

How to Maintain Authorization Using Customer Exit Variable



Applies to:

SAP BW 3.5 & BI 7.0. For more information Visit the [EDW homepage](#).

Summary

This paper will explain you how to provide Authorizations to the users with the help of customer exit variable. The article assumes no prior knowledge of authorization objects and provides an exhaustive solution replete with screenshots for clear understanding.

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Introduction

In this article we will discuss on how to provide authorization to the users by using customer exit variable. Here we will discuss using a simple scenario for the same.

Business Scenario

In your project you want to give authorization to the users in such a way that they should be able to view only those records in the report result for which they are authorized to. Here we will take a simple scenario of Project to Project manager mapping. Here when the project manager executes the report in portal he should be able to view only those projects which are mapped to him.

The Result

When a Project Manager executes a report in portal he will be able to view only those records to which he is authorized to. In our scenario we will take the Project Manager as: 58240 and about 13 projects mapped to him.

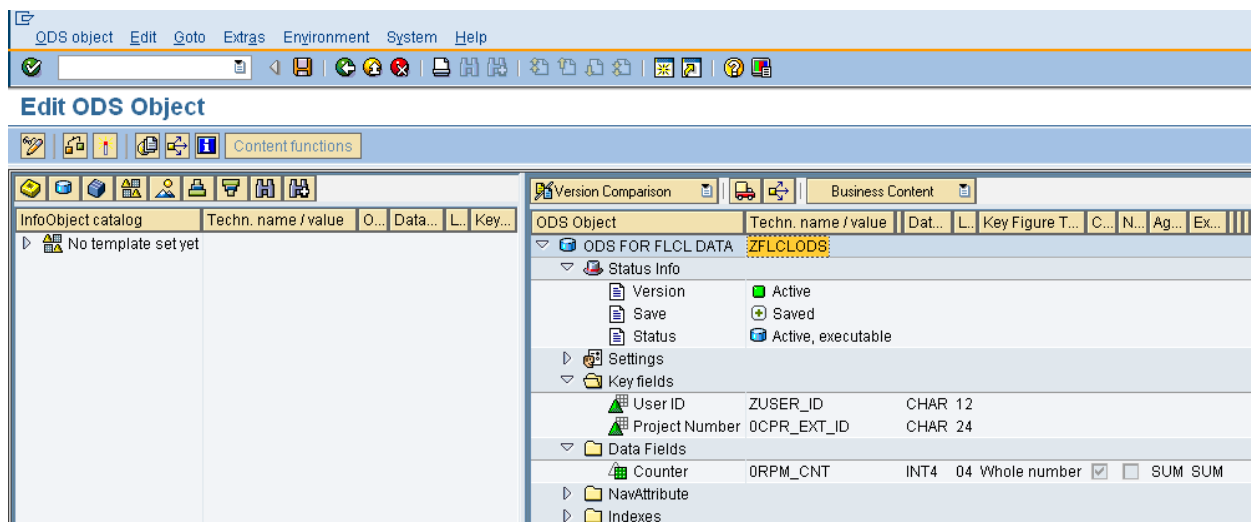
Solution

Create a customer exit variable and use it in the report.

To achieve the above required result, we are going to use a customer exit variable in the report. Before that we need to get the Project to Project Manager mapping into a table. In place of the table we will use an ODS in our case. In this ODS we will be having the Project to Project Manager mapping. The ODS will be having two key fields Project and Project Manager. Here we can check how many projects are mapped to a particular Project Manager. This ODS will act as a reference to us.

Step By Step Procedure

1. Create an ODS with Project and Project Manager as Key fields (because a single Project Manager can have n number of Projects and a single Project can be assigned to n number of Project Managers). Now fill the ODS with Project to Project Manager Mapping data.



2. After loading the Project to Project Manager Mapping data into the ODS, we can check the Active data table for the Project to Project Manager Mapping data, there are about 13 projects mapped to the user 58240.

The screenshot shows the SAP Data Browser interface. The title bar reads "Data Browser: Table /BIC/AZFLCLODS00 Select Entries 13". The table below has two columns: "/BIC/ZUSER_ID" and "CPR_EXT_ID". The first row is highlighted in yellow and contains the values "58240" and "000000000000000057592006". The other 12 rows follow a similar pattern with the same user ID and varying CPR_EXT_ID values.

/BIC/ZUSER_ID	CPR_EXT_ID
58240	000000000000000057592006
58240	000000000000000074572006
58240	000000000000000078612006
58240	0000000000000000155902006
58240	0000000000000000246962007
58240	0000000000000000248152007
58240	0000000000000000298432007
58240	0000000000000000321192007
58240	0000000000000000331272007
58240	0000000000000000416422007
58240	0000000000000000448662008
58240	0000000000000000510302008
58240	0000000000000000513932008

- Go to the Query designer and create a Report for the ODS object created. Now for the Character Project Number we need to create a customer exit variable.

Below is the screen shot for the variable that need to be created.

- Type of Variable is Character.
- Processing by is Customer Exit.
- Characteristic is Project Number

SAP BW Variables Editor

General Information

Type of Variable: Characteristic Value

Variable Name: ZAIC_VAR

Description: Authorization Variable for Project Manager

Processing by: Customer Exit

Characteristic

Characteristic: Project Number

Details

Variable Represents: Multiple Single Values

Variable entry is: Optional

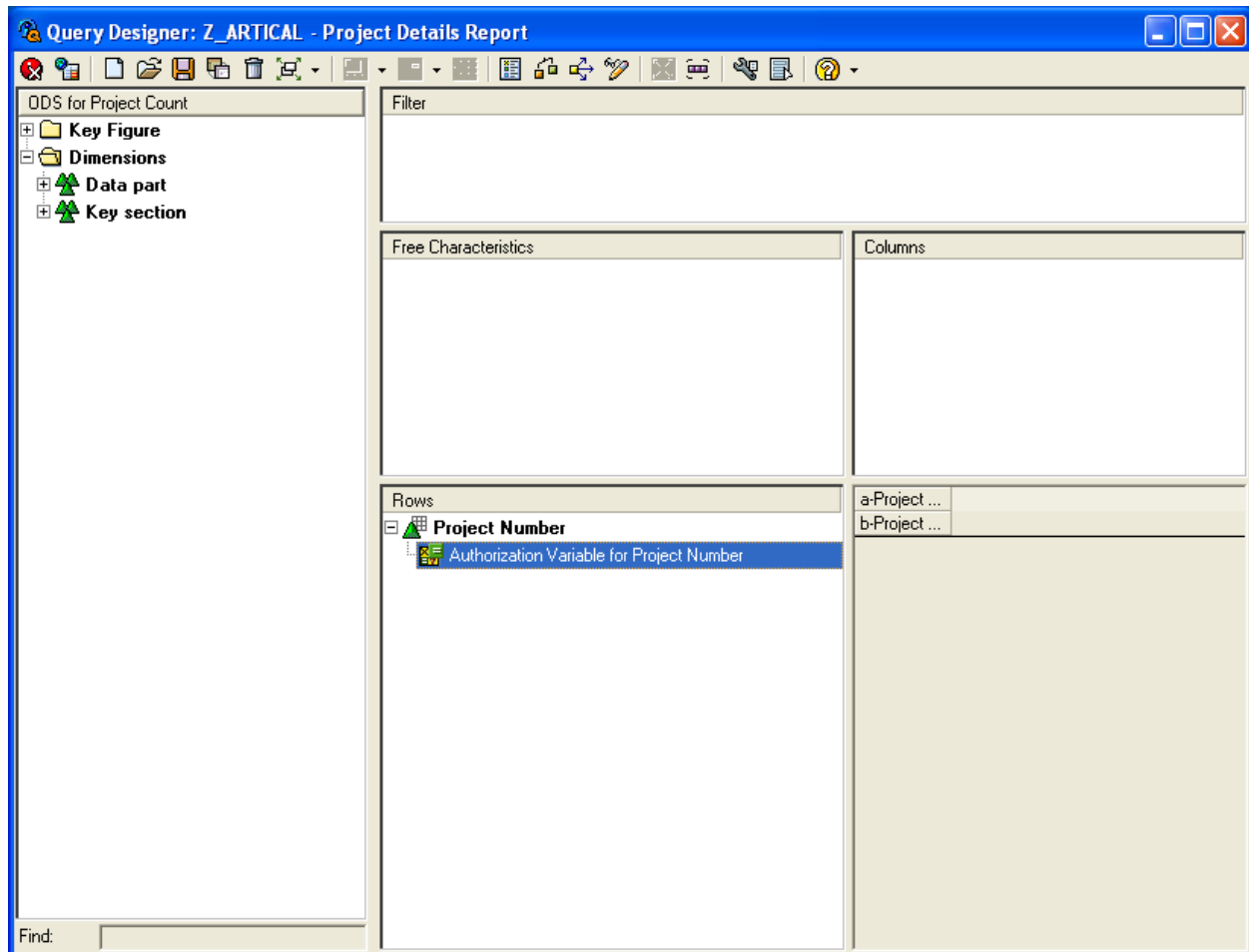
Ready for Input

Can be changed in query navigation

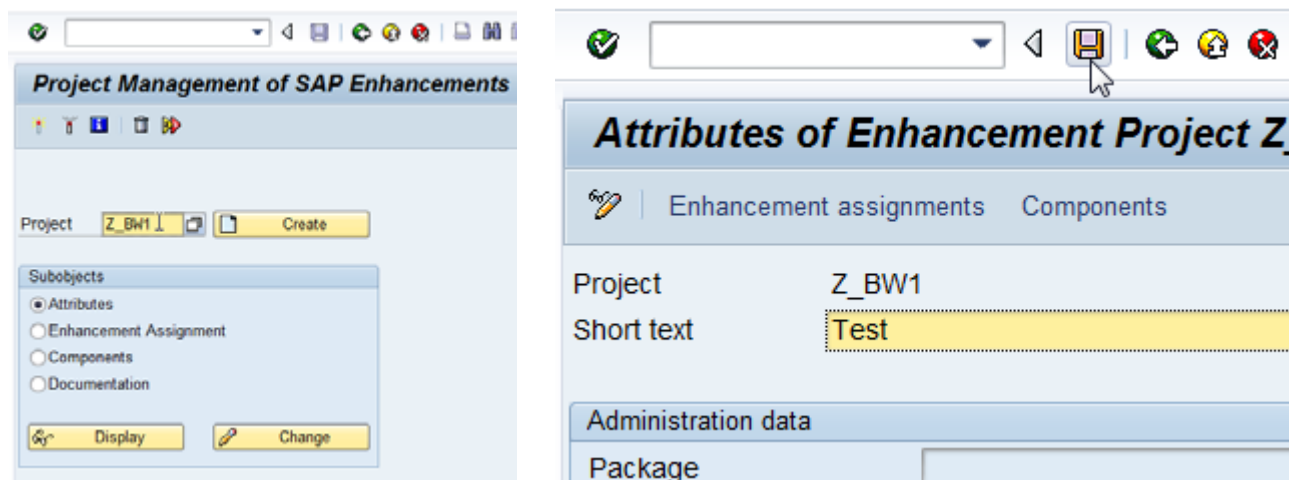
Copy personalization data from the variable:

OK Cancel

4. Now restrict the Character Project Number with the variable created. As shown below.



5. Now we need to maintain customer exit for the variable created, this will be done as below. In order to start it is necessary to activate a new project for a SAP enhancement. So as to execute that you need to call the transaction CMOD, inform a name for your project and press the button 'create'. A second screen requesting a short description will be showed, just enter the required information and 'save':



It is necessary to inform the enhancement for your new project. In the list, select that one responsible for handle the variables in the BI/BW queries: 'RSR0001 – BI: Enhancements for Global Variables in

Reporting

Choosing 'components', it is possible to verify that function module EXIT_SAPLRRS0_001 is already assigned for the new project, selecting that one (by double clicking), system jumps to the function module definition which has basically an instruction like 'INCLUDE ZXRSRU01.'. Actually the report ZXRSRU01 is reserved for store the customer code which will manage the variable values in the BW query.

The most important information here is that the 'customer exit program' will receive the variable name of the BW query in the ABAP variable 'i_vnam', which is defined as an import parameter in the function module EXIT_SAPLRRS0_001 and the BW query's variable value is handled in the table E_T_RANGE.

We can get the user (the user loded in) from the system variable SY-UNAME.

Code required for our scenario:

The screenshot shows the ABAP Editor window titled "ABAP Editor: Change Include ZXRSRU01". The editor displays the following code:

```

*&-----*
*& Include      ZXRSRU01
*&-----*

DATA: l_s_range TYPE rsr_s_rangesid.

DATA: lv_uname TYPE sy-uname.

CASE: i_vnam.

  WHEN 'ZAIC_VAR'.

    CLEAR: l_s_range.

    DATA: BEGIN OF it_itab2 OCCURS 0,
            cpr_ext_id LIKE /bic/azflclods00-cpr_ext_id,
          END OF it_itab2.

    CALL FUNCTION 'CONVERSION_EXIT_ALPHA_INPUT'
      EXPORTING
        input = sy-uname
      IMPORTING
        output = lv_uname.

    IF i_step = 2.

      SELECT cpr_ext_id FROM /bic/azflclods00 INTO
        TABLE it_itab2 WHERE /bic/zuser_id = lv_uname .

      SORT it_itab2.
      DELETE ADJACENT DUPLICATES FROM it_itab2.

      IF NOT it_itab2[] IS INITIAL.

        LOOP AT it_itab2.
          l_s_range-sign = 'I'.
          l_s_range-opt = 'EQ'.
          l_s_range-low = it_itab2-cpr_ext_id.

          APPEND l_s_range TO e_t_range.
          CLEAR l_s_range.
        ENDLOOP.

      ELSE.

        l_s_range-sign = 'I'.
        l_s_range-opt = 'EQ'.
        l_s_range-low = 'NONE'.

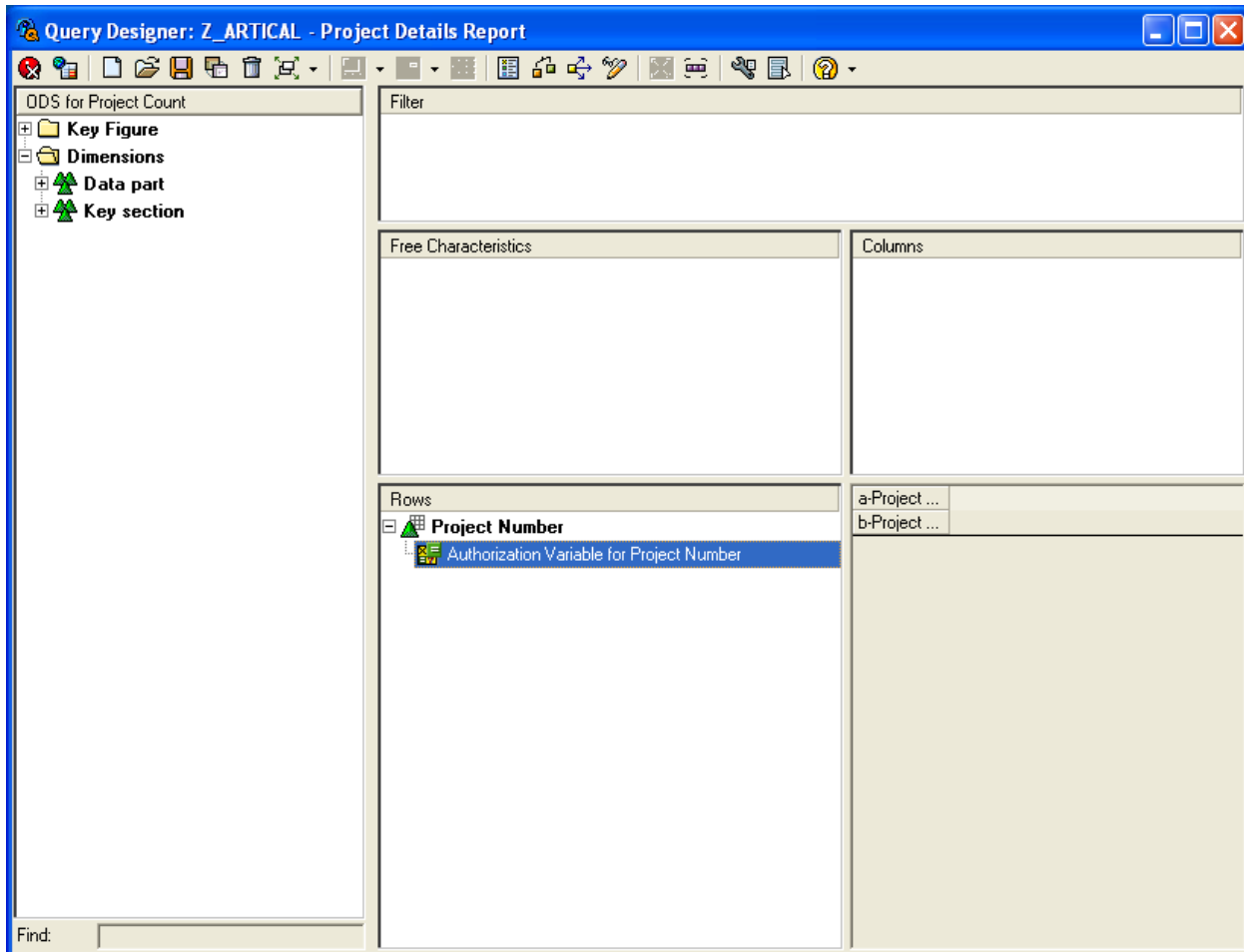
        APPEND l_s_range TO e_t_range.
        CLEAR l_s_range.
      ENDIF.

    ENDIF.

  ENDCASE.

```

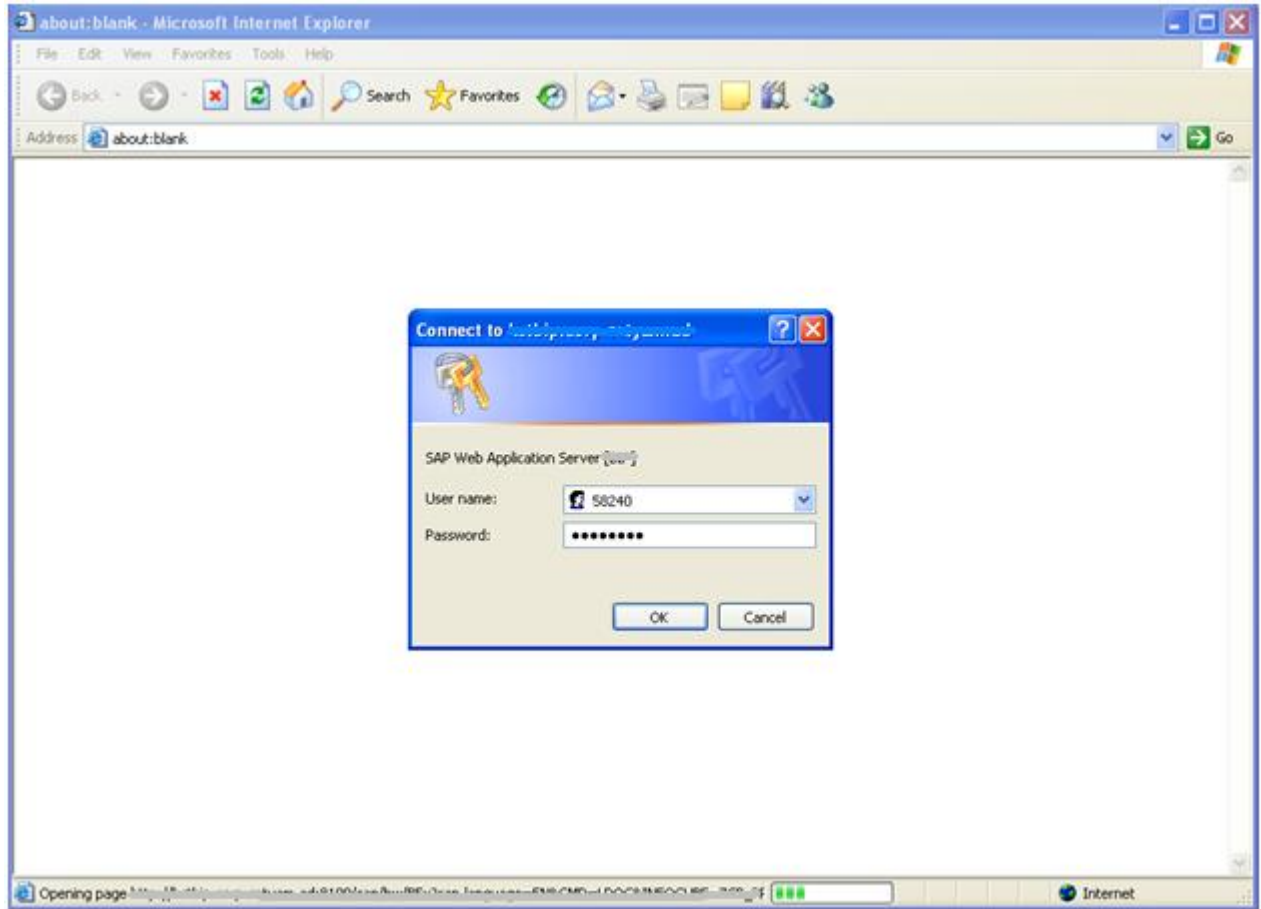
6. Go to the query designer and execute the report created:



Execute the query:

Provide user Id and Password.

Here the user id is: **58240**.



Result of the Query:

The screenshot shows a web browser window titled 'Project Details Report - Microsoft Internet Explorer'. The address bar contains a URL with parameters including 'LANGUAGES', 'CND', 'INFO', 'QUERY', and 'SCREEN'. The main content area is titled 'BEx Ad-hoc Analysis' and includes a 'Data Analysis' tab. Below this, the 'Project Details Report' is displayed with a 'Validity of Data: 12.07.2010 17:47:06'. The report includes a table with 13 rows, each containing a 'Project Number'. The table also has a 'Rows' section on the left with a 'Project Number' header and a 'Free Characteristics' section. The table data is as follows:

Project Number
00000000000000057592006
00000000000000074572006
00000000000000078612006
00000000000000155902006
00000000000000246962007
00000000000000248152007
00000000000000298432007
00000000000000321192007
00000000000000331272007
00000000000000416422007
00000000000000448662008
00000000000000510302008
00000000000000513932008

Here we can see the output of the report with 13 records.

The output contains the same number of projects as available in the ODS.

Related Content

For more information please go through these URLs.

[note 492504 - Dependent customer exit-type variables](#)

mailto:http://help.sap.com/saphelp_nw70/helpdata/EN/f1/0a56f5e09411d2acb90000e829fbfe/frameset.htm

For more information Visit the [EDW homepage](#).

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