

# **SAP CRM AUTHORIZATIONS**

**Concepts and examples**

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- SAP BW (Business Warehouse)
- SAP CRM (Customer Relationship Management)
- SAP IS-U (Industry Solution for Utility Companies)

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**ATTENTION:**

All the money you spent by donating will 100% be transferred for medical or educational purposes in those countries that are far worse off than the readers of this book probably are. In most cases everyone in contact with SAP (and therefore being a potential reader) is either working as consultant, or working internally at a large national or international company. This implies that most of you have a decent and nice job and might be willing to donate a small amount of money for a good cause.

On my personal website [www.dasap.be](http://www.dasap.be) you will be able to make a contribution. I will also further update the knowledge base section. Please visit the section about "Charity Projects".

<u>1. Introduction</u> .....	7
<u>2. SAP Authorization Concept</u> .....	7
2.1. Authorization Components and their Relationships .....	8
2.2. The Profile Generator (PFCG).....	11
2.2.1. <i>Installing the Profile Generator</i> .....	12
2.2.2. <i>Creation of a new Role</i> .....	22
2.2.3. <i>Single Role versus Composite Role (collective role)</i> .....	22
2.2.4. <i>Master role and Derived Role</i> .....	25
2.2.5. <i>Assigning Users</i> .....	32
2.2.6. <i>Transporting Roles</i> .....	36
2.3. Organizing Authorization Administration .....	37
2.3.1. <i>Creating administrator roles</i> .....	37
2.3.2. <i>List of available templates</i> .....	43
2.3.3. <i>Authorization Objects checked in role maintenance</i> .....	44
2.3.4. <i>Relevant SAP Tables for Authorizations and Roles</i> .....	44
2.3.5. <i>System Settings-profile parameters</i> .....	45
2.3.6. <i>Protective measures for Special profiles SAP_ALL &amp; SAP_NEW</i> .....	46
2.4. Authorization Checks.....	47
2.4.1. <i>Checking at program level with AUTHORITY-CHECK</i> .....	47
2.4.2. <i>Starting SAP Transactions</i> .....	49
2.4.3. <i>Starting Report Classes</i> .....	54
2.4.4. <i>Calling RFC Function Modules</i> .....	55
2.4.5. <i>Checking assignment of Authorization Groups to Tables</i> .....	55
2.5. Analyzing Authorization Checks .....	56
2.5.1. <i>System Trace</i> .....	56
2.5.2. <i>Authorization error Analysis</i> .....	59
<u>3. Testing the roles</u> .....	61
<u>4. User Maintenance</u> .....	63
4.1. Creation of a User in the CRM system .....	63
4.1.1. <i>Display user information</i> .....	64
4.1.2. <i>Initial Data load for Users and Authorizations</i> .....	73
4.2. Creation of a User in the SAP Enterprise Portal.....	74
4.3. Creation of an Employee in the CRM system .....	81
4.4. Maintaining the Organizational Model.....	84
<u>5. CRM specific Authorizations</u> .....	88
5.1. Marketing and Campaign Management.....	88
5.1.1. <i>Role for creating marketing plan and campaign</i> .....	90
5.1.2. <i>Restrictions made based on person responsible</i> .....	97
5.1.3. <i>Restrictions made based on Authorization Group</i> .....	99
5.1.4. <i>Restrictions made based on the Campaign Type</i> .....	101
5.1.5. <i>Set Restrictions for assigning Attribute Sets and Attributes</i> .....	101
5.2. Business Partner Security .....	125
5.2.1. <i>Functional insight into Account and Contact Management</i> .....	126
5.2.2. <i>General role SAP_CRM_BUSINES_PARTNER</i> .....	146

5.2.3. Restrictions for certain input fields based on Authorization Type .....	146
5.2.4. Restrictions for certain field groups .....	149
5.2.5. Restrictions based on Authorization Group.....	152
5.2.6. Restrictions for maintaining certain Business Partner Roles.....	154
5.2.7. Perform authorization checks for sales area related data for business partners.....	160
5.2.8. Restriction of business partner role in the BP transaction.....	160
5.3. Product Security.....	162
5.3.1. Relevant SAP Authorization objects .....	162
5.3.2. Product maintenance .....	163
5.3.3. Product Proposals .....	168
5.4. Authorization check in Business Transactions .....	169
5.4.1. Relationship Business Transactions, Types and Categories.....	169
5.4.2. Process flow authorization check .....	182
5.4.3. Examples of the authorization assignment .....	185
5.4.5 Authorization Check at Field Level .....	188
5.4.6. Business add-in for authorization check in business transactions .....	191
5.5. Authorizations in E-commerce (Internet Sales).....	191
5.5.1. Customizing settings for Internet Sales.....	191
5.5.2. User Administration.....	195
5.6. Interaction Center Winclient.....	210
5.6.1. Technical System Landscape .....	210
5.6.2. User Administration and authentication.....	211
5.6.3. Users Overview.....	211
5.6.4. Data synchronization between CRM system and other systems .....	212
5.6.5. Authorizations .....	212
5.7. CRM IC Webclient .....	213
5.7.1. Customizing of the IC Webclient.....	214
5.7.2. Assignment of the IC Webclient Profile .....	216
5.7.3. How to launch the IC Webclient .....	218
5.7.4. Useful Parameters .....	219
5.7.5. Useful information about the IC Webclient .....	220
5.8. ACE (Access Control Engine).....	222
5.8.1. Introduction.....	222
6. BW specific authorizations (TO BE ELABORATED) .....	223
7. Frequently Asked Questions.....	223
8. Tips and Tricks .....	224
9. Relevant OSS notes regarding SAP Authorizations .....	225
9.1. SAP CRM related .....	225
APPENDIX.....	227

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Information contained in this book has been obtained by doing a lot of research on help.sap.com, following the most common standard SAP Courses, by reading SAP Press books, but most important by combining the authors' functional knowledge of R/3, SAP CRM, SAP BW and his understanding of the SAP Authorization concept.

The publisher does not guarantee the accuracy, adequacy, or completeness of any information and is not responsible for any errors or omissions or the results obtained from the use of such information. Readers should be particularly aware of the fact that the product SAP is a continuously changing entity. Some facts may have changed since the writing of the e-book.

The book is a private initiative of the author and is started as a personal SAP CRM security bible in order to keep all relevant experience he obtained during his SAP consultant career into one central document. Due to the lack of a good specific SAP CRM security guide, SAP Course or centralized information about this topic at the time of writing, the author decided to make this book publicly available for sale. The choice of e-book instead of hardcopy is due to the fact that the author is continuously working on this topic, and all updates will be included from time to time.

The price any reader would pay for this e-book is for the effort the author has put into centralizing all relevant information into one document, but will be 100% donated to a good cause. This can be functional know-how, technical knowledge and step-by-step examples of the usage of available authorization objects in the different SAP Modules.

The book is not intended to replace any SAP course and the author strongly advises to attend the basic courses for every SAP Module such as SAP CRM and SAP BW. Furthermore it is also advised to follow the specific SAP Authorization related courses such as:

- A) BW365: Business Information Warehouse - Authorizations
- B) ADM940: SAP Authorization Concept
- C) HR940: Authorizations in HR

## **Foreword**

This guide has been written to elaborate the SAP Authorization concept and to give concrete system examples to understand the design and implementation.

Today a lot of large national and international companies are using SAP as an ERP system to automate their business processes. They often use the well-known R/3 modules such as SD, FI/CO, MM and so on, but also new technologies such as Business Warehouse (BW) and Customer Relationship Management (CRM) and SAP Enterprise Portal.

Business processes are defined and elaborated in those systems by Customizing and developments. Now the way people work with these systems or should be able to work with is being defined by implementing the authorization concept.

In the first chapters I will try to give a solid overview of the general authorization concept, which in fact is valid not only for R/3, but also for other SAP modules such as SAP CRM and BW.

Next I will try to elaborate some concrete examples within the domain of SAP CRM, since this is the module I am working on, on a day-to-day basis.

Because I try to share knowledge within my company but also with fellow SAP CRM colleagues and authorization specialists, I decided to write this manual.

## 1. Introduction

Those people that already obtained the book should know that it is not finished yet. When I find the time in between projects I will try to concentrate on some specific topics such as ACE (Access Control Engine). Furthermore I will elaborate an example for usage of every Authorisation object in SAP CRM, since this is the module I work in on a day-to-day basis.

## 2. SAP Authorization Concept

The SAP Authorization concept allows you to define what people can do in the SAP System, but more importantly what they are NOT allowed to do.

When doing their day to day job, people are performing actions in the system such as creating sales orders, creating/changing master data (products, business partners), or entering leads/opportunities in the CRM system.

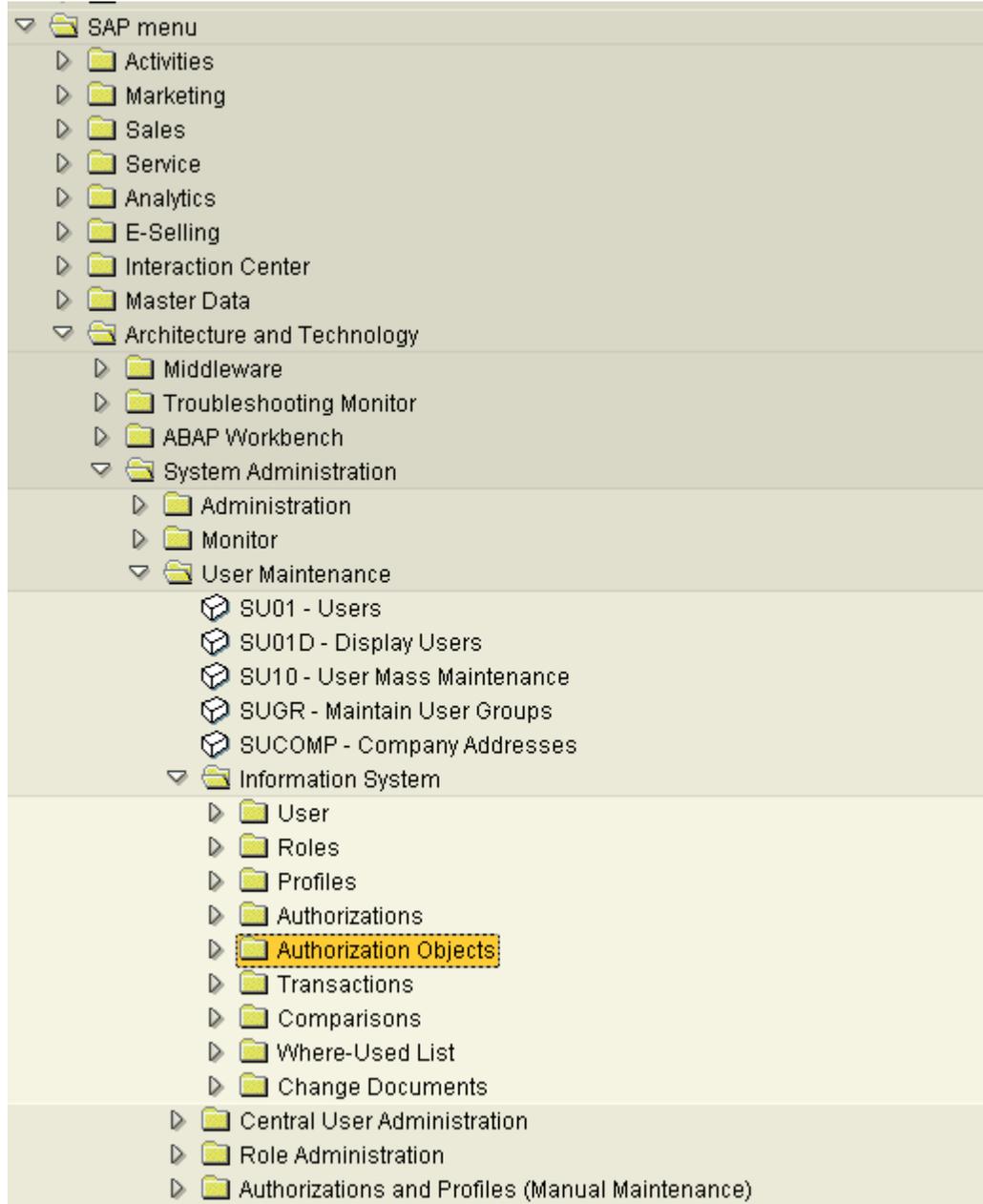
Of course some information should not be accessed by everyone, or at least not be changeable.

Examples:

- Employees should not be able to change their salary records.
- Only certain employees are responsible for creating sales orders in the system
- Account Managers should only be able to change master data information for their own business partners (sales prospects/customers).

The SAP authorization concept protects transactions and programs in SAP systems from unauthorized access. On the basis of the authorization concept, the administrator assigns authorizations to the users that determine which actions a user can perform in the SAP System, after he or she has logged on to the system by entering his/her username and password.

Most components concerning authorizations can be found in the SAP menu:



## 2.1. Authorization Components and their Relationships

A user will have one or more roles assigned to his user master record (maintenance can be done via the transaction code SU01). These roles can be single roles or composite roles. Furthermore the user also can have authorization profiles assigned to the user master record (a generated authorization profile via the profile generator, or a manual created authorization profile or standard SAP authorization profile such as SAP\_ALL).

A role usually contains one or more transactions. Every transaction contains a number of authorization objects that are being checked to see if the user has the right authorization to perform a specific action in the system. An authorization object in its turn can contain one or more authorization fields.

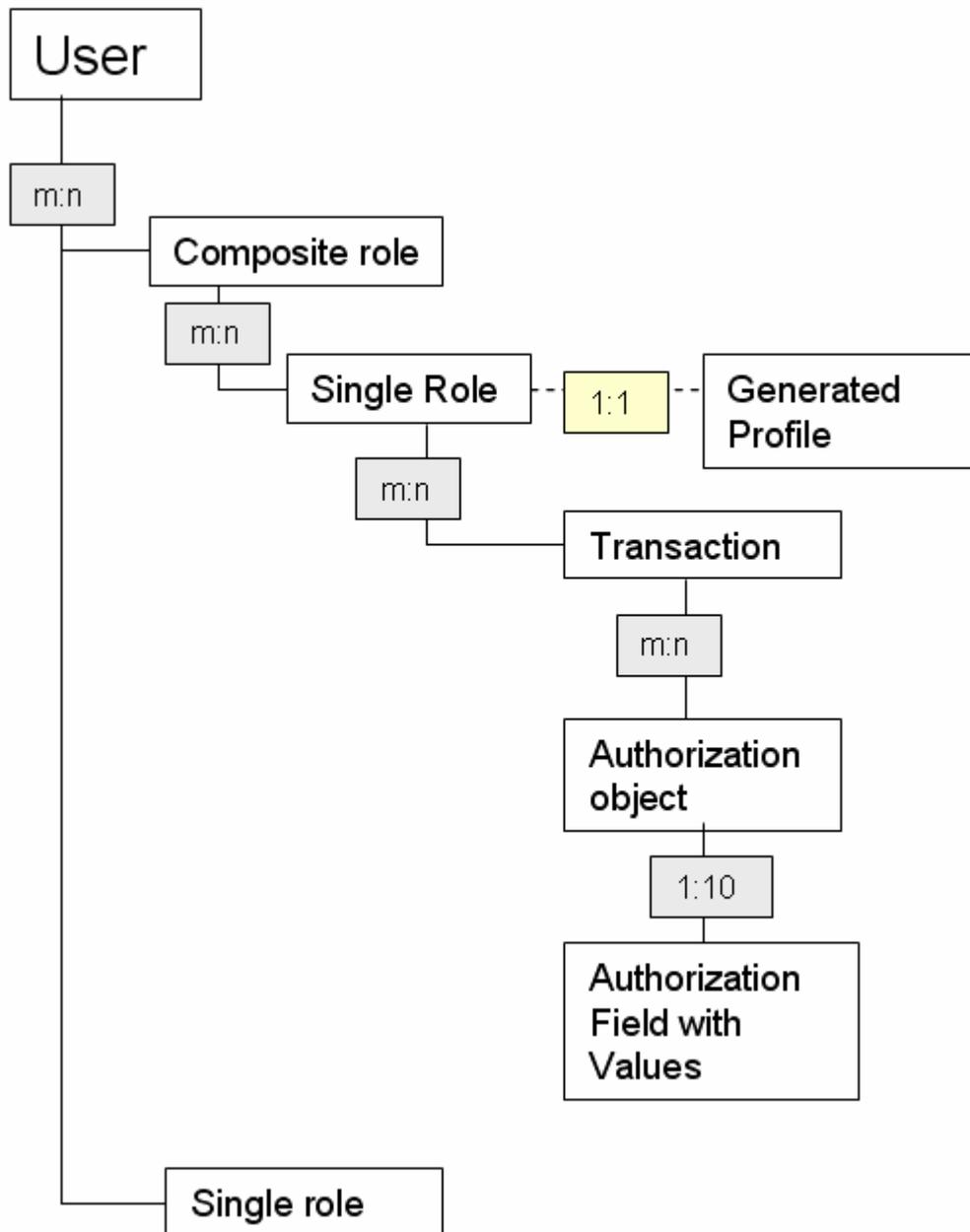


Figure 2.0: Authorization components and their relationships

Explanation of the Graphic:

- **User Master Record:** These enable the user to log onto the SAP system and allow access to the functions and objects in it within the limits of the authorization profiles specified in the role.

Changes only take effect when the user next logs on to the system. Users who are logged on when the changes take place are not affected in their current session.

- **Single Role:** Is created with the profile generator and allows the automatic generation of an authorization profile. The role contains the authorization data and the logon menu for the user.
- **Composite Role:** Consists of any number of single roles.
- **Generated authorization profile:** Is generated in role maintenance from the role data.
- **Authorization object:** An authorization object groups up to ten **authorization fields** that are related by AND. An authorization object allows complex tests of an Authorization for multiple conditions. Authorizations allow users to execute actions within the system. For an authorization check to be successful, all field values of the authorization object must be appropriately maintained in the user master (the SY\_SUBRC must equal 0 during the authority check).

Authorization objects are divided into **authorization classes** for comprehensibility. An object class is a logical combination of authorization objects and corresponds for example, to an application (financial accounting, human resources, and so on).

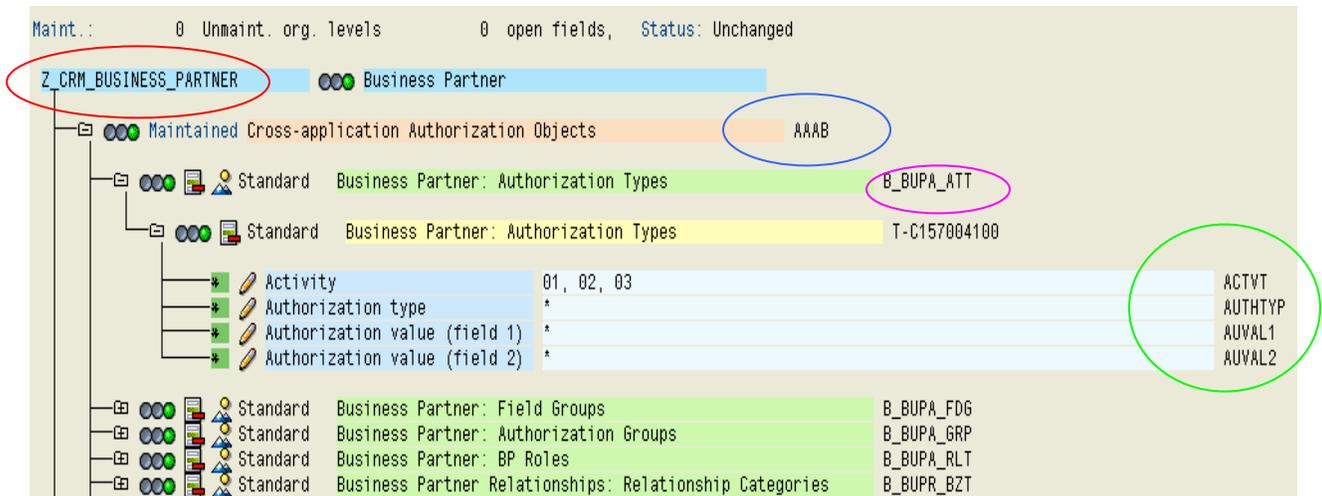


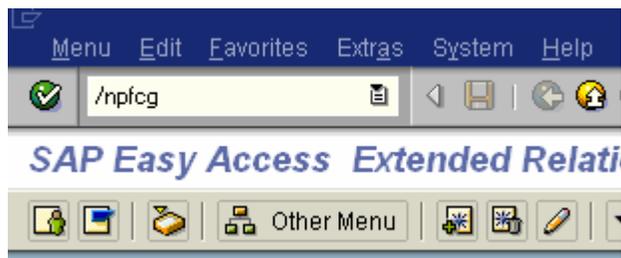
Figure 2.1: Screenshot of authorizations in the Profile Generator

## 2.2. The Profile Generator (PFCG)

In the CRM system (release 4.0) you start the Profile generator in the SAP Menu via the path:

Architecture and Technology → System Administration → User Maintenance → Role Administration → Roles

Or directly by using the transaction code “/npfcg” in the command field.



You can use the Profile Generator to manage roles and authorization data. You can automatically create the authorization profiles with this tool.

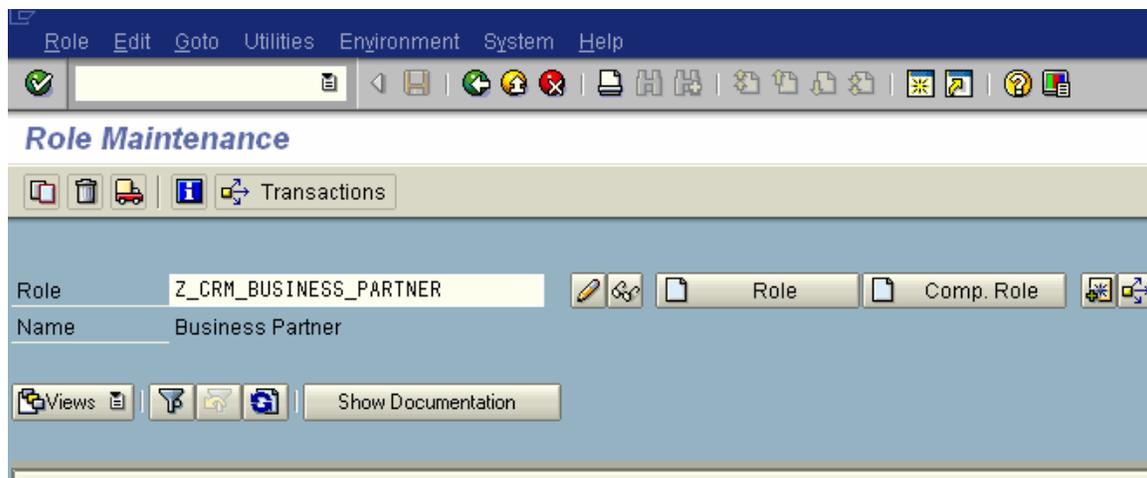


Figure 2.3: Screenshot of the profile generator screen

**Remark:** depending on the release of your system (being R/3, BW or CRM) the access to the profile generator might be different, so the easiest way is to use the Transaction code PFCG immediately.

### 2.2.1. Installing the Profile Generator

You must first configure the system so that you can use the role maintenance function and the Profile Generator. To do this, perform the following steps:

1. Set the profile parameter **auth/no\_check\_in\_some\_cases** to the value **Y**.

[Profile parameters](#) can be displayed/changed via the transaction code RZ11.

#### Display Profile Parameter Attributes

Documentation	
Param. Name	auth/no_check_in_some_cases
Short description(Engl)	Activation of the Profile Generator
Appl. area	Authentication
ParameterTyp	Special character strings
Changes allowed	Change permitted
Valid for oper. system	All operating systems
DynamicallySwitchable	<input type="checkbox"/>
Same on all servers	<input checked="" type="checkbox"/>
Special char. string	Y
Separator	
Dflt value	Y
ProfileVal	Y
Current value	Y

You could also look at the full overview of the configured parameters in transaction code TU02 or report RSPARAM (called in transaction code SA38).

#### Parameter Changes in SAPSYSTEM cernum04 00

Select Period		Active parameters		History of file	
04.01.2006	16:36:53	CC1	cernum04		
List of Active Parameters					
Parameter	Value				
alert/cache/size_MB	0				
alert/param_file	G:\usr\sap\CC1\DVEBM6S00\log\ALPARAMS.DAT				
auth/authorization_trace					
auth/new_buffering	4				
auth/no_check_in_some_cases	Y				
auth/object_disabling_active	Y				
auth/rfc_authority_check	1				

## 2. Execute transaction SU25.

Transaction SU25 copies the proposals for check indicators and authorization field values delivered by SAP to the customer tables USOBX\_C and USOBT\_C, which you can then change by using the transaction code SU24.

You can then use the role maintenance functions and the Profile Generator to manage the authorization information for your users.

### Profile Generator: Upgrade and First Installation

Information about this transaction			
Installing and upgrading the Profile Generator			
Actions to be performed	Date	Time	User
Installing the Profile Generator			
 1. Initially fill the customer tables	23.05.2003	11:56:08	DDIC
Post-processing the settings after upgrading to a higher Release			
 2A. Preparation: Compare with SAP values	17.07.2002	17:48:09	DDIC
 2B. Compare transactions			
 2C. Roles to be checked			
 2D. Display changed transaction codes			
Transport connection			
 3. Transport the customer tables			
Adjusting the authorization check (optional)			
 4. Check indicator (Transaction SU24)			
 5. Deactivate authorization object globally			
Create roles from manually-created profiles			
 6. Copy data from old profiles			

You can set the tables to the check indicators described below. It is important to note that the check of a specific authorization object during the processing of a transaction cannot be simply forced by simply maintaining the object in tables USOBT\_C and USOBX\_C.

Instead, the check indicators in table USOBX\_C only define how the system responds to the authorization checks that are contained in the ABAP coding of the respective transaction.

Check Indicator	Description	Explanation
U	Not maintained	No indicator has been set. The check is always performed. The object is not proposed in the Profile Generator.
N	No check	The check is not active. The object is not processed in the Profile Generator.
C	Check	The check is always performed. The object is not proposed in the Profile Generator.
CM	Check/Maintain	The check is always performed. The object is proposed for maintenance in the Profile Generator.

**Example of Check Indicators for Transaction BP in the CRM system:**

*Display Check Indicator for BP*

U	N	C	CM	Check ID	Object	Object name
			✓	Check/maintain	B_BUPA_ATT	Business Partner: Authorization Types
			✓	Check/maintain	B_BUPA_FDG	Business Partner: Field Groups
			✓	Check/maintain	B_BUPA_GRP	Business Partner: Authorization Groups
			✓	Check/maintain	B_BUPA_RLT	Business Partner: BP Roles
			✓	Check/maintain	B_BUPR_BZT	Business Partner Relationships: Relationship Categories
			✓	Check/maintain	B_BUPR_FDG	Business Partner Relationships: Field Groups
			✓	Check/maintain	B_CCARD	Payment Cards
		✓		Check	B_CLEAR	Data Cleansing
			✓	Check/maintain	B_USERSTAT	Status Management: Set/Delete User Status
			✓	Check	F_BNKA_MAN	Banks: General Maintenance Authorization
			✓	Check	PLOG	Personnel Planning
			✓	Check	S_ADMI_FCD	System Authorizations
			✓	Check	S_ALV_LAYO	ALV Standard Layout
			✓	Check	S_BDS_DS	BC-SRV-KPR-BDS: Authorizations for Document Set
			✓	Check	S_BTCH_ADM	Background Processing: Background Administrator
			✓	Check	S_BTCH_JOB	Background Processing: Operations on Background Jobs
			✓	Check	S_CTS_ADMI	Administration Functions in the Change and Transport System
			✓	Check	S_DATASET	Authorization for file access
			✓	Check	S_DEVELOP	ABAP Workbench
			✓	Check	S_DOKU_AUT	SE61 Documentation Maintenance Authorization
			✓	Check	S_GUI	Authorization for GUI activities
			✓	Check	S_OC_DOC	SAPoffice: Authorization for an Activity with Documents
			✓	Check	S_OC_ROLE	SAPoffice: Office User Attribute
			✓	Check	S_OC_SEND	Authorization Object for Sending
			✓	Check	S_PRO_AUTH	IMG: New authorizations for projects
			✓	Check	S_RFC	Authorization Check for RFC Access
			✓	Check	S_SPO_DEV	Spool: Device authorizations
			✓	Check	S_TABU_CLI	Cross-Client Table Maintenance
			✓	Check	S_TABU_DIS	Table Maintenance (via standard tools such as SM30)
			✓	Check	S_TCODE	Transaction Code Check at Transaction Start
			✓	Check	S_TRANSLAT	Translation environment authorization object
			✓	Check	S_TRANSPRT	Transport Organizer
			✓	Check	S_USER_GRP	User Master Maintenance: User Groups
			✓	Check	S_WFAR_OBJ	ArchiveLink: Authorizations for access to documents

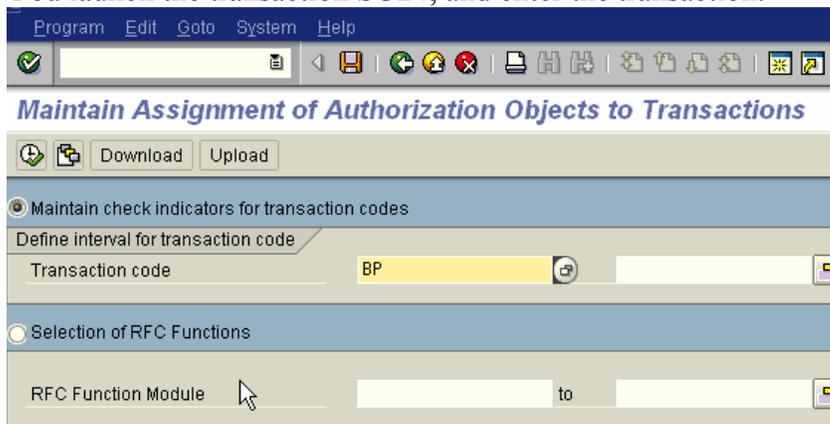
With the transaction SU24, you can check/change the authorization objects that are relevant for a specific transaction.

First of all, this allows you to check upon the relevant authorization objects that are checked/ checked-Maintained within a transaction. If an authorization object is checked/maintained, this means that relevant SAP-fields (like BUKRS for company code) can be maintained/restricted in the profile Generator when adding this transaction into a role.

Let's take an example:

Suppose we would like to see what authorization objects are relevant for the transaction "BP".

You launch the transaction SU24, and enter the transaction.



The other option: "edit check indicator in all transactions" is used to see in what transactions a certain authorization object is used and which status it has for that transaction (Checked; Check/Maintain...).

For example, you could give in the auth. Object K\_ORDER and press execute. This returns a list with all Transaction Codes where the authorization object is relevant for the transaction.

Now, to continue, when we press execute for the above screen, we would get the following:

### Transaction List

<input type="checkbox"/> Check indicator <input type="checkbox"/> Check indicator <input type="checkbox"/> Value list			
TCode	Typ	Text	TCode (original)
BP	T	Maintain Business Partners	

Here you see three buttons:

#### 1) Display Value list

User		DAVYP	
Release		620	
Date		03.01.2006	
Time		14:25:14	
Tcode: BP		Maintain Business Partners	
TCode	Check indicator	Object	ObjectDescription
BP	Check/maintain	B_BUPA_ATT	Business Partner: Authorization Types
		<b>Fld</b>	<b>Val. from</b> <b>Value to</b>
		ACTVT	01 02 03
		AUHTYP	*
		AUVAL1	*
		AUVAL2	*
BP	Check/maintain	B_BUPA_FDG	Business Partner: Field Groups
		<b>Fld</b>	<b>Val. from</b> <b>Value to</b>
		ACTVT	02 03
		FLDGR	*
BP	Check/maintain	B_BUPA_GRP	Business Partner: Authorization Groups
		<b>Fld</b>	<b>Val. from</b> <b>Value to</b>
		ACTVT	01 02 03
		BEGRU	*
BP	Check/maintain	B_BUPA_RLT	Business Partner: BP Roles
		<b>Fld</b>	<b>Val. from</b> <b>Value to</b>
		ACTVT	01 02 03
		RLTYP	*
BP	Check/maintain	B_BUPR_BZT	Business Partner Relationships: Relationship Ca
		<b>Fld</b>	<b>Val. from</b> <b>Value to</b>
		ACTVT	01 02 03 06
		RELTYP	*

Here you only see the relevant authorization objects with the status (check indicator) and the object description.

You also see the fields (if status is check/maintain) that you are able to restrict upon in the profile generator: e.g. example below authorization object B\_BUPA\_RLT for Transaction code BP.

BP	Check/maintain	B_BUPA_RLT	Business Partner: BP Roles	
		Fld	Val. from	Value to
		ACTVT	01 02 03	
		RLTYP	*	

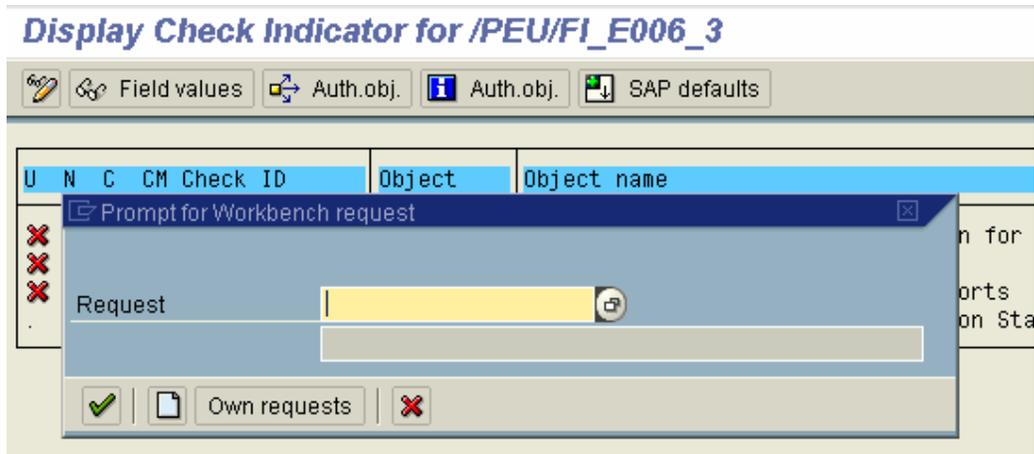
When pressing the button  Check indicator, you get a list similar to the display value list; so with the authorization objects, the status and the description.

Display Check Indicator for BP

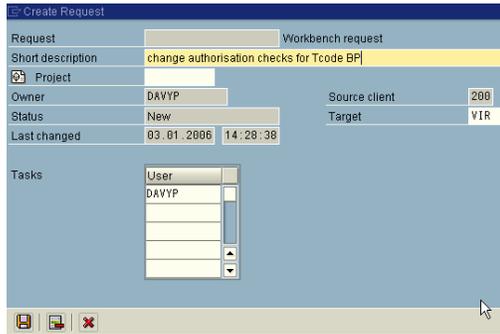
Field values          Auth.obj.          Auth.obj.          SAP defaults						
U	N	C	CM	Check ID	Object	Object name
<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	Check/maintain	B_BUPA_ATT	Business Partner: Authorization Types
			<input checked="" type="checkbox"/>	Check/maintain	B_BUPA_FDG	Business Partner: Field Groups
			<input checked="" type="checkbox"/>	Check/maintain	B_BUPA_GRP	Business Partner: Authorization Groups
			<input checked="" type="checkbox"/>	Check/maintain	B_BUPA_RLT	Business Partner: BP Roles
			<input checked="" type="checkbox"/>	Check/maintain	B_BUPR_BZT	Business Partner Relationships: Relationship Categories
			<input checked="" type="checkbox"/>	Check/maintain	B_BUPR_FDG	Business Partner Relationships: Field Groups
			<input checked="" type="checkbox"/>	Check/maintain	B_CCARD	Payment Cards
			<input checked="" type="checkbox"/>	Check	B_CLEAR	Data Cleansing
			<input checked="" type="checkbox"/>	Check/maintain	B_USERSTAT	Status Management: Set/Delete User Status
			<input checked="" type="checkbox"/>	Check	F_BNKA_MAN	Banks: General Maintenance Authorization
			<input checked="" type="checkbox"/>	Check	PLOG	Personnel Planning
			<input checked="" type="checkbox"/>	Check	S_ADMI_FCD	System Authorizations
			<input checked="" type="checkbox"/>	Check	S_ALV_LAYO	ALV Standard Layout
			<input checked="" type="checkbox"/>	Check	S_BDS_DS	BC-SRV-KPR-BDS: Authorizations for Document Set
			<input checked="" type="checkbox"/>	Check	S_BTCH_ADM	Background Processing: Background Administrator
			<input checked="" type="checkbox"/>	Check	S_BTCH_JOB	Background Processing: Operations on Background Jobs
			<input checked="" type="checkbox"/>	Check	S_CTS_ADMI	Administration Functions in the Change and Transport System
			<input checked="" type="checkbox"/>	Check	S_DATASET	Authorization for file access
			<input checked="" type="checkbox"/>	Check	S_DEVELOP	ABAP Workbench
			<input checked="" type="checkbox"/>	Check	S_DOKU_AUT	SE61 Documentation Maintenance Authorization
			<input checked="" type="checkbox"/>	Check	S_GUI	Authorization for GUI activities
			<input checked="" type="checkbox"/>	Check	S_OC_DOC	SAPoffice: Authorization for an Activity with Documents
			<input checked="" type="checkbox"/>	Check	S_OC_ROLE	SAPoffice: Office User Attribute
			<input checked="" type="checkbox"/>	Check	S_OC_SEND	Authorization Object for Sending
			<input checked="" type="checkbox"/>	Check	S_PRO_AUTH	IMG: New authorizations for projects
			<input checked="" type="checkbox"/>	Check	S_RFC	Authorization Check for RFC Access
			<input checked="" type="checkbox"/>	Check	S_SPO_DEV	Spool: Device authorizations
			<input checked="" type="checkbox"/>	Check	S_TABU_CLI	Cross-Client Table Maintenance
			<input checked="" type="checkbox"/>	Check	S_TABU_DIS	Table Maintenance (via standard tools such as SM30)
			<input checked="" type="checkbox"/>	Check	S_TCODE	Transaction Code Check at Transaction Start
			<input checked="" type="checkbox"/>	Check	S_TRANSLAT	Translation environment authorization object
			<input checked="" type="checkbox"/>	Check	S_TRANSPRT	Transport Organizer
			<input checked="" type="checkbox"/>	Check	S_USER_GRP	User Master Maintenance: User Groups
			<input checked="" type="checkbox"/>	Check	S_WFAR_OBJ	ArchiveLink: Authorizations for access to documents

Here you can go in change mode, meaning you can change the status of each authorization object: U → N → C → CM

When you go into change mode, you immediately get a pop-up for a transport request.



Here you create a new request, give it an appropriate name:  
e.g. Change authorization checks for Tcode BP.



The Request number generated by the system is the following:

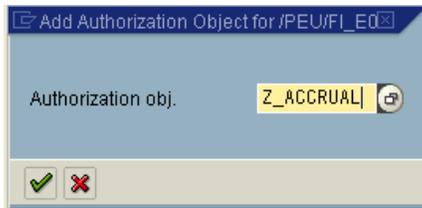


Press ok.

Now you are in change mode and can either change the status of existing authorization objects in the transaction or add a new authorization object into the transaction.

This you can do by pressing the button Auth. Object with the plus sign.

This launches a pop-up where you enter the name of the authorization object.



Press ok.

You now see that the authorization object is in the list for this transaction and can change the status if you want.

Example below: for financial report (with tcode /PEU/FI\_E0006\_3) the authorization object Z\_ACCRUAL was added.

**Change Check Indicator for /PEU/FI\_E006\_3**

U	N	C	CM	Check ID	Object	Object name
✗	.	.	.	not maintained	F_BKPF_BUK	Accounting Document: Authorization for Company Codes
✗	.	.	.	not maintained	K_KEKO	CO-PC: Product Costing
✗	.	.	.	not maintained	K_PCAR_REP	EC-PCA: Summary and line item reports
.	.	.	✓	Check	S_TCODE	Authorization Check for Transaction Start
.	.	.	✓	Check/maintain	Z_ACCRUAL	Mass posting in FI for marketing accruals

In this case the status is on Check/Maintain.

After you have made the necessary changes into the transaction you save.

Now, you can immediately check (in development where you made the change) this change of the transaction by adding this transaction into a role via the profile generator. You will see that the authorization object is automatically taken up into the tab "Authorizations" where you can set restrictions for the relevant fields within this auth. Object.

### **Remarks:**

1) Changes that you made for a transaction, after testing for restrictions on this transaction need to be transported to QA and the Production system. This is necessary if you create a role with this transaction and want to transport the role to production, so that change for the transaction you made is also available in the other clients.

1) If you would change a transaction that is already used in other roles, this could affect the authorizations within that role, so always check what the effect is, because it might be possible that the tab "authorizations" in the role where the transaction was in before becomes red now.

- 2) In our example we used an authorization object that was standard SAP.  
It is also possible to have a completely new Authorization object created (with own development class) and where the code (program) behind is changed to add a check. (This will be done by the ABAP-team).

Once they have created the new authorization object in development, you can either add this authorization object to the role (manually) or into the relevant transaction. Either way, it needs to be in one of the two options. Where you will add the authorization object is up to you. But the person, who needs to have authorization, needs to have this allocated to his user profile. This is either done by allocating the role to his user-profile (with the changed transaction) or by adding the auth. Object manually into the role.

- 3) When your test results turn out to be all right, then you need to pay attention with the order of transports:

In development you already can create the role with:

- The changed transaction in it
- Or with the auth. Object manually added into the role

If you changed the transaction, then you will have a transport request for this transaction change, which will update the table: USOBT\_C.



It will look as the one above.

In the case where you changed the transaction itself, first transport the change of the transaction that you made by using the transaction SU24 and the transport for the creation of the new authorization object. (A person of the ABAP-team normally made this request).

Next you transport the roles you created with either the auth. Object manually added, or with the changed transaction in it.

Ones the roles are in production, you best do the user-allocation first and as last you transport the change in code that was made by the ABAP-team.

From that moment on the user should be able to use the transaction(s) with the relevant restrictions you wanted to make.

### 2.2.2. Creation of a new Role

#### Naming conventions:

The roles that are standard delivered by SAP correspond to the working environment of certain users. As these roles are only templates; that is, examples of work centers, you must still adjust these roles to the requirements of your users.

Standard SAP roles start with “SAP\_”. The predefined roles are delivered as templates. Do not change the delivered standard roles (SAP\_\*), but rather only the copies of these roles.

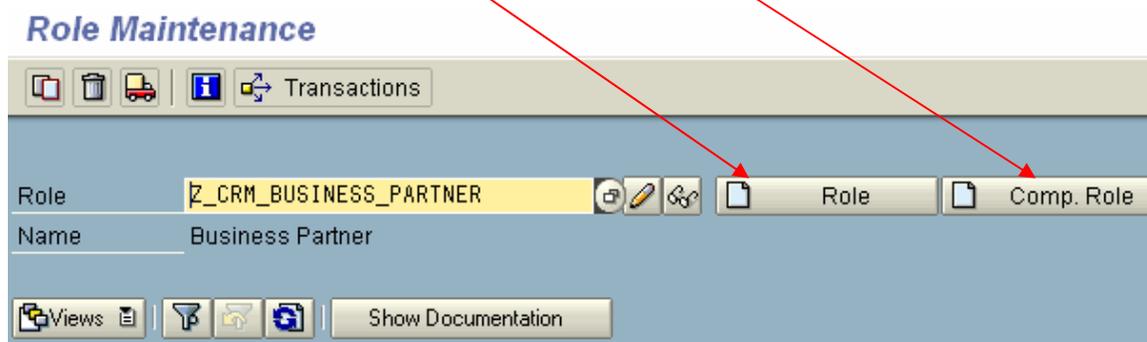
For your own roles, instead of using the SAP namespace, use the customer namespace. This means that the prefix is “Y\_” or “Z\_”. Since you cannot tell from the names of the delivered roles whether they are single or composite roles, you should create a naming convention for your roles so that you can differentiate between single and composite roles.

#### Types of roles:

First of all you should know that there exist different types of roles. The different types and purpose I will explain are the following:

- Single role
- Composite role
- Master Role
- Derived Role

As soon as you start the Profile Generator, when creating a new role, you should make a choice between creating a Single role or a Composite role.



### 2.2.3. Single Role versus Composite Role (collective role)

You could look at it like this:

A single role usually is made to define all necessary transactions and/or reports used to perform a certain specific task such as master data maintenance or product maintenance.

Let's take a specific example for the module CRM.  
In a company you have 20 employees using the CRM system.

Persons with functions like:

- marketing manager
- marketing assistant
- Master data administrator
- Call center agent
- ....

You have created for example several single roles such as:

Z\_MARKETING\_PLAN (create/change marketing plans)  
Z\_MARKETING\_CAMPAIGN (create/change marketing campaigns)  
Z\_BP\_DISP (display business partners)  
Z\_BP\_ALL (create/change/display business partners)  
Z\_PROD\_DISP (display all products)  
Z\_PROD\_ALL (create/change products)  
Z\_LEADS (create/change/display leads)  
Z\_OPPORTUNITIES (create/change/display opportunities)

Now you can imagine that the Role Z\_MARKETING\_PLAN only should be assigned to the marketing manager and not to his assistant for example.

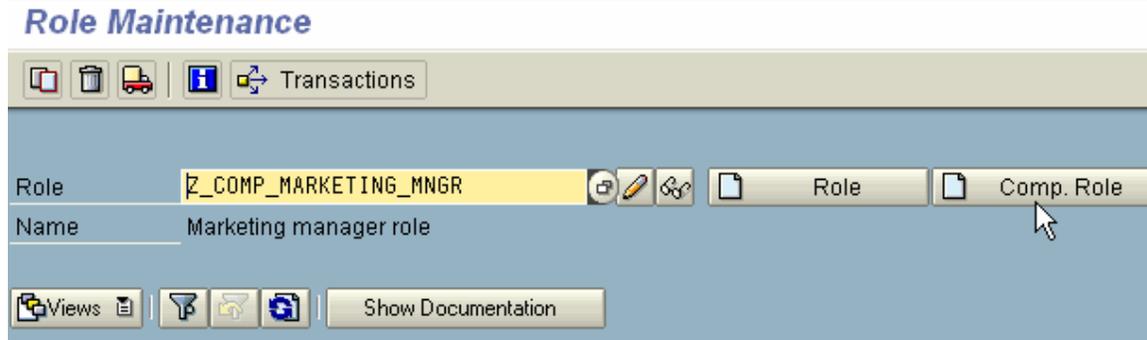
Furthermore, you will also see that one person (with a certain function) will need to have more than one single role assigned to his user master record, since the marketing manager will also need to be able to display products and business partners.

Therefore you will make a COMPOSITE role per function in your company, where you assign the different single roles needed to perform the processes in the system needed to do his job.

The advantage is that you do not need to assign every time every single role to a new person when for example someone leaves the company and a new marketing manager is hired. In that case you just create a new User in the system and assign the composite role.

### **Procedure for creating a Composite Role:**

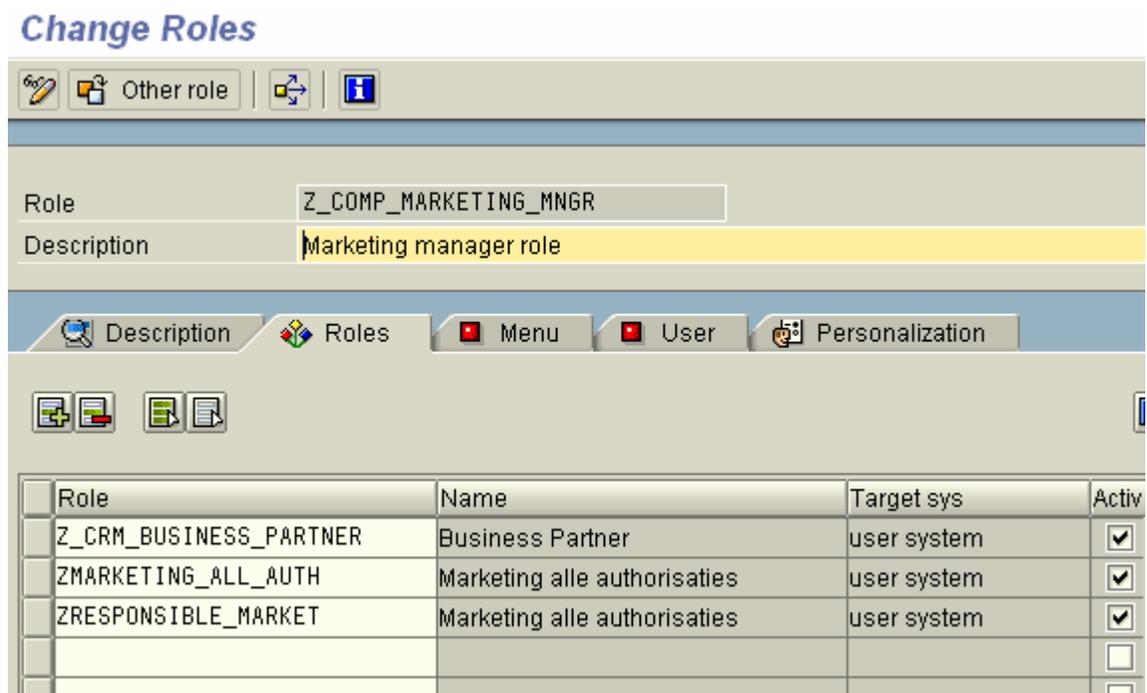
- 1) Start the profile generator and enter the technical name of your composite role.



Remember to indicate in the technical name that you indicate that you are creating a composite role! This facilitates finding back composite roles for assignment to users but also for maintenance purposes.

To create the composite role, you press the button “Comp. Role”.

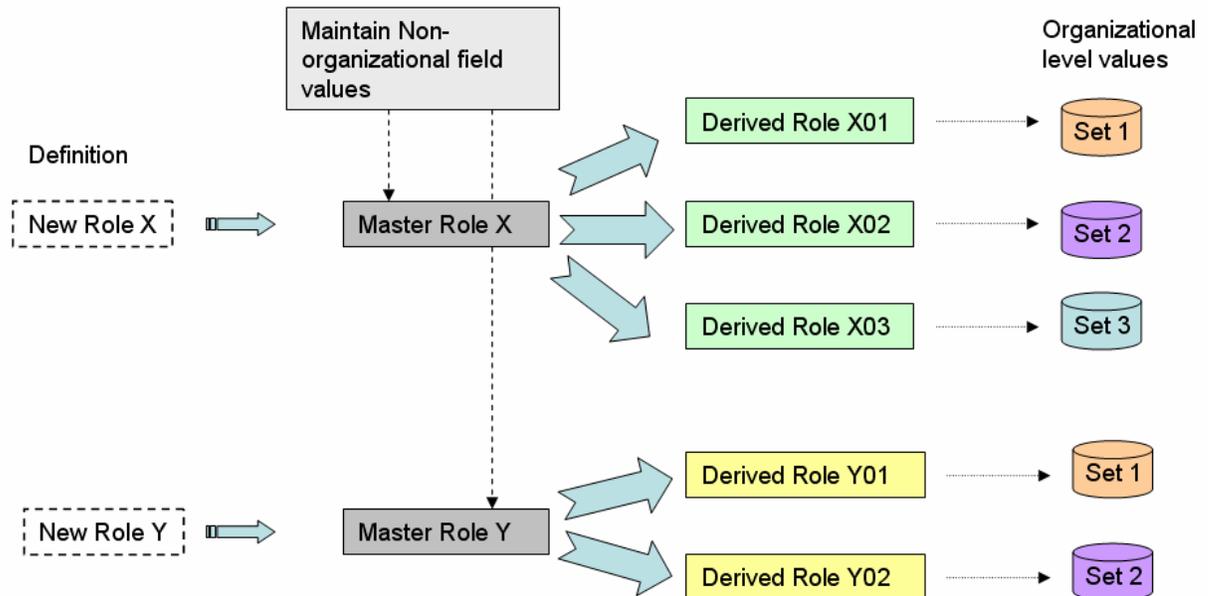
You will get the following screen:



2) On the tab ‘Roles’ enter the different single roles that should be contained in the composite role that make up all the necessary functions and authorizations that the marketing manager will need to perform his processes and actions in the system.

3) Last you assign the composite role to one or more people that share the same function as marketing responsible.

### 2.2.4. Master role and Derived Role



For a single role you should also now that there is the definition of a Master role and a Derived role.

Example:

You have implemented the R/3 SD module in an international Organization. Operations happen in the same way for all countries. So the processes as they are customized and setup are the same, but of course in one country people should only be allowed to create sales orders for a certain company code.

This means you need to use authorizations to limit on organizational elements. What you can do in such a case is create a general template role where you define what activities/transactions can be used, but do not set any limitations on organizational level. Next, you create for each country a derived role, where you put the right authorizations in place.

#### **Creation of the Master Role (template Role)**

The role we wanted to create was the Master Role for a local Sales Administration Operator. This was done as follows:

**Role maintenance**

Role: /PEU/M\_SD\_L\_OPS

Description: 01001: SAD Local Sales Administration Operator

Display Change Create Create collective role

View

Simple maintenance (Workplace menu maintenance)

Basic maintenance (menus, profiles, other objects)

Complete view (Organizational Management and workflow)

So you type in the name of the master role to be created and press the Create Button. In the following screen, you type in the description and press the save button.

**Change Roles**

Role: /PEU/M\_SD\_L\_OPS

Description: 01001: SAD Local Sales Administration Operator

Description Menu Authorizations User Personalization

Created by	
User	CORNELISBI
Date	06.02.2003
Time	15:33:39

Last changed on/by	
User	PELSSERSDA
Date	07.04.2003
Time	12:20:23

In this starting screen, you see a number of tabs: Description, Menu, Authorizations, User etc.

These are important and will be explained further on.

Go to the tab “Menu” where you will enter the transactions that need to be assigned to the master role.

## Change Roles

Role: /PEU/M\_SD\_L\_OPS  
Description: 01001: SAD Local Sales Administration Operator

Transaction button highlighted with a red arrow.

By using the Transaction button, you add transactions in this role.

Target System: No destination, Distribute

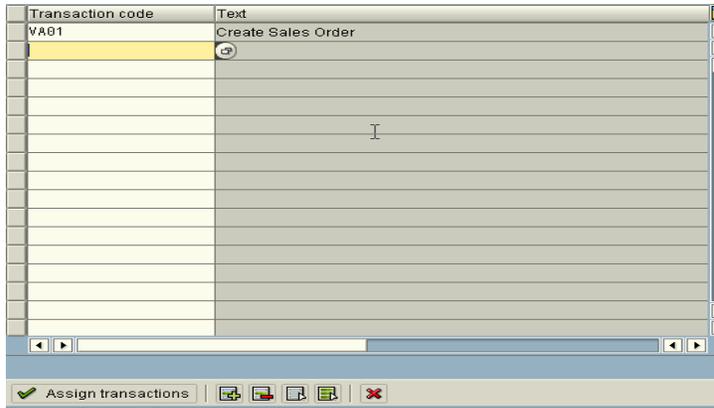
Copy menus: From the SAP menu, From other role, From area menu, Import from file

Additional activities: Translate node, Display documentation, Find in docu., Compress menu

Transaction list:

- CO09 - Availability Overview
- CO06 - Updating backorders
- MB51 - Material Doc. List
- VA41 - Create Contract
- VF01 - Create Billing Document
- V.01 - Sales Order Error Log
- V.02 - List of Incomplete Sales Orders
- V.14 - Sales Orders Blocked for Delivery
- V\_UC - Incomplete SD Documents
- VL06G - List of Outbound Dlvs for Goods Issue
- VL06P - List of Outbound Dlvs for Picking
- VK12 - Change Condition
- VBO3 - Display Rebate Agreement
- VK13 - Display Condition
- W11 - Create Output: Sales
- W12 - Change output: Sales
- W31 - Create Output : Billing

When you press the “Transaction button”, you get the following pop-up screen, where you enter manually the Transaction codes. By pressing enter, the description for this transaction appears on the right side of the transaction-code. When you have finished entering your list of transactions, press the button ‘Assign Transactions’.



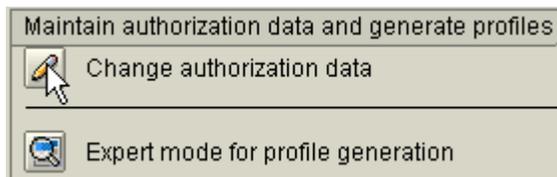
Now that you have entered the necessary transactions in the master role, you go to the tab 'Authorizations', where you enter the profile name and the profile text.



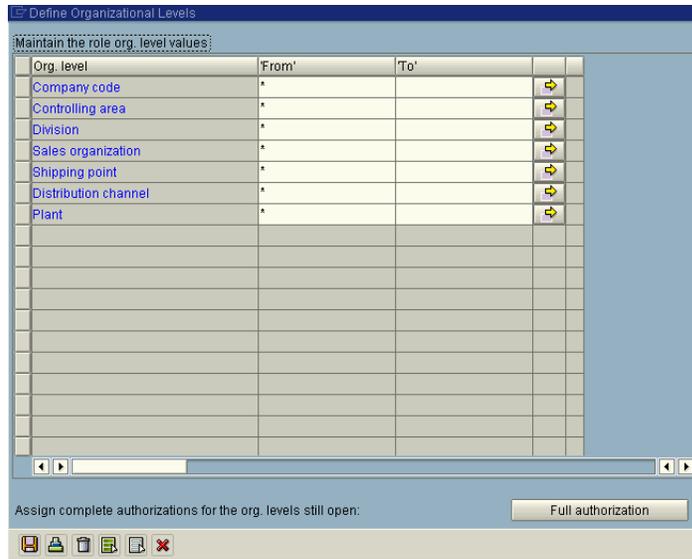
Press the Save button.

Now you will maintain the authorization data for this role!

Press the "change authorization data" button.



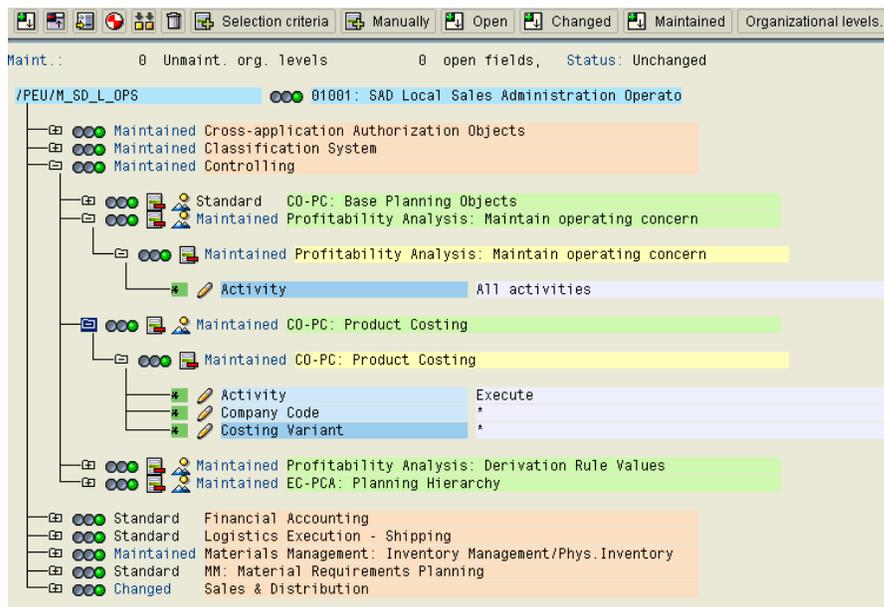
This will probably bring up a popup, where the relevant organization levels for the transactions you entered in the role, are already predefined by the system. When no Organization level is relevant for the transaction(s) you entered, then off course you don't get this pop-up.



In the master role, in the case where you will create derived roles, you usually give full authorization. This can be done by manually entering a \* or by pressing the button “Full authorization”.

Then press save.

You automatically return in the screen, where the relevant authorization objects for the entered transactions are in the screen.



In this case, since the role was already created (saved and generated) all the bolts have a green light. But when you create a new role, they have a yellow/red color and need to be maintained. This involves clicking everything open and press for each object on the \* so that it becomes green. But at this moment, you also can decide whether you want to limit

authorizations for an activity, or some other field of an authorization object that can be maintained. This can be done by clicking on the change button (✎).

**Note:** A red color means that you have not specified an Organization level yet. To do this, you press the “organization levels” button, where you can maintain them.



Once you have made all the traffic lights green (with or without setting restrictions on fields that are checked upon in the authorization objects), you can save the role and generate it. 🚦

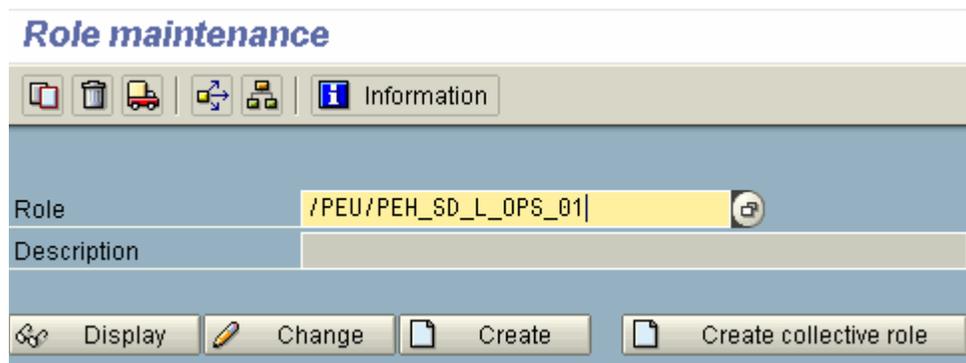
When you have done all these things, go back in the Description tab where you fill in the organization levels, other localization objects and other specific remarks concerning this role (for example manually entered authorization objects (SAP or own developments), etc.

In the derived roles you will do the same, but there you will have the restrictions on the organization levels in the long text, so when viewing the role, you immediately can see for which fields there are restrictions set.

### **Creation of a Derived Role**

In this example I show you an example of how one or more derived Roles can be created. In the master role you already put in the relevant and necessary transactions. So maintenance concerning transactions **ALWAYS** happens in the master role (Delete/add transactions).

Start the transaction PFCG (profile generator) where you put in the name for the derived role.



Press the Create button.

Fill in the description and press save.

Role	/PEU/PEH_SD_L_OPS_01
Description	01001: PEH SAD Local Sales Administration Operator_01

Next you put the name of the master role in the field “Derive from Role”.

Transaction inheritance	
Derive from role	
/PEU/M_SD_L_OPS	Delete inheritance relationships
01001: SAD Local Sales Administration Operator	

You get a pop-up asking if you want to derive all characteristics from the Master role, where you answer yes.

**Set inheriting role**

Do you really want to enter the specified role as the inheriting role?

Yes No  Cancel

Then, you can look in the tab “Menu” where you’ll see that the transactions from within the master role are also taken over in the derived role.

Go further into the tab ‘Authorizations’ where you now can change the Organization levels, and other restrictions for fields that are included in the authorization objects.

(Make again sure that all the traffic lights are green.)

As you can see below, we set the restriction on Company code and Sales Organization. By doing so, the system automatically puts these values in the relevant fields in the authorization objects below.

Define Organizational Levels			
Maintain the role org. level values			
Org. level	From	To	
Company code	0600		
Controlling area	*		
Division	*		
Sales organization	0600		
Shipping point	*		
Distribution channel	*		
Plant	*		

**Display role: Authorizations**

The screenshot displays the SAP Role Authorizations interface for role 01001: PEH SAD Local Sales Administration Ope. The interface shows a tree view of authorization objects and their status (Maintained, Standard, Changed). The status is indicated by colored circles: Red (No users assigned), Green (At least one user assigned), and Yellow (User master comparison is not current).

Authorization Object	Status
Cross-application Authorization Objects	Maintained
Classification System	Maintained
Controlling	Maintained
Financial Accounting	Standard
Logistics Execution - Shipping	Changed
Materials Management: Inventory Management/Phys.Inventory	Maintained
MM: Material Requirements Planning	Standard
Sales & Distribution	Changed
Customer: Authorization for Sales Organizations	Maintained
Agreement: Authorization for Sales Area/Agreement Type	Maintained
Condition: Authorization for Sales Organizations	Maintained
Condition: Authorization for Sales Organizations	Maintained
Activity	All activities
Division	*
Sales organization	0600
Distribution channel	*
Condition: Authorization for Sales Organizations	Standard
Activity	Change, Display
Division	*
Sales organization	0600
Distribution channel	*
Condition: Authorization for Condition Types	Maintained
Sales Document: Authorization for Sales Document Types	Maintained
Sales Document: Authorization for Sales Areas	Maintained
Billing: Authorization for Billing Types	Maintained
Billing: Authorization for Sales Organizations	Changed

**2.2.5. Assigning Users**

To assign users to a certain role (being single role or a composite role) you open the role in the profile generator and select the tab 'User'. The status display on the tab page tells you whether users have already been assigned to the role.

- Red: No users are assigned
- Green: At least one user is assigned
- Yellow: Although users are assigned, user master comparison is not current. For composite roles, the status display refers only to the assignment of users.

Role: Z\_CRM\_BUSINESS\_PARTNER  
Description: Business Partner

Navigation: Description | Menu | Authorizations | **User** | MiniApps | Personaliz...

Tools: Selection | User comparison | i

User ID	User name	From	to
ZPERSONRESP	responsible person	04.01.2006	31.12.9999

**Procedure:**

- 1) Enter as many user IDs as desired in the list.  
Enter the user IDs directly or from the possible entries help. You can make multiple selections with the 'Selection' pushbutton, such as all users in a user group.

Restrict Value Range

Users by Roles | Users by User Groups (General)

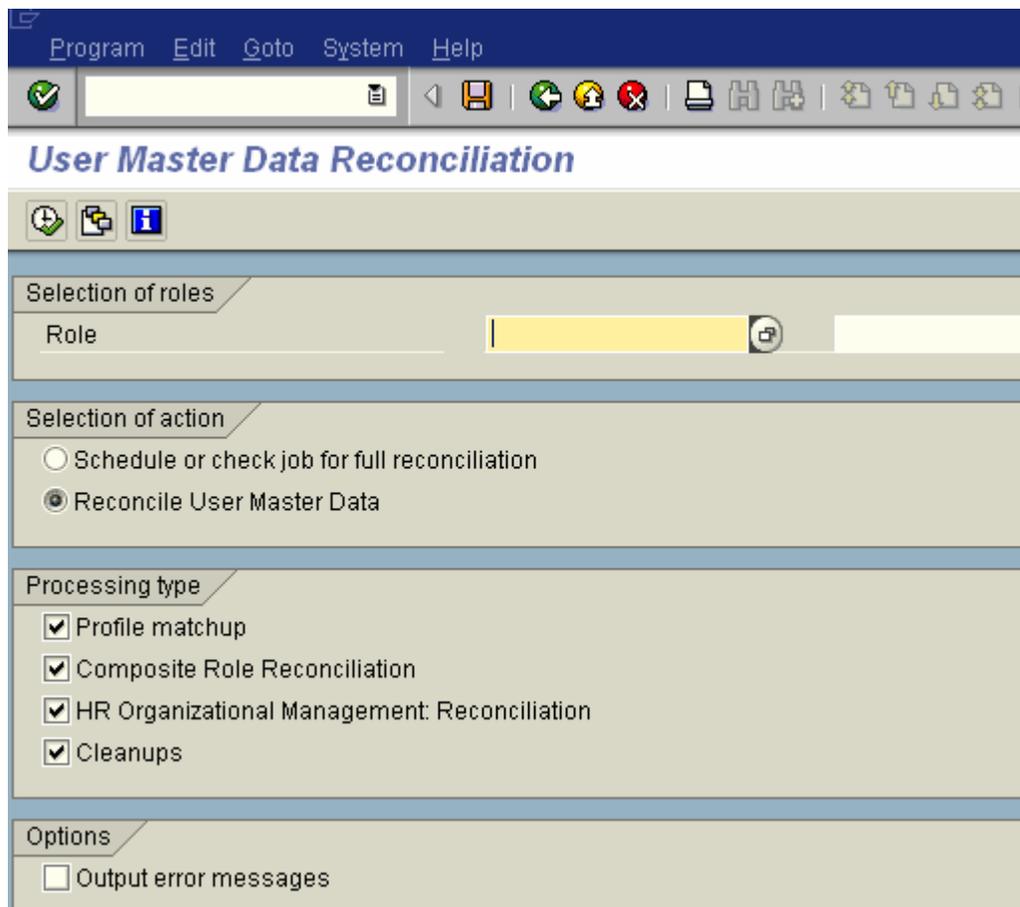
User: [ ]

User group: [ ]

Restrict number to: 500  No restriction

- Users by address data
- Users by Logon Data
- Users by Profiles
- Users by Roles
- Users by User Groups (General)

- 2) Perform a user comparison if necessary.  
The generated profile is not entered in the user master record until the users have been compared. Changes to the users assigned the roles and the generation of an authorization profile also requires a comparison.
- 3) The default validity date when entering a new User ID into the role assignment is the following:
  - From: Date of today
  - To: 31.12.9999
 If you want to restrict this validity date, just enter the dates according to you wishes. If you want to limit the validity period, you must periodically schedule the report transaction PFUD daily to update the user master records. It must also be scheduled if you use the organizational management.

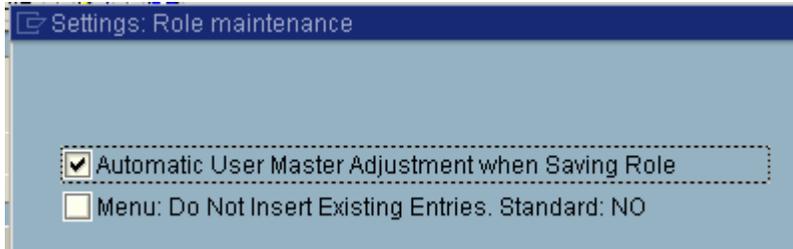


 Never enter generated authorization profiles directly into user master records, as these are deleted if the corresponding role is not contained in the user master record.

For **user comparison** you have the following options:

- 1) Choose the “User comparison” button on the ‘User’ tab page. The users are then compared for the selected role you created. The status for that role will next change into green after the comparison is finished successfully.
- 2) Choose Utilities→Settings→ Automatic comparison at save. When you save the role, a user comparison is performed automatically.

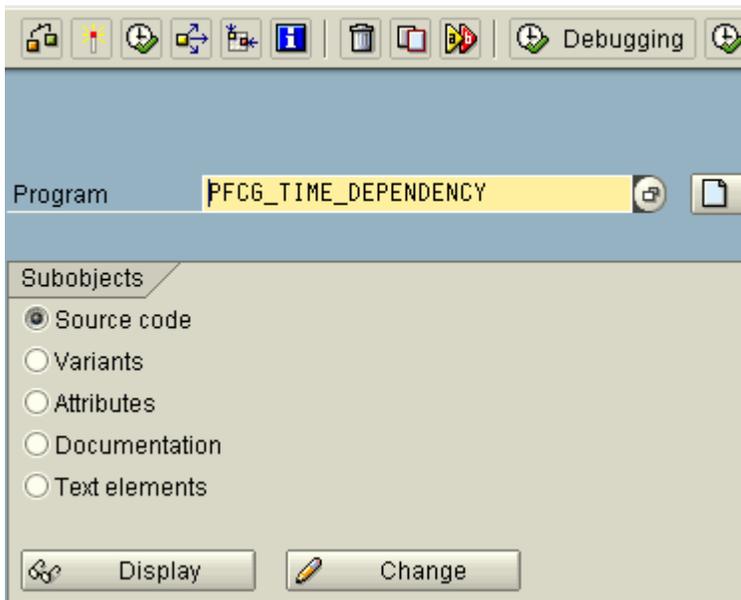




- 3) Wait until the user comparison is made with the program "PFCG\_TIME\_DEPENDENCY". Set the indicator HR-OrgComparison indicator on the selection screen of the report.

You should schedule the report PFCG\_TIME\_DEPENDENCY periodically (preferably daily) as a background job. This ensures that user authorizations are regularly updated. The program performs a complete user master comparison for all roles. The authorizations are updated in the user master records. The authorization profiles of user assignments which have become invalid are removed from the user master record. The authorization profiles of valid user assignments to the role are entered.

### ABAP Editor: Initial Screen



You can launch this report via the transaction code SE38 or SA38.

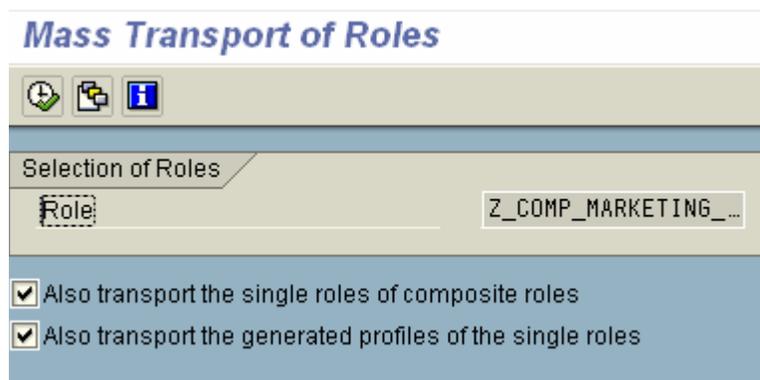
### 2.2.6. Transporting Roles

To transport a role you have created, launch the profile generator and enter the name of the role you want to transport.



To transport the role, press the 'transport' button.

In this case I choose a composite role and get the following screen:



The system asks you if you also want to transport the single roles of this composite role, and if you want to transport the generated profiles of the single role.

Select both entries!

 You should not change the authorization profiles of the role after you have included the role in a transport request. If you need to change the profiles or generate them for the first time, transport the entire role again afterwards!

In the following dialog box, specify whether the user assignment and the personalization data should also be transported!

Next you need to enter a transport request. (You can check the transport request afterwards with transaction SE10).

## 2.3. Organizing Authorization Administration

The authorization system allows you great flexibility in organizing and authoring the maintenance of user master records and roles:

- 1) If your company is a small or medium sized company, you can have all maintenance of user master records and authorization components executed by a single person or super user.
- 2) Depending on the size of your company you should think about distributing responsibilities between more teams responsible each for another purpose. On the one hand you have one team/person responsible for the maintenance of user master records and assigning the appropriate roles. On the other hand you have the second team responsible for the authorization administration, meaning the creation of new roles and authorization profiles.

Since you can precisely restrict authorizations for user and authorization maintenance, the administrators do not have to be privileged users in your organization. You can assign user and authorization maintenance to ordinary users.

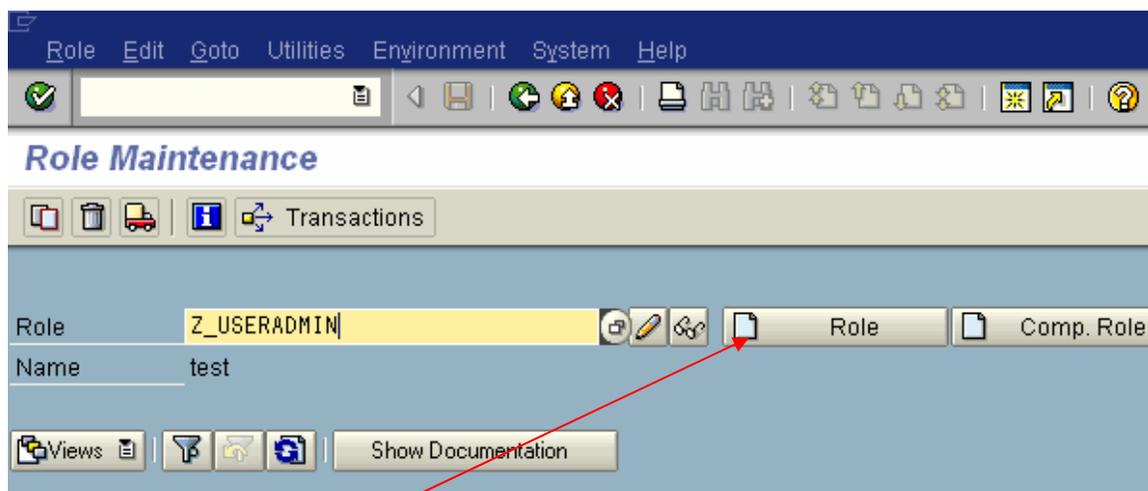
### 2.3.1. Creating administrator roles

Administrator	Permissible Tasks	Impermissible Tasks	Templates
<b>User Admin</b>	Create/change user master records	Change role data	SAP_ADM_US
	Assigning roles to users	Changing or generating profiles	
	Assigning profiles beginning with "T" to users.		
	Displaying authorizations and profiles		
	Using the User Information system		
<b>Authorization Data Admin</b>	Creating/changing roles	Changing users	SAP_ADM_AU
	Changing authorization data and transaction selection in roles	Generating Profiles	
	Using the User Information System		

<b>Authorization Profile Admin</b>	Displaying roles and the associated data	Changing users	SAP_ADM_PR
	Using tcode PFCG or SUPC to generate the authorizations and profiles that begin with “T” for roles that have authorization data	Changing role data	
	Checking roles for the existence of authorization data (tcode SUPC)	Generating authorization profiles with authorization objects that begin with S_USER	
		Performing a user master comparison (tcode PFUD, performing a profile comparison of the user master comparison	
	Using the User Information System		

**Example: Creation of a User Administrator Role**

- 1) Launch the profile generator (PFCG)

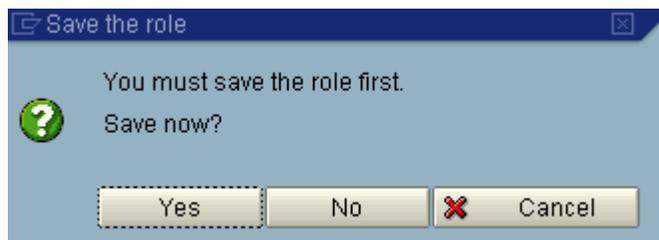


On the initial screen, fill out the technical name of your role: Z\_USERADMIN and press the “create single role” button.

## 2) Fill out the Description Field and extra info

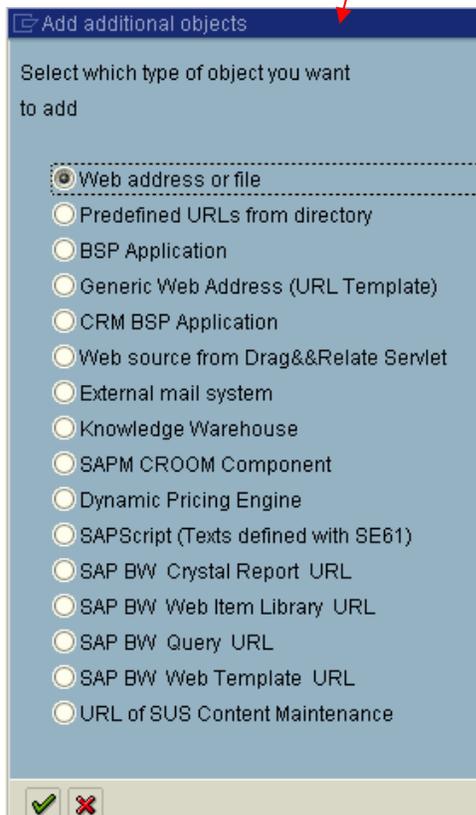
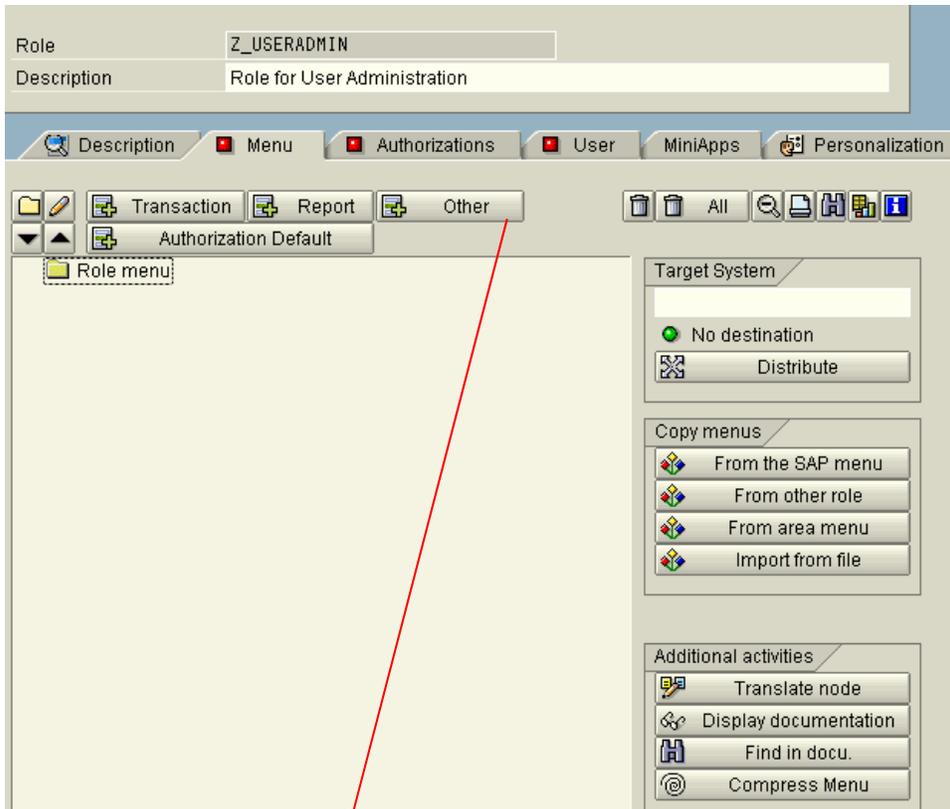
The screenshot shows the 'Create Roles' interface. The 'Role' field is 'Z\_USERADMIN' and the 'Description' field is 'Role for User Administration'. Below the fields are tabs for 'Description', 'Menu', 'Authorizations', 'User', 'MiniApps', and 'Personalization'. The 'Description' tab is active, showing 'Administration Information' and 'Transaction Inheritance' sections. At the bottom, a text area contains 'This is a role for User Administration'.

When selecting another Tab to maintain, you get a popup asking you to save the role, so press 'yes'.

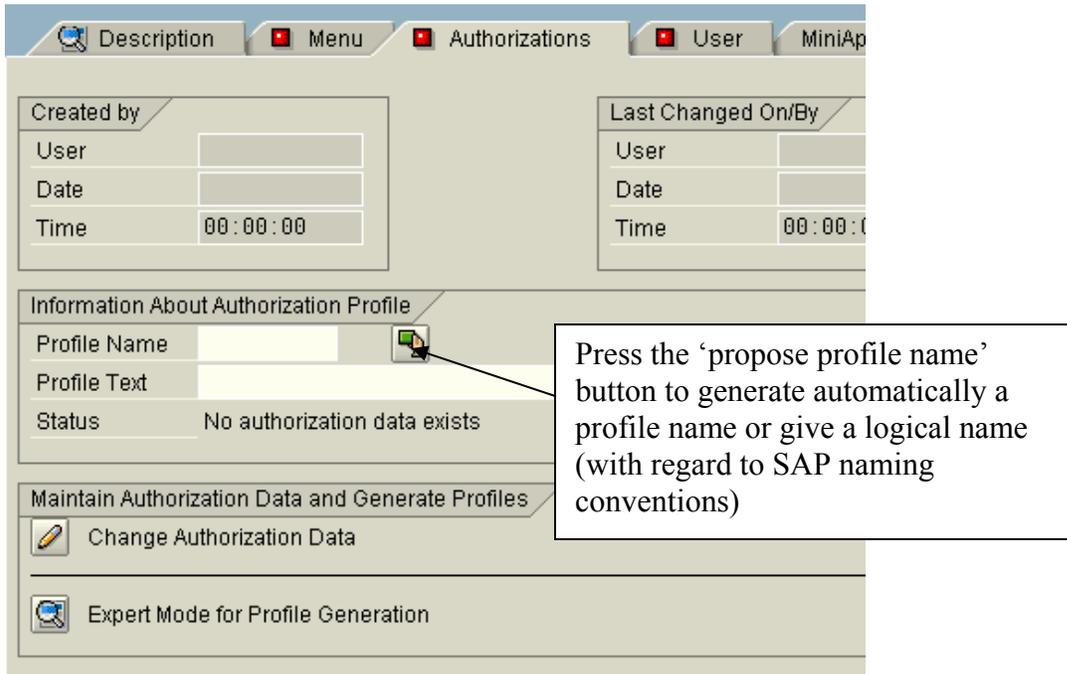


3) On the Tab "Menu" you can create your own user menu if you want. You are able to take over certain parts from the standard SAP menu; from another role, or create a new user menu from scratch. Next, you can also add transactions, reports or other things to the role.

You can skip this for now.

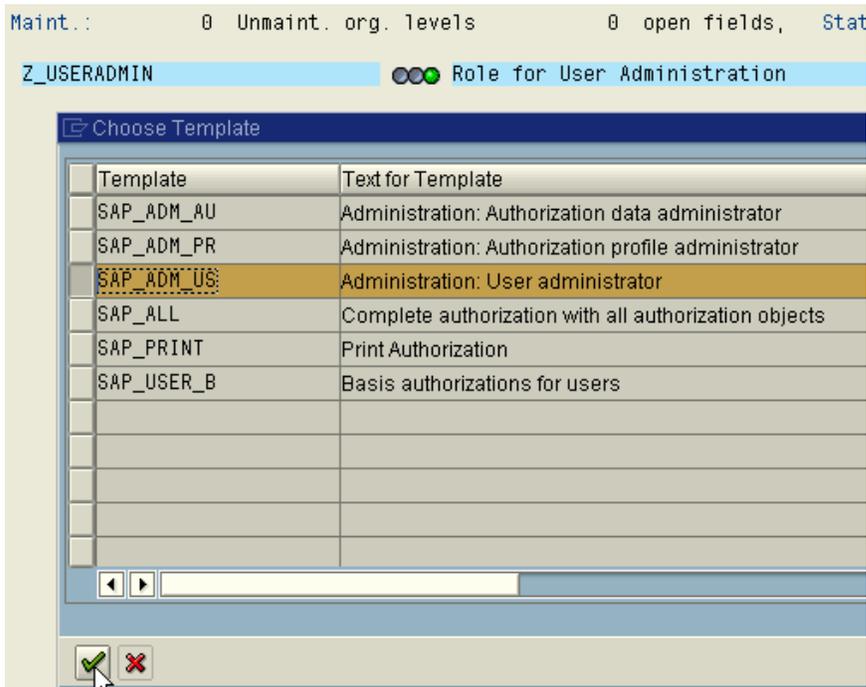


4) On the tab “Authorizations” you will use the template SAP\_ADM\_US

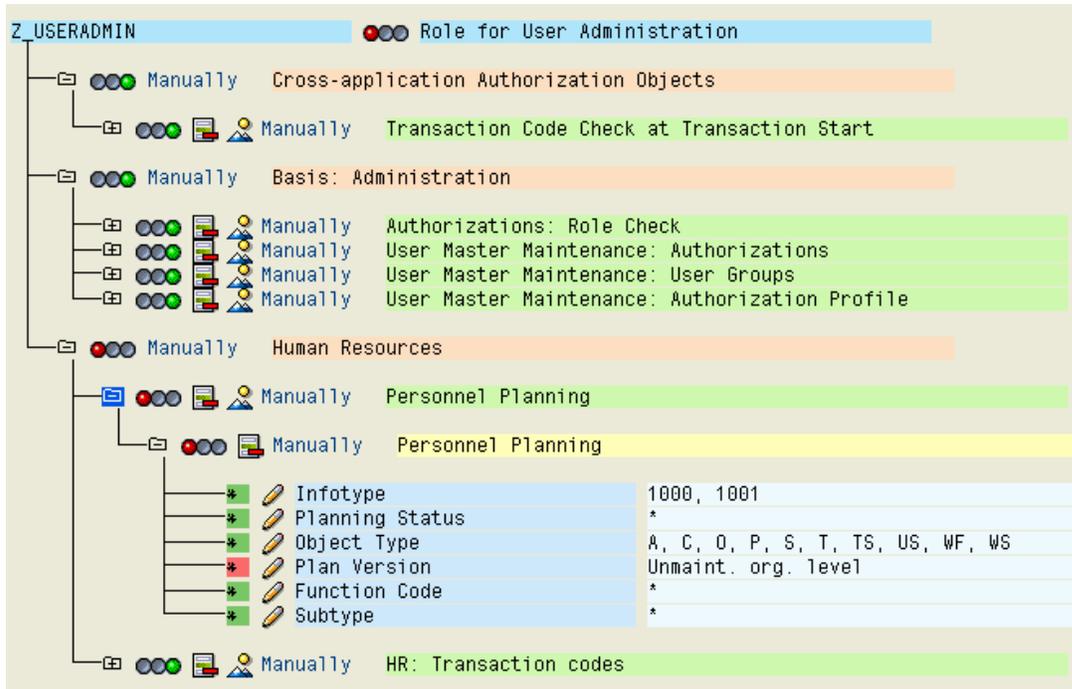


Use a profile name that does NOT begin with ‘T’, so that the authorization data administrator cannot change his or her own authorizations. Now press the button change authorization data.

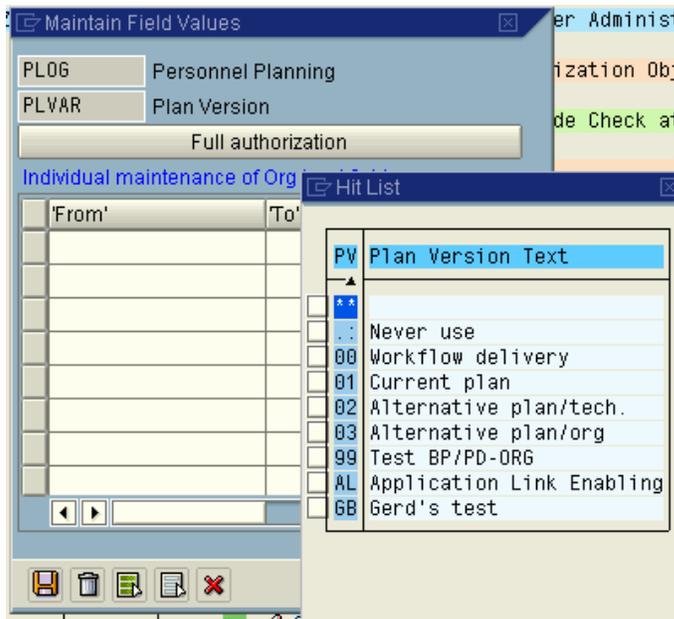
Again you will receive a popup asking you to save the role (press yes).



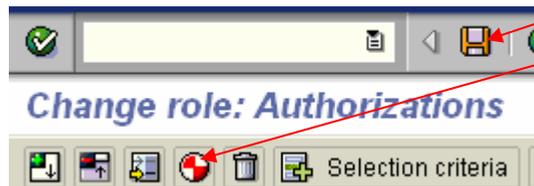
After saving you get a list of templates that you can use to create your role. Since we want to create a User Administrator, choose the template SAP\_ADM\_US.



You will need to maintain all authorization fields of the available authorization objects. In this case, you can see that the 'Plan version' has a red status. Maintain it either by pressing the red 'star \*' to give all authorization or by pressing the change button and select the right field value.



After every authorization object is correctly maintained, you can save and generate the role.



5) On the Tab 'Users' you can assign this role to an EXISTING user. You can also enter a valid-from and valid-to date if you want. Otherwise the system will automatically take the date of today until 31.12.9999.



After filling in one or more users that will perform the task of User Administrator, perform a '**User Comparison**' in order that the role will be updated in their User Master Record.

Now the person with Username ZPERSONRESP will be able to do the user administration after the user comparison has finished.

### 2.3.2. List of available templates

TEMPLATE	Description
SAP_ADM_AU	Administration: Authorization data administrator
SAP_ADM_PR	Administration: Authorization profile administrator
SAP_ADM_US	Administration: User administrator
SAP_ALL	Complete authorization with all authorization objects
SAP_PRINT	Print Authorization
SAP_USER_B	Basis authorizations for users

### 2.3.3. Authorization Objects checked in role maintenance

Authorization Object	Description
S_USER_AUT	User master maintenance: authorizations
S_USER_GRP	User master maintenance: User groups
S_USER_PRO	User master maintenance: Authorization profiles
S_USER_AGR	Authorization system: Check for roles
S_USER_TCD	Authorization system: Transactions in roles
S_USER_VAL	Authorization system: Field values in roles
S_USER_SYS	User master maintenance: system for Central user Administration
S_USER_SAS	User master maintenance: System-specific assignments
S_USER_ADM	Administration functions for user and authorization administration
S_USER_OBJ	Authorization system: global deactivation of authorization objects
S_USER_WWW	User master maintenance: Internet Users

### 2.3.4. Relevant SAP Tables for Authorizations and Roles

Table	Description
AGR_1016	Name of profile for activity group
AGR_1250	Authorization data for activity group
AGR_1251	Authorization data for activity group
AGR_1252	Organizational levels for authorizations
AGR_PROF	Profile name for activity group
AGR_SELECT	Assignment of activity groups to transaction codes
AGR_TCDTXT	Assignment of activity groups to transaction codes
AGR_TCODES	Assignment of activity groups to transaction codes
AGR_USERS	Assignment of activity groups to users
TOBJ	Objects
TOBJC	Classification of authorization objects
TOBJT	Texts for objects (for TOBJ)
TSTC	SAP Transaction Codes
TSTCA	Values for transaction code authorizations
TSTCP	Parameters for transactions
TSTCT	Transaction texts
USH04	Change history: authorizations
USH10	Change history: authorization profiles
USH12	Change history: authorization values
USKRIA	Critical combinations of authorizations for transaction codes

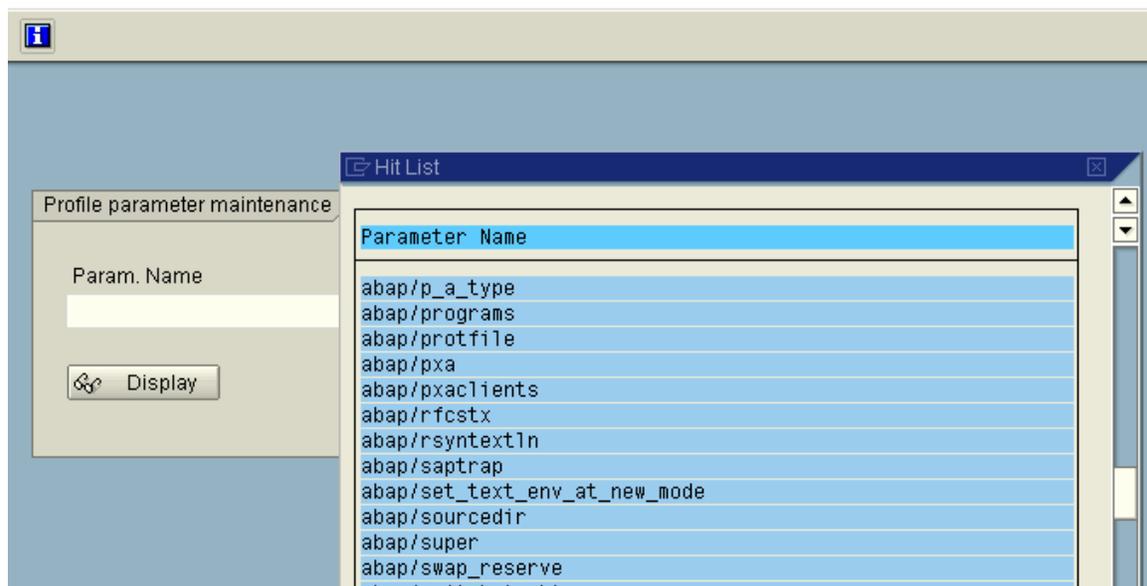
SUKRI	Security-critical combinations of transactions
USOBT	Relation transaction → Authorization object
USOBT_C	Relation transaction → Authorization object (customer)
USOBT_CD	Change history for field values
USOBX	Check table for table USOBT
USOBX_C	Check table for table USOBT_C
USORG	Organizational levels for Profile Generator
USPRO	Authorization Profiles
USR07	Object and values of the last failed authorization check
USR08	Table for entries in the user menus
USR09	Entries for the user menus (work areas)
USR13	Short texts for the authorizations

### 2.3.5. System Settings-profile parameters

In order to configure system-wide settings in SAP, you have to maintain the profile parameters in the Computing Center Management System (CCMS).

You can do this via transaction code **RZ11**.

#### *Maintain Profile Parameters*



Transaction **RZ10** provides more information on the different profile parameters.

Most of the relevant parameters begin with “auth” or “login” and can easily be found back.

Next to RZ10 you can also display a full overview of the configured parameters via transaction code TU02 or report RSPARAM (called via SA38).

**Note:**

Remember that changing profile parameters CAN have a serious impact on your system and therefore should best be restricted to change by a Basis Administrator. Also know that a change of profile parameters can only be visible after restarting the application server.

**2.3.6. Protective measures for Special profiles SAP\_ALL & SAP\_NEW****Authorization Profile SAP\_ALL**

This composite profile contains all SAP authorizations, meaning that a user with this profile can perform all tasks in the SAP system. You should therefore not assign this authorization profile to any of your users. Try to maintain only one user with this profile and keep the password of this user secret! (Only to be used in emergencies).

**Authorization Profile SAP\_NEW**

This composite profile contains a single profile for each release that contains the authorizations that the users require to be able to continue using the functions that they have used until now, but which are protected with new authorization checks. However, you should not leave this profile active for a long period of time.

SAP recommends that you perform the following steps:

- 1) After the upgrade, delete the SAP\_NEW\_\* profiles from the composite profile SAP\_NEW for releases before the last revision of your authorization concept.
- 2) Assign the composite profile SAP\_NE to all users. This means that they can continue to use the functions that they have used until now.
- 3) Distribute the authorizations contained in the SAP\_NEW single profiles to the roles or profiles that you use productively and maintain the authorization values.
- 4) Delete the profile assignment for SAP\_NEW and the SAP\_NEW profile.

A long list of SAP\_NEW profiles (for example, after multiple upgrades) indicates that it is time to revise and redefine your authorization concept.

## 2.4. Authorization Checks

To ensure that a user has the appropriate authorizations when he or she performs an action, users are subject to authorization checks.

The following actions are subject to authorization checks that are performed before the start of program or table maintenance and which the SAP applications cannot avoid:

- Starting SAP transactions (authorization object S\_TCODE)
- Starting reports (authorization object S\_PROGRAM)
- Calling RFC function modules (authorization object S\_RFC)
- Table maintenance with generic tools (S\_TABU\_DIS)

### 2.4.1. Checking at program level with *AUTHORITY-CHECK*

Applications use the ABAP statement *AUTHORITY-CHECK*, which is inserted in the source code of the program, to check whether users have the appropriate authorization and whether these authorizations are suitably defined; that is, whether the user administrator has assigned the values required for the fields by the programmer. In this way, you can also protect transactions that are called indirectly by other programs. *AUTHORITY-CHECK* searches profiles specified in the user master record to see whether the user has authorization for the authorization object specified in the *AUTHORITY-CHECK*. If one of the authorizations found matches the required values, the check is successful.

One way of finding authority checks in the program code is to search the source text of the ABAP program for the string “*AUTHORITY*” in the ABAP Editor (transaction SE38). This search displays all the authorization checks within the respective program.

**Coding Example:**

```
*&-----*
*& Report  SAPBC400DDS_AUTHORITY_CHECK_2      *
*&-----*

REPORT  sapbc400dds_authority_check_2.

CONSTANTS actvt_display TYPE activ_auth VALUE '03'.

DATA: it_flight TYPE sbc400_t_sbc400focc,
      wa_flight LIKE LINE OF it_flight.

PARAMETERS pa_car TYPE s_carr_id.

* Check if user is authorized to read data of the specified carrier ?
AUTHORITY-CHECK OBJECT 'S_CARRID'
  ID 'CARRID' FIELD pa_car
  ID 'ACTVT' FIELD actvt_display.
CASE sy-subrc.
  WHEN 0. " User is authorized
    SELECT carrid connid fldate seatsmax seatsocc FROM sflight
      INTO CORRESPONDING FIELDS OF wa_flight
      WHERE carrid = pa_car.

    wa_flight-percentage =
      100 * wa_flight-seatsocc / wa_flight-seatsmax.

    APPEND wa_flight TO it_flight.

  ENDSELECT.

  IF sy-subrc = 0.
    SORT it_flight BY percentage.
    LOOP AT it_flight INTO wa_flight.
      WRITE: / wa_flight-carrid COLOR COL_KEY,
              wa_flight-connid COLOR COL_KEY,
              wa_flight-fldate COLOR COL_KEY,
              wa_flight-seatsocc,
              wa_flight-seatsmax,
              wa_flight-percentage, '%'.
    ENDLOOP.
  ELSE.
    WRITE: 'No ', pa_car, 'flights found !'.
  ENDIF.

  WHEN OTHERS. " User is not authorized
    WRITE: / 'Authority-Check Error'(001).
ENDCASE.
```

You can see that a check is made on the authorization object “S\_CARRID”. When executing this report the system will check the profiles assigned to the user and look if this authorization object is available. If not, the system will respond with a Sy-subrc  $\neq 0$  and display the output message ‘User is not authorized’. If the authorization object is available via one of the profiles in the user master record, then the system will check if the field values for this authorization object correspond to the ones defined in the coding. If this is not the case, the Sy-subrc will also  $\neq 0$ .

If every check is ok; then the report will be executed as normal.

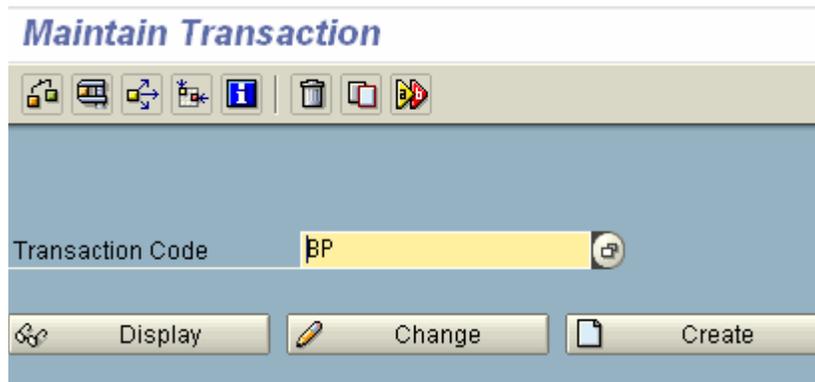
### 2.4.2. Starting SAP Transactions

When a user starts a transaction, the system performs the following checks:

- The system checks in table TSTC whether the transaction code is valid and whether the system administrator has locked the transaction.
- The system then checks whether the user has authorization to start the transaction.

The SAP system performs the authorization checks every time a user starts a transaction from the menu or by entering a command (directly entering the transaction code into the command field). Indirectly called transactions are not included in this authorization check.

- The authorization object S\_TCODE (transaction start) contains the field TCD (transaction code). The user must have an authorization with a value for the selected transaction code.
- If an additional authorization is entered using transaction SE93 for the transaction to be started, the user also requires the suitable defined authorization object (TSTA, table TSTCA).



If you make a copy of a standard transaction such as “BP” (business partner maintenance), and display the information, you see the following:

### Change Dialog transaction

Transaction code

Package

Transaction text

Program

Screen number

Authorization object

Maintenance of standard transaction variant allowed

Classification

Transaction classification

Professional User Transaction  
 Easy Web Transaction Service  
 Pervasive enabled

GUI support

SAPGUI for HTML  
 SAPGUI for Java  
 SAPGUI for Windows

You can enter an authorization object and authorization field values at this level, meaning that when starting this transaction this authorization object will be checked.

You can use existing authorization objects, but if a standard authorization object does not fulfill your needs, you can also enter a new authorization object that you have created via transaction SU21.

**Remark:** Transactions can also be blocked by using transaction SM01.

### Transaction Codes: Lock/Unlock

Locked	TCode	Program	Scr .	Transaction text
<input type="checkbox"/>	<a href="#">/1BEA/BBEA_BD_01</a>	/1BEA/R...	1000	Maintain Billing Documents
<input type="checkbox"/>	<a href="#">/1BEA/BBEA_BD_02</a>	/1BEA/R...	1000	Transfer Billing Docs to Accounting
<input type="checkbox"/>	<a href="#">/1BEA/BBEA_BD_05</a>	/1BEA/R...	1000	Display Collective Run Log

**Creation of new authorization fields via SU20**

**List of Authorization Fields**

Authorization fld	Data element	Check table for F4 help	Package
/SAPCND/AP	/SAPCND/APPLICATION	/SAPCND/T681A	/SAPCND/CUSTOMIZING
/SAPCND/CT	/SAPCND/COND_TABLE_ID	/SAPCND/T681	/SAPCND/CUSTOMIZING
/SAPCND/TY	/SAPCND/COND_TYPE		/SAPCND/CUSTOMIZING
/SAPCND/US	/SAPCND/USAGE	/SAPCND/T681V	/SAPCND/CUSTOMIZING
ABAPFORM	SYFORMNAME		SABP
ACTAREA	SRMACTAR		SRM_WF_PATH
ACTVT	ACTIV_AUTH	TACT	SUSR
ACT_GROUP	AGR_NAME		S_PROFGEN
ACT_TYPE	DNOT_NOTIF_ACT		DND
ADCOMM	AD_COMM	TSAC	SZAD
ADGRP	AD_GROUP	TSAD7	SZAD
ADGRP_P	AD_GROUP_P	TSAD8	SZAD
ADMIN_TYPE	CRMT_ISA_UA_ADMIN_TYPE		CRM_ISALES
ADM_FUNC	MI_LCLADM_FUNC		ME_CORE
AEFUN	CC_AEFUN		CC
AENST	AENST		CC
AF_CHF_ASSIGNIP	CHAR1		S_CHECK_RESULT_MANAGEMENT
AF_CHF_CREATEIP	CHAR1		S_CHECK_RESULT_MANAGEMENT
AF_CHF_REGISTER	CHAR1		S_CHECK_RESULT_MANAGEMENT

**Creation of new authorization object via SU21**

**List of Object Classes**

Obj.Cl.	Short text
	Not assigned to a class
AAAA	Obsolete Authorization Objects
AAAB	Cross-application Authorization Objects
BBP	BBP Component
BC_A	Basis: Administration
BC_C	Basis - Development Environment
BC_Z	Basis - Central Functions
BEA	Authorization Objects for Billing Engine
CLAS	Classification
CMS	Channel Management Solution
CRM	CRM Component
C_MW	CRM Middleware
HR	Human Resources
ICM	CRM: Incentive and Commission Management
QA	Quality Management
WFM	Work Force Management

Select the correct Object class, and you get a list of all authorization object for this object class.

Example: for object class "CRM".

**List of objects**

Documentation Regenerate SAP\_ALL

Objects in class CRM CRM Component

Object	Short text
CRM_PRP_BP	Authorisation Object for PPR Maintenance via BAPI
CRM_PRP_MT	Authorisation Object for PPR Maintenance via PRP API
CRM_MAP_FM	Authorisation object for CRM MKT Mapping Tool
COM_IL	Authorization Check for Relationships
CRM_CIC_OT	Authorization Object CRM , CIC - Check Overriding
CRM_CHM_PS	Authorization Object CRM Channel Mngt. - Partner Self Serv.
CRM_CHM_VL	Authorization Object CRM Channel Mngt. - View Restriction
CRM_ISA_UM	Authorization Object CRM ISA - User Administration
CRM_MPL_AD	Authorization Object CRM Marketing - General Settings
CRM_MPT	Authorization Object CRM Marketing BusObject Marketing Plan.
CRM_DLM	Authorization Object CRM Marketing Business Object Deal
CRM_ORD_OE	Authorization Object CRM Order - Allowed Organ. Units
CRM_CO_PU	Authorization Object CRM Order - Bus. Ob. Sales Contract
CRM_CO_SE	Authorization Object CRM Order - Bus. Ob. Service Contract
CRM_CO_SA	Authorization Object CRM Order - Bus. Ob. Financing Contract

You can create here your own authorization object within this object class.

Create Authorization Object

Object ZBUS\_PART

Text Business partner additional auth object

Class CRM CRM Component

Author

Authorization fields

Authorization object documentation

Create object documentation

Further authorization object settings

Conversion for authorization fields allowed

Field maintenance

Name of the new authorization object

Name of Object class

Enter here the authorization fields, which should be checked for this authorization object! You can use existing ones, or a new one created via transaction SU20.

- The system checks whether the transaction code is assigned an authorization object. If so, a check is made that the user has authorization for this authorization object.

You can check this via Transaction code SU24.

### 2.4.3. Starting Report Classes

You can perform additional authorization checks by assigning reports to authorization classes (using report RSCSAUTH).

**Maintain/Restore Authorization Groups**

Report choice

Program name		to		→
Authorization group (SAP)		to		→
Application		to		→
Logical database		to		→
from application		to		→

Authorization groups

Maintain

Create/Change

Copy authorization groups from

Default authorization group	
Report tree	

Restore / Transport

Test run

Restore

Restore with transport

You can, for example, assign all PA\* reports to an authorization class for PA (such as PAXxx). If a user wants to start a PA report, he or she requires the appropriate authorization to execute reports in this class. Predefined report classes are not delivered. You must decide yourself, which reports you want to protect in this way.

Consider the following:

- After you have assigned reports to authorization classes or have changed assignments, you may have to adjust objects in your authorization concept (such as roles (activity groups), profiles, or user master records).
- There are certain system reports that you cannot assign to any authorization class. These include:
  - RSRZZLG0
  - STARTMEN (as of SAP R/3 4.0)

- Reports that are called using SUBMIT in a customer exit at logon (such as SUSR0001, ZXUSRU01).
- Authorization assignments for reports are overwritten during an upgrade. After an upgrade, you must therefore restore your customer-specific report authorizations.

#### 2.4.4. Calling RFC Function Modules

When RFC Function modules are called by an RFC client program or another system, an authorization check is performed for the authorization object S\_RFC in the called system. This check uses the name of the function group to which the function module belongs. You can deactivate this check with parameter **auth/rfc\_authority\_check**.

#### 2.4.5. Checking assignment of Authorization Groups to Tables

You can also assign authorization groups to tables to avoid users accessing tables using generic access tools (such as transaction SE11, SE16, SM31, OBA5 and so on). A user requires not only authorization to execute the tool, but must also have authorization to be permitted to access tables with the relevant group assignments. For this case, tables are delivered with predefined assignments to authorization groups. The assignments are defined in table TDDAT; the checked authorization object is S\_TABU\_DIS.

Remember that changing the assignment of tables is a modification of standard SAP; you are recommended to only modify those tables where the risk is very high. (i.e., that incorrect changes can result in inconsistent data or an unwanted system response for Customizing tables).

You can also use Transaction code SE54 to access this assignment.

#### Generate Table Maintenance Dialog: Initial Table/View Screen

The screenshot shows the SAP 'Generate Table Maintenance Dialog: Initial Table/View Screen'. At the top, there are four buttons: 'Edit Table/View', 'Edit Function Group', 'Edit View Cluster', and 'Edit View Variant'. Below these, the 'Table/View' field contains 'BUT000' and a 'Test' button. The main area is titled 'Edit Table/View' and contains four radio button options: 'ABAP Dictionary', 'Generated Objects', 'Authorization Groups', and 'Assign Authoriz. Group' (which is selected). To the right of these options are two 'Delete' buttons, each with a trash icon. At the bottom, there are two buttons: 'Display' (with a magnifying glass icon) and 'Create/Change'.

If necessary you can also use authorization object S\_TABU\_CLI for cross-client table maintenance, in addition to authorization object S\_TABU\_DIS.

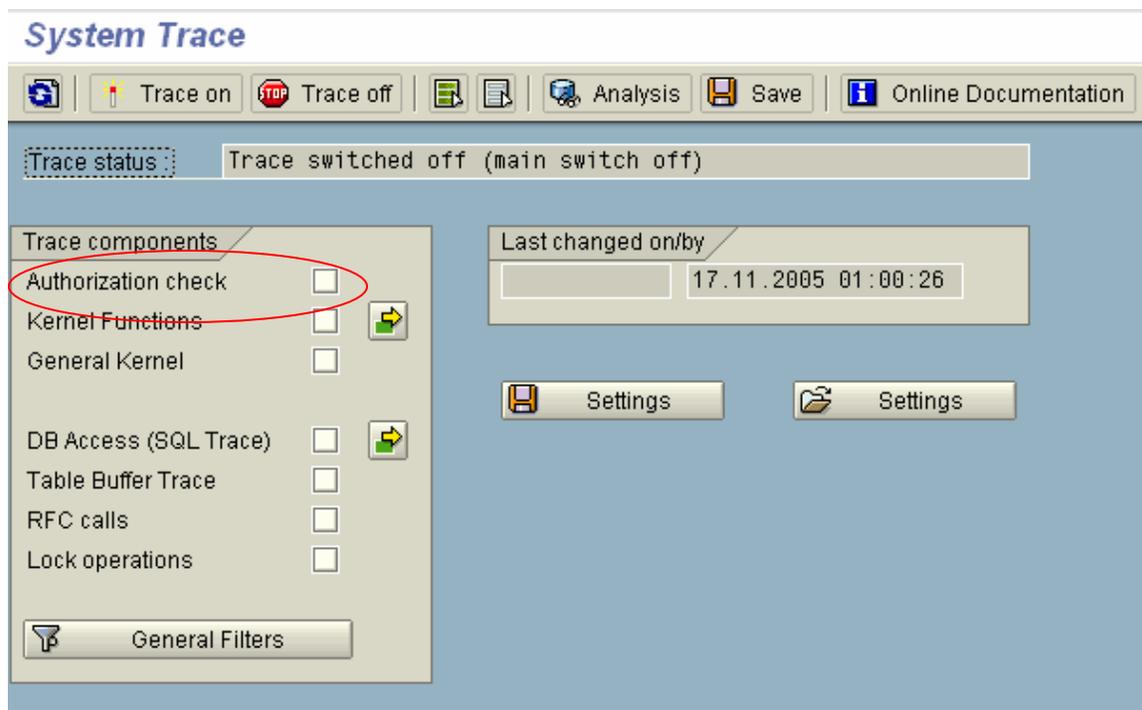
As of SAP release 4.6. You can also use the new authorization object S\_TABU\_LIN, which enables you to grant authorization for specific lines of a table. You can use this object to restrict access to certain data ranges and work areas within the table, for example, to specific plants, or company codes.

## 2.5. Analyzing Authorization Checks

If you do not know the required authorizations for a transaction, you can determine them in the following ways:

### 2.5.1. System Trace

You can use the system trace function (transaction ST01) to record authorization checks in your own and in external sessions, if the trace and the transaction to be traced are running on the same application server. The trace records each authorization object that is tested, along with the object's fields and the values tested.



You will use this in certain cases to check authorization problems when you're not using the standard SAP GUI. (Example, in the Bex analyzer, the IC Webclient, PCUI screens)

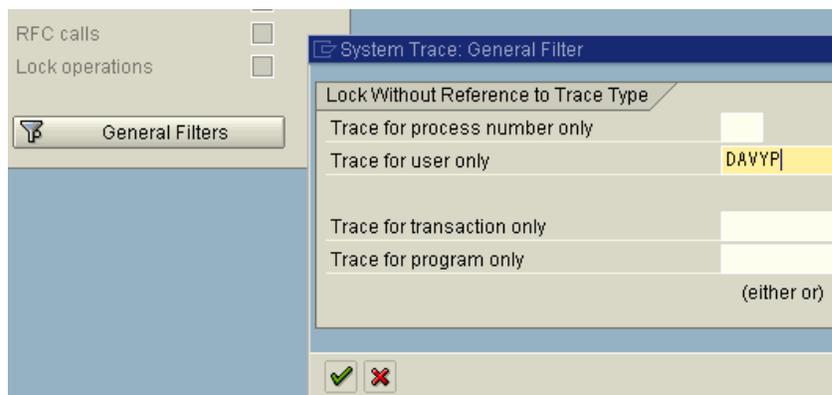
Suppose you are launching a BW report in the BEX analyzer. The consultant (who has SAP\_ALL authorization) is able to launch this report without any problem, but the end-user which has certain Customer Defined roles, is having problems when launching the same report.

Since performing an SU53 authorization check is useless in such a case, you still can use the ST01 trace.

This trace is also useful in case you use PCUI screens or the IC Webclient.

→ **Procedure:**

Flag the 'authorization check' field and next, by pressing the button 'general filters' you can choose for which user you want to activate the trace!



Next, push the button "Trace on".

### System Trace



Let the user who has the authorization problem perform the action(s) again in the system. After the user encountered the problem again, push the button "trace off" and press the "analysis button".



On the next screen below, check/flag the 'authorization check' field and press the execute button.

### Options for Trace Analysis

**General restrictions**

User name: DAVYP

Client: 200

Work Process:

Transaction:

Duration (=us):

Max. No. Records: 10.000

From: 03.01.2006 / 14:49:37

To: 03.01.2006 / 15:04:37

**Trace Records**

Authorization check

Kernel Functions

General Kernel

DB Access (SQL Trace)

Table Buffer Trace

RFC calls

Lock operations

---

**Table Restriction (Only SQL and Buffer Trace)**

D010

D020

[More tables](#)

---

**File selection**

Active Trace File

Other File

In your result screen below, you can see that all checks were positive (dark green color) meaning that all authorization checks so far did not pose any problem. In case of a lack of authorization you will see another color, and a return code (RC = 0) different from "0".

**Trace display**

hh:mm:ss:ms	Type	Lasts(us)	Object	Text
Client: 200 User: DAVYP Transaction: Trans ID: 4F4E5D0C19944B069CB016C89B73817F				
Work process 1 PID 0 Date: 03.01.2006 Start: 14:59:12:499.226 Finish: 14:59:12:567.474				
First Block of Dialog Step Last Block in Dialog Step				
Block Version: 476 No. of records: 2 File Version: 1				
hh:mm:ss:ms	Type	Lasts(us)	Object	Text
14:59:12:499	AUTH	- - -	S_CTS_ADMI RC=0	CTS_ADMFCT=TABL;
14:59:12:507	AUTH	- - -	S_CTS_ADMI RC=0	CTS_ADMFCT=TABL;
Client: 200 User: DAVYP Transaction: Trans ID: 4F4E5D0C19944B069CB016C89B73817F				
Work process 1 PID 0 Date: 03.01.2006 Start: 14:59:20:698.534 Finish: 14:59:20:26.057				
First Block of Dialog Step Last Block in Dialog Step				
Block Version: 886 No. of records: 5 File Version: 1				
hh:mm:ss:ms	Type	Lasts(us)	Object	Text
14:59:20:699	AUTH	- - -	S_TCODE RC=0	TCD=BP;
14:59:22:978	AUTH	- - -	B_BUPA_RLT RC=0	ACTVT=01;RLTYP=000000;
14:59:23:49	AUTH	- - -	B_BUPA_RLT RC=0	ACTVT=01;RLTYP=000000;
14:59:23:49	AUTH	- - -	B_BUPA_RLT RC=0	ACTVT=01;RLTYP=000000;
14:59:25:812	AUTH	- - -	S_GUI RC=0	ACTVT=61;
10 Records Read				

### 2.5.2. Authorization error Analysis

You can use transaction SU53 to analyze an access-denied error in your system that just occurred. You can use transaction SU53 from any of your sessions, not just the one in which the error occurred. You cannot analyze an authorization error in another user's logon session from your own session.

With this transaction you can check what authorizations are checked when a user is using a transaction and seems to be blocked because of authorization issues.

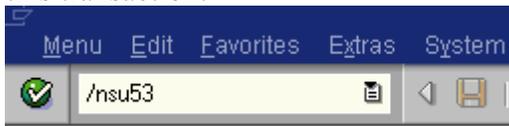
(Usually he gets the message: "you have no authorization ....".)

Although the user has a role (profile) allocated to his user-profile with the transaction in that role, he is blocked at a certain moment. This may be possible, because when performing a certain transaction, the first thing that is checked is whether you have authorization for the object "S\_TCODE". If so, and this will always be the case when you have added the transaction into the role, then he will be able to launch the transaction, but that's all. If relevant transactions are used or authorization objects that are not standard in the transaction, but for which the user needs to have authorization, then you need to perform the transaction SU53 at the moment you are blocked to see what is checked on the one hand, and what the user has authorization for on the other hand.

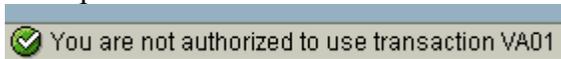
This allows you to make the necessary changes to the role by manually adding the necessary authorization objects into that role with the limitations on the fields you want.

✓	Check	S_TABU_DIS	Table Maintenance (via standard tools such as SM30)
✓	Check	S_TCODE	Authorization Check for Transaction Start
✓	Check	S_TRANSLAT	Translation environment authorization object
✓	Check	S_TRANSPBT	Transport Organizer

You can perform this SU53 by typing in /nsu53 in the screen where you were blocked for this transaction:

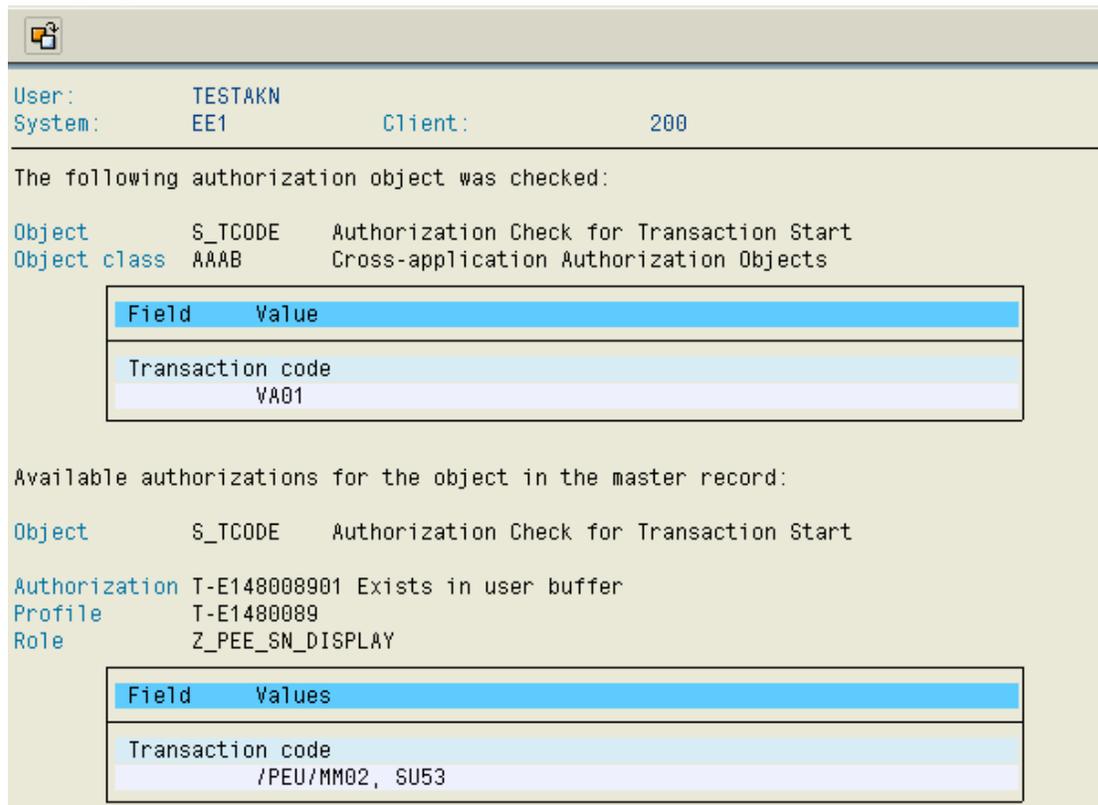


Example:



This means that the user has this transaction not within a role allocated to his user-profile.

### Display Authorization Data for User TESTAKN



The screenshot shows the SAP authorization data display for user TESTAKN. It includes a header with user and system information, a section for the checked authorization object (S\_TCODE), and a section for available authorizations in the master record.

User: TESTAKN  
System: EE1 Client: 200

The following authorization object was checked:

Object	S_TCODE	Authorization Check for Transaction Start
Object class	AAAB	Cross-application Authorization Objects

Field	Value
Transaction code	VA01

Available authorizations for the object in the master record:

Object	S_TCODE	Authorization Check for Transaction Start
Authorization	T-E148008901	Exists in user buffer
Profile	T-E1480089	
Role	Z_PEE_SN_DISPLAY	

Field	Values
Transaction code	/PEU/MM02, SU53

This is the result of performing the transaction SU53.

The first part always shows you what the system checks, and the part below shows you the authorizations that are available for the user and in what role(s). You can see that the check on the authorization object S\_TCODE is relevant in this case, and that it's not available in the role Z\_PEE\_SN\_DISPLAY for the transaction VA01, since the only transaction he may execute are /PEU/MM02 and SU53.

### 3. Testing the roles

During an implementation of for example the SAP CRM module, you will make up the necessary single and composite roles.

As I explained before you will create the following:

- A basic role, which will be assigned to every SAP user (it contains authorizations that are necessary for all end-users such as printing authorizations, possibly SU3 for maintaining his/her preferences, SU53 to check for authorization errors and so on.
- Single Roles: a single role usually contains the authorizations to perform a specific task such as creating a Marketing plan, or creating target groups in case of marketing and campaign management.
- Composite roles: composite roles could contain several single roles. Depending on how you want to setup your role definitions, you could decide in this case to create a composite role for a Marketing manager who will have several single roles.

During an implementation it is important that you test the complete functionality (customizing and developments) initially with a super-user who has the authorization profile SAP\_ALL, to ensure that everything works as designed independent of authorization issues.

#### **UNIT TESTING**

Next you will start with the unit testing, where you will test every single role you have defined. This can be tested by the corresponding key-users (it is best to have the single roles tested by a key-user for the specific domain/module like FI, MM, SD and so on.

You should make sure not only that you are able to perform the tasks such as processing transactions in the system (positive testing), but also check that you are NOT able to perform things in the system you should not be allowed to (Negative testing).

Once you have done the entire unit testing you can start with the integration tests.

#### **INTEGRATION TESTS**

Once the unit tests are done, the roles must also be tested during the role integration test phase. The objective of the unit tests was to ensure that the role functions properly, meaning that the transactions contained in the role can be executed.

For integration testing, the responsibility usually lies in the hands of key users and/or power users who are well familiar with the business processes that need to be tested and who have a basic understanding of the authorization concept and checks.

Usually the key user will logon with a user who acts in a certain function such as marketing manager or master data administrator and who has assigned one or more composite roles to his user-id.

Again you will do positive and negative testing during this integration test. First you will make sure that all activities, transactions, reports and so on can be executed. Next you will ensure that for example a specific transaction can be executed, but for example only in display mode or for a certain organizational level (such as company code, sales organization).

Often you will see that a single role works as designed, but that the combination of several roles (assigned in a composite role) can cause security problems, since an authorization object can occur in more than 1 transaction and have different values in one single role opposed to another single role. Since the SAP system does the authorization check on the entire authorization profiles you have assigned to your user-id and adds up the authorizations you have, this could result in conflicts.

**Example:**

Suppose you have a single role Z\_MARKETING\_PLAN where you have values maintained for authorization object CRM\_CPG where you are allowed only to DISPLAY marketing campaigns (Value 03).

In another single role Z\_MARKETING\_CAMPAIGN you also have this authorization object where you are allowed to create/change and display a marketing campaign.

Both single roles are assigned into the composite role Z\_COMP\_MARKETING.

Since you have the composite role assigned to your user-id and in one role you have all authorizations assigned for maintaining campaigns, this value will overrule the restriction, which was made in the single role Z\_MARKETING\_PLAN.

## 4. User Maintenance

With user maintenance, an administrator can create a user master record for every user, so that the user can log on the SAP System. You assign one or more roles to the user using the user master record to determine which activities are contained in the user menu and which authorizations the user has.

User master records are client-specific. You therefore need to maintain separate user master records for each client in your SAP System. You can use “Central User Administration” to simplify cross-client user administration. Maintaining centrally administered users is slightly different from user maintenance without CUA.

The overview in this book is restricted to user administration without CUA.

### 4.1. Creation of a User in the CRM system

The existence of a User Master Record is a prerequisite for logging on the SAP system, being R/3, CRM, BW, SAP Portal. To uniquely identify a SAP user, each user must have a unique master record, where personal data is saved and authorizations are granted by assigning (composite) roles. Technically, authorizations can also be assigned to users through single roles, composite profiles and single profiles. But from my point of view, the best way is assigning roles, and more specific composite roles.

**Note:** the procedure for creating users is the same in R/3, BW or CRM system. Below I explain this for the CRM System.

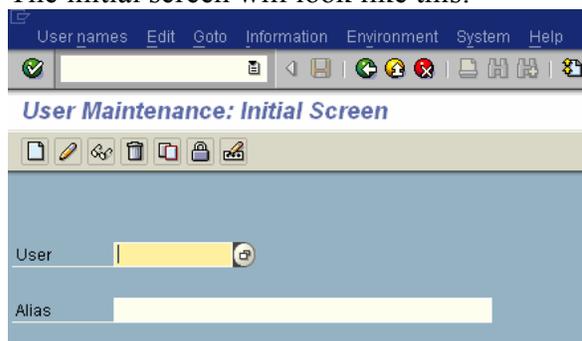
#### **Procedure:**

Start user maintenance via the menu:

*Sap Menu → Architecture and technology → System Administration → User Maintenance → Users (SU01)*

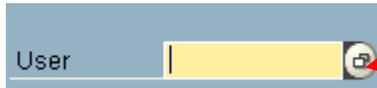
You can also directly access user maintenance via the command SU01.

The initial screen will look like this:

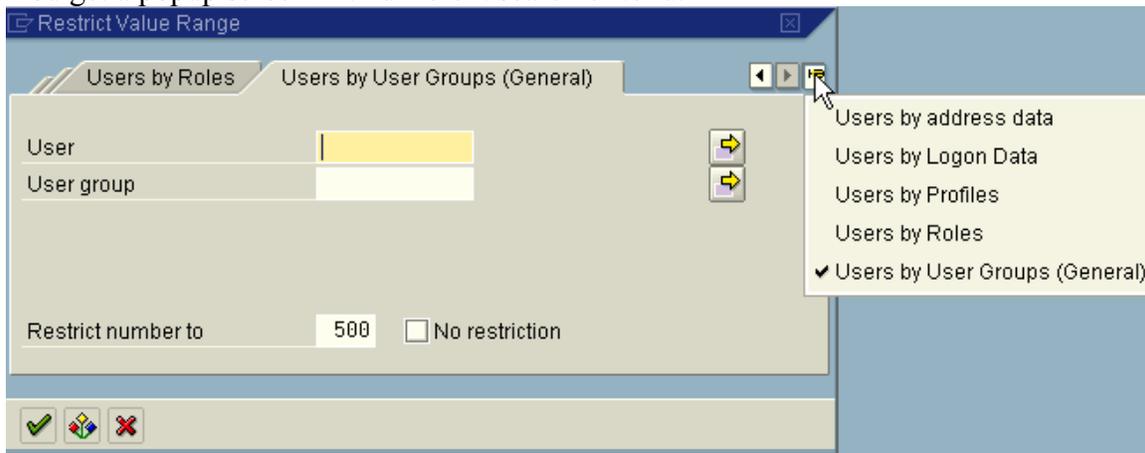


#### 4.1.1. Display user information

To display a user, just type in the username and press the display button.   
If you don't know the username by heart, you can look up any user by pressing the input-help button.



You get a popup screen with different search criteria.



You will see that there are different tabs on the user maintenance screen.

##### 1) Address Data

Use the address data tab page to record a specific user's address data. You must enter at least the user's last name here. This information is meant to identify the actual employee (first name, last name, department, phone number, business address and so on).

The User ID can be up to 12 characters. When creating usernames it is useful to make up naming conventions to make the usernames transparent for maintenance purposes.

Example: First 8 characters of the last name, followed by the first two characters of the first name.

Pelssers Davy → PELSSERSDA  
Clinton Bill → CLINTONBI

User: DAVYP  
Last Changed: DAVYP 05.01.2006 12:22:19 Status: Saved

Address Logon data Defaults Parameters Roles Profiles Groups

**Person**

Title: Mr.  
Last Name: Pelssers  
First Name: Davy  
Academic Title:  
Format: Davy Pelssers  
Function:  
Department:  
Room Number: Floor: Building:

**Communication**

Language: Other communication...  
Telephone: Extension:  
Mobile Phone:  
Fax: Extension:  
E-Mail: davy.pelssers@cernum.com  
Comm. Meth: INT E-Mail

**Company**

SAP-AG / /

## 2) Logon Data

Address Logon data Defaults Parameters Roles Profile

Alias:

User Group for Authorization Check:

**Validity Period**

Valid from: Valid through:

**Other Data**

Accounting Number: Cost center:

**User Type**

- Dialog
- Communications
- System
- Service
- Reference

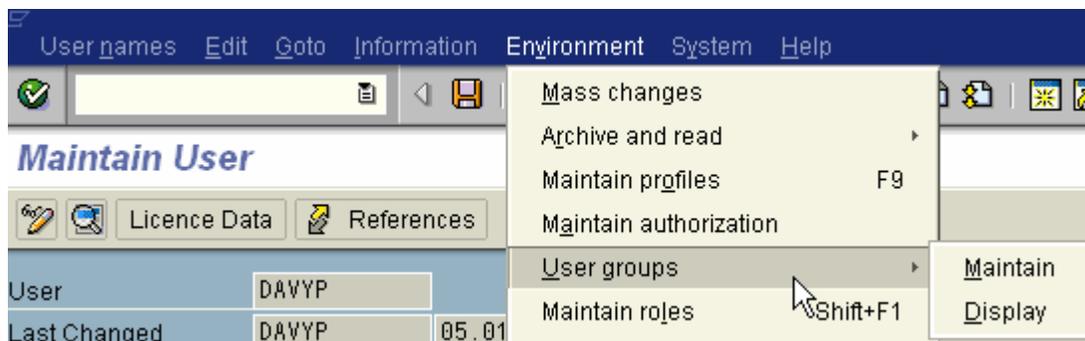
Use the Logon data tab page to maintain user information in the user master record. Here you can set the initial password (this is the password the end-user or employee needs to enter the first time he logs on to the SAP system – at that moment he will get a popup asking him to re-enter a new password of his own choice) and the user group. If necessary, the administrator can restrict the validity period of the user master record.

You also can assign an alias up to 40 characters to a user to specify more descriptive names.

## User Groups

User groups are basically used to distribute user maintenance among several user administrators. Only the administrator that has authorization for a group can maintain users of the group. If you leave the field empty, the user is not assigned to any group. This means the user can be maintained by any user administrator.

You can create and maintain user groups within the user maintenance screen, via the menu path: *Environment* → *User groups* → *Maintain*



## User Types

The user type attribute indicates how the user's access to the SAP system is defined. SAP distinguishes among the following user types:

- *Dialog user:*

User type for exactly one interactive user (all logon types including Internet users). During a dialog log on, the system checks whether the password has expired or is initial. The user can change his or her password himself or herself. Multiple dialog logons are checked and, where appropriate, logged.

Every employee should generally be defined as a dialog user.

- *Communications:*

User type for dialog-free communication between systems (such as RFC users for ALE, Workflow, TMS and CUA):

- A dialog logon is not possible
- Whether the system checks for expired or initial passwords depends on the logon method (interactive or not interactive). Due to a lack of interaction, no request for a change of password occurs.

- *System:*

User type for background processing and communication within a system (internal RFC calls).

- A dialog logon is not possible
- The password change requirement does not apply to the passwords, that is, they cannot be initial or expired. Only a user administrator can change the password.
- Multiple logons are permissible.

- *Service:*

User type that is a dialog user available to a larger, anonymous group of users. Assign only very restricted authorizations for this user type.

- During a log on, the system does not check whether the password has expired or is initial. Only the user administrator can change the password.
- Multiple logons are permissible.
- Service users are user, for example, for an anonymous system access through an ITS service. After an individual authentication, an anonymous session begun with a service user can be continued as a person related session with a dialog user.

- *Reference:*

User type for general, non-person related users that allows the assignment of additional identical authorizations, such as for Internet users created with transaction SU01. You cannot log on to the system with a reference user. (You can deactivate this field in accordance with SAP note 330067.

### 3) Defaults

You can use the defaults tab page to specify user defaults, such as the standard printer, the start menu, date and decimal formats and logon language.

The user administrator does not have to maintain these settings necessarily, because users can also maintain their own user defaults via transaction SU3. In that case however, the users need to have this authorization in their basic user role assigned to their user master record.

### 4) Parameters

Parameter ID	Parameter value	Short Text
COMMPR01_IND_OBJ	X	Prod. Maintenance Transaction: Including Individual
CRM_DIS_CHANNEL	30	Distribution Channel
CRM_ICWC_SHORTCUTS		Show Keyboard Navigation Shortcuts
CRM_ICWC_STATIC		Dynamic / Static HTML Design
CRM_PROC_TYPE_OPP	OPPT	Transaction Type: Opportunity
CRM_PROC_TYPE_SAL	TA	Transaction Type: Sales

Use the tab page 'parameters' to set or get parameters to save default values for fields, such as the company code, plant and so on.

Defining these preassigned values makes it easier for users to enter organizational units when they encounter the units again. Maintaining the parameter values can help to reduce mistakes during input.

### Set/Get parameter ID

A field can be filled with proposed values from SAP memory using a parameter ID.

### Example

A user only has authorization for company code 001. This company code is stored in memory at the beginning of a transaction under the corresponding parameter ID. Fields that refer to the data element are automatically filled with the value 001 in all subsequent screen templates.

### Dependencies

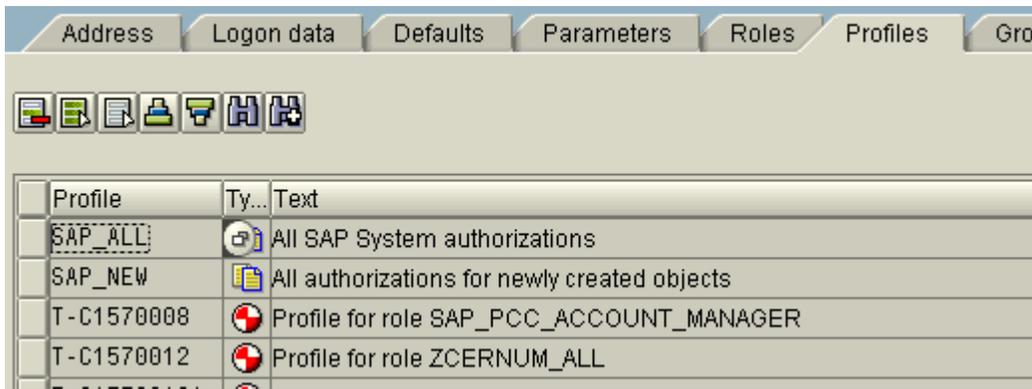
A field in the screen template is only filled automatically with the value stored under the parameter ID of the data element if this was explicitly permitted in the Screen Painter.

## 5) Roles

Role	Type	Valid From	Valid To	Name
SAP_APO_ATP_CU		01.06.2004	31.12.9999	APO: ATP - Customizing
SAP_BC_CUS_CUSTOMIZER		01.06.2004	31.12.9999	Customizing Project Team M
SAP_BC_DWB_ABAPDEVELOPER		01.06.2004	31.12.9999	ABAP Entwickler
SAP_BC_RRR_SAA_ADMIN		01.06.2004	31.12.9999	Basis: Administrator Authori
SAP_CRM_ACTIVITY		01.06.2004	31.12.9999	Activity Management
SAP_CRM_BUSINESS_PARTNER		01.06.2004	31.12.9999	Business Partner
SAP_CRM_IPC_ADMIN		01.06.2004	31.12.9999	IPC Administration

Use the tab page roles to assign composite and/or single roles to assign the correct authorizations to the end-user or employee. You can also enter validity dates, supposing that you give authorization to someone on a temporary basis. By assigning a role to the user, the corresponding active authorization profile will automatically entered on the tab page profiles.

## 6) Profiles



Profile	Ty...	Text
SAP_ALL		All SAP System authorizations
SAP_NEW		All authorizations for newly created objects
T-C1570008		Profile for role SAP_PCC_ACCOUNT_MANAGER
T-C1570012		Profile for role ZCERNUM_ALL

On the profiles tab page, you assign manually created authorization profiles and therefore authorizations to a user. The generated profiles of the roles assigned to the user are also displayed here.

### Example:

In the screenshot above you can see that for my User ID two standard SAP Profiles have been assigned (SAP\_ALL and SAP\_NEW). The other profiles are generated profiles which are automatically displayed on this tab page, because they correspond to the roles which are assigned to my user master record on the tab page 'roles'.

Remember that end-users usually should not get those special profiles SAP\_ALL and SAP\_NEW as explained in chapter 2.3.6.

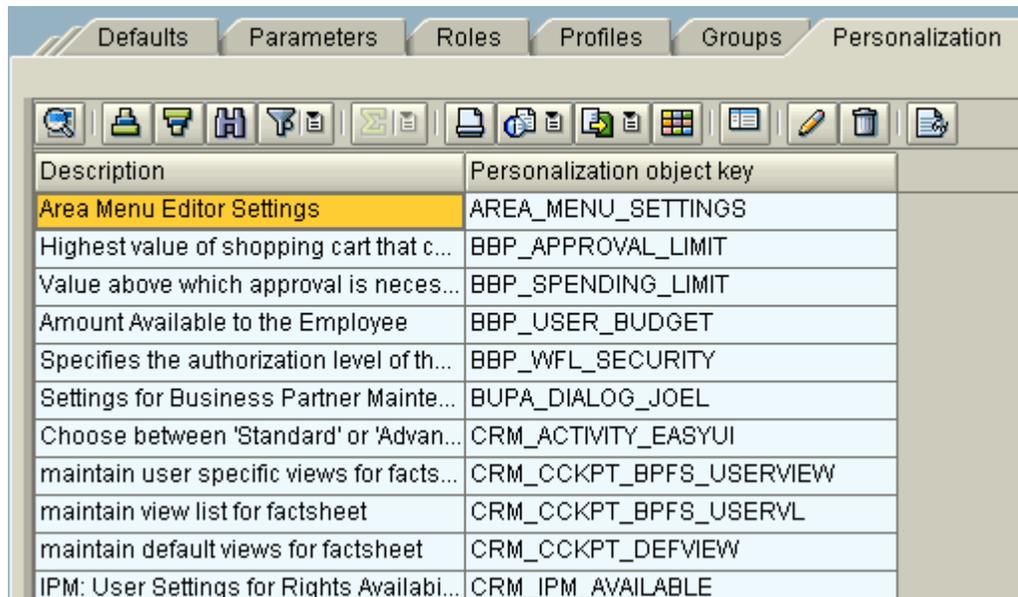
## 7) Groups



User group	Text
------------	------

You assign the user to a user group on this tab page. This is purely a grouping that is suitable, for example, for mass maintenance of user data (transaction SU10). Assignments that you make on the 'groups' tab page are not used for authorization checks that are specified on the *logon data* tab page using the *User Group* field.

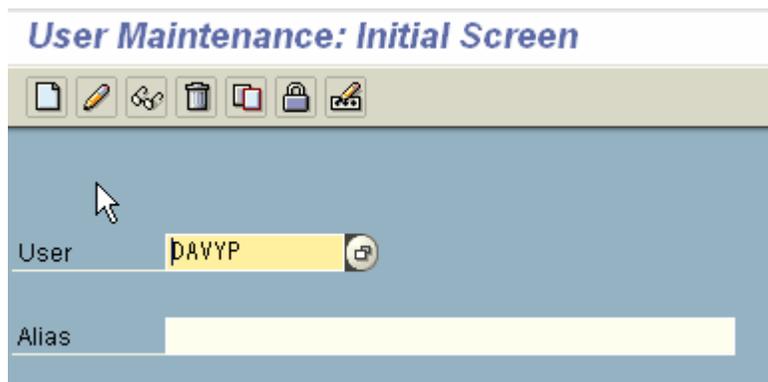
## 8) **Personalization**



Description	Personalization object key
Area Menu Editor Settings	AREA_MENU_SETTINGS
Highest value of shopping cart that c...	BBP_APPROVAL_LIMIT
Value above which approval is neces...	BBP_SPENDING_LIMIT
Amount Available to the Employee	BBP_USER_BUDGET
Specifies the authorization level of th...	BBP_WFL_SECURITY
Settings for Business Partner Mainte...	BUPA_DIALOG_JOEL
Choose between 'Standard' or 'Advan...	CRM_ACTIVITY_EASYUI
maintain user specific views for facts...	CRM_CCKPT_BPFS_USERVIEW
maintain view list for factsheet	CRM_CCKPT_BPFS_USERVL
maintain default views for factsheet	CRM_CCKPT_DEFVIEW
IPM: User Settings for Rights Availabi...	CRM_IPM_AVAILABLE

On the personalization tab page, you can make person-related settings using personalization objects. You can call this tab page both in role maintenance and in user maintenance. Here you can preassign application parameters that include more parameters than the user parameters provided by transaction code SU3.

### ***Other Functions***



**User Maintenance: Initial Screen**

User

Alias

On the initial screen you have several buttons, which allow you to do the following things:

- Create a new User : you create a new user and fill out all the details as explained before!
- Delete a user: use the trashcan icon 
- Copy a user : when copying a user you type in the username that you want to copy, and press the copy button. You will get a popup asking you what parts you want to copy. In the 'TO' field fill out the new username.



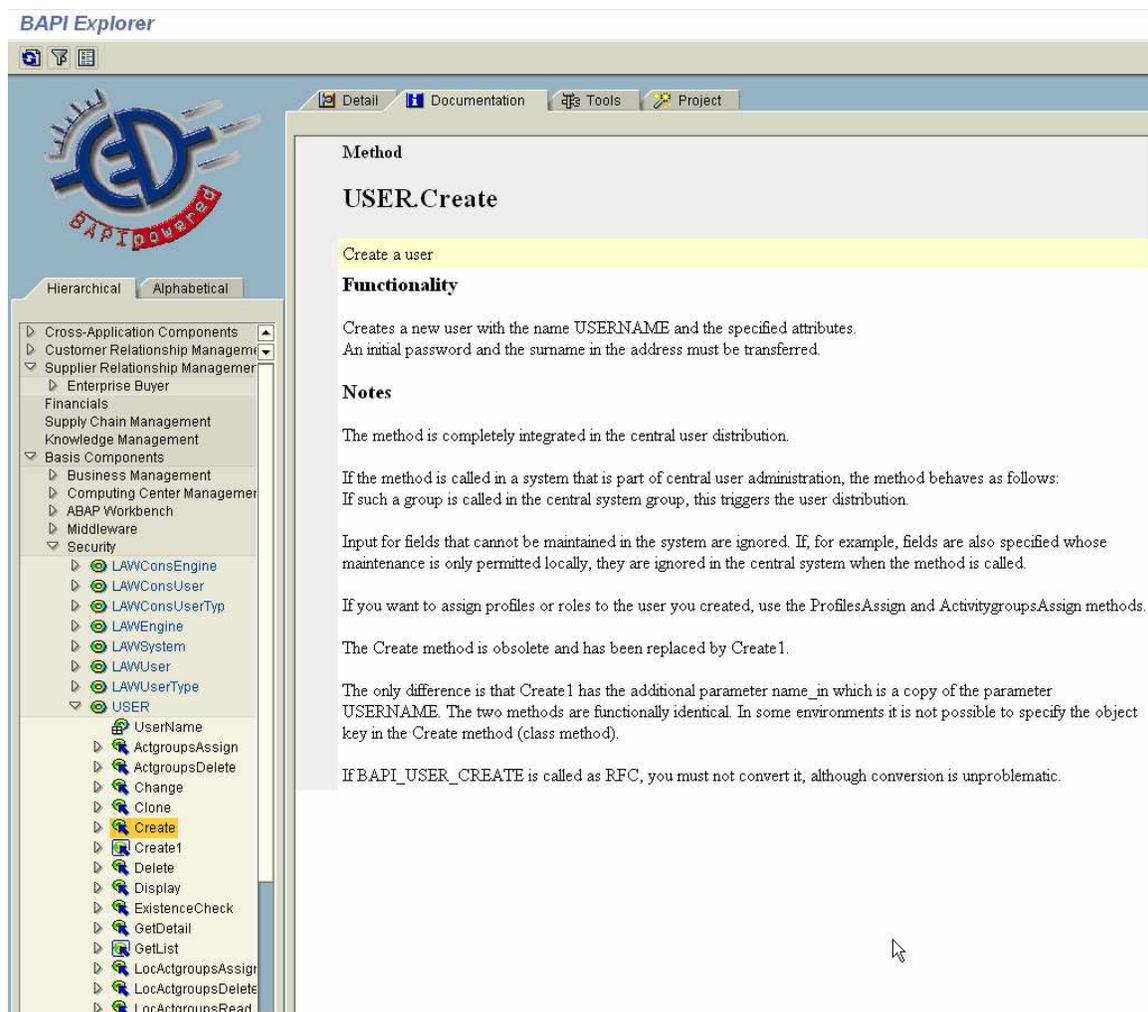
- Lock/unlock a user : depending on the system profile parameters, it is possible that a user can for example mistype his password up to 3 times. At that moment the system will lock the user and he no longer is able to log on to the SAP system. With this button the user administrator can unlock the locked user!
- Change the password : with this button you can give a new initial password to the user!

#### 4.1.2. Initial Data load for Users and Authorizations

You can imagine that for a large international company a lot of users need to be created and maintained. For a smaller company this can easily be managed by one system administrator in a manual way, but for very large user numbers this might be unfeasible. Therefore SAP provides technical aid. You can either accomplish this with an ABAP program that reads the data automatically, or with an external tool for creating and managing user master records based on the standard SAP BAPI's such as:

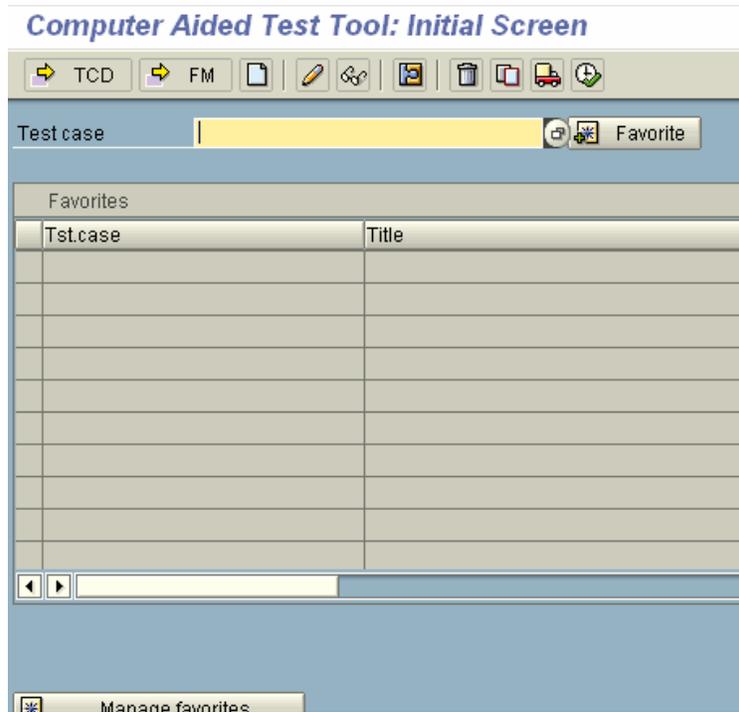
- BAPI\_USER\_CREATE
- BAPI\_USER\_GET\_DETAIL
- BAPI\_USER\_CHANGE
- BAPI\_USER\_DELETE

You can access the existing BAPI (**Business Application Programming Interface**) overview directory via the transaction code BAPI.



The screenshot displays the SAP BAPI Explorer interface. On the left, a tree view shows the hierarchy of BAPIs under the 'USER' category, with 'Create' highlighted. The main pane on the right provides detailed information for the 'USER.Create' method. The 'Method' section identifies it as 'USER.Create' with the description 'Create a user'. The 'Functionality' section states: 'Creates a new user with the name USERNAME and the specified attributes. An initial password and the surname in the address must be transferred.' The 'Notes' section contains several important details: 'The method is completely integrated in the central user distribution.', 'If the method is called in a system that is part of central user administration, the method behaves as follows: If such a group is called in the central system group, this triggers the user distribution.', 'Input for fields that cannot be maintained in the system are ignored. If, for example, fields are also specified whose maintenance is only permitted locally, they are ignored in the central system when the method is called.', 'If you want to assign profiles or roles to the user you created, use the ProfilesAssign and ActivitygroupsAssign methods.', 'The Create method is obsolete and has been replaced by Create1.', 'The only difference is that Create1 has the additional parameter name\_in which is a copy of the parameter USERNAME. The two methods are functionally identical. In some environments it is not possible to specify the object key in the Create method (class method).', and 'If BAPI\_USER\_CREATE is called as RFC, you must not convert it, although conversion is unproblematic.'

Alternatively you can also use SAP CATT (Computer Aided Test Tool). The advantage here is that you do not need any additional programming. You can launch the CATT via the transaction code SCAT.



## 4.2. Creation of a User in the SAP Enterprise Portal

Users in the portal and the CRM system are linked to each other, based on a single sign-on.

You give the same Username here

First logon to the portal by entering your username and password.



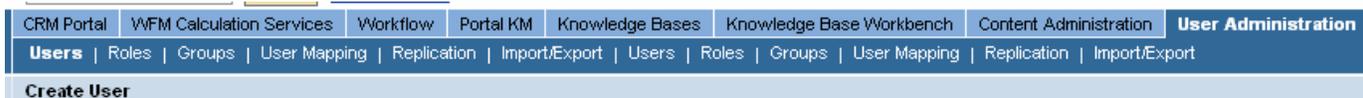
As User-administrator you will have the role “user\_admin\_role”.

Assigned Roles			
		ID	Name
<input type="checkbox"/>		user_admin_role	pcd:portal_content/administrator/User_admin

Select the navigation link “User Administration”.



You will get the following navigational submenu:



By selecting the link “Users” you can create a new User.

**General Information**

User ID:*	<input type="text" value="VERMASSENJ"/>
Automatic Password Generation:	<input type="checkbox"/>
Define Password:*	<input type="password" value="••••"/>
Confirm Password:*	<input type="password" value="••••"/>
Last Name:*	<input type="text" value="Vermassen"/>
First Name:*	<input type="text" value="Jef"/>
E-Mail Address:*	<input type="text" value="jef.vermassen@hotmail.com"/>
Form of Address:	<input type="text" value="Meneer"/>
Language:	<input type="text" value="Dutch (Belgium)"/>
Activate Accessibility Features:	<input type="checkbox"/> (Screen reader required)

**Account History**

Valid From:	<input type="text" value="12/12/2005"/>	
Valid To:	<input type="text" value="31/12/2500"/>	

**Contact Information**

Telephone:	<input type="text" value="089773322"/>
Fax:	<input type="text"/>
Mobile:	<input type="text"/>
Street:	<input type="text" value="lange laan 32"/>
City:	<input type="text" value="leuven"/>
State/Province:	<input type="text"/>
Zip/Postal Code:	<input type="text" value="3000"/>
Country:	<input type="text" value="Belgium"/>
Time Zone:	<input type="text" value="GMT+00:00 (WET) Western European Time"/>

Next, press the create button at the bottom of the screen.  
You will get a next screen with all information you entered.

**View User**

View the profile below. You can modify the profile by clicking on the "Modify" button below. You can use the expand/minimize icon on the far right of each section to use the space efficiently.

**General Information**

User ID:	VERMASSENU
Last Name:	Vermassen
First Name:	Jef
E-Mail Address:	jef.vermassen@hotmail.com
Form of Address:	Meneer
Language:	Dutch (Belgium)
Account Status:	Active

**Account History**

Date	
12-Dec-2005 11:43:47	New account created
12-Dec-2005 00:00:00 - 31-Dec-2500 00:00:00	Account Valid Date
12-Dec-2005 11:43:47	Last Password Change

**Contact Information**

Telephone:	089773322
Fax:	
Mobile:	
Street:	lange laan 32
City:	leuven
State/Province:	
Zip/Postal Code:	3000
Country:	Belgium
Time Zone:	GMT+00:00 (WET) Western European Time

**Additional Information**

Position:  
Department:

Modify Copy to New

As a next step you will want to assign Portal roles to this user.

To do this, you need to click on the navigation link "roles".



There are two ways to assign a role to a user. Either you select a role, and edit it to assign new users. Or you can select a user, edit the user and assign a new role for this user.

Example: (edit a user to assign a new role)

I select the user “VERMASSENJ” that I just have created and press the start button.



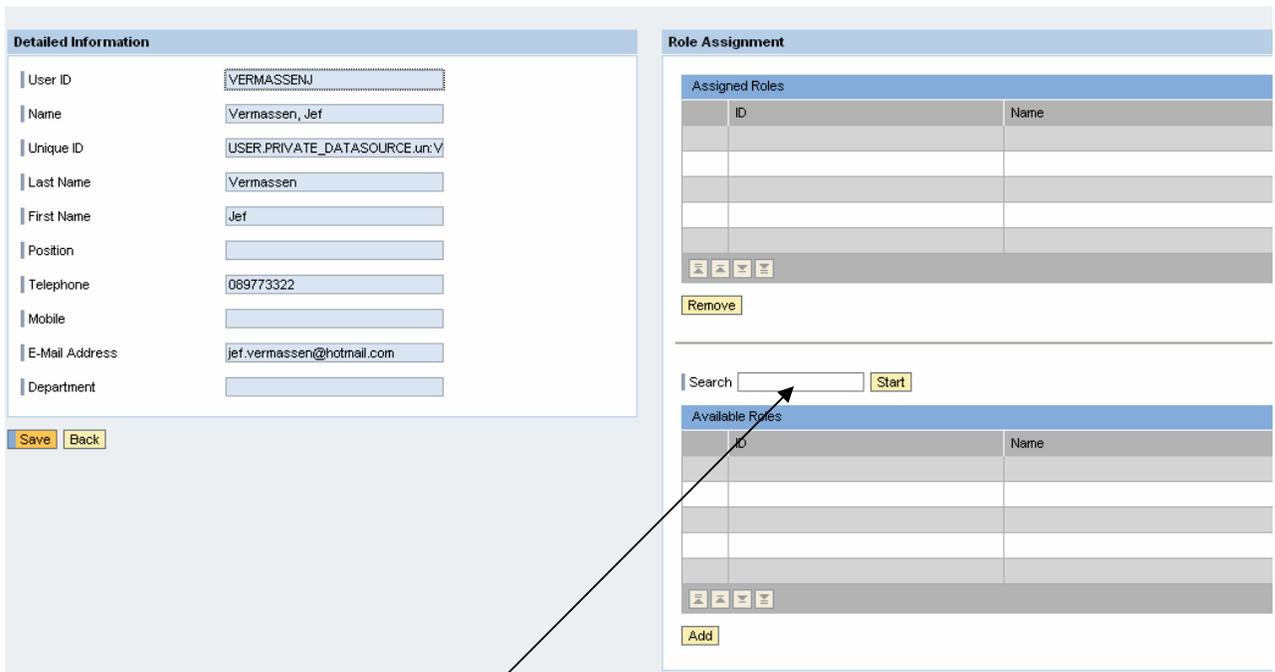
Search: VERMASSENJ in Users Start

You will get a result-list! In this case there will of course only be one entry.



ID	Name
VERMASSENJ	Vermassen, Jef

Press the link “edit”. In the screen below you can see that this User has no roles assigned at this moment.



**Detailed Information**

User ID: VERMASSENJ  
Name: Vermassen, Jef  
Unique ID: USER.PRIVATE\_DATASOURCE.un:V  
Last Name: Vermassen  
First Name: Jef  
Position:  
Telephone: 069773322  
Mobile:  
E-Mail Address: jef.vermassen@hotmail.com  
Department:

**Role Assignment**

Assigned Roles

ID	Name
----	------

Remove

Search: Start

Available Roles

ID	Name
----	------

Add

To assign a new role, search the role you want to add.  
By typing in “\*”, you will get all available roles for Portal Usage.

Search

Roles			
		ID	Name
<input type="checkbox"/>		com.sap.pct.crm.sapses.erudict_marketing_role	pcd:portal_content/Erudict/Roles
<input type="checkbox"/>		com.sap.pct.crm.sapses.erudict_sales_role	pcd:portal_content/Erudict/Roles

As you can see two roles have been created, a marketing role and a sales role.

Select the role you want to add for the user (flag the checkmark before the role-name) and press the “add-button”.

Search

Roles			
		ID	Name
<input type="checkbox"/>		com.sap.pct.crm.sapses.erudict_marketing_role	pcd:portal_content/Erudict/Roles
<input checked="" type="checkbox"/>		com.sap.pct.crm.sapses.erudict_sales_role	pcd:portal_content/Erudict/Roles

In the role assignment, you will now see that this role has been added for the user VERMASSENJ.

**Role Assignment**

Assigned Roles			
		ID	Name
<input type="checkbox"/>		com.sap.pct.crm.sapses.erudict_sales_role	pcd:portal_content/Erudict/Roles

Press the save button.

Detailed Information		Role Assignment	
User ID	<input type="text" value="VERMASSENJ"/>	Assigned Roles	
Name	<input type="text" value="Vermassen, Jef"/>	<input type="checkbox"/>	<input type="text" value="com.sap.pct.crm.sapses.erudict_sales"/>
Unique ID	<input type="text" value="USER.PRIVATE_DATASOURCE.un:V"/>		
Last Name	<input type="text" value="Vermassen"/>		
First Name	<input type="text" value="Jef"/>		
Position	<input type="text"/>		
Telephone	<input type="text" value="089773322"/>		
Mobile	<input type="text"/>		
E-Mail Address	<input type="text" value="jef.vermassen@hotmail.com"/>		
Department	<input type="text"/>		
<input type="button" value="Save"/> <input type="button" value="Back"/>		<input type="button" value="Remove"/>	
		Search <input type="text" value="*erudict*"/> <input type="button" value="Start"/>	
		Roles	
		<input type="checkbox"/>	<input type="text" value="com.sap.pct.crm.sapses.erudict_market"/>
		<input type="checkbox"/>	<input type="text" value="com.sap.pct.crm.sapses.erudict_sales_"/>

The first time that the user VERMASSENJ will logon to the SAP Enterprise Portal, he will use the Username and password that you created in the CRM system (VERMASSENJ with initial password 'init').

Now the system will ask him to change his password, since the one he entered was only an initial password.

## Welcome

 Password has expired

**Change Password**

User ID

Old Password

New Password

Confirm Password

### 4.3. Creation of an Employee in the CRM system

You already have created the User ID's for your employees in the CRM system and for the SAP Enterprise Portal.

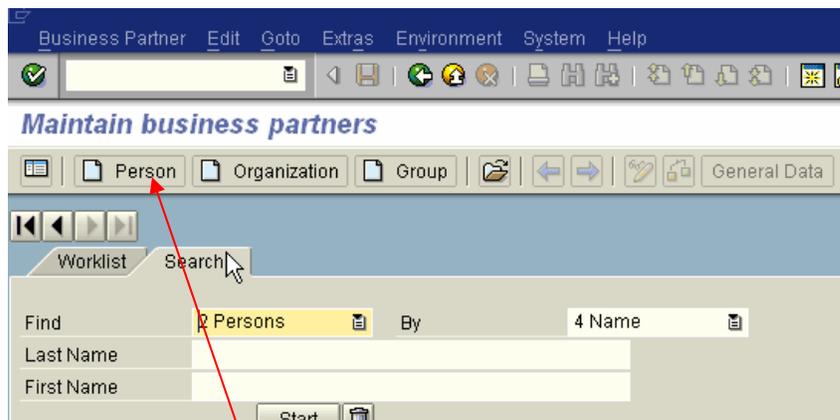
There are 2 steps left to do now. First you should create a Business Partner for each employee (account managers and/or marketing people) and link this business partner to the USER-ID.

Next you should assign this business partner in your organizational model.

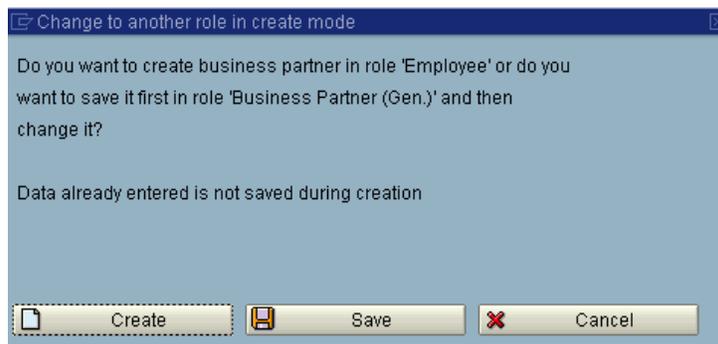
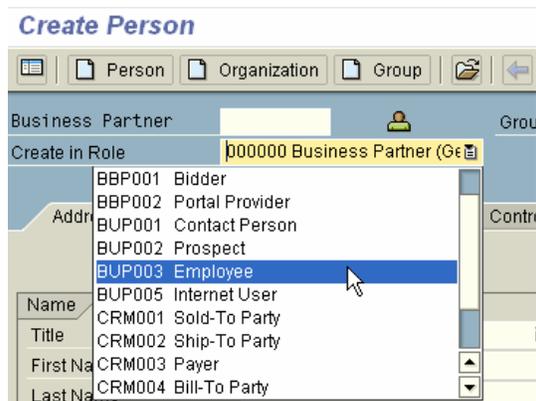
#### Example:

In the previous chapters you already created VERMASSENJ (who is an account manager of the company XYZ) as user on the CRM system and on the SAP Enterprise portal.

Now you will create him as an employee in the CRM System.



Press the button 'create person'.  
In the next screen, select the role "employee".



The system will ask you if you want to create the business partner in the role “employee” or if you first want to save it in the general role.

Choose “CREATE”.

On the address data TAB, fill out the necessary data:

The screenshot shows the 'Address Overview' tab in SAP. The 'Name' section contains: Title (0002 Mr.), First Name (Jef), and Last Name (Vermassen). The 'Search Terms' section has 'EMPLOYEE' in the first field. The 'Standard Address' section shows: Street/House number (bogaerdenstraat 31), Postal code/City (3000 leuven), and Country (BE). The 'Communication' section includes: Telephone, Mobile Phone, Fax, and E-Mail (jef.vermassen@erudict.net). A callout box points to the 'Search Term 1/2' field with the text: 'On the Search Term 1, fill in “EMPLOYEE”! This will make the lookup for account managers easier on the SAP Portal afterwards!!'

On the Tab “identification” you make the link between the Business partner ‘employee’ and the USER-ID.

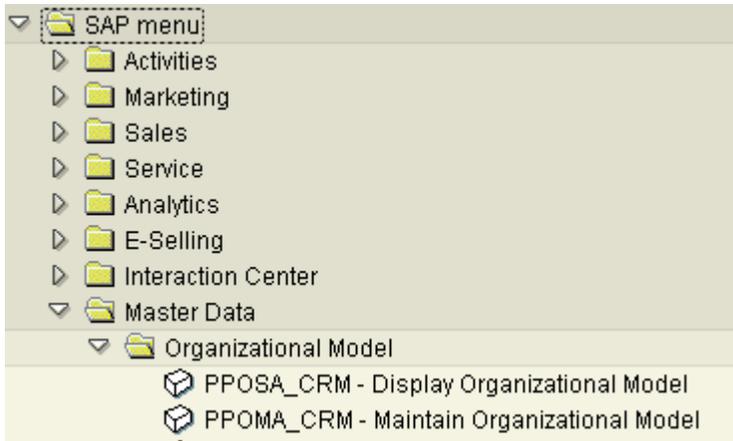
The screenshot shows the 'Identification' tab in SAP. The 'Personal Data' section includes: Gender (Male selected), Marital Status, and Nationality. The 'Employee Data' section includes: Personnel number (empty) and User (VERMASSENJ). A red arrow points from the text above to the 'Personnel number' field.

After filling out these necessary data, you can save the business partner. The Business partner with number 409611 has been created.

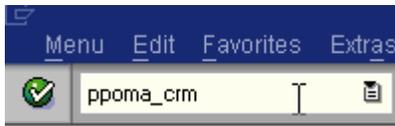
## 4.4. Maintaining the Organizational Model

The last step in the process is to maintain the organizational model.

You can do this via the SAP-menu:



or directly by launching the transaction PPOMA\_CRM.



You will get following screen:

The screenshot shows the SAP CRM interface. On the left, a search filter is applied to 'Organizational unit'. The search results list includes 'Cernum Sales Organisation', 'Cernum Service Organization', and 'Cernum Service Team 1'. The main window displays a tree view of the 'Cernum Sales Organisation' with 'Account Manager' selected. A table below shows assignment details for various organizational units and employees.

Assignment Plan (CRM)	Code	ID	Business partn...	Valid from	Valid to	Assigner
▼ Cernum Sales Organisation	SOrgCernum	O 50000608	0000400001	08.12.2003	Unlimited	
▶ Konstantin Kosev	KONSTANTINK	S 50000711		20.01.2004	Unlimited	06.06.20
▶ Account Manager	SalesMan	S 50001084		18.08.2004	Unlimited	18.08.20
▶ David Vincent / B-	0000405323	BP 0000405323		01.01.1900	Unlimited	18.08.20
▶ Dawy Pelssers / B-3012 wilsele	0000405800	BP 0000405800		01.01.1900	Unlimited	31.03.20
▶ Prof. Dr. Jimmy Laureys / B-9300 AALST	0000406284	BP 0000406284		01.01.1900	Unlimited	08.06.20
▼ Cernum EVENT IC WEBclient	CERNUM	S 50001682		25.02.2005	Unlimited	25.02.20
▶ Yves to GW Dunon / B-9300 Aalst	0000405033	BP 0000405033		01.01.1900	Unlimited	16.03.20
▶ Dawy Pelssers / B-3012 wilsele	0000405800	BP 0000405800		01.01.1900	Unlimited	16.03.20
▶ johan molegraaf / B-3012 wilsele	0000405884	BP 0000405884		01.01.1900	Unlimited	16.03.20
▶ SAB Miller / B-	0000407205	BP 0000407205		01.01.1900	Unlimited	03.11.20
▶ Tom Coumans	TomCoumans	S 50000712		26.01.2004	Unlimited	26.01.20
▶ Sales Employees	SalesEmpl	S 50001082		18.08.2004	Unlimited	18.08.20
▶ Paul Nijs / B-9300 Aalst	0000400090	BP 0000400090		01.01.1900	Unlimited	19.08.20
▶ Mario Carlo Mathieu Vangerven / B-9300 A	0000405030	BP 0000405030		01.01.1900	Unlimited	19.08.20

Annotations in the image:

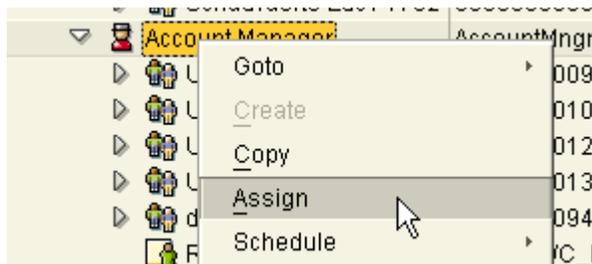
- A box points to the search filter area: "Search area where you can look up organizational units, positions, users and employees".
- A box points to the search results list: "Result-List of your Search that you entered in the Search area".
- A box points to the organizational tree view: "Structural view on your selected organizational element."

You have created the account manager Jef Vermassen as an employee (business partner) in the previous chapter. You want to assign him now to the organizational model.

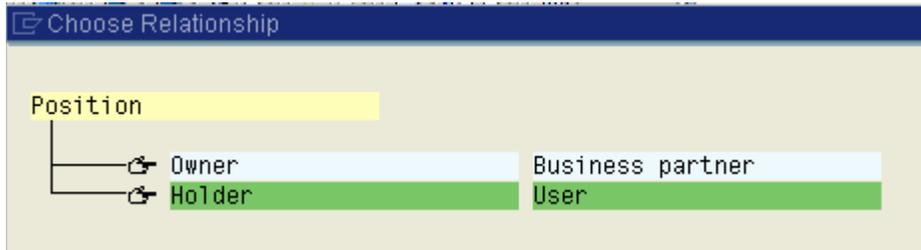
Select therefore the position (a position is indicated with the icon ) to which you want to assign the employee.

Example:

To assign Jef Vermassen to the position "Account Manager", right-click on this position, and select "Assign".



Next you get a popup, asking you to choose between a business partner or User. (Select Business partner!)



Select the business partner (employee) by name or Business Partner number (101).



After selecting Business partner 409611, I see that the organizational model is updated!  
Jef Vermassen is now assigned in the org model.

Assignment Plan (CRM)	Code	ID	Busine:
▼ <input type="checkbox"/> Cernum Sales Organisation	SOrgCernum	O 50000608	000040
▶  Konstantin Kosev	KONSTANTINK	S 50000711	
▼  Account Manager	SalesMan	S 50001084	
▶  David Vincent / B-	0000405323	BP 0000405323	
▶  Davy Pelssers / B-3012 wilsele	0000405800	BP 0000405800	
▼  Prof. Dr. Jimmy Laureys / B-9301	0000406284	BP 0000406284	
▶  Jimmy Laureys	Laureys	US JIMMYL	
▼  Jef Vermassen / B-3000 Leuven	0000409611	BP 0000409611	
▶  jef vermassen	vermassen	US VERMASSE...	
▼  Cernum EVENT IC WEBclient	CERNUM	S 50001682	

## 5. CRM specific Authorizations

As I explained before the SAP authorization concept is not only valid for R/3 but also for CRM and BW for example. However every module has its own particularities. As an authorization administrator you might perfectly understand how the authorization concept works, but this does not guarantee a successful implementation of SAP CRM or SAP BW authorizations. In my experience, you only will be able to successfully apply authorizations in such a module, if you at least have a functional understanding of such a module. Furthermore, when using some authorization objects, you also need to perform some customizing steps.

Since I had the luck to be a functional consultant in all three aspects (R/3, BW and CRM) I can give you some highlights on the specific aspects.

### 5.1. Marketing and Campaign Management

#### Use

The processing of a marketing project is protected by an authorization check. With this authorization check, the system controls whether a user is allowed to create, change, display or delete a marketing project. The results of the authorization check relate to the entire marketing project (including the related marketing elements). It is therefore not possible to forbid a user from changing a campaign header and, at the same time, to allow them to make changes to a campaign element.

The following actions are protected by an additional authorization check:

- Entering plan values in marketing projects (activity 72)
- Changing general settings (marketing element overviews, assignment of template plans and so on): authorization object CRM\_MPL\_AD (activity 23)

**Authorization objects**

<b>Authorization Object</b>	<b>Description</b>	<b>Authorization</b>
<b>CRM_MPT</b>	General authorization object <i>marketing plan</i> (without field-dependency)	The user has authorization to create, change, and so on, marketing plans
<b>CRM_MPLRES</b>	Authorization object <i>marketing plan</i> dependent on the person responsible	The user only has authorization to create, change, and so on, marketing plans for which particular persons are responsible
<b>CRM_MPLAGR</b>	Authorization object <i>marketing plan</i> dependent on the authorization group	The user only has authorization to create, change, and so on, marketing plans for which particular authorization groups are responsible
<b>CRM_CPG</b>	General authorization object <i>campaign</i> (without field-dependency)	The user has authorization to create, change, and so on, campaigns
<b>CRM_CPGRES</b>	Authorization object <i>campaign</i> dependent on the person responsible	The user only has authorization to create, change, and so on, campaigns for which particular persons are responsible
<b>CRM_CPGAGR</b>	Authorization object <i>campaign</i> dependent on the authorization group	The user only has authorization to create, change, and so on, campaigns for which a particular authorization group is responsible
<b>CRM_CPGCTP</b>	Authorization object <i>campaign</i> dependent on the campaign type	The user is only allowed to create, change, and so on, campaigns that have a particular campaign type

## **Activities**

The following activities can be carried out for the authorization objects.

- 01 – Create
- 02 – Change
- 03 – Display
- 06 – Delete
- 72 – Plan

When a marketing project is created, the system checks first whether the user has authorization to create a marketing plan or campaign by checking the general authorization objects (CRM\_MPT for marketing plans and CRM\_CPG for campaigns). Without this authorization, the user cannot create the marketing project. Otherwise the user can go on to create the marketing project. When the project is saved, a final check is carried out for all authorization objects. If authorization for one of the authorization objects is missing, the marketing project cannot be saved. If a user opens a marketing project for which they have no change authorization, it is opened in display mode.

I will illustrate some examples below, but once you have seen a few examples and understand how they work, you will easily be able to use the further authorization objects based on their explanation in the above table!!

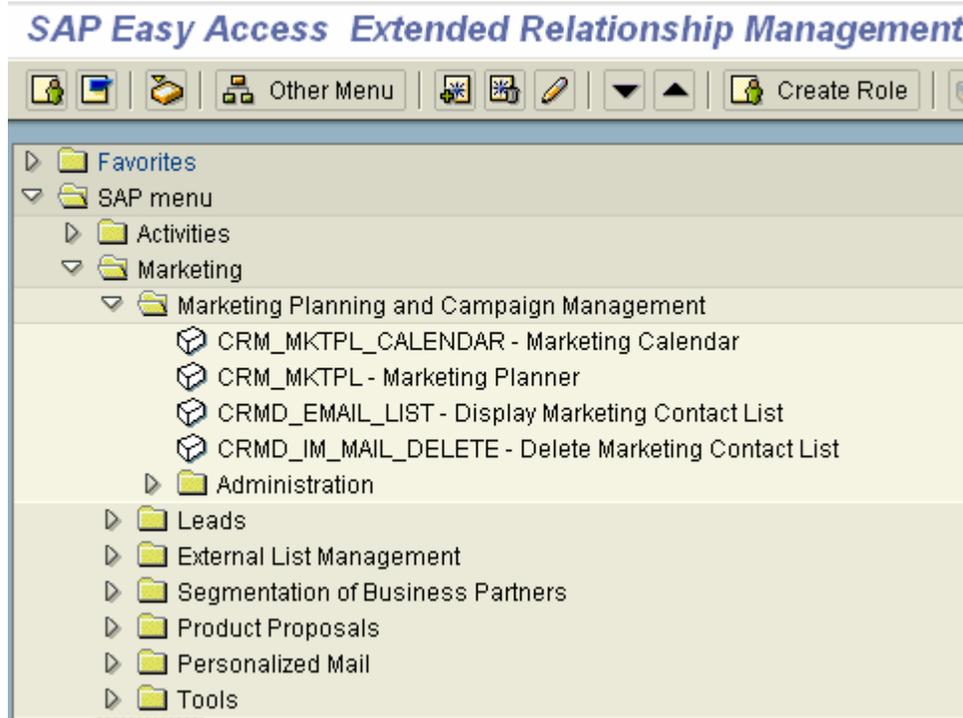
### ***5.1.1. Role for creating marketing plan and campaign***

I already explained that you could make use of standard delivered SAP roles, which you can copy and adjust according to your own wishes. Suppose that you don't find a suitable role, in this case for creating marketing plans and campaigns, you can start creating your own single role.

I already explained the different approaches and concepts how to tackle such a task. (Check authorization objects used in transactions via SU24, check which authorization objects are needed via tracing – ST01 and so on).

If you go into the CRM system, you first look up the transaction code for creating a marketing plan. (If you are not familiar with the CRM system, then ask the functional CRM responsible for the correct transaction code)

You open your sap menu and open the correct folder:

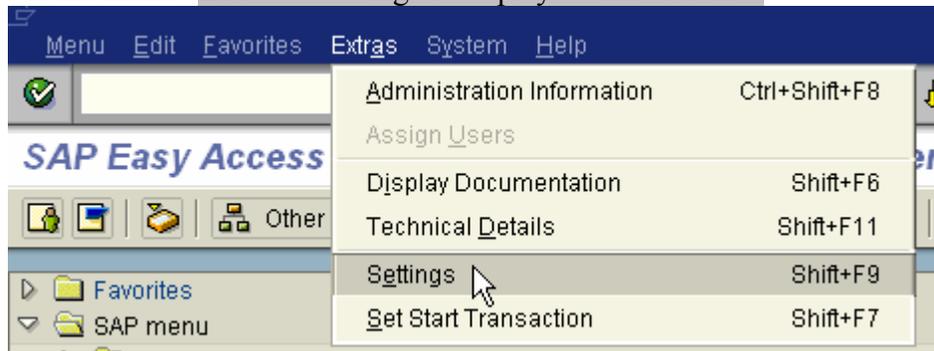


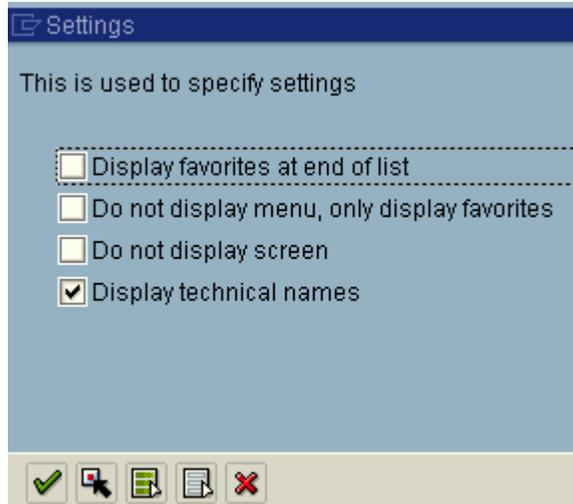
Creating a marketing plan and/or campaign happens via the path:

*SAP Menu → Marketing → Marketing Planning and Campaign Management → Marketing Planner*

Or directly by using the transaction code CRM\_MKTPL in the command field.

If you do not see the transaction codes next to the description, you need to put them on via the menu: *Extras → Settings → display technical names*





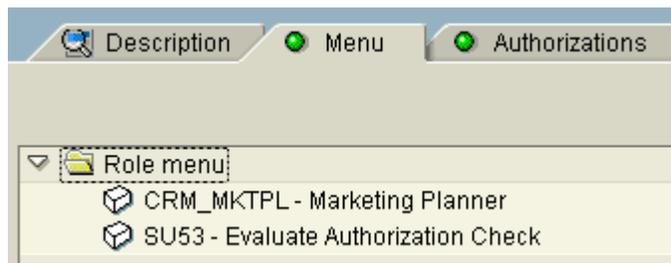
What I want to do first is create a role with all authorizations for a marketing manager, so that he will be able to create marketing plans, campaigns, trade promotions and deals. Furthermore he should be able to assign target groups to a campaign, release the campaign and execute the “target group to channel”.

Since I will test this in the SAP GUI, I can use a combination of SU53 and ST01 to analyze missing authorizations when testing my single role.

### **Procedure:**

Start the profile generator and create the single role Z\_MARKETING\_CAMPAIGN.

Now add the transaction code CRM\_MKTPL on the tab page menu. I also add SU53 in this stage, since I want to test with this role and therefore will need to evaluate authorization checks during the testing phase.



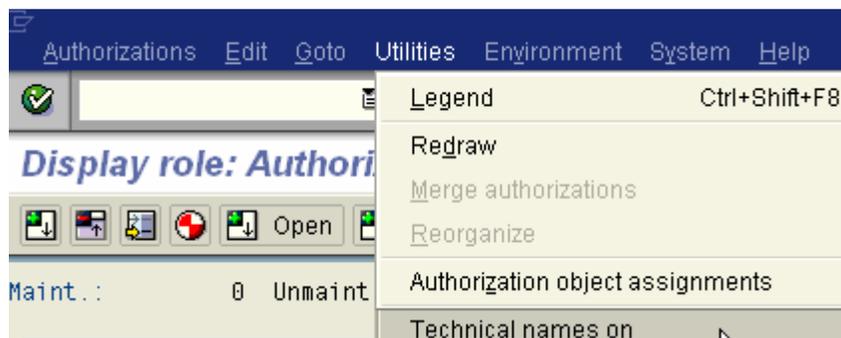
On the tab page ‘authorizations’ the default authorization objects are automatically added into the role.

In this stadium you already can create a test user “MKTMANAGER” to whom you will assign the single role for testing purposes.

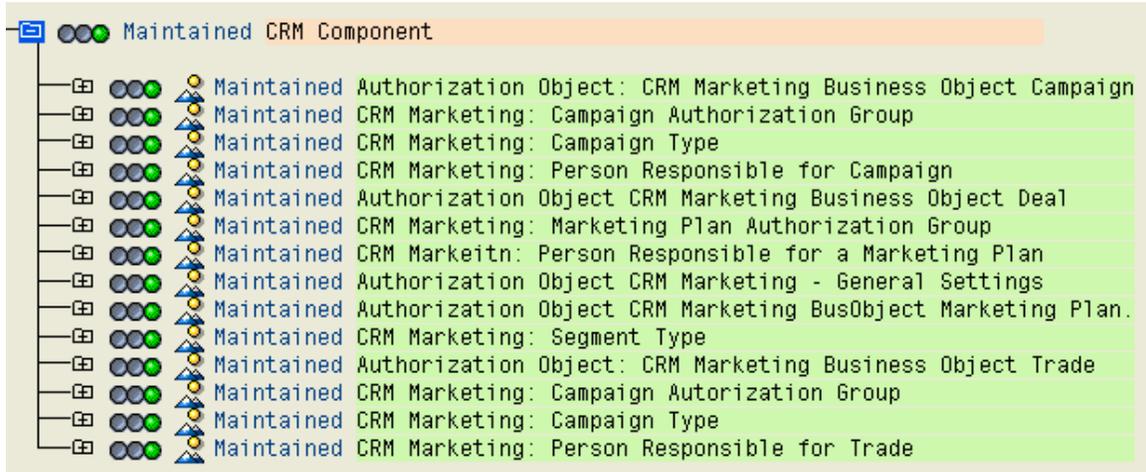
Now by adding the transaction code CRM\_MKTPL, you will notice that the following authorization objects are inserted automatically into my role Z\_MARKETING\_CAMPAIGN.

Description	Authorization-object
Status Management: Set/Delete User Status	B_USERSTAT
Status Management: Set/Delete User Status using Process	B_USERST_T
Transaction Code Check at Transaction Start	S_TCODE
Authorization Object: CRM Marketing Business Object Campaign	CRM_CPG
CRM Marketing: Campaign Authorization Group	CRM_CPGAGR
CRM Marketing: Campaign Type	CRM_CPGCTP
CRM Marketing: Person Responsible for Campaign	CRM_CPGRES
Authorization Object CRM Marketing Business Object Deal	CRM_DLM
CRM Marketing: Marketing Plan Authorization Group	CRM_MPLAGR
CRM Marketing: Person Responsible for a Marketing Plan	CRM_MPLRES
Authorization Object CRM Marketing - General Settings	CRM_MPL_AD
Authorization Object CRM Marketing BusObject Marketing Plan.	CRM_MPT
CRM Marketing: Segment Type	CRM_SEGTYP
Authorization Object: CRM Marketing Business Object Trade	CRM_TPM
CRM Marketing: Campaign Authorization Group	CRM_TPMAGR
CRM Marketing: Campaign Type	CRM_TPMCTP
CRM Marketing: Person Responsible for Trade	CRM_TPMRES

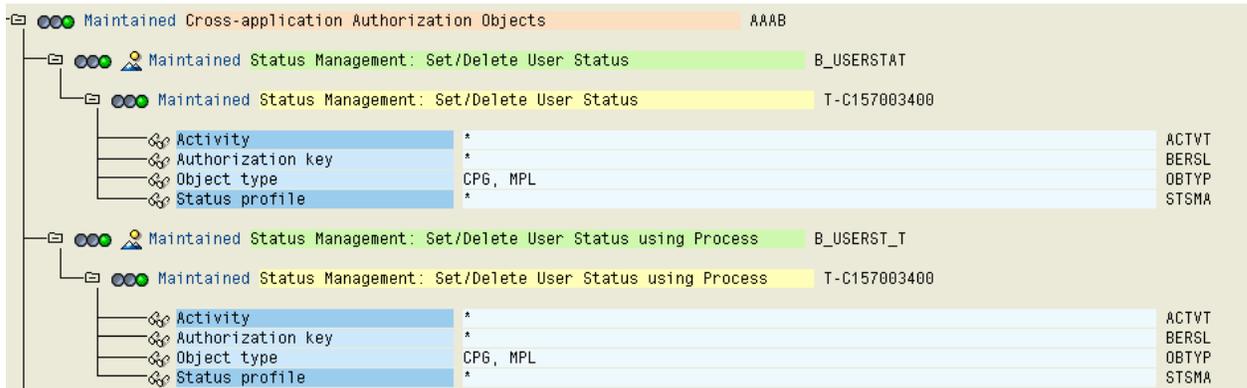
To display the technical names (object class, authorization object and so on) you go via the menu: *Utilities* → *Technical names on*



On the tab ‘authorizations’ make sure you assigned all necessary authorizations for the listed authorization objects (you will see green lights on the status display).



You will see that for the authorization objects B\_USERSTAT and B\_USERST\_T the restriction for the object type was already made by the system, being CPG (campaign) and MPL (marketing plan).



On the tab page ‘user’ assign the USER-ID you just created: MKTMANAGER and perform the user comparison.

Next you logon with the user MKTMANAGER and launch the transaction CRM\_MKTPL.

Create a Marketing plan and next a Marketing campaign:

Fill out the necessary details on the campaign level and assign a target group.

I got an authorization problem when trying to assign a target group on the tab page 'segments'. At that moment you can use SU53 to analyze the authorization problem.

```

User:      MARKET_ALL
System:    CC1      Client:      200
-----
The following authorization object was checked:

Object      S_GUI      Authorization for GUI activities
Object class BC_A      Basis: Administration

Field      Value
-----
Activity   61

Available authorizations for the object in the master record:
    
```

**Remark:** this authorization object is a non-critical basis authorization for all users and is available in the standard SAP role: SAP\_BC\_ENDUSER



Therefore, when testing a single role, I advise you to give upfront also the basic role, which will be assigned, to all end users. This avoids having to put in the missing authorization object manually into the role you are creating now!!

Without having assigned the basic end user role, I had to manually add the following authorization objects:

- 1) S\_GUI
- 2) S\_ALV\_LAYO (activity 23)
- 3) S\_BDS\_DS:
  - Business document service:
    - Class name = CGPL\_DOCUMENTS
    - Class type = OT
- 4) S\_BTCH\_ADM (background administrator ID = Y)
- 5) S\_BTCH\_JOB:
  - Job operations = RELE
  - Summary of jobs for group = ‘ ‘

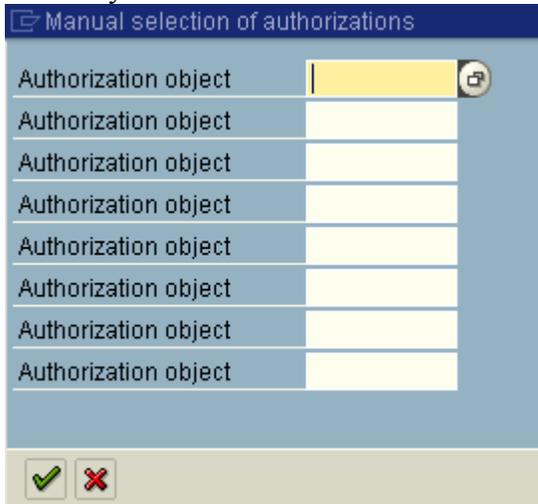
To add an authorization object manually into your role, you do the following:

Press the button 'manually'.

### **Change role: Authorizations**



You will get a popup asking you which authorization objects you want to insert manually.



You can then enter the missing authorization object, which you found by using SU53, and maintain the corresponding field values for it!

**Tip:** To make sure everything works in the correct way using your role, you can test in parallel the same process with a SAP\_ALL user.

Once you have created the role with “all authorizations” for creating a marketing plan and/or campaign, you can start with making more restrictive roles based on the authorization objects in the list

#### ***5.1.2. Restrictions made based on person responsible***

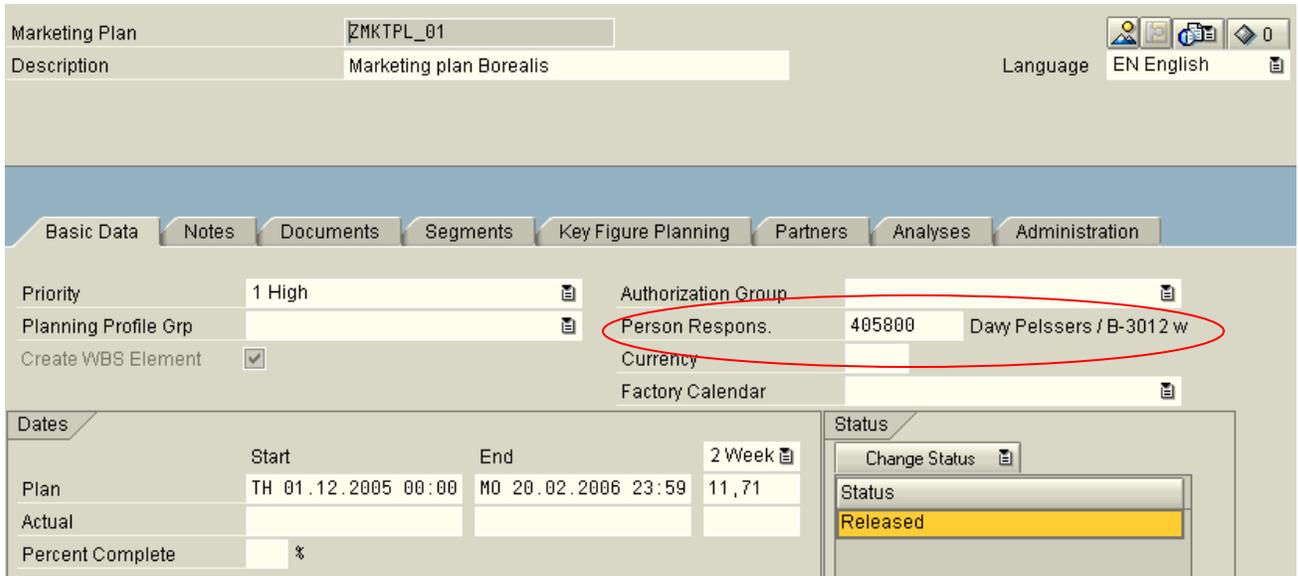
Used authorization objects:

- CRM\_MPLRES for marketing plan
- CRM\_CPGRES for campaigns

I only will illustrate one case by using authorization object CRM\_MPLRES.

I start by making a copy of my single role, which contained all authorizations:  
 Make copy of single role Z\_MARKETING\_CAMPAIGN into  
 Z\_RESPONSIBLE\_MARKET.

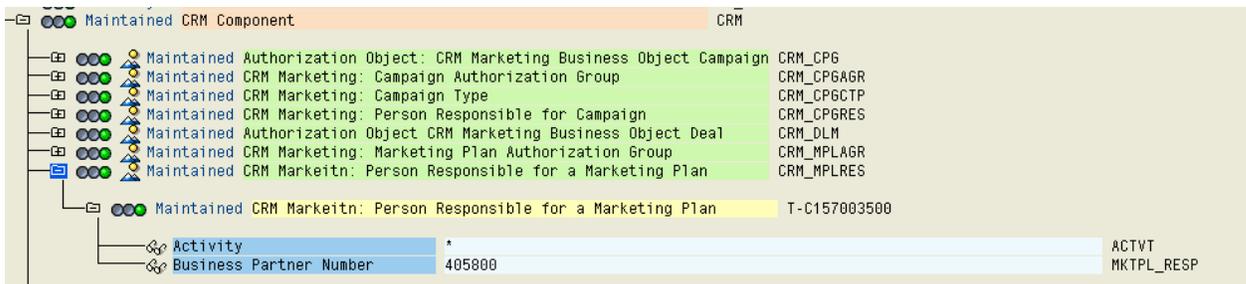
As an example I filled out the person responsible Davy Pelssers for the Marketing plan  
 ZMKTPL\_01.



I also took two other marketing plans:

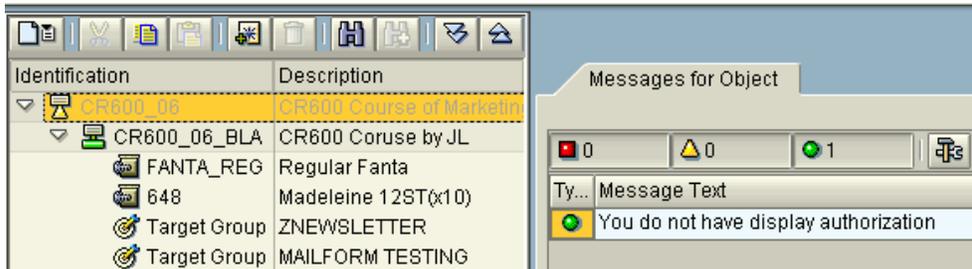
- 1) CR600\_06 where I did not fill out any person responsible
- 2) CR600\_05 where I used person responsible with BP number 405033

In my new single role Z\_RESPONSIBLE\_MARKET I entered the business partner  
 number 405800 as field value for the authorization object CRM\_MPLRES.



**Test Results:**

- 1) Marketing plan ZMKTPL\_01: I can display and change the marketing plan
- 2) Marketing plan CR600\_06: no display authorization



- 3) Marketing plan CR600\_05: also no display authorization

**Remark:** In this example I only limited the authorization object related to the Marketing plan, so even if you are not able to display the marketing plan, you still are able to view the underlying marketing campaign!!

***5.1.3. Restrictions made based on Authorization Group***Used Authorization Objects:

- CRM\_MPLAGR for marketing plan
- CRM\_CPGAGR for campaigns

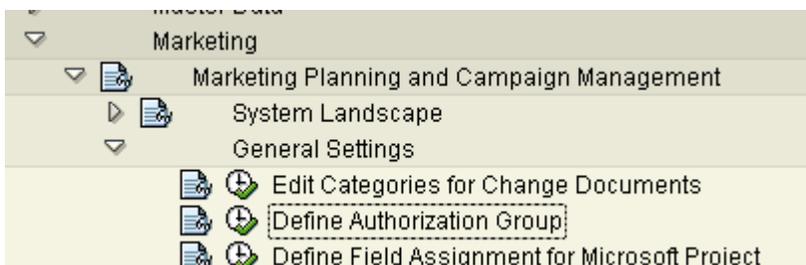
I will again illustrate one example by using the authorization object CRM\_MPLAGR!

The first thing you need to do is creating an authorization group in customizing.

Using the transaction SPRO in the command field you can access customizing.

Menu Path in customizing:

SAP implementation guide → Customer Relationship Management → Marketing → Marketing Planning and Campaign Management → General Settings → Define Authorization group



I created the authorization group ZMKT (Authorization group MPL Borealis)

CRM Marketing Planning: Authorization Group	
Aut...	Authorization Group
ZMKT	Authorisation group MPL Borealis

Now I add this authorization group to a marketing plan!

Marketing Plan: CR600\_05  
 Description: crm 600 training test 05  
 Language: EN English

Basic Data | Notes | Documents | Segments | Key Figure Planning | Partners | Analyses | Administration

Priority: 2 Medium  
 Planning Profile Grp:   
 Create WBS Element:

Authorization Group: ZMKT Authorisation group MPL Bore  
 Person Respons.: 405033 Yes to GW Dunon / B-930  
 Currency:   
 Factory Calendar:

**Role creation:**

Again you can make a copy of the role Z\_MARKETING\_CAMPAIGN and create the new single role where you will make restrictions on the authorization object CRM\_MPL\_AGR.

Maintain Field Values

CRM\_MPLAGR CRM Marketing: Marketing Plan Auth  
 MKTPL\_AUGR Authorization Group

Authorization Group

'From'					
*	<table border="1"> <tr> <td>Cl.</td> <td>AGrp</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>200 ZMKT</td> </tr> </table>	Cl.	AGrp	<input checked="" type="checkbox"/>	200 ZMKT
Cl.	AGrp				
<input checked="" type="checkbox"/>	200 ZMKT				

✓ [ ] [ ] [ ] [ ] [ ] [ ]

When assigning this new role to a user you will see that you only will be able to display marketing plans for which the authorization group ZMKT was maintained.

#### ***5.1.4. Restrictions made based on the Campaign Type***

Used authorization object: CRM\_CPGCTP

**TO BE ELABORATED**

#### ***5.1.5. Set Restrictions for assigning Attribute Sets and Attributes***

This topic elaborates the functional use of Marketing attribute sets and Marketing Attributes and how you can set restrictions via authorizations.

##### **5.1.5.1. Attribute sets and attributes –Functional info**

This chapter illustrates what marketing attribute sets and marketing attributes are, what they are used for and how you can create and assign them to one or more business partners in your system.

###### **5.1.5.1.1. What?**

The first thing you need to know is what marketing attribute sets and attributes are.

An [attribute set](#) is used to group attributes created specifically within CRM Marketing together for a marketing-related purpose. Each attribute set therefore contains those attributes belonging to a business partner that are relevant for the purpose/application at hand.

###### **Use**

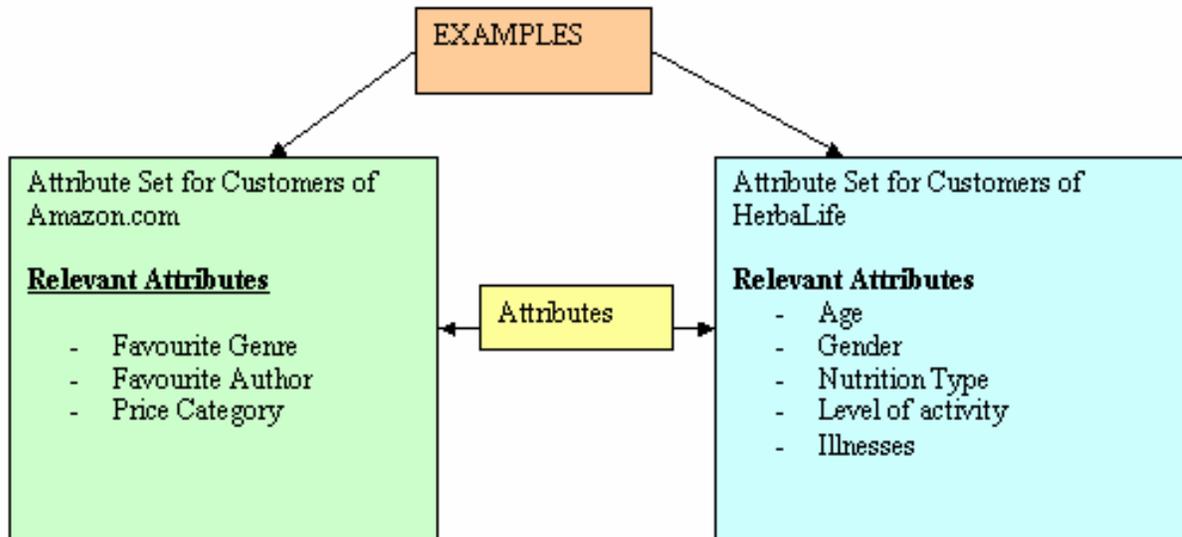
Attribute sets are used in applications such as CRM Internet Sales and CRM Telesales. In Internet Sales, they record marketing attributes for all business partners visiting Web shops, enabling the business partner to be assigned to a marketing profile. In CRM Telesales, they can be used to profile Telesales agents.

An [attribute](#) is a criterion used to describe an object.

Attributes with the following sources can be used for business partner segmentation in CRM Marketing:

1.  Business partner master data, for example "age", "gender", "address"

2.  BW master data/transaction data, for example "number of purchases per month"
3.  Attributes created especially in CRM for marketing purposes, for example "hobbies". Such attributes are combined to create [attribute sets](#).



#### 5.1.5.1.2. How can you create them?

In the SAP menu in CRM (if you do not see the same menu, you can add the CRM\_MENU in your SAP User account as default) you can create and display attribute sets and attributes using the following path:

***SAP Menu → Marketing → Segmentation of business partners → Marketing Attributes***

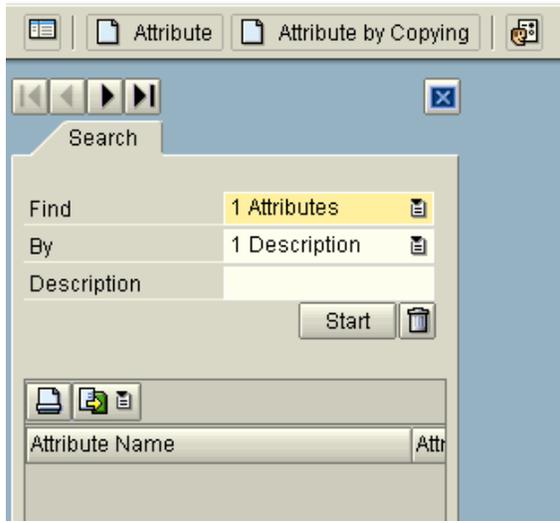


### 5.1.5.1.3. MAINTAIN/CREATE ATTRIBUTES

Launch the transaction code **CRMD\_PROF\_CHAR** to have a look at how these attributes are configured.

The first thing you will see is the locator.

#### *Maintain Attributes*



Here you can search for attributes based on several criteria such as description, data type and name.

You can also create new ones using the “create attribute” or “create by copying” buttons.

#### **EXAMPLE**

In this section you will learn how to create a marketing attribute.

Use the transaction code **CRMD\_PROF\_CHAR** to maintain/create new attributes.

In order to create a new attribute, press the button “create attribute”.



## Creation of first attributes relevant for bookstore Amazon

### - Create attribute "Genre"

The screenshot shows a software interface for creating an attribute. The attribute is named 'GENRE' with the description 'Favourite Genre'. The data type is 'CHAR Character fo...' and the length is set to 20. The 'Multi-Val.' checkbox is checked, and 'Entry Required' is unchecked. Below the form is a table with columns 'Attribute Value', 'D...', and 'Description'. The table contains five rows: SCIFI (Science Fiction), THRIL (Thriller), ROM (Roman), ACT (Action), and FICT (Fiction). Each row has a checkbox in the 'D...' column.

Attribute Value	D...	Description
SCIFI	<input type="checkbox"/>	Science Fiction
THRIL	<input type="checkbox"/>	Thriller
ROM	<input type="checkbox"/>	Roman
ACT	<input type="checkbox"/>	Action
FICT	<input type="checkbox"/>	Fiction

### - Create attribute "Author"

The screenshot shows a software interface for creating an attribute. The attribute is named 'AUTHOR' with the description 'Favourite Author'. The data type is 'CHAR Character fo...' and the length is set to 20. The 'Multi-Val.' checkbox is checked, and 'Entry Required' is unchecked. Below the form is a table with columns 'Attribute Value', 'D...', and 'Description'. The table contains three rows: KINGS (Stephen King), GRISHJ (John Grisham), and TOLKIEN (J.R.R. Tolkien). Each row has a checkbox in the 'D...' column.

Attribute Value	D...	Description
KINGS	<input type="checkbox"/>	Stephen King
GRISHJ	<input type="checkbox"/>	John Grisham
TOLKIEN	<input type="checkbox"/>	J.R.R. Tolkien

### - Create Attribute "PRICE"

Attribute: PRICE\_CAT

Description: Price Category

Data Type: CURR Currency for...  Multi-Val.

No.Char./Digits: 10  Entry Required

Decimal places: 2  Negative Values Allow

Currency: USD  Intervals Allowed

Check Table

Attribute Value	Default Value
10,00 - 20,00 USD	<input type="checkbox"/>
20,00 - 30,00 USD	<input type="checkbox"/>
30,00 - 40,00 USD	<input type="checkbox"/>
40,00 - 50,00 USD	<input type="checkbox"/>
50,00 - 60,00 USD	<input type="checkbox"/>

**Creation of attributes for HerbaLife**

I will only create two attributes for this case, since the purpose is to illustrate how we can restrict authorization for maintaining attributes and attribute sets for a business partner.

- Create Attribute "Gender"

Attribute: GENDER

Description: Gender

Data Type: CHAR Character fo...  Multi-Val.

No.Char./Digits: 10  Entry Required

Check Table

Attribute Value	Default Value	Description
MALE	<input type="checkbox"/>	Male
FEMALE	<input type="checkbox"/>	Female
TS	<input type="checkbox"/>	Trans Sexual

- Create Attribute “active sports”

Attribute	SPORT_ACTIVITY				0
Description	Kind of active sports				
Data Type	CHAR Character fo...				
No.Char./Digits	20	<input checked="" type="checkbox"/> Multi-Val.			
		<input type="checkbox"/> Entry Required			

Attribute Value	Default Value	Description
WALK	<input type="checkbox"/>	Walking
TENNIS	<input type="checkbox"/>	Tennis
FOOTB	<input type="checkbox"/>	Football
GOLF	<input type="checkbox"/>	Golf

For classification purposes you will next group attributes for which you decide that they logically belong together into an attribute set.

#### 5.1.5.1.4. MAINTAIN/CREATE ATTRIBUTE SETS

Launch the transaction code **CRMD\_PROF\_TEMPL** and have a look at how these attribute sets are configured.

Again you will see that the locator for this Object is launched.

### Maintain Attribute Sets

	Attribute Set	Attribute Set by Copying	
--	---------------	--------------------------	--

Search
Find <input type="text" value="2 Characteristic G"/> By <input type="text" value="1 Business Part..."/>
Attribute Set <input type="text"/>
Description <input type="text"/>
Business Partner <input type="text"/>
<input type="button" value="Start"/>

Attribute Set	Description
---------------	-------------

In my example I will group together the attributes I created for both Amazon and HerbaLife.

To create a new attribute set, press the button “create Attribute Set”.



#### A) Create the attribute set for customers of Amazon



You can see I assigned the three attributes I created to this attribute set:

- GENRE
- AUTHOR
- PRICE\_CAT

Furthermore, since I only want this kind of information to be assigned to Persons, and not organizations, I removed the “flag” for organizations.

Next, I also maintained the field “Maintn” which corresponds to the field BGRKP (relevant for authorization object C\_KLAH\_BKP) with the value “AAA” and the field “assign” which corresponds to the field BGRKL (relevant for authorization object C\_KLAH\_BKL) with the value AAA.

#### B) Create the new attribute set for customers of HerbaLife.

Attribute Set	Z_HERBALIFE			0
Description	Customers of Herbalife			
Authorizat.	Maintn	BBB	Assign	BBB
Person	<input checked="" type="checkbox"/>			
Organization	<input type="checkbox"/>			

Attribute	Description
SPORT_ACTIVITY	Kind of active sports
SPORT_ACTIVITY	Kind of active sports

For this Attribute I maintained the Value “BBB” for both BGRKP and BGRKL.

### Authorization specific fields on this screen are:

- Class Maintenance Authorization Group (C\_KLAH\_BKP) - BGRKP
- Classification Authorization Group (C\_KLAH\_BKL) - BGRKL

Object	Text
C_KLAH_BKL	Authorization for Classification
C_KLAH_BKP	Authorization for Class Maintenance
C_KLAH_BSE	Authorization for Finding Objects

### Class maintenance authorization group

Authorization key that determines whether a user is allowed to maintain this class. This authorization must be defined in the user master record. The authorization object is BGRKP.

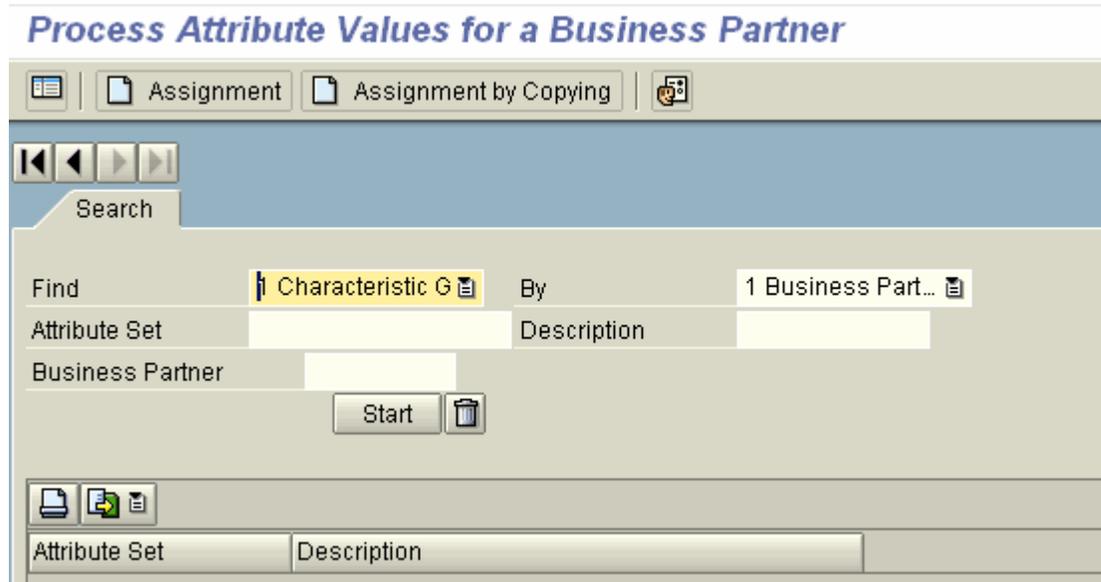
### Classification authorization group

Authorization key: determines whether a user is allowed to assign objects to this **class**. This authorization must be defined in the user master record. The authorization object is BGRKL.

### 5.1.5.1.5. Assignment of Attribute sets to Business Partners

You can do this by launching the transaction code **CRMD\_PROF\_BP**.

Again the locator for this process is launched.



You can first search for an attribute set, select it and next choose the business partner to assign it to.

Example: Search for the attribute set we just created “Z\_AMAZON”.



By double-clicking on an attribute set, you get the following screen:

### Display Attribute Values for a Business Partner

Business Partner: 100016113  
 Attribute Set: Z\_AMAZON

Description	Attribute Value

Now you can go into change mode and maintain the attributes within this attribute set for this specific customer.

Business Partner: 100016113  
 Attribute Set: Z\_AMAZON

Description	Attribute Value
Favourite Genre	
Favourite Author	
Price Category	

Attribute Values for GENRE:

Attribute Value	Descr.
<input type="checkbox"/> SCI FI	Science Fiction
<input type="checkbox"/> THRIL	Thriller
<input type="checkbox"/> ROM	Roman
<input type="checkbox"/> ACT	Action
<input type="checkbox"/> FICT	Fiction

By double clicking on an attribute you will see the possible values you can maintain on the right hand side of the screen.

Maintain for each attribute a value(s).

Business Partner: 100016113  
 Attribute Set: Z\_AMAZON

Description	Attribute Value
Favourite Genre	ROM
Favourite Genre	SCI FI
Favourite Author	KINGS
Price Category	20,00 - 30,00 USD
Price Category	30,00 - 40,00 USD

Attribute Values for PRICE\_CAT:

Attribute Value	Descr.
<input type="checkbox"/> 10,00 - 20,00 USD	10,00 - 20,00 USD
<input checked="" type="checkbox"/> 20,00 - 30,00 USD	20,00 - 30,00 USD
<input checked="" type="checkbox"/> 30,00 - 40,00 USD	30,00 - 40,00 USD
<input type="checkbox"/> 40,00 - 50,00 USD	40,00 - 50,00 USD
<input type="checkbox"/> 50,00 - 60,00 USD	50,00 - 60,00 USD

You will see that per value you maintain, a line with the combination Attribute-Maintained value will appear on the left side of the screen.

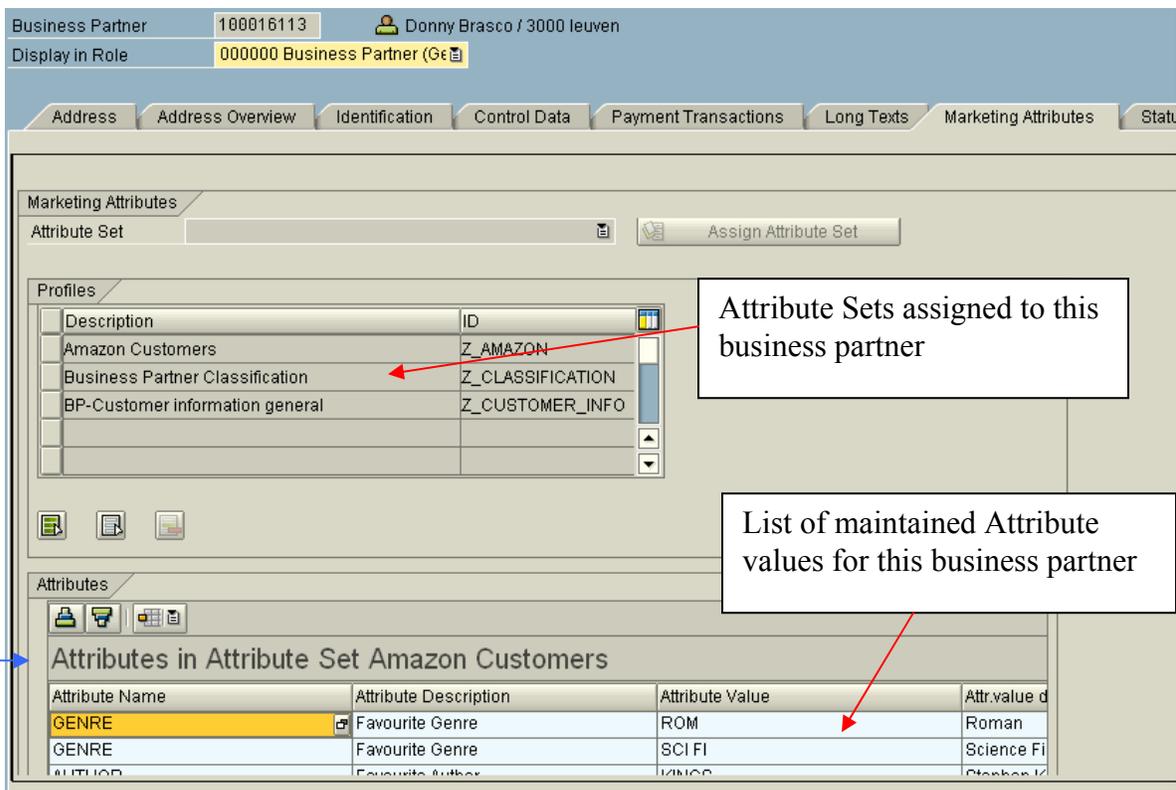
After having maintained the necessary attribute values, save the changes.



Now you can check if the assignment of this attribute set, and the maintenance of the attributes has been processed. Launch the transaction code BP (maintain business partner) and select the business partner 100016113.



Next, select the tab page “Marketing attributes”.



You can clearly see that the attribute set Z\_AMAZON has been assigned to this business partner. If you look more detailed at the attribute values, you can also see that those are the ones I maintained and belong to the attribute set Z\_AMAZON.

By double clicking on the name of the **attribute set**, you will display the maintained attribute values, which belong to this particular attribute set.

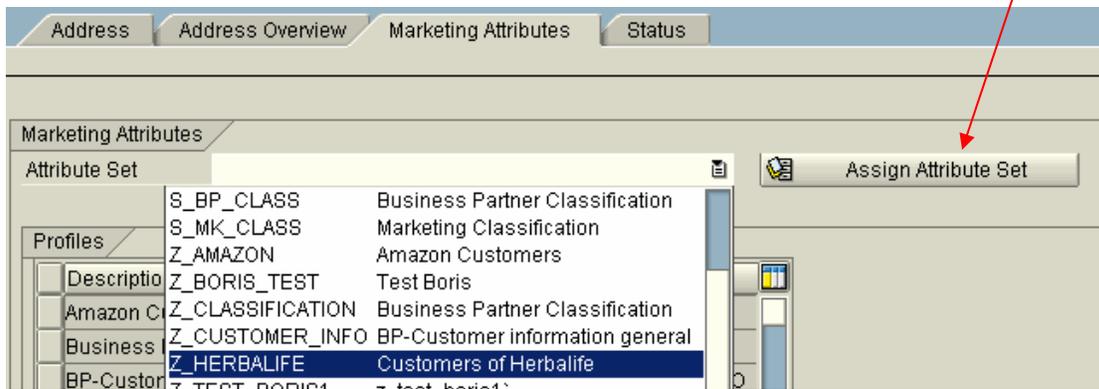
If you would have pressed the “create assignment” button, you would directly go to this screen, and could have selected the business partner and attribute set using the Input Help function.

So far we have seen one way of assigning and maintaining an attribute set for a specific business partner. Another way of performing this action is by directly assign an attribute set on business partner level (assuming you have the right authorizations for this action).

Launch t-code BP, go to the marketing tab.

**Example:** I will assign the attribute Set Z\_HERBALIFE to the customer 100016113.

If you are in change mode, you should be able to see the different existing attribute sets that are available. By selecting Z\_HERBALIFE and pressing the button “assign attribute set” you will see that it will be added in the list.



Profiles	
Description	ID
Amazon Customers	Z_AMAZON
Business Partner Classification	Z_CLASSIFICATION
BP-Customer information general	Z_CUSTOMER_INFO
Customers of Herbalife	Z_HERBALIFE

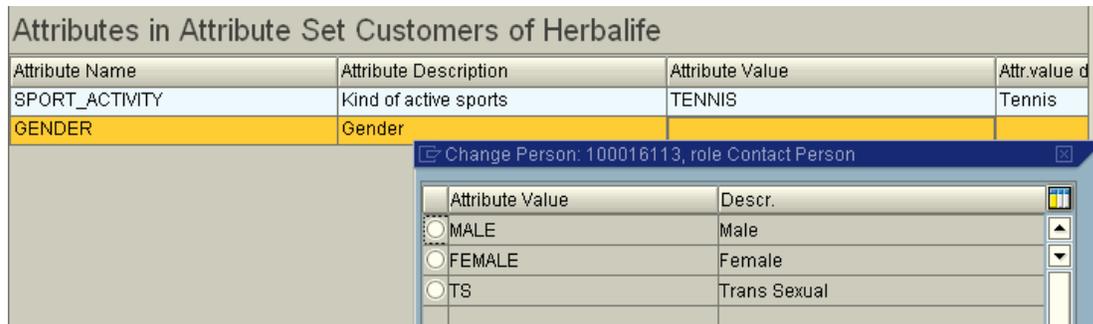
A blue arrow points to the 'Z\_HERBALIFE' entry in the ID column.

Next you can maintain values for the different attributes within this attribute set.

The screenshot shows the SAP Attributes screen for the attribute set 'Customers of Herbalife'. The table lists the following attributes:

Attribute Name	Attribute Description	Attribute Value	Attr.
SPORT_ACTIVITY	Kind of active sports		
GENDER	Gender		

By double clicking on the line of the attribute, you will get a popup with “possible values” if they are maintained on the level of the attribute.



#### 5.1.5.1.6. Authorization Setup

To grant different users authorization to maintain attribute sets, in the transaction PFCG, you assign the appropriate three-digit attribute set key under the authorization group BGKRL to the authorization object C\_KLAH\_BKL for assigning attribute sets and to the authorization object C\_KLAH\_BKP for maintaining attribute sets.

The important authorization objects are:

#### A) C\_KLAH\_BKL

##### **Definition**

Classification: authorization to classify or assign (C\_KLAH\_BKL)

This authorization group defines whether the user is allowed to assign objects to a class.

The *Classification* authorization group allows you to restrict access to certain classes.

When you create or change a class, you can enter an authorization group for classifying objects in the class. A user can only classify objects in the class if the user master record contains the authorization group you enter.

Example:

**Field Entry**

**AutCl** AAA

**Actvt** 03

In this example, the user is only authorized to display objects assigned to or classified in classes if the class concerned has classification group AAA.

This authorization group is checked in all functions for assigning objects to classes in the classification system and in master record maintenance functions.

##### **Defined fields**

Field	Possible entries	Description
-------	------------------	-------------

<b>AutCl</b>	AAA-ZZZ, 000-999	Authorization group for classification
<b>Activity</b>	01	Create
	02	Change, Delete
	03	Display

## B) C\_CABN

### Definition

This authorization object allows you to restrict access to functions for maintaining characteristics.

This authorization object is automatically checked in the following functions:

- Create characteristic
- Change characteristic
- Display characteristic

### Defined fields

Fields	Possible entries	Description
<b>Activity</b>	1	The user is allowed to create characteristics data.
	2	The user is allowed to change characteristics data.
	3	The user is allowed to display characteristics data.

### **Note**

In PPPI process management, authorization object [C PROCCHAR](#) controls external system access to characteristics. Please ensure that the authorization for creating and changing characteristics and the authorization for external system access to characteristics are not given to the same person.

## C) C\_KLAH\_BKP

**Definition**

Classification: authorization to maintain classes (C\_KLAH\_BKP)

This controls the authorization of a user to maintain a class.

This check is made in the following class maintenance functions:

- Create class
- Display class
- Change class
- Delete class

You can use the *Class maintenance* authorization group to restrict access to certain classes.

When you create or change a class, you can enter an authorization group for editing or displaying the class. A user can only maintain or display the class if the user master record contains the authorization group you enter.

Example

<b>Field</b>	<b>Entries</b>
<b>AutCl</b>	030
<b>Activity</b>	01 - 03

In this example, the user is only allowed to create, change, or display classes with the authorization group 030. The user is not allowed to delete classes with group 030, nor use the activities listed above on classes with other groups.

**Defined fields**

<b>Field</b>	<b>Possible entries</b>	<b>Description</b>
<b>AutGp</b>	AAA-999, 000-999	Authorization group for class maintenance
<b>Activity</b>	01	Create
(Activity)	02	Change
	03	Display
	06	Delete

**Note**

In the class list functions, the authorization to display (03) is checked for each class.

**5.1.5.1.7. Example Role**

In the previous chapters we have seen how to create and maintain attribute sets and attributes. We also learned how to assigned these attribute sets to a business partner via two different methods.

Now suppose you have created several attribute sets, but do want to place restrictions in who is allowed to assign and maintain particular attribute sets for business partners.

**Case:** I want my employees be able to assign only a restricted number of attribute sets. Therefore we maintained a classification (authorization group) on each attribute set.

Only attribute sets with classification AAA and BBB should be allowed for assignment by this group of employees.

To test and elaborate this I have created 3 single roles.

Role	Type	Valid From	Valid To	Name
Z_ATTRIBUTES	⊕	22.02.2007	31.12.9999	Assigning Attributes sets an
Z_BASIC_ENDUSER_ROLE	⊕	22.02.2007	31.12.9999	Noncritical Basis Authorizati
Z_CRM_BUSINESS_PARTNER	⊕	22.02.2007	31.12.9999	Business Partner

Z\_ATTRIBUTES:

- Transaction code assigned: CRMD\_PROF\_BP

Z\_BASIC\_ENDUSER\_ROLE: copy of end user role SAP\_BC\_ENDUSER

- This role allows me to perform SU53 and other non critical authorizations and was necessary to do the necessary checks

Z\_CRM\_BUSINESS\_PARTNER: copy of standard role  
SAP\_CRM\_BUSINESS\_PARTNER

- Includes the following transaction codes (actually I only needed the T-code BP for this test case)

Transaction Code	Description
BP	Maintain Business Partner
BPH	Business Partner Group Hierarchy
CRMD_ORDER_BP	Business Partner Cockpit

→ I assigned this role to my test user in order to test the assignment of attribute sets via the transaction code BP.

Now the actual restrictions we want to test are maintained in my single role Z\_ATTRIBUTES.

If we take a look at it you will see the following:

- **Cross-application Authorization Objects**
  - o OBJECT S\_TCODE
    - Transaction code: CRMD\_PROF\_BP
  
- **Classification**
  - o OBJECT C\_CABN
    - Activity: 01,02,03
  - o OBJECT C\_CLA\_PROF
    - Activity: 03,23,78
  - o OBJECT C\_KLAH\_BKL
    - Activity: 01,02,03
    - Classification authorization: AAA, BBB
  - o OBJECT C\_KLAH\_BKP
    - Activity: 01,02,03,06
    - Class Maintenance Authorization: AAA, BBB
  - o OBJECT C\_TCLA\_BKA
    - Class Type: \*

The restrictions we want to realize are obtained by restricting the Objects C\_KLAH\_BKL and C\_CKLAH\_BKP.

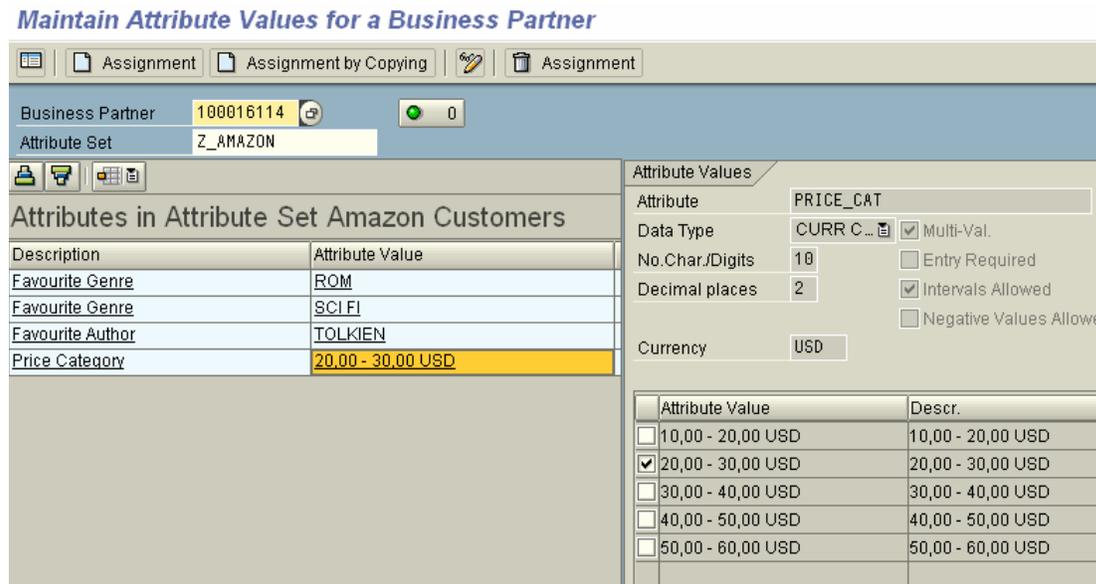
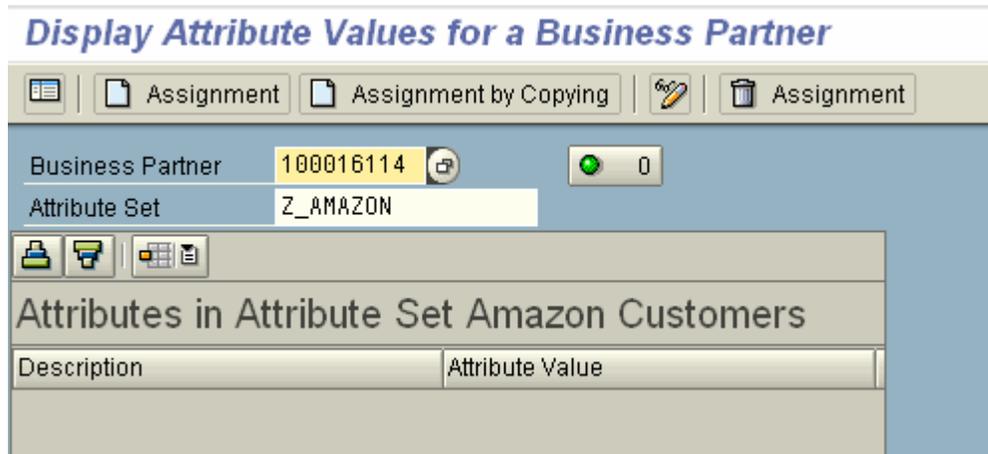
Only attribute sets with classification AAA or BBB may be assigned and maintained.

**Unit Test:**

**Method 1: Use transaction code CRMD\_PROF\_BP**

**POSITIVE TESTING**

I use a new business partner 100016114 as business partner to assign the attribute set Z\_AMAZON.



This works fine. (In fact this is my positive test, since I should be allowed to assign this Attribute Set).

Double-check this via transaction code BP:

Business Partner 100016114 Joan Collins / 3000 Leuven  
 Change in Role BUP001 Contact Person (Mai)

Address Address Overview Marketing Attributes Status

Profiles

Description	ID
Amazon Customers	Z_AMAZON

Attributes

Attributes in Attribute Set Amazon Customers

Attribute Name	Attribute Description	Attribute Value	Attr.value d
GENRE	Favourite Genre	ROM	Roman
GENRE	Favourite Genre	SCI FI	Science Fi
AUTHOR	Favourite Author	TOLKIEN	J.R.R. Tolk
PRICE_CAT	Price Category	20,00 - 30,00 USD	20,00 - 30,

You can see that the assignment has happened and the attribute values I maintained are also available.

## NEGATIVE TESTING

Now I will try to assign an exiting marketing attribute set which does not have the classification AAA or BBB maintained for the same business partner.

First of all, you will notice that in the locator search I only will be able to search for attribute sets of classification AAA and/or BBB.

The screenshot shows the SAP Search interface. The search criteria are: Find: 1 Characteristic, By: 1 Business Part..., Attribute Set: Z\*, Description: [empty], Business Partner: [empty]. The results table is as follows:

Attribute Set	Description
Z_AMAZON	Amazon Customers
Z_HERBALIFE	Customers of Herbalife

If I would search for attribute sets using “Z\*” as search criteria with another User who has all authorizations in the authorization objects C\_KLAH\_BKL and C\_KLAH\_BKP I would see the following list.

The screenshot shows the SAP Search interface with the same search criteria as above. The results table is as follows:

Attribute Set	Description
Z_AMAZON	Amazon Customers
Z_BORIS_TEST	Test Boris
Z_CLASSIFICATION	Business Partner Classification
Z_CUSTOMER_INFO	BP-Customer information general
Z_HERBALIFE	Customers of Herbalife

If I directly search on the attribute set Z\_CUSTOMER\_INFO with the user who has restricted authorizations I do not get to see it.

**Remark:** You will not get an authorization message, but you can see via the user authorization check that you do not have the right authorization values.

The following authorization object was checked:

Object C\_KLAH\_BKL Authorization for Classification  
 Object class CLAS Classification

Field	Value
Activity	03
Classification authorization group	

Available authorizations for the object in the master record:

Object C\_KLAH\_BKL Authorization for Classification  
 Authorization T-C492013200 Available in User Buffer  
 Profile T-C4920132  
 Role Z\_ATTRIBUTES

Field	Values
Activity	01, 02, 03
Classification authorization group	AAA, BBB

If I actually try to create the assignment by filling out the Customer number and the attribute set, and next press the enter button, you do get to see an authorization message!

### Maintain Attribute Values for a Business Partner

Assignment Assignment by Copying Assignment

Business Partner 100016114 0  
 Attribute Set Z\_CUSTOMER\_INFO

Attributes in Attribute Set

Description	Attribute Value

### Maintain Attribute Values for a Business Partner

Assignment Assignment by Copying Assignment

Business Partner 100016114 1 You are not authorized for: Z\_CUSTOMER\_INFO ""  
 Attribute Set Z\_CUSTOMER\_INFO

*Method 2: Use transaction BP to assign and maintain attribute set for a business partner*

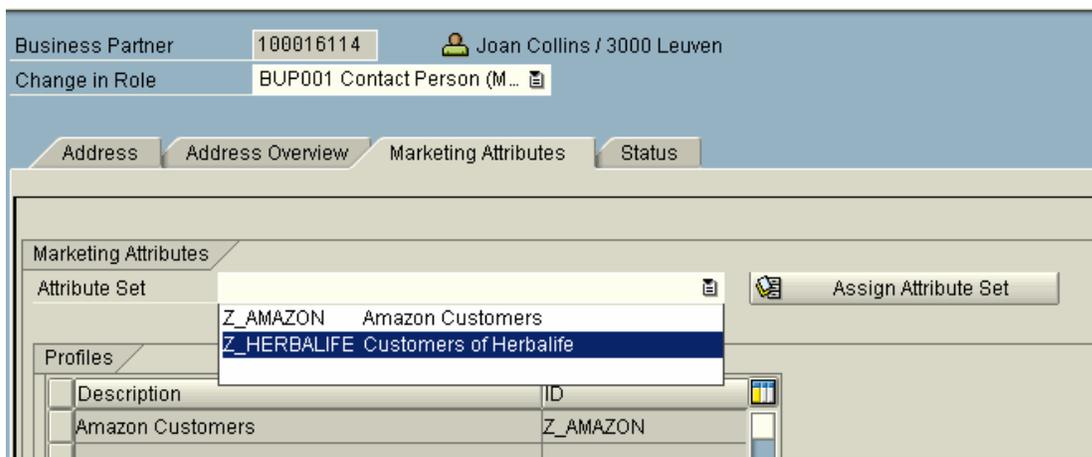
### POSITIVE TESTING

Launch transaction BP and select the customer 100016114.

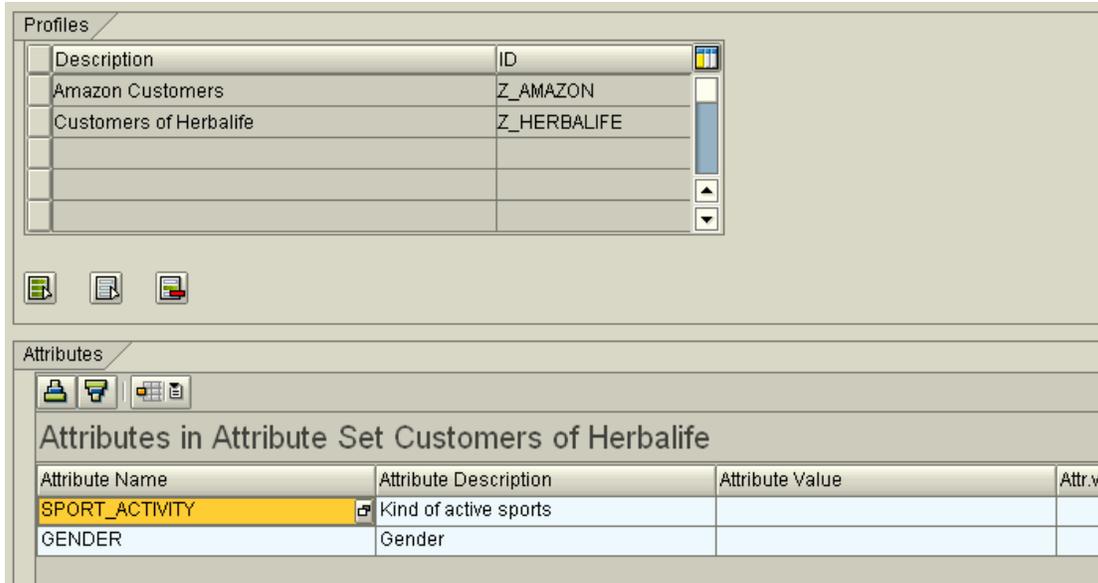
#### Maintain business partners



As you can see, in method 1 during positive testing we already assigned the attribute set Z\_AMAZON to this customer. Now we will assign the attribute set Z\_HERBALIFE.



You do this by selecting Z\_HERBALIFE and pressing the button “assign attribute set”. In the list of profiles the new entry will be added.

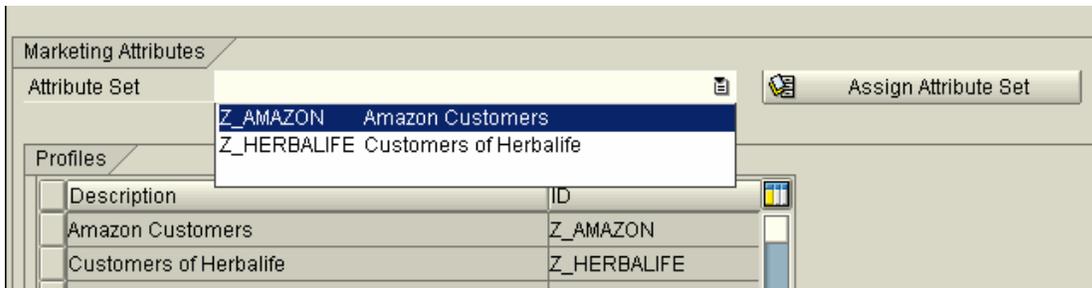


Now we will try to maintain the two attributes belonging to this attribute set, and save the business partner changes.



### NEGATIVE TESTING

Now, this test is done very quickly. Since I do not get to see any other attribute set in my dropdown list, accept the ones belonging to the classification AAA or BBB, I obviously cannot assign such an attribute set this way.



**RELEVANT OSS NOTES:**

Note Number	Object	Description/Symptom
674696		Inherited characteristics are not displayed
601349		Authorizations Enhancement of attribute set: Up to now, you can only assign one authorization for attribute sets, that is, you cannot differentiate between editing an attribute set and a classification. <a href="#">SAPKU40001</a>
581373		Maintenance of attribute Sets in several languages: Currently, attribute sets are only valid in the language in which they are maintained. (release 3.0 and 3.1 )
357914		Class Create: Authorization Check: When you create a class via the BAPI or the API CLMA_CLASS_MAINTAIN, the system does not check the authorization of object C_KLAH_BKP (authorization for class maintenance from the authorization group).
369818		Authorization check BAPIs for reading class data
1002036		MKTATT: wrong F4 values for markt attribute set authorization group: TRX: CRM_PROF_TEMPL. While Creating an attribute set we give two authorizations. One for maintaining the attribute set and one for assigning that attribute set to BP. But for both these authorizations F4 help is same.
446634		Authorization Check for Characteristic groups (prerequisite is note 456375) (valid for release 3.0)
585415		Authorizations for attribute sets (prerequisite is note 446634) (Valid for release 3.0 and 3.1)
456375		Profiles: Creating a characteristic group via template (Valid for release 3.0)
1021841		Authorization check for Marketing attributes: Even though you only have read-only authorization (authorization object C_KLAH_BKP), the system allows you to enter changes and only issues an error message when you try to save your entries. (Valid for release 5.1.)

## 5.2. Business Partner Security

The table below shows the security-relevant authorization objects that are used by the SAP Business Partner.

### Standard Authorization objects

Authorization Object	Description
<b>Business Partner</b>	
B_BUPA_ATT	<u>Authorization Types</u> : With this authorization object, you can define authorizations for any number of input fields in business partner maintenance. You determine which business partners may be maintained, depending on the field values. In Customizing you define an authorization type and specify the names of the fields that should be checked.
B_BUPA_FDG	<u>Field Groups</u> : With this authorization object you can define authorizations for individual field groups in business partner maintenance. You thereby define which fields in business partner maintenance can be maintained or viewed by a user.
B_BUPA_GRP	<u>Authorization Groups</u> : With this authorization object you define which business partners can be edited on the basis of the authorization group.
B_BUPA_RLT	<u>Roles</u> : With this authorization object you define which Business Partner roles can be edited.
B_BUPR_BZT	<u>Relationship Categories</u> : With this authorization object you establish which relationship categories can be processed.
B_BUPR_FDG	<u>Relationship Field Groups</u> : With this authorization object you can define authorizations for individual field groups in business partner relationship maintenance. You thereby define which fields of the business partner relationship can be maintained or viewed by a user.
<b>Payment Cards</b>	
B_CARD_SEC	<u>Authorization Encryption Card Master</u> : You can use this object to regulate authorization for display and/or maintenance of payment card master data.  With this object, you control the authorization for the encryption or decryption of payment card data.
B_CCARD	<u>Payment Cards</u> : You can use this object to regulate authorization for display and/or maintenance of payment card master data.

## Data Storage Security

The data of the SAP Business Partner is stored in the database of the SAP System. The security of data in SAP Business Partner is guaranteed by the general authorization concept of SAP Business Partner, which uses the authorization objects that were mentioned in the table above!

The security of sensitive data such as payment cards can additionally be protected by using encryption.

(See IMG → Cross application components → Payment Cards → Maintain Payment Card Type).

### ***5.2.1. Functional insight into Account and Contact Management***

All information in this chapter is based on the CRM 4.0 release.  
Some functionalities and concepts might not be available in previous releases.

In this chapter I will try to elaborate the most important concepts of the SAP CRM Business Partner that everyone needs to understand in order to be able to comprehend and set up business partner security.

Although I briefly mention all concepts, which you need to understand for SAP CRM security, related to SAP Business partners, **I advise everyone to follow the CR100 course, provided by SAP.** There you get the complete overview of the CRM basics and also do exercises, which might make things more understandable.

If you want to set up Business partner security in SAP CRM, these are the things you want to know.

- 1) SAP CRM Business partners
- 2) Business Partner Roles and Categories
- 3) Business partner Classification
- 4) Partner Functions
- 5) Business Partner Relationships
- 6) Data sets and field groups
- 7) Partner Processing

**Account und Contact Management** allows you to manage and maintain your accounts and contact persons. In the context of *Account and Contact Management* accounts can be understood as firms or organizations, but also persons and groups that have a relationship with your firm as customers or prospects. The terms *account* and *business partner* are used synonymously below.

In **CRM Enterprise**, business partners can be persons, organizations, or groups of persons or organizations in which your company has a business interest.

In **CRM Mobile Sales**, business partners can be organizations or persons.  
Contact persons in CRM Mobile Sales correspond to persons in CRM Enterprise.

The following basic elements are available to you within the business partner data:

### Business Partner Concepts

	People-Centric UI	SAP GUI	Mobile Client
Business partner category	The data available for your business transactions depends on the <b>business partner category</b> .		
BP role		A business partner can take on different <b>business partner roles</b> that allow you to have different views of the business partner data, according to the business function.	
Data set:		<b>Data sets</b> offer you the flexibility to build the BP roles that your company requires for its business transactions.	In CRM <i>Mobile Sales</i> , data sets are the information that you enter into required fields on the user interface. Almost all this data is exchanged with the CRM Server.
BP relationship	A <b>relationship</b> connects two business partners and is characterized by the <b>business partner relationship category</b> .		In CRM <i>Mobile Sales</i> , when a relationship is created between two business partners, business partner 2 becomes a contact person of business partner 1.
BP group hierarchy		You can depict the structure of an organization using the <b>business partner group hierarchy</b> .	

## **Business Partner Category**

### **Definition**

The business partner category denotes whether a business partner is a natural person (private individual), organization (legal person/entity or part of a legal entity, such as a department), or a group.

### **Usage**

When you create a business partner, you have to select a business partner category. Depending on the business partner category, a certain set of fields has to be filled with data. For example, if you are creating a business partner as an organization, you can enter the legal form and industry, whereas in the case of a person you can enter first names, name affixes, gender and so on.

### **Structure**

The standard business partner categories are:

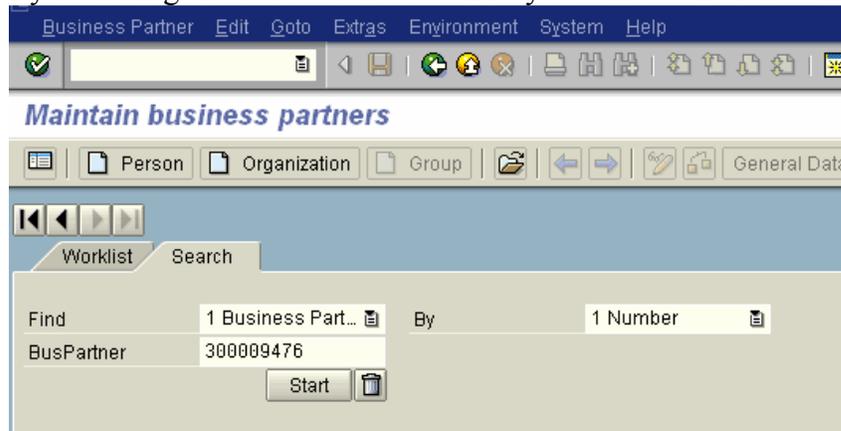
- Natural person (private individual)
- Organization (e.g. company, department in a company, club, association)
- Group (e.g. married couple, shared living arrangement)



It is not possible to create any other business partner categories. You cannot alter the business partner category at a later stage.

### **Example:**

By launching the transaction code “BP” you will see the following screen:



As you can see there are three buttons available for the creation of a business partner.

- Person

- Organization
- Group

Each of these buttons represents the creation of a business partner in a certain business partner category. It seems obvious to me whether you would want to create a business partner as a person or as an organization, so therefore I will not go deeper into this matter. The most important consequences of this choice are:

- You will see **different input fields** appear on the screen when creating a business partner in a certain category.

**Example:** a person will have the fields First Name/Last name available whereas an Organization uses other fields such as Name Org1 and Name Org2.

### Organization:

Name	
Title	
Name	CARREFOUR SCE ENTRETIEN / 751
	.

### Person:

Name	
Title	0002 Mr.
First Name	Davy
Last Name	Pelssers

- Certain roles can only be maintained for a specific business partner category.

**Display View "BP Roles": Details**

Dialog Structure

- BP Roles
  - BP Role -> data sets
  - BP Role -> calling ap
  - BP Role -> screen se
  - BP Role -> views
  - BP Role -> Subhead

BP Role: BUP001

**General Data**

Description: Contact Person

Title: Contact Person

Differentiation type: 0 General Data

**Update Procedure**

Do not update BP role

Higher-level BP role: [ ]

**Screen Selection**

Display

Do Not Display

Not specified

**Valid Business Partner Categories**

Organization

Person ←

Group

**Business Partner Number Field Selection**

Hide customer

Hide partner

Here you can see an example of the standard role BUP001 (contact person). Since this role is flagged as valid only for the Business Partner Category “Person”, you will notice that it is not available when creating a business partner of the category “Organization”.

- This also has an impact on partner processing in business activities.
- In Marketing and Campaign Management you will also see that when creating target groups, you need to make a choice if you want for example to select all organizations (customers) or the contact persons of those organizations.
- ...

**Business Partner Roles**

Business partners are created only once in your system, but they can have different roles.

- A business partner might be related to your company from different point of views. It depends on the business process that this business partner is involved in, which kind of information about him is needed.

For example, for the goods delivery transaction, information about the shipping and delivery conditions is required; for the sales order transaction, delivery dates and payment conditions are relevant.

- You can maintain a business partner in more than one role. A business partner in the SAP CRM system is at least created in the role “Business partner (general)”. General information that is valid for all roles is maintained on this level.

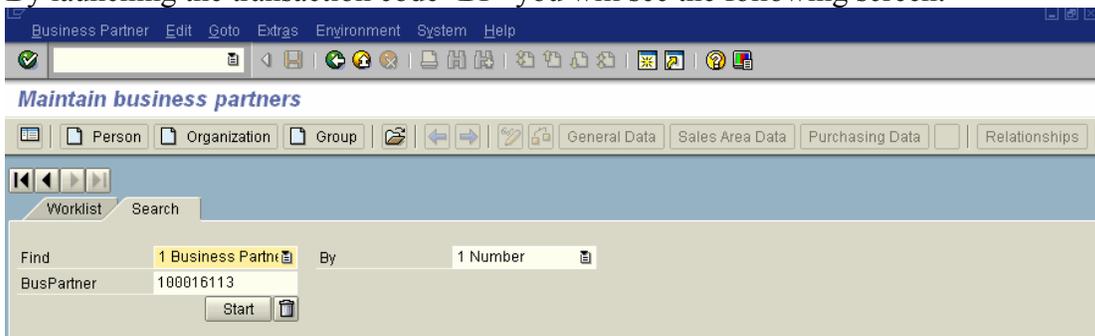


- Each partner role contains various data sets:
  - General data
  - CRM specific data
  - Relationships
  - ....

### What does this mean concrete?

Let's have a look at the business partner creation screen.

By launching the transaction code 'BP' you will see the following screen:

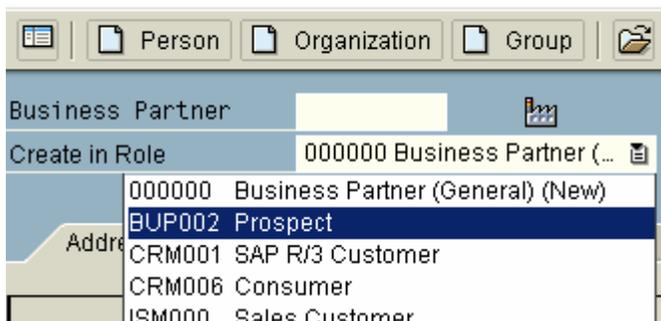


As explained in the previous topic, you have three buttons to create a business partner, determining the business partner category in which you will create him.

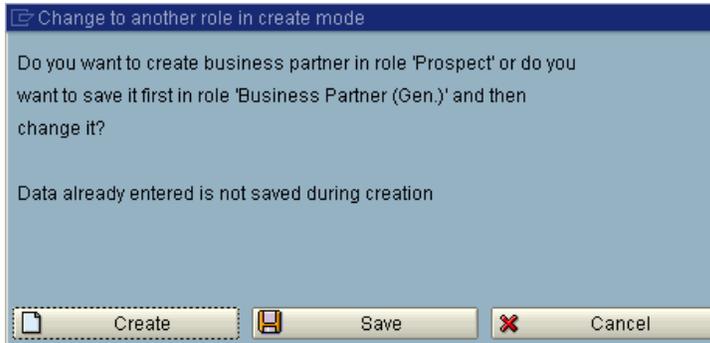
→ Either create a person, organization or group

Let us create an organization in the role BUP002 (prospect):

### **Create Organization**



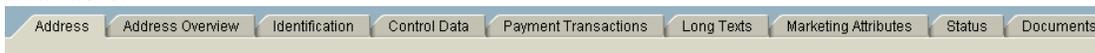
By immediately choosing to create the business partner in the role prospect (for that matter in any other role which is not the business partner (general) role) the system will come up with a pop-up asking you the following:



Should you already have maintained general information for the business partner (before choosing another role than the Business partner (general) you can save this information first. In this way the already entered information is not lost when maintaining the business partner in the other role.

If you did not maintain general information, and immediately chose to create the business partner in the role prospect, than you press the create button, and start maintaining information for this role. All general information is then automatically stored in the role Business partner-general.

Now depending on the role that you chose, you will see different tab pages that are available:



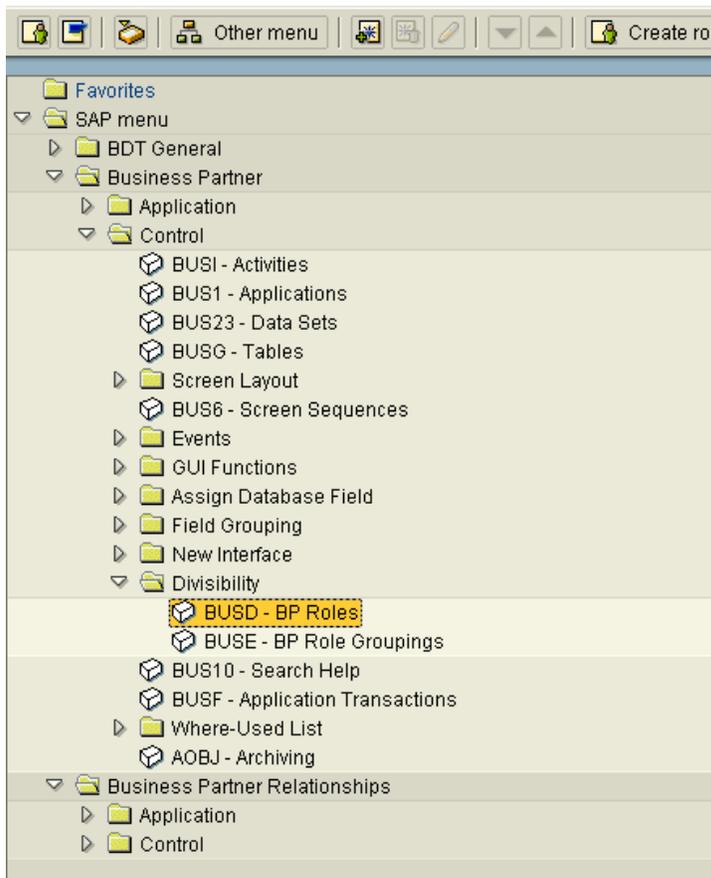
Again, what kind of information you will be able to maintain depends on both the business partner category and the role you are creating the business partner in.

### **Definition of roles**

If you want to look at the definition of the standard delivered roles by SAP, you can launch the transaction code '**BUPT**'.

This will launch the SAP Easy Access menu for Business partners.

**SAP Easy Access Business Partner: Task Menu**



To have a look at the Business partner roles, you will choose transaction code **BUSD**.

**Change View "BP Roles": Overview**

Role	Description	Title
000000	Business Partner (General)	Business Partner (Gen.)
BBP000	Vendor	Vendor
BBP001	Bidder	Bidder
BBP002	Portal Provider	Portal Provider
BBP003	Plant	Plant
BBP004	Purchasing Company	Purchasing Company
BEA001	Billing Unit	Billing Unit
BUP001	Contact Person	Contact Person
BUP002	Prospect	Prospect
BUP003	Employee	Employee
BUP004	Organizational Unit	Organizational Unit
BUP005	Internet User	Internet User
CRM000	Customer	Customer
CRM001	Sold-To Party	Sold-To Party
CRM002	Ship-To Party	Ship-To Party
CRM003	Payer	Payer
CRM004	Bill-To Party	Bill-To Party
CRM005	Competitors	Competitors
CRM006	Consumer	Consumer

In the screenshot above you see the standard SAP delivered roles.

If we take a look at for example the role BUP002 (Prospect), you will see:

BP Role: BUP002

**General Data**

Description: Prospect

Title: Prospect

Differentiation type: 0 General Data

**Update Procedure**

Do not update BP role

Higher-level BP role:

**Screen Selection**

Display

Do Not Display

Not specified

**Valid Business Partner Categories**

Organization

Person

Group

**Business Partner Number Field Selection**

Hide customer

Hide partner

Especially important here is the option where you can flag for which business partner category the role is valid.

If you want to know what the other fields serve for, place your mouse on the field, press F1 for technical help and the SAP Help info will come up.

**Remark:** Remember NEVER to change standard delivered roles!

If you need to make customer changes, just copy the existing role that you need to change into a Z or Y role and make the necessary settings there.

Which roles your company will use, you can maintain in customizing (SPRO):

SAP IMG → Cross Application Components → SAP Business Partner → Business Partner → Basic Settings → Business Partner Roles

**Change View "Properties of Business Partner Roles": Overview**

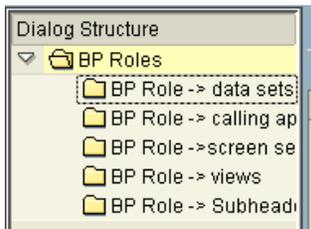
New Entries

BP Role	Standard Title	Hide	Position	Title
BBP000	Vendor	<input checked="" type="checkbox"/>		
BBP001	Bidder	<input checked="" type="checkbox"/>		
BBP002	Portal Provider	<input checked="" type="checkbox"/>		
BBP003	Plant	<input checked="" type="checkbox"/>		
BBP004	Purchasing Company	<input checked="" type="checkbox"/>		
BEA001	Billing Unit	<input checked="" type="checkbox"/>		
BUP001	Contact Person	<input type="checkbox"/>		
BUP002	Prospect	<input type="checkbox"/>		
BUP003	Employee	<input type="checkbox"/>		
BUP004	Organizational Unit	<input checked="" type="checkbox"/>		
BUP005	Internet User	<input checked="" type="checkbox"/>		
CRM000	Customer	<input type="checkbox"/>		
CRM001	Sold-To Party	<input type="checkbox"/>		SAP R/3 Customer
CRM002	Ship-To Party	<input checked="" type="checkbox"/>		
CRM003	Payer	<input checked="" type="checkbox"/>		
CRM004	Bill-To Party	<input checked="" type="checkbox"/>		
CRM005	Competitors	<input checked="" type="checkbox"/>		
CRM006	Consumer	<input type="checkbox"/>		
FS0000	Financial Services BP	<input checked="" type="checkbox"/>		

This has an impact on the dropdown list for choosing the business partner role when creating a business partner via transaction code BP.

### Link Role and corresponding Data Sets

In order to see the available data sets for this role, select this option in the dialog structure!



For the role Prospect, these are the ones available in standard SAP.

BP Role:	BU002	Prospect
BP Role -> data sets		
Set	Name	
BUA010	Addresses	
BUB010	Relationships	
BUP010	Central Data	
BUP160	Status	
CRM003	CRM Long Texts	
CRM005	CRM Marketing Attributes	
CRM010	CRM Sales	
CRM020	CRM Shipping	
CRM030	CRM Pricing	
CRM040	CRM Classification	
CRM080	CRM Partner Functions	
CRM101	CRM Status (Sales)	
CRM102	CRM Status (Shipping)	
CRM103	CRM Status (Billing)	
CRM140	CRM Organization	

Data Sets are building blocks for defining business partner roles in the business processes of your enterprise.

### Link Data Sets and field groups

If you now want to look at the details of such a data set, you will have to look up this information in customizing (SPRO).

*SAP IMG → Cross Application Components → SAP Business Partner → Business Partner → Basic Settings → Field Groupings → Configure Field attributes per BP role*

### Change View "Field Grouping"

Field Grouping	New Entries
Field Grouping Object Part	
Objec...	Descriptn
000000	Business Partner (General)
BUP001	Contact Person
BUP002	Prospect
BUP003	Employee
BUP004	Organizational Unit
CRM001	Sold-To Party
CRM002	Ship-To Party
CRM003	Payer
CRM004	Bill-To Party
CRM005	Competitors
CRM006	Consumer

Select the role you want to analyse and press the button “Field Grouping”.

Data set		Field groups						
Data set	Description	Field grp	Description	Hide	Req.entry	Opt.entry	Display	Not spec.
BUA010	Addresses	62	Address: Language Key (Co...	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
BUP010	Central Data	63	Address: Street	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
BUP160	Status	64	Address: P.O. Box	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
CRM003	CRM Long Texts	65	Address: City	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
CRM005	CRM Marketing Attributes	66	Address: Postal Code	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
CRM010	CRM Sales	67	Address: District	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CRM020	CRM Shipping	68	P.O.Box Address: Postal Co...	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
CRM030	CRM Pricing	69	Address: Country	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
CRM040	CRM Classification	70	Address: Region	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
CRM080	CRM Partner Functions	71	Address: Standard Commun...	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CRM101	CRM Status (Sales)	72	Address: Telephone Number	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
CRM102	CRM Status (Shipping)	73	Address: Fax Number	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
CRM103	CRM Status (Billing)	74	Address: c/o Name	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CRM140	CRM Organization	75	Address: House Number Su...	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		76	Address: House Number Ra...	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In this screen you see the different Data Sets that are available for the role Prospect. Each data set contains one or more field groups. For each field group you can decide whether it should be hidden, mandatory and so on.

To look at the different data sets, just double click on the data set on the left side of the screen and the corresponding field groups will appear on the right hand side of your screen.

### Link Field Group - Fields

Now the last thing you might want to do is have a look at a specific field group to see which fields are contained in the field group.

*Check two field groups:*

- 63: Address: Street (Belonging to Data Set BUA010 – addresses)
- 8: Forms of address (belonging to Data Set BUP010 - Central Data)

Use the transaction code **BUS2** to look at the field groups and the corresponding fields.

### Change View "Field Groups": Overview

Fld...	Description
1	Partner Number (+ Role for Change Doc. Display)
2	Grouping
3	Partner Type
5	Search Terms
8	Form of Address
9	Bank Details

### Field Group 8: Form of Address

Table	Field name	Input field	Not a req. field
BUS000FLDS	TITLE_MEDI	<input checked="" type="checkbox"/>	<input type="checkbox"/>
BUT000	TITLE	<input type="checkbox"/>	<input type="checkbox"/>

### Field Group 63: Address- Street

Table	Field name	Input field	Not a req. field
ADDR1_DATA	STREET	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ADDR2_DATA	STREET	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Business Partner Classification

Customer data is divided according to business points of view into different classes in SAP CRM and SAP R/3. Customer data can represent customers, prospective customers, competitors or consumers, for example. This classification is realized in different ways in the data models of SAP business partner and R/3 customer master.

In SAP R/3 customer master, the R/3 account group controls the classification, whereas in SAP CRM the classification is controlled via an independent attribute called classification in SAP business partner, hereafter called the CRM classification.

### R/3 Account Group

Every R/3 customer master has to be assigned an account group that determines the properties of business partners. These include in particular:

- Master data fields
- Number ranges

- Specific functionality for sales and distribution

There are more than 20 different account groups available in the standard SAP R/3 delivery.

### CRM Classification

You can assign one or more classifications to each business partner. These determine:

- Master data fields
- The number ranges are not directly assigned to the CRM classification. The number range is determined by the so-called business partner grouping. When creating a business partner you can assign a grouping to the business partner. If you do not assign a grouping, SAP CRM uses the specified standard grouping for internal or external number assignment.
- Specific functionality

The following classifications are available in SAP CRM:

CRM Classification	Representation in PIDE
Consumer: Organization	A
Customer	B
Prospective Customer	C
Competitor	D
Consumer: Person	E

You can assign more than one classification when creating a business partner. The classifications obey the following hierarchy.

Consumer > Customer > Prospective Customer > Competitor

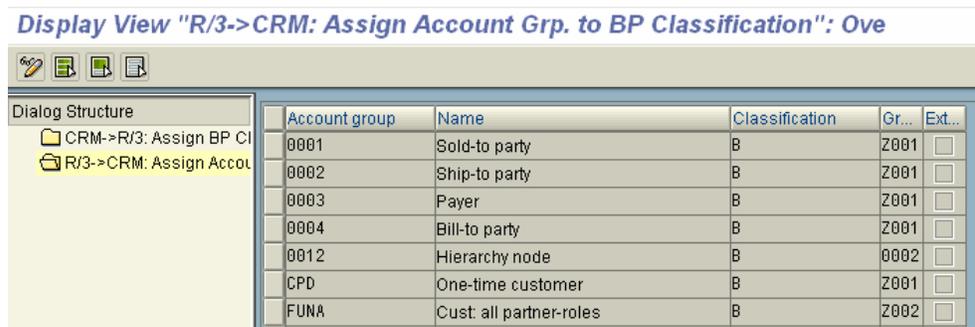
For example, if you assign the classifications *Consumer* and *Customer* to a business partner, the leading classification in the mapping process to R/3 account groups in SAP R/3 is the classification *Consumer*.

Mapping rules have to be set between the CRM classification and the R/3 account group when exchanging data between R/3 customer master and business partner in SAP CRM. These mapping rules are defined in both directions, that is, SAP R/3 to SAP CRM and vice versa. You define these mapping rules in the transaction **PIDE** in SAP R/3.

Specifying the number assignment strategy that you choose for exchanging data between SAP R/3 and SAP CRM plays a deciding role in setting the mapping rules.

**PIDE:**

**Display View "R/3->CRM: Assign Account Grp. to BP Classification": Ove**



Account group	Name	Classification	Gr...	Ext...
0001	Sold-to party	B	Z001	<input type="checkbox"/>
0002	Ship-to party	B	Z001	<input type="checkbox"/>
0003	Payer	B	Z001	<input type="checkbox"/>
0004	Bill-to party	B	Z001	<input type="checkbox"/>
0012	Hierarchy node	B	0002	<input type="checkbox"/>
CPD	One-time customer	B	Z001	<input type="checkbox"/>
FUNA	Cust. all partner-roles	B	Z002	<input type="checkbox"/>

**Classification on Business Partner level in SAP CRM:**

Display in Role: CRM001 SAP R/3 Customer

Address | Address Overview | Identification | Control Data | Payment Transactions | Classification/Hours

**Classification**

Industry Sector

Competitor

Prospect

Consumer

Customer Since

Rented Address

Nielsen ID

Customer Class

**Business Partner Functions and relationships**Definition

**Relationship categories**, such as *has the contact person*, are the definitions of business partner relationships, the business-relevant connections between partners.

**Partner function categories**, such as *contact person*, are hard-coded classifications representing sets of business responsibilities.

Use

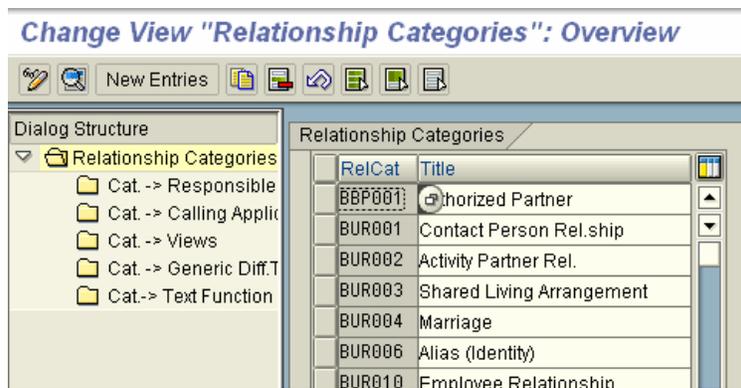
Relationship categories are used in business partner master data. Partner function categories are also used in master data (for sales area-specific partner function assignments), and additionally in transactions and in Customizing for partner processing.

Relationship categories and partner function categories closely correspond to each other. This correspondence allows the system to use business partner master data in transaction processing. Using master data in transaction processing is a crucial part of partner determination.

For example, when you create the relationship "Johnson Electronics *has the contact person* David Wilson", the system knows that, in transactions where Johnson Electronics is the sold-to party, David Wilson performs the partner function *contact person*.

### **Display Available Relationship Categories**

Launch the transaction code **BUBA** in order to have a look at the standard delivered ones.



When taking a more detailed look at for example the relationship category BUR001 (contact person relationship) you will see the following:

General Data	
Description	
From BP1's View	Has Contact Person
From BP2's View	Is Contact Person For
Title	Contact Person Rel.ship
Additional Data	
Differentiation type	0 General Data
Data management app.	BUR BP Relation.: Data (Attr.Tab.)
Screen sequence	BUB1 BP Relationship/BP Role Definition: Standard
<input checked="" type="checkbox"/> One-Way Relship Cat	
Semantic Checks	
Time constraint	4 Record exists at least once from minimum to maximum
No. in each set	
Cardinality	
<input checked="" type="checkbox"/> Standard Reltnshp	
Roles	
Role (Partner1)	
Role (BP2)	
Business Partner Categories	
Partner 1	Partner 2
<input checked="" type="checkbox"/> Organization	<input type="checkbox"/> Organization
<input checked="" type="checkbox"/> Person	<input checked="" type="checkbox"/> Person
<input checked="" type="checkbox"/> Group	<input type="checkbox"/> Group

Since a relationship is always created between 2 business partners, you will have a description, which will be different from each business partner's point of view.

Again, if you want to know more about the meaning of the different field options, use the F1 technical help to learn more about this.

### **Creating relationships between business partners:**

Business partner relationships are created or maintained using the transaction code BP.

When creating or changing a certain business partner, you can also create a relationship for this business partner using the button "Relationships".

The screenshot shows the SAP Business Partner screen for organization 46012426, role SAP R/3 Customer. The 'Relationships' button is highlighted with a blue arrow. The screen displays the following information:

Change Organization: 46012426, role SAP R/3 Customer	
Business Partner	46012426 AHLSELL AB / 42652 V FRÖLUNDA
Change in Role	CRM001 SAP R/3 Customer...

After pressing the button relationships, you jump into the screen where you actually will be able to maintain them:

Description	Business Partner	Description	Valid from	Valid through
Has Contact Person	100016155	Hanibal Smith /	01.01.0001	31.12.9999

### Partner Functions

Partner functions describe the persons and organizations with whom you maintain business relationships and who are therefore contained in your business transactions.

You can define your own functions. However the system already contains frequently used partner functions in service processes, like sold-to party, ship-to party, contact person or responsible employee.

Look at existing Partner functions or define new ones:

**SPRO → Customer Relationship Management → Basic Functions → Partner Processing → Define Partner Functions.**

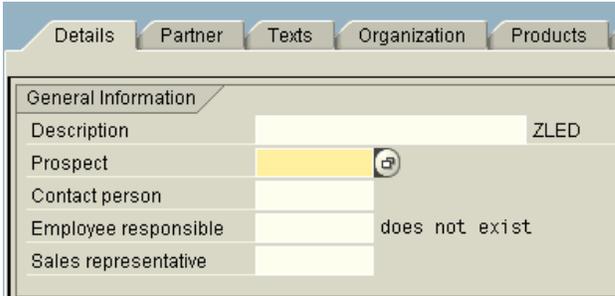
#### Change View "Partner Functions": Overview

Function	Text	Abbrev.	Function category	Usage	Relationship Cat.	Block
00000001	Sold-to party	SP	0001 Sold-to party	CRM Customer Relationship...		<input type="checkbox"/>
00000002	Ship-to party	GR	0002 Ship-to party/Ser...	CRM Customer Relationship...	CRMH02 Is the Ship-To Party...	<input type="checkbox"/>
00000003	Bill-to party	BP	0003 Bill-To Party	CRM Customer Relationship...	CRMH04 Is the Bill-To Party...	<input checked="" type="checkbox"/>
00000004	Payer	PY	0004 Payer	CRM Customer Relationship...	CRMH03 Is the payer of	<input checked="" type="checkbox"/>
00000009	Activity partner	AP	0006 Activity Partner	CRM Customer Relationship...	BUR002 Is Activity Partner ...	<input type="checkbox"/>
00000010	Sales manager	SM	0005 Employee	CRM Customer Relationship...	BUR011 Is the Responsible E...	<input checked="" type="checkbox"/>
00000011	Sales assistant	SA	0005 Employee	CRM Customer Relationship...	BUR011 Is the Responsible E...	<input checked="" type="checkbox"/>
00000012	Sales representative	SC	0005 Employee	CRM Customer Relationship...	BUR011 Is the Responsible E...	<input checked="" type="checkbox"/>
00000013	Sales clerk	SC	0005 Employee	CRM Customer Relationship...	BUR011 Is the Responsible E...	<input checked="" type="checkbox"/>
00000014	Employee responsible	ER	0008 Person responsible	CRM Customer Relationship...	CRMH06 Is the Responsible P...	<input checked="" type="checkbox"/>
00000015	Contact person	CP	0007 Contact person	CRM Customer Relationship...	BUR001 Is Contact Person For	<input checked="" type="checkbox"/>
00000016	Requester	NB	0013 Requester	B2B Enterprise Buyer		<input type="checkbox"/>
00000017	Contact person	CP	0007 Contact person	B2B Enterprise Buyer	BUR001 Is Contact Person For	<input type="checkbox"/>
00000018	Bidder	BI	0011 Bidder	B2B Enterprise Buyer		<input type="checkbox"/>
00000019	Vendor	VE	0012 Vendor	B2B Enterprise Buyer		<input type="checkbox"/>
00000020	Ship-to party	GR	0002 Ship-to party/Ser...	B2B Enterprise Buyer	CRMH02 Is the Ship-To Party...	<input type="checkbox"/>
00000021	Prospect	SP	0006 Activity Partner	CRM Customer Relationship...	BUR002 Is Activity Partner ...	<input type="checkbox"/>
00000022	Person responsible	OF	0008 Person responsible	CRM Customer Relationship...	CRMH06 Is the Responsible P...	<input checked="" type="checkbox"/>
00000023	Competitor	BT	0009 Competitor	CRM Customer Relationship...		<input checked="" type="checkbox"/>

When you define a new partner function in the Customizing activity *Define Partner Functions*, you assign it to a partner function category. The system then enters the corresponding relationship category automatically, if there is a relationship category hard-coded to correspond to this partner function category. If you enter a partner function category that is not hard-coded to correspond to a particular relationship category, you must enter the relationship category yourself. If you leave the field for the relationship category empty, the system cannot use business partner master data to determine partners for the new partner function because it does not know what relationship to look for. In

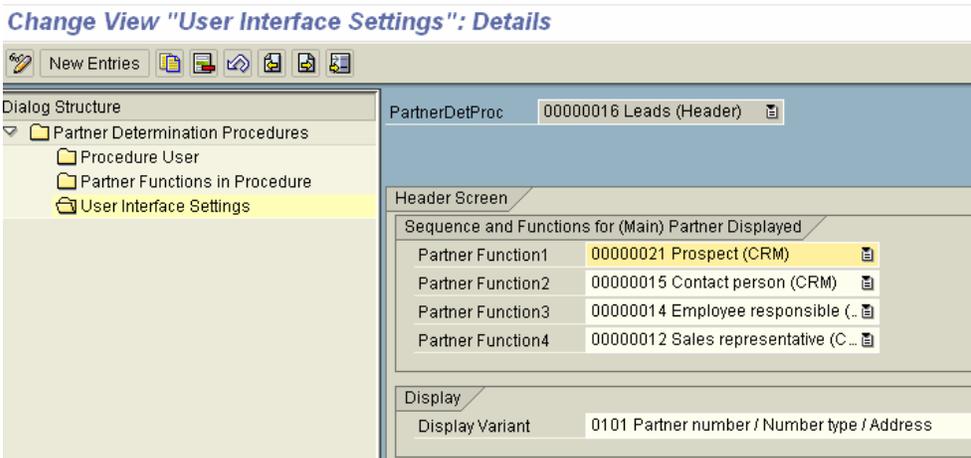
this case, for transaction processing, you must set the system to determine the partner from a source other than business partner master data, or enter it manually.

If we take look at a business transaction in the system, you will see where partner functions are used. When creating a lead in the system I will see the following screen:

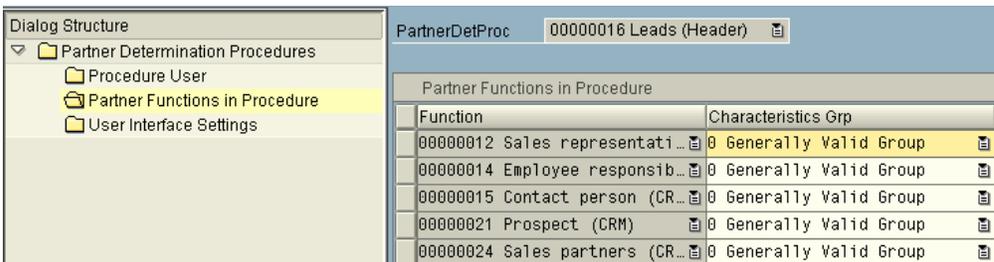


The fields Prospect, Contact Person, employee responsible and Sales Representative are all partner functions used in this kind of transaction type ZLED. These are the ones made available in your partner determination procedure, which is assigned to the transaction type.

The partner functions available on the details tab page are the ones that are defined in the User Interface Settings definition of your partner determination procedure.



The declaration of ALL partner functions that can be used in your business transaction type is done in the section „partner functions in Procedure“.



This brings us to partner processing in business transactions.

## Partner Processing

### Purpose

Partner processing controls how the system works with business partners in transactions. It ensures the accuracy of partner data in transactions by applying rules you specify in Customizing, and it makes users work easier by automatically entering certain partners and related information, like addresses.

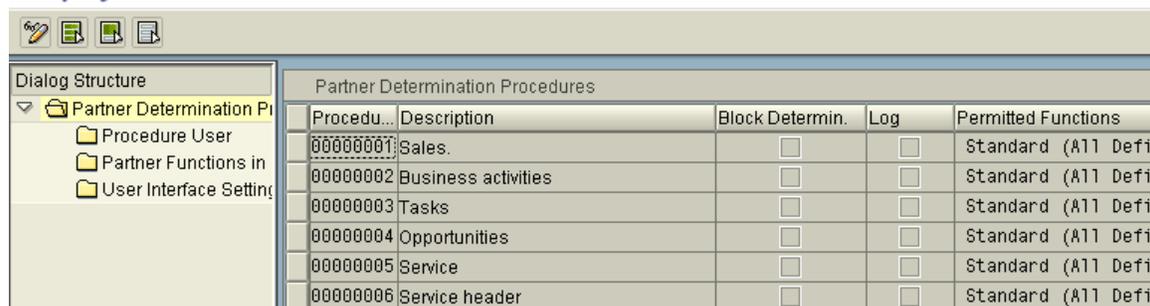
One of the most important aspects of partner processing is partner determination, the system's ability to automatically find and enter the partners involved in a transaction. In most transactions, the user manually enters one or more partners, and the system enters the others through partner determination. Various sources of information make partner determination possible; two of the most important are business partner master data and organizational data.

### Define Partner Determination Procedure

In **Partner Determination Procedures**, you specify which partner functions are involved in a transaction, assign access sequences to the functions the system should determine automatically, and set other rules for working with partners in transactions.

SPRO → Customer Relationship Management → Basic Functions → Partner Processing → Define Partner Determination Procedure

*Display View "Partner Determination Procedures": Overview*



Procedu...	Description	Block Determin.	Log	Permitted Functions
00000001	Sales.	<input type="checkbox"/>	<input type="checkbox"/>	Standard (A11 Defi
00000002	Business activities	<input type="checkbox"/>	<input type="checkbox"/>	Standard (A11 Defi
00000003	Tasks	<input type="checkbox"/>	<input type="checkbox"/>	Standard (A11 Defi
00000004	Opportunities	<input type="checkbox"/>	<input type="checkbox"/>	Standard (A11 Defi
00000005	Service	<input type="checkbox"/>	<input type="checkbox"/>	Standard (A11 Defi
00000006	Service header	<input type="checkbox"/>	<input type="checkbox"/>	Standard (A11 Defi

For every Partner function that you defined in your partner determination procedure, an access sequence is used to determine where the system should look to automatically fill in the correct business partner for this partner function.

Dialog Structure		PartnerDetProc 00000016 Leads (Header)						
<ul style="list-style-type: none"> <li>Partner Determination P...</li> <li>  Procedure User</li> <li>  Partner Functions in</li> <li>    User Interface Setting</li> </ul>	Partner Functions in Procedure							
Function	Change...	Minimu...	Maxim...	Select. limit	Calendar mai...	Changeable Addr.	Ad	
00000012 Sales representati...	<input checked="" type="checkbox"/>	0	10	0	<input type="checkbox"/>	<input type="checkbox"/>		
00000014 Employee responsib...	<input checked="" type="checkbox"/>	1	1	0	<input type="checkbox"/>	<input type="checkbox"/>		
00000015 Contact person (CRM)	<input checked="" type="checkbox"/>	0	10	0	<input type="checkbox"/>	<input type="checkbox"/>		
00000021 Prospect (CRM)	<input checked="" type="checkbox"/>	1	1	0	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
00000024 Sales partners (CR...	<input checked="" type="checkbox"/>	0	1	0	<input type="checkbox"/>	<input type="checkbox"/>		

By selecting the partner function, and look at the details, you can see the used access sequence.

PartnerDetProc 00000016 Leads (Header)	
Partner Function	00000015 Contact person (CRM)
Partner Functions in Procedure	
<b>General</b>	
<input type="checkbox"/> Block Entry on Interface	
<input checked="" type="checkbox"/> Changeable (if Correct After Entry or Determination)	
No. of Occurrences (Lowest)	0
No. of Occurrences (Highest)	10
Selection Limit (Select.Screen)	0
<b>Default Values</b>	
<input type="checkbox"/> Calendar maintenance	
<b>Address</b>	
<input type="checkbox"/> Changeable addr.	
Address for Trans.	
<input type="checkbox"/> Standard address only	
<input type="checkbox"/> No Effects on Address Changes to Preceding Documents (Trigger Address References in Change Case)	
<b>Partner Determination</b>	
Access sequence	0002 from activity partner ←
Determination tm.	0 Recurring
<input type="checkbox"/> Block Determin.	

### Define Access sequence

In **Access Sequences**, you specify the sources of data the system uses for automatic partner determination, and the order in which it checks those sources.

SPRO → Customer Relationship Management → Basic Functions → Partner Processing → Define Access Sequences

In the previous screenshot you saw that the access sequence used in the Partner Determination procedure for Leads (00000016) for the partner function “contact person” is the access sequence 0002 “from activity partner”.

Dialog Structure		Access sequence 0002 from activity partner						
Access Sequences		Individual Accesses						
Batch Seq.	Dialog Seq.	Source	Reverse Determin...	Incorrect Source	Wait	Next Access	As Bust	
10	10	COM_PARTNER_A Preceding Doc...	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
20	20	CRM_PARTNER_D DO NOT USE - ...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
30	30	CRM_PARTNER_C Business Part...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

### 5.2.2. General role SAP\_CRM\_BUSINES\_PARTNER

This standard role allows you to maintain business partners master records and business partner group hierarchies, as well as displaying the business partner Cockpit. In addition, two mini-apps for business partner search and birthday list are assigned to this single role.

You can make a copy of this standard role and assign it to people who need to have full authorization to create and maintain business partners in the system.

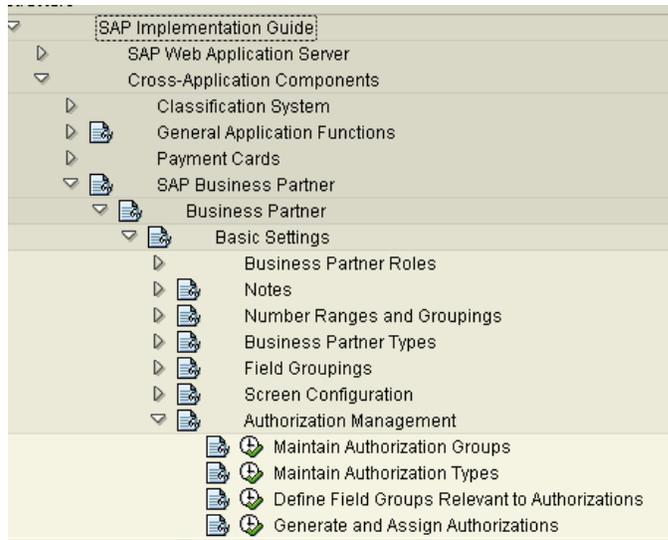
### 5.2.3. Restrictions for certain input fields based on Authorization Type

Authorization object used: B\_BUPA\_ATT

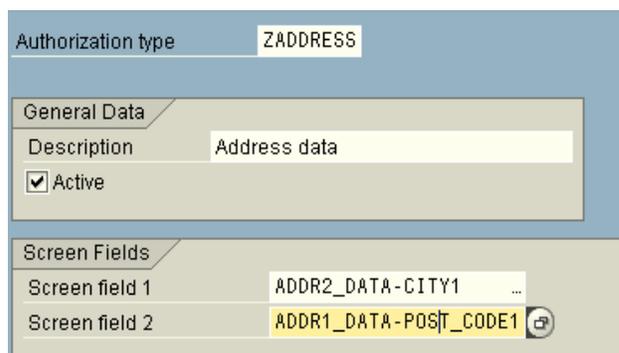
#### Procedure:

First, in customizing you define an authorisation type and specify the names of the fields that should be checked!

*SAP Implementation Guide → Cross-application components → SAP Business Partner → Business Partner → Basic settings → Authorization management*



As an example I created to authorization type ZADDRESS with two fields.



### Look up Screen Field for business partner information.

Launch business partner maintenance via the transaction code 'BP'. Next select the field for which you want to know the screen field name.

#### Example:

I want to know the screen field name of the field 'Search term 1':



If you want to know the name of a certain screen field, when displaying a certain Business Partner, you place your mouse on top of the field, and press F1. Next, in the performance assistant, press the button .

Performance Assistant

**Search Term 1 for Business Partner**

**Use**

Denotes the term that you define for a business partner, and via which you can restrict the search for a business partner in the business partner search or in the locator.

Technical Information

Screen data

Program name	SAPLBUD0
Screen number	1110

GUI data

Program name	SAPLBUPA_DIALOG_JOEL
Status	SCREEN_1000

Field data

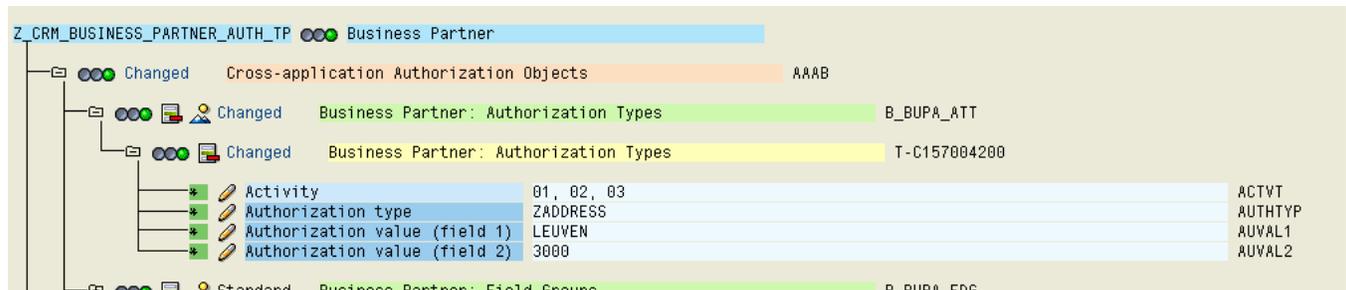
Transparent tabl	BUT000
Field name	BU_SORT1
Data element	BU_SORT1
DE supplement	0

Field description for batch input

Screen field	BUT000-BU_SORT1
Program name	SAPLBUS_LOCATOR
Screen no.	3000

✓ ✗

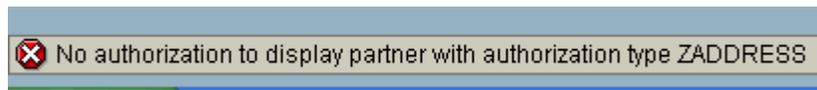
In my new role Z\_CRM\_BUSINESS\_PARTNER\_AUTH\_TP, which is a copy of SAP\_CRM\_BUSINESS\_PARTNER, I will maintain the values for the authorization object B\_BUPA\_ATT.



This means that the person with this role should only be able to create, change or display business partners that have the city 'LEUVEN' and postal code '3000'.

I now searched for a business partner that did not live in Leuven, and selected it to display.

I get the following message:



#### 5.2.4. Restrictions for certain field groups

Authorization object used: B\_BUPA\_FDG

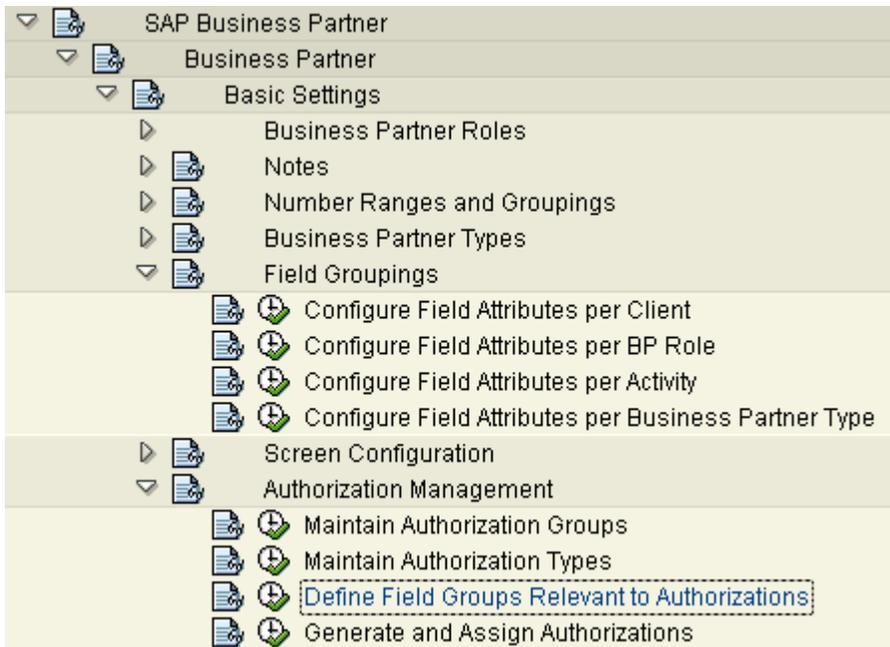
##### **Example:**

Create a new single role Z\_BP\_FIELDGRPS as a copy of the standard role SAP\_CRM\_BUSINESS\_PARTNER.

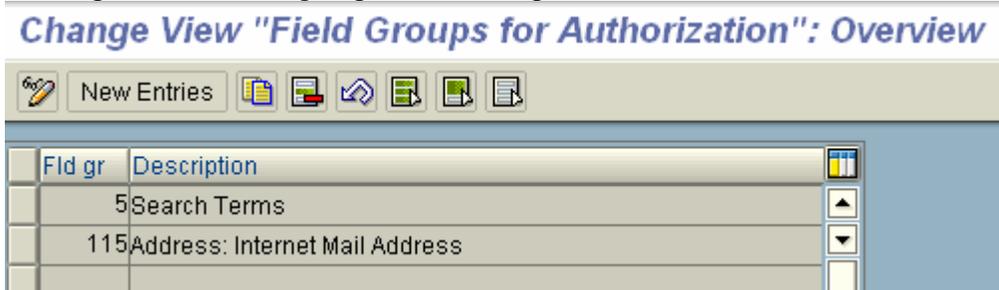
In this role I will maintain the authorization object by selecting out of the InputHelp: For example; I selected the following field groups with display only:

- 0115: address: internet mail address
- 0005: Search terms

In customizing you first define which Field Groups need to be checked for authorisations:



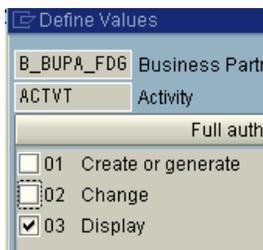
Here I put in two field groups as an example:



Now in my role, I will maintain the parameters for those field groups!  
Select in your role the authorization object B\_BUPA\_FDG and use the input help to select your field groups.

App0	Fld gr	Description
<input type="checkbox"/>	BUPA 0003	Partner Type
<input type="checkbox"/>	BUPA 0005	Search Terms
<input type="checkbox"/>	BUPA 0008	Form of Address
<input type="checkbox"/>	BUPA 0009	Bank Details
<input type="checkbox"/>	BUPA 0010	Central Block
<input type="checkbox"/>	BUPA 0011	Central Archiving Flag
<input type="checkbox"/>	BUPA 0012	Authorization Group
<input type="checkbox"/>	BUPA 0013	Partner Category: Organization
<input type="checkbox"/>	BUPA 0014	Partner Category: Person
<input type="checkbox"/>	BUPA 0015	Partner Category: Group
<input type="checkbox"/>	BUPA 0016	External Partner Number
<input type="checkbox"/>	BUPA 0017	Salutation
<input type="checkbox"/>	BUPA 0018	Data Origin Type
<input type="checkbox"/>	BUPA 0019	Language
<input type="checkbox"/>	BUPA 0020	Payment Cards
<input type="checkbox"/>	BUPA 0021	Identification Numbers
<input type="checkbox"/>	BUPA 0023	Business Activity
<input type="checkbox"/>	BUPA 0024	Person: Other Last Name
<input type="checkbox"/>	BUPA 0025	Person: First Name, Last Name
<input type="checkbox"/>	BUPA 0026	Person: Academic Title
<input type="checkbox"/>	BUPA 0027	Person: Name Affix (e.g.Title of Nobility)
<input type="checkbox"/>	BUPA 0028	Person: Name Affix
<input type="checkbox"/>	BUPA 0029	Person: Correspondence Language
<input type="checkbox"/>	BUPA 0030	Person: Complete Name Line
<input type="checkbox"/>	BUPA 0031	Person: Date/Place of Birth
<input type="checkbox"/>	BUPA 0032	Person: Personnel Number

I select the two fieldgroups I just defined in customizing: search terms & internet mail address. Next I give the authorization value I select the two fieldgroups I just defined in customizing: search terms & internet mail address. Next I give the authorization value „display“ for the authorization field activity.



When finished, it will look like this:

Standard	Business Partner: Authorization Types	BUPA 0011
Changed	Business Partner: Field Groups	B_BUPA_FDG
Changed	Business Partner: Field Groups	T-C157004100
	Activity	03
	Field grp for authorization	0005, 0115

This should mean that I am able to create, change and display all business partners, but not change or maintain those specific fields when I have this new role assigned to my UserID!

Result:

Business Partner 400101 Jeanke Hermans / B-3000 Leuven  
Change in Role 000000 Business Partner (Ge)

Address Address Overview Identification Control Data Payment Transactions Long

Name  
Title 0002 Mr.  
First Name Jeanke  
Last Name Hermans  
Correspondence Lang. EN English  
Language EN English

Search Terms  
Search Term 1/2 JEANKE

Standard Address  
Print Preview Internat. Versions  
Street Address  
Street/House number Heideweg 3  
Postal code/City 3000 Leuven  
Country BE Belgium Region  
Time zone CET

PO Box Address  
PO Box  
Postal Code

Communication  
Telephone Extension  
Mobile Phone Extension  
Fax Extension  
Standard Comm.Method INT  
Other communication...  
Dependent -> Independent.

The search term field is now grayed out and can only be displayed!

The email address cannot be changed, and only be viewed by pressing the button 'Dependent → Independent'.

### 5.2.5. Restrictions based on Authorization Group

Authorization object used: B\_BUPA\_GRP

#### **Procedure:**

Concrete this means that you first define an authorisation group in customizing, next assign on business partner level the authorisation group.  
In the role, you will restrict the authorisation object with the authorisation group you created in customizing.

**Result:** the user will only be able to change/display business partners for which the authorisation group is maintained!

Example:

1) Creation of an authorization group in Customizing:

*SAP Implementation Guide* → *Cross-application components* → *SAP Business partner* → *Business Partner* → *Basic Settings* → *Authorization management* → *Maintain Authorization group*

I create the authorization group ZEMP, which will be maintained for all Business partners in the role Employee. Only the HR responsible will be able to maintain the employee data in the system. Others will only be able to display the maintained information.

Group object		BUFA
Authorization Groups		
Aut...	Descriptn	
ZEMP	Display only for employees in the system	

Now, I can maintain on business partner level, this authorisation group.

In this case, I will do this for employees, which I only want End-users to be able to display and not change!!

On the Tab ,control data' I fill in the authorisation group:

**Change Person: 409582, role Employee**

Person Organization Group

Business Partner: 409582 Jan Tielens / B-3620 Ianaken

Change in Role: BUP003 Employee (Maintai...)

Address Address Overview Identification Control Data Long Te

Control Parameters

BP type

Authorization Group: ZEMP

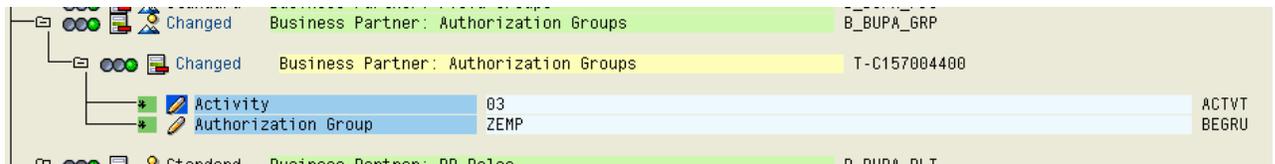
Data Origin

Data Origin

In the Role I will maintain the following:

Role created: Z\_CRM\_BUSINESS\_PARTNER\_AUTHGRP as a copy of SAP\_CRM\_BUSINESS\_PARTNER.

I change the authorisation object: B\_BUPA\_GRP and maintain the following:



If I now select the business partner 409582 for which the authorisation group is maintained, I get the following:



I can only display this employee!

### ***5.2.6. Restrictions for maintaining certain Business Partner Roles***

For this topic I am brainstorming for which scenarios companies might want to restrict people in displaying, changing or creating Business Partners in a certain role.

#### Scenario 1

First of all, as I explained before, a business partner is created at all times in the role "business Partner (general). When creating the partner, you have the option to first create him in the general role and save the information, and next also maintain him in the other necessary roles. This general role only exists for the purpose of storing general information that is valid for all other roles. During business transaction processing however you normally will not be using Partners that only have the general role maintained. You might probably want to create a lead or activity for a prospect or customer, create a sales order for a consumer, for which sales area related data should be maintained on the master data of the business partner. This kind of information is not available in the general business partner role. So unless you would maintain a business partner also in another role then the general role, we might consider it as master data pollution.

Therefore a company could decide that employees that are responsible for the creation of prospects and employees directly should maintain a business partner in the role prospect or customer and not have the option just to maintain him in the general role, leaving the employee the chance to forget maintaining the necessary sales area data.

I have not tested this scenario, but if you think about it, you might not be able to use the authorization object B\_BUPA\_RLT for this purpose. Suppose you would set the following combinations:

**Activity:** 03 (Display) and **BDT:Object Part:** 000000 (Business Partner General)

**Activity:** \* and **BDT:Object Part:** BUP002 (Prospect)

You would expect that the employee would only be able to display a business partner in the general role, and furthermore create or change prospects.

If you would try to create a prospect with such a combination, you will not succeed, since the system will complain about the fact that you are not able to maintain the business partner in the general role (remember I told you that every business partner ALWAYS needs at least to be created in this role?).

Another solution for this is making use of customizing options for field groups.

→ SAP IMG → Cross –Application components → SAP Business Partner → Business Partner → Basic Settings → Field Groupings → Configure field attributes per BP Role



Select the role “business partner (general) and press the button Field Grouping.

If you set for each data set the field groups to “display”, you would obtain the required result.

The screenshot shows the SAP IMG 'Business Partner (General) Business Partner (Gen.)' screen. The 'Data set' and 'Fld groups' tables are visible.

Data set		Fld groups						
Data set	Description	Field grp	Description	Hide	Req.entry	Opt.entry	Display	Not spec.
BUP010	Addresses	62	Address: Language Key (Co...	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
BUP010	Central Data	63	Address: Street	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
BUP020	Bank Details	64	Address: P.O. Box	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
BUP030	Payment Cards	65	Address: City	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Scenario 2

Another most likely scenario is that your sales reps or sales manager might be able to create prospects and customers, but certainly no business partners in the role employee. Creation and maintenance of employees might be a specific job done by the HR responsible or a dedicated CRM person who not only creates the employees, but also maintains the organizational model and the assignment of employees to the org. model.

Scenario 3

I can also assume that a company might want the following:

- Marketing manager/assistant:
  - o Can only display prospects and customers but not change them
  - o Is not allowed to create/change/display employees
  
- A Sales rep/Sales Manager:
  - o Can create/change/display prospects and customers
  - o Is not allowed to create/change/display employees

Anyway, you should get the picture and realize that restricting business partner access based on roles might be necessary.

**As an example I will elaborate the role for the Sales Rep:**

Just make a copy of the standard role SAP\_CRM\_BUSINESS\_PARTNER and create for the role Z\_CRM\_BUSINESS\_PARTNER and assign this to a new test-user.

Now you will restrict the authorization object B\_BUPA\_RLT.

To quickly test if this works I just deselected the role "Employee" out of the F4-input help for maintaining the values.

	AppO	ObjectP...	Description
<input checked="" type="checkbox"/>	BUPA	000000	Business Partner (Gene
<input checked="" type="checkbox"/>	BUPA	BBP000	Vendor
<input checked="" type="checkbox"/>	BUPA	BBP001	Bidder
<input checked="" type="checkbox"/>	BUPA	BBP002	Portal Provider
<input checked="" type="checkbox"/>	BUPA	BBP003	Plant
<input checked="" type="checkbox"/>	BUPA	BBP004	Purchasing Company
<input checked="" type="checkbox"/>	BUPA	BEA001	Billing Unit
<input checked="" type="checkbox"/>	BUPA	BUP001	Contact Person
<input checked="" type="checkbox"/>	BUPA	BUP002	Prospect
<input type="checkbox"/>	BUPA	BUP003	Employee
<input checked="" type="checkbox"/>	BUPA	BUP004	Organizational Unit
<input checked="" type="checkbox"/>	BUPA	BUP005	Internet User
<input checked="" type="checkbox"/>	BUPA	CRM000	Customer
<input checked="" type="checkbox"/>	BUPA	CRM001	Sold-To Party
<input checked="" type="checkbox"/>	BUPA	CRM002	Ship-To Party
<input checked="" type="checkbox"/>	BUPA	CRM003	Payer
<input checked="" type="checkbox"/>	BUPA	CRM004	Bill-To Party
<input checked="" type="checkbox"/>	BUPA	CRM005	Competitors
<input checked="" type="checkbox"/>	BUPA	CRM006	Consumer
<input checked="" type="checkbox"/>	BUPA	CRM007	Marketplace Supplier
<input checked="" type="checkbox"/>	BUPA	CRM008	Marketplace Customer
<input checked="" type="checkbox"/>	BUPA	ES0000	Financial Services Busi

For the activity I used “full authorization”.

Now if you logon with this test-user and try to create a business partner in a certain role, you will see that the role Employee is not in this list.

Hint: You should try this by creating a business partner of the category “Person”, since the role employee is only available for creation of persons.

### Create Person

Business Partner: [ ]

Create in Role: 000000 Business Partner (...)

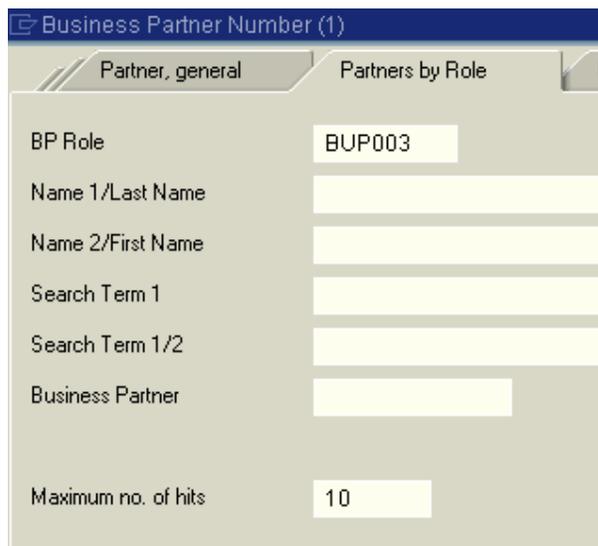
000000	Business Partner (General) (New)
BUP001	Contact Person
CRM001	SAP R/3 Customer
CRM006	Consumer
ISM000	Sales Customer
ISM001	Retailer
ISM020	Media Customer

In the above screenshot you see that the role employee is not available for creation. So far, you covered the creation part. Now, you should also check whether this test-user is able to display or change an existing employee.

Use the business partner search function (based on Role) to look up an employee.



Press F4 and in the option list select "Partner by Role".



Select the Role “BUP003” and restrict the maximum hits to 10. We don’t want to wait too long to only check the first employee that comes up.

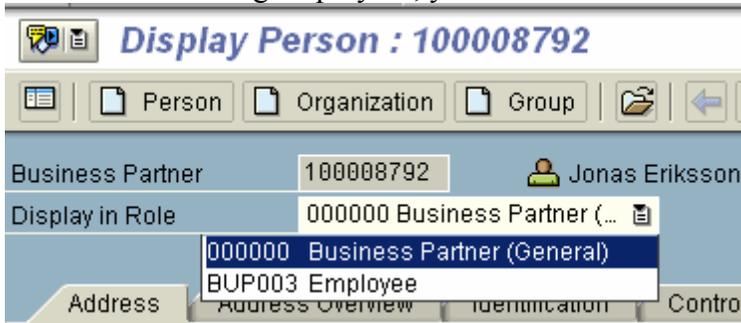
Select one employee out of the list.

Result: You WILL in this case be able to see the Employee, but only his general information, which is maintained on the role “business partner-general”.

If you would try to see the information stored on the role “employee”, you will see that this role cannot be selected.



If I would look at this business partner with another user, which does not have the restriction for seeing employees, you would see the following:



In my opinion, since you can still see the general information about the employee, this is not really a good strategy of protecting employee related data. The usage of restricting business partner data based on the role concept is best if you do not want people to see some sales related data.

To restrict access to critical employee information I would make use of the object B\_BUPA\_FDG to disable the display of critical fields you do not want every sales rep to have a look at.

### ***5.2.7. Perform authorization checks for sales area related data for business partners.***

Authorization object used: CRM\_BP\_SA

Relevant OSS notes:

- 524474: Sales Area related authorization check in business partner (**prerequisite**)
- 803453: Sales Area related check in business partner
- 999239: PCUI: Sales area authorization in partner function tab

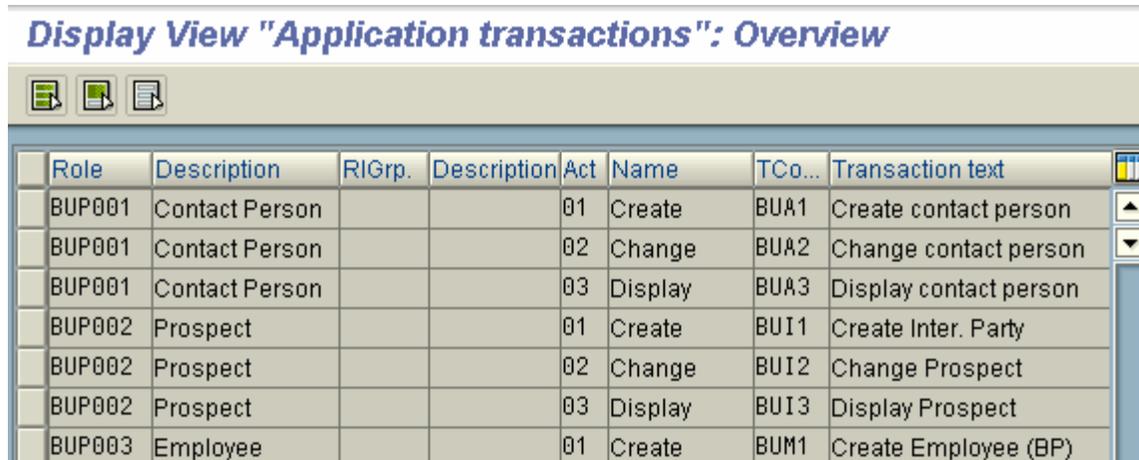
#### **Reason and Prerequisites**

In every sales area, only certain employees are authorized to maintain (create and/or change) the sales-area-dependent data in the business partner master record, or to display them. The general business partner data can be displayed, changed or created by any of the employees. The authorization check should be done at the time of entering the sales area-dependent data. While calling the sales-area-dependent data, a sales area needs to be selected. This selection screen should display only those sales areas for which the user has an authorization, depending on the activity (creating, modification, display). This requirement cannot be met entirely with the help of the BDT- (Business Data Toolset)-tools alone, i.e., in modification-free or upgrade-resistant manner. A small modification, which is described in the following section, is necessary.

### ***5.2.8. Restriction of business partner role in the BP transaction***

Some companies would like their users only to create a Business Partner in a specific role. As we have seen already, the authorisation object B\_BUPA\_RLT can be used for such a setup. However, in such a case you are limiting the allowed role maintenance still by using the same BP transaction. Suppose you would like to have a separate transaction code to create an employee or prospect, you can do this by creating new transaction codes using SE93. Next you can assign these new transaction codes to a specific role related activity using the transaction code **BUSF**.

**Display View "Application transactions": Overview**

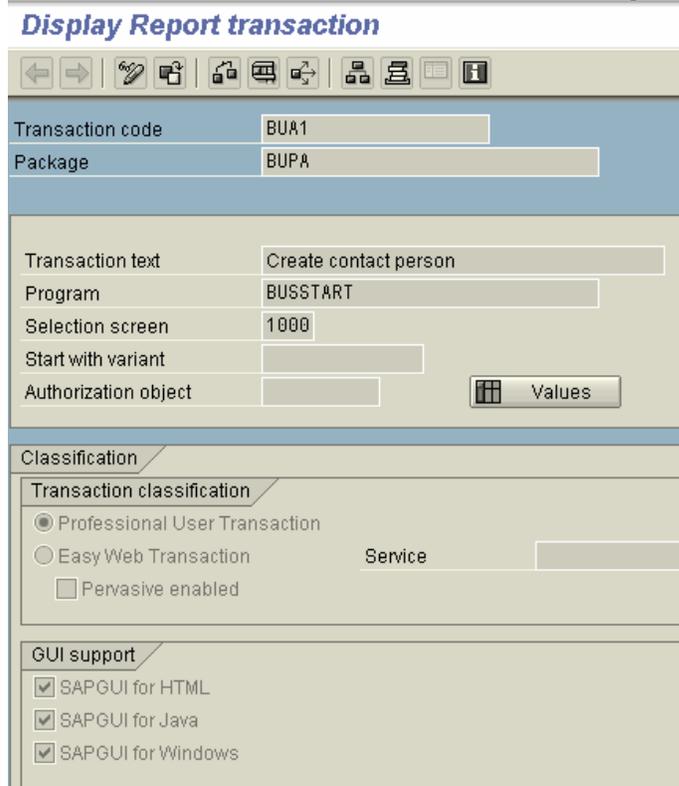


	Role	Description	RIGrp.	Description	Act	Name	TCo...	Transaction text
	BUP001	Contact Person			01	Create	BUA1	Create contact person
	BUP001	Contact Person			02	Change	BUA2	Change contact person
	BUP001	Contact Person			03	Display	BUA3	Display contact person
	BUP002	Prospect			01	Create	BUI1	Create Inter. Party
	BUP002	Prospect			02	Change	BUI2	Change Prospect
	BUP002	Prospect			03	Display	BUI3	Display Prospect
	BUP003	Employee			01	Create	BUM1	Create Employee (BP)

In the example above, you can see that using the transaction code BUA1 you will be able to “create” a Business partner in the role “contact person”.

You can look at the transaction code details using SE93.

**Display Report transaction**



Transaction code: BUA1  
 Package: BUPA

Transaction text: Create contact person  
 Program: BUSSTART  
 Selection screen: 1000  
 Start with variant:   
 Authorization object:   
 Values

**Classification**

Transaction classification

- Professional User Transaction
- Easy Web Transaction
- Pervasive enabled

Service:

**GUI support**

- SAPGUI for HTML
- SAPGUI for Java
- SAPGUI for Windows

## 5.3. Product Security

### 5.3.1. Relevant SAP Authorization objects

#### Standard Authorization Objects

Authorization Object	Description
<b>Product General</b>	
COM_PRD	<u>Product Master, general authorization</u> : Determines whether a user is authorized to maintain products or only to display them.
COM_PRD_CT	<u>Product Master, authorization for category</u> : This authorization object is used to determine whether a user can display and/or edit products, which are assigned to a particular category.
<b>Set Types and Alternative Identifier</b>	
COM_ASET	<u>Set Types/Attributes, general authorizations</u> : Determines whether a user is authorized to maintain set types and attributes, or only to display them.
COM_ALTID	<u>Authorization object for alternative IDs</u> : Determines whether a user is authorized to create or change alternative identification types.
<b>Product Category and Hierarchy</b>	
COM_HIER	<u>Hierarchies, general authorizations</u> : Determines whether a user is authorized to maintain product hierarchies or only to display them.
COM_CAT	<u>Categories, general authorizations</u> : Determines whether a user is authorized to maintain product categories or only to display them.
COM_CAT_CF	<u>Categories, authorization for configuration-relevant data</u> : Determines whether a user is authorized to maintain or display configuration-relevant category data.
<b>Product Relationship</b>	
COM_IL	<u>Authorization check for product relationships</u> : Determines whether a user is authorized to display and/or maintain relationships.

### ***5.3.2. Product maintenance***

Before you start creating new roles for authorization restrictions concerning products, you should know some basic information!

#### **PRODUCTS**

Products are goods, which are the object of a company's business activities. Products can be tangible, such as a PC, or intangible, such as services like PC maintenance.

#### **Use:**

The product master provides you with all information on the products that your company purchases and sells. It is the central source from which product-specific data can be retrieved.

Product information is used in marketing, sales, and service processes. The product master functionality is integrated into various business roles and therefore provides all functionality you require for working with products within the relevant business context.

Product data includes the information required for specific business processes (such as customer inquiries, sales orders, service processes, contracts), and other basic data that essentially describes and categorizes the product. For example:

- Data of a descriptive nature such as size and weight
- Data with a control function such as the item category group for determining the item category for each item in a CRM order

This information is stored in individual product master records. The integration of such data in a single database object eliminates redundant data storage.

#### **Structure:**

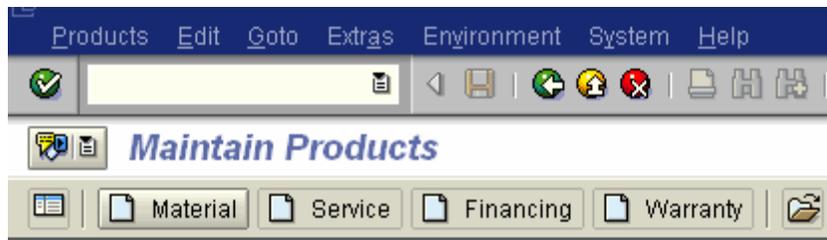
##### **Product Types**

The product type describes the basic characteristics of a product. It also determines to which product categories a product can be assigned, thus defining the structure of the product and how it can be used.

The following product types are available:

- Material
- Service
- Warranty
- Financing
- Intellectual property

In the maintenance screen for products (transaction code COMMPR01) you can see different buttons, which allow you to create a product of a certain product type.

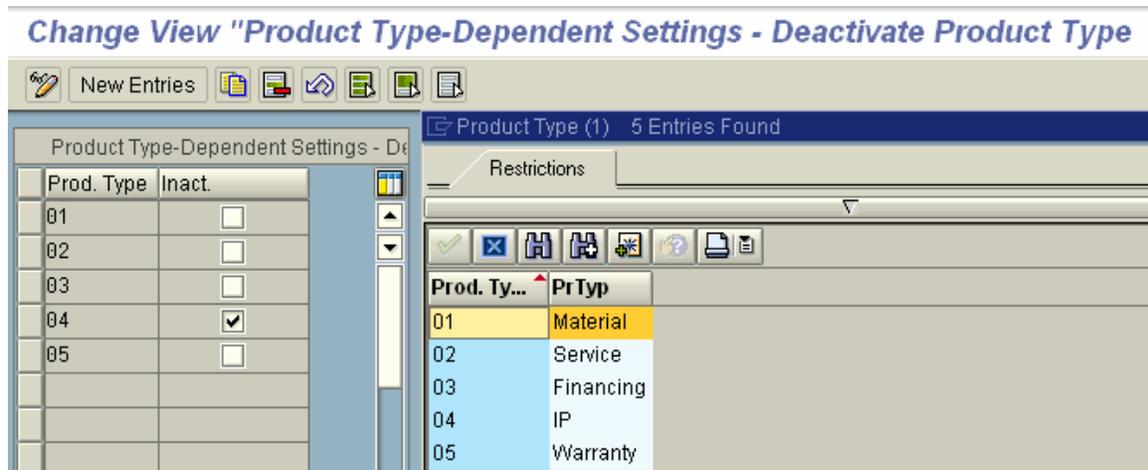


In this screen you see only four buttons for creating a:

- Material
- Service
- Financing
- Warranty

In customizing the product type IP (intellectual property) has been disabled.

SAP IMG → Cross-application components → SAP Products → Settings for Product type → Deactivate Product types



### Attributes and Set Types

Attributes are used to describe products and are grouped together into set types. The use of set types makes it possible to model a product in a detailed manner in your system.

#### How can you create them?

In the SAP Menu for CRM, choose:

Master data → Products → Maintain Set Types and Attributes or directly by using the transaction code **COMM\_ATTRSET**.

Set types and attributes works more or less the same way as the creation of marketing attributes that you use for business partners. (See section Marketing and Campaign management). The main difference is that you do not directly assign such a set type to a product, but assign set types to a product category. Next each product that belongs to this category will have (depending on the settings you made) the option of maintaining the attributes for this product somewhere on the product maintenance screen.

You first also create the attributes and next group certain attributes logically together into a set type.

### Screenshot of an attribute

Attribute: ZBRANDS  
 Description: Brand

Definition | Value Range

Characteristics

Attribute Type: CHAR Character Strin  Select Value Table  
 Attribute Lgth: 15 Value Table  Multiple Values Poss.

Descriptions

Language	Attribute Descriptn
EN English	Brand

Attribute: ZBRANDS  
 Description: Brand

Definition | Value Range

Fixed Values Allowed

Single Value ...	Upper Limit	Fixed Value Des.
PHIL		Philips
PION		Pioneer
SON		Sony

Language-Specific Descriptions for Fixed Values

Single Value /...	Upper Limit	Language	Fixed Value Descriptio
PHIL		EN English	Philips
PION		EN English	Pioneer
SON		EN English	Sony

### Categories and Hierarchies

Categories and hierarchies are used for structuring purposes, and allow you to group together products according to different criteria. Categories define which set types and relationship types are allowed for a product, thereby enabling you to structure the information you require on your products through the assignment of categories.

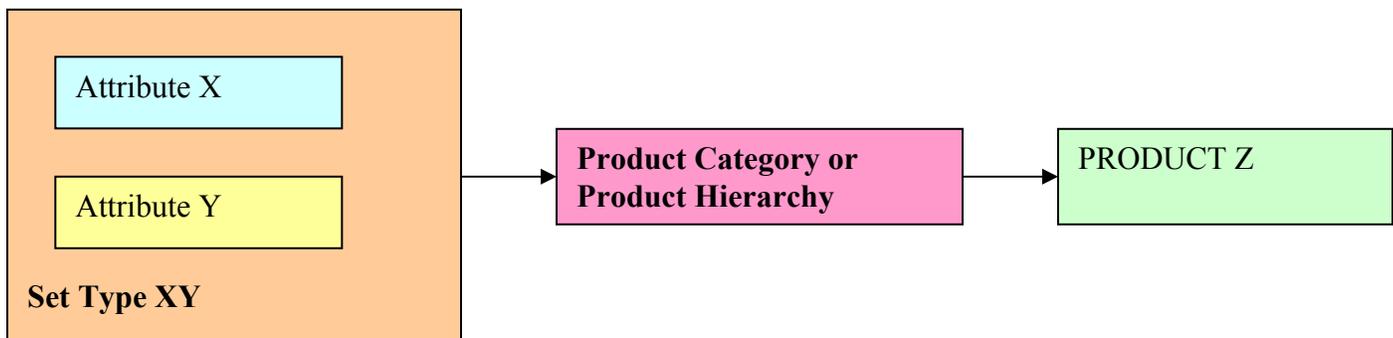
Categories and hierarchies can be maintained using the following path in the SAP CRM Menu:

Master data → Products → Maintain categories and hierarchies or directly by using the transaction code **COMM\_HIERARCHY**

Some standard delivered hierarchies are:

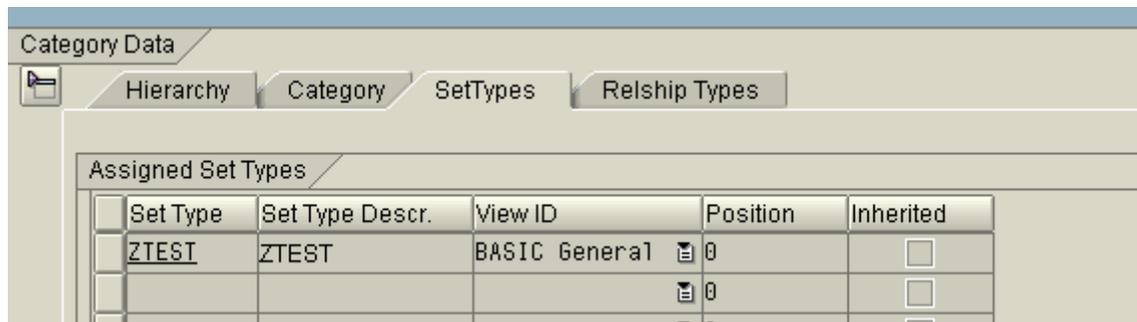
Description	Hierarchy ID
Material group	R3MATCLASS
Product hierarchy	R3PRODHIER
Product Subtype	R3PRODSTYP

Anyhow, you can create your own hierarchies and product categories in the SAP CRM system. The link between product attributes, product set types and products is made the following way:



How does this look like in the system?

After you have created for example a set type ZTEST, you will assign it to either a product hierarchy or product category. On the maintenance screen of a category/hierarchy you have several tab pages. One of them is called "set types" where you can assign existing or own created set types. You can also define the view (tab page) on which the set type should be made available and the position (on the screen). Furthermore, the flag inherited points to the fact if you have the set type inherited from a higher-level product category/hierarchy or not.



The screenshot shows the 'Assigned Set Types' table in SAP. The table has the following columns: Set Type, Set Type Descr., View ID, Position, and Inherited. There are two rows of data.

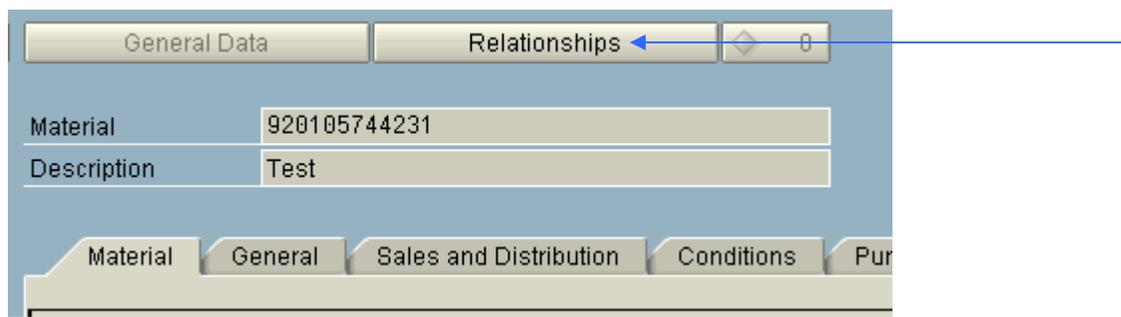
Set Type	Set Type Descr.	View ID	Position	Inherited
ZTEST	ZTEST	BASIC General	0	<input type="checkbox"/>
			0	<input type="checkbox"/>

In customizing you can define your own Views for this purpose.

SAP IMG → Cross-application components → SAP Products → Settings for Product Maintenance → Define Views

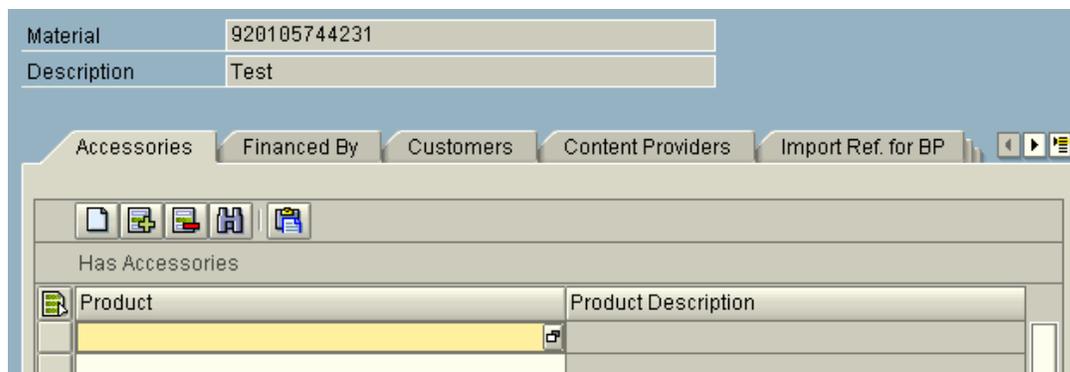
### Relationships

Relationships can be created between products and other products or objects to represent certain product information. For example, spare parts, accessories, or services might be available for a particular product, or products may contain or belong to other products, such as sets and prepacks.



The screenshot shows the 'Relationships' tab in the SAP maintenance screen. The 'Material' field contains '920105744231' and the 'Description' field contains 'Test'. The 'Relationships' tab is selected, and a blue arrow points to it from the right. Below the input fields are tabs for 'Material', 'General', 'Sales and Distribution', 'Conditions', and 'Pur'.

On the maintenance screen of relationships for products, you will see that there are different tab pages available. They make up the type of relationship towards the product.



The screenshot shows the 'Accessories' tab in the SAP maintenance screen. The 'Material' field contains '920105744231' and the 'Description' field contains 'Test'. The 'Accessories' tab is selected, and other tabs like 'Financed By', 'Customers', 'Content Providers', and 'Import Ref. for BP' are visible. Below the tabs is a table with the following columns: Product and Product Description.

Product	Product Description

### **Standard role for product maintenance**

#### SAP\_CRM\_PRODUCT

You can make a copy of this template role and make the necessary adjustments.  
Available transactions in this standard role are:

Transaction Code	Description
COMMPR01	Maintain Products
COMM_PROD_RECATÉG	Recategorize Products
COMMPR02	Mass Processing of Inactive Products
COMM_HIERARCHY	Maintain Categories and Hierarchies
COMM_ATTRSET	Maintain Set Types and Attributes
CRMD_SERV_SLA	Process Availability and Response times

#### ***5.3.3. Product Proposals***

The product proposals consist of Cross-/Up-/Down-Selling, Accessories and Top N Lists. They use SAP Web Application Server and Business Information Warehouse. The people centric UI of the product proposals uses the Enterprise Portal.

The authorization object **CRM\_PAR** manages the authorization requirements for the maintenance of product association rules (cross-/up-/down-selling). It manages authorization concerns related to:

- Creating new rules
- Changing existing rules
- Deleting existing rules
- Activating existing rules

If the authorizations are not maintained for a user, the user can search for product association rules and display them. However, it is not possible for the user to create, change, delete, or activate rules. It is recommended to maintain the settings of the authorization object according to the needed requirements.

There is no authorization object for top N lists. Therefore, it is not possible to handle authorization constraints, such as mentioned for the CRM\_PAR authorization object.

## 5.4. Authorization check in Business Transactions

Before we start into the authorization concept for Business Transactions you should learn the difference between business transaction category, business transaction types and business transactions!

### 5.4.1. Relationship Business Transactions, Types and Categories

The first thing everyone should do who will analyze SAP CRM authorizations is reading the CR100 course. This is a good starting point for understanding SAP CRM.

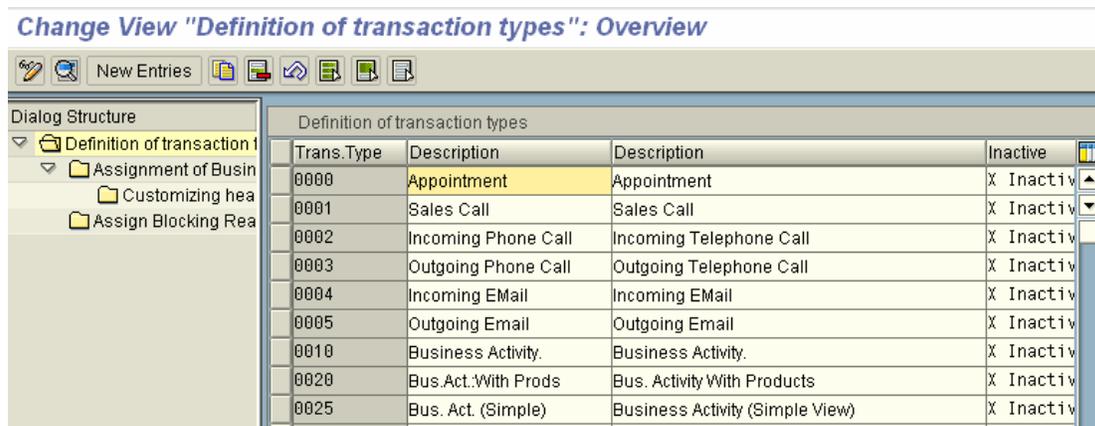
If you would have read the course, you will realize that SAP CRM business transactions are based on a concept, which is different from R/3.

In customizing you will see that CRM business transactions are made up as follows

Every **transaction type** in SAP CRM (= the R/3 document Type) belongs to one or more transaction categories, but only has 1 leading transaction category.

You can check this easily in customizing via the path: (tcode SPRO)

**SAP IMG → Customer Relationship Management → Transactions → Basic settings → Define Transaction Types**

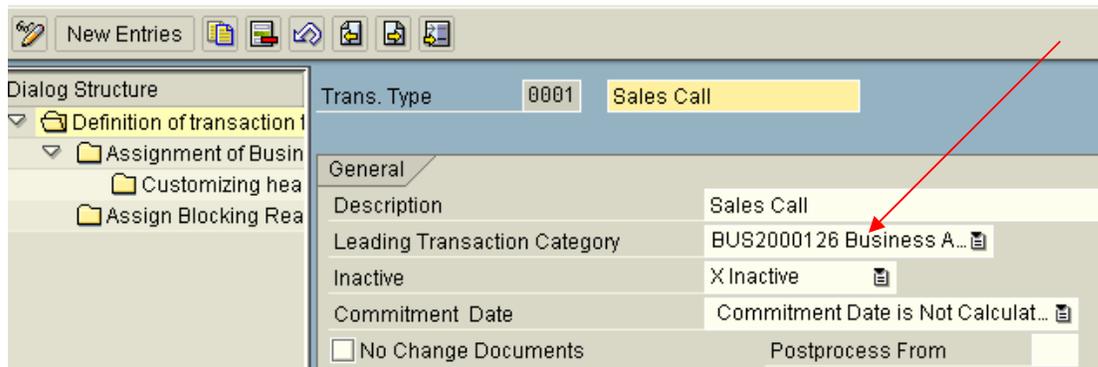


Let's take a look at some transaction types:

Transaction Type	Description	Leading Transaction Category
0001	Sales Call	BUS2000126 – Business Activities
LEAD	Lead	BUS2000108 - Lead
OPPT	Opportunity	BUS2000111 -Opportunity
TA	Standard order	BUS2000115 - Sales

If you look at Transaction type “0001” sales call in more detail, you will see this:

**Change View "Definition of transaction types": Details**



This is an important thing you should know, since per Transaction Category, you have a special authorization object that you should have assigned in your user master record, in order to process such a business transaction at all.

The value for those “transaction category related” authorization objects is “allow”, which you can maintain in the profile generator.

List of those specific **Transaction Category related objects**:

Transaction category	Authorization Object
Activities	CRM_ACT
Opportunities	CRM_OPP
Sales Transactions	CRM_SAO
Service Transactions	CRM_SEO
Service Contract	CRM_CO_SE
Service Confirmation	CRM_CON_SE
Lead	CRM_LEAD
Complaints	CRM_CMP
Financing Contract	CRM_CO_SA
Sales Contract	CRM_CO_SC

**CRM Menu:**

The CRM menu I always work with is the following: CRM\_MENU

You can assign this one to your user (via SU01):

### Maintain User

Licence Data		References	
User	ZMKT_ATTR		
Last Changed	NLY102127	21.02.2007	16:34:15
Address		Logon data	
Start menu		CRM_MENU	
Logon Language			
Decimal Notation		1.234.567,89	
Date format		1 DD.MM.YYYY	

Now you should see the following menu:

### SAP Easy Access Extended Relationship Management



Per area you see that SAP has made a distinction in processing business transactions, such as:

- Business activities
- Marketing related transactions
- Sales
- Service

The most common business transactions that customers are using are:

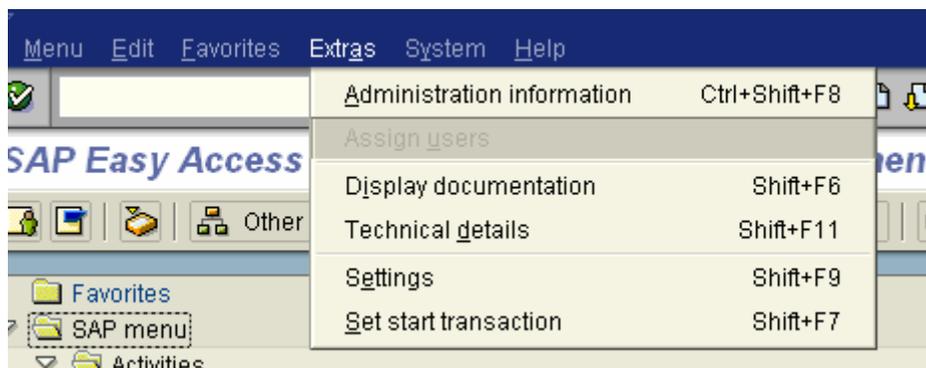
- Activities
- Tasks
- Leads
- Opportunities

- Quotations
- Sales orders and Service orders

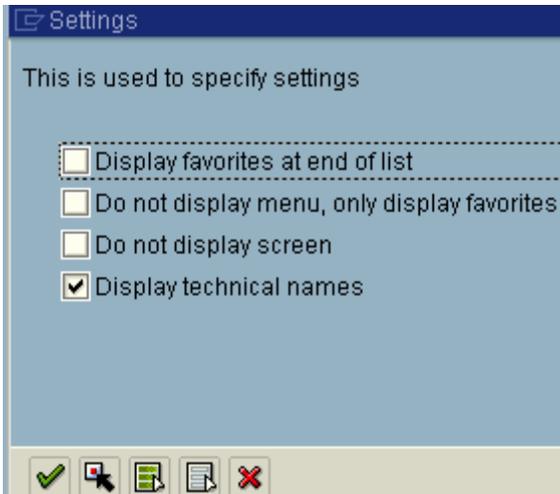
If you for example open some folders such as “activities” and “sales” you see the following:



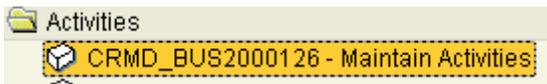
You can see the names of the transaction codes.  
To display those you need to make the following setting:



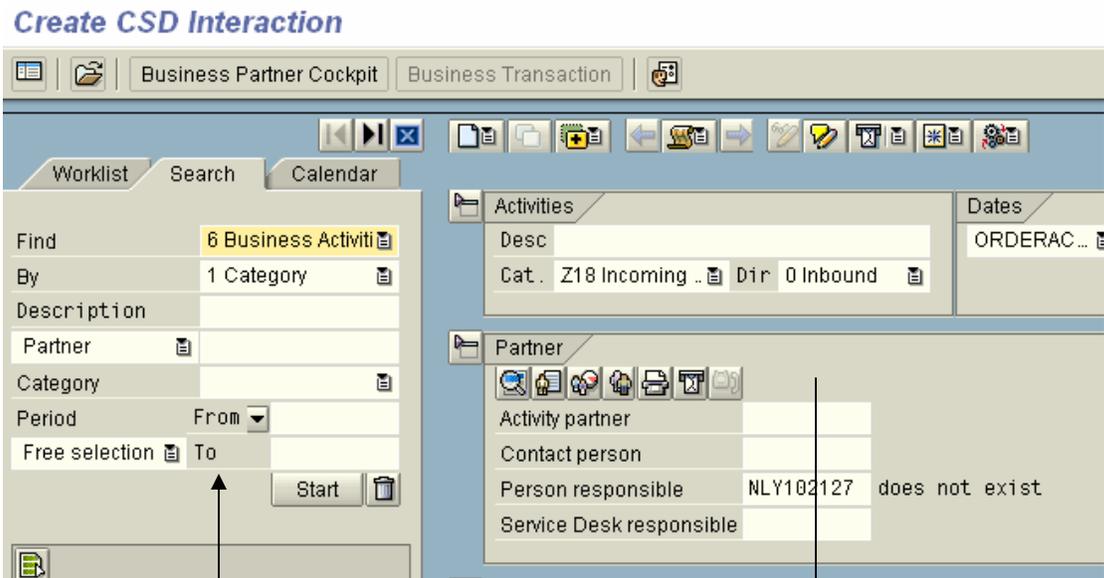
In the menu, select “**extras → settings → display technical names**”.



Now that you know the transaction codes, you can try to launch one, for example:



This will call the following screen:



The system automatically opens the locator for searching objects belonging to the area you want to work in. In this case business activities.

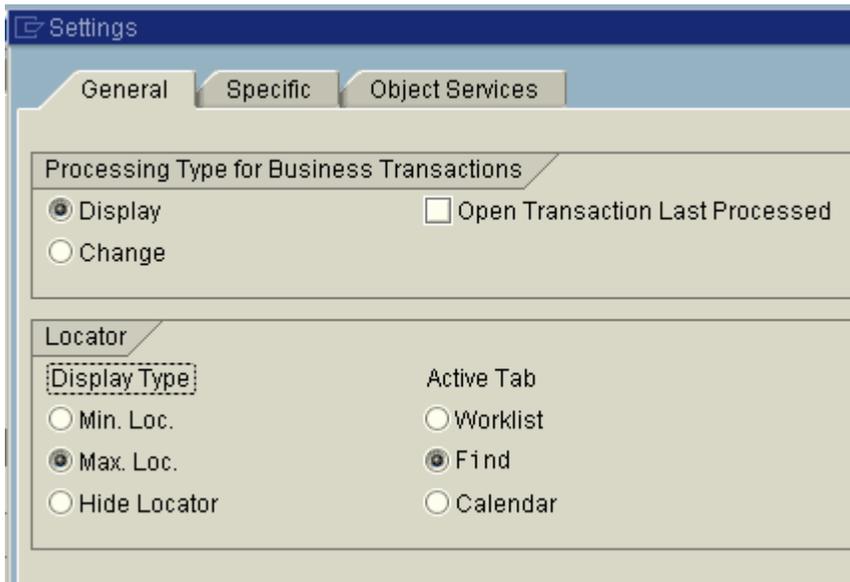
This part displays the Business transaction details. If this is in display mode or change mode depends on your settings.

**Change Locator Settings:**

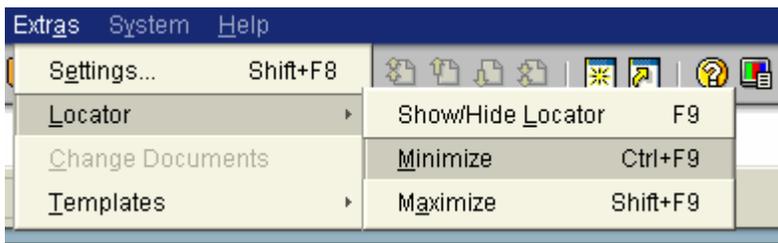
**Option 1:** change Locator settings permanently in a certain modus for your user.



Menu: choose Extras → Settings

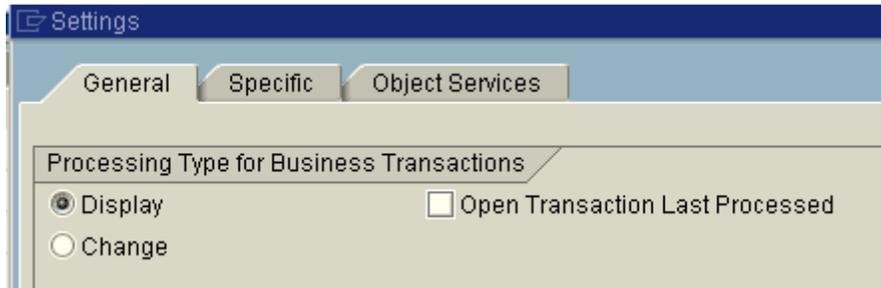


**Option 2:** Change the size of the locator temporarily, in this user session

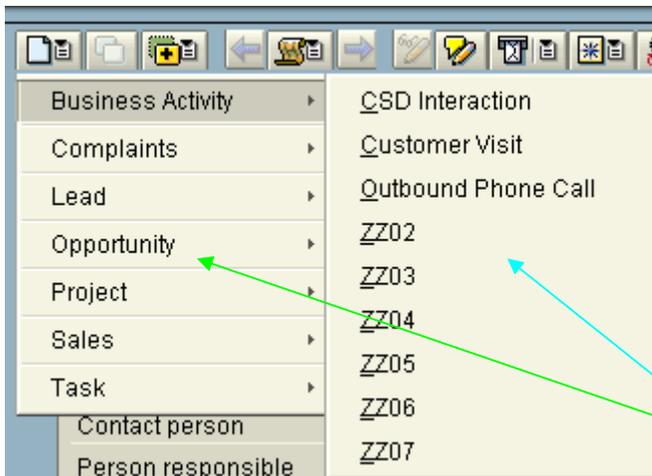


**Change modus (display/change) when launching a certain transaction**

Menu: choose Extras → Settings



Although you launched the transaction for creating/displaying business activities, you will that by using the “create business transaction” button, you can nevertheless create business transactions that belong to another business transaction category.



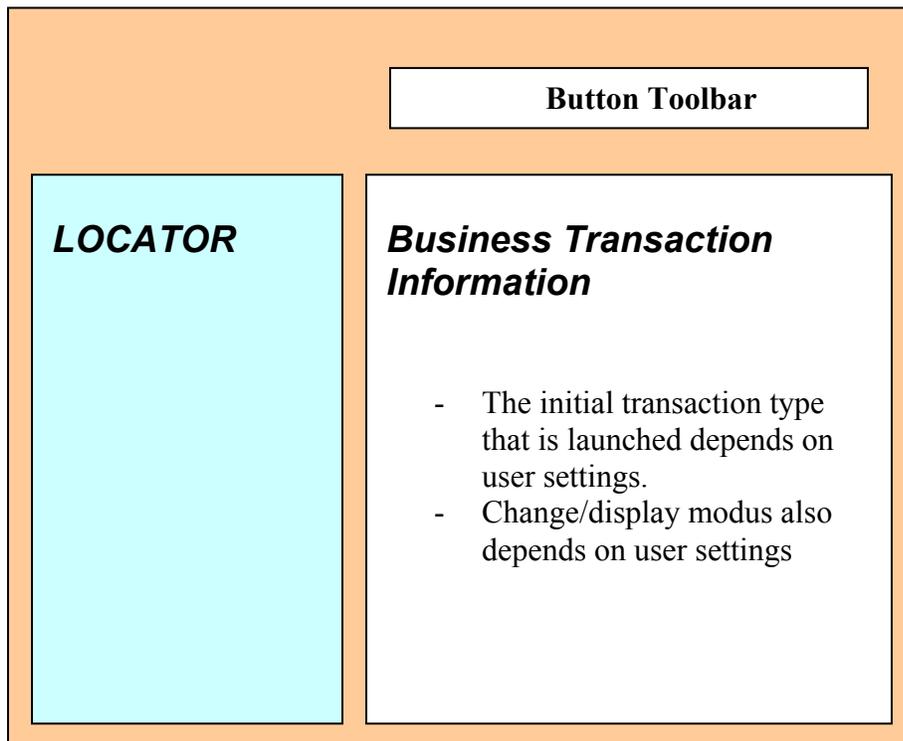
If you press the button, you will get a dropdown list for the authorized “**transaction categories**”. This is based on the authorization objects I mentioned before.

If you now select “business activities” you get the list of authorized “**transaction types**” that have the status “active” in customizing.

**List of Transaction codes (most used business transactions)**

Transaction Code	Description	Authorization Object
CRMD_BUS2000126	Maintain Activities	CRM_ACT
CRMD_BUS2000108	Maintain Leads	CRM_LEAD
CRMD_BUS2000111	Maintain Opportunities	CRM_OPP
CRMD_BUS2000115	Maintain Sales Transactions	CRM_SAO
CRMD_BUS2000121	Maintain Sales Contract	CRM_CO_SC
CRMD_BUS2000116	Maintain Service Processes	CRM_SEO
CRMD_BUS2000117	Maintain Service Confirmations	CRM_CON_SE
CRMD_BUS2000120	Maintain Complaints and In-house Repairs	CRM_CMP
CRMD_BUS2000112	Maintain Service Contracts	CRM_CO_SE

The Important thing that you should now is that for each and every one of those transactions, the screen is always built up the same way.



As you can see the transactions in the previous table all start with CRMD\_BUSxxxxxx. In fact, as you could have guessed the BUSxxxxxx part corresponds to the leading transaction categories we discussed earlier.

Since all screens are made up the similar way, SAP reuses this logical and structured UI framework for business transactions. The only thing they need to do is in this case look at the Leading transaction category, and therefore:

- Set other default search settings in your locator to start with
- Use a business transaction type of the transaction category that corresponds to the "BUSxxxxxx" you are launching to start in the initial business transaction information screen part.

Last, you have the transactions!

In fact, a transaction in this case would be a business transaction!!

For example; you create a business activity of the Type "sales call" in your system!

In that case the system will save this transaction as a number!

**Create Sales Call**

Standard Order | Securex Opportunity | Interaction | Business Partner Cockpit | Business Transaction

Activities: Desc: EXAMPLE of SALES CALL, Cat.: 001 Sales Call, Dir: 1 Outbound, Dates: From: 25.01.2006 23:22, To: 25.01.2006 23:32

Partner: Activity Partner: 409674 willy claes / B-3600 genk, Contact Person: 406224 Staffan Akerman (Incomplete address), Person Responsible: 405800 Davy Pelssers / B-3012 willele

Details | Partner | Texts | Attachments | Address | Organization | Dates | Customer Fields

Status: Location: Belgium Head Office-Brux, Completion: 010 In Percent, Priority: 5 Medium, Status: E0001 Open, Result: A2ACT00001A001 Price A...

Reason: Reason: A1A0000001A006 Opport..., Goal: 002 Arouse interest, Ext.No.:

Text: A002 Note \*, EN Englis..., Customer was called to discuss a new sales opportunity!

Transaction 4599 saved

In the table CRMD\_ORDERADM\_H, after creating for example a standard transaction of the type 'sales call', you will find this back by entering the Number of the transaction!

Or you can just look up all transactions by "process type", which in that case would be '0001'.

**Table CRMD\_ORDERADM\_H Display**

Check Table...

CLIENT	200
GUID	5D14C221AC95C04990AD5A4DD0FE5225
OBJECT ID	4599
PROCESS TYPE	0001
POSTING DATE	25.01.2006
DESCRIPTION	EXAMPLE of SALES CALL
DESCR LANGUAGE	EN
LOGICAL SYSTEM	CC1CLNT200
CRM RELEASE	BBPCRM 400
SCENARIO	A
TEMPLATE TYPE	
CREATED AT	25.01.2006 23:24:52
CREATED BY	DAVYP
CHANGED AT	25.01.2006 23:24:52
CHANGED BY	DAVYP
HEAD CHANGED AT	25.01.2006 22:24:52
OBJECT TYPE	BUS2000126
ARCHIVING FLAG	
DESCRIPTION UC	EXAMPLE OF SALES CALL
OBJECT ID OK	X
VERIFY DATE	
CRM CHANGED AT	25.01.2006 22:24:52
POSTPROCESS AT	

Trans.Type	Description	Description	Inac
0000	Inbound Contact	Inbound Contact	
0001	Sales Call	Sales Call	
0002	Incoming Call	Incoming Telephone Call	
0003	Outgoing Phone Call	Outgoing Telephone Call	
0004	Incoming E-Mail	Incoming E-Mail	
0005	Outgoing E-Mail	Outgoing E-Mail	
0010	Business Activity.	Business Activity.	
0020	Bus.Act.:With Prods	Bus. Activity With Products	X
0025	Bus. Act. (Simple)	Business Activity (Simple View)	X
1001	Meeting	Conversation w. Departmental Colleagues	
1003	Task	Task	
1004	Task (Simple)	Task (Simple View)	X
ACCP	Act. Channel Partner	Activity Channel Partner	X
ACPD	Act. Channel Manager	Activity Channel Manager	X
ACTI	Business Activity	Business Activity	X
AG	Quotation	Quotation	
AGEA	Web Auction Quotat.	Web Auction Quotation	
AGIS	Quot. Internet Sales	Quotation in Internet Sales	
AUC	Auction	Auction	
AUTA	Standard Order:Auct.	Standard Order for Auction	
BBPS	Pur. Schd. Agreement	Purchase Scheduling Agreement	
BID	Bid Invitation	Bid Invitation	
CHM1	Ch. Partner Registr.	Channel Partner Registration	
CMCC	Custom Contract	Custom Contract	
CMDM	Debit Memo Request	Debit Memo Request: Chargeback	
CMGC	Group Contract	Group Contract	

**Impact on authorizations**

**Example:**

When creating a role for a sales rep (who is allowed to create activities, leads and opportunities for example) you would add following transaction codes into your role using the profile generator (PFCG):

CRMD_BUS2000126	Maintain Activities
CRMD_BUS2000108	Maintain Leads
CRMD_BUS2000111	Maintain Opportunities

In order to process these 3 different kinds of transaction categories you would need to have the following authorization objects in your role with the value "allow":

- CRM\_ACT (allows you to process activities)
- CRM\_OPP (allows you to process opportunities)
- CRM\_LEAD (allows you to process leads)

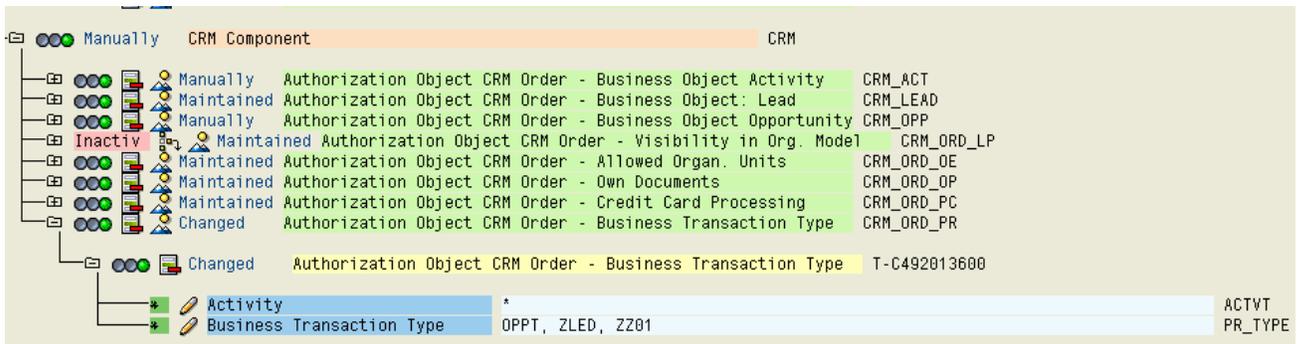


**Impact on the User Interface:**

Before restricting to the 3 needed transaction categories:



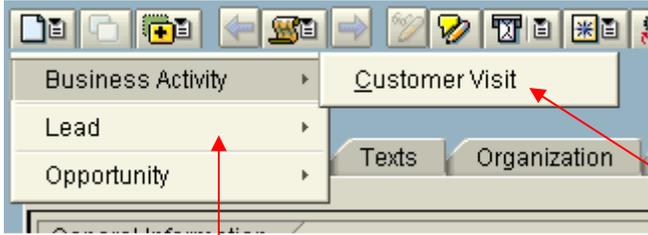
After restricting the role to only the three authorization objects:



**Remark:**

I have set the authorization object CRM\_ORD\_LP to inactive; otherwise my restriction did not seem to work. Furthermore I also restricted the object CRM\_ORD\_PR where I also defined which transaction types are allowed for processing.

When I assign this role to a user, he will only have the option for creating a transaction belonging to one of the three transaction categories.

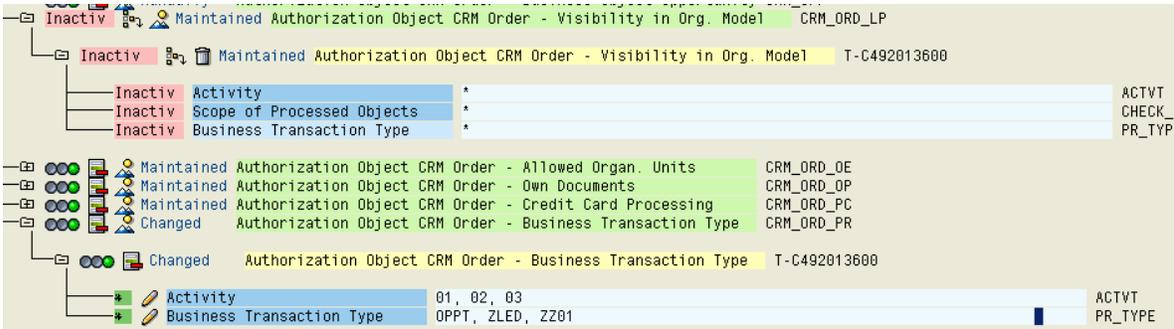


Which transaction categories may be executed, depends on which “transaction category related objects” you have with value “allow” in your role.

See the table [with Transaction category related objects.](#)

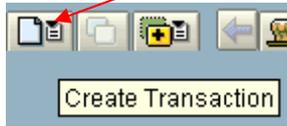
Which transaction types will be displayed on the right side of the dropdown-list depends on the restrictions made in the authorization object CRM\_ORD\_PR.

The reason why I set the authorization object CRM\_ORD\_LP to inactive is because of the fact that in both CRM\_ORD\_PR and CRM\_ORD\_LP the authorization field PR\_TYP is being checked. If you do not restrict both authorization object with the same transaction types, then the restrictions which I only made in CRM\_ORD\_PR are overwritten by the fact that I had “\*” as value in PR\_TYPE for the object CRM\_ORD\_LP.



**Hint:**

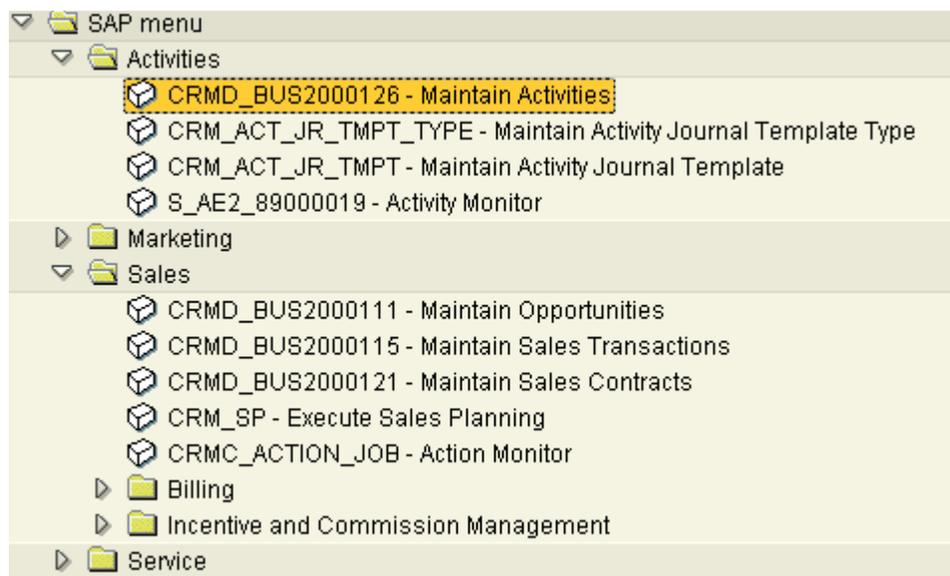
Why would SAP create multiple transaction codes for accessing certain transaction types that belong to a certain “leading transaction category” if in the end, you see that with the button “create transaction” I still have the option of creating another transaction belonging to another transaction category?



My guess is the following:

- 1) This eases the structuring of the user menu. You will logically assign the transaction codes into a folder area.

In the folder “activities” they will place the CRMD\_BUS2000126 which will start the initial screen with “default settings for searching business activities” in the locator.



Furthermore on the right hand side of the screen, a “business activity” will be started. As I explained before, this also depends on the user settings. You could choose to have your last transaction displayed (in either display or change mode).

- 2) This also eases the maintenance of authorizations, since the system normally automatically includes the corresponding authorization object, which belongs to this transaction category when adding the transaction into a role.

**Example:** if you would add the transaction CRMD\_BUS200108 (leads) into your role, you will see that in the profile generator, the system automatically includes the necessary object CRM\_LEAD into your role.

#### **5.4.2. Process flow authorization check**

Business transaction processing in CRM is protected by an authorization check based on alternatives, so that only authorized users can create, change or delete a transaction.

The authorization check follows a specific sequence, that is, the check runs through several levels. This means that the authorization can be granted at each level, and therefore no check is necessary in the subsequent levels. If, for example, an employee is entered in a document as the employee responsible, he is allowed to process this document regardless of whether further checks would lead to a positive or negative result.

The authorization concept in the CRM business transaction has the following characteristics

##### **Role-related protection:**

Users have access to existing business transaction documents, regardless of all other authorization checks, if they are entered as an "employee" or "responsible" in these documents in a partner function for the partner function category. The type of activity allowed is linked to the type of partner function.

See also: [Partner Processing](#)

Sales area/effects in the organization model:

Users have access to business transactions, which are or were already created in or above a certain level in the organization model, regardless of all other authorization checks. If need be, users can only execute specific activities.

##### **Business transaction category:**

Users can only create transactions if they have authorization for the corresponding business transaction category (for example, activity - CRM\_ACT, opportunity - CRM\_OPP).

##### **Business transaction type:**

Users only have access to business transaction documents if they have authorization for the corresponding business transaction type. If need be, users can only execute specific activities.

##### **Sales area**

Payment card processing:

Only authorized users are able to see the payment card number.

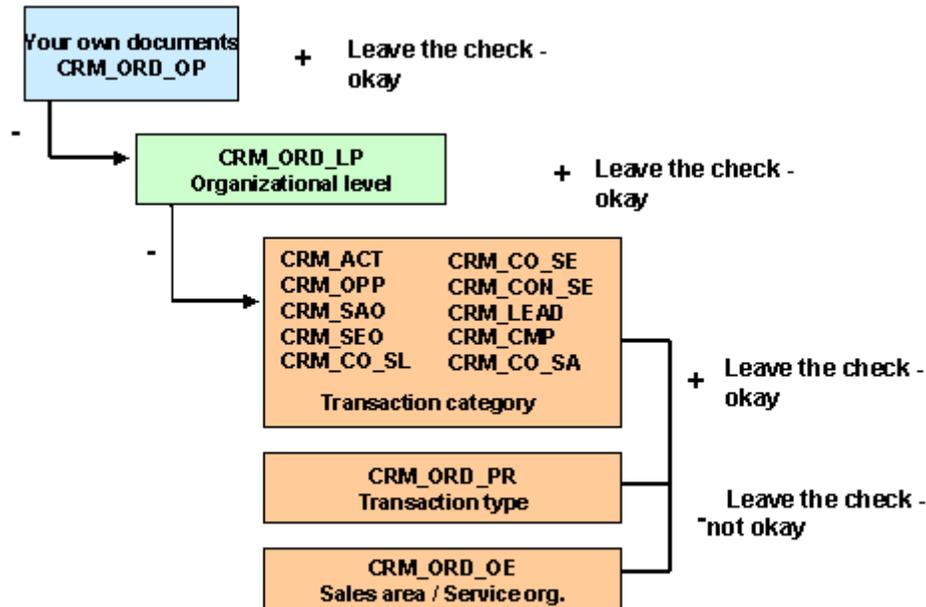
#### **Prerequisites**

Users for whom an authorization check is to be executed must be assigned in the organization model.

In order that other functions can be executed, for example, partner determination, SAP recommends that you assign an employee, to whom a user is assigned in the business partner record, to the position.

**Maintenance of the Organizational model was already explained in chapter 4.4.**

## PROCESS FLOW



### Your own documents (authorization object CRM\_ORD\_OP)

The system checks whether the user takes on a specific partner function for the activity executed in the relevant document, for example, whether he is the employee responsible. Furthermore, the system checks whether the user has the authorization to change, display or delete a transaction. If the result of this check is positive, no further checks take place at transaction level.

### Visibility in the organization model (authorization object CRM\_ORD\_LP)

If the user is not authorized in the first step of the check, the second check is carried out. This check enables the employee to control the access to specific organizational units via his position, depending on his assignment. This authorization object defines which documents can be processed by the user in the individual organizational levels, and which activities he can carry out here. If the user is authorized for the chosen activity (create, change, display, delete) and the relevant organization level, no further checks are carried out.

When maintaining the authorization field CHECK\_LEV, you should only choose the organizational unit at the highest level of the units to be checked. If, during the authorization check, the relevance to a specific sales organization is checked, the organizational units underneath this are also automatically checked. This means that you

do not have to choose the (lower-level) organizational unit sales office. This would cause considerable deterioration in performance.

### **Combination of several authorization objects**

If the first two checks were not successful, this combination of different authorization objects is checked. All the checks must be successful before the user is authorized to process the required transaction. This means the user only receives the authorization to process if he is authorized to:

Process the [leading business transaction category](#) in the corresponding transaction type

Process the corresponding transaction type

Process in the corresponding sales area

**a) Authorization objects CRM\_ACT, CRM\_OPP, CRM\_SAO, CRM\_SEO, CRM\_CO\_SE, CRM\_CON\_SE, CRM\_LEAD, CRM\_CMP, CRM\_CO\_SA, CRM\_CO\_SL**

Using these authorization objects, the system checks, which business transactions the user is allowed to process, and whether he is allowed to carry out the functions create, display or delete in these transactions. The relevant authorization object is checked, depending on the activity executed:

Activities: CRM\_ACT

Opportunities: CRM\_OPP

Sales transactions: CRM\_SAO

Service transactions: CRM\_SEO

Service contract: CRM\_CO\_SE

Service confirmation: CRM\_CON\_SE

Lead: CRM\_LEAD

Complaints: CRM\_CMP

Financing contract: CRM\_CO\_SA

Sales contract: CRM\_CO\_SL

### **b) Authorization object CRM\_ORD\_PR**

Using this authorization object, the system defines which action the user is allowed to execute for each business transaction type.

### **c) Authorization object CRM\_ORD\_OE**

Using this authorization object, the system defines in which sales area or in which service organization the user is allowed to process the CRM business transaction, and which activities he can carry out here.

If the user is not authorized in the third step of the check, he will not be able to process the document in the required way. He will receive a system message, which contains the corresponding authorization object and refers to the lacking authorization.

### ***5.4.3. Examples of the authorization assignment***

- 1. A user wants to keep the authorization to process sales transaction with the transaction OR in the sales organization 0001 and for distribution channel 01.**

You assign the following authorizations:

CRM\_ORD\_PR: PR\_TYPE 'TA', ACTVT '\*'

CRM\_SAO: ACTVT '\*'

CRM\_ORD\_OE: SALES\_ORG '0001', DIS\_CHANNE '01', SALES\_OFFI '\*',  
SALES\_GROU '\*', ACTVT = '\*'

- 2. A user wants to keep the authorization to process all types of sales transactions (independently of the transaction type and the organizational assignment).**

You assign the following authorizations:

CRM\_ORD\_PR: PR\_TYPE 'TA', ACTVT '\*'

CRM\_SAO: ACTVT '\*'

CRM\_ORD\_OE: SALES\_ORG '\*', DIS\_CHANNE '\*', SALES\_OFFI '\*',  
SALES\_GROU '\*', ACTVT = '\*'

- 3. The user wants to keep the authorization to display all opportunities in the transaction type OPPT that (accordingly to the organization model) belong to "his" sales office.**

You assign the following authorizations:

CRM\_ORD\_LP: CHECK\_LEV 'C', PR\_TYPE 'OPPT', ACTVT '03'

- 4. A user wants to keep the authorization to process a document in which he himself is entered as the employee responsible.**

You assign the following authorizations:

CRM\_ORD\_OP: PARTN\_FCT '\*', PARTN\_FCTT '0008', ACTVT ,\*'

**Combinations of different authorizations are also possible, for example, 1. + 2. + 4.**

Since I received a lot of questions concerning the fourth example using the authorization object CRM\_ORD\_OP I would like to explain a bit more about this one.

The exact set-up as mentioned in example 4 is only valid if the employee X does not need to create any business transaction, but only should be able to process a certain business transaction in the case where another person Y assigned employee X as person responsible.

**I can imagine the following scenario:**

As I explained in most companies the partner determination procedure assigned to transaction types is used in such a way that the person responsible is automatically filled in with the Business partner (employee) who is creating the business transaction. This business partner number is mostly derived from the SAP USER that is creating the business transaction. This is in the first place why I explained that you need to make the link between user and business partner.

However, suppose you have a scenario that within your organization you have employees that are not actually CREATING business transactions, but only need to process them.

Scenario:

Company X is making use of call lists (marketing and campaign management). A call center is next processing those calls (transaction type 0003- Outgoing Phone Call) via the Interaction Center Webclient..they call potential customers to see whether they would like to have information about a new product model or not... Suppose 30% of the called prospects is interested in this new product.

In such a case the Call Center Agent will for example create a follow-up activity of the transaction type 1003 (Task), where he will MANUALLY assign a person responsible (this can be a sales rep), so not automatically via partner determination procedure.

In such a case the sales rep does not need to create any transaction type. He will only look at tasks that are assigned to him for which he is made 'person responsible'. He can use the activity monitor for such a purpose. Therefore the following setup would be sufficient:

You assign the following authorizations:

**CRM\_ORD\_OP:**

- PARTN\_FCT: \*
- PARTN\_FCTT: 0008'
- ACTVT: \*

**Now another scenario could be that I want to be able to create any transaction type, but only should be able to display/change/delete business transactions in which I am assigned as person responsible.**

This only makes sense if you are using a partner determination procedure (assigned to your transaction types), which automatically fills out yourself as person responsible when you are creating the business transaction.

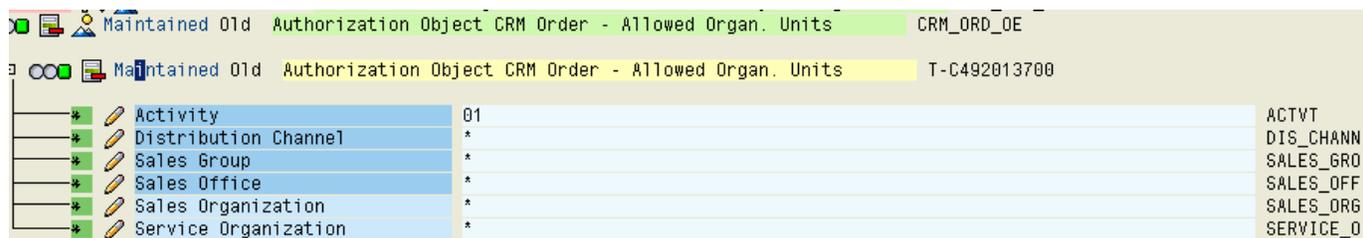
In such a case the "Partner function" person responsible is automatically filled out by using an access sequence that derives the business partner number (employee) from the SAP User that is creating the business transaction. In this case this would be you.

Since the authorization object CRM\_ORD\_OP does not contain the activity "create", you should maintain this in CRM\_ORD\_PR.



Maintained 01d Authorization Object CRM Order - Business Transaction Type CRM_ORD_PR		
Maintained 01d Authorization Object CRM Order - Business Transaction Type T-C492013700		
Activity	01	ACTVT
Business Transaction Type	*	PR_TYPE

Next you will also notice that the system needs to know for which distribution chain you should be allowed to "create" such a business transaction. This is indicated via CRM\_ORD\_OE.



Maintained 01d Authorization Object CRM Order - Allowed Organ. Units CRM_ORD_OE		
Maintained 01d Authorization Object CRM Order - Allowed Organ. Units T-C492013700		
Activity	01	ACTVT
Distribution Channel	*	DIS_CHAN
Sales Group	*	SALES_GRO
Sales Office	*	SALES_OFF
Sales Organization	*	SALES_ORG
Service Organization	*	SERVICE_O

This set-up seemed to work fine at first glance.

### 5.4.5 Authorization Check at Field Level

#### USE

You can use this function to allow certain authorization groups to change fields in the sales order, or prevent them from overwriting certain fields. For example, you only want to allow employees with special authorization to change quantities retroactively after the sales order has already been delivered.

#### Prerequisites

- You have created an authorization with reference to authorization object CRM\_FLDCHK, assigned this authorization to an authorization profile, and assigned this profile to the corresponding user.
  -  When you create the authorization with reference to the authorization object, you can only specify one value (whole number) for field *Authorization Level*. The authorization check cannot process ranges (for example, 1 – 12) or multiple values (for example, 5,7,9).
- You have defined authorization groups in Customizing and assigned fields to them. An authorization group is a type of field group, and consists of a collection of fields. You make the entries in Customizing for *Customer Relationship Management at Basic Functions → Authorizations → Define Authorization Groups*.
- You have assigned an authorization level for each authorization group in Customizing in dependency with the key fields, for instance transaction type and item category. You make these entries manually in Customizing for *Customer Relationship Management at Basic Functions → Authorizations → Maintain Authorizations at Field Level*. You fill the control table CRMM\_AUTH\_FIELD with these entries.
  -  Control table CRMM\_AUTH\_FIELD is created as a master data table, and therefore cannot be transported. For this reason, you should maintain this control table in your productive system.

## Features

In order to be able to carry out an authorization check for the user at field level, particular authorization information has to be read into the sales order for the authorization check.

These are:

- Key fields (transaction type and item category) that are used to read the data from the control table
- Authorization level from the authorization object of the user. The authorization object contains the following fields:
  - Activity
  - Authorization Group
  - Authorization Level
- Other entries in the control table, such as authorization groups and authorization level for each authorization group (field group)

If you have made entries in the Customizing table for the definition of authorization groups, and assigned an authorization level for each authorization group in the control table, the system carries out the authorization check when a transaction is processed.

In the authorization check, the system evaluates the control table and checks whether the authorization level from the control table is higher or lower than the authorization level in the user's authorization object. If the user's authorization level is at least as high in his or her authorization object as the authorization level in the control table, he or she is permitted to overwrite the field. If his or her authorization level is lower than that in the control table, he or she cannot change the field.

If a field is assigned to several authorization groups, the authorization check determines the authorization group with the highest authorization level.

If the control table does not contain any data, the authorization check cannot be carried out.



You can use a Business Add-In (BAI) to make further fields available for the authorization check at field level. The *Transaction Type* and *Item Category* fields are shipped for this purpose as standard. If you want to use more fields (which you have added to the control table CRMM\_AUTH\_FIELD) for the authorization check, you can locate these additional fields with this BAI and transfer them to the authorization check. For more information, see the Implementation Guide (IMG) at *Customer Relationship Management* → *Basic Functions* → *Authorizations* → *Define Authorization Groups* and *Business Add-In for Checking Fields*.

## Activities

Process the Customizing activities described in section 'Prerequisites'.

### Example

Authorization group 0001 consists of the following fields:

- Quantity
- Unit of Measure

Authorization group 0002 consists of the following fields:

- Pricing Date
- Price List

The following entries are maintained in the control table:

#### Entries in the Control Table

Transaction Type	Item Category	Authorization Group	Authorization Level
TA	TAN	0001	15
TA	TAN	0002	10
AG	AGN	0001	5
AG	AGN	0002	3

The user has the following authorizations:

Authorization group 0001	Authorization level 6
Authorization group 0002	Authorization level 12

When the user creates a sales order with transaction type TA and item category TAN, he cannot change the fields of authorization group 0001 (Quantity and Unit of Measure), as he only has authorization level 6 for this, and this value is below authorization level 15 from the control table. He can, however, change the fields of authorization group 0002 in the order (Pricing Date and Price List), as he has authorization level 12, which is above authorization level 10 from the control table.

#### ***5.4.6. Business add-in for authorization check in business transactions***

SAP also delivers a business add-in CRM\_ORDER\_AUTH\_CHECK you can use for additional authorization checks in business transactions.

You can display the details of this BADI using transaction code SE18.

It is also possible to find back this BADI via the following customizing path:  
SPRO → Customer Relationship management → Transactions → Basic Settings →  
Business add-ins → Business Add-in for authorization check in the business transaction

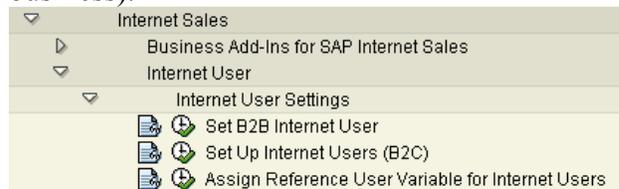
### **5.5. Authorizations in E-commerce (Internet Sales)**

In this chapter I will elaborate the authorization Setup within a B2B scenario.

#### ***5.5.1. Customizing settings for Internet Sales***

SAP IMG → Customer Relationship Management → Internet Sales → Internet User

Here you have 2 scenarios, being B2C (business to consumer) and B2B (business to business).



Depending on the scenario you are using you will maintain different settings.

The scenario for B2B will be illustrated in this documentation.

##### **5.5.1.1. Internet User Settings**

###### **Set B2B Internet User:**

- User Internet Users only (SU01)
- Use Internet User only (SU05)
- Convert Internet Users (SU05) to Internet Users (SU01)

Since SU05 Internet User concept is out of date, we will only focus on the use of the SU01 Internet Users.

This type of user scenario uses an SU01 user that is connected with a contact person business partner.

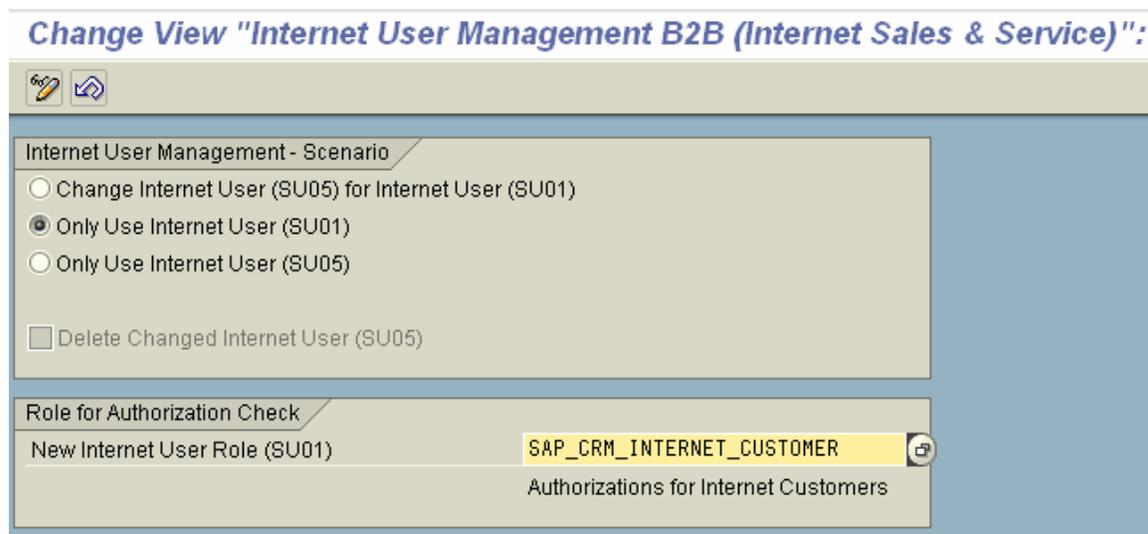
You have the option with this structure to define personalization, workflow and specific user roles. Additionally, you also have the option in Internet Sales to use the user administration via a Web-based application with which, for example, integration with the portal is made possible.

This user scenario is an example of the recommended configuration setting.

The entry Role for Authorization Check (see below) should be maintained in this context.

### **Role for Authorization Check:**

In the standard configuration (client 000), the default value is the SAP\_CRM\_INTERNET\_CUSTOMER role that must be transported to each client in order to be used, and through which a user-define role can be replaced.



As you can see, here you define that you make use of the SU01 Internet User concept, and also which role will be used for authorization check purposes!

### **5.5.1.2. Set Web-based User Administration**

#### ***Use***

With this IMG activity you have the option of making settings for Internet Sales User Management that differ from the standard.

- 1) The business partner grouping determines the number range in which a new contact person is to be created. A grouping with internal number assignment is only possible. If the field is left empty, the standard grouping for internal number assignment is used.
- 2) The contact person role is used to create new Internet users. If you leave the field empty, the standard business partner role for contact persons (BUP001) is used.
- 3) The sold-to party role is used for the company search of a Web shop manager. Only business partners with the specified role and the entered search criteria are searched for. If you leave the field empty, the standard business partner role for customers (CRM000) is used for the company search.
- 4) Using the maximum number of users, you can limit the number of possible Internet users per company. When a new Internet user is created, the number of existing users is compared with the specified maximum number. It is not possible to create another user once the maximum number of users has been reached.
- 5) The e-mail-address is used as the sender address for e-mail notifications. If no e-mail address is specified, the address of the current Internet user of User Management is used as the sender address.

**New Entries: Details of Added Entries**

Internet User Administration: Settings

Grouping	<input type="text" value=""/>	
Contact Person Role	<input type="text" value=""/>	
Contact Per. Role	<input type="text" value=""/>	
Max. User No.	<input type="text" value=""/>	
E-Mail Address	<input type="text" value=""/>	

### **5.5.1.3. Set Roles for Web-based User Administration**

#### *Use*

You can assign authorizations by means of roles and reference users in Internet Sales and Channel Management User Administration.

In this IMG activity, you can define roles that can be assigned in user administration for Internet Sales Internet users.

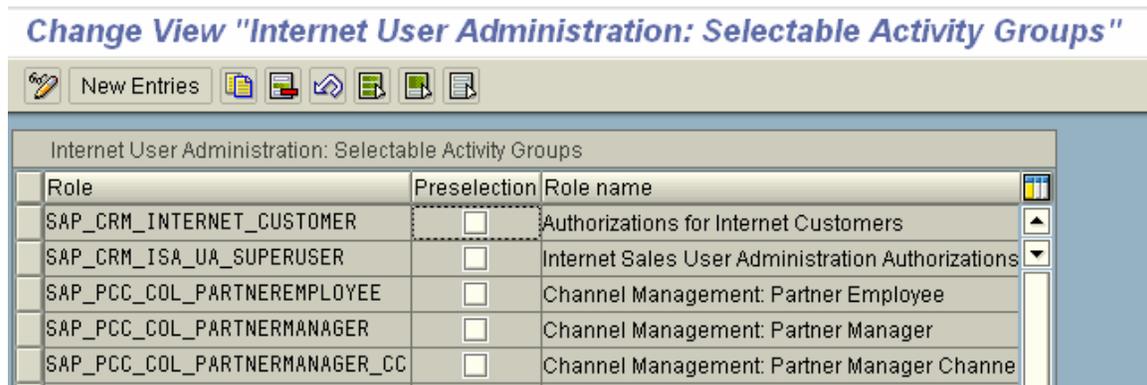
These roles contain all of the authorizations that an Internet user requires in order to carry out relevant activities. You have the option of defining a name under which the role is displayed in the Web UI, otherwise the name of the role is displayed.

***Standard Roles available:***

The following roles are delivered as default values in client 000 as standard:

- o SAP\_CRM\_INTERNET\_CUSTOMER (Authorizations for the B2B Internet Sales Application)
- o SAP\_CRM\_ISA\_UA\_SUPERUSER (Authorizations for Internet Sales User Management)
- o SAP\_PCC\_COL\_PARTNEREMPLOYEE (Channel Management: Partner Employee)
- o SAP\_PCC\_COL\_PARTNERMANAGER (Channel Management: Partner Manager)
- o SAP\_PCC\_COL\_PARTNERMANAGER\_CC (Channel Management: Partner Management Channel Commerce)

If you want use the roles that are delivered as standard, transport them to the appropriate client. You can replace these roles with your own.



In the online User Administration the roles you defined here in customizing will be available and can be assigned to a new Internet User!

**Create New User for Partner 0000406375**

**User ID\***  (max. 40 Characters)

E-mail

For the Companies

Company ID	Name
0000407030	Blankedaele V.Z.W.

**Authorizations\***

Not Assigned	Assigned
Authorizations for Internet Customers	<input type="checkbox"/>
Internet Sales User Administration Aut	<input type="checkbox"/>
Channel Management: Partner Employ	<input type="checkbox"/>
Channel Management: Partner Managt	<input type="checkbox"/>
Channel Management: Partner Managt	<input type="checkbox"/>

additional

Reference User for Internet Sales

Form of Address/Title

First Name/Last Name

All fields marked with \* must be filled in

### 5.5.2. User Administration

In this section more details are explained about the creation of the SUPERUSER (user administrator) and the creation of Internet Users.

#### 5.5.2.1. Creation of an Internet Sales User Administrator

The User administrator will need to have the role SAP\_CRM\_ISA\_UA\_SUPERUSER assigned to his User Master Record!

Furthermore you assign the roles SAP\_CRM\_INTERNET\_CUSTOMER and the role SAP\_CRM\_ISA\_WEBSHOP\_MANAGER.

(The customer can of course first make a copy of the standard delivered role, and make adjustments to the copied role should this be necessary).

Start user maintenance via SU01:

Fill out the username for the User Administrator:

**User Maintenance: Initial Screen**

User

Alias

In the next screen you fill out the necessary details such as first name, last name and e-mail address:

The screenshot shows the 'Person' tab of a user administration interface. At the top, the user is identified as 'ISA\_ADMIN' with a status of 'Not saved'. Below this are tabs for 'Address', 'Logon data', 'Defaults', 'Parameters', 'Roles', 'Profiles', and 'Groups'. The 'Person' section contains fields for Title (Mr.), Last Name (User), First Name (Administrator), Academic Title, Format, Function, Department, and Room Number (with sub-fields for Floor and Building). The 'Communication' section includes Language (EN English), Telephone, Extension, Mobile Phone, Fax, Extension, E-Mail (Useradmin@cernum.com), and Comm. Meth (RML Remote Mail). There are buttons for 'Assign other company address...' and 'Assign new company address...'. The 'Company' section shows 'SAP-AG / /'.

On the tab page “Logon data” fill out at least the following data:

- Alias (is required, since the alias serves as the user Id for logging on into the Online User Administration).
- Initial password (after logging on for the first time, you will need to change the initial password).

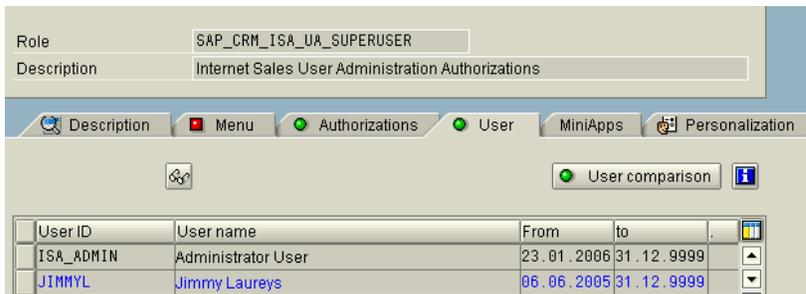
The screenshot shows the 'Logon data' tab of the user administration interface. At the top, the user is identified as 'ISA\_ADMIN' with a status of 'Not saved'. Below this are tabs for 'Address', 'Logon data', 'Defaults', 'Parameters', 'Roles', 'Profiles', and 'Groups'. The 'Logon data' section includes an 'Alias' field (ISA\_ADMIN), a 'Password' section with 'Initial password' and 'Repeat password' fields, a 'User Group for Authorization Check' field, a 'Validity Period' section with 'Valid from' and 'Valid through' fields, and a 'User Type' section with radio buttons for 'Dialog' (selected), 'Communications', 'System', 'Service', and 'Reference'. There is also an 'Other Data' section with 'Accounting Number' and 'Cost center' fields.

On the Tab page “Roles” you enter the role which allows Internet user administration.

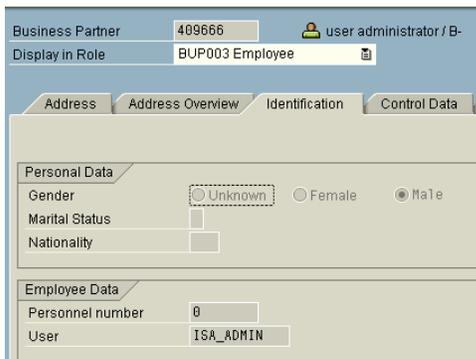


**Remark:** Assignment of roles to the user master record can also be taken care of via the Profile Generator!

Edit the role for Internet User administration, and on the tab page “Users” you enter the username and validity period.



The User administrator should also exist as employee in the CRM system. On this level you link the User ID (SU01 user) to the Business partner.



Next you should also maintain this business partner in the Internet User role:

Business Partner: 409666    user administrator / B-  
 Display in Role: BUP005 Internet User

Address    Address Overview    Identification    Control Data    Payment Transactions    Status    Internet User

**Logon Data**

Internet User: ISA\_ADMIN  
 User: ISA\_ADMIN    Lock:   
 User group:

**User Roles**

Reference user:

Role	Role name
SAP_CRM_INTERNET_CUSTOMER	Authorizations for Internet Customers
SAP_CRM_ISA_UA_SUPERUSER	Internet Sales User Administration Authorizations
SAP_CRM_ISA_WEBSHOP_MANAGER	Authorizations for the Internet Sales Web shop Man

Entry 1 of 3

**Fixed Values**

Logon Language: EN English

**Decimal Notation**

1.234.567,89  
 1,234,567.89  
 1 234 567,89

**Date Format**

DD.MM.YYYY

Since you already linked the SU01 user ID with the Employee, the Internet User automatically will take over the necessary data on this level such as 'Alias and User ID', the role assignment, and the initial password!

The last thing you need to do is create the employee 409666 also in the role contact person, and link him to your organization with the relationship 'is contact person'.

After all this is done, the Administrator will be able to logon to the Online User Administration tool:

<http://Hostname:Port/isauserm/useradm/init.do>

**Welcome to SAP Internet Sales User Management**

**Language**  
 English

**User ID**  
 ISA\_ADMIN

**Password**  
 ●●●●

After logging on the first time with your initial password, the system will ask you to change your password:



**Change Password**

Enter your new password and repeat it to confirm

**Old password**

**Password**

**Verify Password**

### **5.5.2.2. Internet User Creation**

There are two ways for creating Internet Users. To have a consistent procedure in user creation I advise to follow only of the two procedures!

Either you can create and maintain all necessary data (User, Contact Person, relationships and assignment of the Internet Sales User role) via the SAPGUI, or you will do this via the online user administration console.

#### **Creation of the Internet User in the SAPGUI (SU01 and PFCG)**

Step 1: Creation of a SU01 user

Again maintain the Username, Alias (acts as User Id in the web shop), email address, and the role SAP\_CRM\_INTERNET\_CUSTOMER (either on user master record level, via the profile generator or via the BP role Internet User).

User: ISA\_CONSUMER  
 Last Changed: DAVYP 23.01.2006 15:14:01 Status: Saved

Address Logon data Defaults Parameters Roles Profiles G

**Person**  
 Title: Mr.  
 Last Name: ISA customer  
 First Name: ISA customer  
 Academic Title:  
 Format: ISA customer ISA customer  
 Function:  
 Department:  
 Room Number: Floor: Building:

**Communication**  
 Language: EN English  
 Telephone: Extension:  
 Mobile Phone:  
 Fax: Extension:  
 E-Mail: consumer@consumers.be  
 Comm. Meth: RML Remote Mail

User: ISA\_CONSUMER  
 Last Changed: DAVYP 23.01.2006 15:

Address Logon data Defaults Paramet

Alias: CONSUMER

User: ISA\_CONSUMER  
 Last Changed: DAVYP 23.01.2006 15:14:01 Status: Saved

Address Logon data Defaults Parameters Roles Profiles Groups

Reference User for Additional Rights:

	Role	Type	Valid From	Valid To	Name
	SAP_CRM_INTERNET_CUSTOMER		23.01.2006	31.12.9999	Authorizations for Internet Cl

Make sure a User Comparison is done if you assign the role manually to the user master record!

Step 2: Creation of a Business Partner in the Role ‘Contact Person’.

The screenshot shows the SAP Business Partner creation interface for role BUP001. The form is divided into several sections:

- Name:** Title (0002 Mr.), First Name (CONSUMER), Last Name (ISA CONSUMER).
- Search Terms:** Search Term 1/2 (CONSUMER), ISA.
- Standard Address:** Street/House number (test 1), Postal code/City (3600 genk), Country (BE Belgium), Time zone (CET).
- PO Box Address:** PO Box, Postal Code.
- Communication:** Telephone, Mobile Phone, Fax, E-Mail (davy.pelssers@cernum.com).

Create a relationship for this contact person of the type “Is contact person for” and link this with a Business partner. (Organization in the role CRM000 –general business partner or other role).

**Remark:**

You should assign the contact person to an organization in a specific role depending on the customizing settings you made in step 5.5.1.2. Point 3!

The screenshot shows the SAP Business Partner relationship overview for contact person 409669. The relationship category is TBUR001 Is Contact Person For. The relationship is established between Business partner 1 (409669 CONSUMER ISA CONSUMER / B-3600 genk) and Business partner 2 (300415 CDrom-Store / B-3000 Leuven). The relationship category is Is Contact Person For. The form also shows tabs for General Data, Sales and Distribution Data, and Usage, and a section for Contact Person Data with fields for VIP, Department, Function, Authority, and Comments.

Step 3: Creation of the contact person in role “Internet User”.

The business partner you just created in the role contact person now needs to be maintained in the role “Internet User” (BUP005) in order to have access to the web shop.

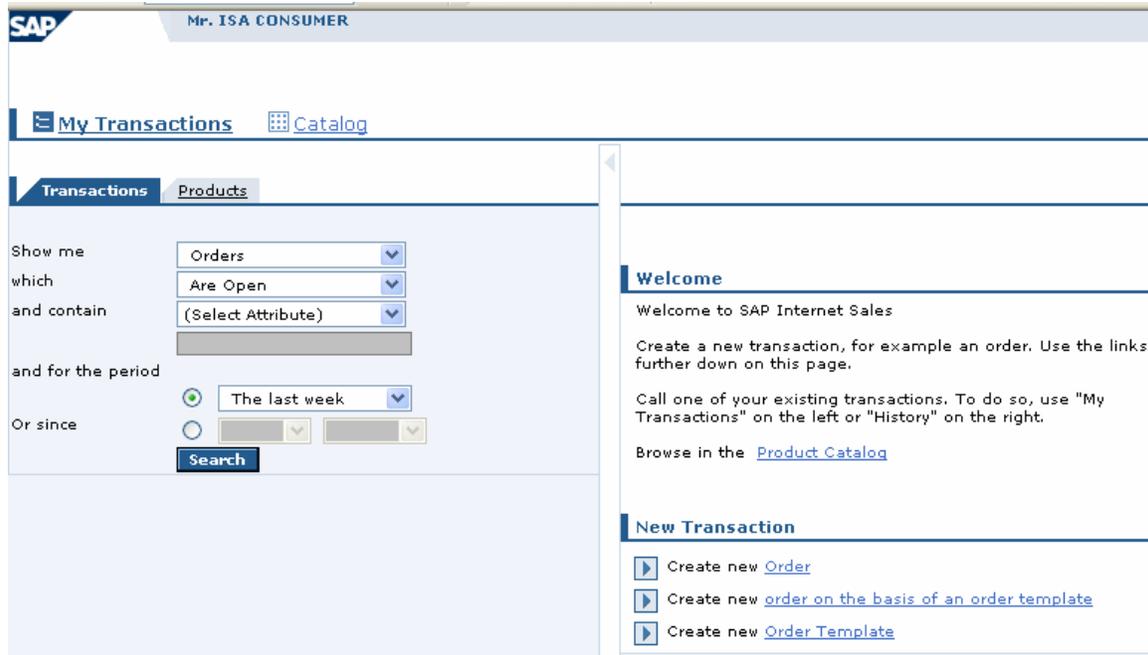
The screenshot shows the SAP user maintenance interface for the role 'Internet User' (BUP005). The 'Logon Data' section is active, showing the user 'CONSUMER' with the alias 'ISA\_CONSUMER' circled in red. The 'User Roles' section shows a table with one entry: 'SAP\_CRM\_INTERNET\_CUSTOMER' with the role name 'Authorizations for Internet Customers'. The 'Fixed Values' section shows the 'Logon Language' set to '1.234.567,89' and the 'Date Format' set to 'DD.MM.YYYY'.

Role	Role name
SAP_CRM_INTERNET_CUSTOMER	Authorizations for Internet Customers

Entry 1 of 1

Just search the SU01 User ID you created before (ISA\_CONSUMER) and the alias, initial password and the assigned role will be entered automatically!

After performing all these steps the Customer will be able to logon to the web shop! (Since you created the user and business partner (roles) for this user manually, you will need to send him an email manually telling him what his User-ID and initial password are!

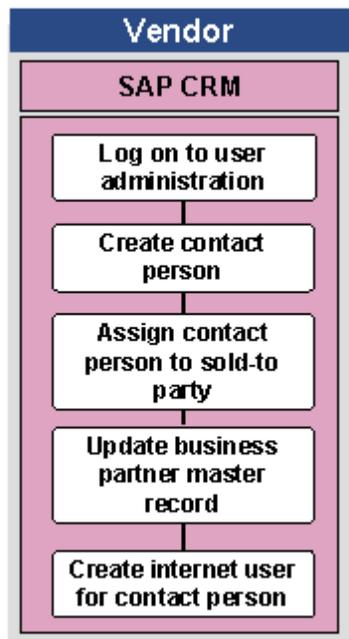


The URL will probably look like this:

<http://hostname:port/b2b/b2b/init.do>

### **Online Internet User Creation**

Process Flow



The following business process runs in SAP CRM.

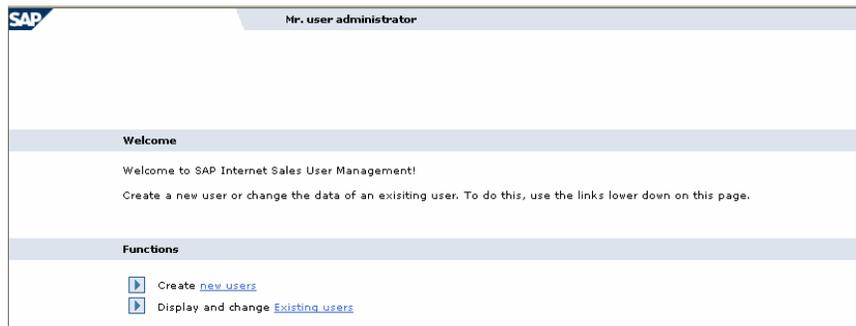
1. Log on to user administration
2. Create contact person
3. Assign contact person to sold-to party
4. Update business partner master record
5. Create internet user for the contact person

The user administrator can create Internet Users online! This is the easiest way to do. Again depending on what you defined in customizing the system will react in a certain way when looking up existing Contact persons and/or organizations.

The User administrator launches the site for user administration:

URL should look like this:

<http://Hostname:port/isauseradm/useradmin/init.do>



As you can see you have two options:

- Create new users
- Display and change existing users

I only will show the creation of new 'Internet Users' here.

There are two options here:

- Create a New User AND a new contact person
- Create a New User for an existing contact person

If you already created the contact person in the system for a certain organization via the SAPGUI, you can search on Business partner number:

I enter the business partner number of an existing company (or you can search this with the look-up button).

Press the button 'Go!'.

I get a result list with one or more contact persons that exist for this company.

Select the contact person for whom you want to create an Internet user and press the 'copy' button.

Fill out (mandatory) the User ID and select the role ‘Authorizations for Internet Customers’.

**Example:**

I created the User Id ‘juliel’ and assigned the role “authorizations for Internet Customers”. The email address ‘davy.pelssers@cernum.com’ is the email address, which is maintained on the relationship ‘is contact person for’.

The screenshot shows the 'Contact Person Relationship Display - General Data' window. It displays two business partners: 'Business partner 1' (ID 409670, name 'julie testable / B-3600 genk') and 'Business partner 2' (ID 300415, name 'CDrom-Store / B-3000 Leuven'). The relationship category is 'is Contact Person For'. The 'General Data' tab is active, showing sections for 'Standard Relationship' (with a 'Standard' checkbox), 'Contact Person Data' (with fields for VIP, Department, Function, Authority, and Comments), 'Address Data' (with 'Addr. Overview' and 'Print Preview' buttons, and fields for Person, Function, Department, Room Number, Floor, and Building), and 'Communication' (with fields for Language, Telephone, Mobile Phone, Fax, E-Mail (set to 'davy.pelssers@cernum.com'), and Comm. Meth (set to 'INT E-Mail')).

The next screen you see is the following:

The screenshot shows the 'Create New User for Partner 0000409670' screen. It is divided into two main sections: 'Address Data' and 'Communication Data'. Under 'Address Data', the 'Company' is 'CDrom-Store' and the 'Address' is 'CDrom-Stor...Leidenslaa...Leuven'. Under 'Communication Data', the 'Correspondence Language' is set to 'German' in a dropdown menu. There are empty input fields for 'Telephone' and 'Fax'. At the bottom, there are 'Create' and 'Back' buttons.

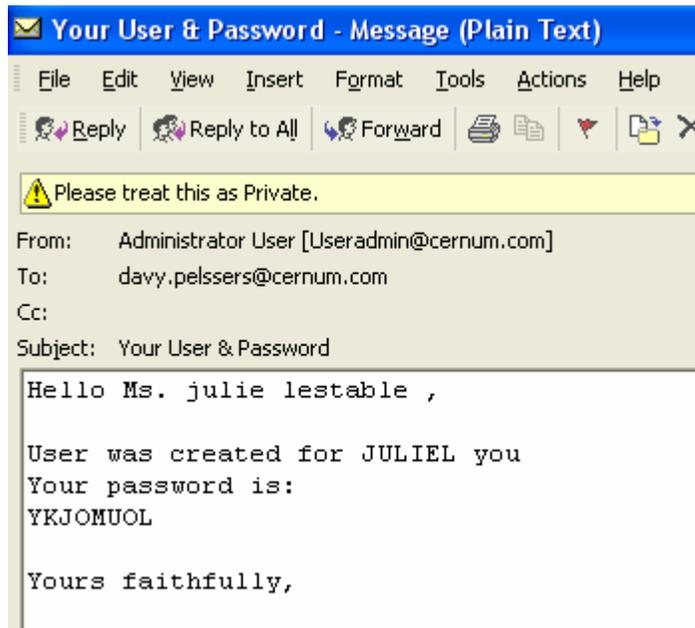
Here you could maintain the correspondence language, phone number and fax. Press the “create” button.

**New User for Partner 0000409670 created**

<b>User ID</b>	juliel				
<b>Password</b>	<b>YKJOMUOL</b>				
<b>Authorization</b>	Authorizations for Internet Customers				
	additional: Reference User for Internet Sales				
<b>Company</b>	<table border="1"> <thead> <tr> <th>Company ID</th> <th>Name</th> </tr> </thead> <tbody> <tr> <td>0000300415</td> <td>CDrom-Store</td> </tr> </tbody> </table>	Company ID	Name	0000300415	CDrom-Store
Company ID	Name				
0000300415	CDrom-Store				
<b>Form of Address</b>	Ms.				
<b>Name/address</b>	julie lestable				
<b>E-mail</b>	davy.pelssers@cernum.com				
<b>Address</b>	CDrom-Store, CDrom-Stor...Leidenslaa...Leuven				
<b>Correspondence Language</b>	English				
<b>Telephone</b>					
<b>Fax</b>					

Use this data when you create another user

Finally you see that a new Internet user has been created!  
 An email will be sent out to [davy.pelssers@cernum.com](mailto:davy.pelssers@cernum.com) to let the user know his user Id and password.



In the SAPGUI you can check now that the user with ALIAS 'JULIEL' has been created with the role SAP\_CRM\_INTERNET\_CUSTOMER.

**User Maintenance: Initial Screen**

User

Alias

By pressing enter you see the generated User ID.

User

Alias

Furthermore you see information that is automatically filled in by the system when you created the Internet User online!

User

Last Changed    Status

Address Logon data Defaults Parameters Roles Profiles Group

**Person**

Title

Last Name

First Name

Academic Title

Format

Function

Department

Room Number  Floor  Building

**Communication**

Language  Other communication

Telephone  Extension

Mobile Phone

Fax  Extension

E-Mail

Comm. Meth

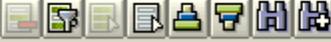
**Company**

SAP-AG / /

User

Last Changed    Status

Address Logon data Defaults Parameters Roles Profiles Groups

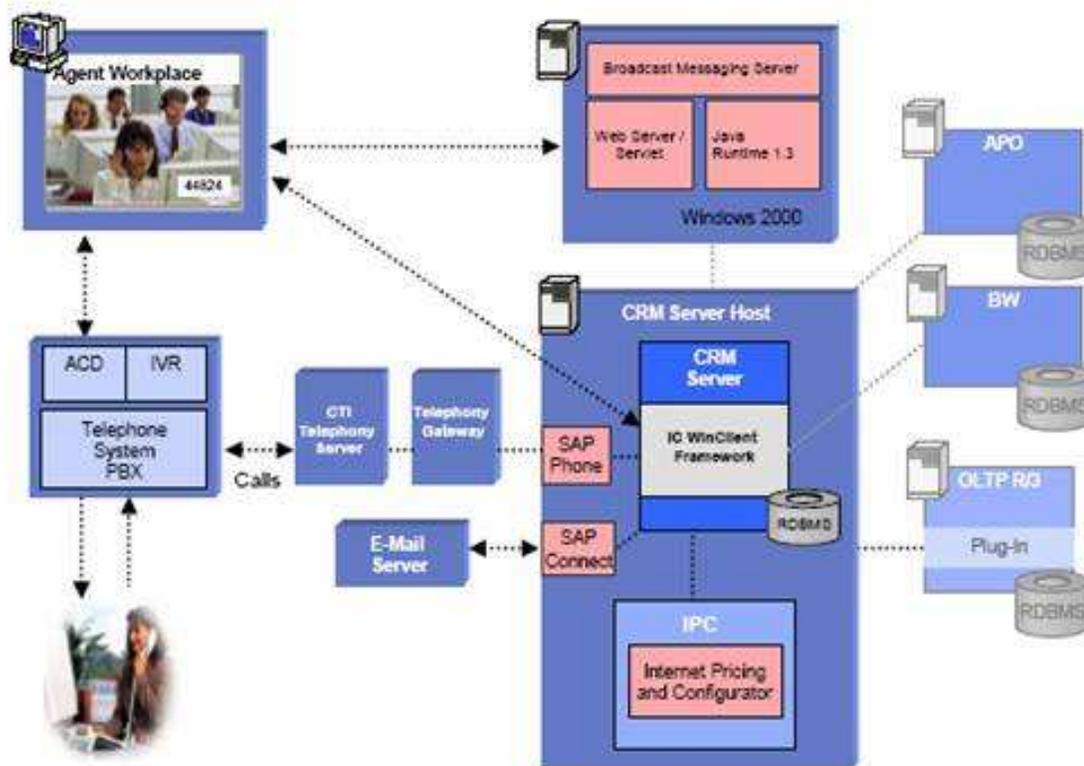


Reference User for Additional Rights

	Role	Type	Valid From	Valid To	Name
<input checked="" type="checkbox"/>	SAP_CRM_INTERNET_CUSTOMER		23.01.2006	31.12.9999	Authorizations for Intern

## 5.6. Interaction Center Winclient

### 5.6.1. Technical System Landscape



The CRM Server includes the IC WinClient framework and the following SAP applications:

→ **SAPphone**

SAPphone provides a telephony function to the interaction center. It allows data to be exchanged between the CRM Server and the telephony component.

→ **SAPconnect**

SAPconnect provides an integrated e-mail function to the interaction center. It enables **communication management software** to connect to the SAP system (for example, an e-mail server or SMTP server).

### 5.6.2. User Administration and authentication

- User Management
  - The IC WinClient uses standard user management tools to maintain users.

<u>Tool</u>	<u>Detailed description</u>
User maintenance (transaction SU01)	
Profile Generator (transaction PFCG)	You use the Profile Generator to create roles and assign authorizations to users in ABAP-based systems.

### 5.6.3. Users Overview

System	User	Delivered ?	Type	Default Password	Detailed description
CRM system	End user	No	Dialog user	INIT	User who can access IC WinClient functions. Created by CRM system administrator
CRM system	WF-Batch	Yes	System User	No	User who can process background workflow tasks
R/3 Backend	End User	No	System User	No	User who can access R/3 background functions. Depending on RFC destination, user can be individual user or system RFC user. Created by R/3 system administrator.
BW User	End User	No	System User	No	Created by BW system administrator if you want to evaluate interactive scripting through BW reporting
Multichannel Interface	Administrator	No	Communic. user	No	User with multichannel support using multichannel interface. Created by system administrator.
Multichannel Interface	User	No	System User	No	Created by multichannel interface administrator to replicate CRM user in multichannel interface and allow these users to access multichannel support (such as e-mail, chat, paging).

#### 5.6.4. Data synchronization between CRM system and other systems

Data Exchanged	When synchronized	How Synchronized
Business partner data	When business partner is created in CRM, the data is replicated to R/3. When business partner is created in R/3, the data is replicated to CRM.	Automatically by CRM middleware settings
Call related information between SAPphone and communication management software		Automatically by SAPphone setting
Data between SAPconnect and communication management software		Automatically by SAPconnect setting
Data between multichannel interface and CRM if multichannel interface is used as multichannel support		Automatically by CRM settings
Data between CRM and third-party communication management software	If you want to use the predict call functionality, call list data is replicated from CRM to third-party communication management software.	Synchronize when managing the call list to predict calls
Data between CRM system and BW system	Evaluation of interactive scripting using BW	Manual synchronization of evaluation data from CRM to BW

#### 5.6.5. Authorizations

- No roles are delivered with the IC WinClient.
- For an agent to access the IC WinClient, transaction **CIC0** must be assigned to the user's profile.
- For a user to work as an interaction center agent, the agent must be defined in the following transactions (in the SAP Menu: *Interaction Center* → *Interaction Center WinClient* → *Multichannel Interface Administration*):
  - Assign Agents to E-Mail Queue Groups
  - Assign Agents to Chat Queue Groups
  - Assign Agents to Paging Queue
- For an agent to receive e-mails, the user has to be maintained in transaction SO28.
- For a user to start the interactive scripting editor, transaction **CRMM\_TM\_SCRIPT** must be assigned to the user's profile.

## 5.7. CRM IC Webclient

The IC WebClient uses the CRM standard for authorizations.

No roles are delivered with this application. However, one CRM back-end role (SAP\_PCC\_IC\_AGENT) is delivered with SAP Enterprise Portal (SAP EP). If you run this application in SAP EP, the CRM back-end user has to be assigned to this CRM back-end role.

This application restricts the users that can change system settings. Only users with authorization S\_TABU\_DIS can change CRM customizing.

The user JAVA\_IC has authorization in mySAP CRM to allow remote function modules to be called via remote function call (RFC) (authorization object S\_RFC, ACTVT 16, RFC\_TYPE: FUGR).

### ABAP Stack Standard Roles Used by mySAP CRM

Role	Description
SAP_PCC_IC_AGENT	SU01 IC agent user

If SAP EP is used to access IC functions, it is very important to match roles between SAP EP and the CRM Server.

### Standard Authorization Objects

The following table shows the security-relevant authorization objects used in the IC agent scenario.

Authorization Object	Field	Value	Description
S_TABU_DIS	ACTVT DICBELCLS	02, 03 CRMC or CRMS	For all IC Customizing
BSP_APPL	BSP_APPL BSP_VIEW		This authorization is for protecting the People-Centric UI application. For a user to access a People-Centric UI application through the transaction launcher, the user must have authorization to access the People-Centric UI application.
CRM_CATEGO (As of release 5.0)	ACTVT (activity) SC_ID (application ID) LN_TYPE (object links) SC_PART (part) ASP_STATE (schema status)		(Optional) This authorization object is used in the auto suggest in the IC WebClient. For more information, go to SAP Help Portal and choose <i>Documentation</i> □ <i>mySAP Business Suite</i> □ <i>mySAP Customer</i>

			<i>Relationship Management</i> <input type="checkbox"/> <i>SAP CRM 5.0</i> <input type="checkbox"/> <i>Components and Functions</i> <input type="checkbox"/> <i>Basic Functions</i> <input type="checkbox"/> <i>Multilevel Categorization</i> <input type="checkbox"/> <i>Authorizations for the Category Modeler.</i>

### 5.7.1. Customizing of the IC Webclient

For each User Interface version you have a separate customizing path:

**Winclient:** SAP IMG → Customer Relationship Management → Interaction Center Winclient

**Webclient:** SAP IMG → Customer Relationship Management → Interaction Center Webclient

Basically you will create your own IC Webclient profile in customizing. This is the main profile, which contains different sub profiles:

SAP IMG → Customer Relationship Management → Interaction Center Webclient → Define IC Webclient Profiles

Change View "Define IC WebClient Profiles": Overview

Profile	Profile Description	Alert Modeler	Act
AUTOMOTIVE	SAP Automotive profile	DEFAULT	AU
DEFAULT	SAP Default profile	DEFAULT	DE
EIC	SAP EIC profile	DEFAULT	EM
FCC_TELCO	SAP Fin. Cust. Care for Telco		FIC
FCC_TELCOIE	SAP Fin. Cust. Care for Telco		FIC
HELPDESK	SAP Helpdesk profile	DEFAULT	DE
MARKETING	SAP Marketing profile	DEFAULT	DE
SALES_B2B	SAP Sales profile B2B	DEFAULT	DE
SALES_B2C	SAP Sales profile B2C	DEFAULT	DE
SERVICE_B2B	SAP Service profile B2B	DEFAULT	DE
SERVICE_B2C	SAP Service profile B2C	DEFAULT	DE
UTIL	SAP Utilities profile	DEFAULT	UT

If you look at the details of such an IC Webclient Profile, you will see the different sub profiles for:

Profile	
DEFAULT	
Define IC WebClient Profiles	
Profile Description	SAP Default profile
Alert Modeler	DEFAULT
Activity Clipboard Profile	DEFAULT
Event Handling	DEFAULT
Navigation Bar Profile	DEFAULT
Toolbar	DEFAULT
Script Profile	
Account Identification Profile	DEFAULT
Business Transaction Profile	DEFAULT
Framework Profile	DEFAULT
E-Mail Profile ID	DEFAULT
Campaign Profile ID	
Trans Launch Profile	DEFAULT
Broadcast Messaging Profile	
Com Mgmt Software Profile	
Content Management	DEFAULT
AI Profile	DEFAULT - 1
Prod. Prop. Profile	DEFAULT
Call List Profile ID	
Planned Bus. App. ID	
Profile ID BP Long texts	
FI-CA Profile	
Categorization Profile ID	DEFAULT

An important difference between customizing the IC WebClient and Winclient is that several IC WebClient sub profiles are based on XML.

For example, the Transaction Launcher Profile (DEFAULT) looks like this:

**Editor XML Data**

Component: Action Box  
 Profile Name: DEFAULT Description: Transaction Launcher Profile

```
<?xml version="1.0"?>
<asx:abap xmlns:asx="http://www.sap.com/abapxml" version="1.0">
<asx:values>
<ACTIONS>
<CRMT_IC_ACTION_DEF>
<ID>ACTION_DISPLAY_CUSTOMER</ID>
<CLASS>CL_CRM_IC_ABOXSAMPLE_DISPBP</CLASS>
<MAPPEDLOGSYS>OWNLOGSYS</MAPPEDLOGSYS>
</CRMT_IC_ACTION_DEF>
<CRMT_IC_ACTION_DEF>
<ID>ACTION_CREATE_SALES_ORDER</ID>
<CLASS>CL_CRM_IC_ABOXSAMPLE_CREATESO</CLASS>
<MAPPEDLOGSYS>R3SYS46C</MAPPEDLOGSYS>
</CRMT_IC_ACTION_DEF>
<CRMT_IC_ACTION_DEF>
<ID>ACTION_CREATE_R3_ORDER</ID>
<CLASS>CL_CRM_IC_ABOXSAMPLE_CREATESO</CLASS>
<MAPPEDLOGSYS>R3SYS46C</MAPPEDLOGSYS>
</CRMT_IC_ACTION_DEF>
<CRMT_IC_ACTION_DEF>
<ID>ACTION_CREATE_R3_SERVICE</ID>
<CLASS>CL_CRM_IC_ABOXSAMPLE_CREATESRV</CLASS>
<MAPPEDLOGSYS>R3SYS46C</MAPPEDLOGSYS>
</CRMT_IC_ACTION_DEF>
<CRMT_IC_ACTION_DEF>
<ID>ACTION_CREATE_LEAD</ID>
<CLASS>CL_CRM_IC_ABOXSAMPLE_CR_LEAD</CLASS>
<MAPPEDLOGSYS>OWNLOGSYS</MAPPEDLOGSYS>
</CRMT_IC_ACTION_DEF>
<CRMT_IC_ACTION_DEF>
<ID>ACTION_CREATE_OPPT</ID>
<CLASS>CL_CRM_IC_ABOXSAMPLE_CR_OPPT</CLASS>
```

### 5.7.2. Assignment of the IC Webclient Profile

Lets suppose you have actually customized your own IC Webclient Profile.  
To assign such a profile to an employee of your company, you need to perform several steps:

1) **Assign your employee to the organizational model:**

Maintenance of the organizational model can be done via the transaction code **PPOMA\_CRM**.

There you will define your organizational structure by defining organisational units (sales organizations, sales office...) and positions.

You will assign either the user or the business partner (in the role Employee) to a position in your org. model.

If you assign a business partner (employee) to a position, you should not forget to create the link between this business partner and the SAP USER he is using.

This can be done via the transaction code **BP**:

Choose the maintenance screen for the role Employee and select the tab page “identification”.

The screenshot shows the SAP Business Partner maintenance screen for the role Employee. The screen is divided into several sections. At the top, there is a header with 'Business Partner' and a search icon. Below that, there is a 'Create in Role' field with the value 'BUP003 Employee (New)'. The main content area has four tabs: 'Address', 'Address Overview', 'Identification', and 'Co'. The 'Identification' tab is selected. Below the tabs, there are two main sections: 'Personal Data' and 'Employee Data'. The 'Personal Data' section has fields for 'Gender' (with radio buttons for 'Unknown' and 'Female'), 'Marital Status', and 'Nationality'. The 'Employee Data' section has fields for 'Personnel number' and 'User'. The 'User' field contains the value 'PELSSERSDA' and has a blue arrow pointing to it.

After assigning your employee to the org model you will define for which organizational unit or position a certain IC Webclient Profile should be available.

## 2) Assign IC Webclient Profile to an org unit or position

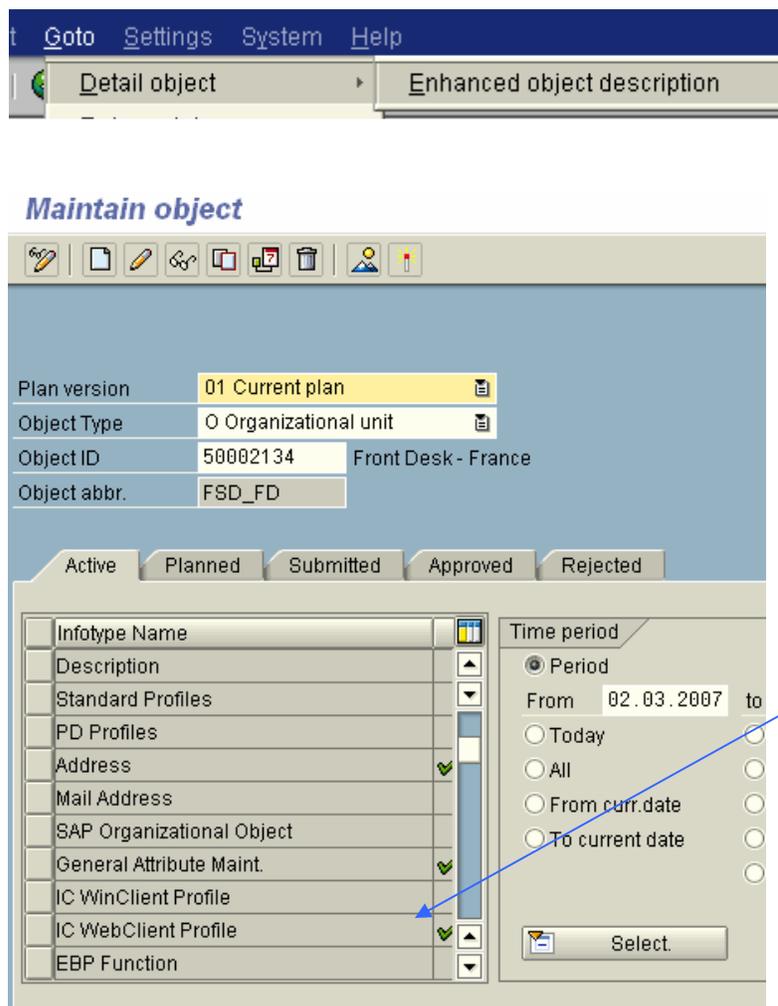
You can do this using the SAP CRM menu:

SAP Menu → Interaction Center → Supporting Processes → IC Structure → Change Organization and Staffing

Or directly by using the transaction code **PPOMW**.

Select the org unit or position to which you want to assign your customized IC Webclient Profile by double clicking on it.

Next, in the menu, choose “Goto → Detail Object → Enhanced object Description”



You can maintain here which IC Webclient profile should be used for this org unit or position.

**Change IC WebClient Profile**

Organizational unit: FSD\_FD Front Desk - France  
 Planning Status: Active  
 Validity: 05.04.2006 to 31.12.9999

IC WebClient Profile  
 Profile: DEFAULT

Record 1 of 1

### 5.7.3. How to launch the IC WebClient

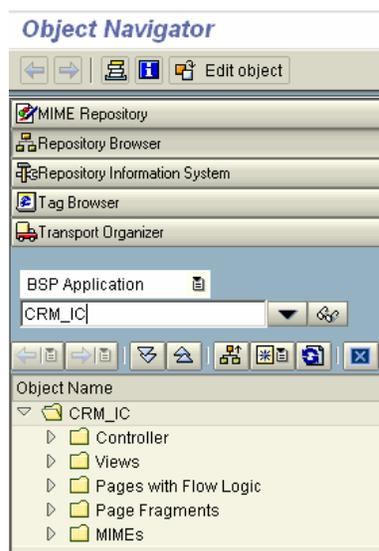
To launch the IC WebClient you have several options that should work, if everything is configured correctly.

- A) Launch the WebClient via transaction code CRM\_IC

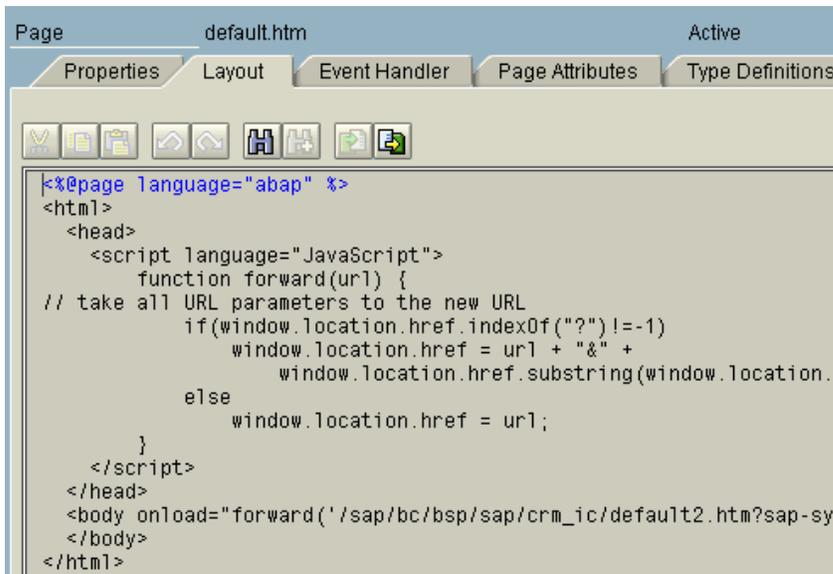


- B) You can also look up the URL to launch the IC WebClient:

Use the transaction code **SE80** to launch the Object Navigator.  
 Next, choose the BSP Application CRM\_IC (this is the standard delivered IC WebClient BSP Application by SAP).



Next, open the folder “pages with Flow Logic” and double click on the page “default.htm”.

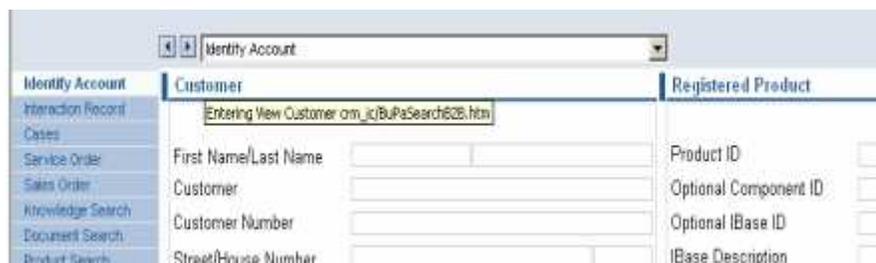


Select the tab page properties, and scroll down to the last field, which is “URL”. Copy the URL into a web-browser and you will be launching the IC Webclient.

### 5.7.4. Useful Parameters

Parameter ID	Parameter value	Short Text
CRM_ICWC_SHORTCUTS		Show Keyboard Navigation Shortcuts
CRM_ICWC_STATIC		Dynamic / Static HTML Design
CRM_ICWC_TEST	0X123456789	Test of new development features

Actually, I do not know the first two parameters, but the parameter CRM\_ICWC\_TEST allows you to display the technical names of the combination BSP application/View that you are looking at in the IC Webclient.



By moving your mouse over the description field of the view, you will get the name of the current BSP Application and the view you are looking at.

### 5.7.5. Useful information about the IC Webclient

If your company is about to implement the SAP CRM IC Webclient, I would advise you to have a look at the following information:

1) <http://help.sap.com>

A) Via the following URL, you can read the basics about the usage of the **SAP CRM Interaction Center**. Also the differences between the Winclient and the Webclient are more or less explained.

[http://help.sap.com/saphelp\\_crm40sr1/helpdata/en/07/71bda902604580bd64520b31c3e35a/frameset.htm](http://help.sap.com/saphelp_crm40sr1/helpdata/en/07/71bda902604580bd64520b31c3e35a/frameset.htm)

B) If you want to learn some basics about **creating Web Applications with BSP's and the Model View Controller concept**, you can launch the following URL:

[http://help.sap.com/saphelp\\_crm40sr1/helpdata/en/c8/101c3a1cf1c54be10000000a114084/frameset.htm](http://help.sap.com/saphelp_crm40sr1/helpdata/en/c8/101c3a1cf1c54be10000000a114084/frameset.htm)

2) If your company has a user account on **SAP Service Market Place** you can also find a lot of useful presentations and the IC Webclient cookbook.

<http://www.service.sap.com>

I am not sure about the path but if you use for example the "SAP support portal" and use the 'advanced search' there, you will find it back too!



Search term = Webclient cookbook  
Method = phrase

-search for documents!

**Search for Documents [Quick Search]**

Search Term:

Method:  Language:

Search for documents:  Number of results:

In this way I find back two entries:

- 1) Interaction Center WebClient Cookbook
- 2) Interaction Center WebClient Cookbook - Service Industry Ext

**Content Areas** Documents

**2 documents found** Page 1 of 1

<b>1</b>	<a href="#">Interaction Center WebClient Cookbook</a>
<p>Version 3 Consultant #s Cookbook Interaction Center ( IC ) WebClient Valid for SAP CRM 4.0 SP03 and Higher December 2003 Please provide feedback :crm .feedback@sap.com Classification: Standard Created on: 15.08.2003 <span style="float: right;">Changed on: 13.10.2004</span></p>	
<b>2</b>	<a href="#">Interaction Center WebClient Cookbook - Service Industry Ext</a>
<p>Version 1 Consultant #s Cookbook Interaction Center ( IC ) WebClient Valid for SAP CRM 4.0 Add -Onfor Service Industries September 2004 Please provide feedback :crm . Classification: Standard Created on: 23.09.2004 <span style="float: right;">Changed on: 13.10.2004</span></p>	

### 3) Online Knowledge Products (OKP)

<http://www.service.sap.com/okp>

Your company can also buy access to Online Knowledge Products.

### 4) Specific SAP Courses:

- CR400: SAP CRM Interaction Center Winclient
- CR410: SAP CRM Interaction Center WebClient
- NET200: SAP Web Application Server: Developing BSP Applications

### 5) SAP BOOKS: [www.sap-press.com](http://www.sap-press.com)

ISBN 1-59229-049-9	Advanced BSP Programming
--------------------	--------------------------

ISBN 1-59229-067-1	mySAP CRM Interaction Center
--------------------	------------------------------

#### 6) Online SAP Forums:

- A) [www.sapfans.com](http://www.sapfans.com) (my nickname is **drago** if you want to search on postings by Author.)
- B) [www.erpgenie.com](http://www.erpgenie.com)

#### 7) Very useful OSS notes related to IC Webclient usage:

OSS note Number	Description
759923	IC Webclient: FAQ note
894493	<u>Frequently Asked Questions about Fax and Letter</u>
947917	FAQ: Dispute Management for Financial Customer Care
947917	FAQ's about the Agent INBOX
741940	FAQ: IC Webclient JCO Connection
1013376	FAQ: CRM IC Webclient Transaction Launcher

## 5.8. ACE (Access Control Engine)

At this moment I did not have time to really look into ACE, although the concept is pretty useful if you are using SAP CRM in the PCUI solution (e.g. when using SAP Enterprise Portal). I will briefly mention what the concept is about based on the finding from Boris Dingenouts (a senior SAP CRM consultant working at **Exxap**).

### 5.8.1. Introduction

Large and complex (international) CRM installations all face the same problem: how do we show the users only the data that they need to see? We don't mean authorizations related to functionality, but related to business content. Imagine you run a big business and have a million customers worldwide. Then a sales rep responsible for a group of customers in Belgium should not see any customers from Asia in his search results. Or a sales rep with responsibility for a certain branche should not be bothered with customers of other branches. Furthermore, if the structure of the sales organization changes, you don't want to end up changing all kind of authorization profiles.

To solve these issues, SAP came up in CRM for the PCUI with a pretty nice solution: CRM-ACE. This stands for Access Control Engine and is a framework to calculate user dependent access rights on object level. It originates from Channel Management but works in all PCUI functionalities. Unfortunately it doesn't work in other environments like IC Webclient or via the SAP GUI (but Boris Dingenouts created a development request for this....).

When Boris started looking into ACE a while ago there was very little documentation and information on this topic. There is some information in the IMG and a very basic SAP tutor file but posts in SDN Forums asking for info got almost no reply. As usual he found out how it works himself by debugging and tracing....and therefore he thought it would be a good idea to share it with you.

You can take a look at his personal “blog” using the following the URL:

<https://www.sdn.sap.com/irj/sdn/weblogs?blog=/pub/wlg/4407>

## 6. BW specific authorizations (TO BE ELABORATED)

Since the main focus of this eBook is on SAP CRM security, I could not find the time to elaborate any BW related authorization topics. Hopefully I can do this in a near future.

- Authorization objects
- Technical side: Administrator workbench
- Functional side: Bex Analyzer
- ....

**TO BE ELABORATED**

## 7. Frequently Asked Questions

1. Where can I learn SAP CRM authorizations?
2. Where can I find back which authorization objects are being used in a transaction or program?
3. How do I know which fields are available in the profile generator and for which specific transactions?
4. How to start the design of my authorization concept and implementation?
5. How to restrict authorizations in PCUI screens and in the IC Webclient user interfaces?
6. Is there any way for an administrator to know whether the user has been locked by him (admin) or whether it is locked by incorrect logons?

Tcode SUIM has report RSUSR006 that reads this information in table USR02 from the field UFLAG.

You could use SE16, table USR02, field UFLAG :

0 not locked  
32 locked by central admin of CUA  
64 locked by security administrator  
128 locked due to incorrect logon (wrong password > 3 times)

7. How to restrict “/h”?

Obj S\_DEVELOP  
DEBUG

8. Critical authorization objects?

S\_BTCH\_ADM  
S\_RZL\_ADM  
S\_ADMI\_FCD  
S\_LOG\_COM  
S\_PROGRAM  
S\_DEVELOP  
S\_RFC  
S\_TRANSPRT  
S\_CTS\_ADMI  
S\_SPO\_AUTH

9.

## 8. Tips and Tricks

1. How to bypass authorization checks?

As a developer you can bypass authorization checks by going into debug mode. Via the command “/h” you start a program or transaction in debug mode. At the statement AUTHORITY-CHECK you change the sy-subrc into 0.

Of course this is not the intention, and therefore you should now that you can restrict people from debugging with the authorization object S\_DEVELOP!

**Check of hier de entry debug inzit!!**

This is all right for developers to have, but only in a development system or quality assurance system, but definitely not in a production system.

2. Best practice cases ...functional consultant per module will explain and test the setup of single roles and integration test... Writing of scripts for authorization administrator to test his setup
- 3.

## 9. Relevant OSS notes regarding SAP Authorizations

### 9.1. SAP CRM related

Note Number	Authorization Object	Description/Symptom
865068	CRM_TXT_ID	<b>Authorization Object for Text Type</b> as of release 5.0: There is no authorization check for accessing individual text types of a text determination procedure.
786045 831212	CRM_OPP_LK CRM_ORD_OE	<b>Missing Authorization Check when creating references:</b> No authorization check is performed when creating a relationship within an opportunity between the Opportunity itself and a Sub Opportunity for example.
831813	B_BUPA_GRP	<b>BP Identification Popup: Authorization check;</b> During the business partner identification process, no authorization check is performed when displaying the business partner in the popup.
877128	CRM_MKTPL	<b>Authorization check for One Order from MKTPL:</b> The authority check was not set

712613	B_BUPA_GRP	<b>Authorization check for B_BUPA_GRP only if group is filled:</b> In the portal environment, you always have to assign an authorization for authorization object B_BUPA_GRP although this should be optional.
524474	CRM_BP_SA	<b>Sales Area related authorization check in business partner</b>
803453	CRM_BP_SA	<b>Sales Area related check in business partner</b>
999239		PCUI: <b>Sales area authorization</b> in partner function tab
453616		In Transactions COMM_SET_UPD_PME and COMM_ATTR_UPD_PME (reports COM_SETTYPE_UPD_PME and COM_ATTRIBUTE_UPD_PME), an <b>authorization check on attribute and set type level and on the level of the category is missing.</b>
446634	CRMD_PROF_TEMPL C_KLAH_BKP C_KLAH_BKL	<b>There is no authorization check when you maintain characteristic groups.</b>
652949	CRM_CGRP	<b>Simulation: Enhancement in Authorization check</b>
829723	COM_PRD_CT	<b>Product Proposal: missing authorization check;</b> The CRM_ISU_GET_PRODUCT search help always displays all products, which correspond to the entered search criteria. However, the system does not check whether the user may actually display the products.
619410		<b>Archiving: Dynamic authorization, no check indicator</b> (ARCHIVE_PRODUCT, Transaction COMM_PRDARC, ARC_OBJ: PRODUCT_MD)
568128	CRM_ORD_OE	You defined authorizations for <b>authorization object CRM_ORD_OE for a user.</b> For example, the user wants to use a document for which only the distribution channel is maintained. The check is incorrect. Occurs in release 3.0 and 3.1
812318	CMS*	<b>Missing Authorizations in CMS Transactions</b>
1010492	CRM_TPM	Default Authorizations for the objects (type transaction) 'CRM_MKTPL_PMDC' and 'S_PNC_50000053' are not fully/appropriate maintained. Check Manager errors of severity 2 have been issued on these objects.
625725		<b>PCUI: Authorization check “create product”</b>


## APPENDIX

Some general information about Authorizations:

Authorization means permission to perform a particular function in the SAP system. It is achieved by assigning authorization profiles to users.

The various terms used in Authorizations are:

- ***Authorization fields:***

Authorization fields identify the elements of the system that need to be protected. These fields are associated with the data elements of the ABAP/4 dictionary. For example if you consider Sales order creation as an activity, for which authorization is required, the fields associated with this activity are:

VKORG – Sales Organization

VTWEG – Distribution Channel

SPART – Division

These fields form the part of the standard ABAP/4 function call  
AUTHORITY –CHECK.

- ***Authorization object:***

Authorization object identifies an activity that needs to be protected in the SAP system. For example Creation of a Sales Order is an activity. An object is made up of authorization fields. A user can perform an activity only if they satisfy the authorization check for each field in the authorization object.

E.g. V\_VBAK\_VKO is an object for Sales Area comprising of the following fields:

VKORG – Sales Organization

VTWEG – Distribution Channel

SPART – Division

ACTVT – Activity

Authorization objects are grouped into Object Class depending up on the application area.

- **Authorization:**

Authorization is used to define permitted values for the fields of an authorization object. For example you want to define an authorization for **displaying** a sales order for a **Sales organization 3000, Distribution Channel 01 and Division 02**, the values that will be assigned to fields of the object V\_VBAK\_VKO are:

VKORG – 3000  
VTWEG – 01  
SPART – 02  
ACTVT – 03 (display)

- ***Authorization profiles (roles):***

As a rule authorizations are not directly assigned to a user. Instead these authorizations are clubbed in an authorization profile (role) and then assigned to the user master records via SU01.

Types of profiles (roles):

There are two types of authorization profiles – Simple and Composite (collective).

**Simple Profiles:**

A simple profile is composed of only Authorizations.

**Composite profiles:**

Composite profiles are sets of authorization profiles, both simple and Composite. A composite profile can contain an unlimited number of profiles. They can be assigned to users just as Simple profiles in the user master records are. Composite profiles are suitable for users who have different responsibilities of job tasks in the system. These profiles are sometimes known as reference profiles for assigning a larger group of access privileges and having the possibility to better match users with several responsibilities.