

Implementing SAP HR Structural Authorization



Applies to:

SAP ECC 6.0 version, SAP HCM module. For more information, visit the [Enterprise Resource Planning homepage](#).

Summary

This document describes the steps required for implementing SAP HR Structural Authorization.

Author: Dinesh Pandey

Company: SAP Labs India

Created on: 30 January 2010

Author Bio



Dinesh Pandey is a Principal Consultant with Custom Development, SAP Labs India. He has worked on various customer projects in the area of SAP HCM.

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Introduction

In Human Resources, authorizations play a significant role since access to HR data must be strictly controlled. There are two main ways to set up authorizations for SAP Human Resources:

You can set up **general authorizations** that are based on the SAP-wide authorization concept or you can set up HR-specific **structural authorizations** that check by organizational assignment if a user is authorized to perform an activity.

The **structural profile** determines which object in the organizational structure the user has access to. The **general profile** determines which object data (infotype, subtype) and which access mode (Read, Write, ...) the user has for those objects.

In contrast to general authorization profiles, which are assigned using the Profile Generator (PFCG transaction), you use table T77UA (User Authorizations = Assignment of Profile to User) to assign structural profiles.

Structural profiles use the data model of the *Organizational Management* to build hierarchies using objects and relationships.

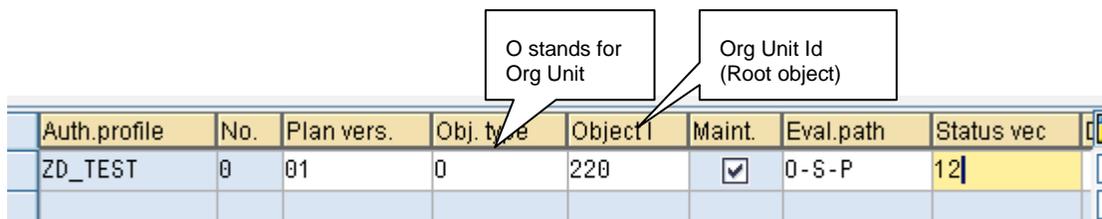
Steps to implement Structural Authorization

Let's take a business scenario to understand how structural authorization works. The scenario is as follows:

"User SMITH is the chief of org. unit 00000220 "Executive Board –Italy" and he should be allowed to access data of those employees who belongs to this org. unit.

The following section will tell you how this requirement can be addressed in SAP using structural authorization.

1. **Step1:** Maintain structural authorization profile in view T77PR



Auth.profile	No.	Plan vers.	Obj. type	Object1	Maint.	Eval.path	Status vec
ZD_TEST	0	01	0	220	<input checked="" type="checkbox"/>	O-S-P	12

By entering a specific evaluation path (O-S-P in this example) in the field 'Eval. Path', you can determine that the user is only authorized to access objects along this evaluation path.

Evaluation paths "collect" objects from a start object in an existing structure according to their definition: The definition of an evaluation path determines the start object and which object types using which relationships are selected.

Few more fields which you can enter in this view:

- a. **Period** - In this field, you can define the profile according to the validity period of the structure. You can enter the following options: Key date, all, and different periods such as current year, current month and so on.
If you select the entry **D** (current day), the structural authorization is limited to the structures valid on the current day.
- b. **Function Module** - You can use this field to specify a function module that determines the root object dynamically at runtime.

The advantage of using function modules is that each time you define an authorization profile, the function module generates a user-specific profile for each user at runtime.

If a manager changes department, for example, the corresponding profile in the T77PR table (*Definition of Authorization Profiles*) does not need to be changed.

Following function modules are delivered in the standard system:

- RH_GET_MANAGER_ASSIGNMENT (*Determine Organizational Units for Manager*)
- RH_GET_ORG_ASSIGNMENT (*Organizational Assignment*)

c. Depth (Display Depth)

You can use this field to determine which level of a hierarchical structure a user is authorized to access.

2. **Step2:** Assign structure authorization profile to user in view T77UA

Change View "User Authorizations": Overview

User name	Auth.profile	Start date	End date	Exclusion	Display Objects
CHICAGO	CHICAGO	01.01.1900	31.12.9999	<input type="checkbox"/>	
COMMCLERK_A	COMMCLERK_A	01.01.1900	31.12.9999	<input type="checkbox"/>	
SAP*	ALL	01.01.1900	31.12.9999	<input type="checkbox"/>	
SMITH	ZD_TEST	07.01.2000	31.12.9999	<input type="checkbox"/>	

Impact of Structural Authorization on SAP HR Transactions

- The below screen shows the complete organization hierarchy of an organization using transaction PPOME.

Staff assignments (structure)	Code	ID	Chief
IDES AG	IDES AG	O 00000001	Eicko Schutz-H...
Vorstand	Vorstand	S 50006025	
Dr.Rer.Nat. sun Bronson	Bronson	P 00000001	
TESTBER	TESTBER	US TESTBER	
do not delete Recruiter for MSS & E-F Recruiter		S 50006825	
XYL Radler 1 Planstelle	XYL RadlerS	S 50007525	
SAP WALLDORF GERMANY	SAP GERM	O 00000100	Eicko Schutz-H...
Executive Board - Italy	Exec. Italy	O 00000220	Pablo Filgueria
Chief Executive Officer - (I)	CEO - I	S 50000191	
Pablo Filgueria	Filgueria	P 07495001	
Executive Assistant (I)	Exec.Asst I	S 50000192	
Chief Financial Officer - (I)	CFO - I	S 50000193	
Executive Assistant - (I)	Exec.Asst I	S 50000194	
Chief Operator Officer - (I)	COO - I	S 50000196	
Executive Assistant Operations (I)	Exec.Asst I	S 50000197	
Vice President HR-Finance (I)	VP HR/FIN I	S 50000198	
Vice President Operations/Sales - (I)	VP Op/Sa I	S 50000201	
Human Resources (I)	Human Res I	O 50000712	
Payroll Administration - (I)	Payroll I	O 50000714	Lucia Iturbe
Executive Board - USA	US Exec.	O 00000300	Debbie Davis...
Executive Board - Canada	CDN Exec.	O 00000400	
Executive Board (Aus)	Exec. AUS	O 00000420	
CATT-Test	New org unit	O 50002776	Mr. GARY DAHL
TESTING FOR ECATT	VERMA	O 50002834	Mr. Bronson Ch...
Accounts Payable D	50000563	O 50002926	Hanno Gutjahr...
HR250Org1	HR250Org1	O 50003978	Manager1

Figure1: Complete Organization hierarchy for a IDES company

- When user SMITH logs on to the system and looks for the organization hierarchy using transaction PPOME, it will look like as show below.

Staff assignments (structure)	Code	ID	Chief	ADT Name	ADT Mair
Executive Board - Italy	Exec. Italy	O 00000220	Pablo Filgueria		
Chief Executive Officer - (I)	CEO - I	S 50000191			
Pablo Filgueria	Filgueria	P 07495001			
Executive Assistant (I)	Exec.Asst I	S 50000192			
Chief Financial Officer - (I)	CFO - I	S 50000193			
Executive Assistant - (I)	Exec.Asst I	S 50000194			
Chief Operator Officer - (I)	COO - I	S 50000196			
Executive Assistant Operations (I)	Exec.Asst I	S 50000197			
Vice President HR-Finance (I)	VP HR/FIN I	S 50000198			
Vice President Operations/Sales - (I)	VP Op/Sa I	S 50000201			
Human Resources (I)	Human Res I	O 50000712			
Payroll Administration - (I)	Payroll I	O 50000714	Lucia Iturbe		

Figure2: Organization hierarchy for organization unit 00000220

You can easily notice that SMITH can only view organization hierarchy for organization unit 00000220 and not the complete organization hierarchy.

- When user SMITH tries to look for master data for personnel no. 1, he will get an error as shown in the screen-shot below. Reason: Personnel no. 1 is not a part of org hierarchy 00000220.

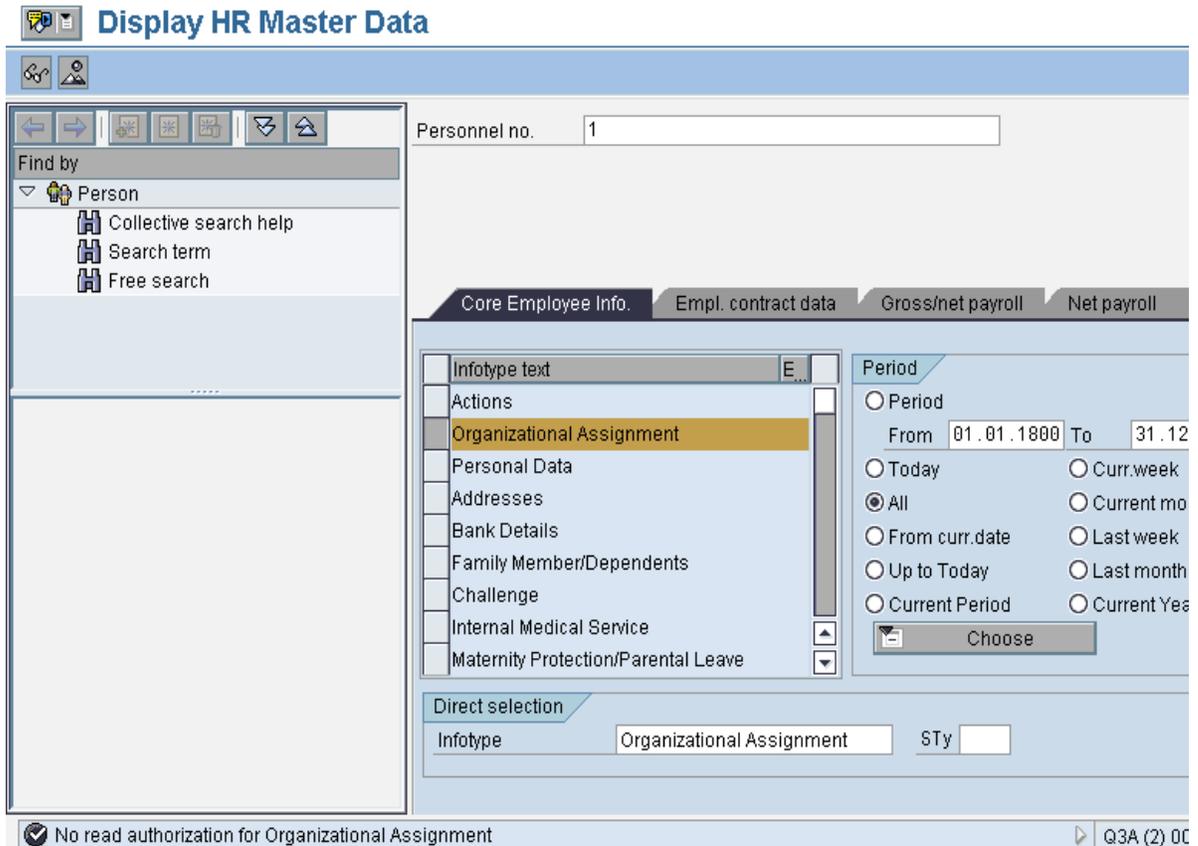


Figure3: HR Master Data screen

- User SMITH will get an error if he wants to read employee 00000001 data using FM "HR_READ_INFOTYPE" as shown in the screen-shot below.

Test for function group		HRAC				
Function module		HR_READ_INFOTYPE				
Uppercase/Lowercase		<input type="checkbox"/>				
Runtime:		1.047.497 Microseconds				
Import parameters	Value					
TCLAS	A					
PERNR	00000001					
INFTY	0001					
BEGDA	01.01.1800					
ENDDA	31.12.9999					
BYPASS_BUFFER						
LEGACY_MODE						
Export parameters	Value					
SUBRC	12					
Tables	Value					
INFTY_TAB	<table border="1"> <tr> <td>0</td> <td>Entries</td> </tr> <tr> <td>0</td> <td>Entries</td> </tr> </table>		0	Entries	0	Entries
0	Entries					
0	Entries					
Result:						

Figure5: Function module execution via SE37 transaction

- When user SMITH tries to look for details of position 50006025, he will get an error as shown in the screen-shot below. Reason: Position 50006025 is not a part of org hierarchy 00000220.

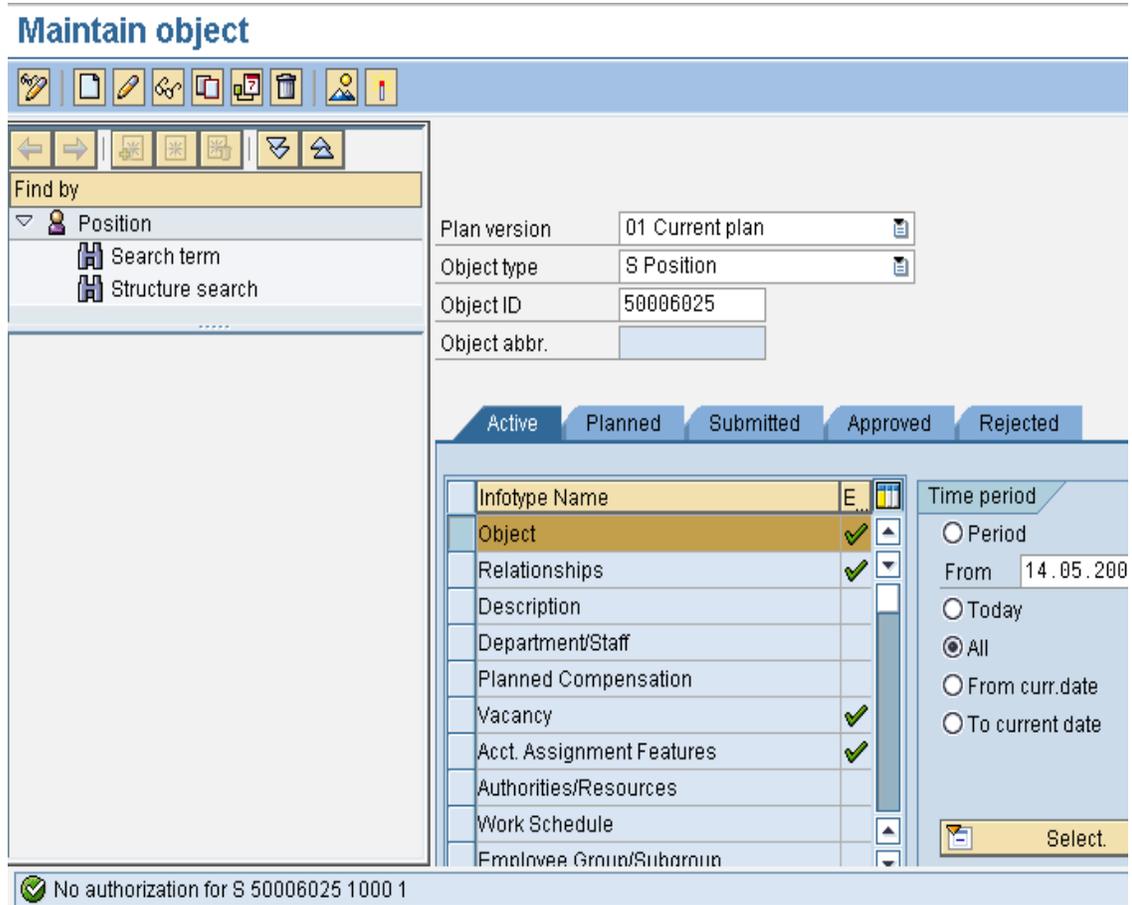


Figure4: Screen to maintain PD Objects

BADI for HR Authorization Checks

You can implement a customer-specific test procedure for general and structural authorization checks using a Business Add-In (BADI). The BADI for the structural authorization check is called HRBAS00_STRUAUTH.

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