

# Life Cycle Management in SAP BusinessObjects Planning and Consolidation version for NetWeaver



## Applies to:

SAP BusinessObjects (SBOP) Planning and Consolidation version for Netweaver 7.x, based on a Netweaver BW 7.01 platform. For more information, visit the [Enterprise Performance Management homepage](#).

## Summary:

This whitepaper covers the main aspects that should be considered while defining a transport strategy for SBOP Planning and Consolidation version for Netweaver (SBOP PC\_NW). Areas addressed include: the transport mechanism, transport tools, and approaches for managing changes in the specific context of SBOP PC\_NW.

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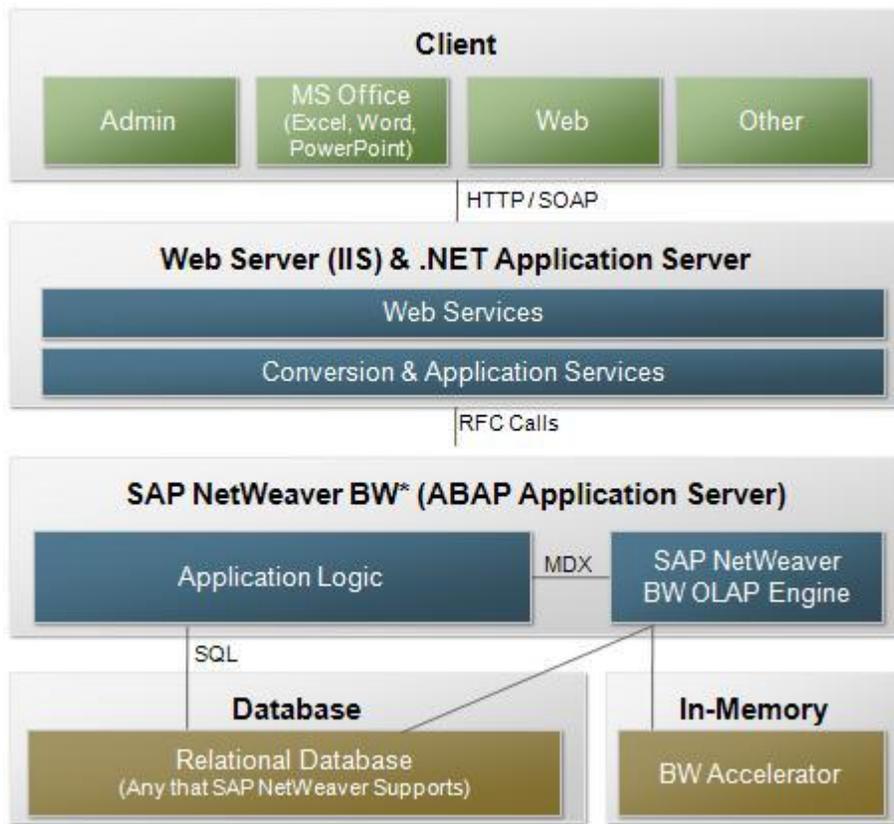
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## 1. Transport Concepts

### 1.1 SBOP PC\_NW Architecture



SAP BusinessObjects Planning and Consolidation, version for Netweaver is a four layer application composed of a client stack, a .NET Application server, the NetWeaver ABAP Application back-end, and the database server.

In the SBOP PC\_NW for NetWeaver architecture, all the data and files are stored in the database. Data and files are logically grouped for storage under a specified AppSet.

The SBOP PC\_NW application can consist of one or many Appsets. Individual Appsets can be transported from one BW system to another.

## 1.2 Main Concepts

SBOP PC\_NW for NetWeaver leverages the NetWeaver BW infrastructure for all the major features, including info-objects, extractors and the transport layer. Following this strategy, the transport of SBOP PC\_NW objects is based on the **TLOGO Framework** (Transportable BW Objects).

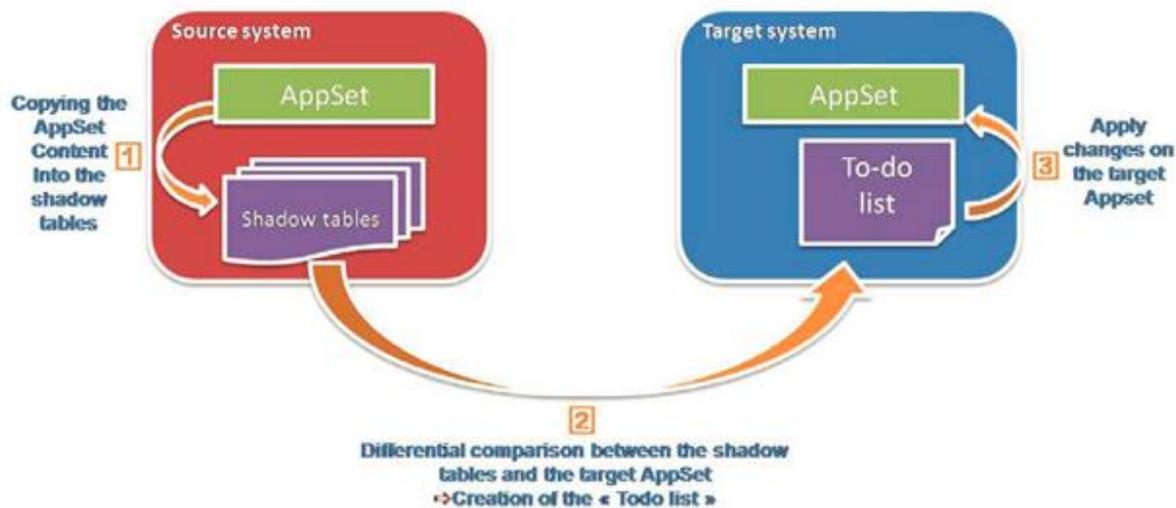
SBOP PC\_NW transport process collects the configuration for all objects specified as being subject to transports. Upon transport release, the entire AppSet specified by the transport is moved into the target system.

The transport process is executed in three major steps:

1. Upon the creation of a customizing request (i.e. transport), the contents of the source AppSet are copied (snapshot) into two shadow tables: **UJT\_TRANS\_HDR** and **UJT\_TRANS\_OBJ**. These shadow tables contain all the metadata describing the objects on the AppSet (see step 1 below).

2. Upon the transport import into the target system, the content of the shadow tables and those of the target AppSet are compared. Any object that is found not already to be in the target system, or objects that have been changed are added to an internal “to do list”.

3. The target system processes the “to do list”, creating/modifying the actual objects. Note: this process is different from most BW transports in that only descriptive information (metadata) about the objects is transported; the objects themselves are not transported.



The shadow tables contain all the metadata from the UJ\* tables (SBOP PC\_NW tables). No BW objects are transported; they are recreated from the metadata that have been transported from the shadow tables in order to create the “to do” list.

The only type of transport that is supported in SBOP PC\_NW is the transport of AppSets. **Do not create customizing requests using the standard BW tools.** This could lead to a loss of data and/or inability to use the SBOP PC\_NW transport process for future updates.

At the end of a transport import “After Import” tasks may be executed (step 3). For this purpose, the function **RS\_APPS\_AFTER\_IMPORT** must be called. The tasks that should be executed will be maintained in the table **UJT\_TRANS\_STP**.

**Important Tip:**

Objects that are not specifically included in a SBOP PC\_NW transport:

- Uploaded data files
- Custom Process Chains
- BADIs

These objects must be transported using the standard BW transport process or manually moved/recreated.

### 1.3 Project Management Considerations

A decision must be made early in the project to determine how the SBOP PC\_NW application will be maintained.

SBOP PC\_NW was designed to be able to be maintained independently from a centralized IT process. Fundamental changes to the way SBOP PC\_NW is configured can directly affect how the change process operates. Each customer should evaluate and determine effective change control for their landscapes.

SBOP PC\_NW allows two significant change control choices:

- 1 - Allow the business users to make changes directly in the production environment
- 2 - Follow a transport controlled system, using the typical Dev>QA>Prod development landscape

The SBOP PC\_NW transport process can be configured to allow either option for specific configuration. For example, the SBOP PC\_NW data model may be strictly controlled using option 2 (transport control), while the control of reports is less restrictive and option 1 (create directly in Production) is desired.

#### Important Tip:

It is relatively easy to move from a transport dominated process control system to a system that allows direct change.

It is a lot more difficult to move from allowing direct change into a more controlled Dev>QA>Prod transport control process. Once the production system configuration is no longer in sync with Dev system the transport process can become unusable.

## 1.4 Changeability

The changeability for SBOP PC\_NW objects is maintained through the table **UJT\_TRANS\_CHG** (accessible through transaction SE16).

There are two levels of changeability:

**D (Development):** The objects whose changeability is set to **D** can be transported from one environment to the other using the SBOP PC\_NW transport tools. Objects in non productive environment are usually set to D, unless for specific cases (exclude a specific a type of object from a transport).

**P (Production):** Objects whose changeability is set to P are not automatically collected for transported. The assumption is that all "P" objects will be maintained in the target system independent of the transport process.

The changeability for the objects can be modified by altering the property CHANGE\_ID for each type of object:

**Data Browser: Table UJT\_TRANS\_CHG Select Entries 22**

Check Table...

Table: UJT\_TRANS\_CHG  
Displayed Fields: 3 of 3 Fixed Columns: 2 List Width 0250

	MANDT	TLOGO	CHANGE_IND
<input type="checkbox"/>	001	ADEF	D
<input type="checkbox"/>	001	APPM	D
<input type="checkbox"/>	001	ASET	D
<input type="checkbox"/>	001	AUDI	D
<input type="checkbox"/>	001	COMM	D
<input type="checkbox"/>	001	DATT	D
<input type="checkbox"/>	001	DIMA	D
<input type="checkbox"/>	001	DIME	D
<input type="checkbox"/>	001	FCON	D
<input type="checkbox"/>	001	FTRA	D
<input type="checkbox"/>	001	JOUR	D
<input type="checkbox"/>	001	K2SC	D
<input type="checkbox"/>	001	LREP	D
<input type="checkbox"/>	001	NFIL	D
<input type="checkbox"/>	001	PACK	D
<input type="checkbox"/>	001	REPT	D
<input type="checkbox"/>	001	SECU	D
<input type="checkbox"/>	001	TDLO	D
<input type="checkbox"/>	001	TEAM	D
<input type="checkbox"/>	001	VALD	D
<input type="checkbox"/>	001	WORK	D
<input type="checkbox"/>	001	WSTA	D

### Important Tip:

There are slight differences in the UJT\_TRANS\_CHG depending on which version of SBOP PC\_NW. The 7.5 version has additional table entries for Business Process Flows and Drill Through functionality that does not exist in the 7.0 version.

<b>TLogo Obj</b>	<b>Short Descript.</b>
ADEF	Administration De
APPM	Application
ASET	Appset
AUDI	Audit
<b>BPFT</b>	<b>BPF Tables</b>
COMM	Comments
DATT	Data Tables
DIMA	Dimension Attribute
DIME	Dimension
<b>DRIL</b>	<b>Drill Through</b>
FCON	Conversion Files
FTRA	Transformation File
K2SC	Scripts
LREP	Live Reports
MCRO	Macro files for Data
NFIL	New Files & Folders
PACK	Package
REPT	Reporting
SECU	Security
TDLO	Table Driven Logic
TEAM	Team
VALD	Validations
WORK	Workbooks
WSTA	Work Status

7.5

7.5

### 1.4.1 Retention of object's technical id

#### DIEMENSIONS

SAP Note 1445688 advises that "... (the) BPC\_NW transport is designed to guarantee the info object technames of BPC dimensions (will remain) identical between source and target system". In other words , SBOP PC\_NW transports will not change the technical name of the BW info object associated with a particular SBOP PC\_NW Dimension.

#### PROPERTIES

The corresponding BW attribute technical names associated with SBOP PC\_NW Dimension Properties also will not be changed by transport. As with the SBOP PC\_NW Dimensions, the technical name retention is by design of the transport.

#### MULTIPROVIDER

The generated SBOP PC\_NW multi info provider will retain its technical name after transport. This is also by design of the transport process.

#### APPLICATION

The BW technical name of the SBOP PC\_NW Application is a different situation. These applications can be "fully optimized" and as a result the data model of an optimized application may change. The current optimization solution requires the underlying BW info provider to be deleted then recreated with an optimized data model. SBOP PC\_NW transports of application configuration act in a similar manner. As a result, **the technical name of the SBOP PC NW application in the target system is not guaranteed to match the technical name of the same application in the source system after transport.**

#### Important Tip:

Never create BW configuration to directly access a SBOP PC\_NW info provider. The technical name of the SBOP PC\_NW info provider may change during optimization and/or transport resulting in deactivation of any BW links associated with the SBOP PC\_NW object.

## 2. File Service

All the files in the File Service are stored in the database, they can be accessed using transaction **UJFS**:

The SBOP PC\_NW file service is located on the Netweaver “backend” (ABAP stack). The file service contains structures that store logic files, report and schedule templates, data manager logs, and dimension data. Specific files and directories within the SBOP PC\_NW file service can be transported as well. The selection of which files to transport is based off the transports configuration table **UJT\_TRANS\_FIL**.

Although it is possible to modify this table, **it is strongly suggested that users do not change these table settings without full knowledge of the intended consequences**. Changes to this table will impact system processes in a similar manner as a program modification. In addition, any change made can potentially be overwritten by future upgrades or releases. Modifications to this table can identify which files service objects are to be included in transports, this information can be used to suggest patterns to isolate file service areas that are not subject to transport control (thus allowing the creation of workbooks directly in Production that will not be impacted by future transports).

### Important Tips:

Transport of Data Manager data files (files uploaded into the source system) is NOT supported by the transport process!

File/Directories under sub-object NFIL, are only transported to target system when there is a new application being created in the target system.

Pattern field, can be specific or generic (wildcard “\*” is supported).

Place holders for Appset (%APPSET%) and/or Applications (%APP%) may be used.

Example: For the first record, FCON, pattern id = 1: this entry will select all files and directories under the CONVERSIONFILES directory (note the use of the “\*” character to specify the inclusion of all files in the specified folder).

Example: For the last record, NFIL, pattern id = 4: this entry will select the directory only, so only that a folder (without documents) will be created in the target system

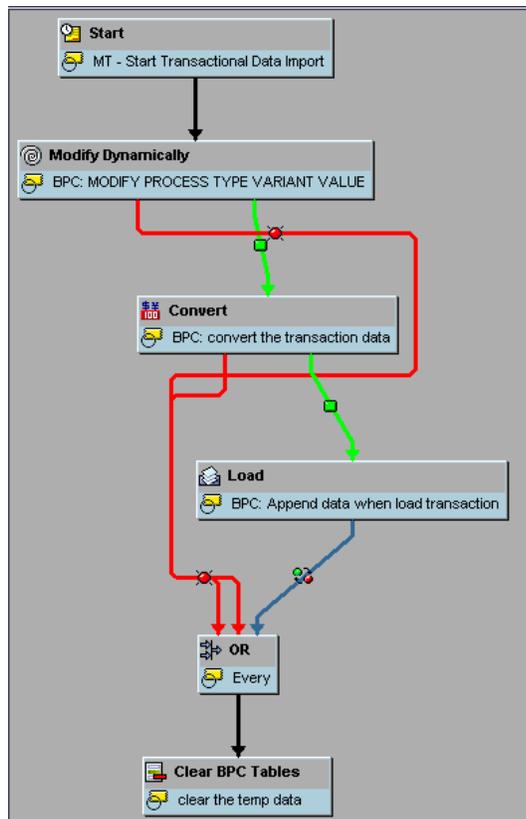
Data Browser: Table UJT_TRANS_FIL Select Entries			35
TLOGO	PATTERN_ID	PATTERN	
FCON	1	\\ROOTWEBFOLDERS\%APPSET%\%APP%\DATAMANAGER\CONVERSIONFILES\*	
FTRA	1	\\ROOTWEBFOLDERS\%APPSET%\%APP%\DATAMANAGER\TRANSFORMATIONFILES\*	
JOUR	1	\\ROOTWEBFOLDERS\%APPSET%\%APP%\JOURNALS\*	
K28C	1	\\ROOTWEBFOLDERS\%APPSET%\ADMINAPP\%APP%\*.LGF	
NFIL	1	\\ROOTWEBFOLDERS\%APPSET%\	
NFIL	2	\\ROOTWEBFOLDERS\%APPSET%\%APP%\	
NFIL	3	\\ROOTWEBFOLDERS\%APPSET%\%APP%\APPPUBLICATIONS\	
NFIL	4	\\ROOTWEBFOLDERS\%APPSET%\%APP%\DATAMANAGER\	

## 2. Data Manager Objects

### 2.1 Custom Process Types and Custom Process Chains

SBOP PC\_NW offers, through the data manager, a series of packages in order to execute specific operations like importing data from a flat file or an excel file into a cube. The Data Manager packages execute preconfigured BW process chains delivered with your SBOP PC\_NW installation.

However, the need for more complex packages might arise. In this case, SAP offers the ability to create your own process types (tasks) and process chains (which can be maintained through transaction **RSPC**).



#### Important Tip:

These custom process chains (linked into a data manager package) **cannot be transported** via the SBOP PC\_NW transport process. You must create a standard BW transport to move all custom process types and/or process chains.

## 2.2 Transformation and Conversion files

The SBOP PC\_NW transport will collect all transformation and conversion files under the “FTRA” and “FCON” TLOGO selections in table UJT\_TRANS\_CHG.

1	<b>*OPTIONS</b>
2	FORMAT = DELIMITED
3	HEADER = YES
4	DELIMITER =
5	SKIP = 0
6	SKIPIF =
7	VALIDATERECORDS=YES
8	CREDITPOSITIVE=YES
9	MAXREJECTCOUNT=
10	ROUNDAMOUNT=
11	
12	<b>*MAPPING</b>
13	CATEGORY=*NEWCOL(ACTUAL)
14	COSTCENTER = *NEWCOL(10150)
15	DATASRC=*NEWCOL(LOAD_BI_FI)
16	FINACCT=*NEWCOL(600000)
17	INTCO= *NEWCOL(NON_INTERCO)
18	PROFITCENTER= *NEWCOL(P10000)
19	RPTCURRENCY=0CURRENCY
20	TIME=0FISCPER
21	AMOUNT=0AMOUNT
22	<b>*CONVERSION</b>
23	TIME=TIME_Conversion_2.xls
24	

### Important Tips:

- Deletion of transformation files is not supported with transports, and must be done manually in each system.
- Deletion of conversion files is also not supported with transports, and must be done manually in each system.

### 3 Reports and Schedules

Workbooks saved to a team folder are transported as part of the TEAM (not the WORK) transport. Make sure the UJT\_TRANS\_CHG setting for TEAM is set for "Development" if transport of these workbooks is desired.

The file service never transports a deletion. Existing files created in production are not deleted when transporting files, they are overwritten. This may be an issue if you allow SBOP PC\_NW users to create new workbooks in production (typical), the solution is to then create a subfolder in the File Service for all workbooks created within production. The result is all reports in this subfolder cannot be overwritten by any transport.

**Important Tip:**

Script Logic files, since they are stored in the SBOP PC\_NW File Service, exhibits the same behavior ...transports cannot delete Script Logic files, but they can move updates.

An article that explains how to implement a custom program to copy SBOP PC\_NW file service files from a source system to any number of target systems can be found at:

<http://www.sdn.sap.com/irj/scn/index?rid=/library/uuid/0096026f-7fc4-2c10-5c92-e75f4c13ca10> "How To Promote Reports and Input Schedules Through Your System Landscape".

## 4 Journals

Transporting any data model change that impacts dimensionality will cause all journal entries in the target system to be deleted.

It is a best practice to back up all journal entries in the target system prior to transporting any application changes that may have impacts to journal configuration using the Data Manager Journal Export package.

## 5 Web Admin Parameters

Web Admin parameters are transported only the first time a new application is created.

Subsequent transports will not change the web admin parameter settings

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### Administration >> Set Application Parameters

Type	KeyID	Value	Delete
(R)	APPROVALORG	<input type="text"/>	<input type="checkbox"/>
	BPC_STATISTICS	OFF	<input type="checkbox"/>
	CALCULATION	0	<input type="checkbox"/>
	COMMENT	ON	<input type="checkbox"/>
(0)	DimsForFactTblIndex	<input type="text"/>	<input type="checkbox"/>

## 6. Transport tools

As mentioned before, the transport is leveraging standard NetWeaver BI transport framework but the content is different. When making transports in SBOP PC\_NW, all the content of the AppShell whose changeability is set to development is transported. Hence specific tools have been made available in order to create the transport requests.

The developers and functional consultants must create all their customizing requests using the transaction **UJBPCR**.

From this screen, they can create three kind of requests:

**Insert or Modify request:** This request will transport a change from the development environment to the other environments. This action leads to the creation of a transport request after updating the shadow tables.

**Deletion request:** This request will delete a specific change that has been applied in the target environment. This action leads to the creation of a transport request after updating the shadow tables.

**Only update shadow table:** This action will only commit changes into the shadow tables without creating a transport request. This action will prove useful if a transport request has already been created but has not been released yet.

We may then choose the appropriate AppSet which should be transported.

Optionally, we may choose to release the request immediately if proper authorization has been provided.

Before being able to create a transport request for a specific AppSet, **you must turn it offline** otherwise you will raise an exception.

The AppSet, in the target environment, **must also be set offline when importing the transports**. The holder of this task must have access to SBOP PC\_NW Client\_in order to be able to turn the AppSet offline.

After creation, you can then view the transport request using standard TMS transaction codes such as SE10, or SE09:



Multiple transports of the same Appset:

If user A creates a transport request for "Appset1" but doesn't release it, then user B creates a transport request for the "Appset1" as well.

The entries in the shadow tables created by User A are overwritten by the entries from the User B's request and the transport request for user A becomes equivalent to the one created by user B. This happens because there is only one set of shadow tables and the last action taken to populate them will overwrite any previous actions. In this scenario the transport manager will only need to import the latest request

#### Important Tip:

The customizing request is created with only one task underneath it. An Appset is transported as a single transportable object.

### 6.1 UJT\_CHECK\_TABLE\_ENTRIES

Program UJT\_CHECK\_TABLE\_ENTRIES can be used to check how many records exist in the UJ\* database tables for a particular Appset. This is useful after deleting an Appset to make sure that all data has been removed.

**Transports - Check Table Entries**

Parameters

AppSet ID:

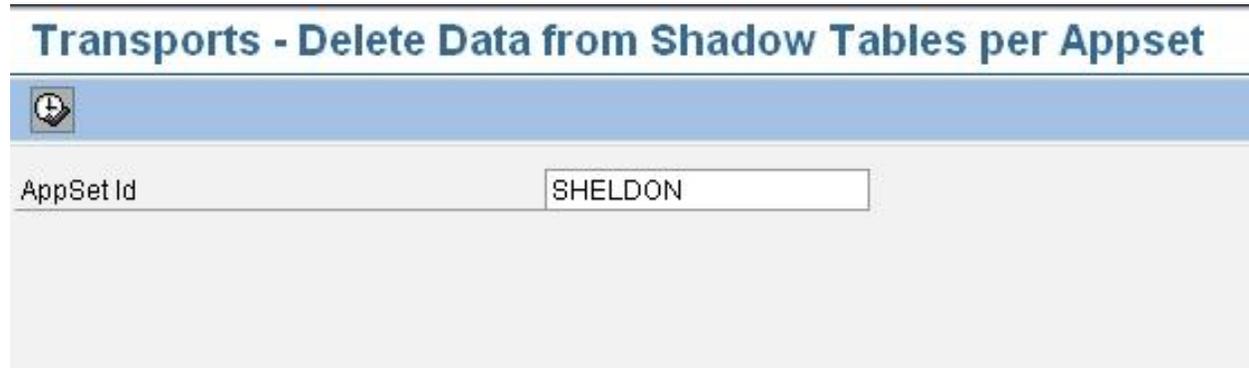
Table Name:  to

**Transports - Check Table Entries**

Table Name	Rows
UJA_APPL	3
UJA_APPLT	3
UJA_APPL_DIM_JOB	0
UJA_APPSETT	1
UJA_APPSET_INFO	1
UJA_DIMENSION	17
UJA_DIMENSIONT	17
UJA_DIM_APPL	19
UJA_DIM_ATHIER	12
UJA_DIM_ATTR	164
UJA_FILTER	0
UJA_FORMULA_APP	18
UJA_LAST_USER	0
UJA_LOGGED_ON	63
UJA_USER_CV	220
UJA_USER_DEF	102

### 6.2 UJT\_DLT\_TRANS\_DATA

Program UJT\_DLT\_TRANS\_DATA can be used to delete entries from the transport shadow tables (UJS\_ACTVIATE\_CONTENT when used in delete mode cannot delete these entries). This is also useful after deleting an Appset to make sure that all data has been removed from the target system



### 6.3 UJS\_ACTVIATE\_CONTENT

Program UJS\_ACTVIATE\_CONTENT is typically used to activate ApShell installation, but can also be used to delete most entries in the UJ\* database tables for a particular Appset.



### 6.4 UJT\_CHECK\_TABLE\_ENTRIES

Program UJT\_CHECK\_TABLE\_ENTRIES can be used to check how many records exist in the UJ\* database tables for a particular appset. This is useful to help determine if all objects were transported and/or after deleting an appset to make sure that all data has been removed.

#### Transports - Check Table Entries

Parameters

AppSet ID: SHELDON

Table Name: UJ\* to

#### Transports - Check Table Entries

Table Name	Rows
UJA_APPL	3
UJA_APPLT	3
UJA_APPL_DIM_JOB	0
UJA_APPSETT	1
UJA_APPSET_INFO	1
UJA_DIMENSION	17
UJA_DIMENSIONT	17
UJA_DIM_APPL	19
UJA_DIM_ATHIER	12
UJA_DIM_ATTR	164
UJA_FILTER	0
UJA_FORMULA_APP	18
UJA_LAST_USER	0
UJA_LOGGED_ON	63
UJA_USER_CV	220
UJA_USER_DEF	102

## 7. Applying Support Packages

When applying support packages on SBOP PC\_NW for NetWeaver, the user client as well as the two server layers (.NET and NetWeaver) must be aligned on the same support package level.

### 7.1 Support Packages for the Client

Support Pack upgrades are not incremental, therefore the whole client installation must be replaced with the new version. Prior to installation, copy or rename the “BPC” (7.0) or the “PC\_NW” (7.5) folder located on the client machine under My Documents (XP) or Documents (Vista) to save any local workbooks. Delete the old client using Add/Delete Programs then install the new support pack client.

### 7.2 Support Packages for the .NET Infrastructure

The application of support packages in the .NET environment of SBOP PC\_NW goes through installing the new available package. This upgrade is not incremental thus the whole .NET application is replaced with the new version.

The installation has to be manually executed on all SBOP PC\_NW environments. Refer to the release note of the current SBOP PC\_NW version/support package in order to check if any post installation actions have to be done.

The upgrade of the .NET application must be done **after** the ABAP stack has been updated to the appropriate support package level.

### 7.3 Support Packages for SBOP PC\_NW (NetWeaver Infrastructure)

The support packages for the NetWeaver stack of SBOP PC\_NW are applied using the **SPAM** (Support Packages Manager). The application of the SPs complies with the standards of change request management in SAP. Thus, they can be integrated with Solution Manager using the standard tools and methodologies.

## 8. Resources and Help

Detailed information on how specific SBOP PC\_NW objects are transported can be found in Service Marketplace at:

[https://websmp103.sap-ag.de/instguidescpm-bpc > BPC 75 version for Netweaver > Operations Guide](https://websmp103.sap-ag.de/instguidescpm-bpc%20>BPC%2075%20version%20for%20Netweaver%20>Operations%20Guide)

or

<https://help.sap.com/ > SAP Solutions > SAP Business User> Planning & Consolidations > BPC 75 version for Netweaver > Operations Guide>

### 8.1 SAP Notes

Check for SAP Notes under component: EPM-BPC-NW-TRA

Note 1415296 - BPC transport and installation troubleshooting summary

### 8.2 Blogs and Guides

SAP Network Blog: What you should know about transports in BPC7.xNW

<https://weblogs.sdn.sap.com/pub/wlg/17968>

SAP Network Blog: SAP BusinessObjects Planning and Consolidation version for Netweaver - Deleting an Appset

<https://weblogs.sdn.sap.com/pub/wlg/17532>

SAP Network Blog: BW Objects technical name changeability for SAP BusinessObjects Planning & Consolidation, version for Netweaver

<http://www.sdn.sap.com/irj/scn/weblogs?blog=/pub/wlg/18520>

How To Promote Reports and Input Schedules Through Your System Landscape

<http://www.sdn.sap.com/irj/scn/index?rid=/library/uuid/0096026f-7fc4-2c10-5c92-e75f4c13ca10>

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