

## Applies To:

Integrating SAP CRM with the SAP R/3 HR module

## Summary

An organization that has an active HR module, and a SAP CRM system in operation, would be likely to want employee data from R/3 to be maintained in CRM as well. This can be applied in a scenario where an employee of a company is also a business partner to the company in some capacity (purchaser of goods/services, etc).

To enable seamless transfer of employee data between the subscribing system (R/3) and the publishing system (CRM), an Application Linking and Enabling (ALE) needs to be setup and maintained between these two systems. The ALE would provide real-time integration of the data transfer process from R/3 to CRM. So, whenever an employee is created or employee details are modified in R/3, the employee record or changes to an existing record will flow to the CRM system. SAP standard IDocs are used as a vehicle for data transfer.

This document provides a detailed step-by-step guide of all the transactions and configuration settings that are required for ALE integration of the 2 systems.

The following SAP notes have been consulted in preparation of this document –

312090 (Integration HR – EBP/CRM)

550055 (EBP/CRM: New integration for business partner)

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## Integrating SAP CRM with the SAP R/3 HR module

### Introduction

This integration exercise is being demonstrated in a system testing environment. The systems used for the exercise are –

QAS 400 (this is the R/3 system, version 46c), and

CRQ 310 (CRM system, version 4).

Some of the steps are perceived to be predominantly a BASIS task, and should thus be carried out by a member of the BASIS team. Nevertheless, these steps too have been sufficiently illustrated to provide a non-BASIS resource with a fundamental overview.

Some of the steps are non-transportable and thus need to be created in each system and client. Steps that are transportable are carried out in a development environment (R/3 – DEV, CRM – CRD).

### Step 1 – Maintain RFC Destinations, transaction – SM59 (BASIS function)

Go to transaction SM59 in the SAP R/3 system.

Click on the *Create* icon to set up a new RFC destination.

Enter the following values –

*RFC destination* (we will use CRQ\_310),

*Connection type* as 3,

*Description* – CRQ\_310,

*Language* (we will use EN as our preferred language).

Client of the target CRM system needs to be entered next. Our client is 310.

Check the *Current user* checkbox.

Save it.

Now enter the following values (you'll see that the screen now requires many more fields to be populated) –

*Load distribution* – No,

*Target host* (refer to the value stated in the *Application Server* from the SAP logon pad for the CRM QAS system)

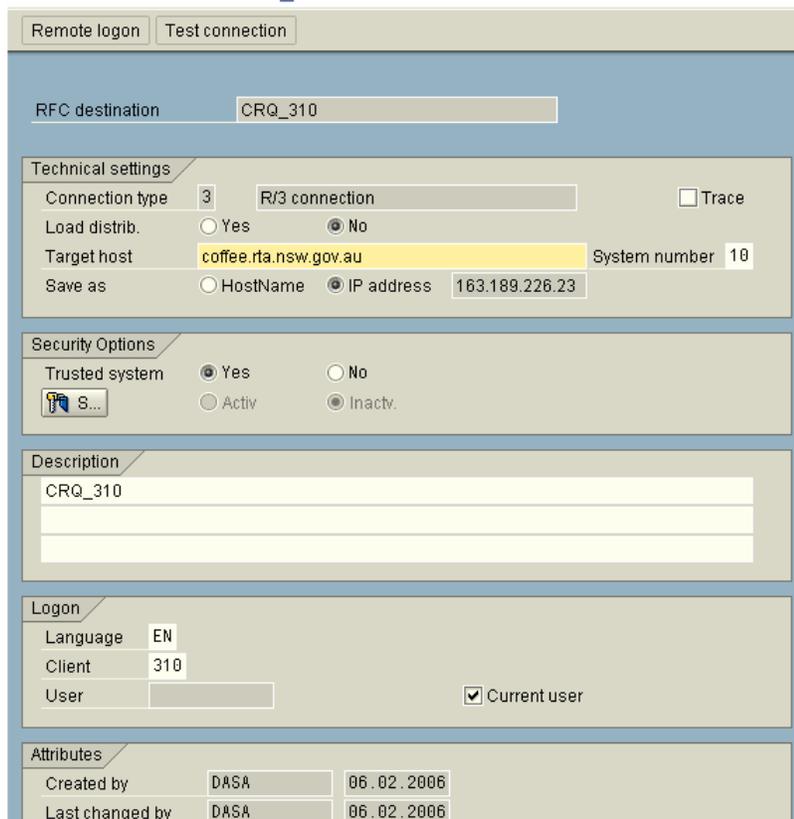
*System number* – 10,

Currently the *Trusted system* is set to No (leave it to No for the time being).

Save the entries on the screen.

Now the screen should look similar to Figure 1 –

## RFC Destination CRQ\_310



The screenshot shows the SAP RFC Destination configuration interface for 'CRQ\_310'. It includes sections for Technical settings, Security Options, Description, Logon, and Attributes.

Section	Field	Value
Technical settings	Connection type	3
	R/3 connection	<input type="checkbox"/> Trace
	Load distrib.	<input type="radio"/> Yes <input checked="" type="radio"/> No
	Target host	coffee.rta.nsw.gov.au
	System number	10
Security Options	Trusted system	<input checked="" type="radio"/> Yes <input type="radio"/> No
	Options	<input type="radio"/> Activ <input checked="" type="radio"/> Inactiv
Description	CRQ_310	
Logon	Language	EN
	Client	310
	User	<input type="text"/> <input checked="" type="checkbox"/> Current user
Attributes	Created by	DASA 06.02.2006
	Last changed by	DASA 06.02.2006

Figure 1 – Setting the RFC destination for CRM as the target system in R/3

Back out of the screen.

Now that we have created our new RFC destination for the CRM system, we will need to set it up as a trusted system. So, when IDocs are transferred from R/3 to CRM in real-time, the user under whose id the job gets processed will not be prompted to enter a password to authenticate oneself.

From the menu bar go to the following path –

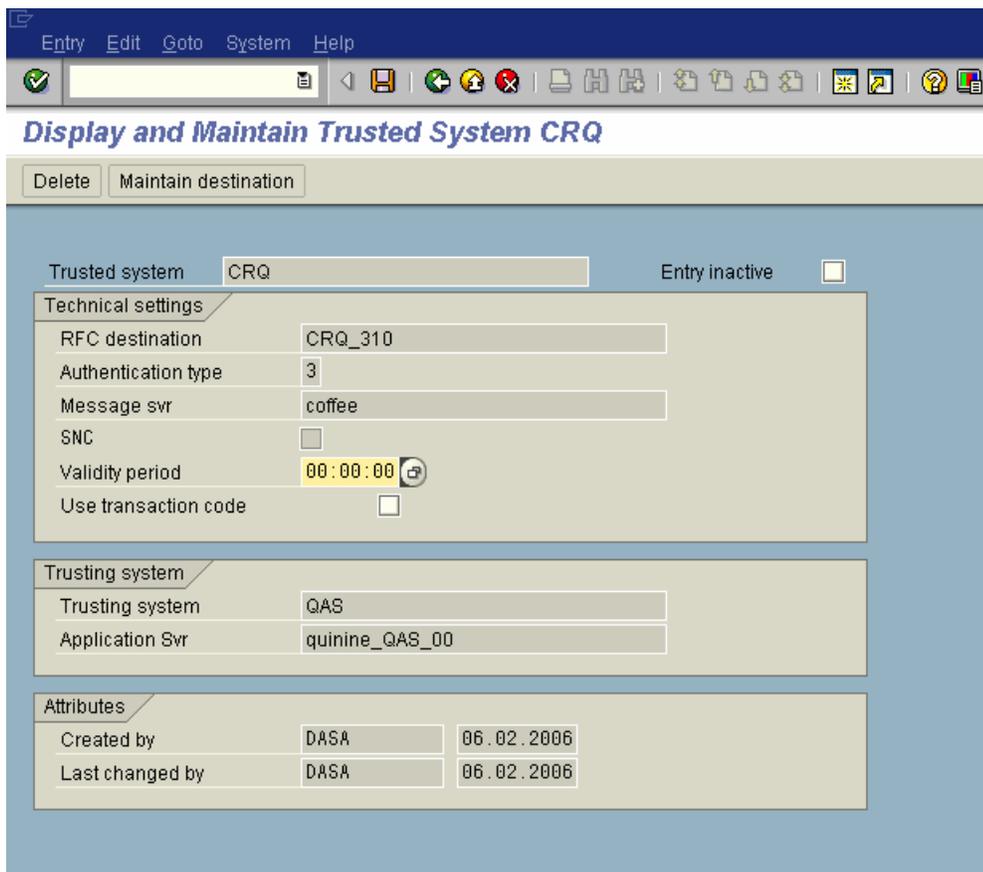
*RFC >> Trusted systems*

Click on the create icon to set up CRQ\_310 as a trusted system.

Enter CRQ\_310 as the *RFC destination*.

On the following screen enter the *Client* (310), *User* (Username), and *Password*.

You should get the following screen as in Figure 2 –



**Figure 2 – Setting up the trusted system on the R/3 side**

Now, go back to *Display and maintain RFC destinations*, and double-click on CRQ\_310, and set the setting for *Trusted system* to Yes.

Save it.

Now we need to set up the R/3 system as a trusted RFC destination on the CRM system. Repeat the entire Step 1 on the CRM system with the appropriate *RFC destination*, *Target host*, *System number*, and *Client* values.

In a live environment the security team will have to create a *Communication* user in both the R/3 and CRM systems to facilitate dialog-free communications via RFC between the systems.

## Step 2 – Ports in IDoc processing, transaction – WE21 (BASIS function)

Go to transaction WE21 in the R/3 system.

Select the port type *Transactional RFC* and click on the create icon.

The system will pop up a window asking to select one of the following –

*Generate port name*, or  
*own port name*.

You may select either, in this example we will define our own port as CRQ\_310.

*Continue* through the pop up.

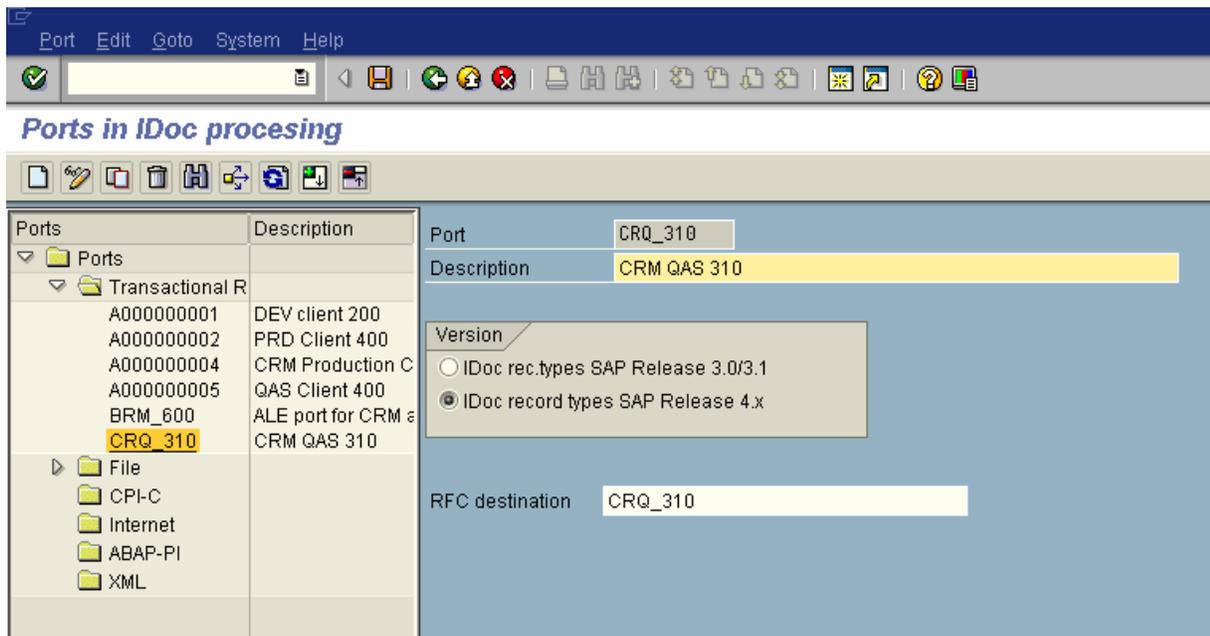
Enter a *Description* for the port as CRM QAS 310.

By default the *Version* will be defaulted to *IDoc record types SAP Release 4.x*.

Enter the *RFC destination* created in the previous step as CRM\_310 (either manually or select from the drop down).

Save it.

Your screen should now look similar to Figure 3 –



**Figure 3 – Creating a tRFC port in the R/3 system**

Now we have a port with the CRM system as the destination on the R/3 side. We also require an R/3 port on the CRM end for the incoming IDocs from R/3. Repeat the above mentioned steps to create a port in CRM. For simplicity, we will call our *Port* QAS\_400, with a *Description* R/3 QAS 400, and assign QAS\_400 as the *RFC destination*.

### Step 3 – Define Logical System, transaction – SM30 (BASIS function)

To distribute data from the R/3 system to CRM, both the systems need to be defined as a logical system in order to communicate with one another.

These entries should be created in the respective development environments and then transported to other systems in the landscape.

Either transaction SM30, with parameters *Table/view* as V\_TBDLS can be used to define a logical system or it can be done through the IMG. Since most of you would already be familiar with how to maintain customizing data in SM30, we will look at how it is done in the IMG using transaction SPRO.

In R/3, follow the following menu path in transaction SPRO –

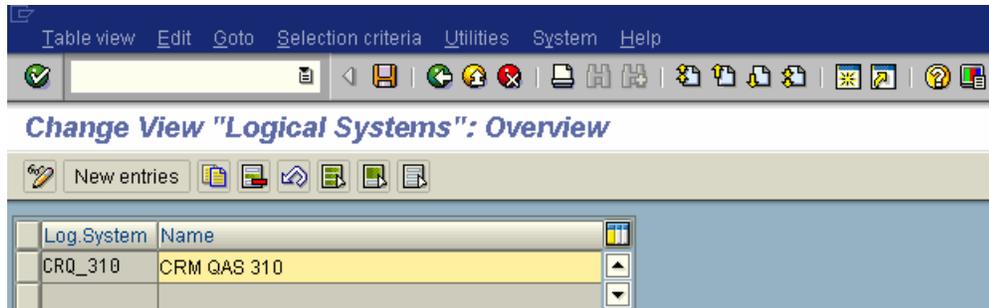
*Basis Components >> Application Link Enabling (ALE) >> Sending and receiving Systems >> Logical Systems >> Define Logical System*

Click on *New Entries*.

Enter CRQ\_310 as the *Log. System*, with *Name* as CRM QAS 310.

Save it.

Once saved your screen will look like the one in Figure 4 –



**Figure 4 – Define a Logical System**

Now repeat the above step in the CRM system as well. Define QAS\_400 as a new *Log. System* and give it an appropriate *Name*.

The menu path differs slightly in the CRM system, it is –

*SAP Web Application Server >> Application Link Enabling (ALE) >> Sending and receiving Systems >> Logical Systems >> Define Logical System*

#### Step 4 – Partner profiles, transaction – WE20 (BASIS function)

Go to transaction WE20 in R/3 and select the node *Partner Type LS* (Logical System).

Click on the *Create* icon.

We will enter the logical system (CRQ\_310) that we created in the previous step as the *Partn. number*.

*Partn. type* is already defaulted to LS.

In the *Post processing: permitted agent* section, enter the following values –

*Typ* – US,

*Agent* – User ID of the IDoc administrator (or system administrator),

*Lang* – EN.

In the *Outbound parmtrs.* section click on the *Create outbound parameter* icon.

On the following screen enter HRMD\_ABA as the *Message type*.

Under *Outbound options*, the *Receiver port* will be CRQ\_310 that we created in Step 2.

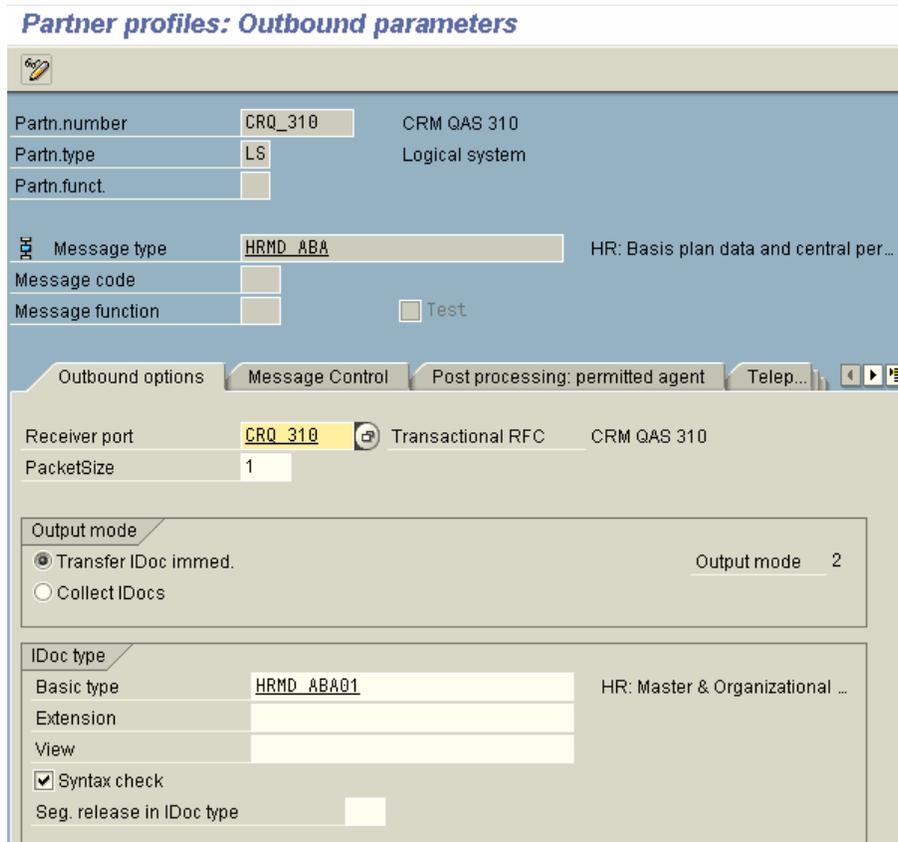
Select the option *Transfer IDoc immed.* as the *Output mode*.

HRMD\_ABA01 is the SAP standard *Basic type* for HRMD\_ABA (table EDIMSG).

The checkbox for *Syntax check* should already be switched on.

Now Save the details.

Your screen should look identical to Figure 5 –



The screenshot shows the SAP 'Partner profiles: Outbound parameters' configuration screen. The interface includes a top navigation bar with a pencil icon and a main content area with several input fields and sections. The 'Partn.number' field is set to 'CRQ\_310' and 'Partn.type' is 'LS'. The 'Message type' is 'HRMD\_ABA'. The 'Receiver port' is 'CRQ\_310' and 'PacketSize' is '1'. The 'Output mode' section has 'Transfer IDoc immed.' selected. The 'IDoc type' section has 'Basic type' set to 'HRMD\_ABA01' and 'Syntax check' checked.

Partn.number	CRQ_310	CRM QAS 310
Partn.type	LS	Logical system
Partn.funct.		
Message type	HRMD_ABA	HR: Basis plan data and central per...
Message code		
Message function		<input type="checkbox"/> Test
Receiver port	CRQ_310	Transactional RFC CRM QAS 310
PacketSize	1	
Output mode	<input checked="" type="radio"/> Transfer IDoc immed. <input type="radio"/> Collect IDocs	Output mode 2
IDoc type	Basic type: HRMD_ABA01 Extension: View:	HR: Master & Organizational ...
	<input checked="" type="checkbox"/> Syntax check Seg. release in IDoc type:	

**Figure 5 – Define a Partner Profile**

Back out of this screen.

Now create another *Outbound parmtrs.* with *Message type* – SYNCH.

*Basic type* – SYNCHRON.

The *Receiver port* and *Output mode* have the same values.

Save it.

Similarly, on the CRM side we define a new partner – QAS\_400 for *Partner type* LS.

Here, the *Outbound parmtrs.* will be *Message type* – SYNCH, and HRMD\_ABA will be the *Inbound parmtrs.* with HRMD as the *Process code* (*Receiver port* – QAS\_400).

Select the option *Trigger by background program* for *Message type* HRMD\_ABA.

## Step 5 – Setting up the Distribution Model, transaction – BD64

Please refer to the latest version of OSS note – 312090 for a detailed guide on how to set up the distribution model.

We need to define precisely the infotypes for an employee that message type HRMD\_ABA will transfer from the R/3 to the CRM system.

Execute transaction BD64.

Click on *Create model view*, with *Short text* – R/3 HR - CRM ALE, and *Technical name* – HRALECRM, *Start date* – today's date, *End date* – 31.12.9999.

Select R/3 HR - CRM ALE and click on *Add message type*.

Enter the following values –

*Sender* – QAS\_400

*Receiver* – CRQ\_310

*Message type* – HRMD\_ABA

Expand node R/3 HR - CRM ALE down to the very last level.

Now the following nodes should be visible –

*R/3 HR - CRM ALE >> QAS\_400 >> CRM QAS 310 >> HRMD\_ABA >> No filter set*

Double-click on *No filter set*.

The system will display a pop up for *Change filter*.

Click on *Create filter group* (there are 7 filter groups in total) to add the following –

Filter group for relationships

- *Infotype* – 1001
- *Object type* – C, S, O
- *Type of related object* – C, S, O
- *Subtype* – A002, A007, A008, A012, B002, B007, B008, B012

Filter group for relationships for object S

- *Infotype* – 1001
- *Object type* – S
- *Type of related object* – P

- *Subtype* – A008

Filter group for relationships with the linked object being specified

- *Infotype* – 1001
- *Object type* – S, O
- *Type of related object* – S, O
- *Subtype* – A003, B003

Filter group for organizational objects

- *Infotype* – 1000, 1002, 1028, 1032
- *Object type* – C, S, O

Filter group for employees

- *Infotype* – 0000, 0001, 0002, 0009
- *Object type* – P

Filter group for employees

- *Infotype* – 0006
- *Object type* – P
- *Subtype* – 1

Filter group for employees

- *Infotype* – 0105
- *Object type* – P
- *Subtype* – 0001, 0005, 0010, 0020

As per OSS Note 550055, a new filter group is required if the organization plans to distribute positions and organizational units along with employee data<sup>1</sup>. The values are –

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<sup>1</sup> We will not be creating this filter group, as we are only distributing employee data.

- *Infotype* – 1001
- *Object type* – P
- *Type of related object* – P
- *Subtype* – B008

Save it.

Infotypes 0000 (Actions), 0001 (Organizational Assignment), 0002 (Personal Data), and 0006 (Addresses with subtype 1, which is permanent residence) are mandatory and need to be maintained in R/3 in order to create and maintain employees in CRM.

Another mandatory requirement is that the employment status of an employee must be Active in the R/3 system (table PA0000, field STAT2).

Infotypes 0009 (Bank Details), and 0105 (Communication with subtypes 0001, 0005, 0010, and 0020) are optional.

At the conclusion of this step, your screen should look like Figure 6 –

### Change Distribution Model

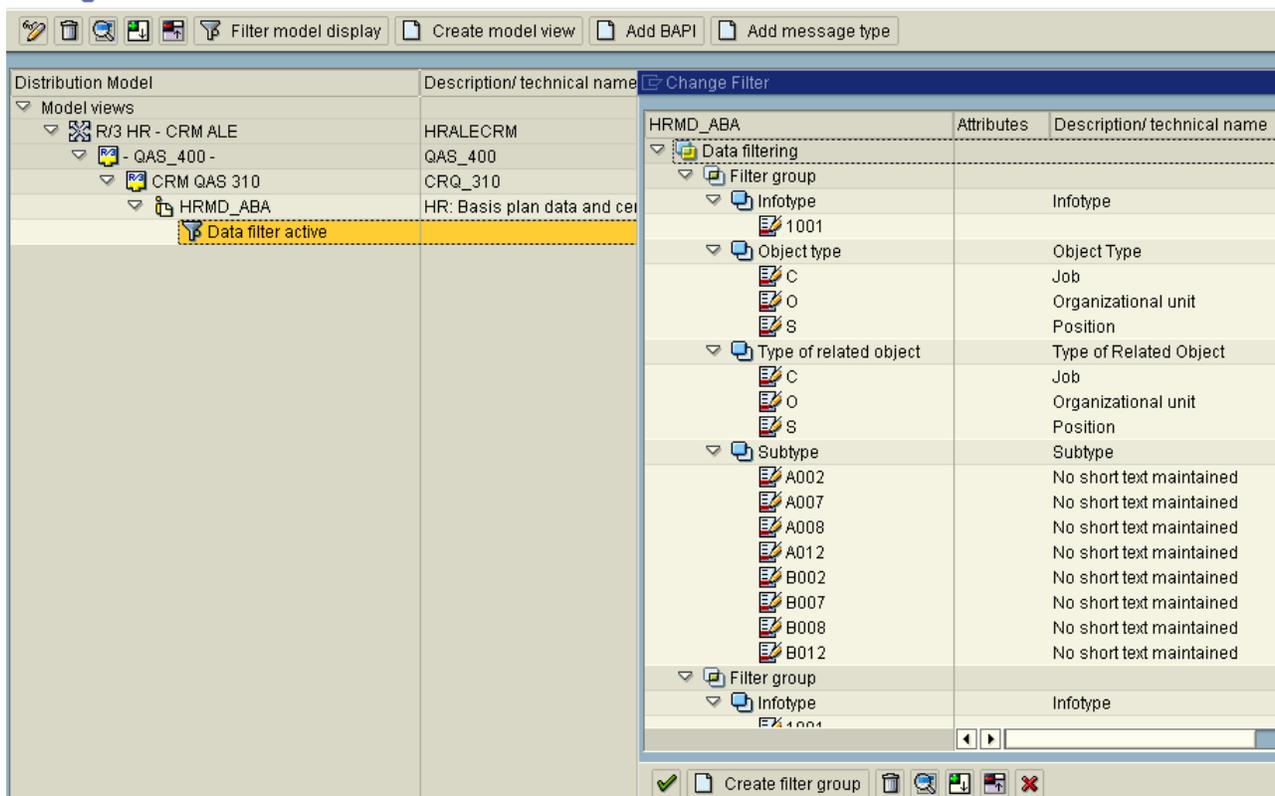


Figure 6 – Distribution Model

This distribution model has to be distributed to the CRM system.

Go to menu –

*Edit >> Model view >> Distribute >> select CRM QAS 310 (CRQ\_310) as the Logical system >> continue.*

You should get a confirmation stating *Model view HRALECRM has been changed.*

## Step 6 – Permitting Multiple Address Subtypes, transaction – SE38

Organizations that employ contractors might not maintain a Permanent address for them. Instead contractors would have their agency's address in a customized subtype (for e.g. – 90). If this is the case then we will need to make some code changes as the standard IDoc processing program in CRM does not recognize any subtype other than 1. Since subtype 1 is mandatory for infotype 0006, the following code changes need to be made to accommodate additional address subtypes in the system –

Go to transaction SE38 in CRD.

*Program – LHRALX00\_INTEGRATION\_PERSONF50.*

```
CASE <ls_e1pityp>-infy.  
WHEN '0006'.  
*** Start Of Deletion ***  
IF <ls_e1pityp>-subty NE '1'.  
*** End Of Deletion ***  
*** Start Of Insertion ***  
IF <ls_e1pityp>-subty NE '1' and  
   <ls_e1pityp>-subty NE '90'.  
*** End Of Insertion ***
```

*Program – LHRALX00\_INTEGRATION\_PERSONF52.*

```
CASE <ls_segment>-segnam.  
WHEN gc_e1plogi.  
.....  
.....  
WHEN gc_e1pityp.  
.....  
.....  
WHEN '0006'.  
*** Start Of Deletion ***  
IF <ls_e1pityp>-subty = '1'.  
*** End Of Deletion ***  
*** Start Of Insertion ***  
IF <ls_e1pityp>-subty = '1' or  
   <ls_e1pityp>-subty = '90'.  
*** End Of Insertion ***  
<ls_e1pityp>-infy = '5583'.  
<ls_e1pityp>-subty = ''.  
.....  
.....
```

## Step 7 – Masking of sensitive data, transactions – BD62, BD79, BD55

Organizations might not want sensitive data like an employee's address (IDoc segment E1P0006), date of birth (IDoc segment E1P0002), bank details (IDoc segment E1P0009) etc to be sent to the CRM system. Such sensitive data needs to be masked before it is transferred to CRM.

If the organization does not distribute positions and organizational units, then the fields ORGEH, PLANS, STELL for IDoc segment E1P0001 need to be masked as well.

We will look at the masking of employee's date of birth value.

Go to transaction BD62 (Define Segment Conversion Rule).

Click on the *Change* icon.

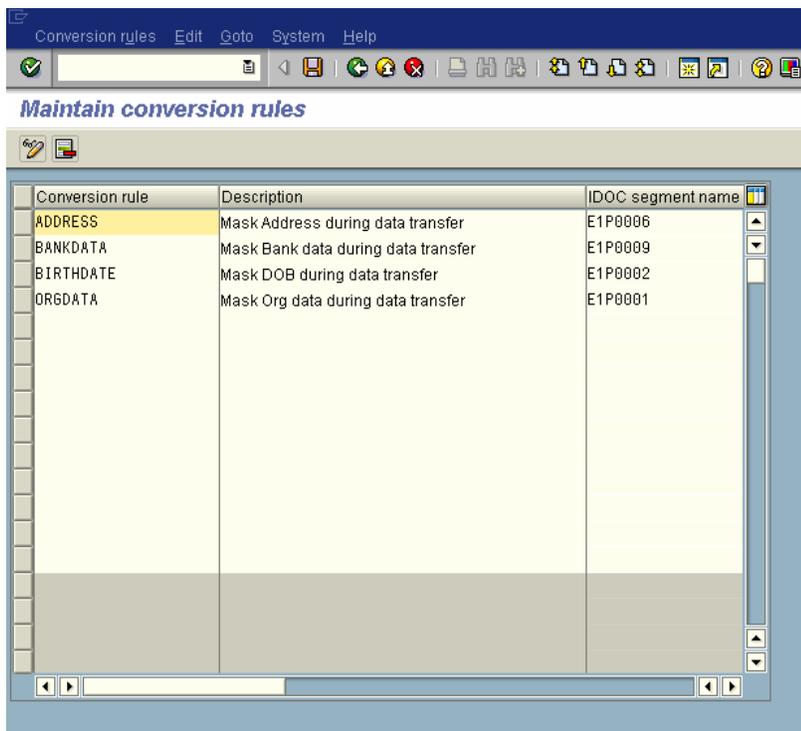
Type in BIRTHDATE in the *Conversion rule* field.

Enter a *Description* – Mask DOB during data transfer.

Select the appropriate *IDoc segment name* (in this case it will be E1P0002 for Personal Data).

Save it.

Your screen should now look like Figure 7 –



Conversion rule	Description	IDOC segment name
ADDRESS	Mask Address during data transfer	E1P0006
BANKDATA	Mask Bank data during data transfer	E1P0009
BIRTHDATE	Mask DOB during data transfer	E1P0002
ORGDATA	Mask Org data during data transfer	E1P0001

**Figure 7 – Maintain Conversion Rules**

Now, go to transaction BD79 (Maintain IDoc Conversion Rules).

Enter the recently created *Conversion rule* BIRTHDATE, and go into *Maintain* mode.

Go to *Rec. field* – GBDAT.

Set '01.01.1900' (date format here is in DD/MM/YYYY) as the value in *Constant* (alternatively, you can double-click to go to the next screen and set the value there).

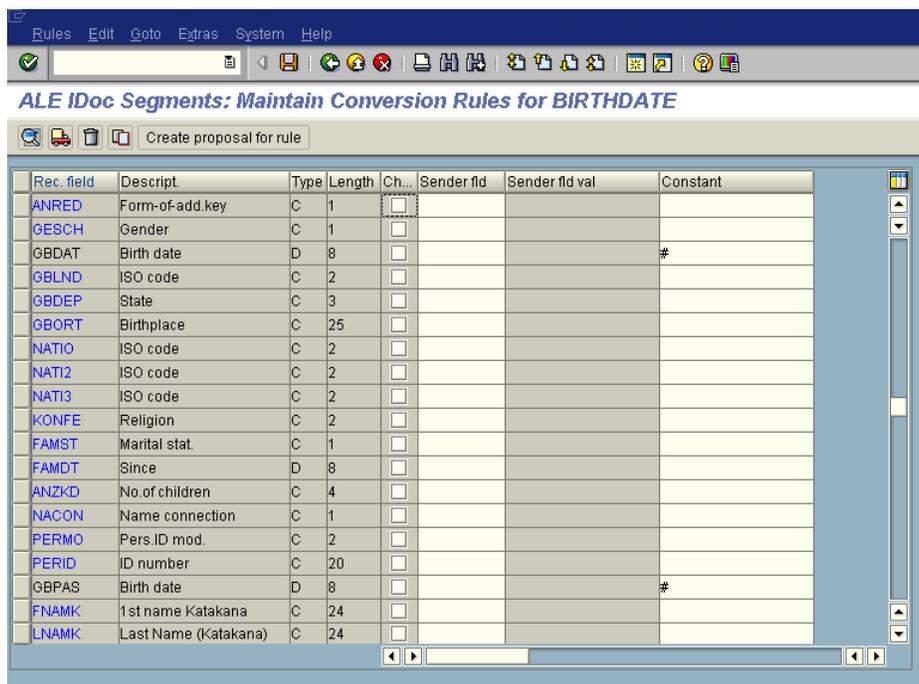
Repeat the above step for field GBPAS (if this field is maintained in HR).

Assign '#' as the constant for the following fields –

GBJHR, GBMON, and GBTAG.

Save the changes.

Your screen should look like Figure 8 –



**Figure 8 – Maintain Conversion Rules for BIRTHDATE**

Now this rule needs to be assigned to a message type (this data is transportable, and hence should be performed in the development client DEV).

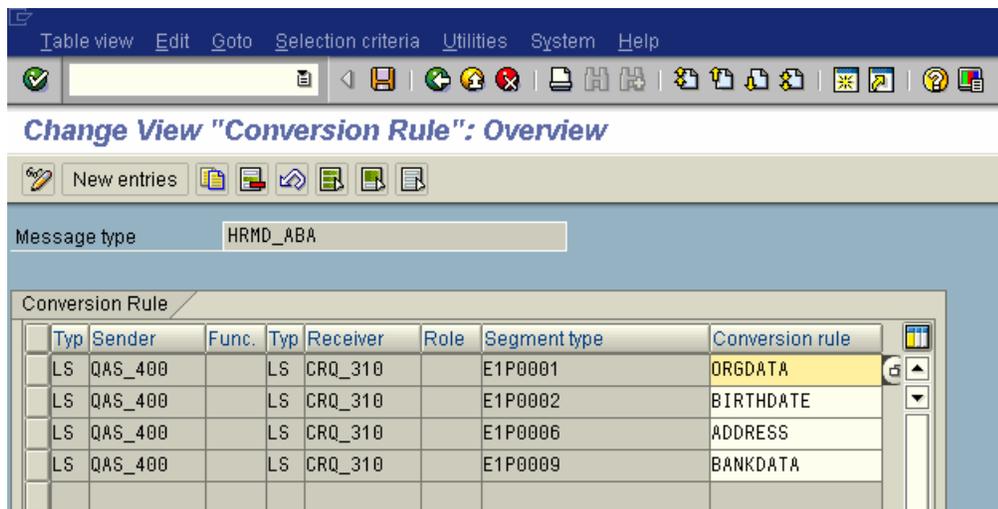
Go to transaction BD55 (Maintain IDoc Conversion), enter *Message type* as HRMD\_ABA.

Click on *New entries*.

Enter the *Sender* as QAS\_400, *Receiver* as CRQ\_310, *Segment type* – E1P0002, and *Conversion rule* – BIRTHDATE.

Save the record.

The screen should now resemble Figure 9 –



**Figure 9 – Overview of Conversion Rules**

Now you can mask the address, banking information, and organizational data fields similarly.

## Step 8 – Setting up of Change Pointers, transactions – BD61, BD50

This step should be executed in DEV and then transported.

Go to transaction BD61 in R/3.

Switch on the *Change pointers activated – generally* check box.

Save.

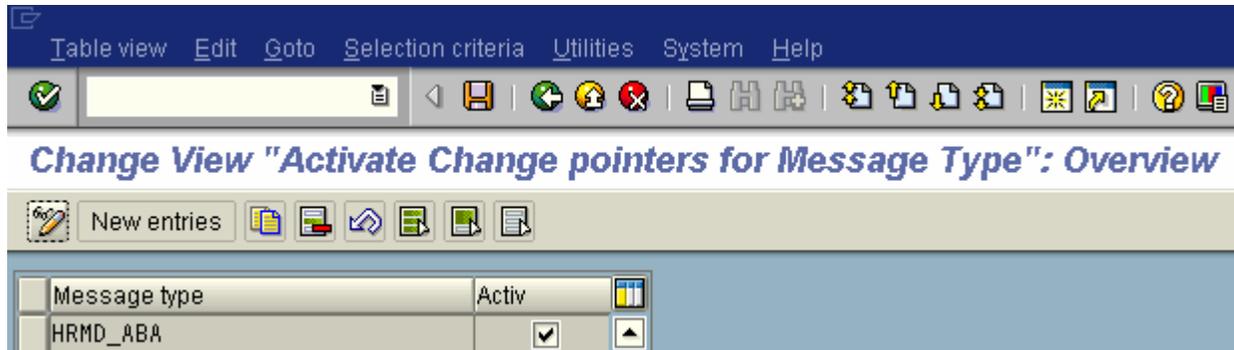
Now activate the change pointer for the specific message type.

Go to transaction BD50.

Check *Activ* for *Message type* HRMD\_ABA.

Save.

Your screen should resemble Figure 10 –



**Figure 10 – Activate Change Pointers for Message Type HRMD\_ABA**

## Step 9 – Customizing Data in CRM, transactions – SM30, SNRO, BUC2

Please refer to the latest version of OSS note – 550055 for a detailed guide to configuration requirements in CRM.

This entire step is to be done in the CRD system.

Go to transaction SM30.

Enter *Table/view* T77S0.

Alternative route via IMG –

*Customer Relationship Management >> Master Data >> Business Partner >> Integration Business Partner-Employee >> Set Up Integration With HR*

Maintain the following settings –

Activation of the integration: Activate the integration by using a main switch (HRALX/HRAC=X; formerly switch CPERS/EEALE).

Integration (organizational units): To activate the integration between business partners and organizational units, activate the HRALX/OBPON=ON switch (formerly: BUPA/SYNC). Even though we are migrating only people (employees) in this exercise, it still needs to be switched on. This is done so that whenever an organizational unit is manually created in CRM, there is a corresponding business partner created as well. Otherwise the system will not create a business partner in the background for an organizational unit.

Integration (employee): To activate the integration between business partners and employees, activate the HRALX/PBPON=ON switch.

Roles: For the business partner in the organizational unit role, the function description is maintained in HRALX/OPROL=BUP004 (formerly: ORGEH/PROLE), for employees it is maintained in HRALX/PPROL=BUP003 (formerly: BUPA/PROL).

At this point, Save the entries.

Number assignment: The business partner number range object is BU\_PARTNER. Generally, there are three types of number assignment when business partners are created from the R/3 system.

01 = This is the internal interval of BU\_PARTNER.

02 = External number assignment, the system uses the number from a specific internal interval of the object.

03 = The number is transferred from HR and a prefix is added. In this case, a specific external interval, which must be defined as XX00000000 (up to XX99999999), is used (where XX denotes any two letters).

Any one of the three intervals can be set up for HR integration. We will use 02, so that when a business partner is created from employee data, the partner number will be identical to the employee. The value of this interval will equal that of the employee number range interval in R/3.

Also, not all the business partners will be employees from R/3, there would likely to be external partners of various types under various roles other than Employee (for e.g. – Vendor, Bidder, Sold-To, Ship-To etc). These business partners would be present only in the CRM system, and not in the R/3 system. Thus, we require an internal interval as well to create these business partners on the fly.

Go to transaction SNRO.

Alternatively, you can access it via the IMG –

*Cross-Application Components >> SAP Business Partner >> Business Partner >> Basic Settings >> Number Ranges and Groupings >> Define Number Ranges*

*Object is BU\_PARTNER.*

Click on *Number ranges*.

Click on *Change intervals*.

Delete all existing intervals.

Add a new interval, with *No – 01*.

Set the *From number* and *To number* to 1 and 50000 respectively (the size of the interval will need to be decided by the business, and will depend on how many external partners they envisage they will have).

Add another interval 02.

The *From number* and *To number* of the BU\_PARTNER interval will be set identical to that of RP\_PREL (Personnel Administration Number Ranges, in R/3).

Check *Ext – 'X'*.

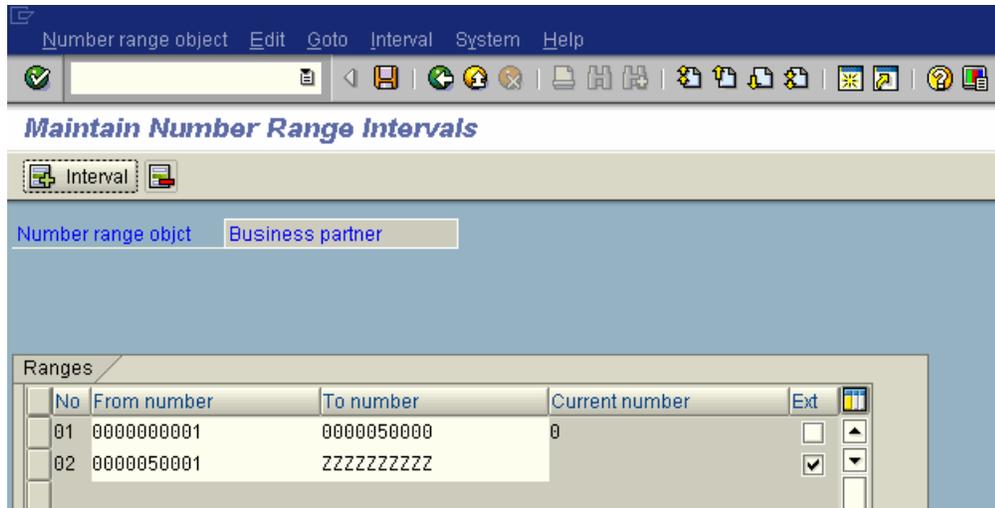
Save the entries.

*Back* out of the screen.

To create a transport for the number range intervals, follow the following menu path –

*Interval >> Transport >> Yes.*

Your screen should look like Figure 11 –



**Figure 11 – Maintain Number Range Intervals for BU\_PARTNER**

Switch values in HRALX/ONUMB is used to set the number assignment for organizational units and HRALX/PNUMB is used to set the number assignment for employees, that is which number range interval in BU\_PARTNER will be used when an organizational unit or a business partner comes through from R/3 into CRM.

We will be using 2 as the switch value for HRALX/ONUMB and HRALX/PNUMB.

For switch value 1, the system uses the internal standard interval.

For switch values 2 and 3 the interval is defined by the HRALX/OSUBG or HRALX/PSUBG switch. For switch values 2 and 3 a grouping needs to be created (transaction BUC2) to link an interval. For the system to be able to connect the grouping and the number range interval, the name of the grouping must be exactly the same as the name of the corresponding number range interval (the name of the grouping is contained in the first column of the table). If you select type 3 (HRALX/PNUMB = 3 switch) for the number assignment of business partners of the employee role, create the HRALX/PSUBG switch manually in table T77S0.

To create the grouping for the number range interval, go to transaction BUC2.

Alternatively, follow the menu path in the IMG –

*Cross-Application Components >> SAP Business Partner >> Business Partner >> Basic Settings >> Number Ranges and Groupings >> Define Groupings and Assign Number Ranges*

Delete all existing entries.

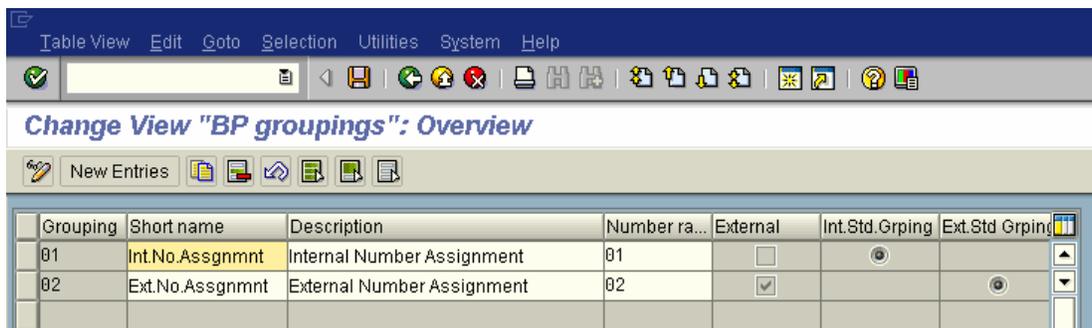
Click *New entries* to create the following –

*Grouping – 01, Short name – Int.No.Assgnmnt, Description – Internal Number Assignment, Number range – 01, Int. Std. Grouping – 'X'.*

Grouping – 02, Short name – Ext.No.Assgnmnt, Description – External Number Assignment, Number range – 02, External – 'X', Ext. Std. Grouping – 'X'.

Save it.

Your screen should look like the one in Figure 12 –



**Figure 12 – Maintain Groupings for Number Range Intervals**

Now, maintain the values for HRALX/ONUMB and HRALX/PNUMB as 2 (type of number assignment), and 2 (as the number range interval) for HRALX/OSUBG and HRALX/PSUBG.

Addresses: If addresses are necessary to generate correct business partners of the organizational unit role (such as in SRM, for example), the HRALX/OADRE=X is set (formerly: BUPA/ADDR). If an address is required for each business partner of the organizational unit role but the corresponding organizational units do not always have a separate address, you can define a standard address. A separate business partner is created for storing the standard address. The number of this business partner, which is used as a container, is stored in the HRALX/OADBP switch (formerly BUPA/ADRBP).

Relationship with the user: As standard, a relationship with the user (infotype 0105, subtype 0001) is only created if the user already exists in the target system. However, if the HRALX/USRAC switch is set to 'X', relationships are created for the user, even if the user does not exist in the system (see note 711852). A link between the position and the user (S-US) is no longer required (for more information see notes 632879 and 752923).

Save the newly added entries.

Figure 13 lists all the switch values in system table T77S0 –

Group	Sem.abbr.	Value abbr	Description
HRALX	HRAC	X	
HRALX	MERID	X	
HRALX	MSGRE	1	
HRALX	OADBP		
HRALX	OADRE		
HRALX	OBPON	ON	
HRALX	OBWIG	X	
HRALX	ONUMB	2	
HRALX	OPROL	BUP004	
HRALX	OSUBG	02	
HRALX	PALED		
HRALX	PALEP		
HRALX	PBPHR	ON	Employees Are Replicated from HR System
HRALX	PBPON	ON	
HRALX	PCATS		
HRALX	PLEVE	3	
HRALX	PNUMB	2	
HRALX	PPROL	BUP003	
HRALX	PQUAL		
HRALX	PRTON		
HRALX	PSUBG	02	
HRALX	PSYNO		
HRALX	PSYNP		
HRALX	USRAC	X	Create Relationship to User(s)

**Figure 13 – Settings in Table T77S0**

Section “Reference to related Notes” of note 550055 has a list of useful OSS notes. These notes should be carefully studied and the relevant ones applied so that the integration between an Employee and Business Partner is possible.

### Step 10 – Testing, transactions – PFAL, BD87

Now that we have completed setting up the pre-requisite customizing data in both the systems, we need to manually test the process.

Go to transaction PFAL in the R/3 system.

Enter 01 as the *Plan version* (usually an enterprise sets up 01 as the current plan), and P (Person) for *Object type* since we are only transferring employees across.

If we were to transfer the complete organizational structure (organizational units, positions, and persons), then *Object type* would be O (Organization unit), and *Evaluation path* – O-S-P.

Select an employee you would like to be created in CRM as the *Object ID*.

*Transfer mode* should default to *Insert* (complete transfer: delete in target system, recreate).

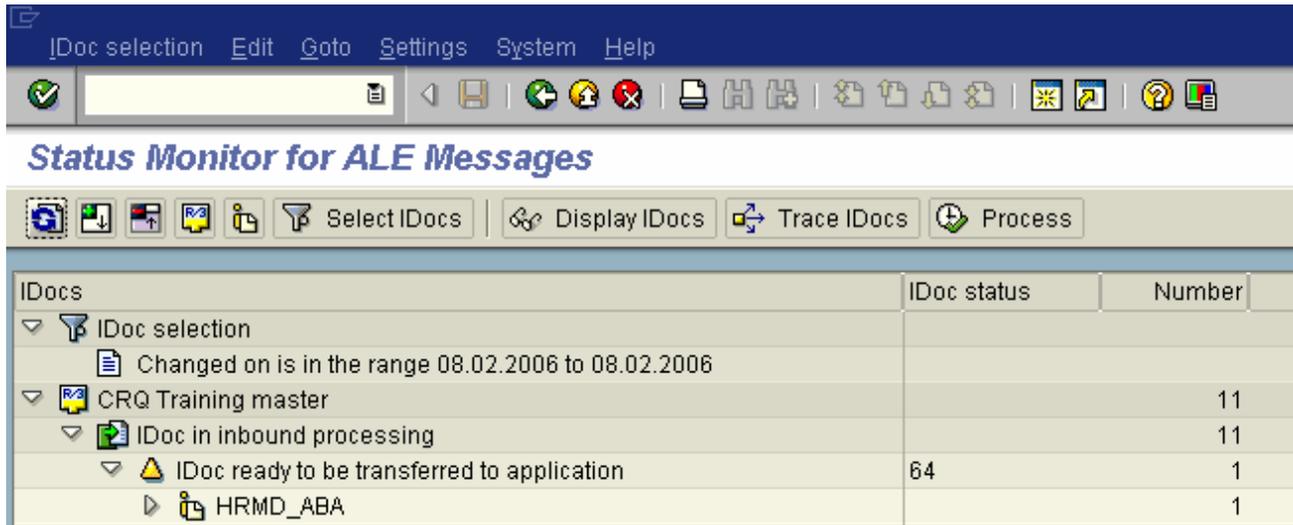
*Receiver partner no.* is CRQ\_310 (we set this up in Step 4), and our *Message type* is HRMD\_ABA.

Execute it.

On the next screen you will get a message with green traffic lights stating that CRQ\_310 received the IDoc.

Go to your CRM session, run transaction BD87, hit *Execute*.

You will see a yellow triangle (*IDoc ready to be posted to application*) as in Figure 14 –



**Figure 14 – IDoc Status Monitor**

Click on the node *HRMD\_ABA*, and *Process*.

On the following screen you will be notified if the IDoc has been successfully processed or not by the *New status*. Double-click on the ALV line to go to the next screen. If the *Current status* indicator is set to green traffic lights (53), then the IDoc has been successfully processed. Have a look at table TEDS1 for all IDoc status codes and their description.

Now, execute transaction BP, and search for *BusPartner* with the employee id.

The system should the business partner.

Double-click to examine the details.

Repeat this entire step for a few more employees to confirm that all are successfully processed. If your organization has more than one employee group (table T501) and multiple subgroups (table T503K) then prepare a test case to test at least a couple of employees belonging to each subgroup.

## Step 11 – Process Automation, transactions – SE38, SM36, WE20 (BASIS function)

If we are satisfied with our test runs we need to automate the above manual step.

Standard program RBDMIDOC creates IDocs from the change pointers for the *Message type* (HRMD\_ABA) specified. The IDocs are then sent to the receiving systems specified in the distribution model. In our case it will be the CRM system (CRQ\_310).

In R/3 run transaction SE38 with *Program* RBDMIDOC.

Enter *Message type* – HRMD\_ABA.

Save as *variant* with *Variant name* HR2CRM, *Description* – Post Employee Data R/3-CRM.

Save it.

Execute transaction SM36 (Define Background Job).

Enter a *Job name* – RBDMIDOC\_BG.

Specify a *Job class* – A / B / C (depending on the priority). We will use A.

Save.

In the pop up, enter the *Communication* user (Step 1) as the *User*.

Click *ABAP program*.

This opens the fields *Name* (enter the program RBDMIDOC), *Variant* – HR2CRM, and *Language* (already defaulted to the system language).

Save.

You will get a success message *Job RBDMIDOC\_BG saved with status: Scheduled*.

Click on *Start condition*, then *Date/Time*.

Enter an appropriate *Date* and *Time*.

Switch on *Periodic job* – 'X'.

Click *Period values*, click *Other period*, set the frequency to 5 *Minute(s)*.

Save four times.

You will get another success message *Job RBDMIDOC\_BG saved with status: Released*.

In CRM, go to transaction WE20.

For *Partner type LS – QAS\_400*, *Message type HRMD\_ABA*, change the setting for *Processing by function module* to *Trigger immediately*. This will consume the IDoc as soon as it receives it from R/3.

### Step 12 – Synchronizing Business Partners, transactions – SE38, SM36 (BASIS function)

Run transaction SE38, *Program* – HRALXSYNC.

HRALXSYNC synchronizes HR objects – organizational units and central persons, with the business partners in CRM. A business partner is required for each organizational unit and central person in the organization or employee role. Because the data of the business partner is not generally time dependent, any future changes to HR objects cannot automatically be posted in the business partner. You can update the business partner with these changes by regularly running this report. When synchronizing the organizational unit, the basic data (name, description) and address is taken into account. In the case of the central person, the bank data and user assignment is also taken into account.

Schedule HRALXSYNC as a background job to run once every night using the default variant SAP&DEFAULT.

## Author Bio



I have been an SAP Techno-functional Specialist for the past 4.5 years. I started my career in SAP with Toyota, Melbourne as a final year Bachelor's work experience student. After staying with Toyota for close to 4 months, I got my first big break by scoring a full-time position with BOC in Sydney. My main duties were programming and configuring in the logistics area – SD, MM, FI-CO, PP, and PM. I also got a chance to dabble in HR and PS. I remained with BOC for a little more than 3 years. Then I joined the RTA in Sydney (Roads and Traffic Authority). In the past year that I have been with the RTA, I have had customized applications in HR, and MM. Currently, I'm involved in a CRM 4 implementation. My main areas of responsibility are to configure various bits of the system for Business Partners, Products, and Activities.

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