

# Managing Transports in SAP BW 3.5 and BI 7.0



## Applies to:

SAP BW 3.5/SAP BI 7.0. For more information, visit the [Business Intelligence homepage](#).

## Summary

This document explains all the features associated with respect to transporting objects in BW like object collection (standard objects, customized objects, and dependent objects), sequence to be followed, common errors and their fixes.

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## Overview:

There are many occasions where we as Developers face erroneous situations when we deal with Transports. This may be due to various reasons like making a mistake in collecting objects in the correct transport, missing out dependencies, being unaware of the sequence to be followed etc.

To avoid these situations let us take up each of these step by step.

## Object Collection In Transports:

The first step to have an error free release to another system is to identify the related objects / dependencies in each transport.

The respective Transports should have the following objects:

1. Base Objects -
  - a. Info Area
  - b. Info object catalogs
  - c. Info Objects
2. Info Providers –
  - a. Info Cubes
  - b. Multi Providers
  - c. Info Sets
  - d. Data Store Objects
  - e. Info Cube Aggregates
3. Transfer Rules –
  - a. Application Components
  - b. Communication Structure
  - c. Data Source replica
  - d. Info Packages
  - e. Transfer Rules
  - f. Transformations
  - g. Info Source Transaction data
  - h. Transfer Structure
  - i. Data sources (Active version)
  - j. Routines & BW Formulas used in the Transfer routines
  - k. Extract Structures
  - l. (Note) If the transfer structures and related objects are being transferred without preceding Base Objects transport (e.g. while fixing an error) it is safer to transport the related Info Objects as well.
4. Update Rules –
  - a. Update rules
  - b. Routines and formulas used in Update rules
  - c. DTPs

5. Process Chains –
  - a. Process Chains
  - b. Process Chain Starter
  - c. Process Variants
  - d. Event – Administration Chains
6. Report Objects –
  - a. Reports
  - b. Report Objects
  - c. Web Templates

### **Sequence of Transport Migration:**

The recommended sequence of migration of Transports to the QC/Production on a Broad Level (assuming the underlying objects as mentioned above have been captured in these transports) is as follows:

1. Base Objects
2. Info Providers
3. Transfer Rules
4. Update Rules
5. Process Chains
6. Report Objects
7. User exits (any order)

## Transport Collection and Settings:

Most of the BW objects can be collected during development by simply activating them.

When you create/change BW objects like Info Object, Info Provider, Transformations, Info Packages, DTPs, Queries, Web Templates etc. and activate them, then you get a window prompting you to enter the Package. Enter the correct Package Name and click on save. This opens another window which prompts the Transport Request Number. Now enter the correct Transport Request in which your object should be collected.

This is one of the ways to collect the objects in transports.

You can also use Transport Connection from the Administrator Workbench in the Development instance.

You can collect the various BW objects from the Transport Connection as follows:

1. To collect **Info Objects in Info Object catalogs**, ensure the setting is as follows:
  - Grouping = 'only necessary objects'
  - Note: If grouping = 'in dataflow before', it would bring in transfer rules.
  - Note: If grouping = 'in dataflow afterwards', it would bring in info providers.
  - Collection Mode = 'start manual collection'
  
2. To collect **Master data info sources**, ensure the setting is as follows:
  - Grouping = 'in dataflow before'
  - Collection Mode = 'start manual collection'
  - Verify that you see transfer structures, transfer rules and info packages. You may choose not to transport Info Packages and just create them manually in production, or link their transport more closely with that of process chains instead.
  - Note: if an info source refers to an info object with its own info source, it will nest the transfer rules.
  - Note: it may show previously collected Info objects in another CTO. That CTO would have to be imported first
  - There is no collector for Master Data Info Sources. The best way to collect these is to
    - 1) Collect the Info Object normally (Only Necessary).
    - 2) Later, in another CTO, re-collect it again "In Data Source Before" (which will get your transfer rules, etc).
  
3. To collect **ODS/Info cubes and transaction info sources**, ensure the setting is as follows:
  - Grouping = 'in dataflow before'
  - Collection Mode = 'start manual collection'
  - Verify that you see ODS, infocube, communication structures, info packages, info source, transfer structure, transfer rules, routines, update rules.

4. To collect **Workbooks/Queries**, ensure the setting is as follows:
  - Grouping = 'only necessary objects'
  - Collection Mode = 'start manual collection'
  - Make sure that the transport is created for the appropriate development class (this is only for making changes). When using the collector to collect objects, it doesn't look for a CTO assigned to the right development class. If a table entry already exists for that development class with an old transport #, you must first delete and re-add the development class with the new transport #.
  - Verify that objects (queries, calculated key figures, restricted key figures) are collected.
5. To collect **Application Hierarchy**,
  - From RSA1, go to the drop down menu: 'Tools' --> ' Hierarchy Transport' --> 'Application Hierarchy'
6. Miscellaneous Notes:
  - Drag the objects over from left to right in the Transport Connection screen.
  - Be careful when you collapse and expand the tree in the collected area. Sometimes check boxes can revert to earlier setting if you use collection mode = 'collect automatically'.
  - If needed, you can click on a tree node and right click to say 'do not transport any below'.
  - Objects are not locked until they are added to a transport.
  - Objects are not added to a transport until you click the transport truck.
  - Security Roles require 'customizing request'
  - Workbook Folders require 'customizing request'. Folders are roles without authorization attached to them.
  - Backend objects require 'workbench request'
  - Frontend objects require 'workbench request', assigned to a development class
7. **Collecting all dependent objects in Transport for Transfer rules:**
  1. All related objects for the Transfer Rules should be collected using transport connection. Please note that this method would collect data source replica but not data sources (active version)
  2. Info Sources and related objects (Except data sources) can be collected by opening the node of the info source, choosing the Transfer structure and activating it.
  3. BI Contents Data Sources (active version) should be collected using the transaction RSA5 (or RSA6). Custom data sources ('Z') can be collected using TX: RSA6.

#### 8. **Caution while installing using Automatic Installer for BI Contents:**

When we use automatic installer (or all objects in data flow before and after in Transport connection) we have no control over the objects being collected in the transport. Also, if we use different transport for different kinds of objects (Base objects, Transfer rules etc) then we'll have to delete the locked objects and re collect the objects, increasing the risk of missing some objects in the second time.

#### 9. **Special Instructions for collecting the standard time objects:**

When we collect standard Info Objects like 0CALWEEK etc, which are already present in the target system in the unassigned nodes, the transport might fail with an error message "Unable to overwrite the existing object" In this case, the transport must be imported with the special instruction U2 (Overwrite mode).

## Best Practices:

1. Do not start transporting until the development is complete and stable.
2. Request for Transports before starting Development.
3. Capture all the objects in right transport request from the start of development.
4. Delete any obsolete objects in Development, so that they would not accidentally get transported to Test or Production.
5. Transport objects in the recommended sequence or errors may result. Ensure a successful import of the object before transporting the next set of dependent objects.
6. Organize the contents of the transports
  - To facilitate transporting the objects in the right sequence
  - To keep the CTO small
  - To make error debugging easier
7. Import dependent transports into production in the same sequence as they were imported into Test, otherwise the results in the Production environment would not reflect what was user tested and accepted in Test environment. Import into Production even those transports that ended with errors in Test. There may be some exceptions that will affect the sequence.
8. Keep track of transport errors in Test and the action steps taken to correct them in the CTO Tracking Log. These action steps will come in very handy when importing those same transports into Production.
9. Avoid making any changes directly in Test or Production. All changes should be made in Development and transported.
10. Verify that objects are reflected in the transport. This should be jointly performed by the developer and CTO Administrator.
11. Assign all info objects to an Info object Catalog. It is recommended to split out the Info object Catalog by Subject Area by Characteristics and Key Figures.
12. Verify that the R/3 transports that are required for the BW transports are successfully imported and tested with RSA3 and replicate data sources in BW, **prior to** initiating the BW transports.
13. Make note of R/3 dependencies in the CTO Tracking Log. This would assist in the grouping of BW CTOs that can be transported and breakpoints to wait for the R/3 transport to occur.

## Activation of Inactive Objects in Production:

Sometimes there may be a case that in spite of successful migration of a BW object via transport, the object continues to remain inactive. There may also be cases where we mistakenly forget to transport a dependent object and hence the dependent object remains inactive in the Production system.

For such scenarios SAP has helped us by providing programs which activate the objects without the need for us to transport them from development to production.

Here is a list of programs which can be used to activate the inactive objects in the system:

Program Name	Description
RSDG_CUBE_ACTIVATE	Activation of Info Cubes
RSDG_ODSO_ACTIVATE	Activation of all ODS Objects
RSDG_IOBJ_ACTIVATE	Activation of all Info Objects
RSDG_MPRO_ACTIVATE	Activating Multi providers
RS_COMSTRU_ACTIVATE_ALL	Activate all inactive Communication Structures
RS_TRANSTRU_ACTIVATE_ALL	Activate Transfer Structure
RSAU_UPDR_REACTIVATE_ALL	Activate Update Rules
RRHI_HIERARCHY_ACTIVATE	Activate Hierarchies
RSDS_DATASOURCE_ACTIVATE_ALL	Activate All Data Sources of a Log System

There is no standard SAP program to activate Transformations and DTP.

However you can refer the article '**Program to Activate Transformation & DTP**' provided by **Arminster Singh** to activate transformations and DTP in open systems. PFB the link:

<http://www.sdn.sap.com/irj/scn/index?rid=/library/uuid/d02513b2-7fb6-2c10-3a8b-887fc115d61b>

**Note:** The above programs should be used only when a BW object is inactive. Do not use them if you have to make changes to an object present in production. **Avoid making any changes directly in Test or Production. All changes should be made in Development and transported.**

## Related Content

<http://wiki.sdn.sap.com/wiki/display/BI/Transport+a+specific+Infoobject+in+BW>

<http://wiki.sdn.sap.com/wiki/display/BI/Transport+Sequence+in+SAP+BW>

[http://help.sap.com/saphelp\\_nw04/helpdata/en/0b/5ee7377a98c17fe1000009b38f842/frameset.htm](http://help.sap.com/saphelp_nw04/helpdata/en/0b/5ee7377a98c17fe1000009b38f842/frameset.htm) - This explains the use of Transport Connection very well.

<http://www.sdn.sap.com/irj/scn/index?rid=/library/uuid/d02513b2-7fb6-2c10-3a8b-887fc115d61b>

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