

Checking for Non-Existent Objects in the Object List of a Change Request



Applies to:

SAP Master Data Governance Release EhP6 and higher

Summary

SAP Master Data Governance offers the feature to include the keys of objects that do not yet exist in the object list of a change request. Rather than waiting until all data is ready before specifying changes, you can work simultaneously on object creation and the processing of the change request. This document shows how to implement BAdIs that provide warnings and errors about non-existent objects.

Created on: 24 July 2013

Table of Content

Checks during Change Request Processing.....	3
Checks during the Validation of a Change Request.....	5
Copyright.....	7

SAP Master Data Governance offers the feature to include the keys of objects that do not yet exist in the object list of a change request. Rather than waiting until all data is ready before specifying changes, you can work simultaneously on object creation and the processing of the change request. This document shows how to implement BAdIs that provide warnings and errors about non-existent objects. The warnings and errors are as follows:

- Warning if objects do not exist during processing
- Error if objects do not exist during validation

Obviously, the example code given must be adapted to the relevant use cases (for example a different entity type).

Checks during Change Request Processing

To provide a warning if objects do not exist during the processing of a change request, implement the `PROCESS_EVENT` method of BAdI `USMD_CREQUEST_UI`. Sample code is shown below.

```
METHOD if_ex_usmd_crequest-process_event.
* This method checks if all objects for a certain
* Entity type have been created in single processing
* If not, an error message is issued for each object
* As an example, the Airline Entity CARR is given
* NOTE: The airline has only one keyfield, for objects
* with multiple key fields the logic must be more complex

DATA: lv_dummy          TYPE string ##needed,
      ls_sel            TYPE usmd_s_sel,
      lt_sel           TYPE usmd_ts_sel,
      lt_objlist       TYPE usmd_t_crequest_entity,
      lt_carr_key      TYPE STANDARD TABLE OF /mdg/_s_sf_drf_carr.

FIELD-SYMBOLS: <ls_objlist> TYPE usmd_s_crequest_entity.

CLEAR: ef_not_save_relevant,
       et_message.

" Avoid Check during Creation
CHECK is_creq_context-mode NE if_ex_usmd_crequest=>gc_mode_create.

" Prepare Data Selection
ls_sel-sign      = 'I'.
ls_sel-option    = 'EQ'.
ls_sel-fieldname = usmd0_cs_fld-crequest.
ls_sel-low      = is_creq_context-crequest.
INSERT ls_sel INTO TABLE lt_sel.

" Read all objects within the change request
is_creq_context-o_model->read_char_value(
  EXPORTING
    i_fieldname = usmd0_cs_fld-crequest
    it_sel      = lt_sel
  IMPORTING
    et_data    = lt_objlist ).

CLEAR lt_sel.
LOOP AT lt_objlist ASSIGNING <ls_objlist>.
  " Collect the Airlines into a separate selection table to retrieve the master data
  IF <ls_objlist>-usmd_entity = 'CARR'.
    ls_sel-fieldname = 'CARR'.
    ls_sel-low = <ls_objlist>-usmd_value.
    INSERT ls_sel INTO TABLE lt_sel.
  ENDIF.
ENDLOOP.

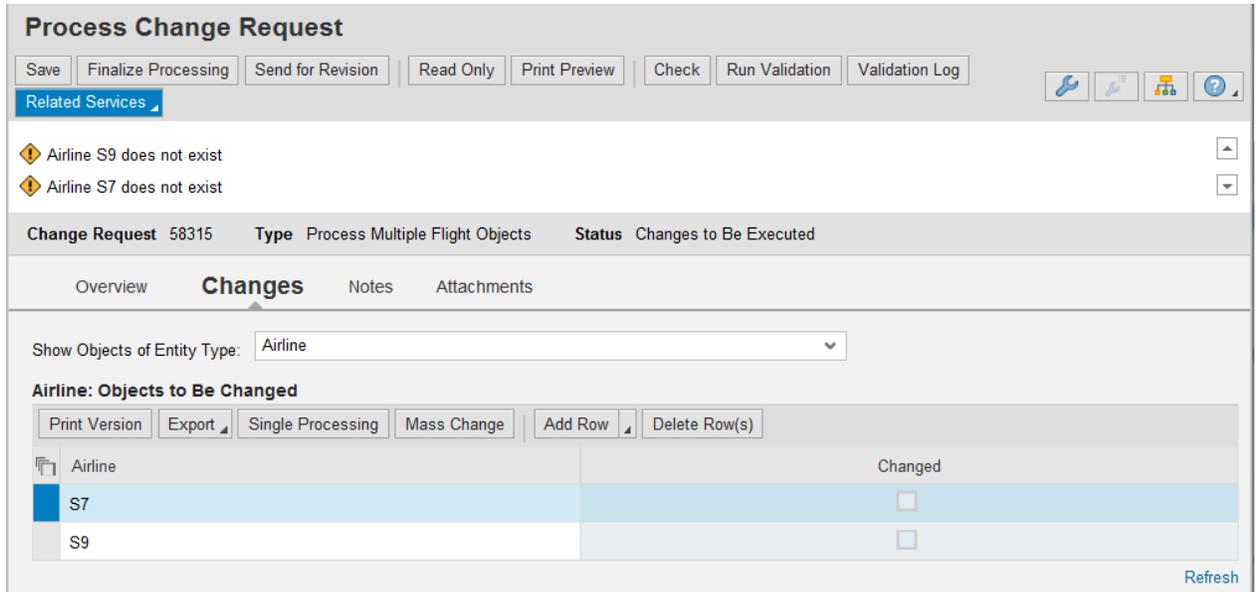
" Read the Airline Master Data
is_creq_context-o_model->read_char_value(
```

```

EXPORTING
  i_fieldname = 'CARR' " Field Name
  it_sel      = lt_sel
IMPORTING
  et_data     = lt_carr_key
  et_message  = et_message ).

" Do the comparison and add an error message for each airline without master data
LOOP AT lt_objlist ASSIGNING <ls_objlist>
  WHERE usmd_entity = 'CARR'.
  READ TABLE lt_carr_key TRANSPORTING NO FIELDS
  WITH TABLE KEY carr = <ls_objlist>-usmd_value.          "#EC WARNOK
  IF sy-subrc <> 0.
    MESSAGE w006(mdg_sf) WITH <ls_objlist>-usmd_value INTO lv_dummy.
    cl_usmd_message=>add_last_message( CHANGING ct_message = et_message ).
  ENDIF.
ENDLOOP.
ENDMETHOD.          "IF_EX_USMD_CREQUEST~PROCESS_EVENT
    
```

After the user has selected the check button, the system displays a warning message (see below.) Note that the user can still proceed with the processing of the change request.



Checks during the Validation of a Change Request

To prevent the approval of non-existing objects, you need to ensure that the relevant error messages are transferred into the validation log of a change request. This can be achieved by implementing the method CHECK_CREQUEST_FINAL method of the BADI USMD_RULE_SERVICE. Sample code is given below.

```
METHOD if_ex_usmd_rule_service-check_crequest_final.
* This method checks if all Airlines entered into a Change Request
* have been created in single processing.
* If not, an error message is issued for Airline
* NOTE: The airline has only one keyfield, for objects
* with multiple key fields the logic must be more complex

DATA:
  lv_dummy          TYPE string ##needed,
  ls_sel            TYPE usmd_s_sel,
  lt_sel            TYPE usmd_ts_sel,
  lt_objlist        TYPE usmd_t_crequest_entity,
  lt_carr_key       TYPE STANDARD TABLE OF /mdg/_s_sf_drf_carr,
  lt_message        TYPE usmd_t_message,
  lt_log_handle     TYPE bal_t_logh,
  ls_bal_msg        TYPE bal_s_msg.

FIELD-SYMBOLS:
  <ls_objlist>      TYPE usmd_s_crequest_entity,
  <ls_message>      TYPE usmd_s_message.

CHECK id_log_handle IS NOT INITIAL.

"Prepare Reading the Objects within the Change Request
ls_sel-sign        = 'I'.
ls_sel-option      = 'EQ'.
ls_sel-fieldname   = usmd0_cs_fld-crequest.
ls_sel-low         = id_crequest.
INSERT ls_sel INTO TABLE lt_sel.

"Read Object List of Change Request
io_model->read_char_value(
  EXPORTING
    i_fieldname = usmd0_cs_fld-crequest
    it_sel      = lt_sel
  IMPORTING
    et_data    = lt_objlist ).

"Prepare to read Carrier Data
CLEAR lt_sel.
LOOP AT lt_objlist ASSIGNING <ls_objlist>.
  IF <ls_objlist>-usmd_entity = cl_mdg_fs_sflight_access=>gc_carr.
    ls_sel-fieldname = cl_mdg_fs_sflight_access=>gc_carr.
    ls_sel-low       = <ls_objlist>-usmd_value.
    INSERT ls_sel INTO TABLE lt_sel.
  ENDIF.
ENDLOOP.

"Read Carrier Data
io_model->read_char_value(
  EXPORTING
    i_fieldname = 'CARR'
    it_sel      = lt_sel
  IMPORTING
    et_data     = lt_carr_key
    et_message  = lt_message ).

"Compare Object List with Existing Data
LOOP AT lt_objlist ASSIGNING <ls_objlist>
WHERE usmd_entity = cl_mdg_fs_sflight_access=>gc_carr. "#EC CI_SORTSEQ
READ TABLE lt_carr_key TRANSPORTING NO FIELDS
WITH TABLE KEY carr = <ls_objlist>-usmd_value.
IF sy-subrc <> 0.
  MESSAGE e006(mdg_sf) WITH <ls_objlist>-usmd_value INTO lv_dummy.
  cl_usmd_message=>add_last_message( CHANGING ct_message = lt_message ).
ENDIF.
```


Copyright

© Copyright 2013 SAP AG. All rights reserved.

No part of this publication may be reproduced or transmitted in any form or for any purpose without the express permission of SAP AG. The information contained herein may be changed without prior notice.

Some software products marketed by SAP AG and its distributors contain proprietary software components of other software vendors.

Microsoft, Windows, Excel, Outlook, and PowerPoint are registered trademarks of Microsoft Corporation.

IBM, DB2, DB2 Universal Database, System i, System i5, System p, System p5, System x, System z, System z10, System z9, z10, z9, iSeries, pSeries, xSeries, zSeries, eServer, z/VM, z/OS, i5/OS, S/390, OS/390, OS/400, AS/400, S/390 Parallel Enterprise Server, PowerVM, Power Architecture, POWER6+, POWER6, POWER5+, POWER5, POWER, OpenPower, PowerPC, BatchPipes, BladeCenter, System Storage, GPFS, HACMP, RETAIN, DB2 Connect, RACF, Redbooks, OS/2, Parallel Sysplex, MVS/ESA, AIX, Intelligent Miner, WebSphere, Netfinity, Tivoli and Informix are trademarks or registered trademarks of IBM Corporation.

Linux is the registered trademark of Linus Torvalds in the U.S. and other countries.

Adobe, the Adobe logo, Acrobat, PostScript, and Reader are either trademarks or registered trademarks of Adobe Systems Incorporated in the United States and/or other countries.

Oracle is a registered trademark of Oracle Corporation.

UNIX, X/Open, OSF/1, and Motif are registered trademarks of the Open Group.

Citrix, ICA, Program Neighborhood, MetaFrame, WinFrame, VideoFrame, and MultiWin are trademarks or registered trademarks of Citrix Systems, Inc.

HTML, XML, XHTML and W3C are trademarks or registered trademarks of W3C®, World Wide Web Consortium, Massachusetts Institute of Technology.

Java is a registered trademark of Sun Microsystems, Inc.

JavaScript is a registered trademark of Sun Microsystems, Inc., used under license for technology invented and implemented by Netscape.

SAP, R/3, SAP NetWeaver, Duet, PartnerEdge, ByDesign, SAP Business ByDesign, and other SAP products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of SAP AG in Germany and other countries.

Business Objects and the Business Objects logo, BusinessObjects, Crystal Reports, Crystal Decisions, Web Intelligence, Xcelsius, and other Business Objects products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of Business Objects S.A. in the United States and in other countries. Business Objects is an SAP company.

All other product and service names mentioned are the trademarks of their respective companies. Data contained in this document serves informational purposes only. National product specifications may vary.

These materials are subject to change without notice. These materials are provided by SAP AG and its affiliated companies ("SAP Group") for informational purposes only, without representation or warranty of any kind, and SAP Group shall not be liable for errors or omissions with respect to the materials. The only warranties for SAP Group products and services are those that are set forth in the express warranty statements accompanying such products and services, if any. Nothing herein should be construed as constituting an additional warranty.