Sending Additional Files from SAP Netweaver PI to third Party System

Applies to:

SAP Netweaver PI.

Summary

The document describes about a scenario where the requirement is to send multiple files from one source system to target system on the basis of a condition file. Multiple files are extracted from BW and sent in one payload as attachment to third Party system, via SAP Netweaver PI.

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Purpose

The idea to implement this scenario came up when we had a requirement to transfer some files from one Business System to another via the middleware. And the transfer of the files was dependent on a finish file. So, I came up with this idea of sending the files as attachments. This scenario could also be extended to transfer image files as well as all forms of binary files from master data sources for articles to MDM.

Abstract

Five files from BW system are posted on PI server directory and a finish file for eg : "done.dat" is written to indicate that the five files are written successfully to the directory location and are ready to be transferred to the target system.

In the target system again the files should be written first and then "done.dat" file should be written. The target system has the option to use the file "done.dat" (case sensitive and not zipped) to start the data import from FTP server. The file has to be empty. Therefore the the file "done.dat" should be uploaded (case sensitive and not zipped) to the FTP server AFTER all other flat files have been uploaded. A job checks automatically every 10 minutes if there is a new "done.dat" file on the FTP server. In case that there is a new file the job submits a request and then deletes "done.dat" from the FTP server. Hereafter the data load is started by the target system .

Description

The five files are extracted from BW system and are available on PI application server as well as the finish file "done.dat" is posted. Now we have to pick the files from this location on the basis done.dat file. This can be done by polling for the finish file and sending the actual files as attachments. This is achieved by using File adapter with additional files option in the sender side.

The five files should now be posted to the ftp location on target server and the finish file should be written only after the five files have been posted successfully on the target location . This can be achieved by using SOAP axis adapter.

The following document will provide details about configuring the sender File adapter for additional files and receiver Soap Axis adapter.

Configuring the Sender File adapter:

The sender file adapter is configured to pick the finish file (done.dat), which is specified in the File access parameters, and the data files done1.xml, done2.xml …done5.xml that is to be sent as an attachment is configured under the Additional File(s) as shown in the screenshot below.

In the sender file adapter, you can specify additional files to be included in the PI message as attachments .Additional files are transported unchanged without conversion options.

Note: The way that the files to be transported are grouped together is defined by the file names. All file names must be identical except for a defined part (such as the suffix).

1.   Under File List, enter the name for each additional file.
2.   Separate the names of the additional files with a comma (done1,done2,done3.. etc).

The specified names are used as the names of the additional attachments in the PI message

and as parameter keys.
3.   Enter parameters for the additional files in the table:

done1.**namePart**

The name of the additional file is determined from the file name that was assigned for the PI message under *File Name*.

Specify which part of the original file name must be replaced to find additional files.

Here

".dat"=".1.xml"

".dat"="2.xml" etc.

If the file **done.dat** is found as a result of the configuration, this entry means that a search is performed for the file **done1.xml, done2.xml etc**.

Parameters	Identifiers	Module

Adapter Type *	File	http://sap.com/xi/XI/System	SAP BASIS 7.11	

⦿ Sender   ○ Receiver

Transport Protocol *	File System (NFS)
Message Protocol *	File
Adapter Engine *	Central Adapter Engine

Source	Processing	Advanced

File Access Parameters

Source Directory *	XXXXXXXXXXXput\abap
File Name *	done.dat

☐ Advanced Selection for Source File
☑ Additional File(s)

File List	done1,done2,done3,done4,done5

Name	Value
done1.namePart	".dat" = "1.xml"
done2.namePart	".dat" = "2.xml"
done3.namePart	".dat" = "3.xml"
done4.namePart	".dat" = "4.xml"
done5.namePart	".dat" = "5.xml"

Configuring the receiver Soap adapter:

To receive the file on the receiver system we will configure the Soap Axis adapter .

1. **In the connection parameters give the ftp location against URL and user name password for basic authentication.**
2. **For file format select**
   "Parts" So that the main payload and all attachments are put into separate files.

3. Under *Payload Extraction*, select which part of the XI message to take the payload of the SOAP message from:
   "**SOAP Body"**
4. Do not forget to check the "Keep Attachments" option .

Parameters	Identifiers	Module

Adapter Type *	SOAP	http://sap.com/xi/XI/System	SAP BASIS 7.11	

○ Sender   ⦿ Receiver

Transport Protocol *	File
Message Protocol *	Axis
Adapter Engine *	Central Adapter Engine

Connection Parameters

URL *	ftp://XXXXXXXXXXXX/SR
Authentication	Basic
User	ftpsp
Password	•••••••••••••• = ••••••••••••••

File Parameters

File Format	Parts
File Name	done.dat
Response	Empty

Outbound Parameters

SOAP Version	1.2
SOAP Action	
Encapsulation Format	DIME

XI Parameters

☐ Keep XI Headers
☑ Keep Attachments
Payload Extraction   SOAP Body

The communication channels are now ready to transfer the files. Configure other objects in the Integration builder to complete the configuration scenario

Results

1. Load the five files and the done.dat file on the directory location

Useable	Viewed	Changed	Length	Owner	Lastchange ▼	Lastchange	File Name
		X		Administ	16.08.2011	15:50:07	.
X			139	SAPServi		15:50:07	done.dat
X			141	SAPServi		15:49:03	done1.xml
X			142	SAPServi		15:49:13	done2.xml
X			141	SAPServi		15:49:21	done3.xml
X			141	SAPServi		15:49:30	done4.xml
X			141	SAPServi		15:49:40	done5.xml
X			138	SAPServi	11.08.2011	11:52:50	done20110811_115250_687.dat

2. The files are picked by PI :

▼ ☐ XML Message   Msg ID = 2FA7D031DEE845B92D71
  ▼ 🏴 Inbound Message (CENTRAL)
    ▶ ☐ SOAP Header
    ▶ ☐ SOAP Body
    ▼ 🗁 Payloads
      • 📄 MainDocument (application/xml)
      • 📄 done1 (application/xml)
      • 📄 done2 (application/xml)
      • 📄 done3 (application/xml)
      • 📄 done4 (application/xml)
      • 📄 done5 (application/xml)
  ▶ ○ XML Validation Inbound Channel Request

```
<?xml ve
<!-- Res
- <SOAP:E
    xmlns:S
- <SOAP:
  - <SAP
    xml
    xml
    200
    vers
```

3. On Target Location the files are posted in a folder of the same name as the file ,the following way:

\abap\done2fa7d031-dee8-45b9-2d71-8dbf2bfa6a2battachments

Name ▲	Size	Type	Date Modified	Attributes
attachment-1	1 KB	File	8/16/2011 4:07 PM	A
attachment-2	1 KB	File	8/16/2011 4:07 PM	A
attachment-3	1 KB	File	8/16/2011 4:07 PM	A
attachment-4	1 KB	File	8/16/2011 4:07 PM	A
attachment-5	1 KB	File	8/16/2011 4:07 PM	A

4. The finish file is also written to the target location :

done2fa7d031-dee8-45b9-2d71-8dbf2bfa6a2b.dat	1 KB	DAT File	8/16/2011 4:07 PM	A
done6ad276b0-4eae-4258-0053-eabe135c70fd.dat	1 KB	DAT File	8/11/2011 12:36 PM	A
done9abbc7e0-6	1 KB	DAT File	8/11/2011 12:39 PM	A
done44b713cc-c	1 KB	DAT File	8/11/2011 12:30 PM	A
done20110811-1	1 KB	DAT File	8/11/2011 11:54 AM	A

Type: DAT File
Date Modified: 8/16/2011 4:07 PM
Size: 291 bytes

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