SAP BW - Handling Error Stack in DTP

Applies to:
SAP BI 7.0 Consultants. For more information, visit the EDW.

Summary
Document explains about handling Error Stack, which would improve error handling in DTP. At runtime, erroneous data records are written to an error stack if the error handling for the data transfer process is activated. Error stack is further used to update the data to the target destination once the error is resolved.

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Scenario
Temporary Data Storage and Error Stack improve error handling in DTP which doesn’t exist in Infopackage. Temporary Storage area contains all the data whereas Error Stack will have only erroneous records. Error Handling for DSO is possible only in DTP. Reloading Bad Request without deleting request in the Data Target is possible only in DTP using Manual Update option.

In the below example, records in DSO with non blank ‘Date until which bid/quotation is binding (valid-to date)’ values are erroneous records and these records would be rectified in error stack and reloaded again.

Step-by-Step Solution
Temporary Data Storage and Error Stack improve error handling in DTP which doesn’t exist in Infopackage. Temporary Storage area contains all the data whereas Error Stack will have only erroneous records. Temporary Storage area can be switched on/off at each stage of Summary.

Data transfer process supports handling data records with errors. The data transfer process also supports error handling for DataStore objects. In case with InfoPackages, one can determine how the system responds if errors occur. At runtime, the incorrect data records are sorted and can be written to an error stack (request-based database table). After the error has been resolved, one can further update data to the target from the error stack. It is easier to restart failed load processes if the data is written to a temporary store after each processing step. This allows us to determine the processing step in which the error occurred. One can also display the data records in the error stack from the monitor for the data transfer process request or in the temporary storage for the processing step (if filled). In data transfer process maintenance, one can determine the processing steps that one want to store temporarily.

Below steps would help us understand the basic idea of the Error Stack and how it would be handled to rectify the erroneous records.

Error Handling: Explains the error handling and types of captured errors in Error Stack

No Update, No Reporting: Error Occurs, the whole data package is terminated.

Valid Records Updated, No Reporting (Request Red): Valid records updated. After manual release of request, data is available for reporting.

Valid Records Updated, Reporting Possible (Request Green): Valid records are updated and available for reporting.

<table>
<thead>
<tr>
<th>DOC_NUM</th>
<th>COMP_CODE</th>
<th>CUST_GRP1</th>
<th>QUOT_TO</th>
</tr>
</thead>
<tbody>
<tr>
<td>400000155</td>
<td>X100</td>
<td>20A</td>
<td>00.00.0000</td>
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<tr>
<td>400000156</td>
<td>X100</td>
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<td>X100</td>
<td>20A</td>
<td>01.06.2009</td>
</tr>
</tbody>
</table>
Error Handling (Error Stack)

Error Stack is a request-based table (PSA table) into which erroneous data records from a data transfer process are written. The error stack is based on the data source, that is, records from the source are written to the error stack. At runtime, erroneous data records are written to an error stack if the error handling for the data transfer process is activated. You use the error stack to update the data to the target destination once the error is resolved.

Captured Errors:

- Un-allowed characteristic values
- Lower Case letters
- Arithmetic and Conversion Errors
- User based routine with return-code <> 0
- Master data read unsuccessful
- Currency translation or time conversion error
- Checks during Master data and Text Update
- No SID for navigational attribute
- No languages for text upload
- Double records concerning the key
- Overlapping or invalid time intervals
- Data does not map with the scheduler selection
- “Do not update, when no master data exists”
- Errors in hierarchy structure
- Overlapping time intervals
- No SID for characteristic values

Error DTP can be executed in background or included it in the process chain so that one can schedule it regularly in the context of the process chain. Error DTP uses the full update mode to extract data from the error stack to the data target.
Setting for DTP Temporary Storage

In DTP we can store the data temporarily at any stage during the process of data load. It could be before extraction, after transformation etc. This flexibility of data storage makes easier for the analysis of data.

Go To -> Settings for DTP Temporary Storage

In these settings, one can specify the processing steps after which you want the system to temporarily store the DTP request (such as extraction, filtering, removing new records with the same key and transformation). One can also specify when the temporary storage should be deleted. This can be done either after the request has been updated successfully to the target, when the request is deleted or a specified amount of time after the request is processed. Under Level of Detail, one can specify how one want to track the transformation.
Transformation Code (Update MOTINOR)

Transformation code traps the records which have non blank ‘Date until which bid/quotation is binding (valid-to date)’.

Transformation Change

```plaintext
* <- source package

METHOD start_routine.

+++ Segments +++

FIELD-SYMBOLS:
  <SOURCE_FIELDS>  TPX__ty_s_sc_1.

DATA:
  MONITOR_REC  TYPE rmoniter.

*$$ begin of routine - insert your code only below this line ^-^
...
** fill table "MONITOR" with values of structure "MONITOR_REC"
** to make monitor entries
** "to cancel the update process
** raise exception type GX_RSROUT_ABORT.

DATA : va_source_package TPX__ty_s_sc_1 ,
       t_source_package TPX_STANDARD_TABLE OF ty_s_sc_1.

LOOP AT SOURCE_PACKAGE INTO va_SOURCE_PACKAGE.
  CLEAR monitor_rec.
  IF va_source_package-quot_to NE 'GOODGOOD'.
    monitor_rec-magid = 'T'.
    monitor_rec-memo = 001.
    monitor_rec-mgrty = 'E'.
    monitor_rec-rema = va_source_package-record.
    monitor_rec-skipped = 'X'.
    APPEND monitor_rec TO MONITOR.
  ELSE.
    APPEND va_source_package TO t_source_package.
    CLEAR va_source_package.
    ENDIF.
  ELSELOOP.

*$$ end of routine - insert your code only before this line ^-^
ENDMETHOD.  "start routine

* Method inverse_start_routine

Error stack would be populated with the records with non blank ‘Date until which bid/quotation is binding (valid-to date)’, which can further be rectified.

Error Message (Message Class: YBI)

Message class  YBI  Active

Attributes  Messages

Message  Message short text  Self-explana
001  Invalid 'Date until which bid/quotation is binding (Valid-to date)'  
No Update, No Reporting

No Update, No Reporting: Once error occurs, the whole data package is terminated. This request is not released for reporting.

**Step1: Execute the DTP for Error Handling "No Update, No Reporting"**

Execution would be incomplete giving the error details for the records which have non-blank 'Date until which bid/quotation is binding (valid-to date)'.

**DTP Request 47.303**

<table>
<thead>
<tr>
<th>Request ID</th>
<th>Start Time</th>
<th>Finish Time</th>
</tr>
</thead>
</table>

- **Data Transfer Process**: ZSDNAD15 --> YSDNAD15 (Full)
- **ID**: DTP_4LQOKRG3655XOFNGU00E9C2Z
- **Version**: Active, Saved

**Error Handling**

- No Update, No Reporting

**Type of Data Update to Data Targets**

- Further Processing Without Master Data
- No Further Processing Without Master Data

**Request Details**

- Request 47.303
- Duration: 6 Sec.
- Date until which bid/quotation is binding (valid-to date): 13:35:2011 09:15:41 (4 Sec.)
- Transformation Start: 13:35:2011 09:15:43 (1 Sec.)
Valid Records Updated, No Reporting (Request Red)

This option allows you to update valid data. This data is only released for reporting after the administrator checks the incorrect records that have not been updated and manually releases the request by setting the overall status on the Status tab page in the monitor (QM action).

**Step1:** Execute the DTP with Error Handling option ‘Valid Records Updated, No Reporting (Request Red)’:

Execution would result in display of erroneous records and the error stack would be populated with those:

Total number of erroneous records (3564).
Error Stack:

| Status | Data File | Data Rec | Sales doc | Date on wh | Sold to party | Company | Customer 1 | Customer 2 | Customer 3 | Customer 4 | Customer 5 | Customer 6 | Customer 7 | Customer 8 | Sales Rep | Sales group | Sales Off | Sales Org | Order No |
|--------|-----------|----------|-----------|------------|---------------|---------|------------|------------|------------|------------|------------|------------|------------|------------|------------|----------|-----------|----------|----------|---------|
| ✔️     | 1         | 040000145 | 11.09.2009 | 1000000101 | X100          |         | 10         |            |            |            |            |            |            |            | 10         | 10        | 10       |         |         |
| ✔️     | 2         | 040000146 | 11.09.2009 | 1000000102 | X100          |         | 10         |            |            |            |            |            |            |            | 10         | 10        | 10       |         |         |
| ✔️     | 3         | 040000147 | 11.09.2009 | 1000000103 | X100          |         | 10         |            |            |            |            |            |            |            | 10         | 10        | 10       |         |         |
| ✔️     | 4         | 040000148 | 11.09.2009 | 1000000104 | X100          |         | 10         |            |            |            |            |            |            |            | 10         | 10        | 10       |         |         |
| ✔️     | 5         | 040000149 | 11.09.2009 | 1000000105 | X100          |         | 10         |            |            |            |            |            |            |            | 10         | 10        | 10       |         |         |

Settings for Error Stack:

Valid Records Update, Reporting Possible (Request Green)

Valid records can be reported immediately. Automatic follow-up actions, such as adjusting the aggregates, are also carried out.

**Step 1:** Execute the DTP with Error Handling 'Valid Records Update, Reporting Possible (Request Green)'

Data Transfer Process: 2GDNAD15 -> YSDNAD15 (Full)

ID: DTP_LSQR586510PNS80GEC02Z

Version: Active

**Type of Data Update to Data Targets**

- [ ] Further Processing Without Master Data
- [ ] No Further Processing Without Master Data

Valid records are updated properly to DSO and rest would be loaded from Error Stack.
DTP Request 47.332

Request ID: 47.332
Start Time: 13.05.2011 19:08:30
Finish Time: 13.05.2011 19:08:36

Request Processing

- Request 47.332
  - Generate Request: 13.05.2011 19:08:30, 5 Sec.
- End Request: 13.05.2011 19:08:30, 1 Sec.

Data Package 1 (19734 Data Records)
- Extract from Database ZSEMD1015: 19734 Data Records: 13.05.2011 19:08:40, 1 Sec.
- Filter Out New Records with the Same Key: 19734 -> 19734 Data Records: 13.05.2011 19:08:40, 6 Sec.

- Transformation Start: 13.05.2011 19:08:41, 3 Sec.
- Transformation End: 13.05.2011 19:08:40, 2 Sec.
- Messages saved for 3564 data records: request green acc. to configuration: 13.05.2011 19:08:45

- Update to Database Object YSMD1015: 16170 -> 16170 Data Records: 13.05.2011 19:08:45
- End of Processing: 13.05.2011 19:08:40
- Set Technical Status to Open: 13.05.2011 19:08:40
- Set overall status to Open [user CAPTOGA]: 13.05.2011 19:08:40

(Target DSO (No of records): 16170, Source DSO (No of records): 19734)

3564 records are loaded in the Error Stack.
Reload Error Stack

Go to Custom ABAP Code to execute the APD in background

**Step1:** Error Stack records (‘Date until which bid/quotation is binding (valid-to date)’ would be made blank and further loaded from Error Stack DTP):

<table>
<thead>
<tr>
<th>Customer</th>
<th>Customer</th>
<th>Distrib</th>
<th>Sales Rep</th>
<th>Base</th>
<th>Sales Curr</th>
<th>Sales Unit</th>
<th>Sales Exp</th>
<th>Fiscal Year</th>
<th>DTD</th>
<th>Header Del</th>
<th>Number of</th>
<th>Quotation</th>
<th>Date until which bid</th>
<th>Qty</th>
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<td>15.11.2009</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Change all data records

If you continue all 1000 records will be changed

Should the change be carried out?

Yes  No

Save the Error Stack. Execute the Error Package, 35464 records are loaded to DSO successfully.
Related Content

For more information, visit the EDW Homepage.
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