How To Use SAP MII – Synchronous RFC Listeners

Applicable Release: MII 15.0

Version 1.0

Date: 13-10-2015
The value of $y$ will be incremented by 1 for a new version of the How-To-Guide for a new version of MII.
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Sending RFCs from SAP to MII – often, there is a need to trigger downloading of information (e.g. Production Orders, Material Master, etc.) from SAP to an external system. This guide walks you through a step – by – step process of setting up the sending of RFCs to SAP MII 15.0.

2.1 Introduction
In some cases where information needs to be “pushed” from SAP rather than “pulled”, it is necessary to Configure the SAP system to send RFCs to the external system. The external system in this case needs to have a Listener, which triggered when information sent to it. The systems involved in this scenario are SAP ECC and SAP MII. In SAP MII 15.0, there have been some substantial changes in how the RFC Listeners configured. Instead of configuring the RFC Listener in MII, there are 10 preshipped RFC Listeners and 10 preshipped SynchronousRFC Listeners, which are available in MII. The specific connection parameters to the ERP system applied in NetWeaver.

2.2 Step – By – Step Solution
To enable your SAP ECC system to issue RFCs for the SAP MII RFC Listener, you must define an RFC Destination on the ECC system. Each ECC system has a single RFC destination for an MII RFC Listener that identifies where the ECC system sends all RFCs that invoke the MII RFC Listener service.

3.1 Creating an RFC Destination on the SAP ECC Server
Use the following procedure to configure the SAP MII RFC Listener as a registered RFC Destination on the SAP ECC system. You must have the proper authorizations for SAP ECC to add an RFC Destination. If you do not have authorization, have your SAP Administrator perform the following steps:

1. From the SAP Logon Pad, make a note of your SAP System number and Message Server Name
   - My SAP System number is 09
   - My SAP Message Server Name is QPT
2. Log in to SAP ECC system.
   - The Client Number of my SAP System is 004
3. Choose Tools → Administration → Administration → Network → RFC Destinations (transaction SM59)
5. Click on Create button.
6. In the RFC Destination field, type a meaningful name that identifies the SAP MII RFC Listener.

7. We recommend for simplicity, that a default RFC Listener name is used (XMIISRFC01, XMIISRFC02, XMIIRFC01, etc.) as the name of the RFC Destination, Program ID, Receiver, Port, etc. For the purposes of this document, we will be using XMIISRFC01 or XMIIRFC01.

   NOTE: This field is case sensitive. We strongly recommend that you pick a name that is all UPPERCASE characters.

8. The name of my RFC Destination is: XMIISRFC02

9. Enter T in the ConnectionType field (destination type TCP/IP).

   NOTE: T is the default ConnectionType.

10. Enter MII_SRFC Listener (or the meaningful name from above) in the Description section.

11. Choose Save from the toolbar or select Save from the Connection menu.

12. Select the Registered Server Program radio button.

13. In the Program ID field, type the name of your RFC destination, which defined in Step 8. Enter it exactly as you did in that step. This is also a case sensitive field.
NOTE: Your Program ID can only use for a single RFC or RFC Destination. Using the same Program ID in multiple destinations will cause errors.

14. Choose **Save** from the toolbar or select **Save** from the **Connection** menu.
15. Scroll down to *Gateway Options*.

16. To fill in the required values in *Gateway Options*, you need to know the SAP Application Server Name and SAP system number. The following steps can help you:
   - Open transaction **SMGW**.
   - Click on the menu item **Goto → Parameters → Display**.
   - Look for the name **gateway hostname**; this is the name of the Application Server.
   - Locate the name **gateway service**; this string consists of the prefix **sapgw** and the system number.
17. The name of my gateway host is `ldai1qpt.wdf.sap.corp`
18. The name of my gateway service is sapgw09

19. Go to the **MDMP & Unicode** tab and check the **Unicode** option.

20. Choose **Save** button
4.1 Registering an SAP MII RFC Listeners as RFC Destination

1. Log in to the SAP NetWeaver system where MII installed. Generally it will be using the same server name and port number as MII (http://<servername>:<port number>/nwa)

   **NOTE:** You must have the permissions to both modify the default MII Listeners in NetWeaver and start the Resource.

2. Navigate to **Configuration Management -> Infrastructure -> Application Resources**

3. In the blank line under **Resource Name**, Search the RFC Listener by entering your RFC Listener name (XMIISRFC01 or XMIIRFC01).

4. Select the Resource Name where **Resource Type** of Resource Adapter. (Select the block to the left of the line)

5. In **Resource Details**, select **Properties** tab.

6. Enter the following properties:

   - Unique ProgramID (Same as used in SM59) as XMIISRFC02
   - MaxReaderThreadCount as 1
   - Client as 004 <example>
   - UserName as sapuser <example>
   - Password as pwd <example>
• Language as EN
• ServerName (fully qualified) <hostname>
• PortNumber (System Number) <port>

NOTE: Your Program ID can only use for a single Listener. Using the same Program ID in multiple Listeners or for multiple MII Instances will cause errors.

7. Enter any notes or comments in the Description column and click on the Save button.

8. After saving the properties, Resource Name should be Started which indicates in Green color.

NOTE: If it’s not started then Click on Start Application button. Again, select the Resource Name, which configured and Click on Restart. If still not running. Then check the logs under More Actions -> View Logs.

4.2 Configuring Message Listener for Synchronous RFC

1. In the MII menu, go to Message Services → Message Listener
2. Search for Synchronous RFC Listener (XMIISRFC01 or XMIHRFC01)
3. Click on the Edit button
4. Enable Use Legacy Format
5. Click on the Save button
6. Click on the Update button

NOTE: You can see the SAP ECC system details such as SAP Server name, SAP Client and Program ID.
4.3 Testing the RFC Destination

1. Verify that the SAP ECC system connection is successful. Use the following steps:
2. Go to Transaction SM59
3. Open the TCP/IP connections folder.
4. Select the RFC Destination you previously created (XMIISRFC01 or XMIIRFC01).
5. Click on the Connection Test.
6. If the ECC server can successfully connect to the SAP MII RFC Listener, it will display connection information as shown. If you receive an error message, review the steps for creating an RFC Destination and creating and MII Listener to verify your settings.
5.1 Message Processing rule

1. In Message Services; go to Message Processing rule
2. Create a new processing rule for SynchronousRFC Listener messages. Select the Message Listener as XMIISFC01
3. Enter the following details for the processing rules:
   - Name: SynchRFC01
   - Description: <if any>
   - Message Type: RFC <default setting>
   - Message Name: * <default value>
   - Processing Type: Transaction <default setting>
   - Choose the Transaction using Browse button <ex: Default/SynchronousRFC>
   - Persist Transaction: <Optional>
   - Log Level: <Optional>
   - In Parameters tables:
     i. Check the InputXML where Type as Input Parameter and Value as Received MessageXML
ii. Check the OutputXML where Type as Output Parameter and Value as ResponseMessageXML

NOTE 1: For this SynchronousRFC Listener, only processing type will be Transaction.

NOTE 2: Anyone of the output parameter should be able to select.

4. Click on Save button

5.2 Transaction created to support Synchronous RFC

Create a MII transaction, which will read the Messages from processing rule. Transaction should contain Transaction Properties/Local Properties as Input XML and Output XML. Input XML/Output XML can have dummy structure of the receiving Message structure. It will be easy to map the input & output parameters accordingly since it is a synchronous communication.
6.1 RFC messages sent through ABAP report

1. Go to ERP system (Ex: QPT) where RFC Destination is configured

2. Execute the transaction SE38

3. Open any ABAP report (Ex: ztesttrfc1)

4. Enter the RFC Destination as XMIISRFC02

5. Click on F8 button to execute the ABAP Report

NOTE: ztesttrfc1 is just an example used in this test case. The user / tester could use any transaction / program to send synchronous RFC to MII
SAP MII How-To-Guide for Integration of UI Elements

ABAP Editor: Initial Screen

Program: ZTESTTRFC1

Subobjects:
- Source Code
- Variants
- Attributes
- Documentation
- Text elements

Display
Change
6.2 RFC messages received in Message Monitor

1. In Message Services, go to Message Monitor
2. Search for the messages received under Message Listener ‘XMIISRFC01’
3. Message with Success or Failed status should appear. These status appear once these messages are processed through transaction configured in Processing rule