

Working with SAP BI 7.0 Data Transfer Process (DTP)



Applies to:

SAP BI 7.0. For more information, visit the [EDW homepage](#)

Summary

The objective of this document is to know the various available DTP options and settings in BI 7.0.

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Table of Contents

Extraction Modes	3
Delta:	3
Processing Mode:	4
Temporary Data Storage Options in DTP:	4
Error Handling using DTP:	5
How to Handle Error Records in Error Stack:	6
Importance of Semantic Groups	8
DTP Settings to Increase the Loading Performance	8
1. Number of Parallel Process:	8
2. Don't Load Large Value Data by Sing DTP Load Request:	8
3. Full Load to Target:	9
4. Load from Info Cube to Other Target:	9
Handle Duplicate Records	9
Related Content	10
Disclaimer and Liability Notice	11

Extraction Modes

The data from source can be loaded into to target by using either Full or Delta mode.

Delta:

No initialization is required if extraction mode 'Delta' selected. When the DTP is executed with this option for the first time, it brings all requests from the source into target and also sets the target in such way that it is initialized.

Display Data Transfer Process

The screenshot shows the SAP Data Transfer Process configuration window. The 'Extraction Mode' is set to 'Delta', which is highlighted with a red box. Other settings include 'Data Source' as 'DataStore Object', 'Package Size' as '50.000', and 'Delta Status' as 'Active, No Request Yet'. There are also checkboxes for 'Only Get Delta Once' and 'Get All New Data Request By Request'.

If you selected transfer mode *Delta*, you can define further parameters:

- Only get delta once:** It can select this option where the most recent data required in data target. In case delete overlapping request from data target have to select this option and use delete overlapping request process type in process chain. If used these setting then from the second loads it will delete the overlapping request from the data target and keeps only the last loaded request in data target.
- Get all new data request by request:** If don't select this option then the DTP will load all new requests from source into a single request. Have to select this option when the number of new requests is more in source and the amount of data volume is more. If selected this option then the DTP will load request by request from source and keep the same request in target.

In 3.x, in info package have an option Initialization without data transfer. This can be achieved in 7.x by putting 'No data transfer, delta status in source: Fetched'.

The screenshot shows the 'Processing Mode' dropdown menu in the SAP Data Transfer Process configuration window. The selected option is 'Data Transfer, Delta Status in Source: Fetched'. Other options include 'Serial Extraction, Immediate Parallel Processing' and 'Serially in the Dialog Process (for Debugging)'. There is also an 'Execute' button visible.

Full: It behaves same like info package with option "Full". It loads all data/requests from source into target.

Processing Mode:

These modes detail the steps that are carried out during DTP execution (e.g. Extraction, transformation, transfer etc). Processing mode also depends on the type of source.

The various types of processing modes are shown below:

1. Serial extraction, immediate parallel processing (asynchronous processing)

This option is most used in background processing when used in process chains. It processes the data packages in parallel.

2. Serial in dialog process (for debugging) (synchronous processing)

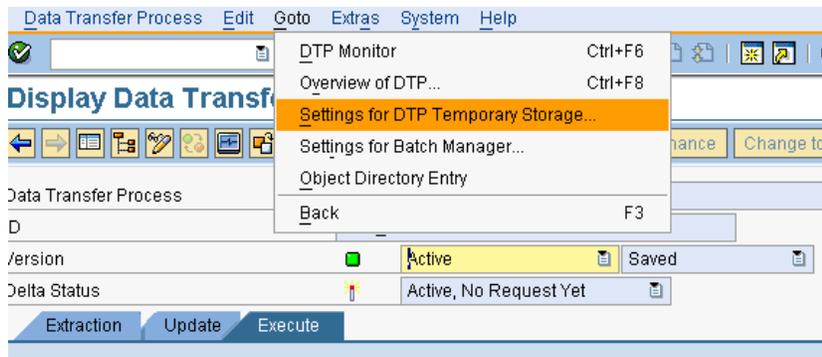
This option is used if we want to execute the DTP in dialog process and this is primarily used for debugging.

3. No data transfer; delta status in source: fetched

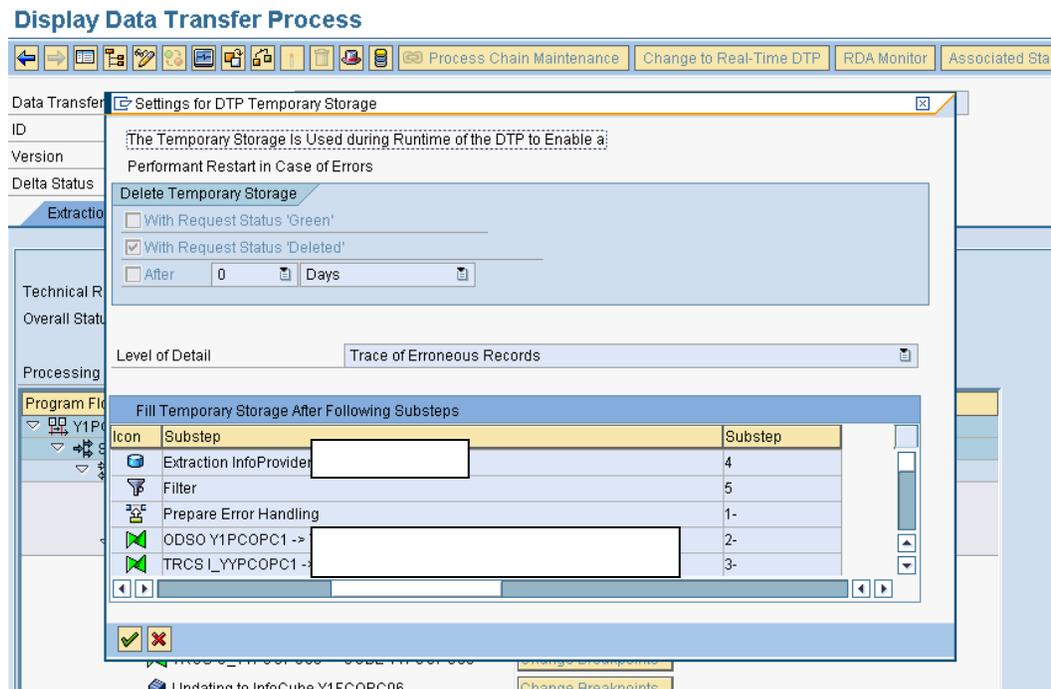
This option behaves exactly in the same way as explained above.

Temporary Data Storage Options in DTP:

In DTP, it can set in case to store the data temporarily in data loading process of any process like before extraction, before transformations. It will help in data analyzing for failed data requests.



Temporary store settings:



Error Handling using DTP:

Options in error handling:

Display Data Transfer Process

Data Transfer Process: Y1FCOP

ID: DTP_4JEJO2540YGE9WNNH48VNN8S2E

Version: ■ Active | Saved

Delta Status: ⚡ Active, No Request Yet

Extraction | **Update** | Execute

Data Target: InfoCube
Y1FCOP
Yield-E1

Error Handling: Valid Records Update, Reporting Possible (Request Green);
Deactivated
No Update, No Reporting
Valid Records Update, No Reporting (Request Red)
Valid Records Update, Reporting Possible (Request Green)

No Update without Master Data

Deactivated

Using this option error stack is not enabled at all. Hence for any failed records no data is written to the error stack. Thus if the data load fails, all the data needs to be reloaded again.

No update, no reporting

If there is erroneous /incorrect record and we have this option enabled in the DTP, the load stops there with no data written to the error stack. Also this request will not be available for reporting. Correction would mean reloading the entire data again.

Valid Records Update, No reporting (Request Red)

Using this option all correct data is loaded to the cubes and incorrect data to the error stack. The data will not be available for reporting until the erroneous records are updated and QM status is manually set to green. The erroneous records can be updated using the error DTP.

Valid Records Updated, Reporting Possible (Request Green)

Using this option all correct data is loaded to the cubes and incorrect data to the error stack. The data will be available for reporting and process chains continue with the next steps. The erroneous records can be updated using the error DTP.

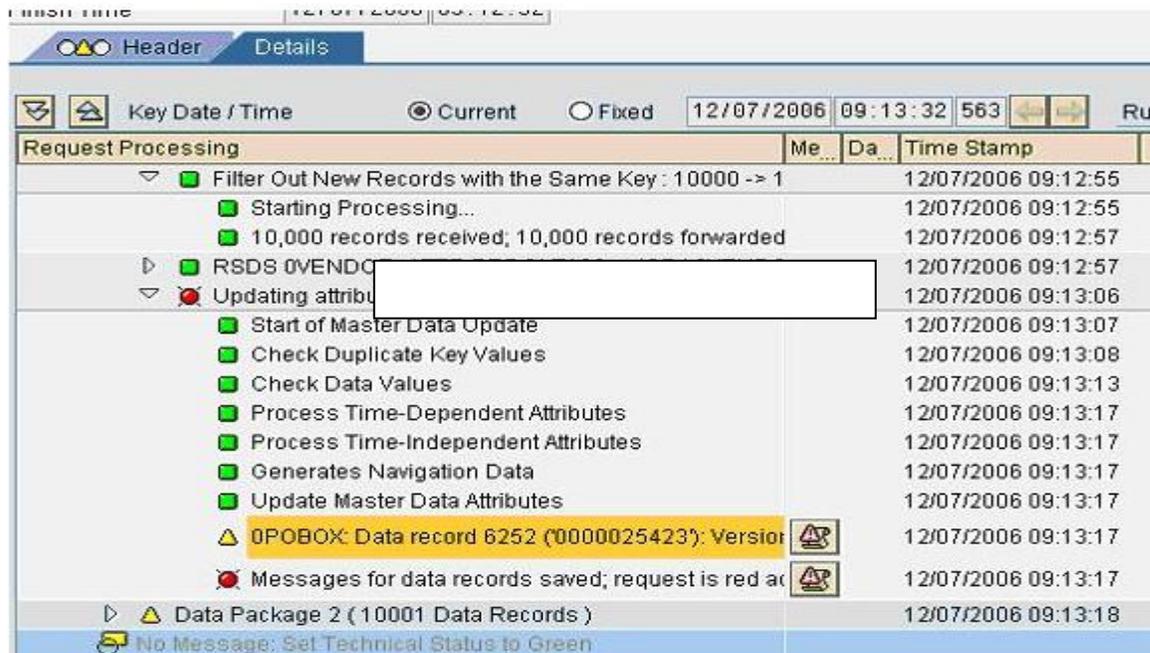
How to Handle Error Records in Error Stack:

Error stack:

A request-based table (PSA table) into which erroneous data records from a data transfer process is written. The error stack is based on the data source, that is, records from the source are written to the error stack.

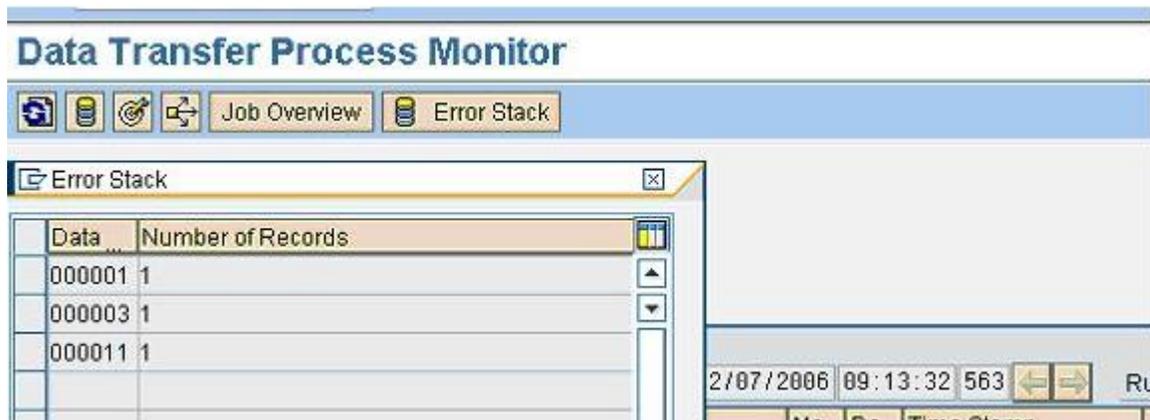
At runtime, erroneous data records are written to an error stack if the error handling for the data transfer process is activated. You use the error stack to update the data to the target destination once the error is resolved.

In below example explained error data handling using error DTP in invalid characteristics data records:



Here, DTP failed due to invalid characteristic values in records.

Double click on error stack to see the error records in error stack.



Modify the error record in error stack by clicking on edit button.

Error Stack

Data records to be edited

Status	DataPacket	Data Rec.	LIFNR	BRSCH	KTOKK	LAND1	NAME
	1	6,252	0000025423		EMPL		

Single record change

Request number: DTPR_44127A65G4H3K3Q1VAIERAH

Data packet number: 000001

Data record number: 6252

LIFNR: 0000025423

BRSCH:

KTOKK: EMPL

LAND1: US

Create and execute error DTP to load these modified records in error stack by clicking on create error DTP of existing DTP of data source.

Data Transfer Process: Error DTP: 0VENDOR

ID: DTP_4422KFYC9HN7ZCGYTBOYYJULV

DTP Type: Error DTP

Version: Active

Buttons: Saved

Extraction | Update | **Execute**

Request Status

Technical Request Status: ?

Overall Status of Request: Request Has Status: Active . Do you want to display the request monitor?

Processing Mode: Serial

Buttons: Yes | No | Cancel

Program Flow: Error DTP: 0VENDOR

This DTP load will create a new load request in target and load these modified records into target. Here, can see the modified 3 records loaded into target.

Reconstruction						
ndor(0VENDOR)						
Loa	Transferred	Added Rec	Type of Data Update	Source/InfoSource	Name of Source	
	3	3	Full update	DTP	Error DTP: 0VE	
	120578	120575	Delta update	DTASRC	DataSource	

Importance of Semantic Groups

This defined key fields in semantic group's works as key fields of data package while reading data from source system and error stock.

Display Data Transfer Process

Key Field	Field Name	Long Description
<input checked="" type="checkbox"/>	SOURSYSTEM	Source system ID
<input type="checkbox"/>	PLANT	Plant
<input type="checkbox"/>	MATERIAL	Material
<input type="checkbox"/>	PRODORDER	Manufacturing Order

If need to put all records into a same data package which are having same keys from loading source system. In this case select semantic keys in DTP those are required as keys in data package.

In semantic group the key fields will be available if selected the error handling option 'Valid Records Update, No reporting (Request Red)' or 'Valid Records Updated, Reporting Possible (Request Green)'

DTP Settings to Increase the Loading Performance

1. Number of Parallel Process:

We can define the number of processes to be used in the DTP.

Display Data Transfer Process

Process Type: DTP_LOAD(New Data Transfer Process)

Process Variant: [Empty field]

Number of Processes: 3 Parallel Processing

Parallel Processing

Background

Job Class of Additional Background Processes with Parallel Processing: [Empty field]

Server/Host/Group on Which Additional Processes Should Run: [Empty field]

Here defined 3, hence 3 data packages are processed in parallel.

2. Don't Load Large Value Data by Sing DTP Load Request:

To avoid load large volume data into a single DTP request select Get all new data request by request in extraction tab.

3. Full Load to Target:

In case full load into data target from DSO or first load from DSO to target always loads from Active table as it contains less number of records with Change log table.

Display Data Transfer Process

The screenshot shows the SAP Data Transfer Process (DTP) configuration interface. The process is named 'YYFCOPC1 -> YYFCOPC06'. The version is 'Active' and the delta status is 'Active'. The extraction mode is set to 'Delta'. The package size is '50.000'. The 'Delta Init. Extraction From...' section is highlighted with a red box, showing the following options:

- Active Table (With Archive)
- Active Table (Without Archive)
- Archive (Full Extraction Only)
- Change Log

4. Load from Info Cube to Other Target:

In case reading data from info cube to open hub destination it is best to use extraction from Aggregates. If select this option it reads first the aggregates tables instead of E and F table in case cube contains any aggregates.

Handle Duplicate Records

In case load to DSO, we can eliminate duplicate records by selecting option "Unique Data Records". If loading to master data it can be handled by selecting "handling duplicate record keys" option in DTP.

If you select this option then It will overwrite the master data record in case it time independent and will create multiple entries in case dime dependent master data.

Display Data Transfer Process

The screenshot shows the SAP Data Transfer Process (DTP) configuration interface for handling duplicate records. The process is named '0ACCOUNT_ATTR / D80CL020 -> 0ACCOUNT'. The version is 'Active' and the delta status is 'Active, No Request Yet'. The data target is 'InfoObject: Attributes'. The error handling is set to 'Valid Records Update, Reporting Possible (Request Green)'. The maximum number of errors per pack is '1.000'. The 'Handle Duplicate Record Keys' checkbox is highlighted with a red box.

Related Content

For more information, visit the [EDW homepage](#)

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