

Chapter 1. Adapters

Chapter 1 will show you how to use different adapters and their advanced functionalities, together with many troubleshooting tips. In this chapter you will learn how to use Conversion Agent in order to do more sophisticated file conversions, how to use an adapter module in order to swap the payload of an attachment into the main message inside a mail adapter and also some tips on how to use command line functions which are available with a few adapters. We also describe one of the most popular functionalities which allow you to dynamically determine many parameters in SAP Process Integration – Adapter Specific Message Attributes (ASMA.) As the RFC adapter used to be one of the most popular adapters, we have also included a complete step by step guide on how to configure the RFC sender adapter, as it involves more set up steps than the RFC receiver adapter.

1.1 How to troubleshoot RFC and SOAP scenarios

Introduction

This article is intended to help the reader understand the various parameters used in the RFC sender and SOAP receiver adapter, and how to access and use them while configuring these specific adapters. We will also discuss troubleshooting steps to help resolve common errors and exceptions raised for the adapters.

Article

RFC SENDER ADAPTER

1. The Program ID

Q: What is the program ID? Where can it be found?

A: The program ID can be anything (even your name) but must be the same in both RFC destination and RFC adapter.

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For more information refer to Question 22 of SAP note 730870

An extract from the above:

"¹To identify a SAP NetWeaver PI RfcAdapter sender channel within the SAP Gateway it is important that its Program ID is unique within this Gateway. So try to avoid using common phrases as Program ID like 'rfcadapter' or 'rfcToXmb'.

To check which Program IDs are registered at the SAP Gateway the gateway-monitor can be used via transaction SMGW. Select Goto -> Logged on Clients. Registered RFC-Servers have a System-Type of 'REGISTER_TP'. The Program ID of the registered RFC-Server can be found in column 'TP name'. Unfortunately the list within SMGW only shows the truncated version of the Program ID (column 'TP name'). To get the full name, the details of an entry have to be selected. As an alternative the report RSGETALL_REG_SERVERS can be executed in transaction SE38. The output of this report will show the full names of the Program ID in column 'Registered PROGID'. This functionality is also available in the function module GWY_READ_CONNECTED_SYSTEMS which can be executed in transaction SE37."

2. Application Server (Gateway) and Application Server Service (Gateway) - Where is it located?

TCODE: SMGW -> Goto-> Parameters -> Display

The required information can be found under Attributes. Application Server (Gateway) is the Gateway hostname and Application Server Service (Gateway) is the Gateway service.

¹ SAP note 730870 <http://service.sap.com/notes>

Usually the Gateway service is **SAPGWXX** where XX is the system number.

3. The RFC destination

- The RFC destination should be created in the R3 systems and not SAP NetWeaver PI.
- If in your adapter monitoring you find a message such as 'Could not start server: Connect to SAP gateway failed' then try to replace the GWHost (gateway host) with the IP of the R3 system.
- Refer to SAP note 730870 for FAQ on the RFC adapter.

SOAP RECEIVER ADAPTER

1. SOAP Action

Search for 'soapAction' text in the WSDL, it will give the action.

In the event the WSDL does not have a SOAP Action defined, try a blank SOAP Action in the Adapter. If this does not give the desired output, try the following:

The SOAP action = SOAP operation.

For example:

To access the list of Operations in the WSDL try the following:

Open the WSDL in a XML Editor (e.g. XML Spy). Click on the Schema/WSDL tab and all the operations will be listed. Refer to Figure 1.

In the following scenario **getDistance** is the action.

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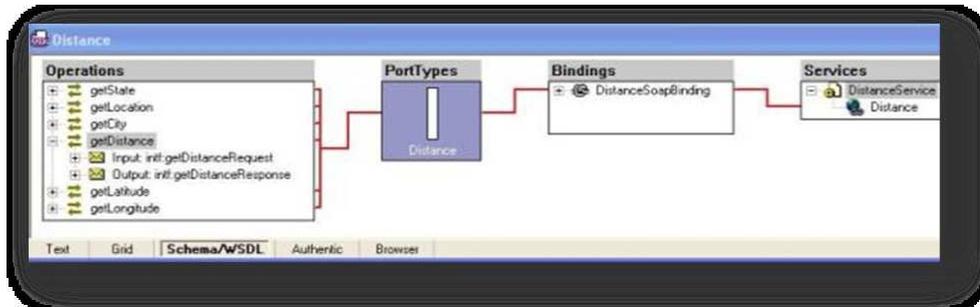


Figure 1

For more information refer to point 5 – Additional Notes in the event you use XML Spy

2. The Target URL

To find the Target URL search the WSDL for 'wsdlsoap:address location'.

For more information refer to point 5 – Additional Notes in the event you use XML Spy

3. Configure Proxy

If the network involves a proxy those details have to be provided in the adapter. Also, if the proxy involves an authorization, the Proxy User Authentication details need to be entered or a **Delivery Exception** will be raised.

4. SAP Note - FAQ's on the SOAP adapter

Refer to SAP Note: 856597

5. Additional Notes - XML Spy users

A simple way to find the web service's correct address and SOAP action using XML Spy is as follows:

- Click the Go to SOAP menu-> Create a new SOAP request.
- Browse the WSDL file or enter the full URL of the WSDL e.g.:?wsdl).
- Select the operation to be accessed.
- After the request has been generated, go to SOAP and change the SOAP request parameters.

6. "Delivery Exception: invalid content type for SOAP: TEXT/HTML."

- 1) The reason for this could be a wrong address in your SOAP adapter.
- 2) What else can be done?

By default, the SOAP adapter sends the SOAP message with the content type 'text/xml'. If this is not the case, then use the MessageTransformBean.

In the adapter provide the following:

Go to the SOAP receiver communication channel module tab. Add the module "localejbs/AF_Modules/MessageTransformBean" before the standard module. Provide the parameter name **Transform.ContentType** and value **text/xml**.

7. *com.sap.aii.af.ra.ms.api.DeliveryException: invalid content type for SOAP: TEXT/PLAIN*

Contact the team responsible for the web service development and find out the Content Type expected by them.

Use the **MessageTransformBean**, to change the content type as required.

8. *Content type is showing application/xml, but this is not expected.*

Confirm if you have checked the option "Do not use SOAP envelope". If this is checked then the content type by default is application/xml. If the problem still persists, use the MessageTransformBean.

End notes

RS_COL_TOOL_SHOW_REGSERVERS is a report that, when executed in Application system (ECC), lists all registered program ids.

1.2 How to handle files with Random Position of Key Fields while using File Content Conversion

Introduction

Often you will encounter a file which will have key fields of its various segments at random positions. This article is intended to help you understand and configure the file adapter to read such files and content convert them to XML.