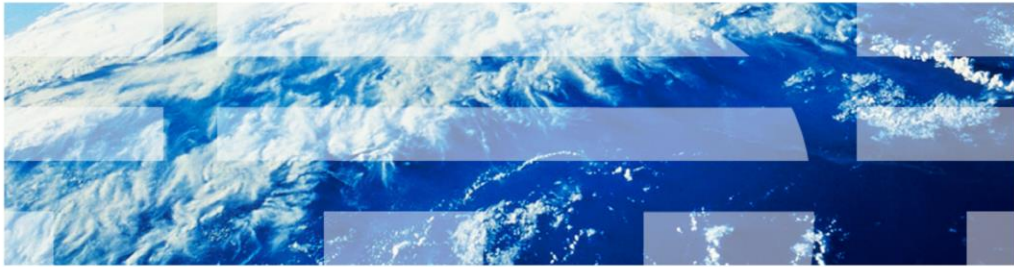


InfoSphere Information Server

SAP R/3 Pack: ALE Partner Profile configuration for IDoc extract processing



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This presentation describes the steps required to create an Application Link Enabling, or ALE, partner profile configuration to be used with IDoc extract processing.

Objectives

- SAP terminology
- Procedures for creating ALE Partner Profile
- Common ALE configuration

The objective of this presentation is to discuss some basic SAP terminology and procedures for creating an ALE partner profile to support IDoc Extract processing. You will also examine a common ALE configuration because ALE configuration is a prerequisite for the IDoc extract connection and successful transport.

SAP terminology

- ALE - Application Link Enabling
 - Bilateral, message-oriented form of data transfer
- IDoc - Intermediate Document
 - Standard SAP proprietary document format
 - Message that is a hierarchical
 - package of related records
 - Generated by SAP in an SAP exchange format
 - Allow different application systems to be linked by way of a message-based interface
- RFC - Remote Function Call
- tRFC- Transactional Remote Function Call

There is some basic SAP terminology that is important to understand.

First, ALE stands for Application Link Enabling. ALE is a bilateral, message-oriented form of data transfer. ALE technology enables integration of business processes between SAP and external systems.

Second, IDoc stands for Intermediate Document. IDoc is a standard SAP proprietary document format. An IDoc is a message that is a HIERARCHICAL package of related records generated by SAP in an SAP exchange format. IDocs allow different application systems to be linked by way of a message-based interface.

Third, RFC. RFC is Remote Function Call. tRFC is transactional Remote Function Call.

SAP ALE configuration for IDocs

- IDoc message flows configured in “distribution model”
 - Sender
 - Recipient
- SAP connection on DataStage® server represented in SAP by external “logical system” or recipient
 - Assigned to tRFC port
 - Port bound to RFC destination
 - Registered server program ID
- Standard IDoc interface configuration
 - Logical Systems
 - RFC Destination/Program ID
 - Distribution Models
 - Partner Profiles
 - Message Types
 - Ports

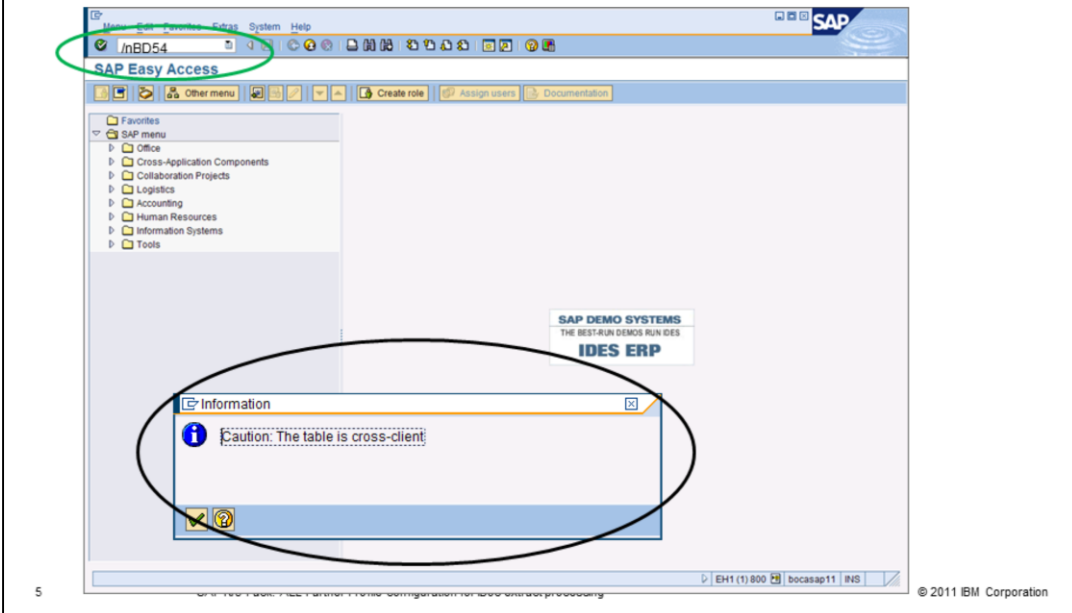
IDoc message flows are configured in a so called 'distribution model'. The distribution model involves two partners: the sender and the recipient.

Each SAP connection on the DataStage server is represented in SAP by an external “logical system” or recipient, which is assigned to a tRFC port. The port is bound to an RFC destination, hence, is bound to a registered server program ID.

This presentation describes the ALE configuration steps in this order: First, create an external, so called 3rd party, logical system, where a DataStage server plays the role of an external system. Second, create an RFC destination. Third, configure a distribution model between SAP and the external system or DataStage and fourth, create an external tRFC port or a partner profile.

Create logical system (1 of 2)

- Transaction code /nBD54



This slide displays the initial SAP applications window after you connect to a SAP client system with a dialog user.

The first step is to connect to a SAP client system and to create a logical system. When in the SAP application system, in order to create a logical system, type `/nBD54` transaction code in the navigation window and press Enter. Click the Check button to accept the Information pop up displayed on this slide in the blue oval.

Create logical system (2 of 2)

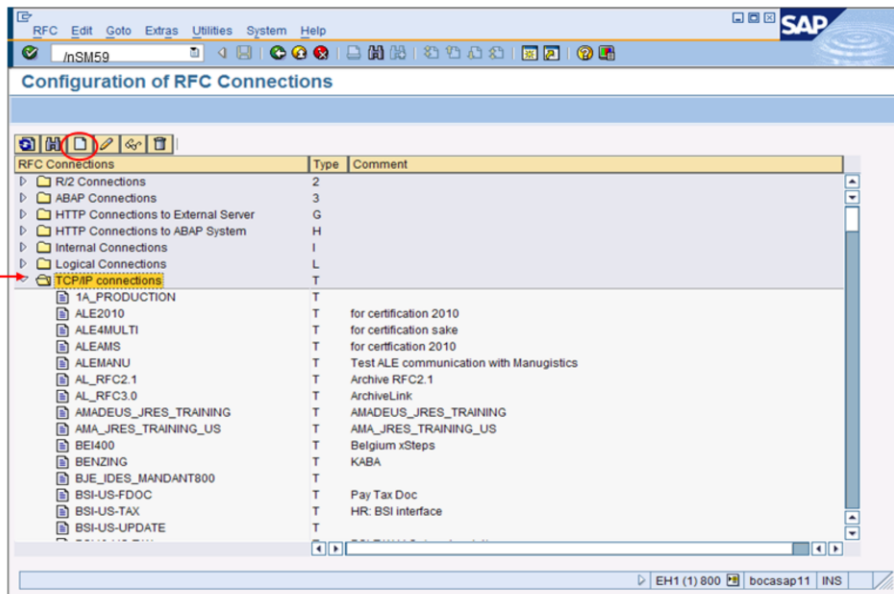
| Log System | Name |
|------------|------------------------------|
| AIT_00_710 | All System client 710 |
| AIT_00_800 | All 7 TM System client 800 |
| AIN1 | Auto ID Node 1 |
| AIN2 | Auto ID Node 2 |
| AIN_800 | Auto ID Node 2.1 client 800 |
| AIN_800NB1 | Auto ID Node client 800 NB 1 |
| ALE2010 | for certification 2010 |
| ALE4MULTI | for certification 2010 |
| ALEAMS | certif |
| ALETFREUND | for cert |
| APOCLNT100 | APOCLNT100 |
| APOCLNT800 | APOCLNT800 |
| APOCLNT801 | APOCLNT801 |
| APOCLNT802 | APOCLNT802 |
| APOCLNT810 | APOCLNT810 |
| APOCLNT890 | APOCLNT890 |
| AT2CLNT001 | AT2 System |
| B2B_IDES | BTB IDES IAC |
| B3TCLNT800 | ID3 client 800 |
| BA1CLNT100 | BA1CLNT100 |
| BA4CLNT100 | BA1CLNT100 |
| BBP_DII | Procurement nach IDES |
| BC619CNTRL | BC619 Central System |
| BC619MDREF | BC619 Master Data Reference |
| BC619PROD1 | BC619 Manufacturing site 1 |
| BC619PROD2 | BC619 Manufacturing site 2 |
| BC619SALES | BC619 Sales System |

| Log System | Name |
|------------|------|
| MYEXTERNAL | demo |

When the Change View “Logical systems” : Overview application opens, click New Entries. Then, enter a logical system name. MYEXTERNAL is used in this example. The name opens in all capitals and is a maximum of 10 characters long. Also, type a short description and click the save button on the top of the dialog box.

Create RFC destination for logical system

- Transaction Code /nSM59



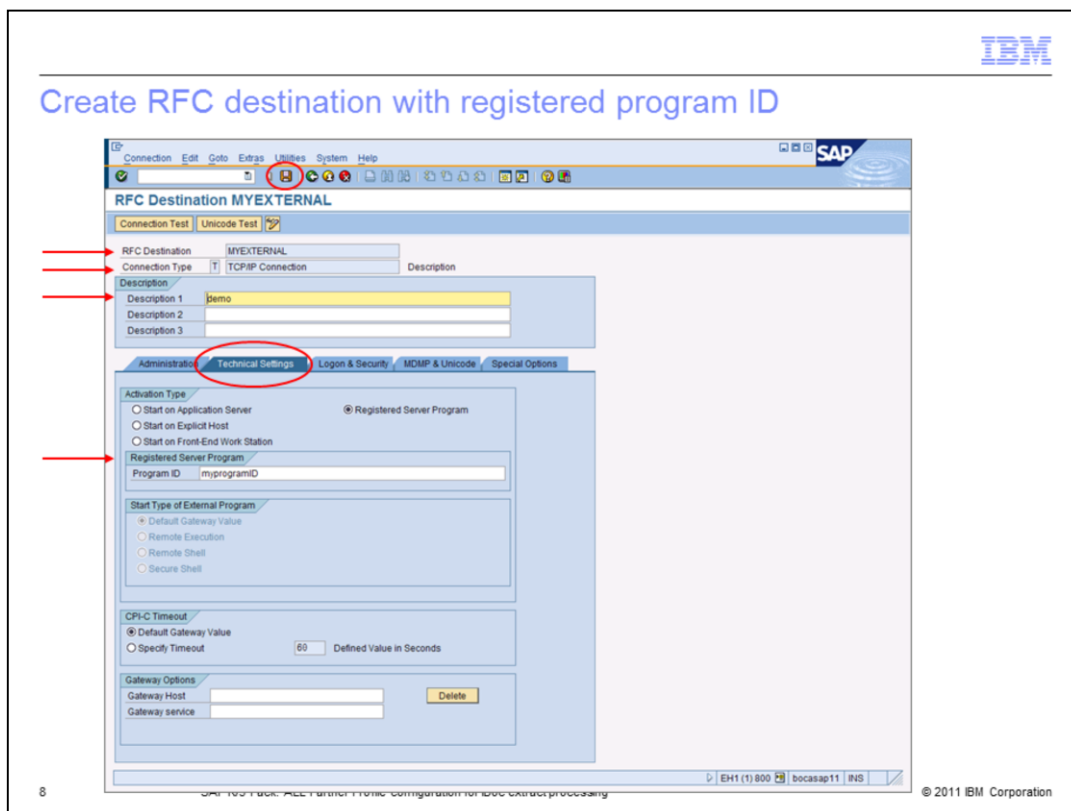
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The second step is to create an RFC destination for MYEXTERNAL logical system. Type /nSM59 in the navigation window and press Enter. Expand the TCP/IP connections directory. Click 'Create an RFC connection' icon as displayed on this slide in the red circle.

Create RFC destination with registered program ID

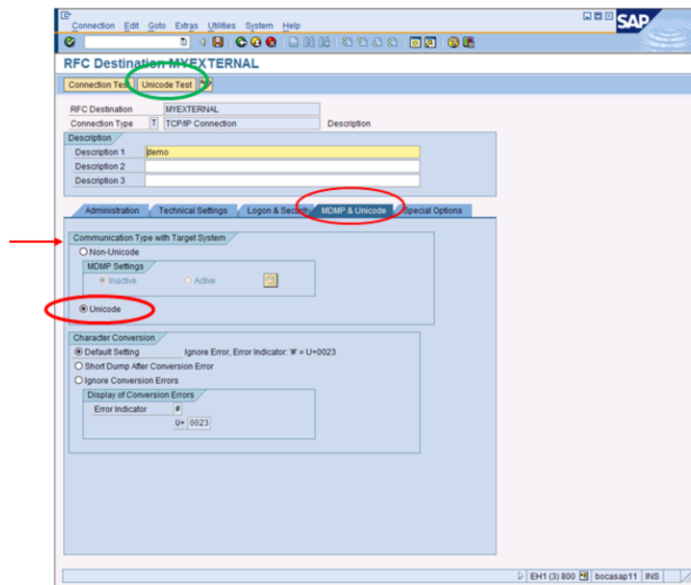


Next, in the RFC destination field at the top of the dialog box, enter the name of the RFC destination system. You should name the RFC destination exactly the same as the name of the logical system. MYEXTERNAL in this example.

You will create a TCP/IP or tRFC type of connection. Directly under RFC Destination is the Connection Type. Set the connection type to T. Enter a description for the new RFC destination and click Save at the top of the dialog box. Next, under the Technical Settings tab, select the Registered Server Program for the Activation Type. Type a Program ID and Save. The program ID can be any name you choose.

Note: A program ID is the single smallest communication object and must be unique in relation to the DataStage server. It is a common verification point between DataStage and SAP systems in terms of troubleshooting.

Create RFC destination – Communication type Unicode



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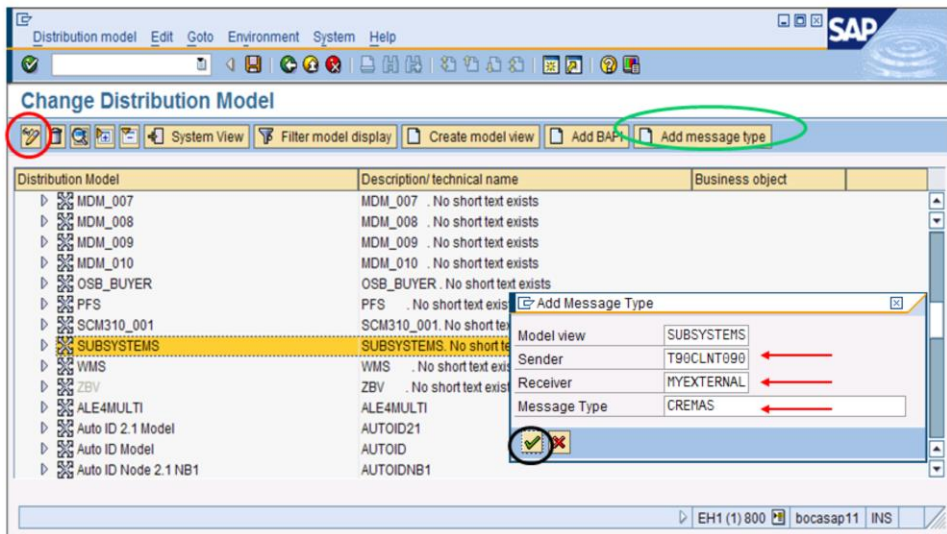
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Next, click the MOMP& Unicode tab and click the 'Unicode Test' button at the top of the dialog box. RFC destinations for IDocs must be defined as Unicode for Unicode-enabled SAP R/3 systems.

Select 'Unicode' for communication type with Target system and Save. This will complete the creation of the RFC destination. As the result, you can now register the IDoc Server as the RFC destination.

Configure distribution model (1 of 2)

- Transaction Code /nBD64



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The third step is to configure a Distribution Model. Using /nBD64 transaction code, go to 'View Distribution Model' application. Click the icon displayed on this slide in the red oval to change to 'Change Distribution Model' mode. Then, click the 'Add message type' button as displayed on this slide in the green oval. Using the drop down lists for all logical systems and IDoc message types available in this SAP system, select Sender T90CLN090. T90CLN090 is a typical logical system for client 800 and Receiver as the previously created external logical system (MYEXTERNAL) and Message type CREMAS, for this example. Click the Continue button as displayed on this slide in the blue circle. Next, click Save at the top of the dialog box.

Regarding a message type: IDoc types define different categories of data, such as customers, vendors, purchase orders or invoices, which can then be broken down into more specific categories called message types.

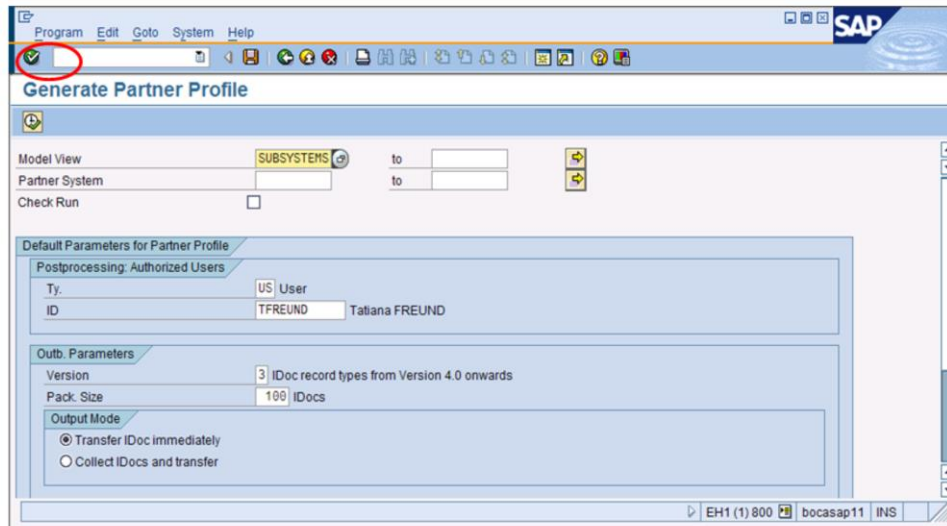
Configure distribution model (2 of 2)

The screenshot shows the SAP 'Change Distribution Model' dialog box. The 'Environment' menu is circled in green. The 'SUBSYSTEMS' folder is highlighted in yellow. The 'demo' folder under 'CREMAS' is circled in red. The status bar at the bottom indicates 'Distribution model has been saved'.

| Distribution Model | Description/technical name | Business object |
|--|---|-----------------|
| OSB_BUYER | OSB_BUYER. No short text exists | |
| FFS | FFS. No short text exists | |
| SCM310_001 | SCM310_001. No short text exists | |
| SUBSYSTEMS | SUBSYSTEMS. No short text exists | |
| Productive system (client 811) | PRODUCTION | |
| Sales system (client 810) | SALES | |
| IDES ALE Central system (client 800) | T90CLNT090 | |
| SUB_CC1 | SUB_CC1 | |
| Productive system (client 811) | PRODUCTION | |
| Sales system (client 810) | SALES | |
| demo | MYEXTERNAL | |
| CREMAS | Vendor master data distribution | |
| No filter set | | |
| WMAS | WMAS. No short text exists | |
| ZBV | ZBV. No short text exists | |
| ALE4MULTI | ALE4MULTI | |
| Auto ID 2.1 Model | AUTOID21 | |
| Auto ID Model | AUTOID | |
| Auto ID Node 2.1 NB1 | AUTOIDNB1 | |
| B2B_IDS | B2B_IDS | |
| CIDX Demos | CIDX | |
| Cross System Flow of Goods | CSFG | |
| DE3 - KABA BENZING | DE3-KABA | |
| DH3-ID3 & M13 <-> ID3 | DH3->ID3 | |
| DSD Masterdata Distribution to Connector | DSD_MASTER | |
| ECC->vRPM | ECC->vRPM | |
| Global Trade Services | GTS | |
| HR to BW/SEM | HR_ORG_BW | |
| ID3(HR) to DEJ(w/Recruitment) | ID3->DEJ | |
| ID3(HR) to DMJ(w/Recruitment) | ID3-DMJ | |
| ID3->DSZ | ID3-DSZ | |
| IDES - FICO Distribution to vRPM | FICOTORPM | |
| INFS - HCM Distribution to vRPM | HCMTORPM | |

Now the partner profile entry is created under the SUBSYSTEMS folder. But, before data exchange with external systems can take place, the corresponding ports must be configured. The fourth step is to create a port. For this, in the menu, choose Environment, as displayed on this slide in the green oval and select Generate partner profiles.

Generate partner profile



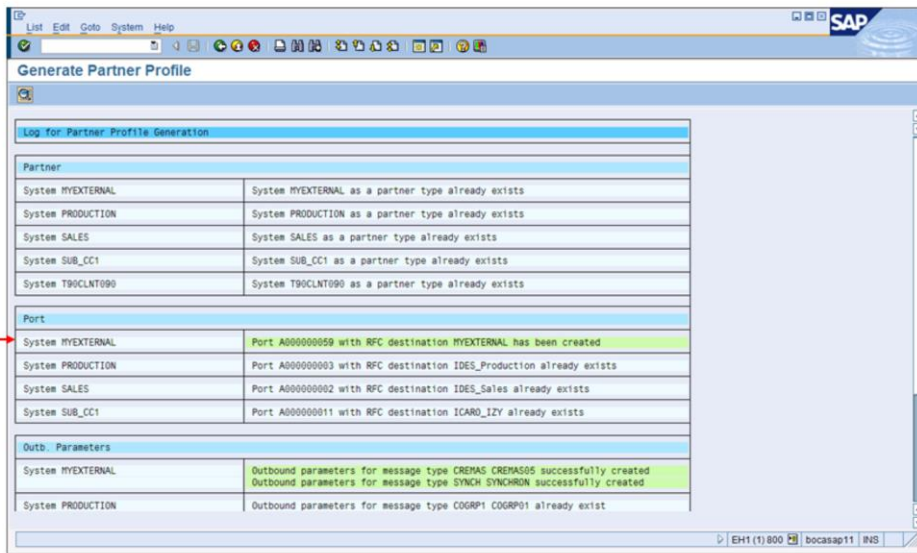
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The Generate Partner profile window will now open. Click the Execute icon at the top, left side of the dialog box.

Generate partner profile- tRFC port



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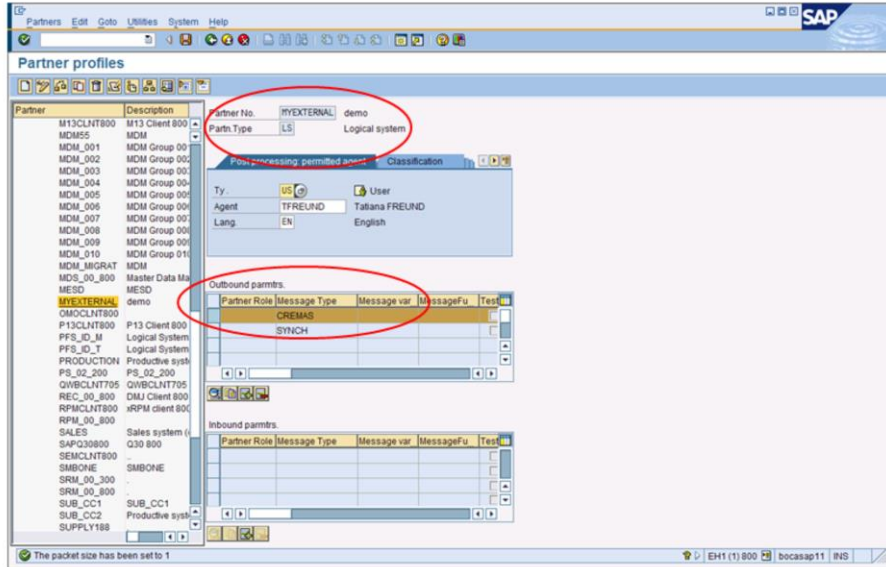
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In the next dialog box you will see that the external port A000000059 has been assigned for the MYEXTERNAL system for communication with the SAP system by means of the IDoc message type CREMAS05.

This completes the partner profile configuration and completes ALE configuration for the outbound processing in terms of SAP.

Partner profile maintenance

- Transaction Code `/nWE20`



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Note: All partner profiles are stored and maintained in transaction WE20. In this view, the Partner profile consists of all components, such as Sender/Receiver pair and the Message Type and the Port you just created. It also includes the person to be notified in case of errors. To view or edit settings for this message type, double click the CREMAS record, highlighted on this slide, in the Outbound parameter window.

View or edit outbound parameters

The screenshot displays the SAP 'Outbound parameters' configuration window. The 'Partner profiles: Outbound parameters' section is visible, with the following fields and values:

- Partner No.: MYEXTERNAL (demo)
- Partn Type: LS (Logical system)
- Partner Role: [Empty]
- Message Type: CREMAS (Vendor master data distribution)
- Message code: [Empty]
- Message function: [Empty] (Test)

The 'Outbound Options' tab is selected, showing the following settings:

- Receiver port: A200000005 (Transactional RFC demo)
- Pack Size: 100
- Queue Processing: [Unchecked]
- Output Mode:
 - Transfer IDoc Immed. (Output Mode 2)
 - Collect IDocs
- IDoc Type:
 - Basic type: CREMAS05 (Vendor master data distribution)
 - Extension: [Empty]
 - View: [Empty]
 - Cancel Processing After Syntax Error
 - Seq. release in IDoc type: [Empty]
 - Segment Appl. Rel.: [Empty]

Red arrows on the left side of the image point to the Receiver port, Pack Size, Output Mode, and IDoc Type sections.

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In the Outbound parameters window you can edit or review the receiver port and output mode settings.

You can select Transfer IDoc immediately so IDocs are transferred one by one and each IDoc will have an assigned TID.

The pack or packet size should be setup if you choose the Collect IDocs option. IDocs are collected first and then transferred as a packet. A packet will have a TID which stands for Transfer Identification number, assigned by SAP.

Also, verify that CREMAS05 IDoc type is expected to be transferred. CREMAS01, if sent, would not be processed by this port.

NOTE: For IDoc extract troubleshooting details, see the IDoc Troubleshooting session.

For the IDoc processing details on the DataStage side, see IDoc Processing session.

References

- Additional technical materials
 - Environment variable reference
 - <https://www-304.ibm.com/support/docview.wss?uid=swg21424455>
- Known problems
 - <https://www-304.ibm.com/support/docview.wss?uid=swg21395447>
- Technotes and troubleshooting documentation
 - http://www-01.ibm.com/support/search.wss?word=aw&wfield=sap&nw=download&apar=include&tc=SSZJPZ&tc1=SSC2NNZ&tc1=SSCMKC3&atrn=&atrv=&atrn1=&atrv1=&atrwcs=on&lang=all&dr=all&r=40&ibm-submit=Submit&cc=us&from=advs&loc=en_US&rs=14&cs=utf-8

This slide displays links to additional information.

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