

A Step-by-Step Simple File-to-File Scenario: SAP XI



Applies to:

SAP Exchange Infrastructure (XI) 3.0 / Process Integration (PI) 7.0.

For more information, visit the [SOA Management homepage](#).

Summary

This document describes all the basic steps required to implement a file to file scenario in SAP XI.

Author: Vijayasree Kammara

Company: Satyam Computer Services Limited, Hyderabad, India

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Author Bio

Vijayasree Kammara is a Software Engineer at Satyam Computer Services Ltd. She is a SAP ABAP certified professional. She has been working in XI and ABAP.

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Pre-Requisites

Knowledge Requirements:

Basic knowledge of XI and how it works

System Requirements:

Developer Access to XI System is required to create this scenario

Scenario File-to-File

In the file to file scenario we are going to transfer the file from source location to target location.

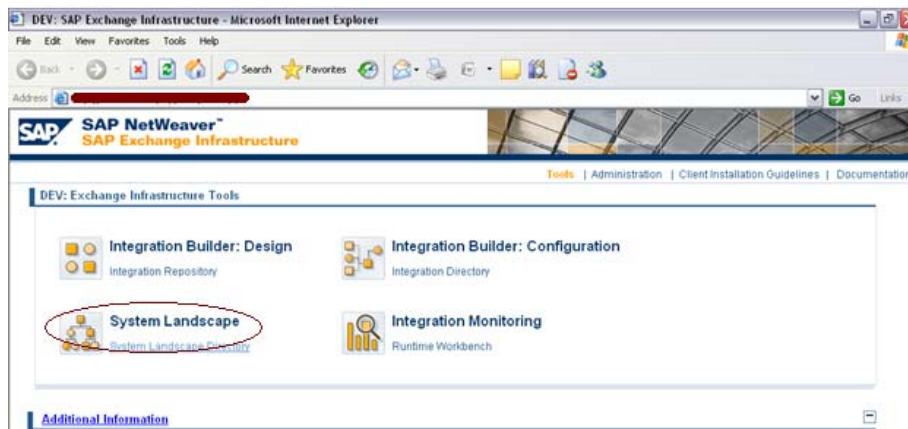
In this example we are going to demonstrate the scenario by means of concatenating the first and last name to full name and a simple addition and subtraction.

Implementation - Build Solution

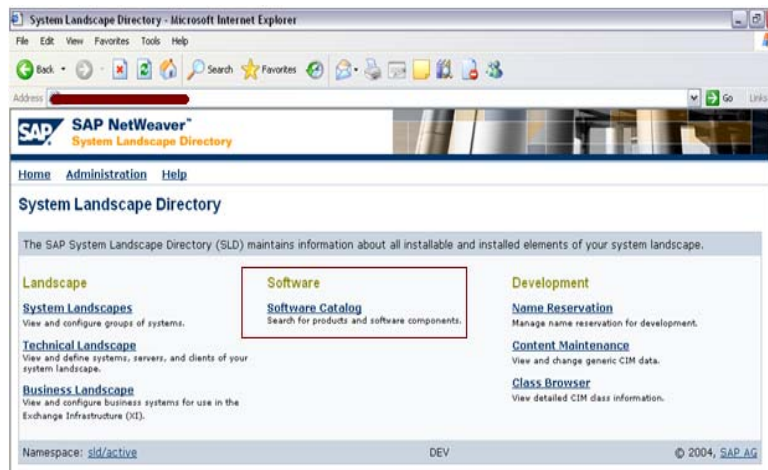
Step 1: Create Product and Software component

Go to **SYSTEM LANDSCAPE**.

Click on System Landscape Directory as shown in the following screenshot by giving the username and password.



Click on Software Catalog in order to create new product and software component.



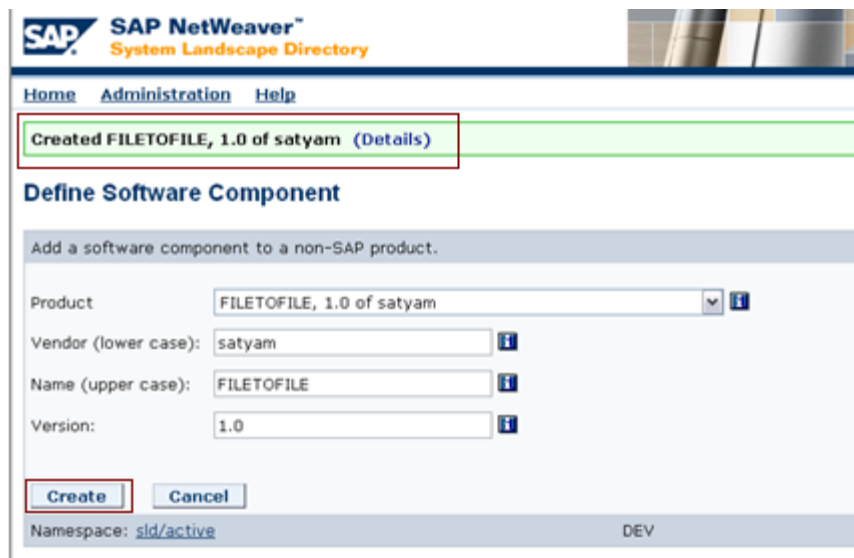
Click on New Product button in order to create a new product.



Give Vendor, Name and Version and click on create button as shown.



Define software Component by giving Name (uppercase) and version. Then click on create as shown.



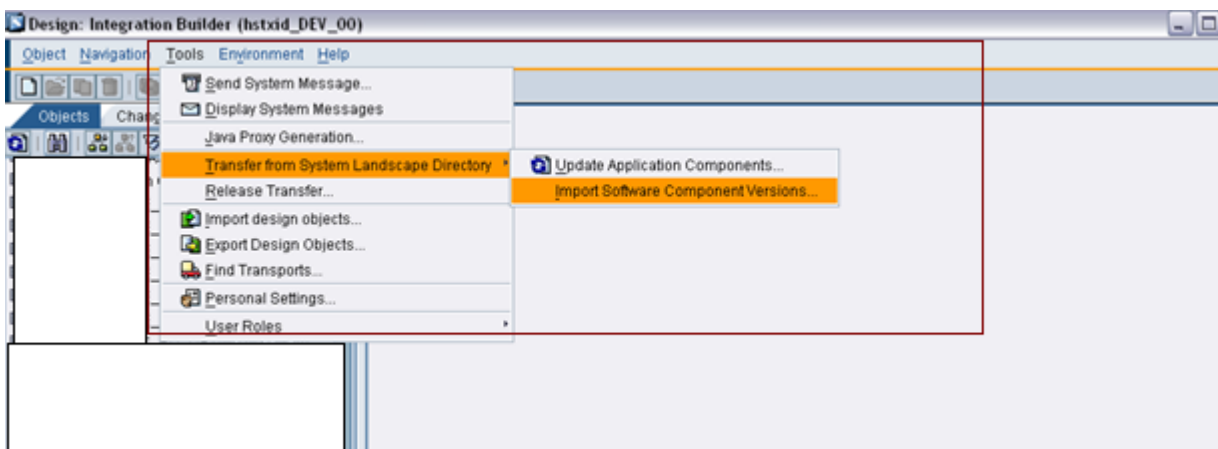
Once product and a software component is created the next step is Design part.

Step 2: Maintain IR (Integration Repository)

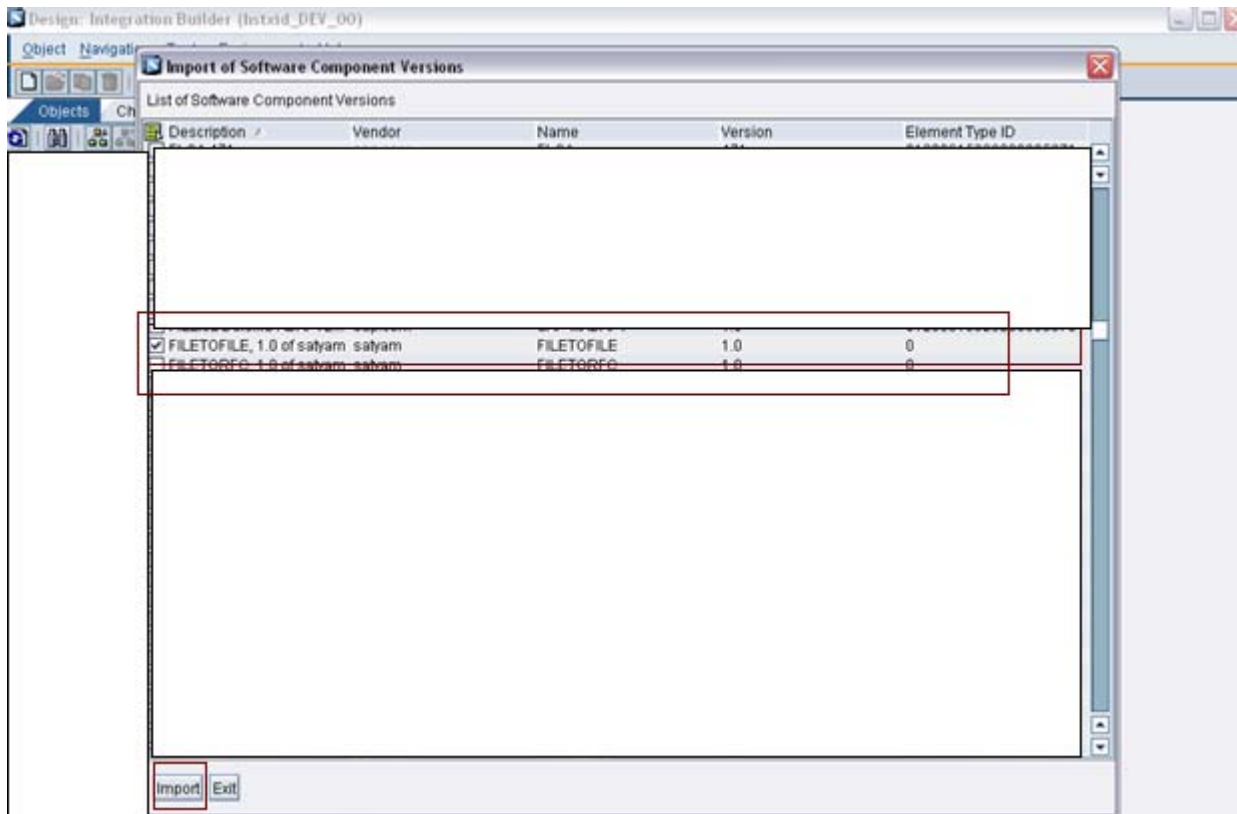
Go to **INTEGRATION BUILDER: DESIGN**. Click on the Integration Repository as shown.



Go to **Tools->Transfer from System Landscape Directory->Import Software Component Versions** in order to Import the product and software component into the IR which we created earlier in the system Landscape Directory.



Check the software component version which we created earlier in the SLD. Then click on **IMPORT**



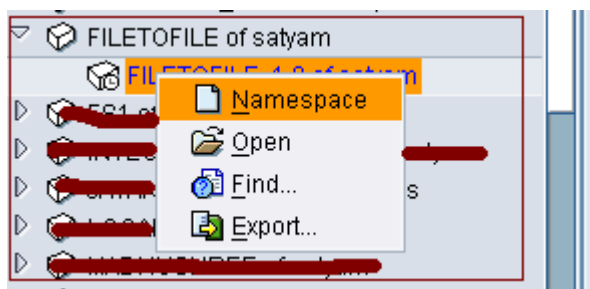
After successful importing we will get the following message. Click on **Exit**.

Import Protocol

- **FILETOFILE, 1.0 of satyam** imported successfully to software component **FILETOFILE**



Create the Namespace in the software Component Version. Give the namespace name as shown and save.

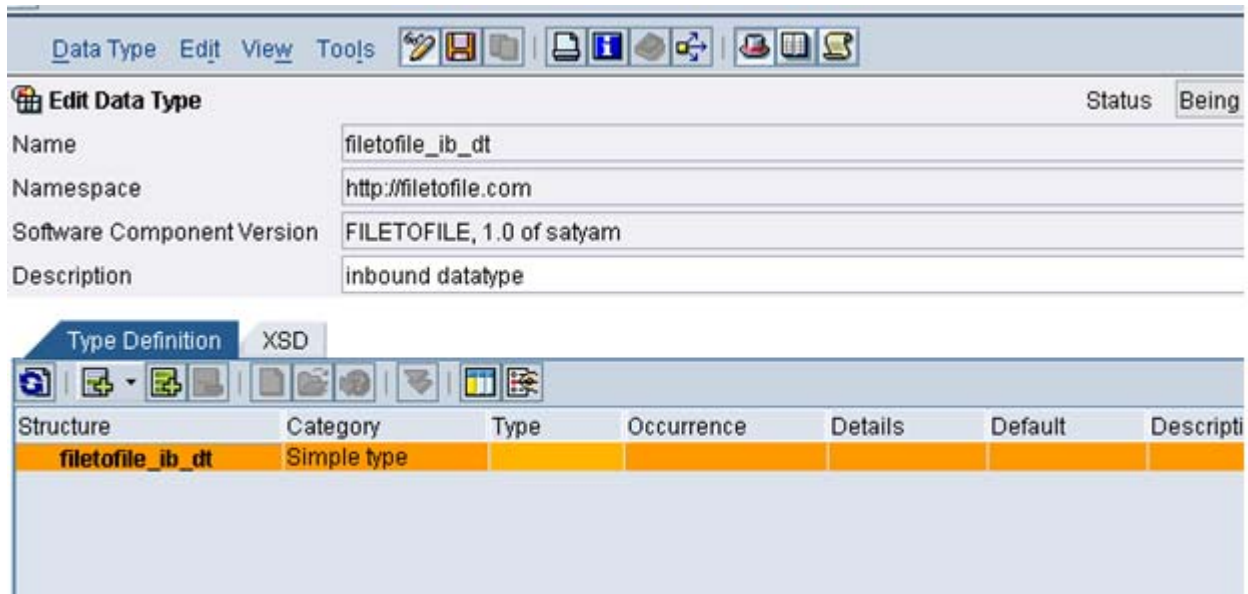


Edit Software Component Version		Status	Active			
Name	FILETOFILE					
Version	1.0					
Software Component Version	FILETOFILE, 1.0 of satyam					
Description	FILETOFILE, 1.0 of satyam					
<div style="display: flex; border-bottom: 1px solid black; margin-bottom: 5px;"> <div style="background-color: #4a7ebb; color: white; padding: 2px 5px; margin-right: 5px;">Definition</div> <div style="background-color: #d9e1f2; padding: 2px 5px; margin-right: 5px;">Details</div> <div style="background-color: #d9e1f2; padding: 2px 5px;">Key</div> </div>						
Interface Import						
<input type="radio"/> Import of RFC and IDoc Interfaces from SAP Systems Permitted <input checked="" type="radio"/> Not Permitted						
Connection Data for Import from SAP System						
System *	<input type="text"/>					
Client *	<input type="text"/>					
Message Server	<input type="text"/>					
Group	<input type="text"/>					
<input type="text" value="Source System Connection Data"/>						
Namespaces *						
<div style="display: flex; align-items: center; border-bottom: 1px solid black; margin-bottom: 5px;"> <div style="margin-right: 10px;"> </div> </div>						
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Name</th> </tr> </thead> <tbody> <tr> <td style="border: 2px solid orange;">http://filetofile.com</td> </tr> <tr> <td style="height: 20px;"> </td> </tr> </tbody> </table>				Name	http://filetofile.com	
Name						
http://filetofile.com						

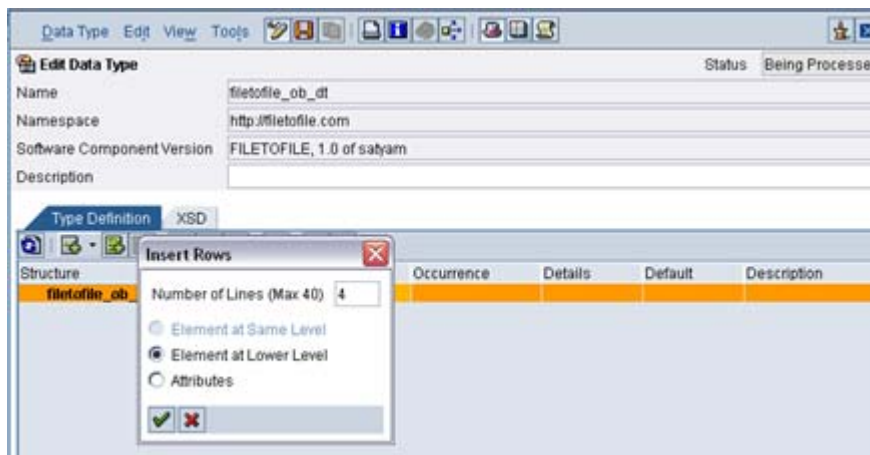
Under the Namespace we have

- Integration Scenarios and Integration Processes
- Interface Objects
- Mapping Objects
- Adapter Objects

Under the Interface Objects create a new Data Types (sender/receiver) as per requirement, Insert the row and provide the type of each filed. For creating data types right click on data types->click on new. Then we will get one pop up. Give the data type name and then create. Then we will get the following.

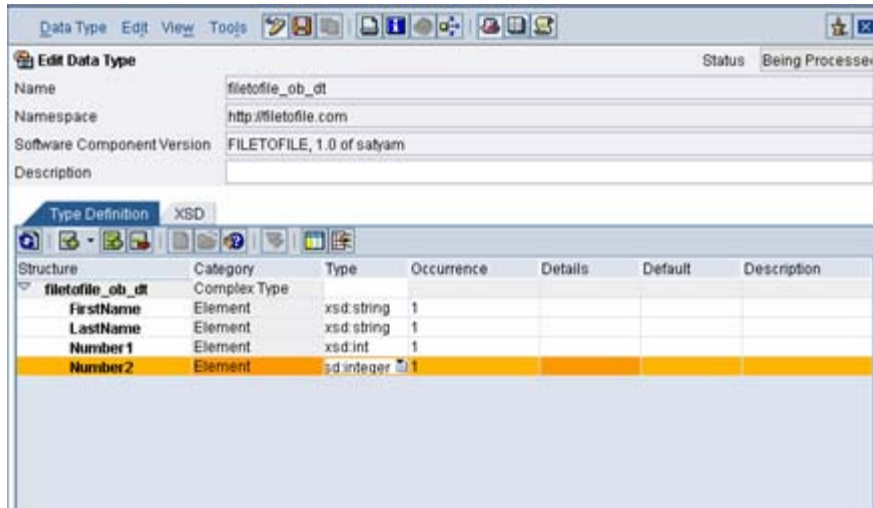


In order to build the structure, Right click on the structure name insert rows as per the requirement. In this example say 4. Enter Number of Lines as 4 and enter.



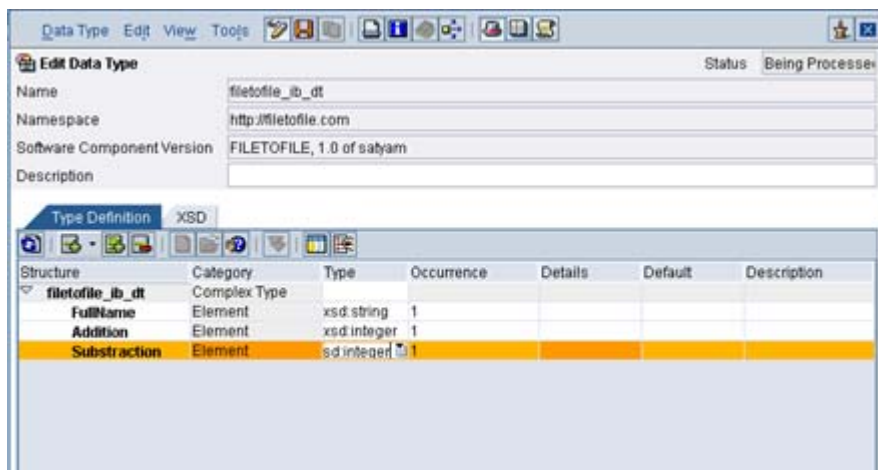
Define the structure as follows:

- 1st line: FirstName Category: Element; Type: xsd: string; Occurrence: 1
- 2nd line: LastName Category: Element; Type: xsd:string ; Occurrence :1
- 3rd line: Number 1 Category: Element; Type: xsd: integer; Occurrence: 1
- 4th line: Number 2 Category: Element; Type: xsd: integer; Occurrence: 1

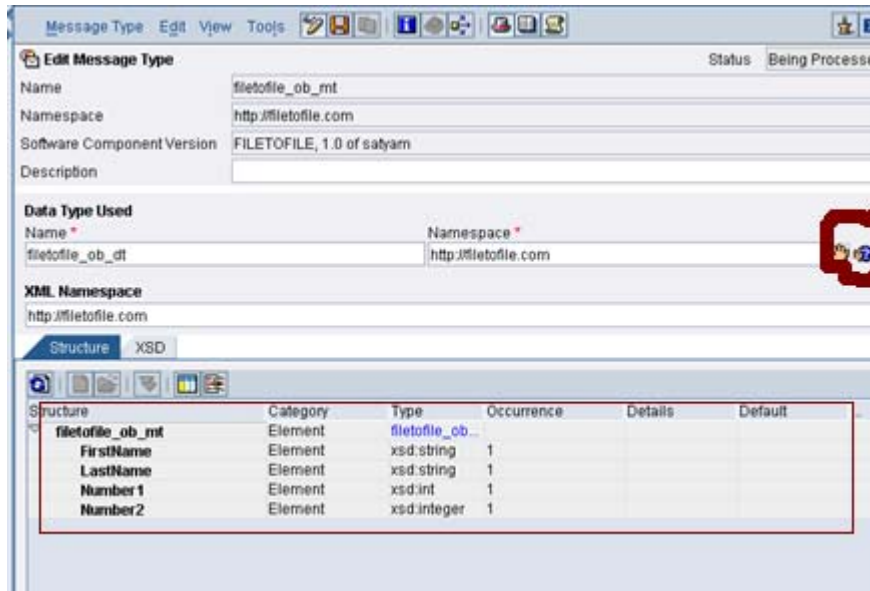


In the similar way create another data type using the following structure.

- 1st line: FullName Category: Element; Type: xsd: string; Occurrence: 1
- 2nd line: Addition Category: Element; Type: xsd: integer; Occurrence: 1
- 3rd line: Subtraction Category: Element; Type: xsd: integer; Occurrence: 1

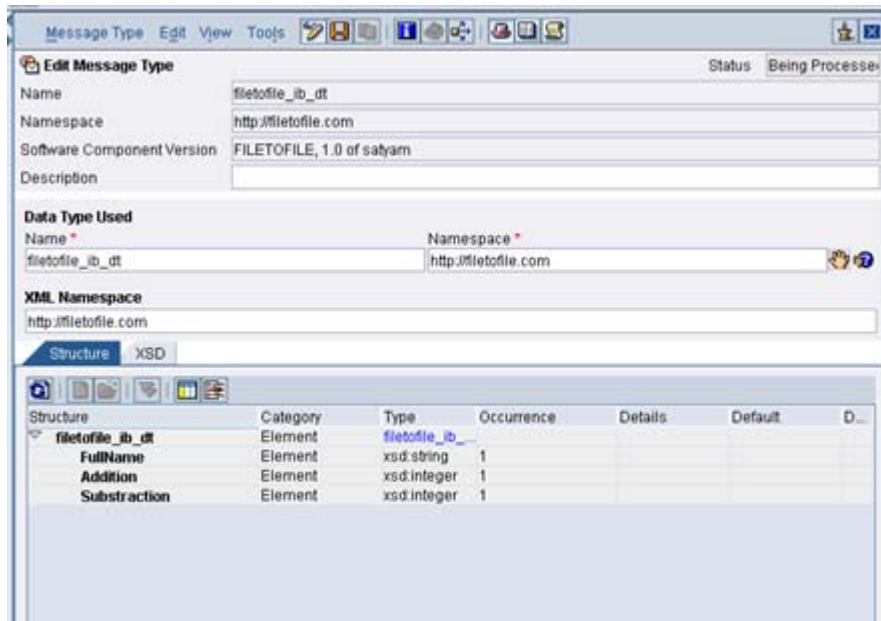


Create two Message types as follows. Specify the Data type which we created earlier.



In the screenshot you can see a blue button. By means of that button you can take the input help for data types. You can also see the structure as shown in the box. That will come automatically once you give the data type.

Define another message type in the similar manner.



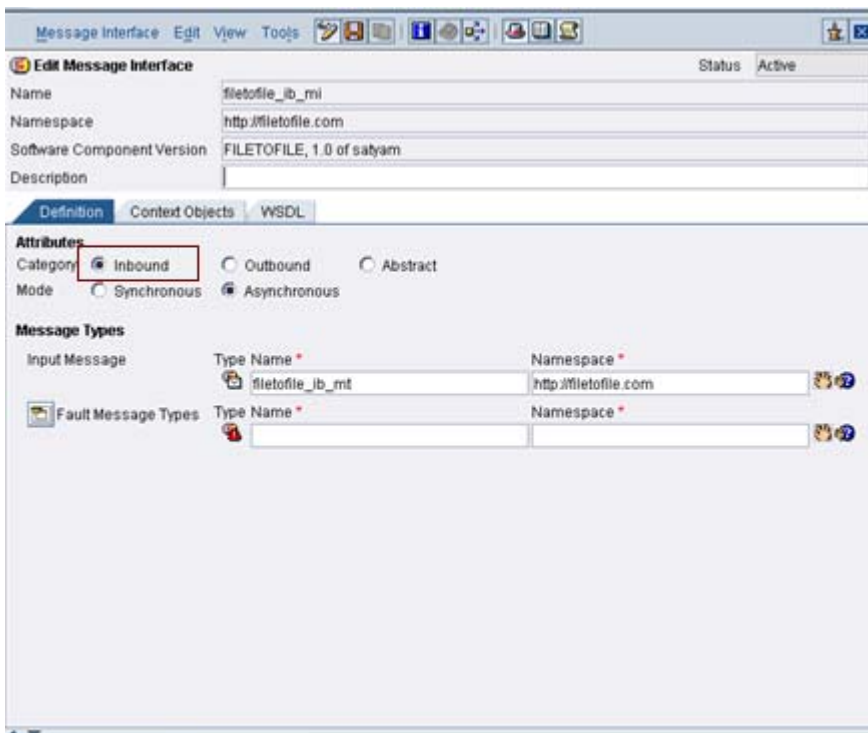
Create Message Interfaces as shown.



Click on **Apply**.

Click on **inbound** radio button as shown.

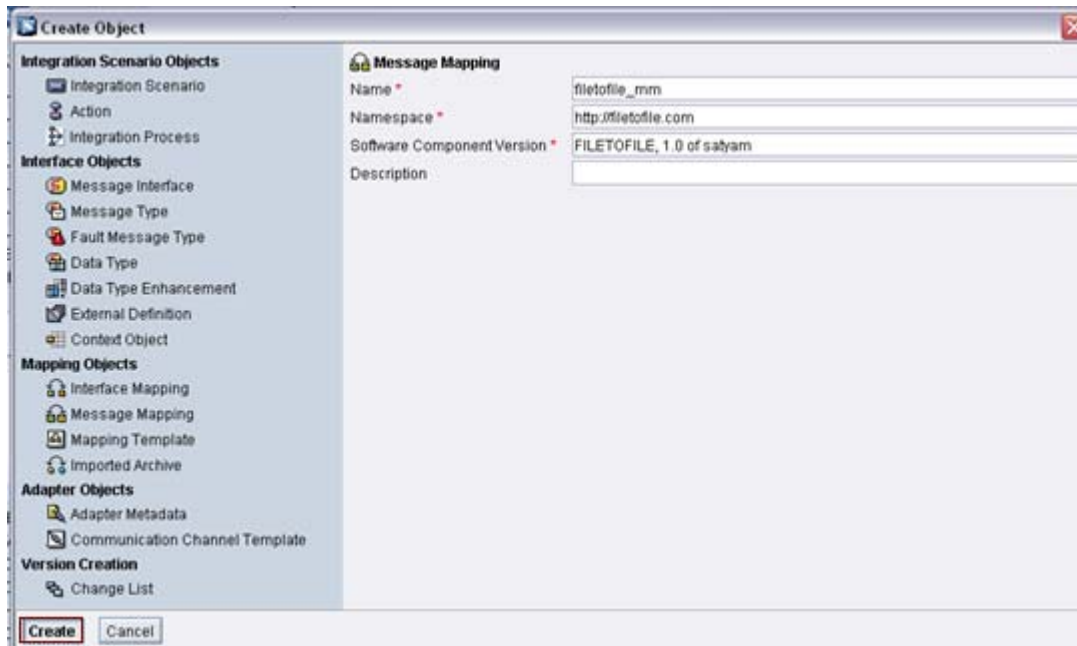
Then specify the Input Message: **Type Name**.



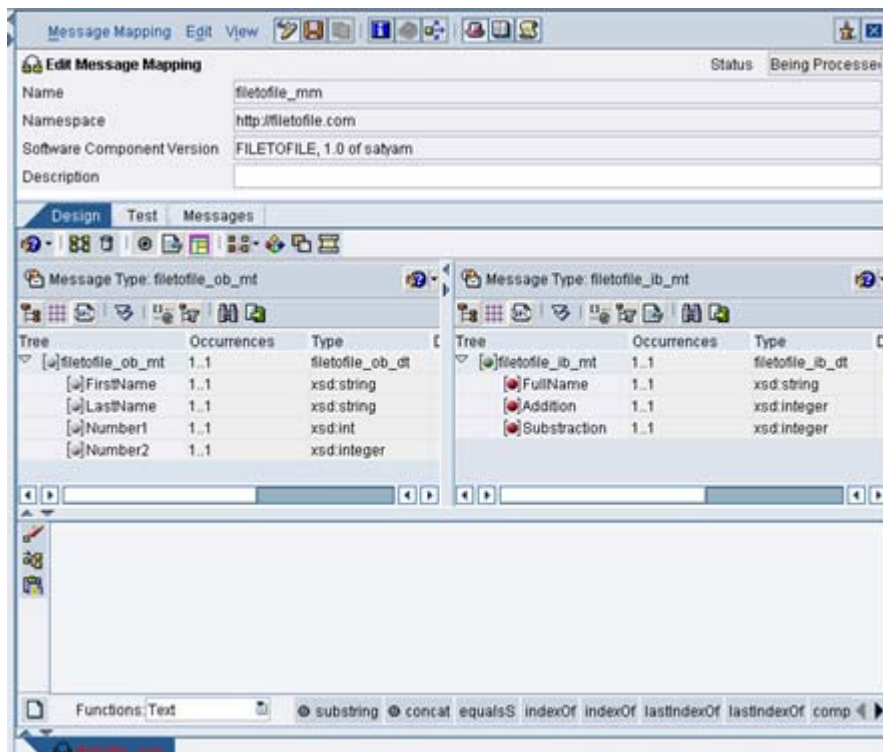
Similarly create another message interface for outbound and specify as **Outbound**.

Create Message Mapping.

For this specify the name and namespace then click on create.



Specify the message types as shown:



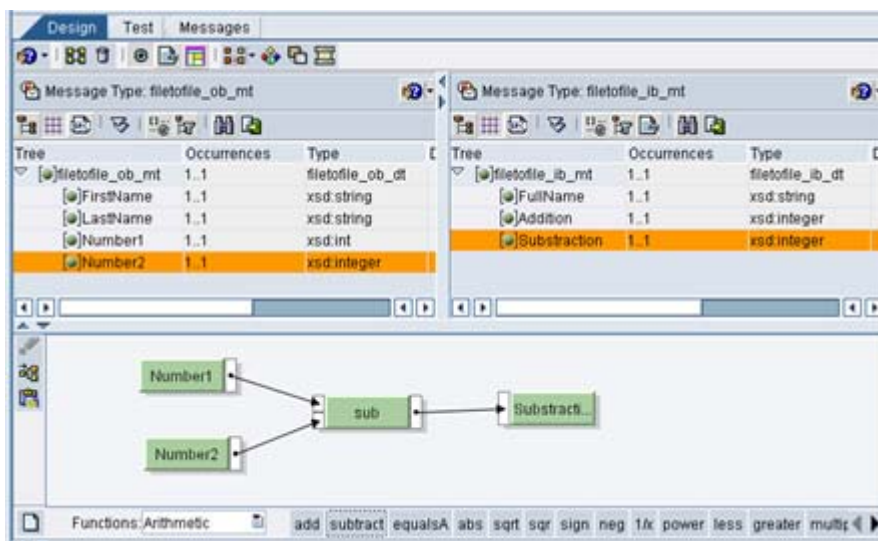
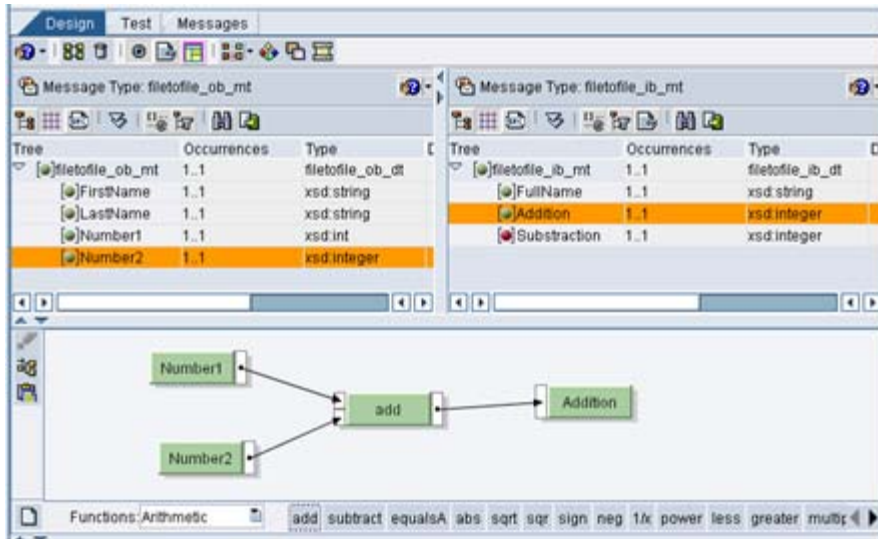
Message Mapping of the message types can be done as follows.

The image displays three sequential screenshots of the SAP XI Message Mapping configuration interface, illustrating the step-by-step process of mapping the source message type 'filetofile_ob_mt' to the target message type 'filetofile_ib_mt'.

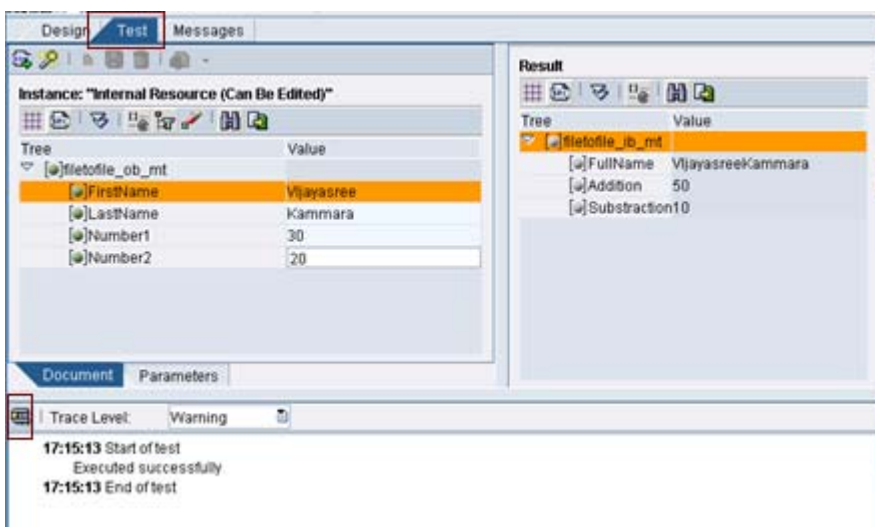
Top Screenshot: Shows the initial state where the source message type 'filetofile_ob_mt' (Type: filetofile_ob_dt) is mapped to the target message type 'filetofile_ib_mt' (Type: filetofile_ib_dt) using the 'ns0:filetofile...' function. The source tree lists fields: FirstName (xsd:string), LastName (xsd:string), Number1 (xsd:int), and Number2 (xsd:integer). The target tree lists fields: FullName (xsd:string), Addition (xsd:integer), and Substraction (xsd:integer).

Middle Screenshot: Shows the configuration of the 'concat' function. The source fields 'FirstName' and 'LastName' are mapped to the 'concat' function, which is then mapped to the target field 'FullName'.

Bottom Screenshot: Shows the configuration of the 'Addition' function. The source field 'Number2' is mapped to the 'Addition' function, which is then mapped to the target field 'Addition'. The 'Functions:Text' menu is open, highlighting the 'Arithmetic' category.



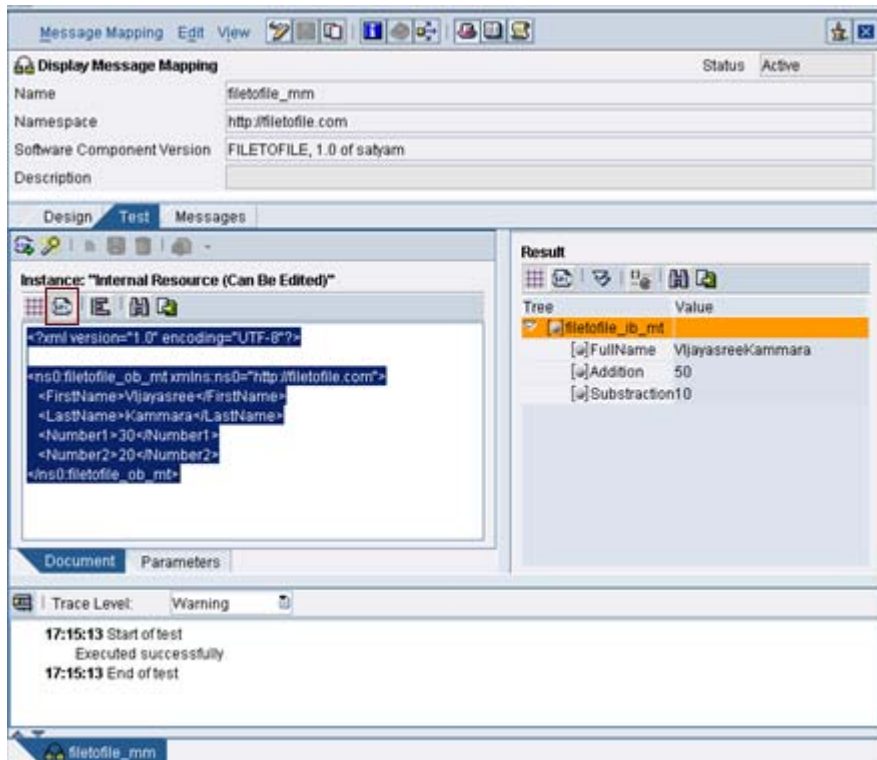
Once the Message Mapping has done, test the mapping as follows.



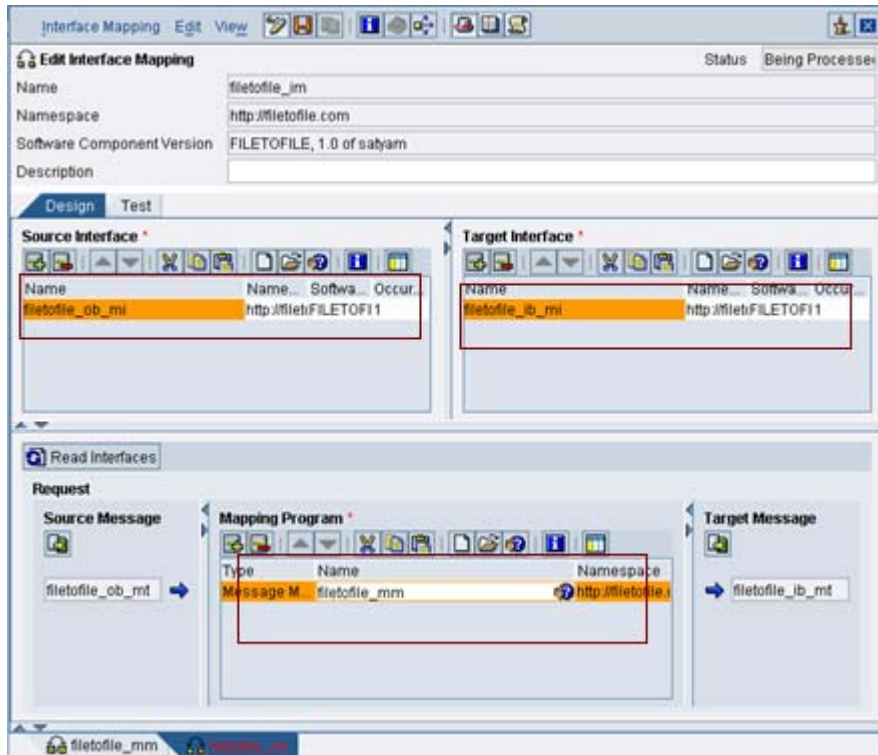


Click on SRC as shown and copy the source code into .xml file.

In this example the file is examplefile.xml



Create Interface Mapping

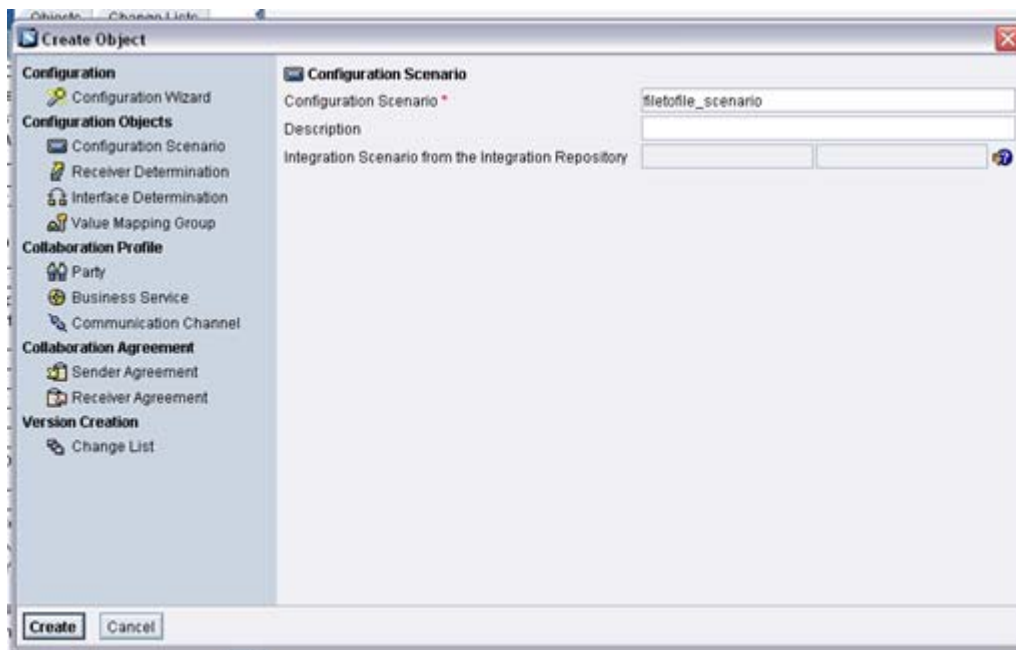


Activate.

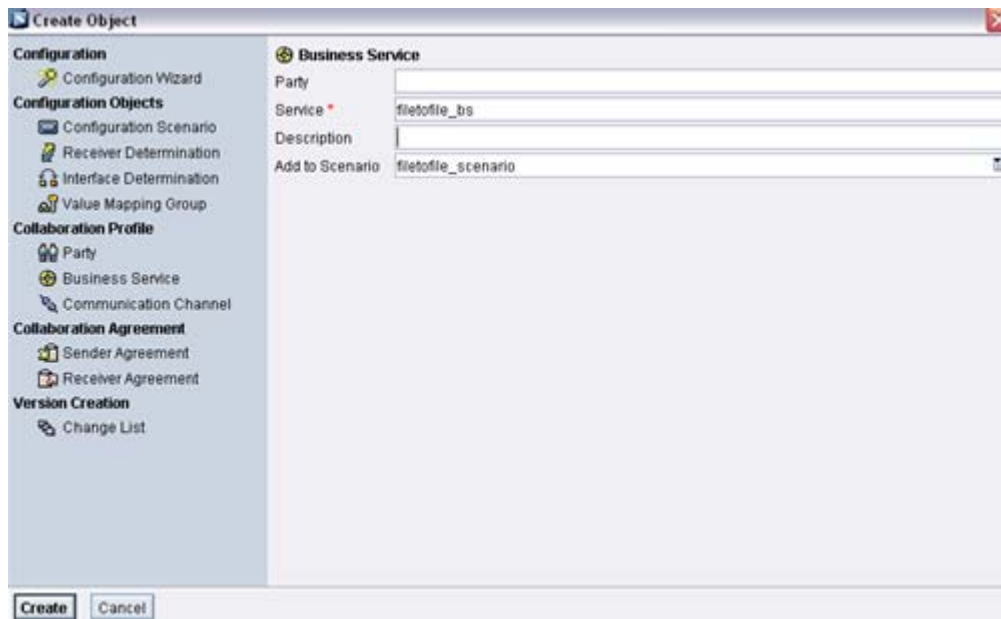
Step 3: Maintain ID (Integration Directory)

Go to Integration Builder – Configuration.

Create a new configuration scenario.



Under Scenario-Service without Party. Select the Business Service or Business System based on the scenario. In this case we select the Business Service. Once created we add the Receiver/Sender Message Interfaces.



Receiver		
Sender	Assigned Users	Other Attributes
Inbound Interfaces		
Name	Namespace	Software Component Version
filetofile_ib_mi	http://filetofile.com	FILETOFILE, 1.0 of satyam

Receiver		
Sender	Assigned Users	Other Attributes
Outbound Interfaces		
Name	Namespace	Software Component Version
filetofile_ob_mi	http://filetofile.com	FILETOFILE, 1.0 of satyam

Create Sender/Receiver Communication channels. In it select the Adapter that is to be used for this communication channel, also provide the required processing Parameters for both the sender and receiver.

- For the sender, provide the Source directory (, i.e. the place where the Sender File is kept), name of the file, Poll interval, Processing Mode etc.
- For the receiver, provide the Target directory (, i.e. the place where the File is will be placed), name of the file.

Specify the **source directory** from where to pick the file.

Processing mode should be **Delete**.

Sender communication Channel.

The screenshot shows the 'Edit Communication Channel' dialog for a sender channel named 'filetofile_sender_cc'. The status is 'Being Processed'. The communication channel is 'filetofile_sender_cc', the party is empty, the service is 'filetofile_bs', and the description is empty. The 'Parameters' tab is active, showing the following settings:

- Adapter Type: File
- Adapter URL: http://sap.com/xi/System
- Adapter Version: SAP BASIS 6.40
- Sender/Receiver: Sender (selected)
- Transport Protocol: File System (NFS)
- Message Protocol: File
- Adapter Engine: Integration Server

The 'File Access Parameters' section includes:

- Source Directory: [Redacted]
- File Name: examplefile.xml

The 'Processing Parameters' section includes:

- Quality of Service: Exactly Once
- Poll Interval (secs): 60
- Poll Interval (msecs): [Empty]
- Retry Interval (secs): [Empty]
- Processing Mode: Delete
- Process Read-Only Files:
- Processing Sequence: By Name

The bottom of the dialog shows the channel name 'filetofile_sender_cc'.

Specify the path (Target Directory) where the picked file need to place and also specify the name of the file Receiver communication channel

The screenshot shows the 'Edit Communication Channel' dialog for a receiver channel named 'filetofile_receiver_cc'. The status is 'Being Processed'. The communication channel is 'filetofile_receiver_cc', the party is empty, the service is 'filetofile_bs', and the description is empty. The 'Parameters' tab is active, showing the following settings:

- Adapter Type: File
- Adapter URL: http://sap.com/xi/System
- Adapter Version: SAP BASIS 6.40
- Sender/Receiver: Receiver (selected)
- Transport Protocol: File System (NFS)
- Message Protocol: File
- Adapter Engine: Integration Server

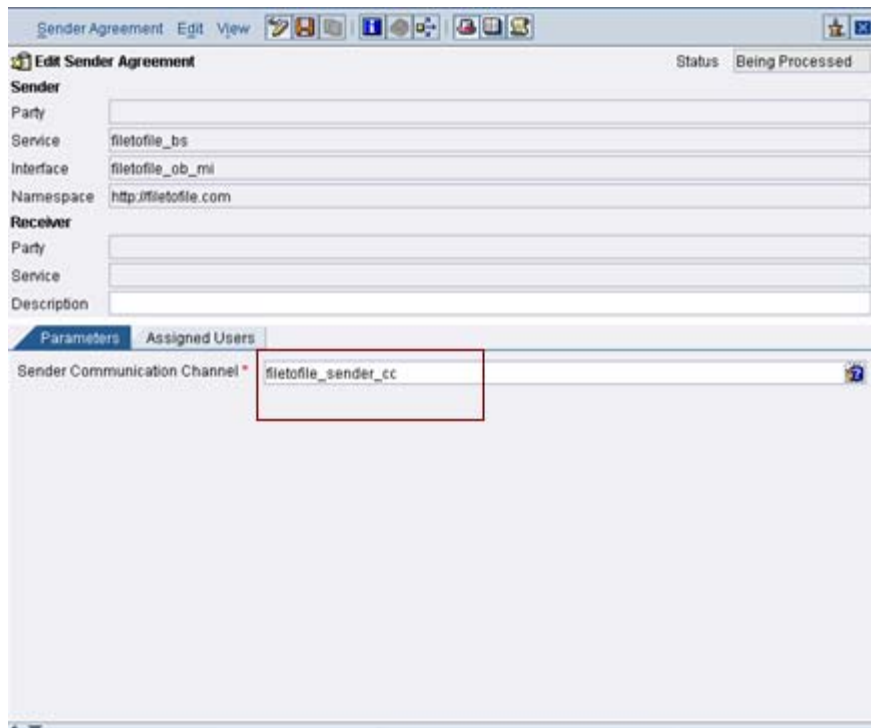
The 'Processing Parameters' section includes:

- Target Directory: [Redacted]
- File Name Scheme: [Redacted]
- File Construction Mode: Add Time Stamp

The 'File Type' is set to Binary. The 'Command Line' is empty. The 'Adapter Status' section shows the status as 'Active'. The 'Advanced Mode' checkbox is unchecked. The bottom of the dialog shows the channel name 'filetofile_receiver_cc'.

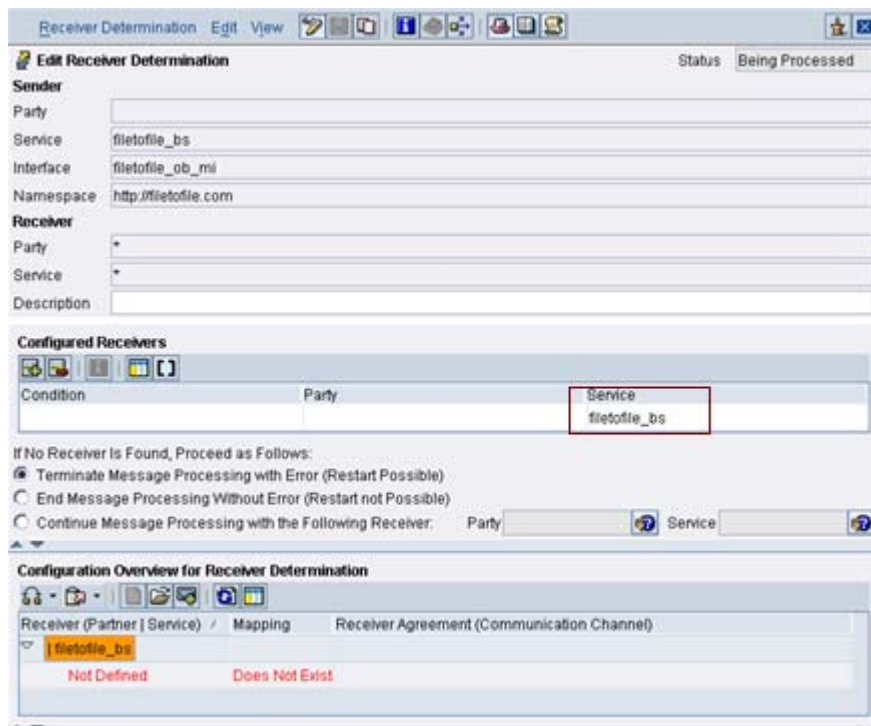
Sender Agreement: Sender Agreement is a combination of the Sender service, Sender Message Interface and the Sender Communication channel.

Create Sender Agreement and specify the sender communication channel.



Receiver Determination : Receiver determination is combination of Sender service, Sender Message Interface, Receiver service

Create a Receiver Determination and specify the service.



Interface Determination: In the Interface determination, specify the Inbound interface and the interface mapping.

Create new and specify the inbound interface and interface mapping as shown.

Interface Determination Edit View

Status: Being Processed

Sender

Party: _____

Service: filetofile_bs

Interface: filetofile_ob_mi

Namespace: http://filetofile.com

Receiver

Party: _____

Service: filetofile_bs

Description: _____

Type of Interface Determination **Quality of Service**

Standard Extended Maintain Order At Runtime

Configured Inbound Interfaces

Inbound Interface		Interface Mapping	
Name	Namespace	Name	Namespace
filetofile_ib_mi	http://filetofile.com	filetofile_im	http://filetofile.com

Receiver Agreement: Receiver Agreement is a combination of the Sender service, Receiver service, Receiver Message Interface and the Receiver Communication channel.

Create new and specify Receiver communication channel.

Receiver Agreement Edit View

Status: Being Processed

Sender

Party: _____

Service: filetofile_bs

Receiver

Party: _____

Service: filetofile_bs

Interface: filetofile_ib_mi

Namespace: http://filetofile.com

Description: _____

Receiver Communication Channel * filetofile_receiver_cc

Header Mapping

Sender Party _____

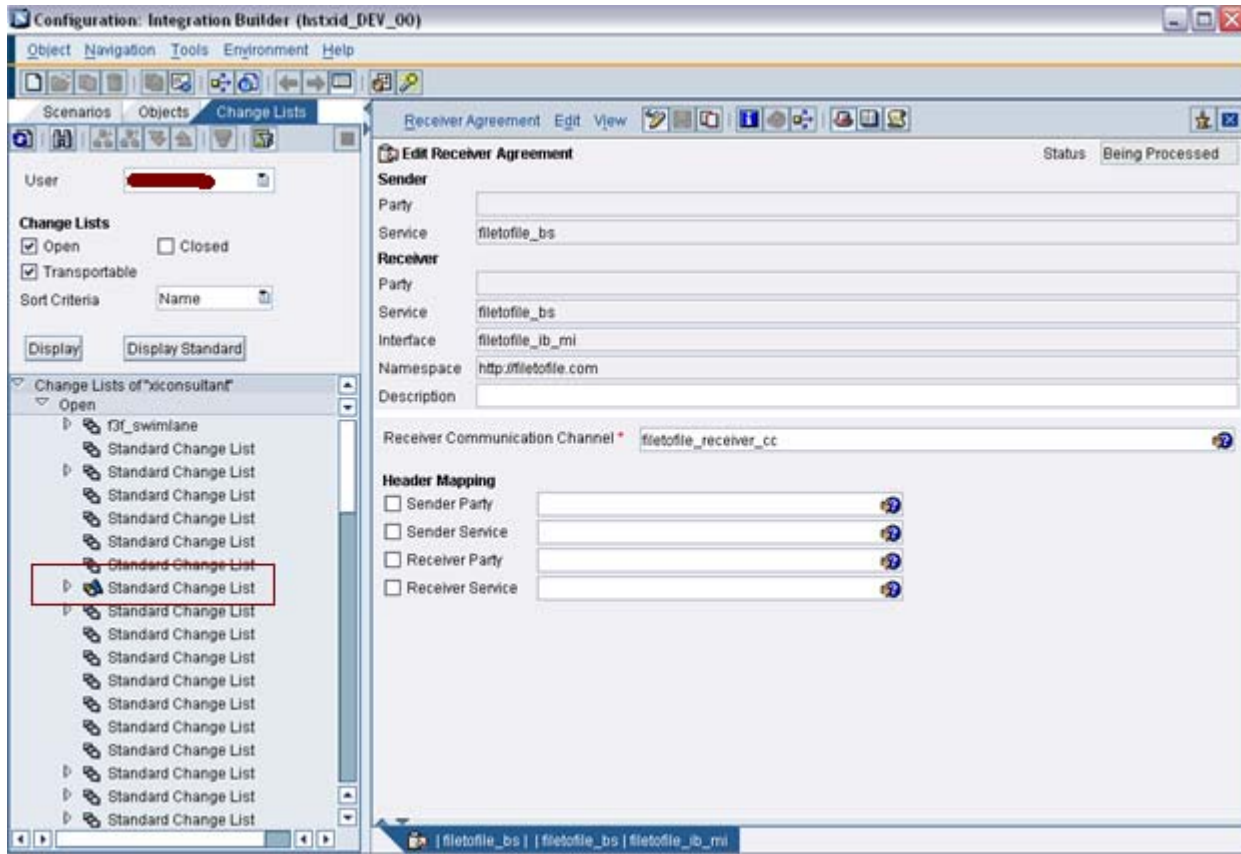
Sender Service _____

Receiver Party _____

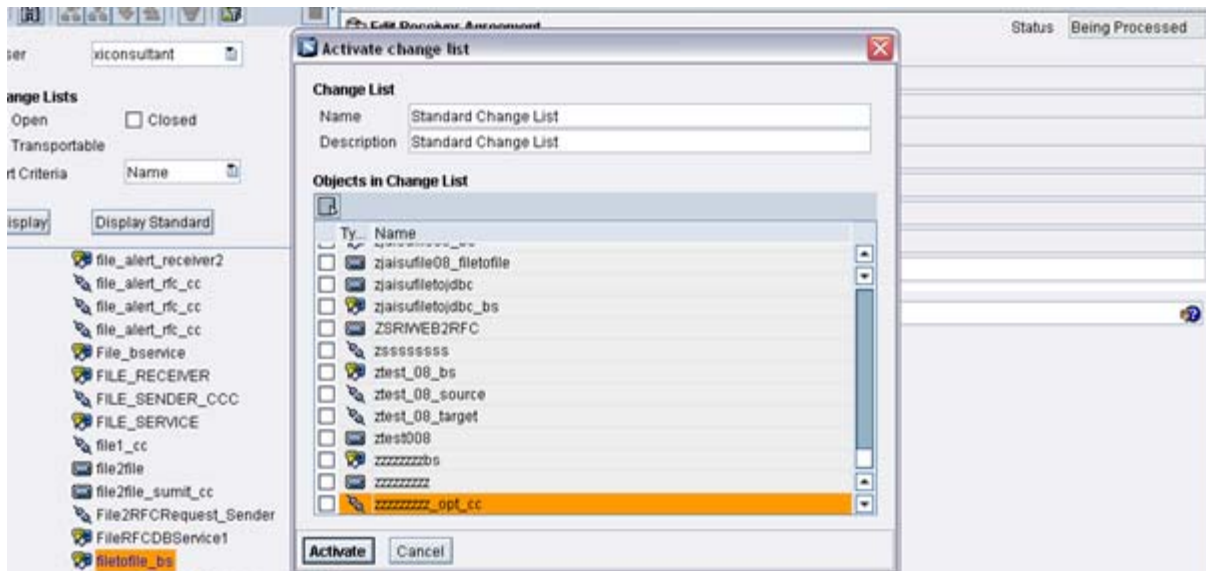
Receiver Service _____

filetofile_bs | filetofile_bs | filetofile_ib_mi

Activate the scenario by clicking **change lists** tab.



In the above screenshot you can notice the symbol in the box. There you can find the inactive versions. From there we can activate the scenario.



Once the Scenario is activated the File will be picked up from the source directory and placed in the target folder.

Testing the Scenario

Go to Runtime Workbench.

By means of Message Monitoring we can check the status of the scenarios. In this case the scenario is successful.

If we can find the file in the target directory then the scenario is successful.

269 Messages									
Update Details Referencing Messages Referenced Message Resend Cancel Multiple Selection On Error Log									
End-to-End Information	Status	Start	End	Sender Party	Sender Service	Receiver Party	Receiver Service	Interface	
<input type="radio"/>	Successful	08.12.2008 18:13:23	08.12.2008 18:13:23		filetofile_bs		filetofile_bs	http://filetofile.com filetofile_ib_mi	
<input checked="" type="radio"/>	Successful	08.12.2008 18:13:03	08.12.2008 18:13:04		filetofile_bs			http://filetofile.com filetofile_ob_mi	

Related Content

<https://www.sdn.sap.com/irj/scn/go/portal/prtroot/docs/media/uuid/21114571-0701-0010-afa6-c711cf156cbd>

http://help.sap.com/saphelp_nw04/helpdata/en/7b/d4653fd1d3b81ae1000000a114084/frameset.htm

http://help.sap.com/saphelp_nw04/helpdata/en/7b/d4653fd1d3b81ae1000000a114084/frameset.htm

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