Using Customer Exit Variables in BW/BI Reports: Part - 4

Applies to:
SAP NetWeaver Business Warehouse (Formerly BI), Will also work on SAP BI 3.5. Business Intelligence homepage.

Summary
This article gives clear picture about how to use Characteristic Customer Exit Variables in SAP-BW/BI Reports.

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Created on: 25 December 2009

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Introduction:
This article addresses the requirement of Customer Exit variables in BW/BI Reports; in this article I’m explaining the following scenario How to use the Characteristic Customer Exit Variables in BW/BI Reports based on 0CALMONTH. To validate the user Input parameters.

Live Scenario:
In most of the SAP-BI/BW reports (Here I taken Sales example) users want to see the Sales revenue data for entire Financial Year Period.

Whenever the User will executes the report he/she don’t want to enter the from Month.Year (MM.YYYY) and To Month.Year (MM.YYYY), if users will give wrong inputs to 0CALMONTH User Entry Variable then it should populate the error message. i.e. If user will give From and To Month.Year which are not falling in the same Financial Period, it should through an error message.

Eg: Suppose user will execute this report and given From 01.2009 To 12.2009 as input for 0CALMONTH User Entry Variable, it should through an error message because as per Indian Financial Year Period the give From Month and Year doesn’t fall in same Financial year Period (This example is as per Indian Calendar, From is April.YYYY To March.YYYY, so in 01.2009 To 12.2009 period 01.2009 doesn’t fall in 2009 – 2010 Financial Year Period, it should be in between 04.2009 to 03.2010.

So based on the 0CALMONTH inputs, we need to validate the MM.YYYY and populate the Following Error Message.

“Pls Enter Correct Months Eg: 04.2009 - 03.2010 From & To months must be in same Fy Period Eg: 01.2009 - 03.2010 is WRONG Eg: 04.2009 - 03.2010 is CORRECT”

Steps:
Create Manual Input/Default Value Variable on Calendar Month (0CALMONTH)

Create ZMTH_I variable on 0CALMONTH, the properties are:
Type of Variable = Characteristic Value
Variable Name = ZMTH_I
Processing by = Manual Input/Default Value
Reference Characteristic = 0CALMONTH
Variable Represents = Interval
Variable Entry = Mandatory
Check ready for input
For reference look into the following screens.
Using Customer Exit Variables in BW/BI Reports: Part 4
Code:

Goto CMOD TCode in SAP-BW/BI and then give your Project Name and click on Change button.

<table>
<thead>
<tr>
<th>Project Management of SAP Enhancements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project</td>
</tr>
</tbody>
</table>

Subobjects:
- Attributes
- Enhancement Assignment
- Components
- Documentation

Click on Components

<table>
<thead>
<tr>
<th>Attributes of Enhancement Project ZBW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enhancement assignments</td>
</tr>
</tbody>
</table>

Project: ZBW
Short text: For BW Enhancements

Double Click on EXIT_SAPLRRS0_001
Double Click on INCLUDE ZXRSRU01.

```
FUNCTION EXIT_SAPLRRS0_001.
**---------------------------------------------------------------
**"Lokale Schnittstelle:
**" IMPORTING
**" VALUE(I_VNAM) LIKE RSZGLOBV-VNAM
**" VALUE(I_VARTYP) LIKE RSZGLOBV-VARTYP
**" VALUE(I_IOBJNM) LIKE RSZGLOBV-IOBJNM
**" VALUE(I_S_COB.PRO) TYPE RSD_S_COB.PRO
**" VALUE(I_S_RK10) TYPE RSD_S_RK10
**" VALUE(I_PERIV) TYPE RR01_S_RKB1F-PERIV
**" VALUE(I_T_VAR_RANGE) TYPE RR00_T_VAR_RANGE
**" VALUE(I_STEP) TYPE I_DEFAULT 0
**" EXPORTING
**" VALUE(E_T_RANGE) TYPE RSR_T_RANGESID
**" VALUE(E_MEEHT) LIKE RSZGLOBV-MEEHT
**" VALUE(E_MEFAC) LIKE RSZGLOBV-MEFAC
**" VALUE(E_WAERS) LIKE RSZGLOBV-WAERS
**" VALUE(E_WHFAC) LIKE RSZGLOBV-WHFAC
**" CHANGING
**" VALUE(C_S_CUSTOMER) TYPE RR004_S_CUSTOMER OPTIONAL
**---------------------------------------------------------------
```

INCLUDE ZXRSRU01.

ENDFUNCTION.

Write the following Code in the ABAP Editor in ECC:

```
***************Begin of Data Type Declaration*****************************
DATA: L_S_RANGE TYPE RSR_S_RANGESID,
     LOC_VAR_RANGE LIKE RRRANGEEXIT,
     zsmy TYPE /b10/oicalmonth,
     zemy TYPE /b10/oicalmonth,
     zsmon type UMC_Y_ICHAVAL,
     zemon type UMC_Y_ICHAVAL,
     zsyd type UMC_Y_ICHAVAL,
     zeyr type UMC_Y_ICHAVAL,
     zsyr type UMC_Y_ICHAVAL,
     zeyr type UMC_Y_ICHAVAL,
     zsyr1 type UMC_Y_ICHAVAL,
     zeyr1 type UMC_Y_ICHAVAL.

********************End of Data Type Declaration*****************************

*****To Validate the given inputs for 0CALMONTH based on INDIAN Financial Year******
*****From and To Periods and if the Inputs are wrong then it will through an******
*****error message.***************************************************************************
***************Surendra Kumar Reddy Koduru***25-12-2009******************************
CASE i_vnam.
  WHEN 'ZABC'.
    IF i_step = 1.
      <Some Code for other Variables>
    ENDIF.
  WHEN 'ZXYZ'.
    IF i_step = 2.
      <Some Code for other Variables>
    ENDIF.
  END_CASE.

IF I_STEP = 3. "Our code will starts from here
  LOOP AT i_t_var_range INTO loc_var_range WHERE vnam = 'ZMTH_I'.
  CLEAR: l_s_range.
  zsmy = loc_var_range-low.
  zemy = loc_var_range-high.
  zsmon = zsmy+4(2).
  zemon = zemy+4(2).
  zsyd = zsmy+0(4).
  zeyr = zemy+0(4).
  CALL FUNCTION 'UMC_CALMONTH_TO_FISCPER'
    EXPORTING
      i_periv          = 'V3'
      i_calyear        = zsyd
      i_calmonth       = zsmon
    IMPORTING
      E_FISCPER        = zsyr
  EXCEPTIONS
    INVALID = 1
    OTHERS   = 2
  .
  IF sy-subrc <> 0.
    MESSAGE ID SY-MSGID TYPE SY-MSGTY NUMBER SY-MSGNO
```
* WITH SY-MSGV1 SY-MSGV2 SY-MSGV3 SY-MSGV4.
ENDIF.
CALL FUNCTION 'UMC_CALMONTH_TO_FISCPER'
  EXPORTING
    i_periv = 'V3'
    i_calyear = zeyr
    i_calmonth = zemon
  IMPORTING
    E_FISCPER = zefper
  EXCEPTIONS
    INVALID = 1
    OTHERS = 2
  .
  IF sy-subrc <> 0.
    MESSAGE ID SY-MSGID TYPE SY-MSGTY NUMBER SY-MSGNO
    WITH SY-MSGV1 SY-MSGV2 SY-MSGV3 SY-MSGV4.
  ENDIF.
  zsyr1 = zsfper+0(4).
  zeyr1 = zefper+0(4).
  IF zsyr1 NE zeyr1.
    CALL FUNCTION 'RRMS_MESSAGE_HANDLING'
      EXPORTING
        i_class  = 'RSBBS'
        i_type   = 'E'
        i_number = '000'
        i_msgv1  = 'Pls Enter Correct Months Eg: 04.2009 - 03.2009 From & To'
        i_msgv2 = 'months must be with in same Fy Period'
        i_msgv3 = 'Eg: 01.2009 - 03.2010 is WRONG Eg: 04.2009 - 03.2010 is' 'CORRECT'.
      RAISE again.
  ELSEIF zsyr1 EQ zeyr1.
    l_s_range-low  = loc_var_range-low.
    l_s_range-high = loc_var_range-high.
    l_s_range-sign = 'I'.
    l_s_range-opt  = 'BT'.
    APPEND l_s_range TO e_t_range.
  ENDIF.
ENDLOOP.
ENDIF.

**********************************************************************End**********************************************************************

Save and Activate the above code and project.
Code Explanation:
The Function Module 'UMC_CALMONTH_TO_FISCPER' will take Fiscal Year Variant, Year and Month as input, and it will give Fiscal year period under which the given inputs are falling.

The Function Module 'RRMS_MESSAGE_HANDLING' is used to raise Error/Warning messages.

Report Designer:

In Report Rows:
Drag and Drop Material Group, Material Plant and Calendar Year/Month.

In Report Columns:
Create New Selection and Drag and Drop Revenue and Qty Key figures
Restrict the 0CALMONTH with ZMTH_I Variable.
Save and Execute the Report:
Selection Screen:

Once you execute the report you can see the following selection screen:

Give Plant, Material Group and Month Year like above (in my report the above values are user inputs, in your case user input values will differ.

So give Inputs and click on Check button.
The given inputs i.e. From and To Month and Years are wrong, because the input Month & Years are not falling in the same Financial Year, so it is populating Error Message.

Again give 04.2009 – 04.2010 as inputs, this time also show error message, because 04.2010 is not within the Financial year period. i.e. 2009 – 2010 Period.
Now give 04.2009 – 03.2010, and check, it won’t give any Error Message, so execute the report and see the result.
Report Result:

See the following Report Result:

Here the Report Heading showing that From 04.2009 To 03.2010, for this I have written Customer Exit Code using Text Variables. For references you can check the following URLs given below.

<table>
<thead>
<tr>
<th>Material Group</th>
<th>Material</th>
<th>Plant</th>
<th>Calendar Year</th>
<th>Revenue</th>
<th>Qty</th>
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<tbody>
<tr>
<td>M123</td>
<td>M3201088</td>
<td>P2000</td>
<td>04.2008</td>
<td>120.00</td>
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<td>05.2009</td>
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</tbody>
</table>
Related Content

Using Customer Exit Variables in BW Reports Part - 3
How to use Customer Exit Variables in BW Reports: Part - 2
Using Customer Exit Variables in BW or BI Reports Part - 1
Using Text Variables with Customer Exits in Report Headings
Using Text Variables with Customer Exits in Report Headings
Variables of Type Customer Exit

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