SAP BusinessObjects Planning and Consolidation 10.0, version for SAP NetWeaver

Zane Connally / Customer Solution Adoption
Sheldon Edelstein/Database and Technology Solution Management
2012

BPC10 NW: What's New in Transports
Agenda

1. Transport Overview
   - Benefits
   - Prerequisites

2. Dependency / Validation Checks
   - Creation process checks
   - Import process checks
   - Post import data checker

3. Transport Modes
   - Normal
   - Deletion

4. Transport Creation
   - Normal
   - Deletion

5. Transport Logs

6. Transporting Supporting Configuration

7. Transport – Misc Topics

8. Transport Summary
Transport Introduction

- The purpose of a transport is to move the contents of an environment across a landscape at granular (or object) level.
- With SAP BusinessObjects Planning and Consolidation 10, version for SAP NetWeaver, granular object transport behavior is now available.
- Full integration with the standard NW CTS (Change and Transport System)
- Normal and Delete mode of transport are supported.
- Standard NW based transport transactions and debugging tools can now be used.
New Improved Transports

Benefits

Benefits of these features include:

- Better Performance during transport (only the objects wanted are collected)
- Flexible transport process due to granular object transport behavior
- Good benefit to backend system administrators as transport process is fully integrated into standard NW CTS (Change and Transport System) framework
- Better debugging options
- Tight dependency checks during the transport process
Before performing transports, ensure that the following prerequisites have been met:

- Configuration of the SAP NetWeaver Transport Framework by creating transport domains, routings.
- Configure the system to import client dependent objects.
  - Create user ALEREMOTE (background user id)
  - Create a RFC destination to allow the import method to be executed in the correct client.

[http://help.sap.com/saphelp_nw73/helpdata/en/be/f4d53f41adea34e10000000a1550b0/fileset.htm](http://help.sap.com/saphelp_nw73/helpdata/en/be/f4d53f41adea34e10000000a1550b0/fileset.htm)

**SBOP Plan & Consol 10.0 NW Administrator's Guide** (sections 5 and 6.7)
How BPC 7.x NW transports worked:
- Required a unique transaction code, UJBPCTR.
- Transports collect all objects within the entire application set.
- The transport collects meta data (data describing the actual BPC objects to be transported) about the appset objects into two “shadow tables”.
- The data in these shadow tables are then used to reconstitute the BPC objects in the target system.
Transport Dependency/Validation Checks

There are several checks that occur with the transport process to insure consistency and successful import. These are three types of checks performed during the transport process:

- An object dependency check during the transport creation process
- An object dependency check during the transport import process
- A Data Checker process is executed after the transport import process
Transport Dependency/Validation Checks

Object dependency checks during the **transport creation process**

Example of a dependency check during transport creation:

- Transporting a model definition requires the dependent dimension definitions to be either have already been transported into the target environment, or the dimension definitions are included in the model definition transport. Even if the dependent dimensions have already been imported into the target system, the generation of the new transport for the model definition will raise a warning message indicating that dependant objects were not included in the current transport.
- User can continue to create this transport by selecting “continue with warning message”.
- If the dependent entities are already existing in target system, the new transport will succeed. If the dependent entities do not exist in the target system the transport will fail upon import.
Transport Dependency/Validation Checks

Object dependency checks during the **transport creation process**

<table>
<thead>
<tr>
<th>Object</th>
<th>Dependency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimension</td>
<td>Environment</td>
</tr>
<tr>
<td>Model</td>
<td>Environment, Dimension</td>
</tr>
<tr>
<td>Data Manager Package</td>
<td>Model</td>
</tr>
<tr>
<td>Report Templates</td>
<td>Model</td>
</tr>
<tr>
<td>Report Files</td>
<td>Model</td>
</tr>
<tr>
<td>Data Manager Files</td>
<td>Model</td>
</tr>
<tr>
<td>Data Manager Data Files</td>
<td>Model</td>
</tr>
<tr>
<td>Data Manager Package Link</td>
<td>Model</td>
</tr>
<tr>
<td>Script Logic</td>
<td>Model</td>
</tr>
</tbody>
</table>
Transport Dependency/Validation Checks

An object dependency checks during the transport creation process (continued):

<table>
<thead>
<tr>
<th>Object</th>
<th>Dependency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Rules</td>
<td>Model, Rule and Method business rules</td>
</tr>
<tr>
<td>Journal Template</td>
<td>Model</td>
</tr>
<tr>
<td>BPF</td>
<td>Environment</td>
</tr>
<tr>
<td>Data Access Profile</td>
<td>Environment, Model, Dimension</td>
</tr>
<tr>
<td>Work Status Setting</td>
<td>Model, Locked Dimension</td>
</tr>
<tr>
<td>Team</td>
<td>Environment, Task Profile, Data Access Profile</td>
</tr>
<tr>
<td>Controls</td>
<td>Model</td>
</tr>
<tr>
<td>Library</td>
<td>Environment</td>
</tr>
<tr>
<td>Drill-Throughs</td>
<td>Model</td>
</tr>
</tbody>
</table>
Transport Dependency/Validation Checks

Object dependency checks during the transport import process

Example of a dependency check during transport import:

- If the dependent objects (i.e.: the dimension definitions in the previous example) are already existing in target system, the new transport will successfully import.
- If the dependent entities do not exist in the target system the transport will fail upon import.
  - If the dependency check fails upon import, the system will roll back the configuration for the specific object (corresponding to transport granularity) that encountered the error during the transport import process. The failure will not affect any additional objects in the transport that are unrelated to the dependency.
## Transport Dependency/Validation Checks

Object dependency checks during the **transport import process**

<table>
<thead>
<tr>
<th>Object</th>
<th>Dependency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Manager Package</td>
<td>Existence of DM package group and Team</td>
</tr>
<tr>
<td>Data Manager Package Group</td>
<td>Team</td>
</tr>
<tr>
<td>Work Status</td>
<td>Owner Property (Owner dimension must have OWNER property both in target system and source system, else transport will fail and the following error message will be displayed: “Owner dimension has no OWNER property in target system, please transport dimension…”)</td>
</tr>
<tr>
<td>Drill-Through</td>
<td>Existence of any dimension and/or properties specified in the drill through parameters</td>
</tr>
</tbody>
</table>
Transport Dependency/Validation Checks

Data Checker process is executed after the transport import process

Data Checking process:
• Data checker is executed after importing.
• Roll back will not be executed at this step.
• Error or warning messages will be returned when there are issues during this step.
Transport Dependency/Validation Checks

## Data Checker process

<table>
<thead>
<tr>
<th>Object</th>
<th>Dependency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Manager Package</td>
<td>Environment</td>
</tr>
<tr>
<td>Report Templates</td>
<td>Environment</td>
</tr>
<tr>
<td>Report Files</td>
<td>Environment</td>
</tr>
<tr>
<td>Data Manager Files</td>
<td>Environment</td>
</tr>
<tr>
<td>Data Manager Data Files</td>
<td>Environment</td>
</tr>
<tr>
<td>Data Manager Package Link</td>
<td>Environment</td>
</tr>
<tr>
<td>Script Logic</td>
<td>Environment</td>
</tr>
<tr>
<td>Business Rules</td>
<td>Environment and validation of dimensions and dimension members</td>
</tr>
<tr>
<td>Journal Template</td>
<td>Environment and validate the dimensions and dimension members</td>
</tr>
</tbody>
</table>
## Transport Dependency/Validation Checks

### Data Checker process (continued):

<table>
<thead>
<tr>
<th>Object</th>
<th>Dependency</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPF</td>
<td>Environment, Model, Dimensions, Dimension Members, BPF activity workspaces, and linked resources</td>
</tr>
<tr>
<td>Data Access Profile</td>
<td>Existence of the accessed dimension member, secured dimensions, and if the dimension exists in specified Model.</td>
</tr>
<tr>
<td>Work Status Setting</td>
<td>Environment and locked dimensions exist in Model</td>
</tr>
<tr>
<td>Controls</td>
<td>Model, Dimension, and Dimension Member</td>
</tr>
<tr>
<td>Library</td>
<td>Model, Dimension, and Dimension Member</td>
</tr>
</tbody>
</table>
Transport Steps
Normal Mode

Normal Mode:
Used for modifying and creating objects

- Environment objects that support create or modification transport
  - Environment
  - Dimension
  - Dimension Member
  - Model
  - Data Manager Package
  - Report Templates
  - Report Files
  - Data Manager Files
  - Data Manager Data Files
  - Data Manager Package Link
  - Script Logic Files
  - Business Rules
  - Journal Template
  - BPF Template
  - DM Package Group
  - Data Access Profile
  - Task Profile
  - Work Status Setting
  - Model Configuration
  - Environment Configuration
  - Book Template
  - Teams
  - Controls
  - Library
  - Drill Through
  - Hierarchy of dimension
Transport Modes

Deletion Mode:
Use for deleting objects

Environment objects that support Deletion Mode:

Model
Dimension
Data Manager Package
Data Manager Package Group
Data Manager Package Link
Transport Creation
Normal Mode

How to Create Transport
Normal Mode

• Logon to Source System via SAP GUI and enter transaction code RSA1
• Select Transport Connection on left column
Transport Creation
Normal Mode

- In the left column, choose SAP Transport > Object Types
- In the middle column, choose More Types > Environment and double-click Select Objects
Transport Creation
Normal Mode

- In the dialog box, select the environment to be transported and click the Transfer Selections button.
The object collection process can be controlled using GROUPING settings to include only those objects desired. Options include:

- For BPC transports, it is recommended that you use the “Only Necessary Objects” setting which will collect all objects required for the selected environment.)
Transport Creation
Collection Mode

• The system can automatically identify and add the necessary objects to the transport collection, or you and manually select specific objects.
• The recommendation is to allow the system to collect all of the objects automatically, then manually select/deselect specific objects as required:
Transport Creation
Collection

- Use drag and drop to move the selected environment to the collection screen
Transport Creation
Collection

- During the collection process the system will display the number of objects collected as it scans through the various levels of the configuration:
Transport Creation
Manual Selection

- The column labeled TRANSPORT indicates if the object has been selected to be included in the transport. Right click on a parent node and you can include/exclude all objects associated with the selected node:
Transport Creation
Normal Mode

- Once all objects that are to be included in the transport are indentified, click the Transport Objects button to create the transport.
Transport Creation
Normal Mode

- Transport object for the selected objects have been created.
- Generate a customizing request to include the transport objects and release the customizing task for transporting.
Transport Creation
Deletion Mode

- All the steps are the same with Normal Mode transport except you will select the Deletion mode.
- In the left column, choose SAP Transport > Object Types, in the middle column, choose More Types > BPC Deletion and double-click > Select Objects
Transport Creation
Deletion Mode

The following objects are supported by the deletion mode transport:

- Model
- Dimension
- DM Package
- DM Package Group
- DM Package Link
Transport Logs
Debugging Transport Issues

• Transport logs help to debug issues during Transports
• Log on to Source System via SAP GUI and enter transaction code SLG1
• In the Object field, enter UJ and in the Subobject field, enter UJT
• Click Execute to get the log
How do you transport the new BPC parameter settings configured in the IMG?

- These settings must be included in a separate BW transport
Transporting Supporting Configuration
Transporting BW Objects which have been attached to BPC objects

• How do you transport BW objects which are attached to BPC objects (such as DTPs, Transformations, InfoCubes, etc)?
  – PREREQUISITE is SAP Note 1689814 (Stabilize InfoCube's technical name in the modeling process)
    – and you MUST have the ENABLEFIXEDCUBENAME parameter enabled on the model which has the BW objects attached to it
  – There is a specific order in which you must transport the BW objects which have been attached to BPC objects.
    o 1) First transport the BPC objects using the standard BPC transport process
    o 2) Second gather the BW objects in a BW transport process. Do not include any of the generated BPC objects in this transport (the BPC InfoObjects themselves)
    o 3) Verify that the BW objects were transport correctly to the target system

• Important notes:
  – Ensure you do not include any of the BPC Generated InfoObjects in the BW transport... Only the meta data is needed (this is because the BPC Generated InfoObjects should have been transported over already before the BW objects)
  – Technically, you can’t transport generated objects in BW – which is why you should first perform the BPC transport (which creates the generated objects in the target system first)
Transporting Supporting Configuration
Transporting BW Objects which have been attached to BPC objects

- CURRENT BEHAVIOR
  - Only high level meta data objects necessary
  - No /CPMB/ objects without error message
    - NOTE: can still transport these objects with an error message...
How do you transport EPM10 workbooks?

- Workbooks created and stored on the BPC server can be easily transported (using RSA1) as long as all existing environments / models are available in the target system and the environments/models have exactly the same names between the source and target systems.

- If source and target environment/model names are different, you will have to change the report connection manually through “manage connections” feature in “report actions” after importing the workbook into the target system.

- You can check the “do not store connection“ option in the report options of the workbook definition so changes between environments / models naming are bypassed.
Transport – Miscellaneous Topics
Object Locking

- Do BPC10 transports lock objects?
  - No, BPC transports do not lock objects. This means that transport import sequence must be controlled to insure the correct configuration is transported.
Transport – Miscellaneous Topics
Multiple Transports

- What happens when two transports are created for the same environment?
  - For the same environment, only one importing can be performed in target system, any additional transports for the same environment raise error message.
  - The error message is “Another import for environment %EnvironmentName% is processing...”
Transport – Miscellaneous Topics
Useful Programs : UJT_AFTER_FAIL_PROCESS

- What is program UJT_AFTER_FAIL_PROCESS used for? (as referenced in the Administration Guide)?
  - This program allows SAP Support to convert environments from an inactive status to an active status (see note 1615644).
What is program UJA_DATA_CHECKER used for?

This program checks the consistency of the underlying BW objects, file structure, rule configuration, and meta data supporting the specified environment/model. This should be executed as part of your troubleshooting procedures for any failed transport.
How do you remove an unwanted BPC environment??

- In addition to performing content activation during the initial system setup, the program UJS_ACTIVATE_CONTENT also has the ability to wipe clean a specified environment. The CLEAN option will remove all components of the specified BPC environment.
Transport – Miscellaneous Topics
Backup and Restore

- Transaction code UJBR (BPC Backup and Restore) allows the user to create a copy of the environment and potentially transfer the copy to another system bypassing the transport control process completely.
- Project management needs to address and identify what situations should transports and UJBR be utilized.
  - Transports provide control and traceability.
  - UJBR provides disaster recovery capability but little or no control and/or traceability.
Transport – Miscellaneous Topics
Useful Transport related T-Codes

- SE01/SE09 /SE10 provide access to the workbench/customizing Change and Transport Organizers. The transaction codes have similar capabilities. You can use these codes to sort through and find specific transports, and view the contents of specific transports.
Transport – Miscellaneous Topics
Useful Transport related T-Codes

- STMS (SAP Transport Management System) allows the creation and maintenance of the system to system connections as well as providing access to controlling the importation of transports into selected systems.
Transport – Miscellaneous Topics
Technical Name ID Retention - 1

- The technical name of a BPC supporting BW object can sometimes change when transporting from source to target environments.
- Control over some objects’ id name changeability is now available, see SAP Note 1689814 “Stabilize Info Cube’s technical name in the modeling process “

```
<table>
<thead>
<tr>
<th>InfoCube</th>
<th>Techn. name / value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCOUNT</td>
<td>/CPMB/JEIFY7V1</td>
</tr>
<tr>
<td></td>
<td>/CPMB/JED798G</td>
</tr>
<tr>
<td>CATEGORY</td>
<td>/CPMB/JEIFY7V2</td>
</tr>
<tr>
<td></td>
<td>/CPMB/JEDE5H7</td>
</tr>
<tr>
<td>ENTITY</td>
<td>/CPMB/JEIFY7V3</td>
</tr>
<tr>
<td></td>
<td>/CPMB/JEDZHUB</td>
</tr>
<tr>
<td>PRODLINE</td>
<td>/CPMB/JEIFY7V4</td>
</tr>
<tr>
<td></td>
<td>/CPMB/JEDZ5D9</td>
</tr>
<tr>
<td>RPTCURRENCY</td>
<td>/CPMB/JEIFY7V5</td>
</tr>
<tr>
<td></td>
<td>/CPMB/JEDFN30</td>
</tr>
<tr>
<td>TIME</td>
<td>/CPMB/JEIFY7V6</td>
</tr>
<tr>
<td></td>
<td>/CPMB/JEDKM0F</td>
</tr>
</tbody>
</table>
```

```
<table>
<thead>
<tr>
<th>Navigation Attributes</th>
<th>Techn. name / value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCTYPE</td>
<td>/CPMB/JED798G__/CPMB/ACCTYPE</td>
</tr>
<tr>
<td>CALC</td>
<td>/CPMB/JED798G__/CPMB/CALC</td>
</tr>
<tr>
<td>IS_INPUT</td>
<td>/CPMB/JED798G__/CPMB/JEPPFRZ</td>
</tr>
<tr>
<td>TYPELIM</td>
<td>/CPMB/JED798G__/CPMB/JEPY7Q8</td>
</tr>
<tr>
<td>RATETYPE</td>
<td>/CPMB/JED798G__/CPMB/RATETYPE</td>
</tr>
<tr>
<td>CALC</td>
<td>/CPMB/JEDE5H7__/CPMB/CALC</td>
</tr>
</tbody>
</table>
```
Transport – Miscellaneous Topics
Technical Name ID Retention - 2

• Specific Objects technical name changeability:
  – DIMENSIONS
    o PC10NW transports do not change the technical name of the BW info object associated with a particular PC10NW Dimension
  – PROPERTIES
    o PC10NW transports may change the technical name of the BW info object associated with a particular PC10NW Dimension
  – MODEL
    o As per SAP Note 1689814 “Stabilize Info Cube’s technical name in the modeling process“, PC10NW parameters (activate model level parameter ENABLE_FIXED_CUBENAME) can be specified in such a way that transports do not change the technical name of the generated PC10NW model.
    o Important Note: if the ENABLE_FIXED_CUBENAME parameter is not activated then the technical name of the model may change during transport and/or the full optimization process. In this case, it is important not to develop configuration that is directly tied to the technical cube supporting the BPC model.
Specific Objects technical name changeability (continued):

- **MULTIPROVIDER**
  - PC10NW transports *may change* the technical name of the generated PC10NW multi-info provider if SAP Note 1689814 is not implemented and the parameter ENABLE_FIXED_CUBENAME has not been activated.
  - The multi-provider technical name *will not change* if the parameter ENABLE_FIXED_CUBENAME is activated.

- **VIRTUAL PROVIDER**
  - The behavior of technical name of virtual provider (which may be used to establish an ODBO connection to BPC data) acts the same as with the multi-provider, that is, the technical name is *does not change* if the parameter ENABLE_FIXED_CUBENAME is enabled.
  - If the ENABLE_FIXED_CUBENAME is not enabled, the technical id of the virtual provider *may change* in the target system.
Transport – Miscellaneous Topics

Self Help

• SAP Note 1667160 - Consulting Note on BPC10 NW Granular Transport
  This note summarizes the solutions and best practices to overcome common known issues during Planning and Consolidation 10.0 transports and will be continuously updated.

• Administrator’s Guide: SAP BusinessObjects Planning and Consolidation 10.0 version for SAP NetWeaver – Chapter 5 “Software Change Management”:

<table>
<thead>
<tr>
<th>Chapter 5</th>
<th>Software Change Management</th>
<th>35</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1</td>
<td>Transport Management</td>
<td>35</td>
</tr>
<tr>
<td>5.1.1</td>
<td>Transport Objects</td>
<td>36</td>
</tr>
<tr>
<td>5.1.2</td>
<td>Transport Configuration</td>
<td>37</td>
</tr>
<tr>
<td>5.1.3</td>
<td>Transport Execution</td>
<td>37</td>
</tr>
<tr>
<td>5.1.3.1</td>
<td>Transporting Environments</td>
<td>37</td>
</tr>
<tr>
<td>5.1.3.2</td>
<td>Transport Deletion</td>
<td>38</td>
</tr>
<tr>
<td>5.1.4</td>
<td>Transport Log Files</td>
<td>39</td>
</tr>
<tr>
<td>5.1.5</td>
<td>Transport Maintenance</td>
<td>40</td>
</tr>
<tr>
<td>5.1.6</td>
<td>Deployment Scenarios</td>
<td>40</td>
</tr>
<tr>
<td>5.2</td>
<td>Development Requests and Development Release Management</td>
<td>41</td>
</tr>
<tr>
<td>5.3</td>
<td>Quality Management and Test Management for CLM</td>
<td>41</td>
</tr>
<tr>
<td>5.4</td>
<td>Support Packages and Patch Implementation</td>
<td>41</td>
</tr>
</tbody>
</table>
Transport – Summary

- BPC NW 10.0 will support the transport of granular objects to move any given BPC object from development system to QA & Production systems. In 7.x, customers were required to transport whole AppSet every time.
- Customers and consultants will need to take into account dependencies to insure a logical sequence of transport imports when transporting an Environment's objects in multiple transports.
- BPC objects can be collected to a transport using the BW Administrative Workbench (transaction RSA1) which uses the standard transport process already familiar to BW users.