

How to Send IDocs from the SAP R/3 Enterprise to the SAP xMII 11.5 IDoc Listener

Applies to:

SAP xMII 11.5 and SAP R/3.

Summary

Sending IDocs from SAP to xMII – Often there is 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 IDocs to SAP xMII 11.5.

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Introduction

In some cases where information needs to be “pushed” from SAP rather than “pulled”, one needs to configure the setup of sending IDocs to an external system. The external system in this case needs to have a listener, which is triggered when information is sent to it. The systems involved in this scenario are SAP R/3 and SAP xMII 11.5.

Business Scenario

Sending IDocs from SAP to xMII – Often there is 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 IDocs to SAP xMII 11.5.

The Step By Step Solution

To enable your SAP R/3 Enterprise server to issue RFCs for SAP xMII IDoc Listener services on an SAP xMII IDoc Listener, you must define an RFC destination on the SAP R/3 Enterprise server. Each SAP R/3

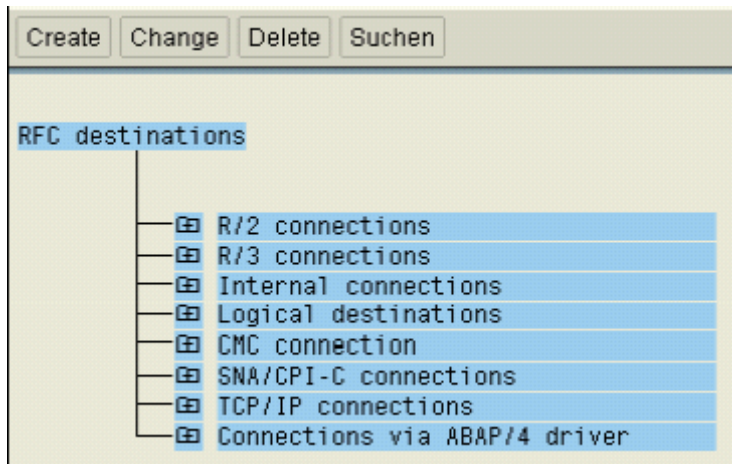
Enterprise server has a single RFC destination for an SAP xMII IDoc Listener that identifies where the SAP R/3 Enterprise server sends all RFCs that invoke an SAP xMII IDoc Listener service.

Creating an RFC Destination on the SAP R/3 Enterprise Server

Registering an SAP xMII IDoc Listener as an RFC Destination

Use the following procedure to configure the SAP xMII IDoc Listener as a registered RFC destination on the SAP R/3 Enterprise server. You must have the proper authorizations for SAP R/3 Enterprise to add an RFC destination. If you do not have this authorization, have your SAP administrator perform the following steps.

- Logon to SAP R/3 Enterprise. Choose Administration → System Administration → Administration → Network → RFC Destinations (transaction SM59).



- Choose TCP/IP connections.
- Choose Create.
- In the RFC Destination field, type a meaningful name that identifies both the SAP xMII IDoc Listener and SAP R/3 Enterprise. You must re-enter this name several times, so keep it simple and memorable. I recommend that you keep the name of the RFC Destination, ProgID, and xMII IDoc listener the same. For example, IDOC_XMII. This field is case sensitive. I recommend that you pick a name that is all UPPERCASE characters.

RFC Destination IDOC_XMII

The screenshot shows the SAP configuration interface for an RFC Destination named 'IDOC_XMII'. The 'Connection Type' is set to 'T' (TCP/IP Connection). The 'Description' section contains three fields, with the first field containing 'xMII IDoc Listener'. The 'Technical Settings' tab is active, showing 'Registered Server Program' selected. The 'Program ID' field contains 'IDOC_XMII'. Under 'Start Type of External Program', 'Default Gateway Value' is selected. Under 'CPI-C Timeout', 'Default Gateway Value' is selected with a value of 60 seconds.

- Enter T in the ConnectionType field (destination type TCP/IP).
- Enter xMII IDOC Listener in the Description section.
- Choose Save from the toolbar or select Save from the Destination menu.
- Choose Registered Server Program.
- In the Program ID field, type the name of your RFC destination created above. Enter it exactly as you did in that step. This is also a case sensitive field.
- Choose Save from the toolbar or select Save from the Destination menu.
- Scroll down to Gateway Options.
- To fill up the values in the Gateway Options you need to know SAP system application server name and SAP system number. Following steps can help you find these:
 - Open transaction SMGW in SAP system and click on the menu item “Goto -> Parameters -> Display”. Look for the name “gateway hostname”; the value for this is your SAP system application server.

Gateway Monitor for usciqeg / Parameters and Attributes

Name	Value
gw/resolve_timeout	0
is/use_uds	1
rdisp/max_gateways	100
rdisp/max_comm_entries	500
gw/rem_start	REMOTE_SHELL
gw/remsh	/bin/rsh
gw/ssh	/bin/ssh
exe/gwrd	/usr/sap/QEG/DVEBMGS10/exe/gwrd
snc/enable	1
snc/gssapi_lib	/usr/sap/QEG/SYS/global/SSO/secude/sun_6
snc/permit_insecure_start	1
Attributes	
Release	700
Release no	7000
internal version	2
start time	Wed Nov 22 23:05:33 2006
build time	Nov 11 2006 01:37:36
build with Unicode	TRUE
build with Threads	FALSE
gateway hostname	usciqeg
gateway service	sapgw10
req_sync_limit	24
appc_ca_blk_size	34423
gwreq_in	34615
appdata_in	34343
overflow_size_limit	2000000
overflow_use	1152
trace level	0

- For the system number of your SAP server, go to the SAP logon Pad and view the properties of the server. You should find “System Number” there.

The screenshot shows the 'System Entry Properties' dialog box with the 'System Connection Parameters' tab selected. The 'System Number' field is highlighted with a red box and contains the value '10'. Other fields include Description (QEG [PUBLIC]), System ID (QEG), Message Server (usciqeg.wdf.sap.corp), SAProuter, and Group/Server (PUBLIC).

- Enter <SAP system application server> in the Gateway host field.
- Enter sapgw<SAP system number> in the Gateway service field. This guarantees that you can access the RFC Server from all SAP application servers.

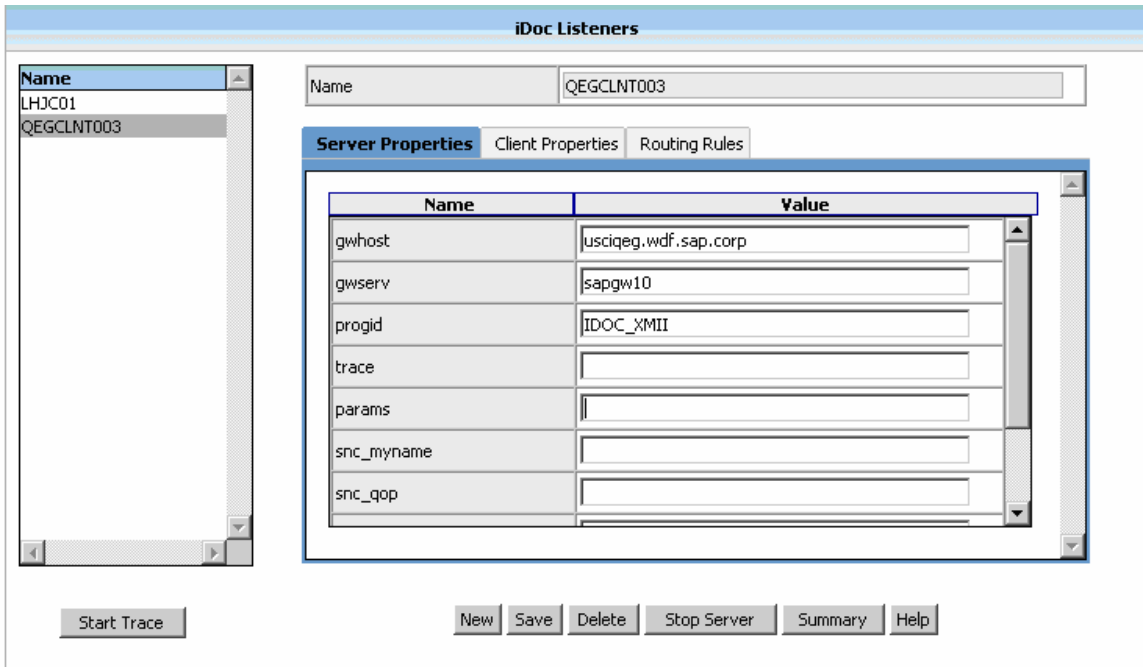
The screenshot shows the 'Technical Settings' tab in the SAP Gateway configuration. It is divided into three main sections:

- Start Type of External Program:** Contains four radio button options: 'Default Gateway Value' (selected), 'Remote Execution', 'Remote Shell', and 'Secure Shell'.
- CPI-C Timeout:** Contains two radio button options: 'Default Gateway Value' (selected) and 'Specify Timeout'. A text input field next to 'Specify Timeout' contains the value '60', with the label 'Defined Value in Seconds'.
- Gateway Options:** Contains two text input fields: 'Gateway Host' with the value 'usciqeg.wdf.sap.corp' and 'Gateway service' with the value 'sapgw10'. A 'Delete' button is located to the right of the 'Gateway Host' field.

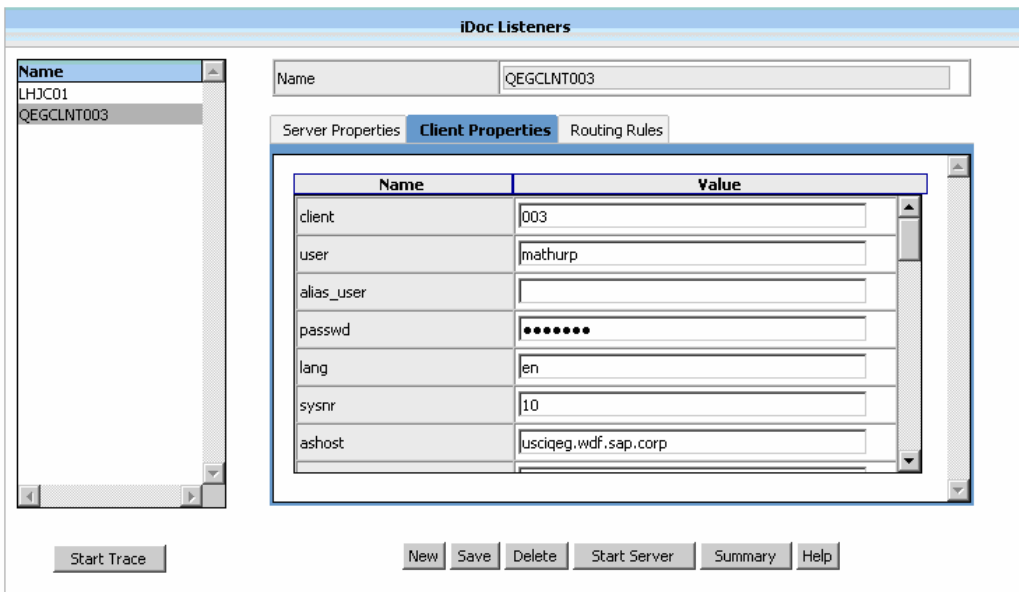
- Got to the tab “MDMP & Unicode” and check the “Unicode” option.
- Choose Save.

Creating an IDoc Listener in SAP xMII 11.5

- Login to the SAP xMII system.
- Click on the menu item “Data Services -> iDoc Listeners”.
- Click on the new button.
- Give a name to the Idoc listener.
- In the “gwhost” field, enter the SAP system application server.
- In the “gwserv” field, enter sapgw<SAP system number>.
- In the “progid” field, enter the program ID of the RFC destination created in previous step.
- Set the “unicode” field to 1.



- Switch to the “Client Properties” tab and enter the following values:
 client – Client of the SAP system. E.g. 003.
 user – User of SAP system.
 Passwd – Password of SAP system.
 Lang – Login Language in the SAP system.
 Sysnr - System Number of the SAP system.
 Ashost - SAP system application server name.



- Save the listener by clicking on the Save button.
- Start the server by clicking on the “Start Server” button.

Testing the RFC Listener

Use the following procedure to verify that the SAP R/3 Enterprise server can successfully issue an RFC to the SAP xMII IDoc Listener.

In SAP R/3 Enterprise, complete the following steps.

- Choose Administration → System Administration → Administration → Network → RFCDestinations (transaction SM59).
- Open the TCP/IP connections folder.
- Select the RFC destination you previously created.
- Choose Test Connection. If the SAP R/3 Enterprise server can successfully connect to the SAP xMII IDoc Listener 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 an RFC listener to verify your configuration settings.

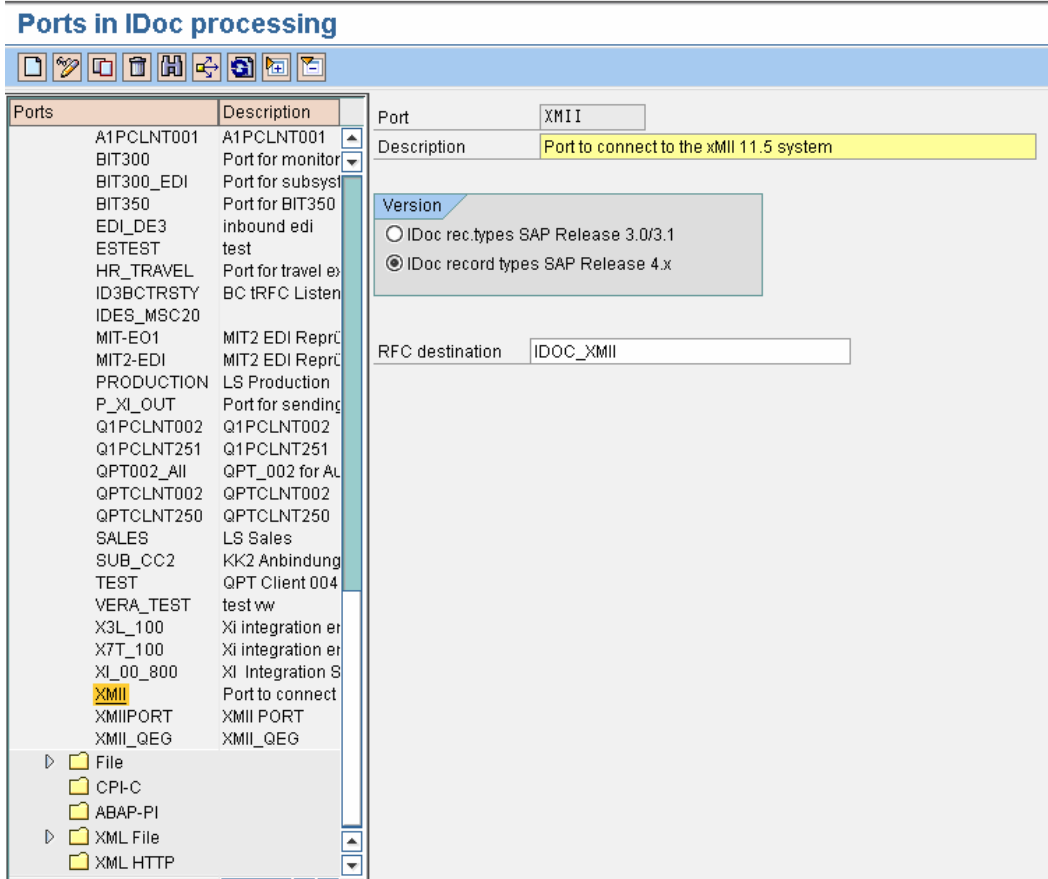
RFC - Connection Test

Connection Test IDOC_XMII	
Connection Type TCP/IP Connection	
Action	Result
Logon	369 msec
Transfer of 0 KB	373 msec
Transfer of 10 KB	363 msec
Transfer of 20 KB	375 msec
Transfer of 30 KB	382 msec

Defining a Logical Port

The lower level networking requires that a system port number be associated with the RFC destination. The logical port identifies the port to which messages are sent. The logical port can only be used if an RFC destination was previously created. You can define a unique logical port using transaction WE21 (alternatively, use the following menu path to do this: Main screen → Tools → Business Communication → IDoc-Basis → IDoc → Port Definition).

- Select Transactional RFC and choose Create.
- Choose New Entries in the toolbar.
- Either choose your own descriptive port name or let the system generate one.
- Enter the IDoc version you want to send via this port, the RFC destination you just created, and a short description of your logical port, then save the information.



Choosing a Partner

A logical subsystem manages one or more RFC destinations. You can create a partner (logical system) using transaction SPRO_ADMIN. Alternatively, use the following menu path to do this: Tools -> AcceleratedSAP -> Customizing -> Project Management.

- Choose SAP Reference IMG.
- Expand the following nodes: Basis Components → Application Link Enabling(ALE) → Sending and Receiving Systems → Logical Systems → Define Logical System. [You can also use transaction SALE and select the path described above starting with Application Link Enabling (ALE)].
- Choose a Logical system that is not same as the current system + client you are logged on to. E.g. If you are logged into QEG (003) then choose the logical system QEGCLNT004 and not QEGCLNT003.

Note: You will not have rights to create a logical system. You just need to choose one and use it in the next step.

Creating a Partner Profile

Use transaction WE20 to create a partner profile (alternatively, use the following sequence to do this: Main screen -> Tools -> Business Communication -> IDoc-Basis -> IDoc -> Partner profile).

- Choose LS (logical system) partner and click Create.
- Enter the partner you chose in step “*Choosing a Partner*” in the Partner field and enter the following parameters:

Part. Type – LS

Ty. – O

Agent – 50010120

- Save the partner profile.
- Click Insert entry below the outbound parameter table control.
- Enter the Message Type as “SYNCH”, Receiver port as the one created in step “*Defining a Logical Port*” and Basic Type as “SYNCHRON”. Check the option “Transfer Idoc Immed.”.
- Save the outbound parameter.

Partner profiles: Outbound parameters

Partner No. QEGCLNT004 QEGCLNT004
 Parth.Type LS Logical system
 Partner Role

Message Type SYNCH ALE:Dummy Message Type for Deter
 Message code
 Message function Test

Outbound Options Message Control Post Processing: Permitted Agent Tele...

Receiver port XMIIIPORT Transactional RFC XMII PORT
 Pack. Size 1
 Queue Processing

Output Mode
 Transfer IDoc Immed. Output Mode 2
 Collect IDocs

IDoc Type
 Basic type SYNCHRON Dummy IDoc type for synchron
 Extension
 View
 Cancel Processing After Syntax Error
 Seg. release in IDoc type Segment Appl. Rel.

- Add one more outbound parameter with the following values:
 Message Type: LOIPRO
 Receiver Port: The one created in step “*Defining a Logical Port*”
 Basic Type: LOIPRO01
- Check the option “Transfer Idoc Immed.”.
- Save the outbound parameter.

Creating a Distribution Model for the Partner and the Message Type

After you define a partner and partner profile, you can create a distribution model that triggers the creation of a communication IDoc.

If you are using SAP System 4.5 or earlier, you can use transaction BD64 to create the distribution model (alternatively, you can use the following sequence Main screen → *Tools* → *Business Framework* → *ALE* → *Customizing*).

- Open the Cross-Application Components folder, then the Distribution (ALE) folder, then the Distribution Customer Model folder in the tree view. Click the green hook next to Maintain customer distribution model directly.

- Create a new model using Model → Create.
- Add a message type to your model, enter the sender in the dialog box (for example, the system on which you are currently logged on to – QEGCLNT003), enter the receiver (for example, the logical system that you chose in step “Choosing a Partner”), and the message type (for example, LOIPRO).
- If you are using SAP System 4.6 or later, you can use transaction BD64 or alternatively, the following procedure:
- In the Main screen, choose Tools → AcceleratedSAP → Customizing → Project Management. Choose SAP Reference IMG.
- Expand the following nodes: Basis Components → Distribution (ALE) → Modeling and Implementing Business Processes → Maintain Customer Distribution Model.
- Click the green hook next to Maintain Customer Distribution Model (transaction BD64).
- Change to edit mode.
- Click Create model view.
- Enter a short text string and a technical name for your new model view.
- Select your new model view in the Distribution Model tree, and choose Add message type.
- In the dialog box, enter the sender (for example, the system on which you are currently logged on to – QEGCLNT003), enter the receiver (for example, the logical system that you chose in step “Choosing a Partner”), and the message type (for example, LOIPRO).
- Save the Distribution Model.
- Select the distribution model created in previous step and click on Environment -> Generate Partner Profile.
- Select the distribution model and click on Edit -> Model View -> Distribute. Select the Receiver Logical system and press enter.

Change Distribution Model

Filter model display Create model view Add BAPI Add message type

Distribution Model	Description/ technical name
▶ CIDX Demos	CIDX
▶ Cross System Flow of Goods	CSFG
▶ DE3 - KABA BENZING	DE3-KABA
▶ DH3->ID3 & M13 <-> ID3	DH3->ID3
▶ Global Trade Service	GTS
▶ HR to CRM 4.0 (Without Qualifications) Test EIC	NWTCLNT003
▶ HR to SRM/CRM 4.0 (Without Qualifications)	Q5UCLNT705
▶ ID3(HR) to DMJ(eRecruitment)	ID3-DMJ
▶ ID3(PB)toDMK(xRPM)	ID3 - DMK
▶ ID3->DSZ	ID3-DSZ
▶ IDES - FI/CO Distribution to xRPM	FICOTORPM
▶ IDES - HR Distribution to xRPM	HRTORPM
▶ MDM Demo Model	MDMDEMO
▶ MITII - PLM Accessibility Test	PLM_ACC
▶ MM-PUR BUS2012.CreateFromData	BUS2012
▶ MM-SUS	MM-SUS
▶ PLMXXX	PLMXXX
▶ QEG --3 to xMII	QEG_XMII
▶ QEG_TO_XMI	QEG_TO_XMI
▶ R/3 Backend Communication (Idocs)	EBP_TO_R3
▶ SMBONE	SMBONE
▶ SMI	SMI
▶ TESTMODEL	TESTMODEL
▶ Test MSS Multiple Backend	QPTCLNT004
▶ US Product Data Replication	US_PDR
▶ XMI IDOC Model	XMIIDOC
▼ QEGCLNT003	QEGCLNT003
▼ QEGCLNT004	QEGCLNT004
LOIPRO	Production order
dd	TEST

Sending IDocs from SAP to xMII

- Go to transaction POIT and enter the Optimization system as the receiver logical system chose in step “Choosing a Partner”.
- Send production orders by checking the option “Production orders for” and entering some selection criteria.
- Press F8 or click on the Execute button.

Select Transaction Data for Transfer

Planned order

No planned orders

Planned orders for global selection

Planned orders for

Plant to

Material to

MRP controller to

Work center to

Production order

No production orders

Production orders for global selection

Production orders for

Plant to

Material

MRP controller to

Work center to

Current stock/requirements list

No current stock/reqmts list

Current stock/requirements list for global selection

Current stock/reqmts list for

Plant to

Material to

MRP controller to

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