

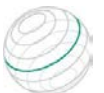
Case Study – Structural Authorisations at Vaillant Group

iProConference SAP HCM, 6/7 May 2015 in London



Agenda

- Business requirements
- Technical realisation
- Scenarios
- Lessons learned

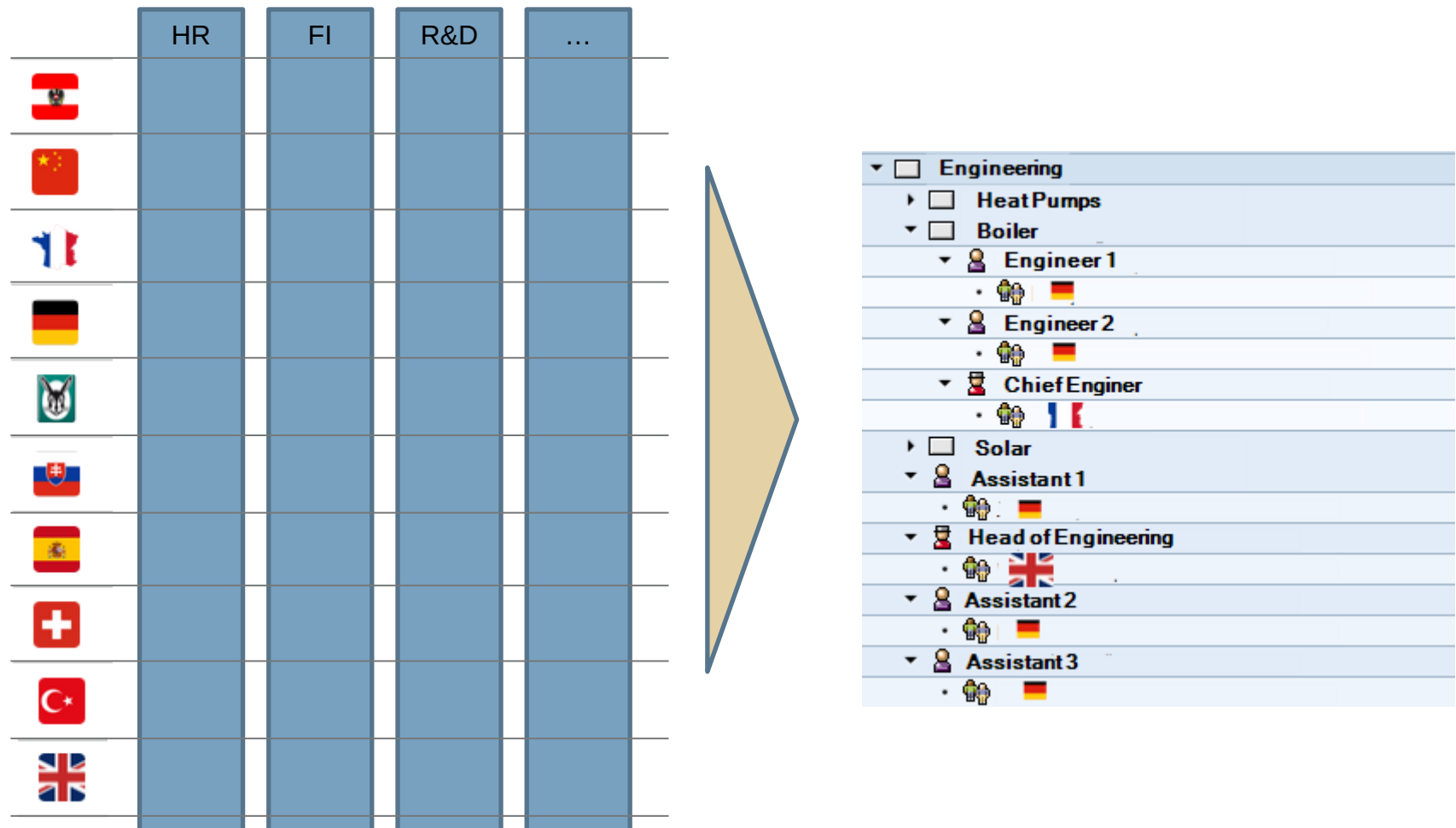


Business Requirements

AUTHORISATIONS FOR A MATRIX ORGANISATION



Matrix Organisation with Functions and Countries



Constraints for access to HR master data

- ☐ Give Group HR access to all employees and org. objects
- ☐ Give Country HR only access only to employees and org. objects of same country
- ☐ Give managers read-only access to reporting employees
- ☐ Enable access to special functions like time managers



Technical Realisations

SAP STANDARD FUNCTIONS AND CUSTOM DEVELOPMENTS



First we need a new authorisation object

A custom auth. object allows you to extend the standard functions for custom rules

Maintain the Authorization Objects

Regenerate SAP_ALL

Class/Object Text Type

E02(1)/002 Create Authorization Object

Object: Z_DUMMY

Text:

Class: HR Human Resources

Author:

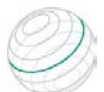
Authorization fields

Authorization Fld	Short Description
BUKRS	Company Code
PROFL	Authorization Profile
INFTY	Infotype
SUBTY	Subtype

Field maintenance

J111	India version authorization object class	Object Class
J3GD	Industry Business Solutions - ETM	Object Class
J3RC	Autoclearing program authorizations	Object Class
J3RE	Export operations (Russia)	Object Class
J3RF	FI: Specific features for Russia	Object Class

- Transaction SU21
- Define authorisation fields
 - Use INFTY / SUBTY to restrict data available
 - User IT1 fields to restrict personnel numbers in access
 - Use PROFL for complex logic or OM objects



Then we build some roles

Create a role for each user type (HR Admin, Line Manager, Special Function User, ...)

Change Role: Authorizations

Maint.: 0 Unmaint. org. levels 1 open fields, Status: Changed

Z:DUMMY

Manually Human Resources HR

Manually Test Z_DUMMY

Manually Test T-E241107900

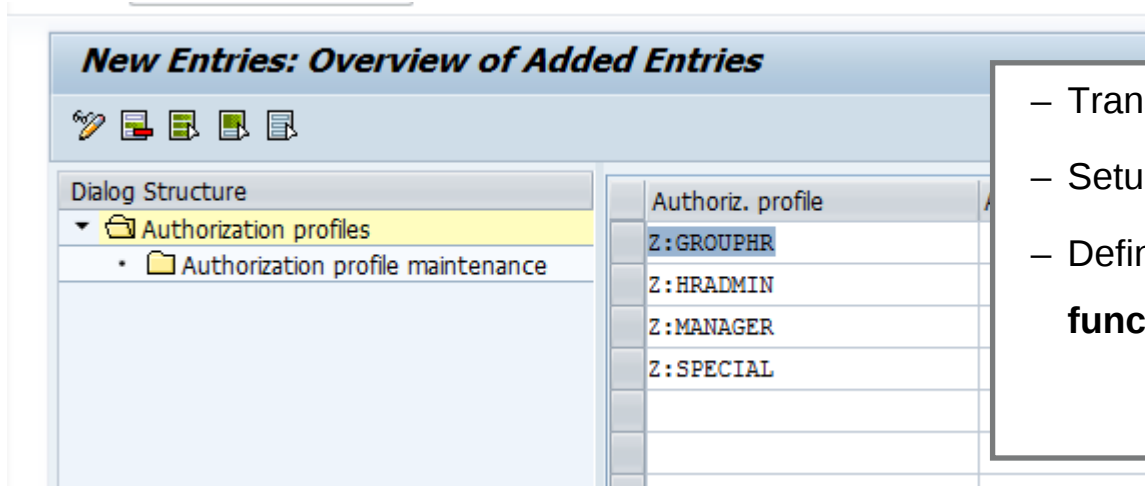
Company Code	0007	BUKRS
Infotype	0001-0007, 0009-0013, 0016-9999	INFTY
		PROFL
		SUBTY

- General limitation to a particular company code
- Exclude infotypes with salary information
- Add a profile. Wait... what profile?

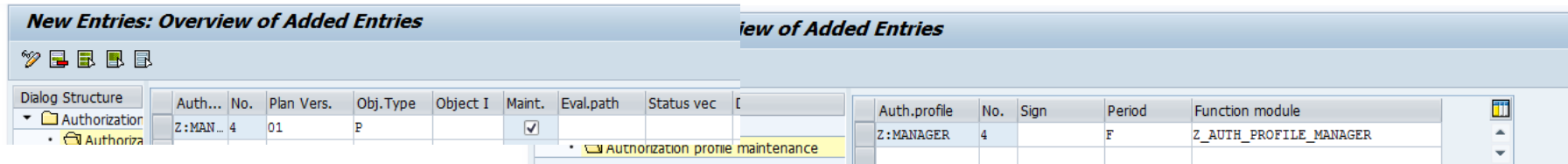


Setup your profiles

Profiles map each of the business rules we defined



- Transaction OOSP
- Setup a profile for each business rule
- Define either an **evaluation path** (simple) or a **function module** (complex)



Use evaluation paths if it's an easy requirement

Evaluation paths can be used to query objects from the org. management without ABAP coding

Change View "Evaluation path (individual maintenance)": Overview

New Entries

Dialog Structure

- Evaluation paths
 - Evaluation path (individual maintenance)
 - Short names

Evaluation Path: Z_OSCP

No.	Obj.Ty...	A/B	Relat'ship	Relationship name	Priority
10	O	B	002	Is line supervisor of	*
12	O	A	003	Belongs to	*
20	O	B	003	Incorporates	*
30	S	B	007	Is described by	*
40	S	A	008	Holder	*
50	S	B	962	Is superior (alternative)	*
60	S	A	037	Designated as successor	*
70	S	A	011	Cost center assignment	*

- Transaction OOAW
- Query relations between objects in a particular sequence



Go for function modules if requirements become complex

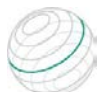
Function modules give you the full range of implementing any logic required.

- Transaction SE37
- As long as you stick to the FuMo interface, you can implement any logic required and possible in ABAP

```

1  function z_hr_auth_get_manager_profile.
2  *-----
3  *""Lokale Schnittstelle:
4  *  IMPORTING
5  *      REFERENCE (UNAME) TYPE  SY-UNAME OPTIONAL
6  *      VALUE (I77PR) LIKE  T77PR STRUCTURE  T77PR
7  *  TABLES
8  *      OBJ_TAB STRUCTURE  HROBJECT
9  *-----
10

```



Decide if you require context dependant authorisations

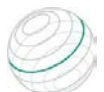
SAP allows you to evaluate IT1 authorisations as well (e.g. in PA30). This can make things easier or more difficult.

Display View "System Table": Overview

Documentation   

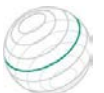
	Group	Sem.abbr.	Value abbr	Description
☐	AUTSW	DFCON	4	HR: Default Position (Context)
☐	AUTSW	INCON	0	HR: Master Data (Context)
☐	AUTSW	NNCON	1	HR:Customer-Specific Authorization Check (Context)
☐	AUTSW	NNNNN	0	HR: Customer-Specific Authorization Check
☐	AUTSW	ORGIN	0	HR: Master Data
☐	AUTSW	ORGPD	2	HR: Structural Authorization Check
☐	AUTSW	ORGXX	0	HR: Master Data - Extended Check

- Table T77S0 group AUTSW give several switches
- By these switches you can define if which authorisation model you want to use
- You can combine authorisation models



Scenarios

WHERE STRUCTURAL AUTHORISATION MAKE OUR LIVE EASIER



Scenario 1 – Mobile ESS/MSS

Group Net

Search

Gilberg, Peter
SAP Berater HCM
VGI-FS / Finance & Services / Hum...

>

News

Worklist

Groupsp...

Explorer

MY SERVICES

GroupNet Explorer

Corporate News Desk

My Absence Information

My Leave Account

Team Calendar

My Time Postings

My Worklist

←

Leave

Start Date *

Apr 13, 2015

End Date *

Apr 13, 2015

Approver

Rainer Kuboth

New Note

BACKGROUND INFORMATION

Check calendar

>

Check time account

>

?

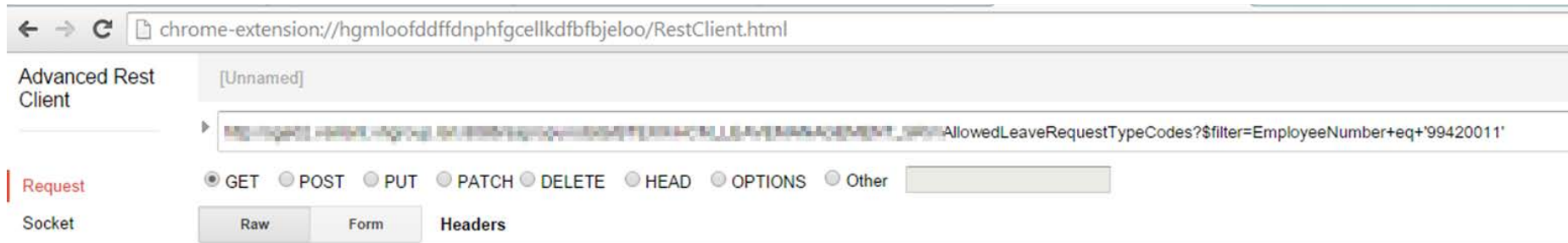
Check

➔

Send



Your SAP Gateway can be queried freely with any browser



```
<?xml version='1.0' encoding='utf-8'>
<feed xmlns="http://www.w3.org/2005/Atom" xmlns:m="http://schemas.microsoft.com/ado/2007/08/dataservices/metadata" xmlns:d="http://schemas.microsoft.com/ado/2007/08/dataservices"
xml:base="http://sge02.vaillant.vhgroup.lan:8086/sap/opu/odata/BTEXX/HCM_LEAVEMANAGEMENT_SRV/">
  <id>http://sge02.vaillant.vhgroup.lan:8086/sap/opu/odata/BTEXX/HCM_LEAVEMANAGEMENT_SRV/AllowedLeaveRequestTypeCodes</id>
  <title type="text">AllowedLeaveRequestTypeCodes</title>
  <updated>2014-06-17T05:25:18Z</updated>
  <author>
    <name />
  </author>
  <link href="AllowedLeaveRequestTypeCodes" rel="self" title="AllowedLeaveRequestTypeCodes" />
  <entry>
    <id>http://sge02.vaillant.vhgroup.lan:8086/sap/opu/odata/BTEXX/HCM_LEAVEMANAGEMENT_SRV/AllowedLeaveRequestTypeCodes('01')</id>
    <title type="text">Urlaub</title>
    <updated>2014-06-17T05:25:18Z</updated>
    <category term="HCM_LEAVEMANAGEMENT_SRV.AllowedLeaveRequestTypeCode" scheme="http://schemas.microsoft.com/ado/2007/08/dataservices/scheme" />
    <link href="AllowedLeaveRequestTypeCodes('01')" rel="edit" title="AllowedLeaveRequestTypeCode" />
    <link href="AllowedLeaveRequestTypeCodes('01')/FieldSelection" rel="http://schemas.microsoft.com/ado/2007/08/dataservices/related/FieldSelection"
type="application/atom+xml;type=feed" title="FieldSelection" />
    <link href="AllowedLeaveRequestTypeCodes('01')/$links/FieldSelection" rel="http://schemas.microsoft.com/ado/2007/08/dataservices/relatedlinks/FieldSelection" type="application/xml"
title="FieldSelection" />
    <content type="application/xml">
      <m:properties xmlns:m="http://schemas.microsoft.com/ado/2007/08/dataservices/metadata" xmlns:d="http://schemas.microsoft.com/ado/2007/08/dataservices">
        <d:EmployeeNumber>99420011</d:EmployeeNumber>
        <d:LeaveRequestTypeCode>01</d:LeaveRequestTypeCode>
        <d:StartDate>2011-07-01T00:00:00</d:StartDate>
        <d:EndDate>9999-12-31T00:00:00</d:EndDate>
        <d:MinimumDays>1</d:MinimumDays>
        <d:MaximumDays>999</d:MaximumDays>
        <d:AttendanceOrAbsenceIndicator>A</d:AttendanceOrAbsenceIndicator>
        <d:QuotaDeductionRelevant>X</d:QuotaDeductionRelevant>
        <d:NewRequestForbidden>false</d:NewRequestForbidden>
        <d>DeleteRequestForbidden>false</d>DeleteRequestForbidden>
        <d:ChangeRequestForbidden>false</d:ChangeRequestForbidden>
        <d:ApprovalProcess>W</d:ApprovalProcess>
        <d:ApproverVisible>true</d:ApproverVisible>
        <d:NoticeVisible>true</d:NoticeVisible>
        <d:FieldSelectionId />
        <d:ApproverChangeAllowed>false</d:ApproverChangeAllowed>
        <d:ApproverOmittable>false</d:ApproverOmittable>
        <d:LeaveRequestTypeDescription>Urlaub</d:LeaveRequestTypeDescription>
        <d:NoPartialDay>true</d:NoPartialDay>
      </m:properties>
    </content>
  </entry>
</feed>
```



Scenario 2 – HRAdmin Proxy for ESS/MSS

Personnel No.:



ESS
 In this area you can access the Employee Self-services.



MSS
 In this area you can access the Manager Self-services.

Quick Links

Personnel File

Employee Master Data

Statements

Simulation Car Leasing

Team Calendar

Leave Request Overview

Leave Request

Leaveoverview

My Substitutes

Belehrungs- und Informationsdokumente

Travel & training courses

Performance Management

Manage salary review

Manage recruiting

Personnel Requisition Form: Employee Overview

Personnel Requisition Form: Approval Worklist

Quick Links

Employee Overview

Team Overview Time Management

Reporting

Hierarchy Visualization

Overview of requests

Overtime Worklist

PuRe Maintain Level

personnel requisition

Incentive Katalog



01-Jan-09



Lessons Learned

YOU'RE NEVER DONE WITH IMPLEMENTING AUTHORISATIONS



Lessons Learned

Performance

- ☐ Evaluation of profiles in SAP Standard can be very slow
- ☐ Buffering via Report RHBAUS is not really an option (uncomfortable, leads to errors)
- ☐ Use functions modules instead of evaluation paths
- ☐ User function module top includes to buffer data
- ☐ Implement SAP BADIs HRBAS00_STRUAUTH / HRBAS00_GET_PROFL to improve performance

→ We made it from minutes to microseconds querying a person in PA30

Non-OM staff

- ☐ Is all your staff assigned to a position in org.management? Is any org.unit somehow related to your root org.unit?
- ☐ What happens, if a person is not assigned to a position during the hiring action?

→ Think of workarounds and implement profiles for these cases

