Step-by-step FTP to ABAP Proxy

ABAP Server Proxy

Area: SAP NetWeaver Process Integration

CONTENT

1. Foreword.
2. Preface.
3. Predefined configuration required on the SAP ECC side.
   3.1 Create HTTP connection in the business system.
   3.2 Configuration Business system as local Integration Engine.
   3.3 Checking activation the XI Service in transaction SICF Maintain Services.
4. Tasks in the Integration Builder (Design time) and SAP ECC Proxy Framework.
   4.1 Import RFC metadata into Integration Repository.
   4.2 Creation Message Interface for Receiver.
   4.3 Generation ABAP Server proxy.
   4.4 Integration Repository objects for sender.
   4.5 Message transformation rule.
5. Configuration time.
   5.1 Communication channels.
   5.2 Receiver and sender agreements.
   5.3 Receiver and Interface determination.

1. Foreword

As part of Integration Project, I was responsible for integrating Legacy system with SAP System using Server ABAP Proxies. ABAP Server (Inbound) Proxies enable adapterless integration with SAP Applications on WAS 6.20 and above. Below in this document we look at real life example of implementation ABAP Server Proxy.

2. Preface

This document describes how to send list of materials (specification) from FTP in XML format to SAP ECC system. The solution is based on SAP ECC 6.0 and PI 7.0.
We execute all actions in our integration scenario within customer LAN.

3. Predefined configuration required on the SAP ECC side:

3.1 Create HTTP connection in the business system.

Configuration Details:

Technical Setting:

1. Following Inputs are required for technical setting

1 Connection Type: H

2 Target Host: System name

3 Service Number: HTTPPort name

4 Path Prefix: /sap/XI/engine/?type=entry

Logon Security

On the Logon/Security tab page, enter the following logon data:

1 User: XIAPPLUSER (for example); this user should represent the sending business system see also the SAP PI Security Guide under Service Users for Message Exchange).

2 Password: the password you have specified for this user

3 Client: SAP PI Integration server

4 Language: Language required
3.2 Configuration Business system as local Integration Engine.

1. Goto Transaction SXMB_ADM

2. Choose Edit --> Change Global Configuration Data.

3. Select Role of Business System: Application system

4. Corresponding Integration server: dest://<HTTPDESTINATION> created on previous step. Here <HTTPDESTINATION> SAP_E03_TO_NW2_PROXY created in step 1. Dest://SAP_E03_TO_NW2_PROXY.
5. Under Specific Configuration Data you can specify additional configuration data

1. Select the relevant category under Specific Configuration Data.
2. Choose Change Specific Configuration Data.

For ABAP Proxies, add the following configuration:

1. Category RUNTIME
2. Parameters: IS_URL
3. Current Value: dest://SAP_E03_TO_NW2_PROXY

3.3 Checking activation the XI Service in transaction SICF Maintain Services.

For purpose of checking activation the xi service you have to execute transaction SICF and if no then invoke context menu on xi service and Press "Activate".
4. **Tasks in the Integration Builder (Design time) and SAP ECC Proxy Framework.**

Open the Repository (Design) of the PI Integration Builder. You may start the application by executing transaction SXMB_IFR in PI system. (Further information can be found in the PI documentation -> Design and Configuration Time -> Design.) Choose your Software Component in the tree and open it with double-click: here we use: SC_PROD_FOR_E03 Enter the system data of the SAP ECC system that you want to connect.
4.1 Import RFC metadata into Integration Repository

Choose "Import RFC/IDOC" in the context menu of "Imported Objects" and enter your user data to logon to the SAP ERP system. Select the function module ZMGW1_CREATE_BOM Press "Continue" Press "Start". ZMGW1_CREATE_BOM it's remote-enabled module instead of SAP standard function module MGW1_CREATE_BOM.

4.2 Creation Message Interface for Receiver

Select your namespace, here: "http://rea_ksp_e03/" is used Choose "Interface Objects" and then "Message Interface" Create a Message Interface there by choosing "New" from the context menu Press "Create"

Choose the settings like this:

Direction: Inbound
Mode: Asynchronous

Select the imported RFC Message and by executing the value help ZMGW1_CREATE_BOM for Input Message Name

4.3 Generation ABAP Server proxy

Start transaction SPROXY and Refresh the tree Double-click on the Message Interface "MI_PROXY_MGW1" in your Software Component in your namespace (here: "http://rea_ksp_e03") Choose a package (e.g. $tmp) Choose a prefix (we use "Z" here) Activate the Proxy.
Navigate to the implementing class ZCL_MI_PROXY_MGW1 by double clicking. Navigate to the method "EXECUTEASYNCHRONOUS" by double-clicking. Choose the change mode.
Send and activate the method and all class and interface components

Result:

The SAP ECC is now ready to receive data from the Integration Server via the Proxy Framework and the implemented Proxy. Data which is running through PI may now be transferred to the SAP ECC system according to routings and mappings that still have to be created.

4.4 Integration Repository objects for sender

Also, we should develop necessary repository objects for sender during the design phase. The outbound Data type, Message type and the corresponding Message interface are shown below.

Outbound Data type: ROOT
Outbound Message type ROOT.

Outbound Message interface ROOT
4.5 Message transformation rule

Now we have to specify transformation rule between message types ROOT and ZMGW1_CREATE_BOM. For the purpose create message mapping MM_PROXY_XML2RFC.

It's important that material which you pass to field STRUC_MATERIAL in function module ZMGW1_CREATE_BOM exist in SAP ECC system.

Create Interface Mapping IM_MI_PROXY_XML2RFC. It's very important set as target interface message interface MI_PROXY_MGW1 instead of message type ZMGW1_CREATE_BOM.
Save and activate all your changes in Integration Repository.

5. **Configuration time**

Open the Integration Directory (Configuration) of the PI Integration Builder. You may start the application by executing transaction SXMB_IFR in PI system. Create configuration scenario CS_E03_MI_PROXY_XML2RFC.

5.1 **Communication channels**

After creation in our configuration scenario business services BS_MI_PROXY_S and BS_MI_PROXY_R we have to create two communication channels type FILE and PROXY. Below configuration parameters for both channels.

Sender communication channel CC_MI_PROXY_S.
Receiver communication channel CC_MI_PROXY_R.
5.2 Receiver and sender agreements

Next step we have to create receiver and sender agreement.

Sender agreement.
5.3 Receiver and Interface determination

Last step we have to create receiver and interface determination like providing on screenshots below.

Receiver determination.
Interface determination

[Image of a software interface]

Save and activate all your changes in Integration Directory.

Now we are able to run our configuration scenario by putting XML file in proper directory at FTP server. Transaction SXMB_MONI (or SXI_MONITOR) can be used for checking technical successful execution of scenario. For checking business successfully execution of scenario you have to run transaction CS03 Display material BOM.

6. Example of execution & Useful SDN Blog permanent links

Putting XML file in proper directory at FTP server with simple business content.
Then go to SAP ECC system to CS03 transaction and input material which you mapped to field STRUC_MATERIAL in function module ZMGW1_CREATE_BOM and press ‘Enter’

Now you can see result of execution our scenario
At the end, I would like to provide useful SDN Blog permanent links which were extremely helpful for me.

**ABAP Server Proxies**

https://weblogs.sdn.sap.com/pub/wlg/1457

How do you activate ABAP Proxies?


Monitoring for Processed XML messages in ABAP Proxy


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### Display material BOM: General Item Overview

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