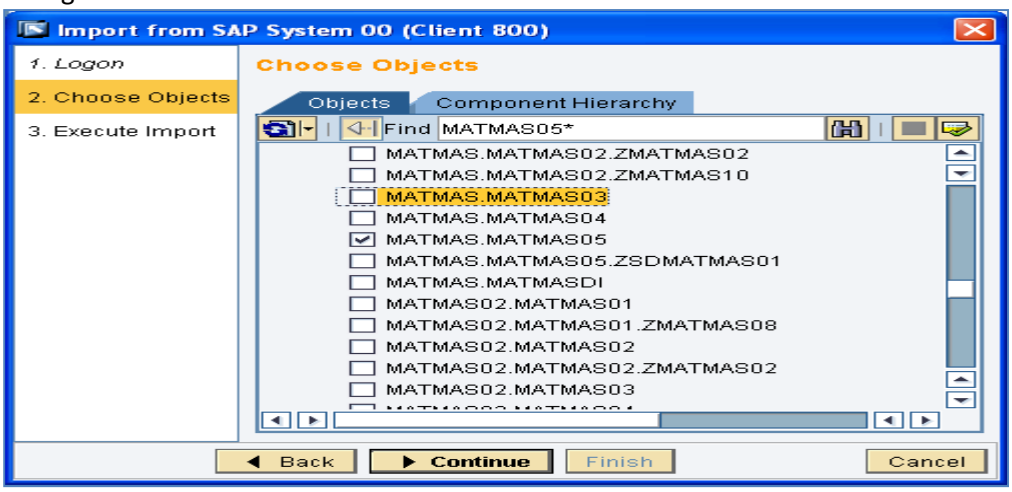
5. **Import IDoc**

   Note : For Scenarios involving Idoc on sender/receiver , no need to define Data Type, Message type and service Interface. Just need to import the IDoc for ECC server and use it in place of message type and service interface.

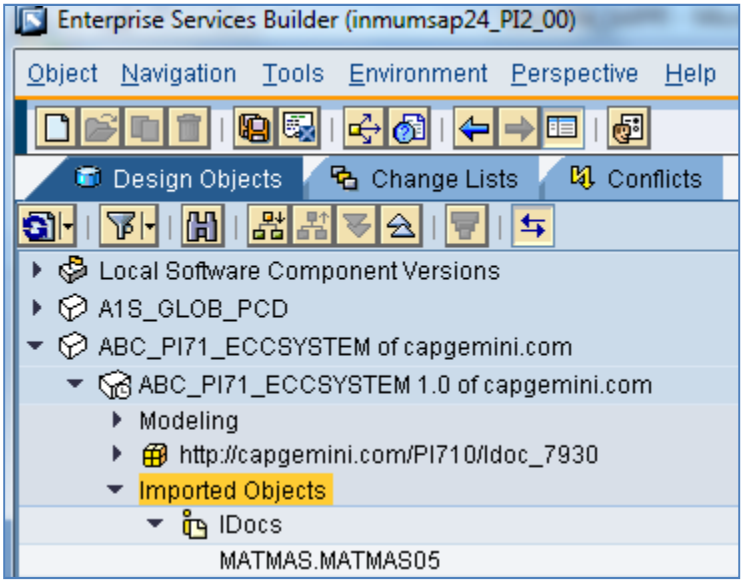
   Import the required IDoc into ESR under the software component defined for ECC system as below -



Select the Idoc required and continue as under –



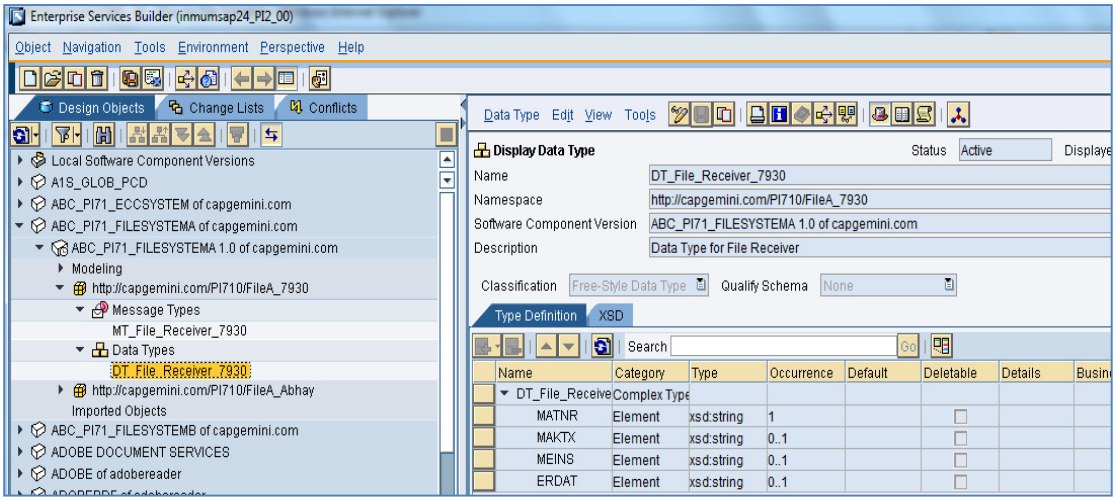
Once the Idoc is successfully imported, activate the same and it appear as below in ESR-



6. Define Data Type

1. Date type(DT_File_Receiver_< *Name/EmpNo* >) for Receiver System (FileSystemA)

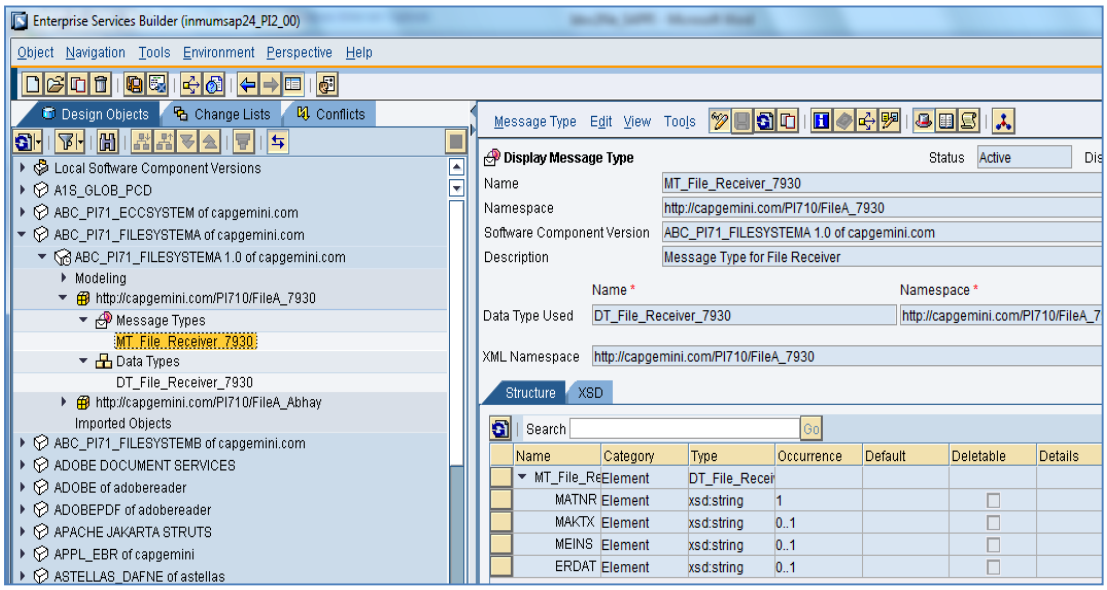
Create DT_Idoc_File_Receiver_< *Name/EmpNo* > for the inbound message to the receiver FileA System.



7. Define Message Type

1. Message type(MT_Idoc_File_Receiver_< *Name/EmpNo* >) for Receiver System (FileSystemA)

Create MT_Idoc_File_Receiver_< *Name/EmpNo* > for the receiver FileA System as below-



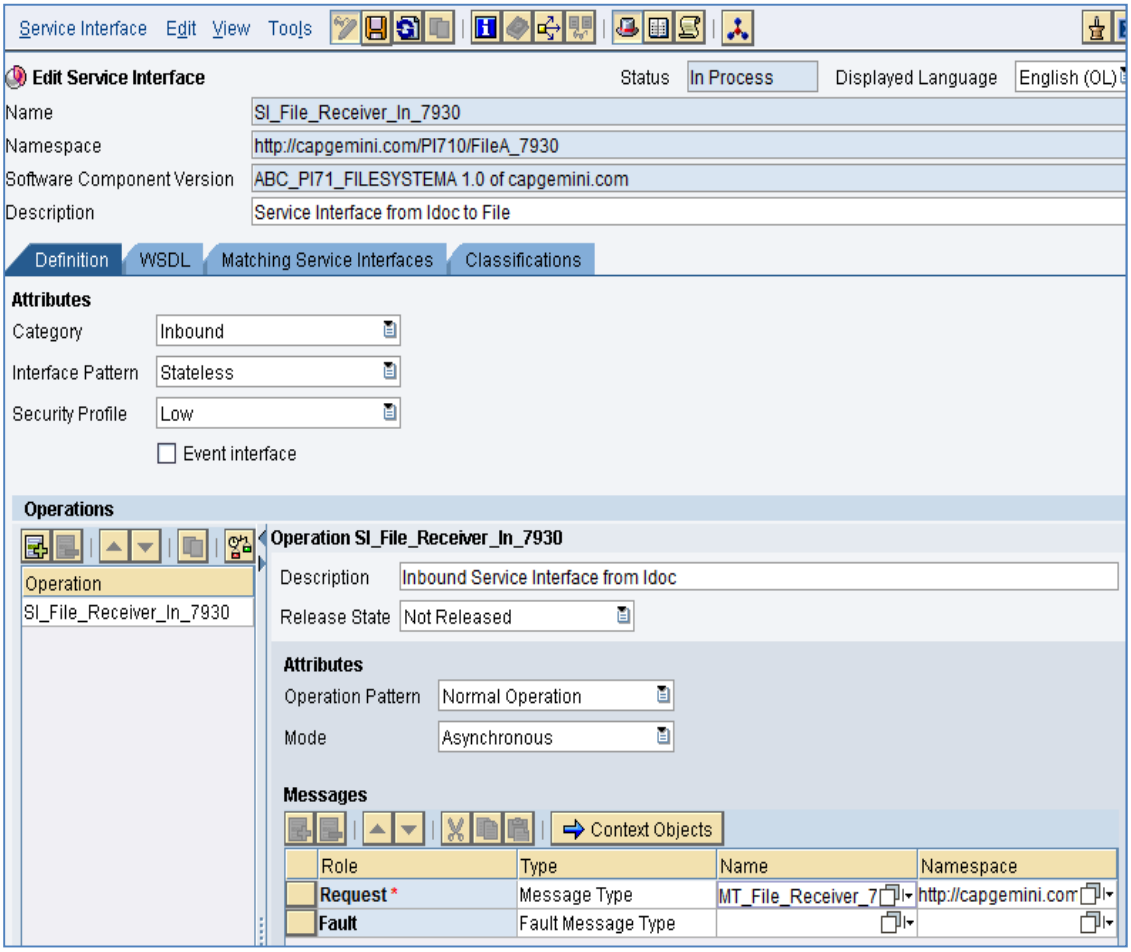
8. Create Service Interfaces

1. Service Interface(SI_File_Sender_In_< *Name/EmpNo*>) for Sender System (FileSystemA).

Service Interfaces specify the Mode(Sync/Async), direction(inbound/outbound) and the corresponding Message Type. Define the Service Interface using the attributes given below.

Service Interface	Message Type	Category	Mode	Operation Pattern
SI_File_Sender_In_< *Name/EmpNo*>	MT_Idoc_File_Sender_<*Name/EmpNo*>	Inbound	Asynchronous	Stateless

This is the service interface for the receiver system -



Leave the Fault Message Type as empty as we are not doing any error handling. Activate the changes made in objects by going to change lists tab.

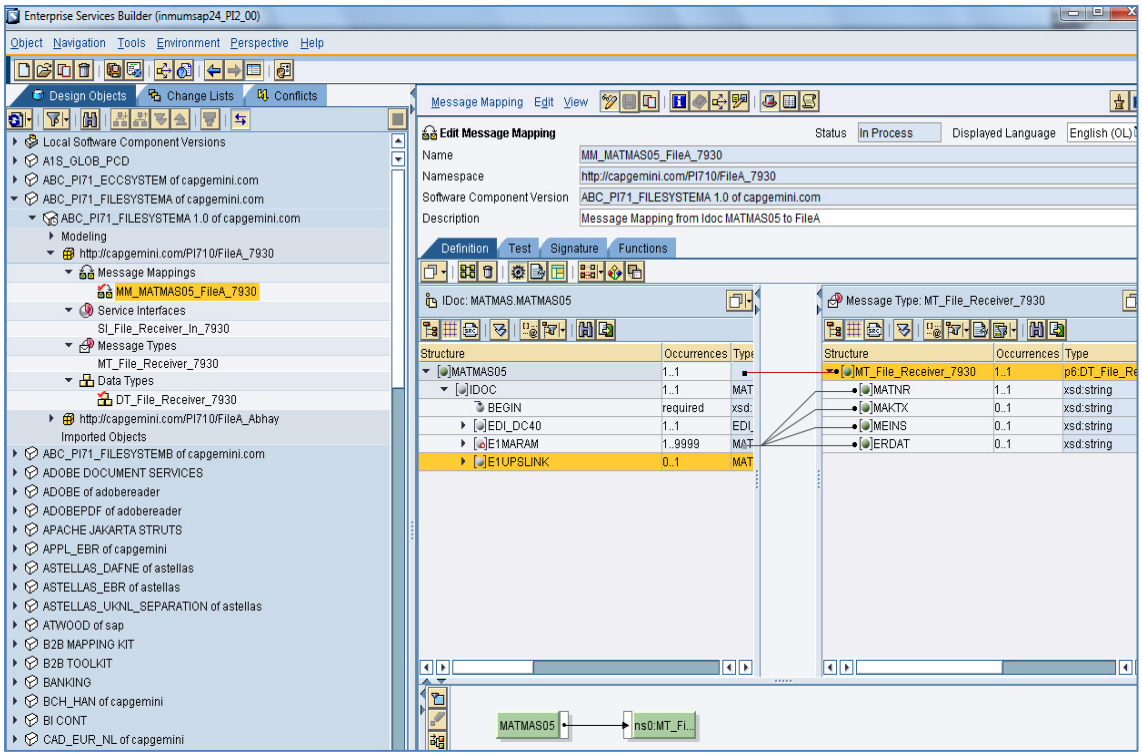
9. Create the Message Mapping

1. MM_MATMAS05_FileA_<*Name/EmpNo*> in the receiver File SystemA

Create a new Message mapping MM_Idoc_FileA_<*Name/EmpNo*>

Mapping object transforms Data from one Message Type to another message type.

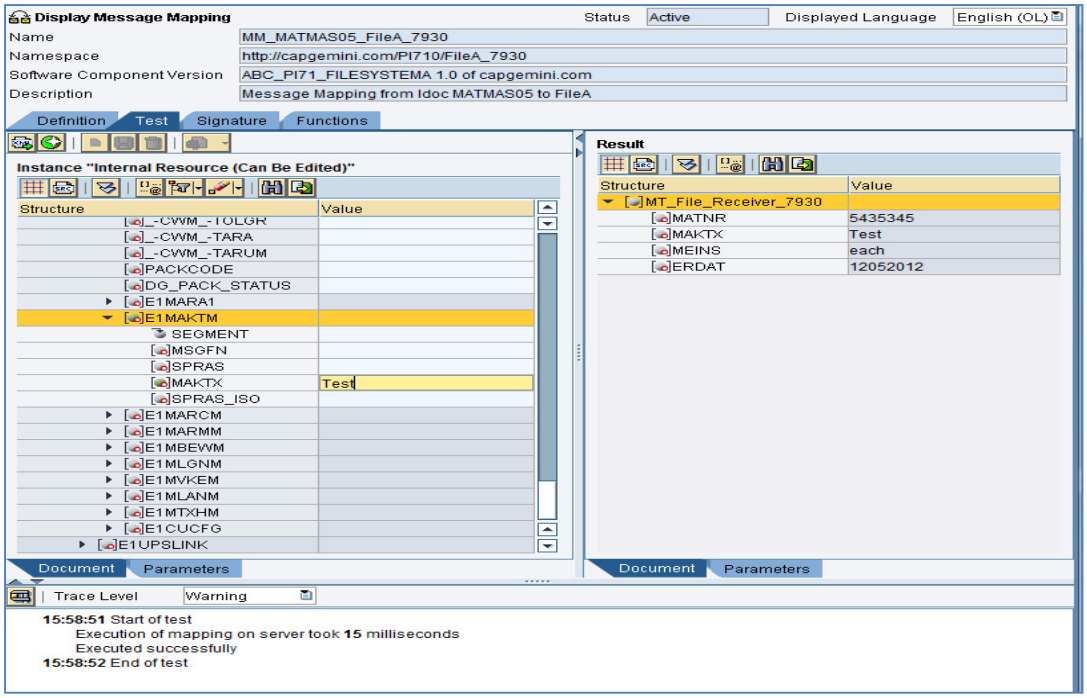
The mapping in this scenario is one to one mapping of idoc fields to fields in the file. To perform a mapping, drag the source fields and drop on the target field. The mapping would be displayed in the graphical display.



You can test you mapping by going to test Tab. You can select either of the two buttons from the tool bar to test your scenario.

1. **Load XM Instance** – load an XML file that contains your test data.
2. **Generate Instance** – By specifying the value manually.

Now you can test the scenario by clicking the Execute Mapping.

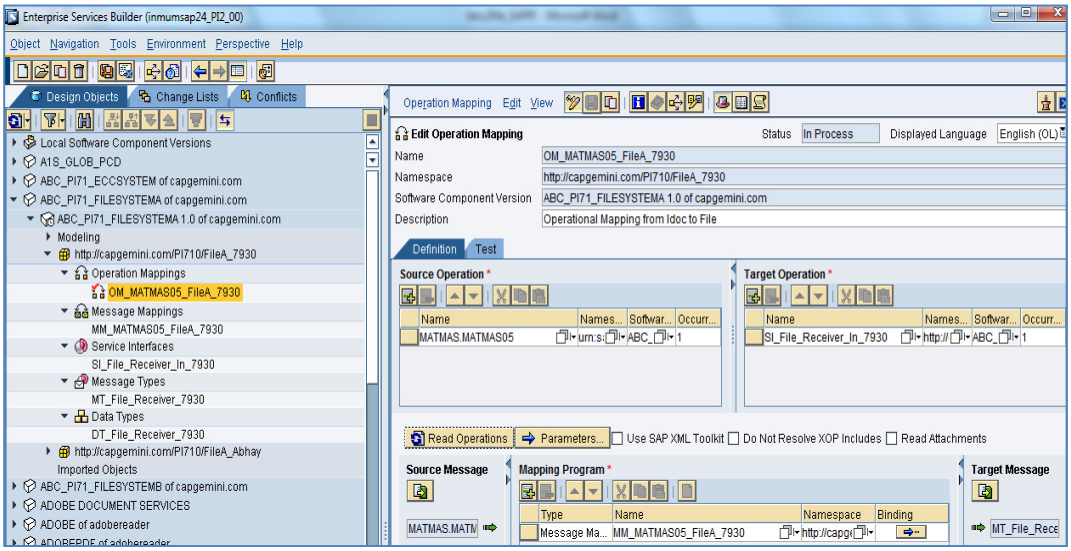


10. Create the Operation Mapping

1. OM_Idoc_FileA_<*Name/EmpNo*> in the receiver File SystemA.

In the operation mapping, Select the source interface as "MATMAS.MATMAS05" and target interface as "SI_Idoc_File_Sender_In_<*Name/EmpNo*> ". Click on the Read Interfaces tab and source/target message types automatically get populated.

Select the message mapping as "MM_Idoc_FileA_<*Name/EmpNo*> "

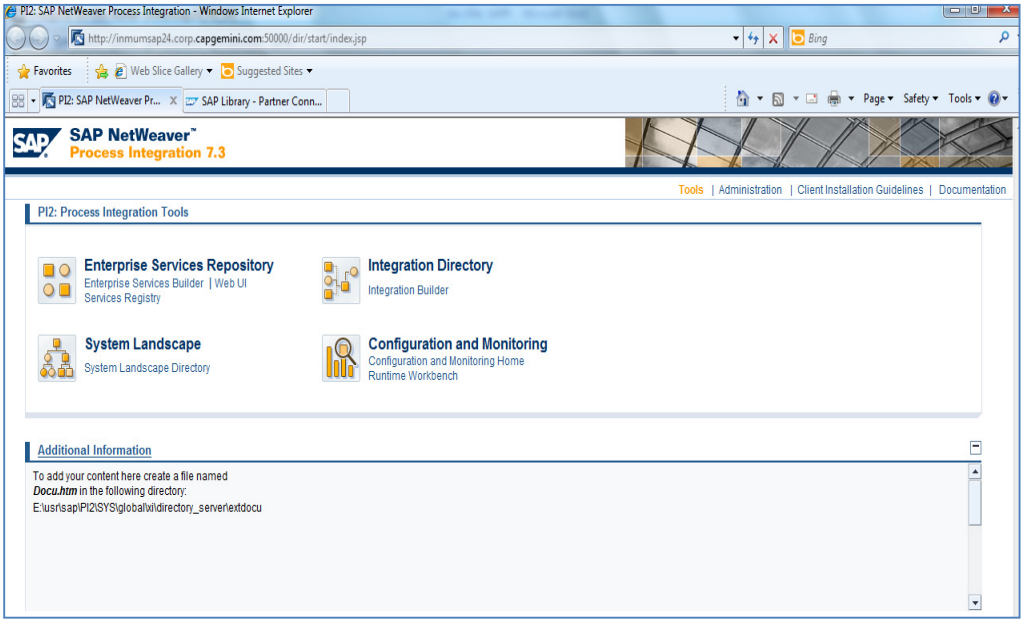


Configuration

1. **Access to the Process Integration Tools**

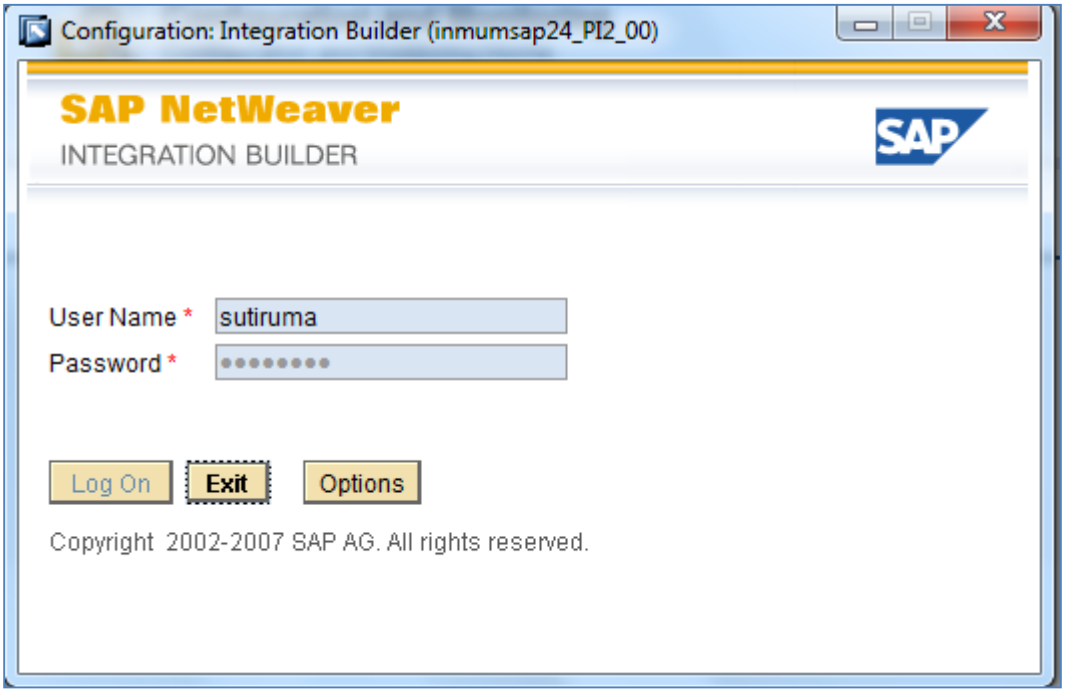
   Link provided.

   For Eg - http://inmumsap24.corp.capgemini.com:50000/dir/start/index.jsp



2. **Access Integration Directory**

   Click on the link Integration Builder under Integration Directory. The following screen appears –



   Login to PI7.1 using your user id and password.

3. **Create a new Directory and Scenario.**
   Directory will contain the scenario and scenario is a place holder for the configuration of interfaces. A scenario can hold the configuration for multiple interfaces.

   Create a Directory IDOC2FILE_PI71_Training and Configuration Scenario CS_IDOC2FILE_7930 and add it to the Folder IDOC2FILE_PI71_Training.

4. **Assign Business Sender for sender ECC system.**
   For any data send for ECC system, we need to have a Business system defined at SLD and we need to assign it to our scenario.

   NOTE: Here Business system for sender is BS_EC3CLNT200

5. **Create Business Component for receiving File system**

   For this exercise we are going to define Business components.

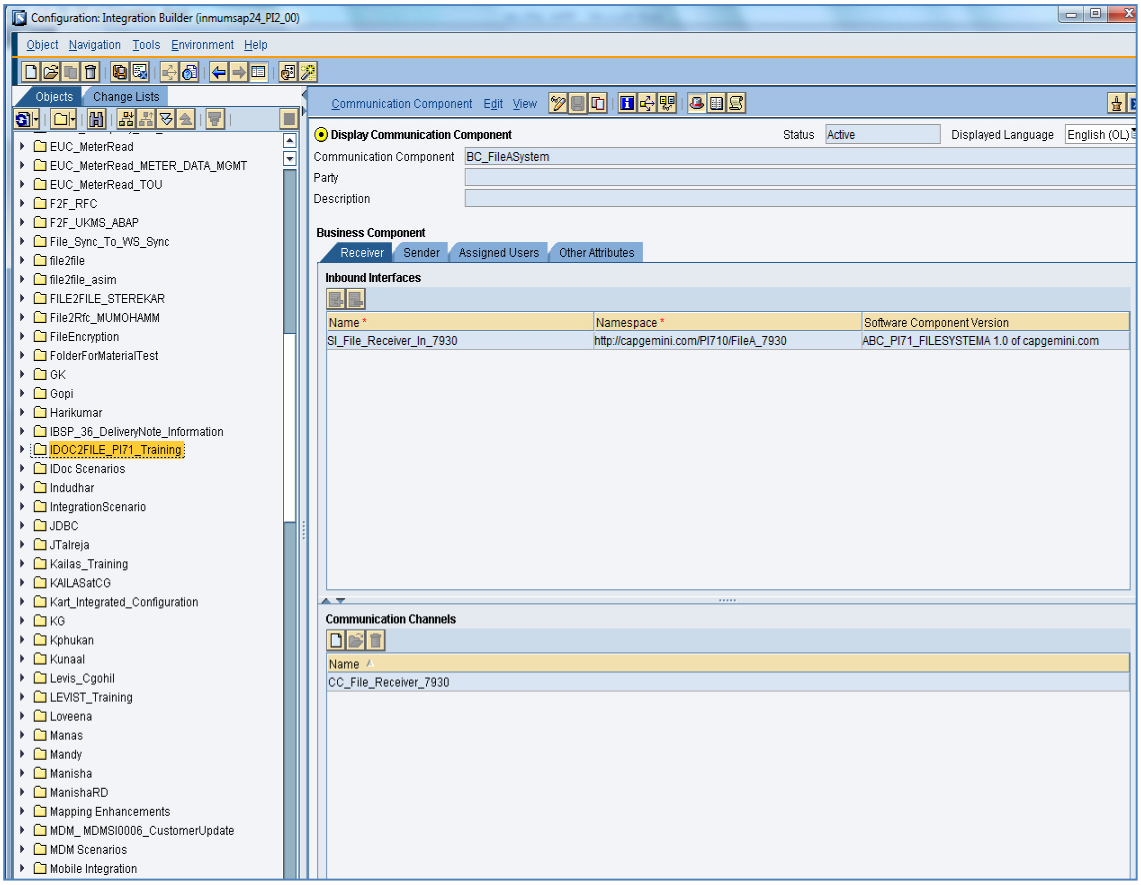
   NOTE: Here Business Component is BC_FileASystem

6. **Assign the Service Interfaces to Business Component.**

   Note : *This step is required only when we are using business component and not the business systems. In case of Business systems, there is reference to Software components defined in SLD.*

   But if we are using Business components, we need to explicitly add respective inbound/ outbound service interfaces to the business components created.

   Receiver Business component –

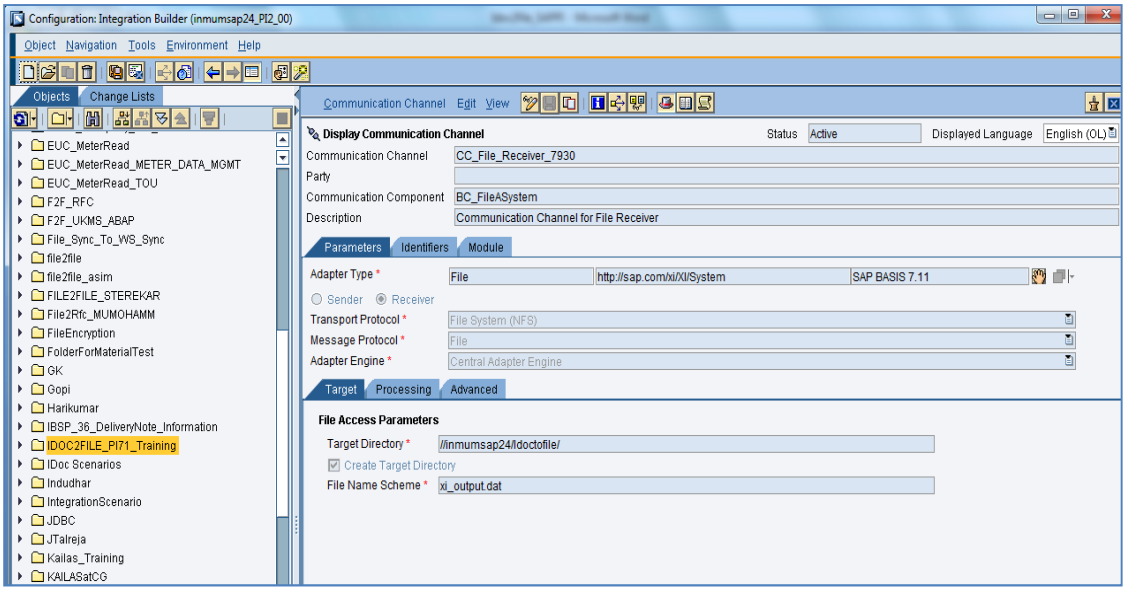


7. Create Communication Channels

This communication channel will enable the business component/business system and integration server to communicate to each other.

Note : For IDOC sender , we do not create Communication channel.

Receiver Communication Channel-

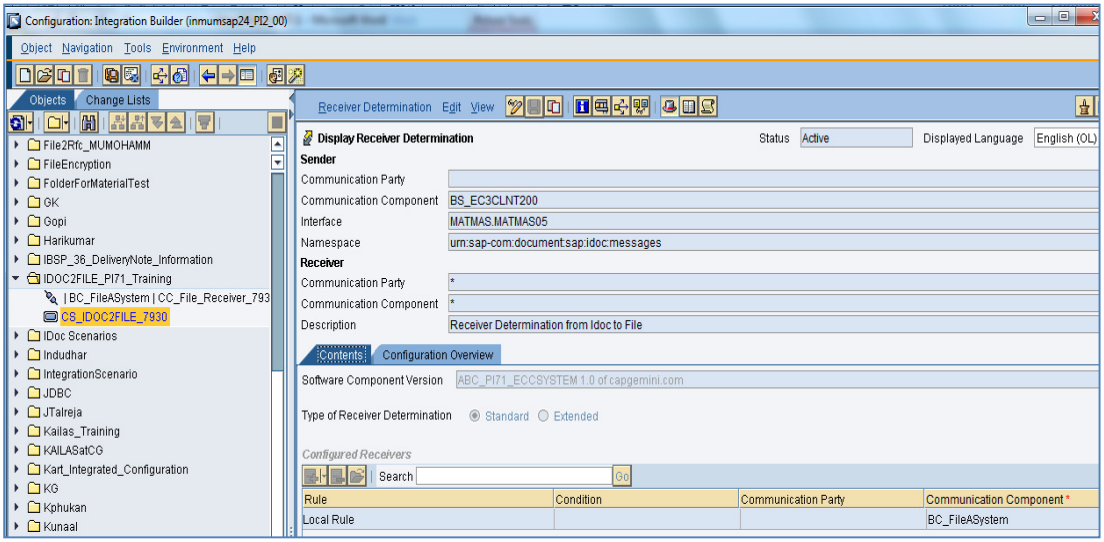


Note: *Target Directory will depend on the system to which we are connecting. File Name Scheme will can also change as per requirement.*

8. Receiver Determination

A receiver determination defines one or more receivers for a sender and a outbound Service interface.

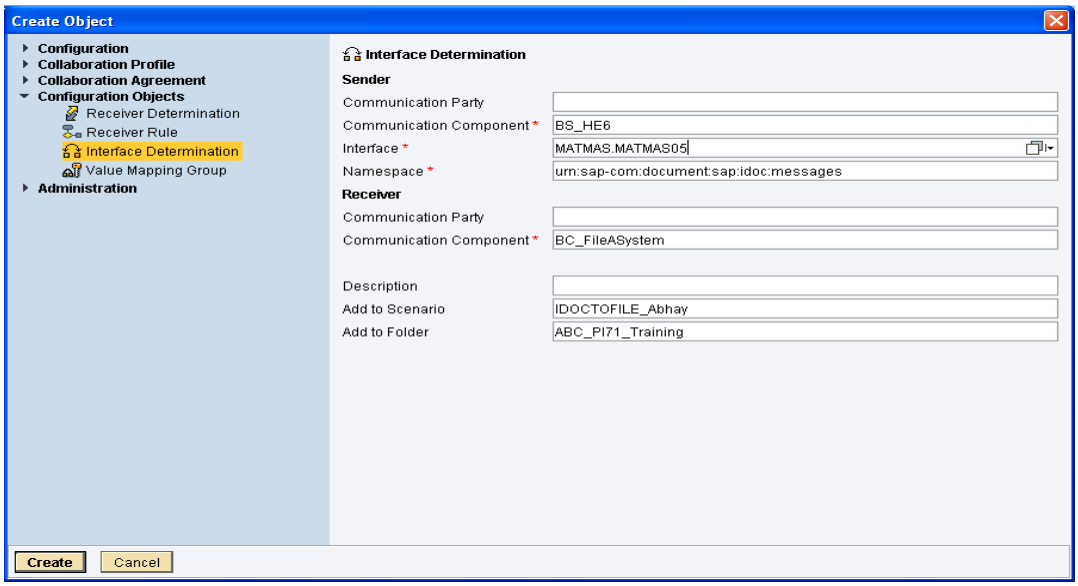
Create a new receiver determination, by right the scenario and then select Receiver Determination under Configuration Objects –



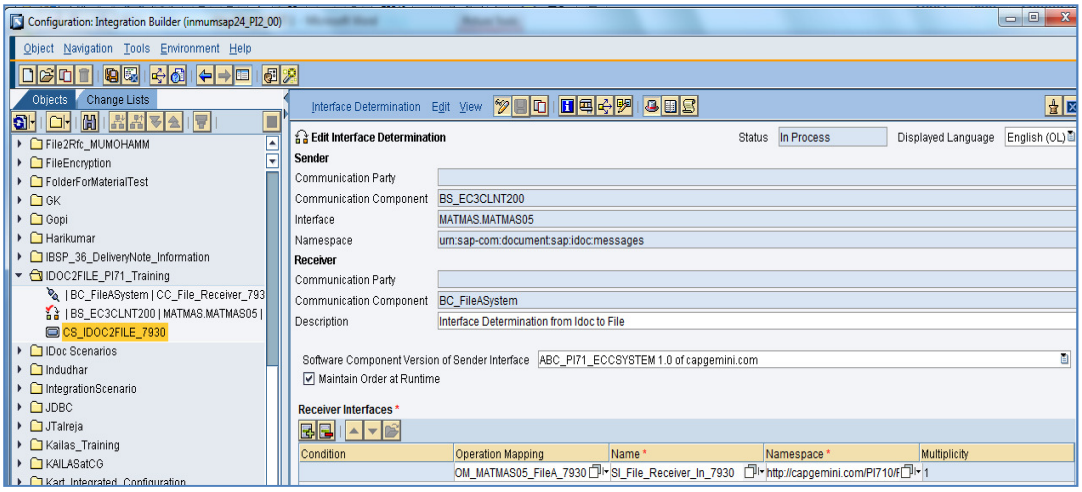
9. Interface Determination

In this step, we need to determine the inbound service interface using which the receiver system is expected to receive data.

Create a new interface determination, by right the scenario and then select Interface Determination under Configuration Objects –



Now add the inbound interface and operation mapping to be used by this scenario -

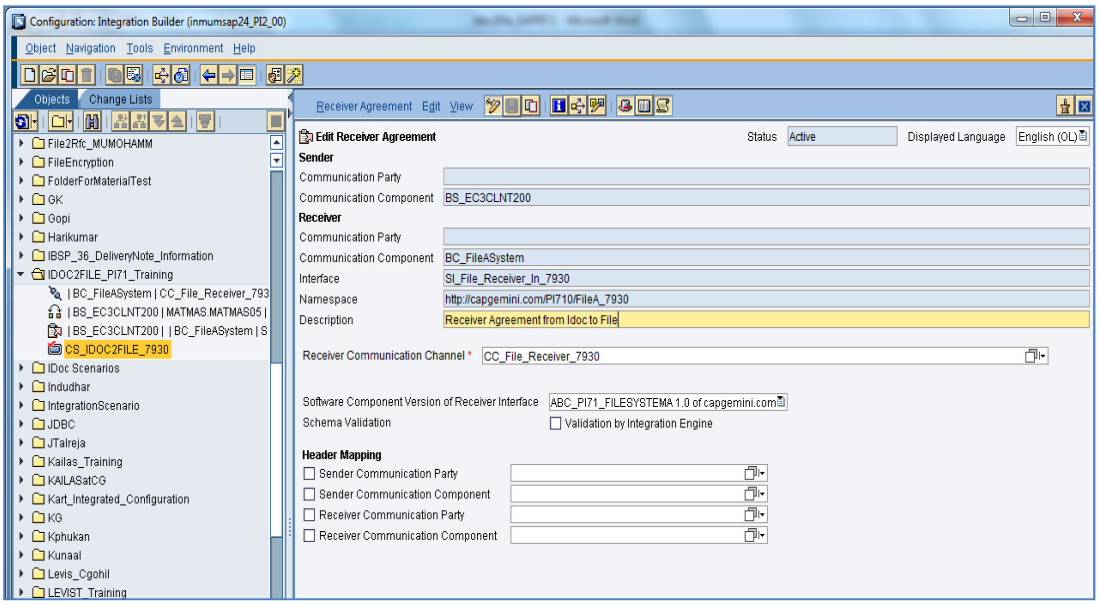


10. Sender and Receiver Agreement

Note : For IDOC sender , we do not create Sender Agreement.

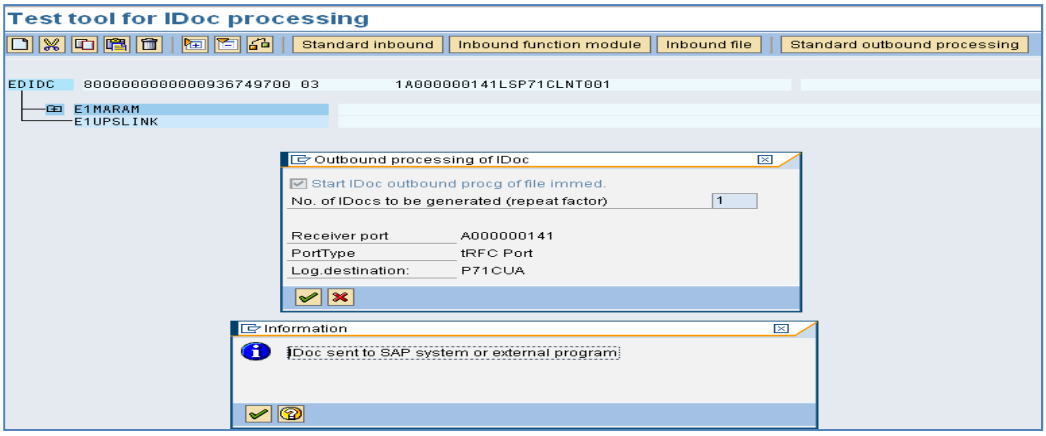
The agreements we need to specify the communication channel to be used by sending/receiving systems to actually connect to Integration Engine.

Create the receiver agreement by specifying receiver business component and adding receiver communication channel.



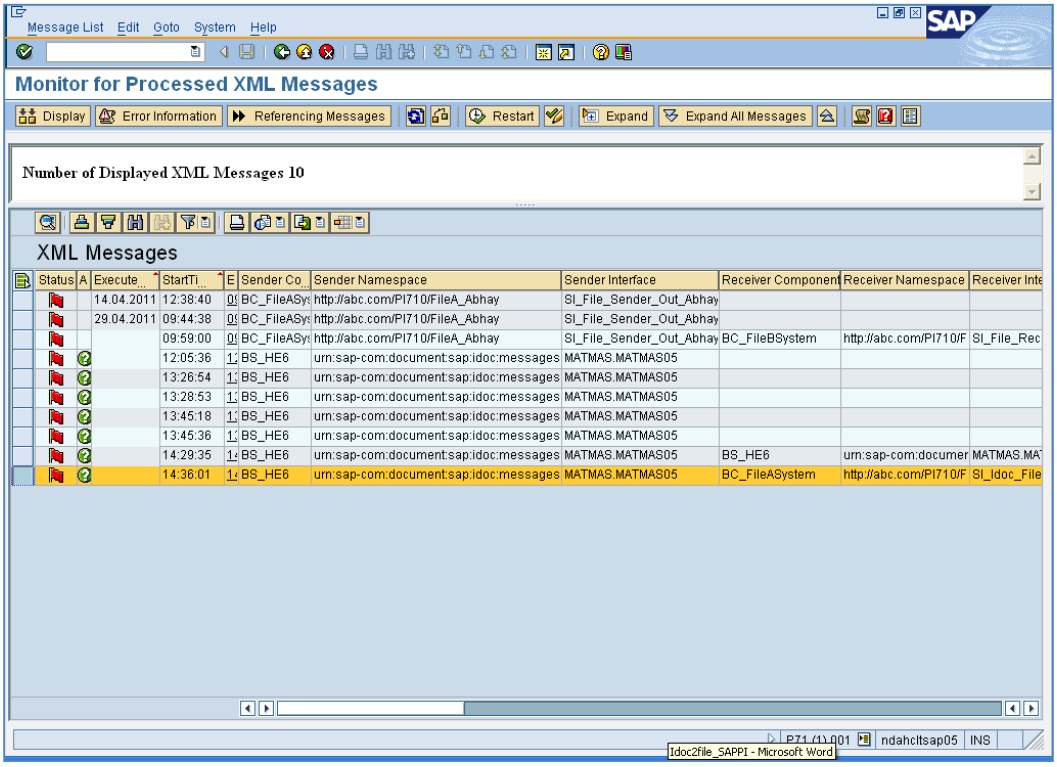
End to End Testing

1. Trigger Idoc from ECC using T-code WE19



2. Access the Integration server

One the file is successfully picked up by the sender communication channel, the message is send to Integration engine. The entries can monitored using Runtime Workbench.



3. Access the Target FTP server

After the message is successfully processed by Integration Engine, it will be send to Receiver Communication and in turn the output file will be placed on Target directory. You can know access the target NFS server and check if the file is created over there. You can monitor this channel also, using the same steps as discussed above for sender communication channel.