

# BW4HANA

Friday, July 31, 2020 1:28 AM

# ADT 2.89/BWMT 1.19 Installation

November 06, 2017 4:51 PM

ADT - Abap Development Tool

BWMT - BW Modeling Tool (BWMT is dependent on ADT installation).

Document guide as reference for and old version (starts from page 6).

<http://ishareteam1.na.xom.com/sites/GEMS2R7/Central%20Library/How%20to%20Install%20HANA%20Studio%20Rev93%20and%20BW-MT%201.7.3.docx>

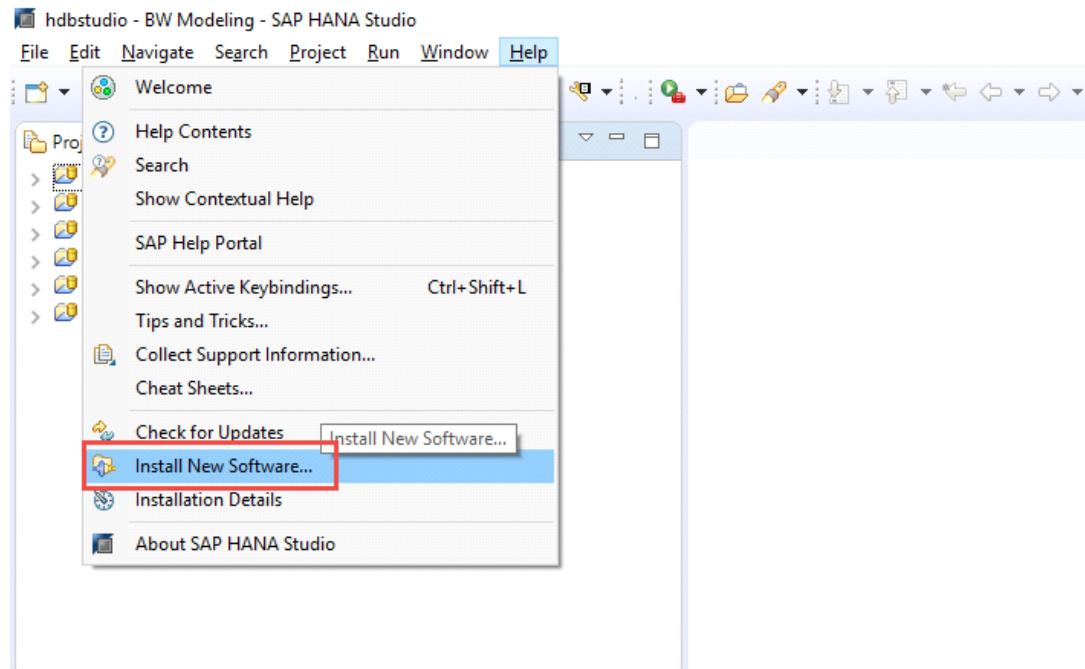
After BW/4Hana SP08 upgrade, It's mandatory to use ADT 2.89 and BWMT 1.19 version  
Installation available in: [\\hoeefv3\sapmedia\StageArea\HANA\Windows\ADT\\_BWMT](\\hoeefv3\sapmedia\StageArea\HANA\Windows\ADT_BWMT)

Pre-requirement install the libraries below:

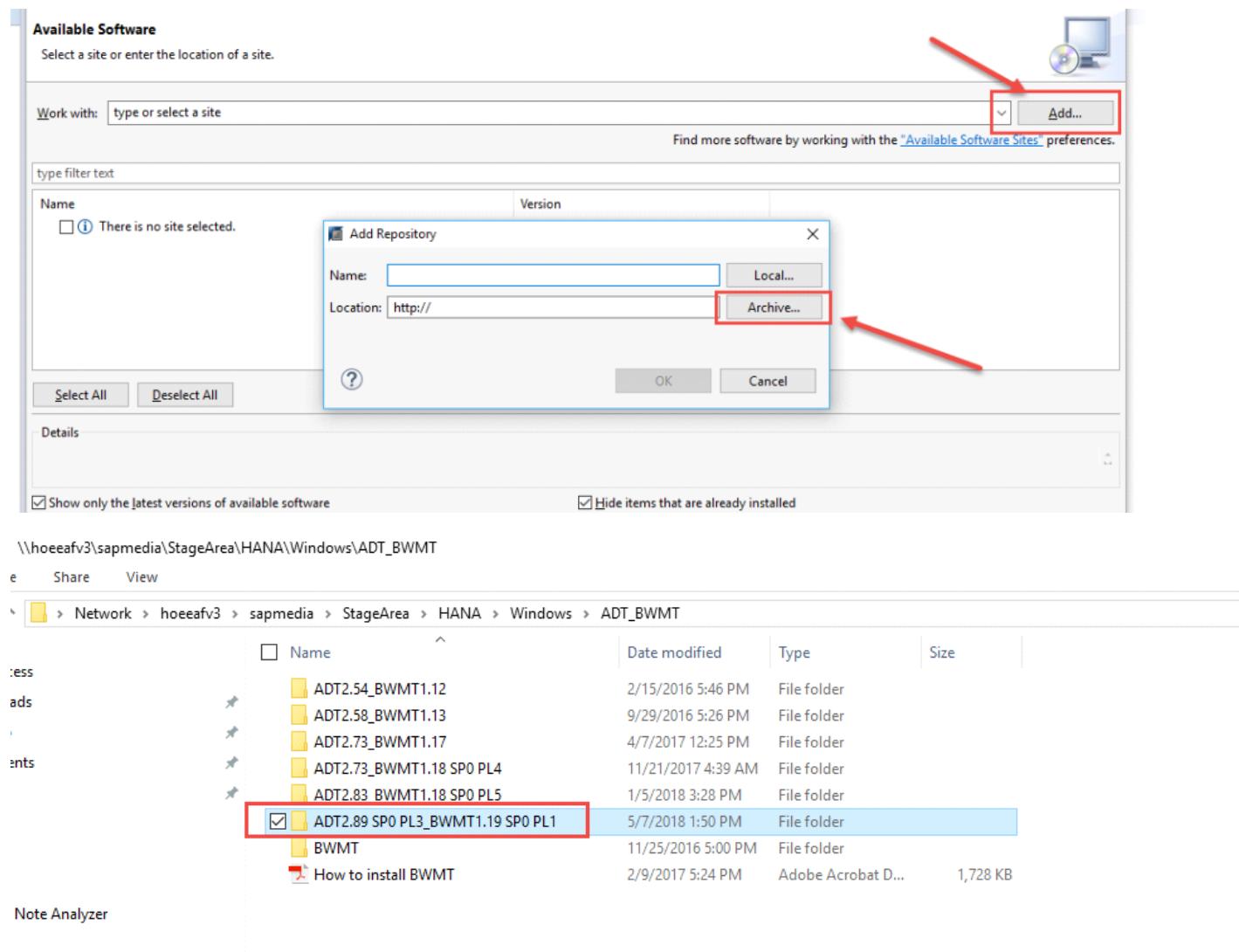
Find it in the link -> Eclipse Oxygen - <http://download.eclipse.org/releases/oxygen>

EMF Edit Data Binding	org.eclipse.emf.databinding.edit
EMF Model Query	org.eclipse.emf.query
Mylyn Commons	org.eclipse.mylyn.commons
Mylyn Task-Focused Interface	org.eclipse.mylyn.context_feature
Web Services Tools	org.eclipse.wst.ws_ui.feature Web Services Tools 3.6.1.v201409111852

1 - Go to menu Help into your SAP Hana Studio and choose option Install New Software



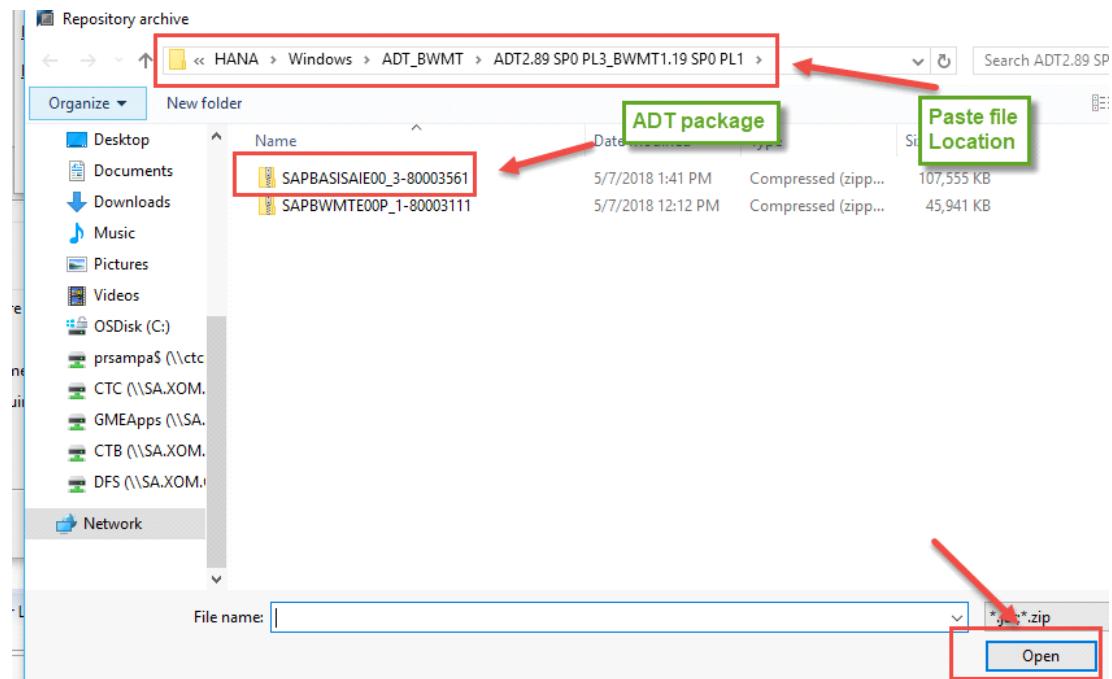
2 - Click in Add and choose archive button to select the installation package



3 - First we need to install ADT package.

Paste the following link into File Name, open folder "ADT2.89 SP0 PL3\_BWMT1.19 SP0 PL1", choose ADT package and click Open:

[\\hoeefav3\sapmedia\StageArea\HANA\Windows\ADT\\_BWMT](\\hoeefav3\sapmedia\StageArea\HANA\Windows\ADT_BWMT)



4 - Give it a name and click OK



#### Available Software

Select a site or enter the location of a site.

Name	Version
There is no site selected.	

Work with: type or select a site

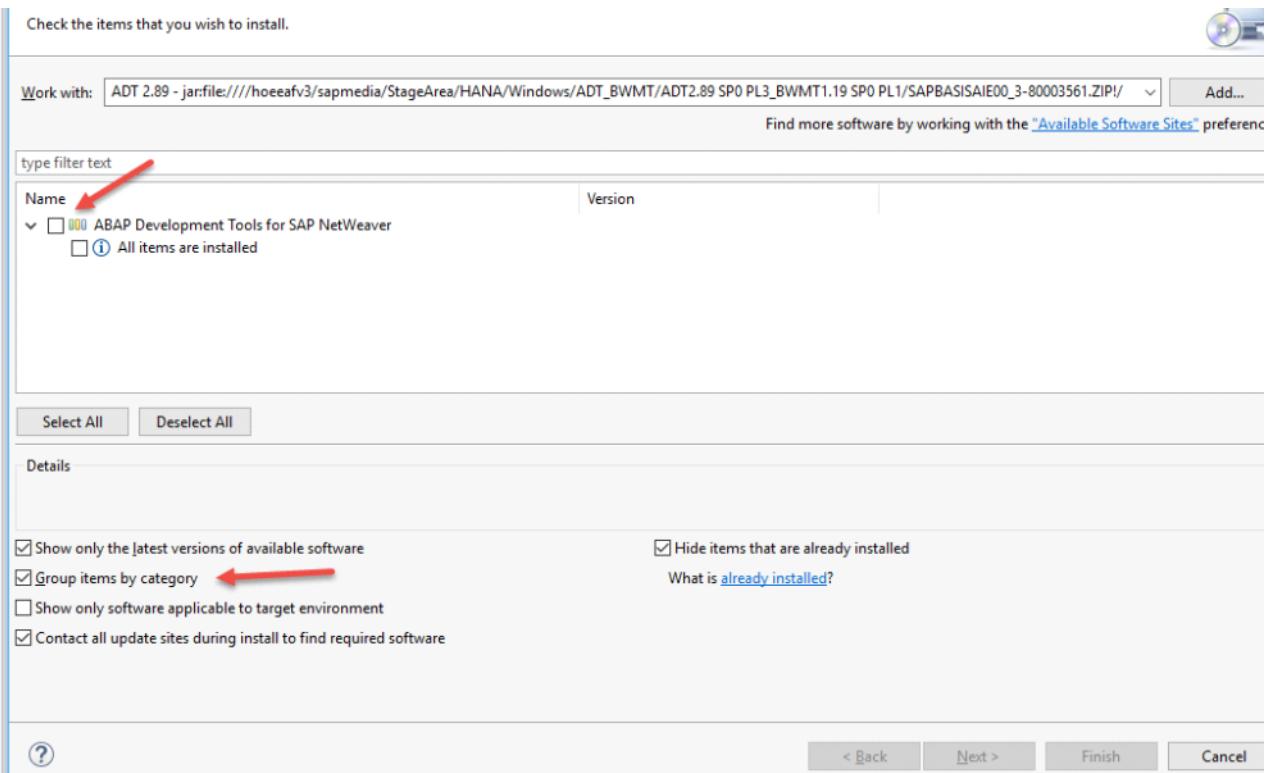
Find more software by working with the [Available](#).

type filter text

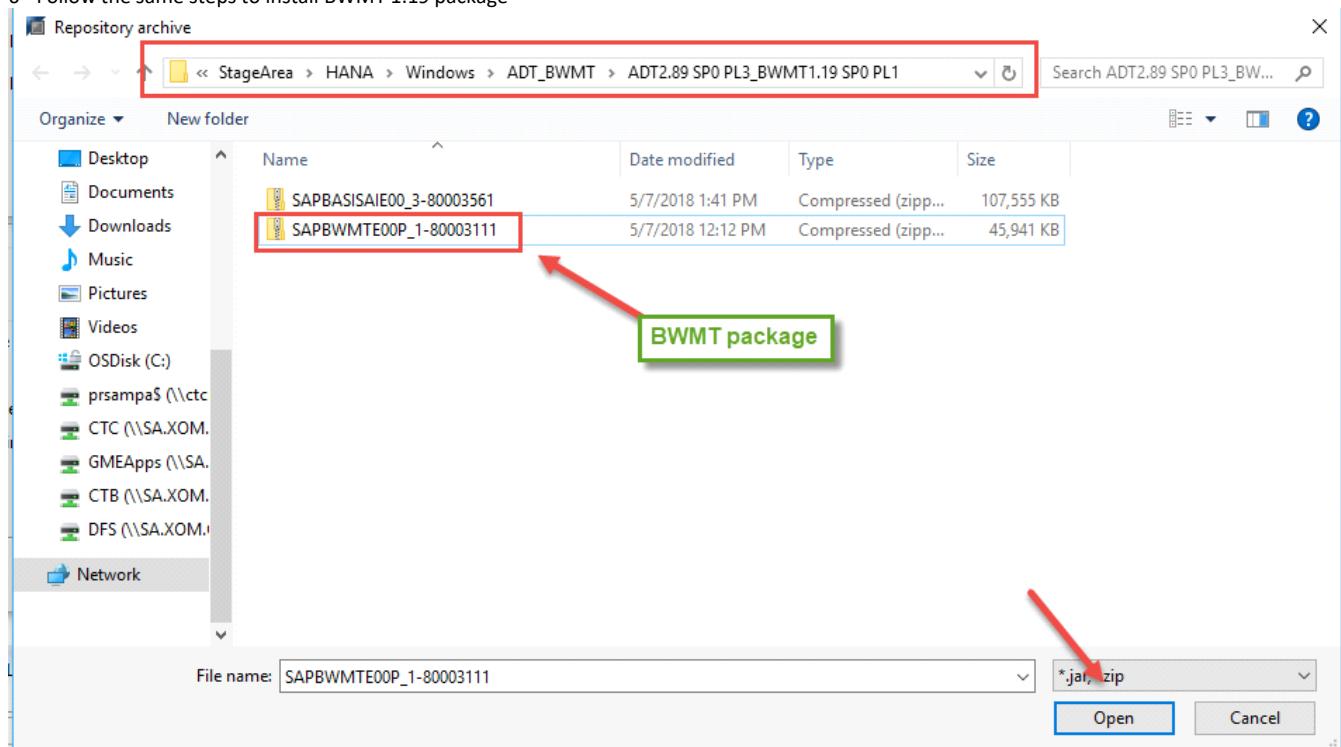
?

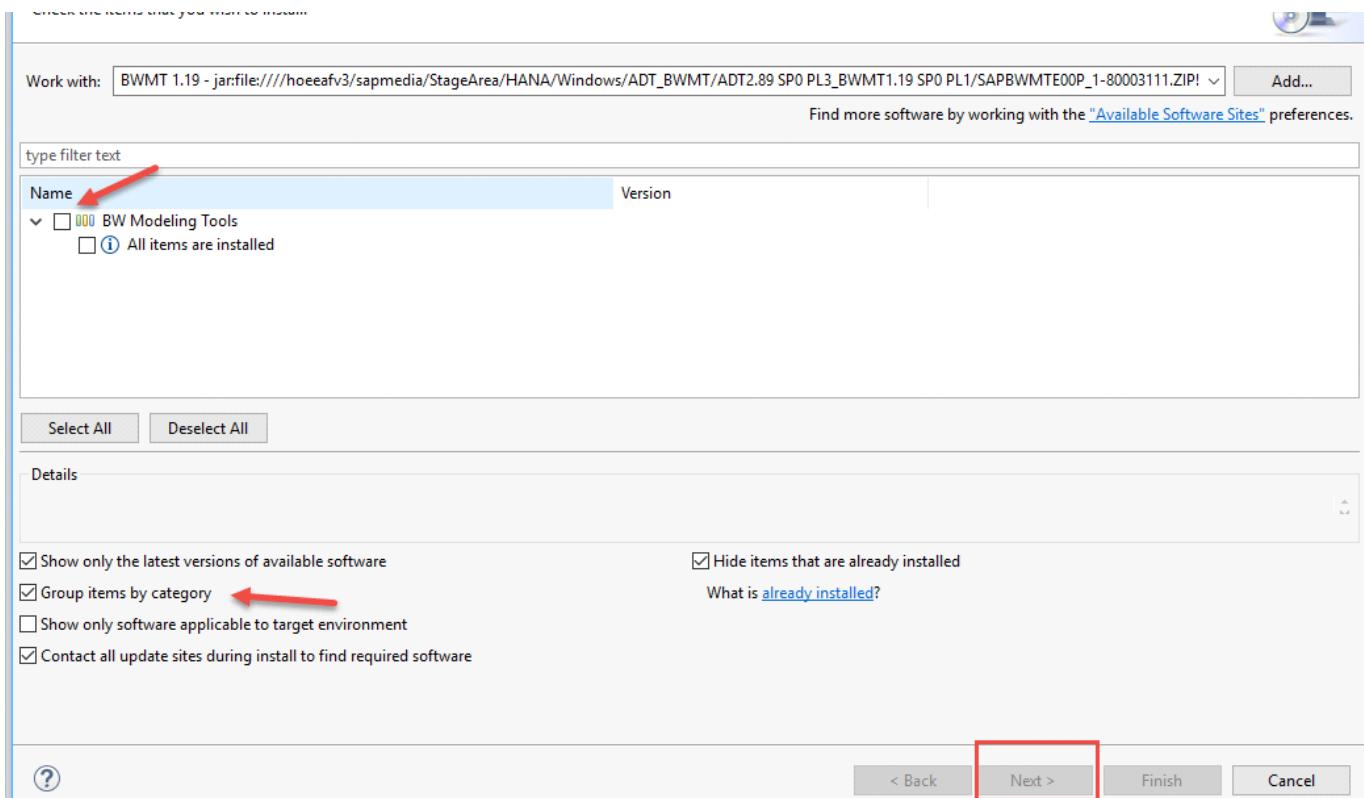
OK Cancel

5 - Select checkbox "Group item by category" and select most high level in the installation package. From here just follow clicking next until the installation is finished.

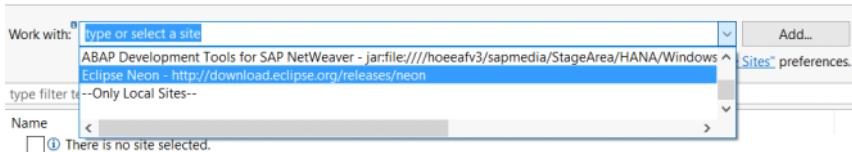


#### 6 - Follow the same steps to install BWMT 1.19 package





If you get dependency errors make sure you have installed below add-ons from the standard eclipse repository:



Feature Name	Feature ID
EMF Model Query	org.eclipse.emf.query
Graphiti (Incubation) 2)	org.eclipse.graphiti.feature
Mylyn Commons	org.eclipse.mylyn.commons
Mylyn Task-Focused Interface	org.eclipse.mylyn.context_feature
Web Services Tools 2)	org.eclipse.wst.ws_ui.feature

# BW/4HANA Introduction by SAP

May 16, 2018 1:59 PM

## **Table of Contents:**

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[Performance - In-memory DW](#)

[Performance - Advanced Analytics](#)

[Modern interface](#)

# BW/4HANA Presentation - Agenda

June 25, 2018 8:00 AM

- Overview and live walkthrough - Valdomiro
- Delta loads from Hub - Prize
- Hierarchies and non-cumulative KFs - Imre
- Planning - Paulo
- Final Q&A and wrap-up

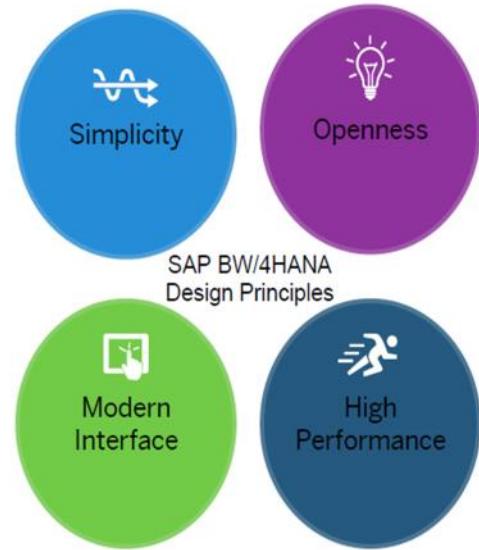
# Announcement

May 16, 2018 2:03 PM

## Announcing SAP BW/4HANA

### SAP BW/4HANA...

- is a new data warehouse solution
- is highly optimized for SAP HANA
- solves analytics problems in seconds that take other systems days
- accelerates solution development
- means you have one version of the truth
- is ready for the internet of things at petabyte scale



The transition from standard SAP BW to SAP BW/4HANA can be compared with the transition of the SAP Business Suite to SAP S/4HANA. As part of this transition, SAP BW/4HANA will drastically reduce the number of data objects to be stored and maintained, similar to the elimination of aggregates in SAP S/4HANA.

# Simplicity

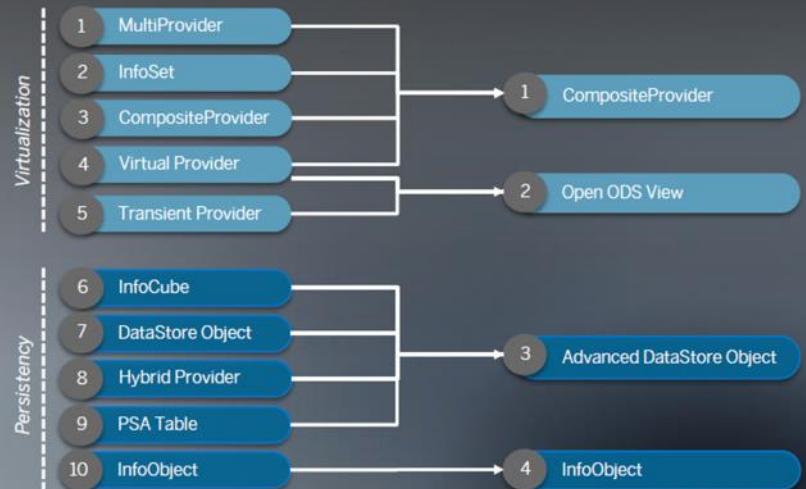
May 16, 2018 2:05 PM

## SAP BW/4HANA – Simplified Data Structures



### Classic SAP BW

- Number of modelling object types reduced from 10 to 4
- No complex data structures (extended star schema)
- Field or InfoObject based modelling
- Greater control of data persistency and virtualization
- Support for external, structured and unstructured data



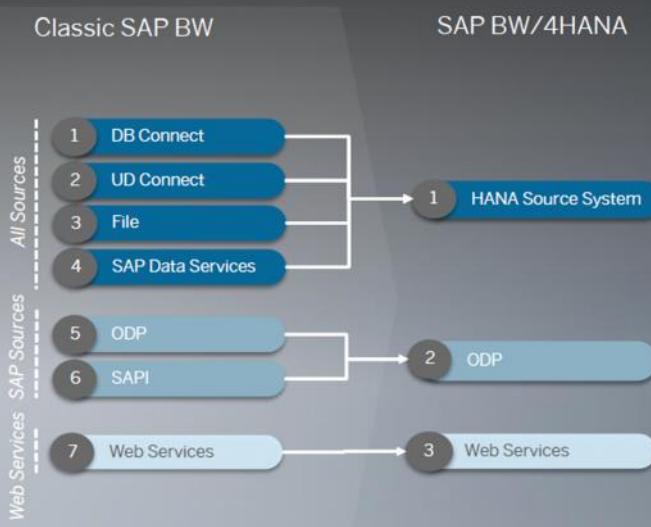
[Detailed list of objects /recommendations for BW/4HANA conversion](#)

# Openness - Non SAP sources

May 16, 2018 2:06 PM



## SAP BW/4HANA – Simplified Data Integration



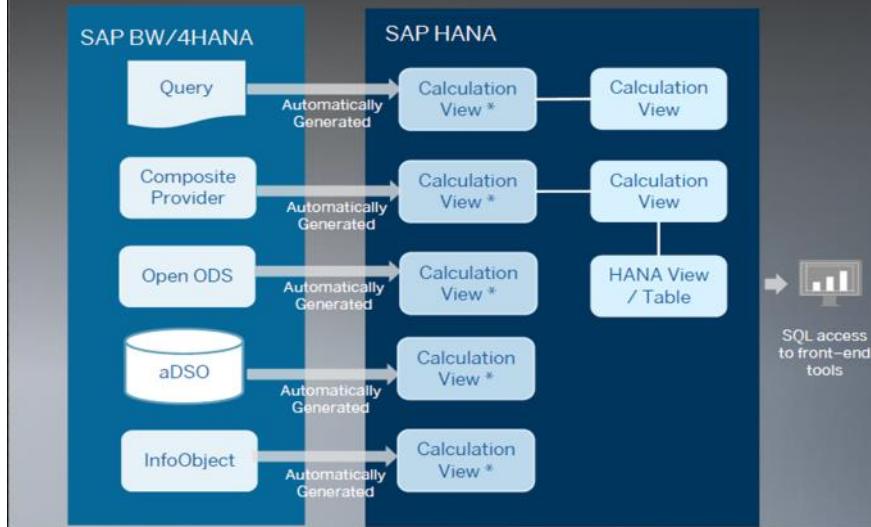
Number of Source System Types reduced from 7 to 3

- HANA Source System for all database and file connectivity
- ODP Source System for SAP backend systems and SLT

Traditional source systems still exist but future innovations are focusing the consolidated objects on SAP HANA



### SAP BW/4HANA – Native SQL Access



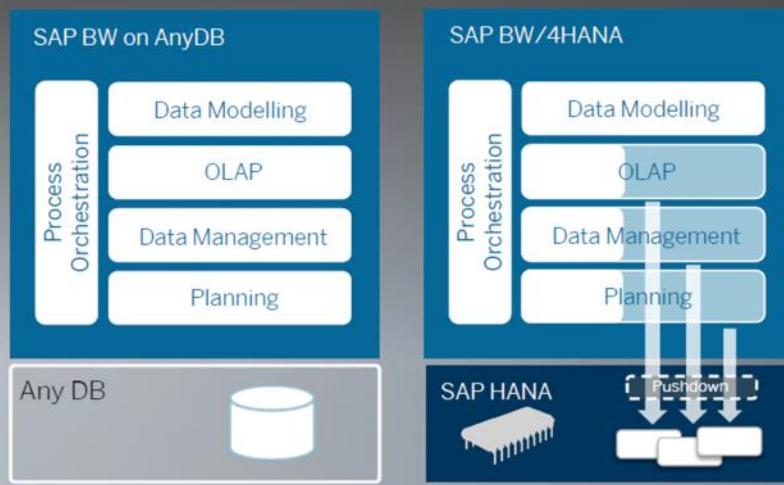
SAP BW/4HANA logic and data can be exposed to SAP HANA

Automatic generation of SAP HANA views allows:

- SQL logic on top of generated views
- Combined data from native SAP HANA
- SQL access for front-end tools

Generated SAP HANA views are part of SAP BW/4HANA lifecycle and SAP BW/4HANA security

# SAP BW/4HANA – In-memory Data Warehousing



### In-memory data warehousing

- No Aggregates or Roll-up Processes
- No Performance Specific Objects
- Fewer Indexes
- Faster Loading and Processing

Significant performance gain through push-down of operations/calculations

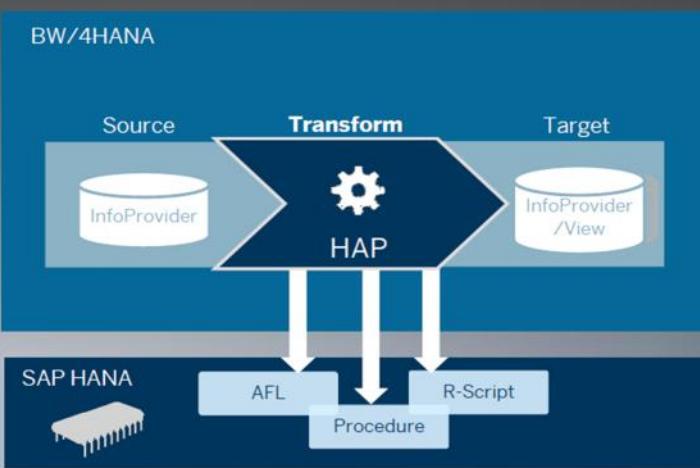
- OLAP Engine, complex query calculations (e.g. exception aggregation)
- Planning functions (e.g. disaggregation)
- Data management (e.g. transformation logic)

# Performance - Advanced Analytics

May 16, 2018 2:09 PM



## SAP BW/4HANA – Advanced Analytics

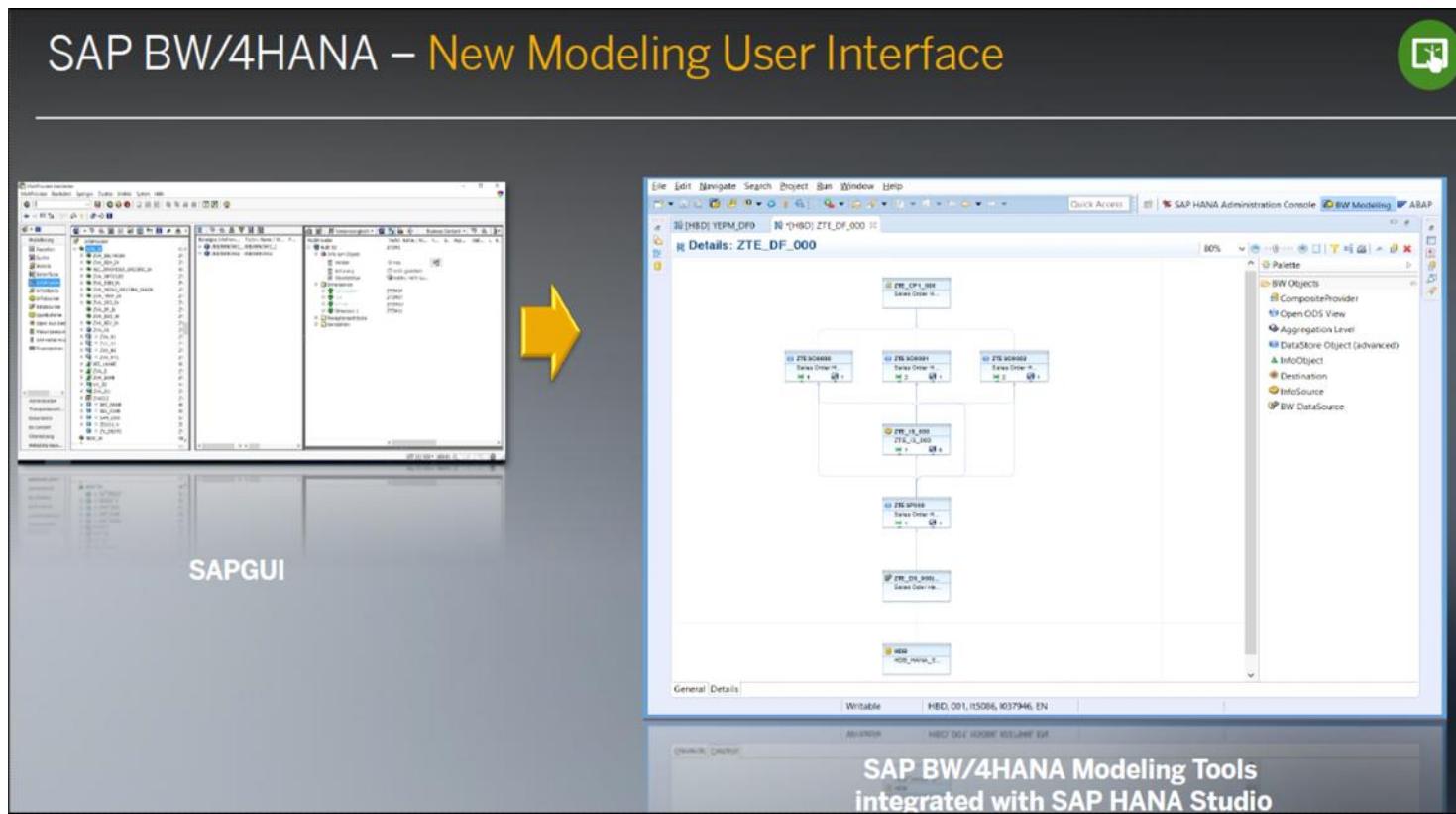


Enhance data with Advanced Analytics using HANA specific libraries (AFL, PAL), R-script or a custom HANA procedure

- Predictive / Machine Learning
- Text Analysis
- Spatial
- Time-series

# Modern Interface

May 16, 2018 2:11 PM



# BW/4HANA Introduction by EDMk

May 09, 2018 9:40 AM

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- [BW Hierarchy Time-Dependent](#)
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- [Selective copyback](#)

# ADSO Modeling

Saturday, March 31, 2018 12:53 AM

All ADSOs have these system tables, but depending on the ADSO modeling properties, some tables might remain unused:

- 1: Inbound table
- 2: Active table
- 3: Change log
- 6: View for extraction
- 7: View for Reporting

## 3 Modeling Templates

- 1) Enterprise data warehouse architecture
- 2) Planning
- 3) Classic Objects

**Model Template**

- ✓ **Enterprise data warehouse architecture**
  - Data acquisition layer (including corporate memory)
  - Corporate memory - compression capabilities
  - Corporate memory - reporting capabilities
  - Data warehouse layer - delta calculation
  - Data warehouse layer - data mart
- ✓ **Planning**
  - Planning on InfoCube-like
  - Planning on Direct Update
- > **Classic objects**

## **Enterprise data warehouse architecture**

### - Data acquisition layer (including corporate memory)

**Modeling Properties**

Activation:  
 Activate Data  
 Write Change Log  
 Keep Inbound Data, Extract from Inbound Table  
 Unique Data Records  
 Snapshot Support

Special Types:  
 Direct Update  
 All Characteristics are Key, Reporting on Union of Inbound and Active Table  
 Planning Mode  
 Inventory

The selected properties match template 'Data acquisition layer (including corporate memory)'.

- Do not use an active table
- Write-Optimized DSO
- Act as PSA containing transaction sequence number (TSN), Data Packet, and data record number

**Model Template**

- ✓ **Enterprise data warehouse architecture**
  - Data acquisition layer (including corporate memory)
  - Corporate memory - compression capabilities
  - Corporate memory - reporting capabilities
  - Data warehouse layer - delta calculation
  - Data warehouse layer - data mart
- ✓ **Planning**
  - Planning on InfoCube-like
  - Planning on Direct Update
- > **Classic objects**

### - Corporate Memory (Compression capabilities)

**Modeling Properties**

Activation:  
 Activate Data  
 Write Change Log  
 Keep Inbound Data, Extract from Inbound Table  
 Unique Data Records  
 Snapshot Support

Special Types:  
 Direct Update  
 All Characteristics are Key, Reporting on Union of Inbound and Active Table  
 Planning Mode  
 Inventory

The selected properties match template 'Corporate memory - compression capabilities'.

- Only use an inbound table and an active data table (No change log)
- Once load request is activated, the system loads the data into active table and deletes it from the inbound table (The activation process compresses the data by aggregating(Overwrite or sum KF) records based on their semantic key, therefore there's no log to trace back the load which also save the space.)

**Model Template**

- ✓ **Enterprise data warehouse architecture**
  - Data acquisition layer (including corporate memory)
  - Corporate memory - compression capabilities
  - Corporate memory - reporting capabilities
  - Data warehouse layer - delta calculation
  - Data warehouse layer - data mart
- ✓ **Planning**
  - Planning on InfoCube-like
  - Planning on Direct Update
- > **Classic objects**

### - Corporate Memory (Reporting Capabilities)

**Modeling Properties**

Activation:  
 Activate Data  
 Write Change Log  
 Keep Inbound Data, Extract from Inbound Table  
 Unique Data Records  
 Snapshot Support

Special Types:  
 Direct Update  
 All Characteristics are Key, Reporting on Union of Inbound and Active Table  
 Planning Mode  
 Inventory

The selected properties match template 'Corporate memory - reporting capabilities'.

- No change log table
- When ADSOs are activated, the system does not erase data from Inbound table, you can trace back records to their specific loads and reload data into active table after deleting data there.

**Model Template**

- ✓ **Enterprise data warehouse architecture**
  - Data acquisition layer (including corporate memory)
  - Corporate memory - compression capabilities
  - Corporate memory - reporting capabilities
  - Data warehouse layer - delta calculation
  - Data warehouse layer - data mart
- ✓ **Planning**
  - Planning on InfoCube-like
  - Planning on Direct Update
- > **Classic objects**

## - Data warehouse layer - delta calculation

**Modeling Properties**

**Activation:**

- Activate Data
- Write Change Log
- Keep Inbound Data, Extract from Inbound Table
- Unique Data Records
- Snapshot Support

**Special Types:**

- Direct Update
- All Characteristics are Key, Reporting on Union of Inbound and Active Table
- Planning Mode
- Inventory

The selected properties match template 'Data warehouse layer - delta calculation'.

**Model Template**

- Enterprise data warehouse architecture
  - Data acquisition layer (including corporate memory)
  - Corporate memory - compression capabilities
  - Corporate memory - reporting capabilities
  - Data warehouse layer - delta calculation**
  - Data warehouse layer - data mart
- Planning
  - Planning on InfoCube-like
  - Planning on Direct Update
- Classic objects

- Modeled like a **standard DSO**
- ADSOs have change log table for delta extractions, an inbound table, and an active table**
- Act as a central data object from which only new and changed records are loaded to the next layer.

## - Data warehouse layer - data mart

**Modeling Properties**

**Activation:**

- Activate Data
- Write Change Log
- Keep Inbound Data, Extract from Inbound Table
- Unique Data Records
- Snapshot Support

**Special Types:**

- Direct Update
- All Characteristics are Key, Reporting on Union of Inbound and Active Table
- Planning Mode
- Inventory

The selected properties match template 'Data warehouse layer - data mart'.

**Model Template**

- Data acquisition layer (including corporate memory)
- Corporate memory - compression capabilities
- Corporate memory - reporting capabilities
- Data warehouse layer - delta calculation**
- Data warehouse layer - data mart**
- Planning
  - Planning on InfoCube-like
  - Planning on Direct Update
- Classic objects
  - Standard DataStore Object
  - Write-optimized DataStore Object
  - InfoCube

- Act like an **InfoCube**
- No change log
- Inbound table (F Table) & Active data table (E Table) -> After activation, the inbound table is empty
  - BW now writes Master data identities (SIDs) directly to the Fact table
- The system "unions" both the inbound table and active table together for reporting and extraction

## Planning

- Planning on InfoCube-like**
  - Modeled the same as the Data warehouse layer - Data Mart ADSO
  - Having an Inbound Table, and an Active Table where **all characteristics fields are marked as key fields in the active table**
- Planning on Direct Update

## Classic Objects

- Standard DataStore Object**
  - Same as DW Layer - Delta Calculation template
- Write-optimized DataStore Object**
  - Same as Data Acquisition layer (including Corporate Memory) Template
- InfoCube**
  - Same as DW Layer - Data Mart template

## Summary

Modeling Properties											
Model Templates	Classic BW Object	Activate Data	Write Change Log	Keep Inbound Data, Extract from Inbound Table	Unique Data Records	Snapshot Support*	Direct Update	All Characteristics are Key, Reporting on Union of Inbound and Active Table	Planning Mode	Inventory	SAP HANA Dynamic Tiering**
Data Acquisition Layer (including Corporate Memory)	PSA / Write-Optimized DSO		n/a	n/a	n/a	n/a			n/a	n/a	
Corporate Memory – Compression Capabilities		x				n/a	n/a		n/a	n/a	
Corporate Memory – Reporting Capabilities		x	n/a	x		n/a	n/a		n/a	n/a	
Data Warehouse Layer – Delta Calculation	Standard DSO	x	x	n/a			n/a		n/a		
Data Warehouse Layer – Data Mart	InfoCube	x	n/a	n/a	n/a	n/a	n/a	x			
Planning on Cube-like	Real-Time Cube	x	n/a	n/a	n/a	n/a	n/a	x	x		n/a
Planning on Direct-Update	Direct-Update DSO	n/a	n/a	n/a	n/a	n/a	x	n/a	x	n/a	n/a

\* Enables delta for full update DataSources

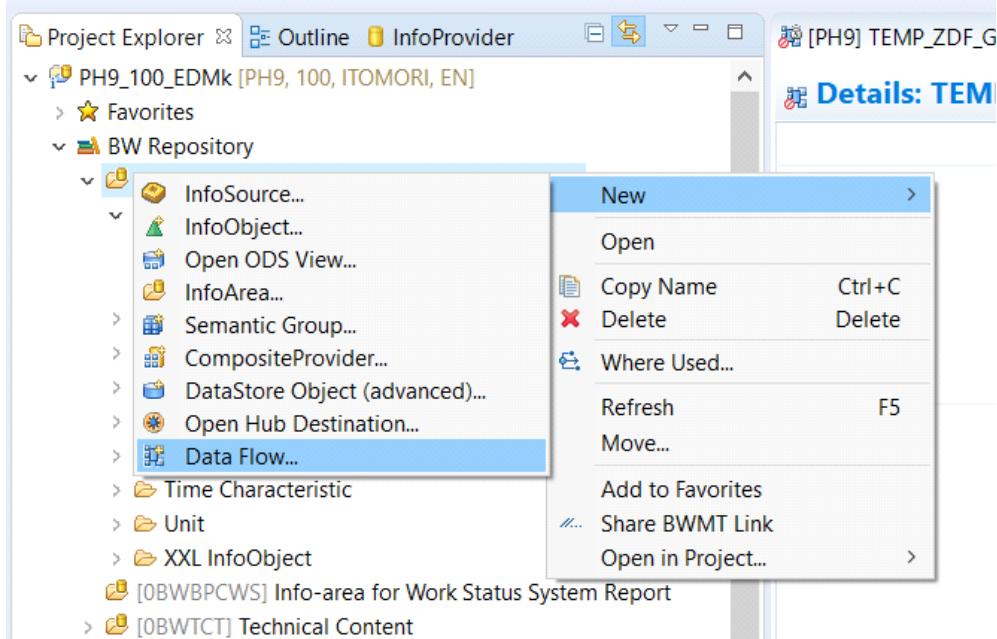
\*\* The data is only stored persistently and not in-memory

# Load data from SAP to aDSO

Monday, November 13, 2017 4:44 PM

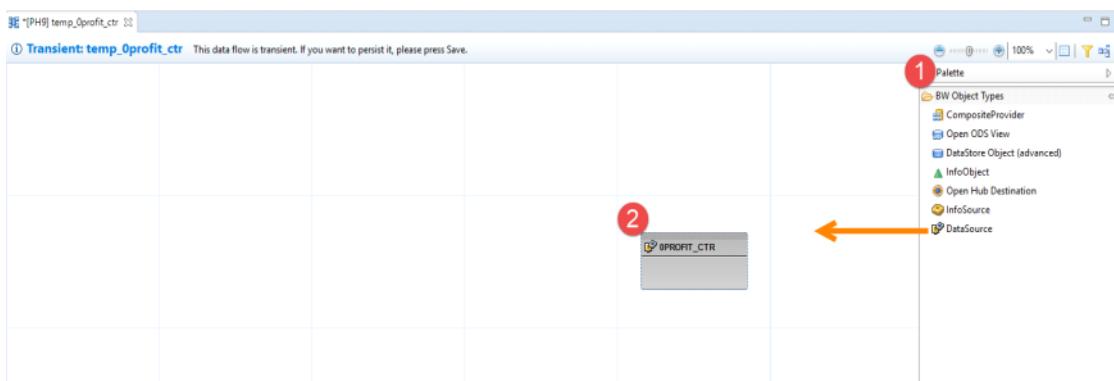
Load master data to InfoObject, full extraction:

Create data flow

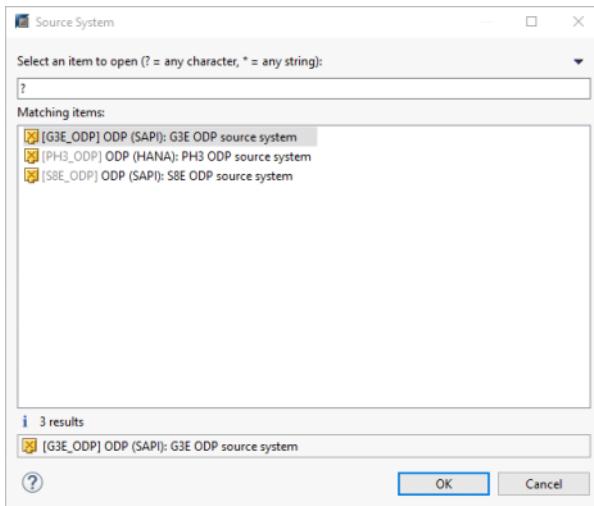


TEMP\_ZDF\_G3\_MASTER

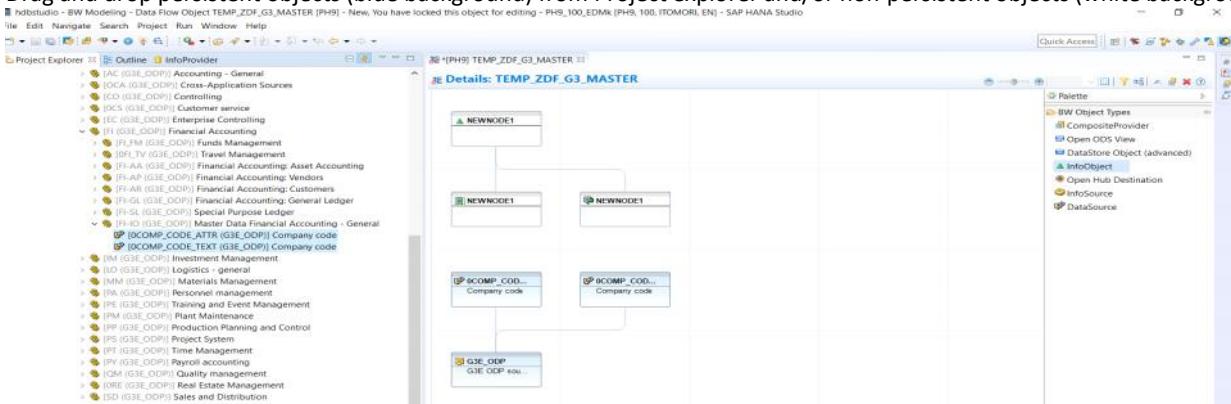
Place the DataSource into the Data flow



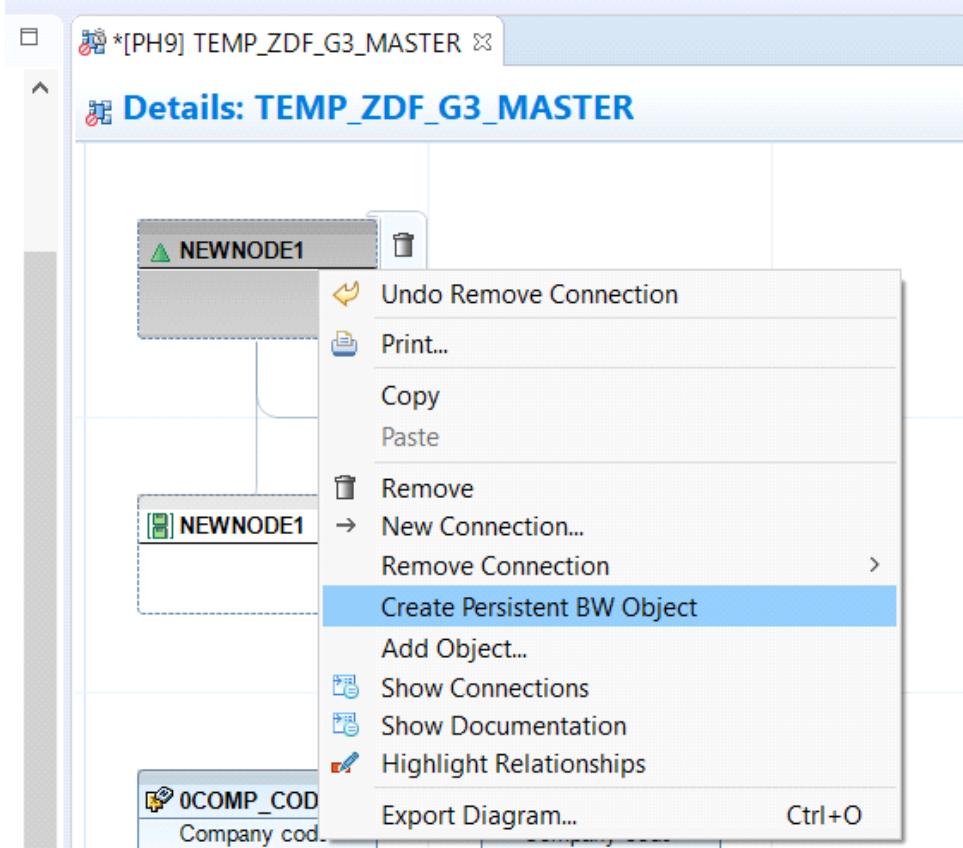
Select the source system



Drag and drop persistent objects (blue background) from Project explorer and/or non-persistent objects (white background) from the palette:

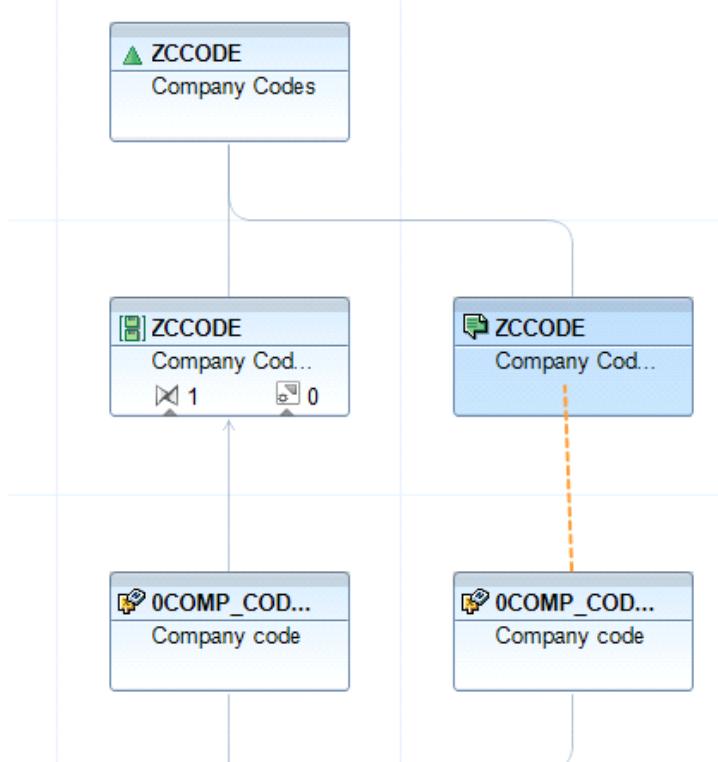


We can add an already existing BW object to the non-persistent elements or create a new one:

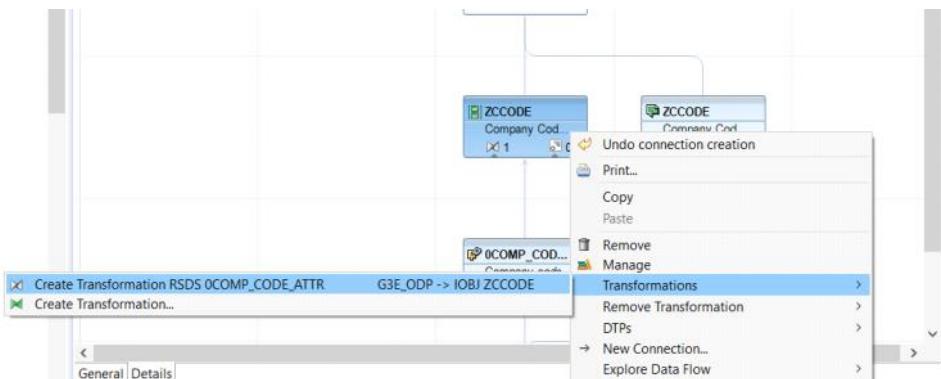


## ZCCODE

Drag and drop connection (this creates an inactive transformation):



Choose Transformation from context menu of the target object to create transformation:

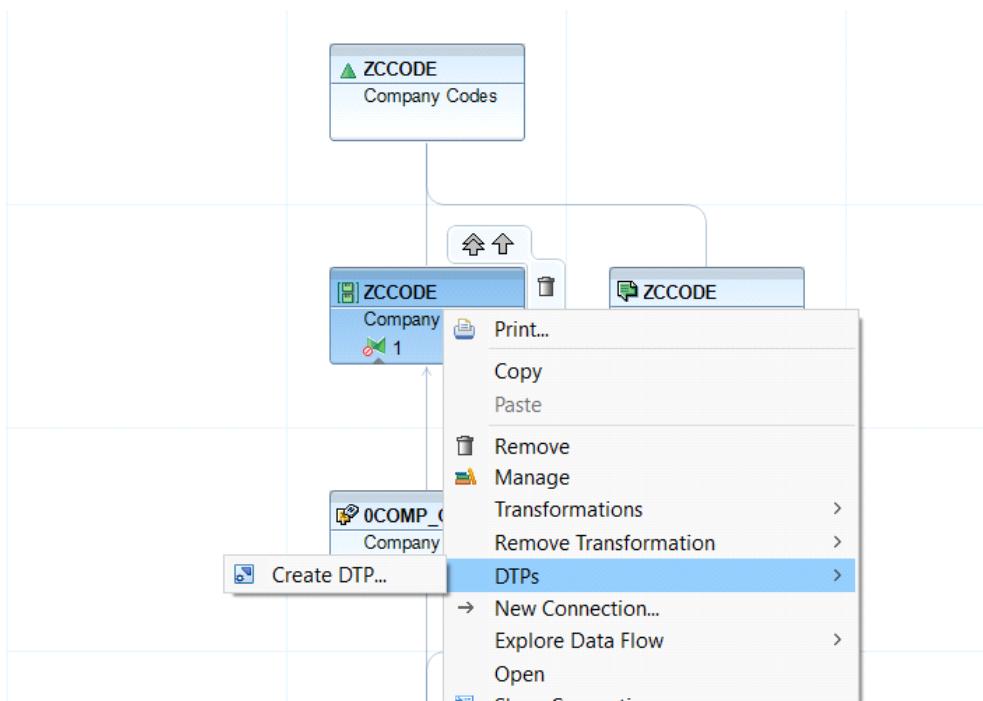


Transformation can be edited in HANA studio with classic GUI:

From Key Field	To Description	Data Length
1. 0COMP_CODE_ATTR	Company code	CHAR 999004
2. LAND01	Country key	CHAR 999003
3. WAERS	Currency key	CHAR 999005
4. KSTKPL	Chart of Accounts	CHAR 999004
5. KRSR	Controlled Area	CHAR 999004
6. PERID	Period Year Variant	CHAR 999007
7. RCOMP	Company	CHAR 999007

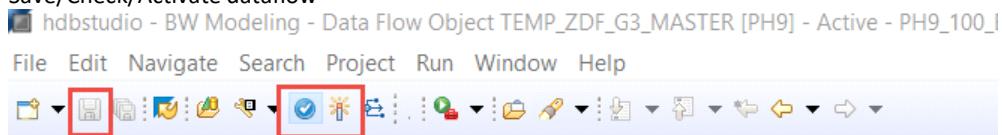
Rule Group Name	Priority	Interobject	To Description	Data Length
0COMP_CODE_ATTR	1	0COMP_CODE_ATTR	Company code	CHAR 999004
0COMP_CODE_ATTR	2	2000000000	Country key	CHAR 999003
0COMP_CODE_ATTR	3	0000000000	Currency key	CHAR 999005
0COMP_CODE_ATTR	4	0000000000	Fiscal year variant	CHAR 999002

Choose DTPs from context menu of the target object to create DTPs:



DTPs can be edited in HANA studio with classic GUI:

Save/Check/Activate dataflow



Test loads successful:

Menu <<

### Monitor: Data Transfer Process {2017-11-13 08:02:08 000002 CST}

Debugging Job Overview Error Stack

Request ID	(2017-11-13 08:02:08 000002 CST)
Start Time	13.11.2017 08:02:06
Finish Time	13.11.2017 08:02:13

Header Details

Request Processing

M...	D...	Time Stamp	Duration
Request {2017-11-13 08:02:08 000002 CST}		13.11.2017 08:02:08	
- Generate Request		13.11.2017 08:02:08	
- Set Status to 'Executable'		13.11.2017 08:02:08	1 Sec.
- Process Request		13.11.2017 08:02:09	9 Sec.
> Data Package 1 ( 1.482 Data Records )		13.11.2017 08:02:12	6 Sec.
> No More Data Available		13.11.2017 08:02:18	
- End of Processing		13.11.2017 08:02:18	1 Sec.
- Technical status 'Green' (user ITOMORI)		13.11.2017 08:02:19	
- Set overall status to 'Green' (user ITOMORI)		13.11.2017 08:02:19	

Loads transactional data to aDSO with delta extraction mode:

New DataStore Object (advanced)

### DataStore Object (advanced)

① Create a DataStore Object (advanced)

BW Project:\*

InfoArea:\*

Add to Favorites

Name:\*

Description:

Copy From:

Templates

None

DataSource

DataSource:

Source System:

InfoProvider

InfoSource

Creating object for data Acquisition layer (similar to classic PSA)

[PH9] TEMP\_ZDF\_G3\_MASTER [PH9] ZPMHDRG3

### General: ZPMHDRG3

**DataStore Object (advanced)**

Technical Name: ZPMHDRG3  
Description: PM WO Header - IPES  
 External SAP HANA View

**Modeling Properties**

Activation:  
 Activate Data  
 Write Change Log  
 Keep Inbound Data, Extract from Inbound Table  
 Unique Data Records  
 Snapshot Support

Special Types:  
 Direct Update  
 All Characteristics are Key, Reporting on Union of Inbound and Active Table

Model Template

- Enterprise data warehouse architecture
  - Data acquisition layer (including corporate memory)
    - Corporate memory - compression capabilities
    - Corporate memory - reporting capabilities
    - Data warehouse layer - delta calculation
    - Data warehouse layer - data mart
- Classic objects

Apply Template

[PH9] TEMP\_ZDF\_G3\_MASTER [PH9] ZPMHDRG3

### Details: ZPMHDRG3

**Fields**

Name	InfoObject	Key	Type	Column
[_NON_KEY] Non-Key Fields				
[ROCANCEL] Indicator: Cancel Data		CHAR	1	
[AUART] Order Type		CHAR	4	
[AUFRNR] Order Number		CHAR	12	
[AWERK] Plant associated with mair		CHAR	4	
[BAUTL_HD] Assembly		CHAR	18	
[DZBRUTTO] Order Run-time in Ca		FLTP	16	
[DZNNETTO] Order Lead Time/Work		FLTP	16	
[EHTAG] Lead Time Unit (Day)		UNIT	3	
[EQUNR] Equipment Number		CHAR	18	
[ERDAT] Date on Which Record Wa		DATS	8	
[GETRI] Confirmed Order Finish Dat		DATS	8	
[GEWRK] Object ID of the Work Cen		NUMC	8	
[GLTRP] Basic finish date		DATS	8	

**General**

Name: ROCANCEL  
Description: Indicator: Cancel Data Record  
Identify With: Field   
Data Type Data Type: CHAR Length: 1  
Properties Aggregation: NONE  
Unit/Currency Field:  
Fixed Unit/Currency:  
Master Data Check:  
Conversion Exit Name:

### Create reportable object:

[PH9] TEMP\_ZDF\_G3\_MASTER [PH9] ZPMWOHDR

### General: ZPMWOHDR

**DataStore Object (advanced)**

Technical Name: ZPMWOHDR  
Description: PM WO Header  
 External SAP HANA View

**Modeling Properties**

Activation:  
 Activate Data  
 Write Change Log  
 Keep Inbound Data, Extract from Inbound Table  
 Unique Data Records  
 Snapshot Support

Special Types:  
 Direct Update

Model Template

- Enterprise data warehouse architecture
  - Data acquisition layer (including corporate memory)
    - Corporate memory - compression capabilities
    - Corporate memory - reporting capabilities
    - Data warehouse layer - delta calculation
    - Data warehouse layer - data mart
- Classic objects

Apply Template

Connect object from context menu -> Transformation/DTP

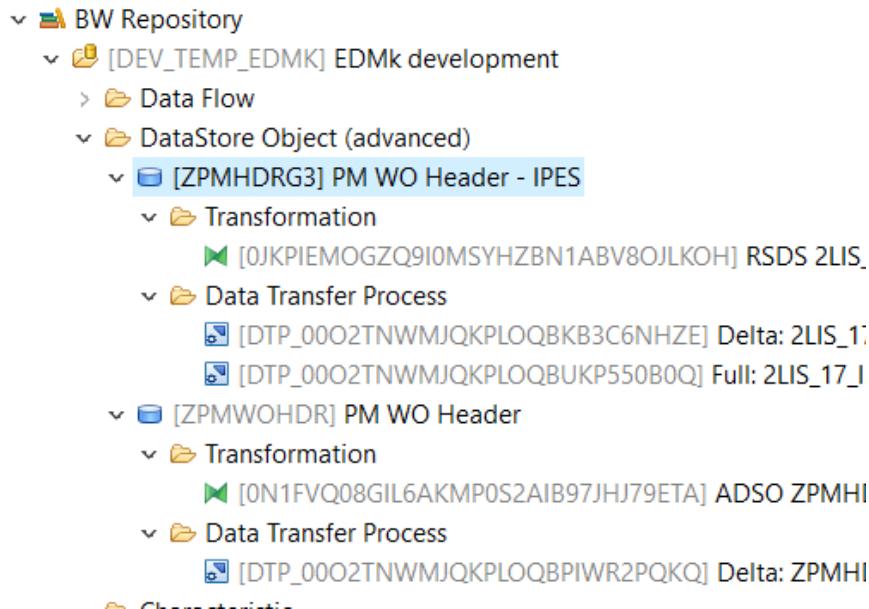
**BW Repository**

- [DEV\_TEMP\_EDMK] EDMk development**
  - Data Flow**
  - DataStore Object (advanced)**
    - [ZPMHDRG3] PM WO Header - IPES**
      - Global Structure...
      - Calculated Key Figure...
      - Data Transfer Process...
      - Transformation...**
      - Global Filter...
      - Restricted Key Figure...
      - Query...

**New**

- New
- Open
- Explore Data Flow
- Copy...
- Copy Name Ctrl+C
- Delete Delete

Objects created:



Test loads:

Full load

**Monitor: Data Transfer Process {2017-11-14 06:40:27 000003 CST}**

Debugging Job Overview Error Stack

Request ID	{2017-11-14 06:40:27 000003 CST}
Start Time	14.11.2017 06:40:26
Finish Time	14.11.2017 06:43:00

Header Details

Request Processing

M...	D...	Time Stamp
Request {2017-11-14 06:40:27 000003 CST}		14.11.2017 06:40:27
Generate Request		14.11.2017 06:40:27
Set Status to 'Executable'		14.11.2017 06:40:27
Process Request		14.11.2017 06:40:27
Data Package 1 ( 80.000 Data Records )		14.11.2017 06:40:35
Data Package 2 ( 80.000 Data Records )		14.11.2017 06:40:41
Data Package 3 ( 80.000 Data Records )		14.11.2017 06:40:47
Data Package 4 ( 80.000 Data Records )		14.11.2017 06:40:54
Data Package 5 ( 80.000 Data Records )		14.11.2017 06:40:57
Data Package 6 ( 64.749 Data Records )		14.11.2017 06:41:03
End of Main Process		14.11.2017 06:41:03
Technical status 'Green' (user ITOMORI)		14.11.2017 06:43:01
Set overall status to 'Green' (user ITOMORI)		14.11.2017 06:43:02

Data resides in the Inbound table (data acquisition layer)

[PH9] ZPMHDRG3 [PH9] ZPMWOHDR [PH9] TEMP\_ZDF\_G3\_MASTER [PH9] /BIC/AZPMHDRG31

Menu DataStore Object (advanced),ZPMHDRG3 [PH9] - Active - PH9\_100.EDMk [PH9, 100, ITOMORI, EN]

**Data Browser: Table /BIC/AZPMHDRG31: Selection Screen**

Number of Entries

Display Number of Entries

Number of entries that meet the selection criteria:  
464.749

REQTSN	
DATAPAKID	
RECORD	
Width of Output List	
Maximum No. of Hits	

Delta load:

Created new WO 10460425 in G3E

Record arrives to data acquisition layer

**Monitor: Data Transfer Process {2017-11-14 07:32:05 000005 CST}**

Request Processing	M...	D...	Time Stamp	Duration
Request {2017-11-14 07:32:05 000005 CST}			14.11.2017 07:32:05	
- Generate Request			14.11.2017 07:32:05	
- Set Status to 'Executable'			14.11.2017 07:32:05	
- Process Request			14.11.2017 07:32:05	3 Sec.
> Data Package 1 ( 1 Data Record )			14.11.2017 07:32:07	2 Sec.
- End of Main Process			14.11.2017 07:32:08	1 Sec.
- Technical status 'Green' (user BWREMOTE)			14.11.2017 07:32:09	
- Callback to PC done - State: G DQ03MYONKGY105R1EJM5AYYII			14.11.2017 07:32:09	

Record in aDSO active table as with 'N' :

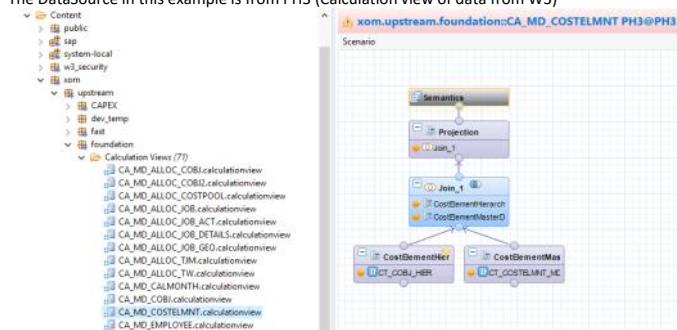
**Data Browser: Table /BIC/AZPMWOHDR2 Select Entries 1**

# Load data from HANA to aDSO

Wednesday, November 22, 2017 8:56 AM

## Objective

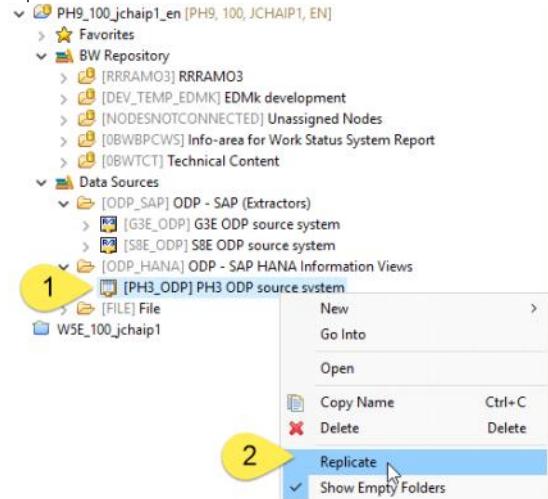
- To load data from HANA to aDSOs.
- Test scenarios for Data Hub -> BW layer loads



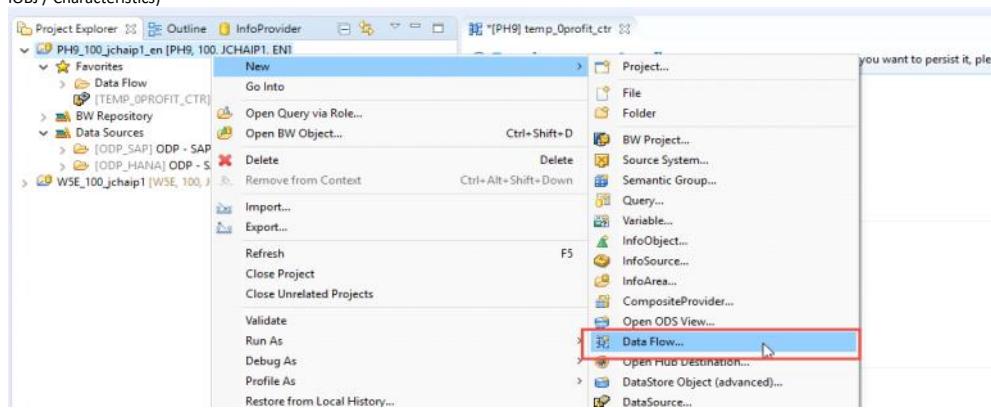
## Load master data into InfoObject

1) Go to HANA Studio -> BW Modeling Perspective

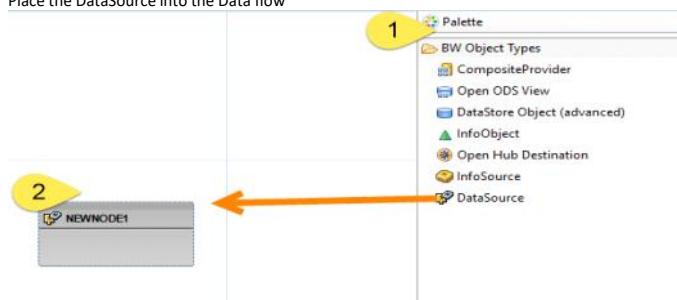
2) Replicate the DataSource



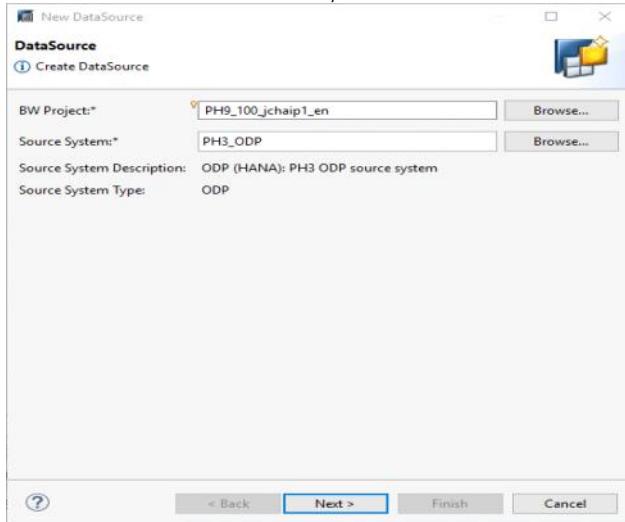
3) Create a new Data Flow (optional; It is used only to display the connection, you can skip to create the IOBJ / Characteristics)



4) Place the DataSource into the Data flow

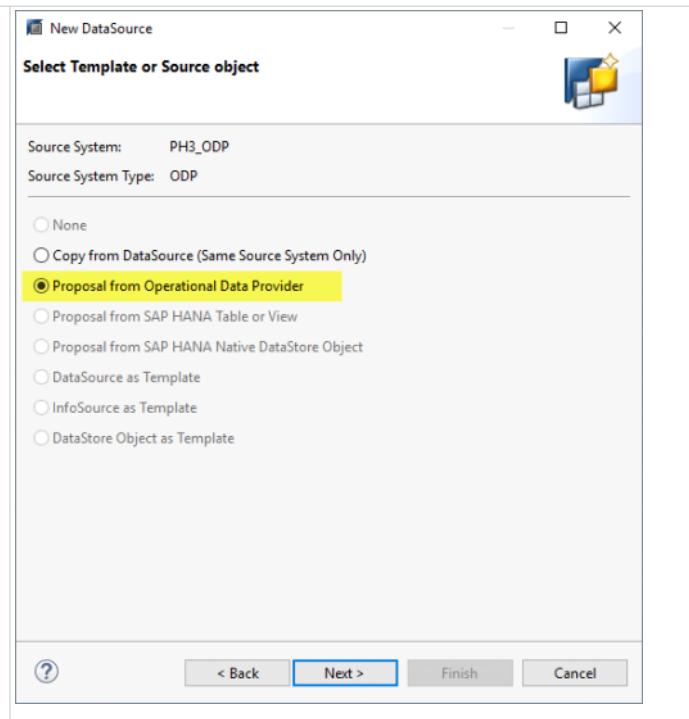


5) Double click on the node to select the source system

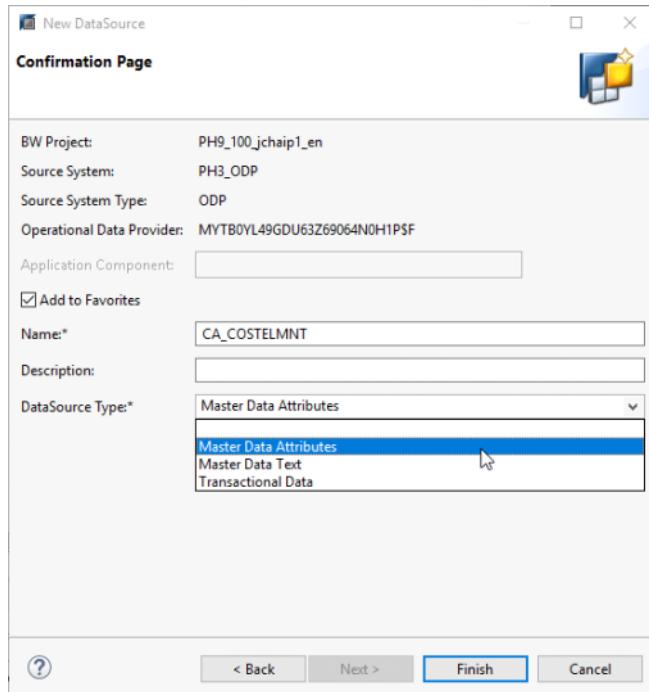
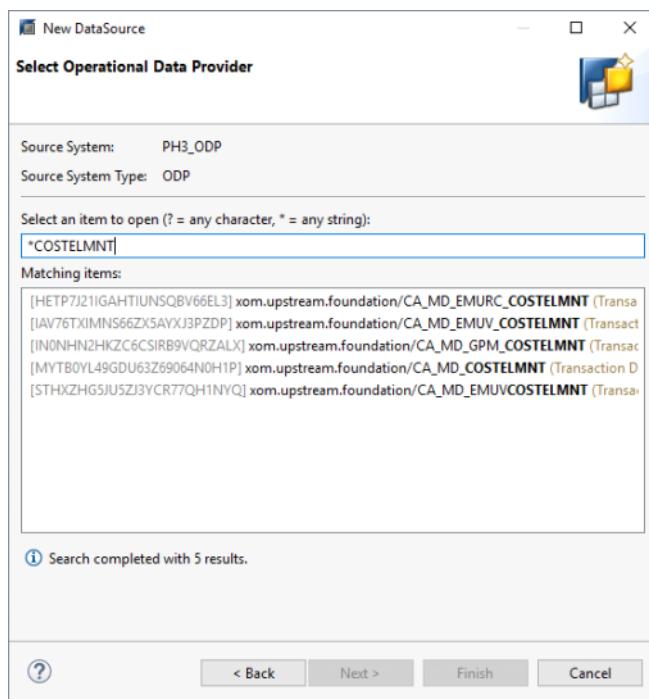


6) Select the source object

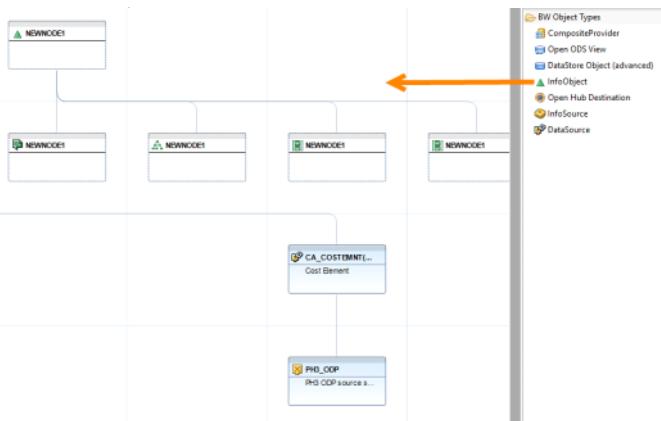
Template or Source Object	Source System Type SAP HANA	Source System Type ODP	Source Source System File
<a href="#">None</a>	-	-	x
<a href="#">Copy from DataSource (Same Source System Only)</a>	x	x	x
<a href="#">Proposal from Operational Data Provider</a>	-	x	-
<a href="#">Proposal from SAP HANA Table or View</a>	x	-	-
Template or Source Object	Source System Type SAP HANA	Source System Type ODP	Source Source System File
<a href="#">Proposal from SAP HANA Native DataStore Object</a>	Possible for the following types of SAP HANA source systems: <ul style="list-style-type: none"><li>o SAP HANA Local Database Schema</li><li>o SAP HANA Tenant Database Schema</li><li>o SAP HANA Smart Data Access (with HANA Adapter or HANA ODBC Adapter)</li></ul>	-	-
<a href="#">DataSource as Template</a>	-	-	x
<a href="#">InfoSource as Template</a>	-	-	x
<a href="#">DataStore Object as Template</a>	-	-	x



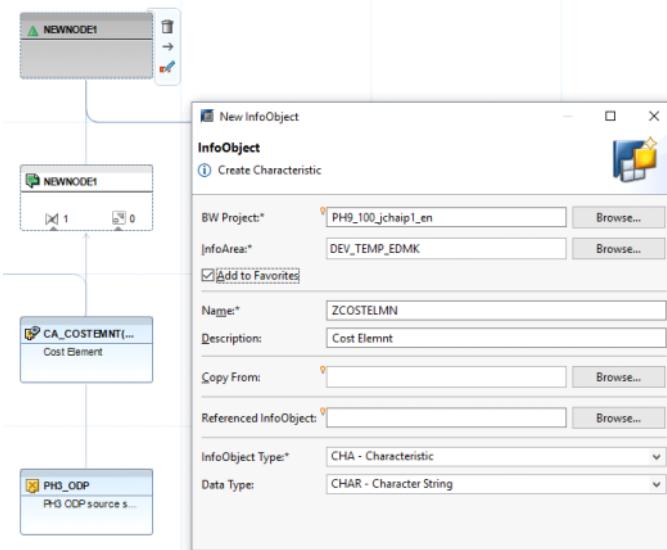
7) Replicated DataSource is shown



8) Create new InfoObject



- 9) Double click on the InfoObject to create Persistent BW Object  
 \*\*\* The object name length must be between 3 and 9 characters



Once the IOBJ is created, we can identify its data type, properties e.g. Master Data, Texts, etc.

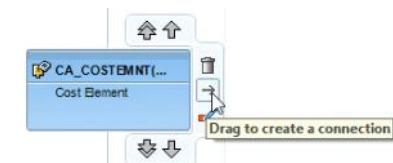
The screenshot shows the 'General: Characteristic ZCOSTELMN' screen. The 'General' tab is selected. Key properties shown include:  
 - Technical Name: ZCOSTELMN  
 - Description: Cost Element  
 - Data Type: CHAR - Character String  
 - Length: 20  
 - Output Length: 20  
 - Conversion Routine: ALPHA  
 - Properties section: Master Data (selected), Enhanced Master Data Update, Texts, Usable as InfoProvider, Usable as InfoSource, Authorization-Relevant, Attribute Only

As well as adding Attributes, etc.

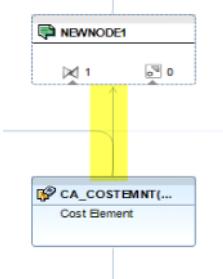
The screenshot shows the 'Attributes: Characteristic ZCOSTELMN' screen. The 'Attributes' tab is selected. The table displays the following data:  
 - Column Headers: Navi..., Name, Time-Depende..., Transitive Attr..., Part of F4 Help  
 - Rows:  
 1. [LEVEL1] Cost Element Master Data View...  
 2. [LEVEL2] Cost Element Master Data View...  
 3. [LEVEL3] Cost Element Master Data View...  
 4. [LEVEL4] Cost Element Master Data View...  
 - Actions: Add..., Remove, New..., Up, Down

Save, and activate the new IOBJ

- 10) Back to the dataflow  
 Hover the mouse on the node to see an option to create a connection



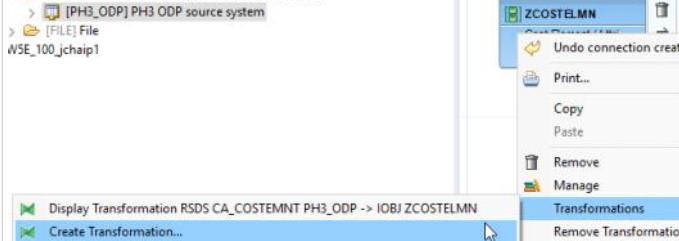
Drag the connection to an InfoObject node will create an inactive transformation



To activate the transformation either do these 2 ways

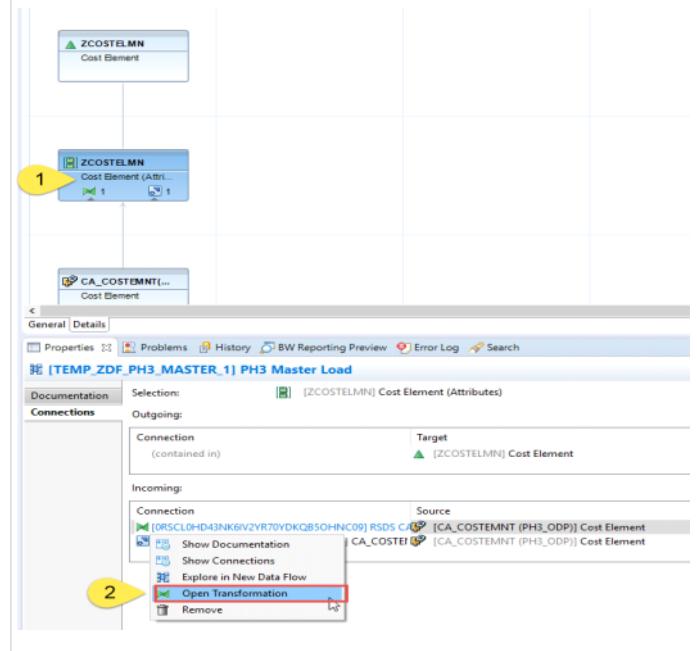
#### Way1:

In the Data Flow, right click at the IObj to create a transformation



#### Way2:

Click on the node, and go to the 'properties' tab > Connections  
Right click to open/create the transformation



This will link you to the SAP GUI Interface

A screenshot of the SAP GUI 'Create Transformation' dialog box. The 'Target of the Transformation' section shows 'Object Type: IObj InfoObject' and 'Name: ZCOSTELMN'. The 'Source of the Transformation' section shows 'Object Type: RSDS DataSource' and 'DataSource: CA\_COSTEMLN'. A yellow arrow points to the 'Open Transformation' button at the bottom right of the dialog.

11) Repeating the same step for the DTP

12) Make sure to save, check, and activate the transformation, DTP, and the Data Flow

### To see the DTP monitoring

Right click on the activate IOBJ -> Manage

### Founding!!!

- Dataflow is optional as it is only used to see the connection/ flow
  - You can simply create the IOBJ (characteristic), and continue with the Transformation, and the DTP
- [DEV\_TEMP\_EDMK] EDMk development**
- > Data Flow
  - > DataStore Object (advanced)
  - > **Characteristic**
    - > **[ZCCODE] Company Codes**
    - > **[ZCOSTELMN] Cost Element**
      - > Transformation
      - > [0RSCL0HD43NK6IV2YR70YDKQB50HNC09] RSDS CA\_COSTEMNT
      - > Data Transfer Process
      - > [DTP\_0002TNWMIQKPLPF9ZOSQJSHAI] RSDS CA\_COSTEMNT

### To view the data

(I couldn't find any Data Preview button)

Open the InfoObject -> General -> Properties -> DDIC -> This will link you to the table in Classic GUI

The screenshot shows the SAP Dictionary: Display Table interface. The table structure for ZCOSTELMN is displayed, listing fields such as /BIC/ZCOSTELMN, /BIC/ZCOSTELMN\_CBAR, /BIC/ZCOSTELMN\_CDVER, /BIC/ZCOSTELMN\_CHANG, /BIC/ZCOSTELMN\_CDLEVEL1, /BIC/ZCOSTELMN\_CDLEVEL2, /BIC/ZCOSTELMN\_CDLEVEL3, and /BIC/ZCOSTELMN\_CDLEVEL4. The table has 7 columns and 1 row.

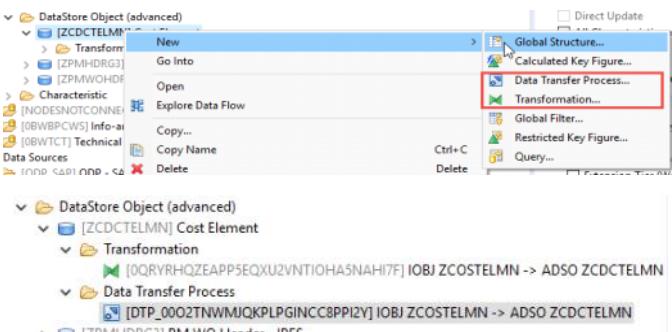
### Load data to aDSO



The screenshot shows the 'New DataStore Object (advanced)' dialog box. The 'Name' field is set to ZCDCTELMN and the 'Description' field is set to Cost Element. The 'DataSource' section is selected, with CA\_COSTEMLN chosen as the data source and PH3\_ODP as the source system. The 'Finish' button is visible at the bottom.

The screenshot shows the 'General: ZCDCTELMN' dialog box. Under 'Modeling Properties', 'Activation' is checked with 'Activate Data'. Under 'Special Types', 'All Characteristics are Key, Reporting on Union of Inbound and Active Table' is checked. On the right, a 'Model Template' list is shown, with 'Corporate memory - reporting capabilities' selected. The 'Apply Template' button is visible.

After activating the aDSO, create the Transformation and DTP



Only Full Extraction Mode is available

**Data Transfer Proc.** ZCOSTELMN -> ZCDCTELMN

**ID** DTP\_0002TNWMJQKPLPGINCC8PP12Y

**DTP Type** Standard (Can Be Scheduled)

**Version** A Active X Saved

**Extraction** **Update** **Execute**

**Source Object** IOBJA InfoObject: Attributes **ZCOSTELMN**

**Cost Element**

**Extraction Mode** F Full F Full

**Monitor: Data Transfer Process {2017-11-21 22:25:51 000001 CST}**

Request ID (2017-11-21 22:25:51 000001 CST)  
Start Time 21.11.2017 22:25:50  
End Time 21.11.2017 22:25:53

Header Details

Request Processing	M...	D...	Time Stamp	Duration
- Request (2017-11-21 22:25:51 000001 CST)			21.11.2017 22:25:51	
- Generate Request			21.11.2017 22:25:51	
- Set Status to 'Executable'			21.11.2017 22:25:51	
- '15.378' rows updated or inserted			21.11.2017 22:25:51	2 Sec.
- Data Package 1 ( 15.378 Data Records )			21.11.2017 22:25:51	2 Sec.
- End of Processing			21.11.2017 22:25:53	
- Technical status 'Green' (user JCHAIP1)			21.11.2017 22:25:53	
- Set overall status to 'Green' (user JCHAIP1)			21.11.2017 22:25:53	

To view the data  
 -> Go to the aDSO  
 -> General  
 -> Properties  
 ->DDIC

**General: ZCOSTELMN**

**DataStore Object (advanced)**

Technical Name: ZCOSTELMN  
Description: Cost Element  
 External SAP HANA View

**Modeling Properties**

Activation:  
 Activate Data  
 Write Change Log  
 Keep Inbound Data, Extract from Inbound Table  
 Unique Data Records  
 Snapshot Support

General | Details | Settings

**ZCOSTELMN**

General	Inbound Table:	BIC/AZCDCTELMN1 (Active)
DDIC	Reporting View:	BIC/AZCDCTELMN2 (Active)
	Extraction View:	BIC/AZCDCTELMN3 (Active)
	Active Table:	BIC/AZCDCTELMN4 (Active)

Data appears in the inbound table

**Data Browser: Table /BIC/AZCDCTELMN1: Selection Screen**

Display Number of Entries

Number of entries that meet the selection criteria: 15.378

Close

REQTSN	DATAPAKID	RECORD	RECORDMODE	INSTANCE	COSTOBJECT	LEVEL1	LEVEL2	LEVEL3
--------	-----------	--------	------------	----------	------------	--------	--------	--------

[Continue with Process chain](#)

# Load data from NDSO to ADSO in BW4HANA (delta load)

Monday, January 29, 2018 3:52 PM

## Objectives:

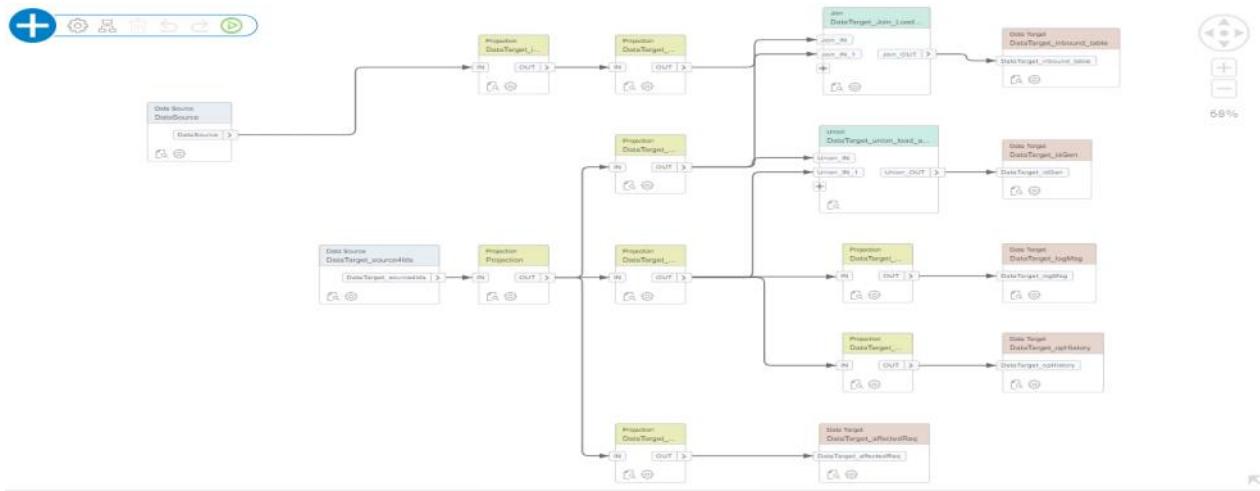
To test delta load from HANA (PH1) to BW/4 HANA (PH9) using NDSOs in HANA layer

## Flow:

PH1 (Native HANA) **NDSO** > **SDA** > PH9 (BW/4HANA) **Dataflow** > **ADSO**

## Steps:

- 1) [In HANA XSA \(PH1\), create NDSO and flow graph to load data](#)



- 2) [Create Role in XSA](#)

In able for BW/4 HANA to be able to read your container, the following privileges is necessary:

- SELECT
  - INSERT
  - UPDATE
  - DELETE
  - EXECUTE
  - CREATE TEMPORARY TABLE
  - SELECT CDS METADATA
- e.g. Role created

```
1 {
2   "role": {
3     "name": "default_access_role",
4     "schema_privileges": [ { "privileges": [ "SELECT", "INSERT", "UPDATE", "DELETE", "EXECUTE", "CREATE TEMPORARY TABLE", "SELECT CDS METADATA" ] } ],
5     "schema_roles": [
6       {
7         "names": [ "DSO_ACTIVATE_CHANGES_ROLE", "DSO_ROLLBACK_CHANGES_ROLE" ]
8       }
9     ]
10   }
11 }
12 }
```

- 3) [Assigned the role to the user in PH1: XXSDAPH1](#)

Connection from PH9 to PH1

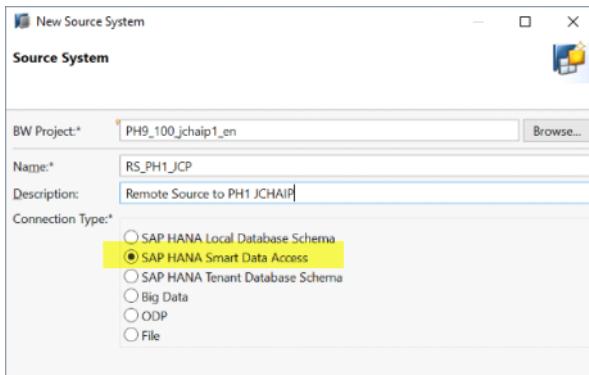
(To do so, you have to grant the access via SQL Statement as HANA studio has a bug that does not allow using the user interface screen to add container roles; it says 'role does not exist')

e.g. GRANT "NAME\_OF\_CONTAINER"."default\_access\_role" to XXSDAPH1;

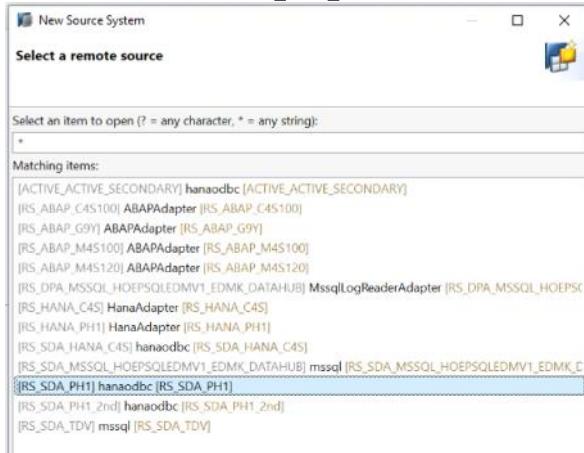
Granted Roles		System Privileges	Object Privileges	Analytic Privileges	Package Privileges	Application Privileges	Privileges on Users
<input checked="" type="checkbox"/>	Role						
<input checked="" type="checkbox"/>	DataWareHouse.Database.Roles::EDH_FOUNDATION_g# (EDH_FOUNDATIO	WFERNAN					
<input checked="" type="checkbox"/>	DataWareHouse.Database.Roles::EDH_FOUNDATION (EDH_FOUNDATION_	WFERNAN					
<input checked="" type="checkbox"/>	default_access_role (EDH_FOUNDATION_EDH_SD_FOUNDATION_CONTAIN	WFERNAN					
<input checked="" type="checkbox"/>	default_access_role (JCHAIP1_DWF_JCHAIP1_DWF_CONTAINER_1)	JCHAIP1					
<input checked="" type="checkbox"/>	EDMK_ALL_ACCESS	RCHANNE					
<input checked="" type="checkbox"/>	HS_SEC_TEST_SELECT (HS_SEC_TEST)	HS_SEC_TEST					

- 4) [Create New Source System in BW/4HANA](#)

- o You can either create a new source system connection in Eclipse (HANA Studio/ [Recommended!](#)) OR in classical SAP GUI at T-Code: RSA1 (Will be obsolete soon) > Source System



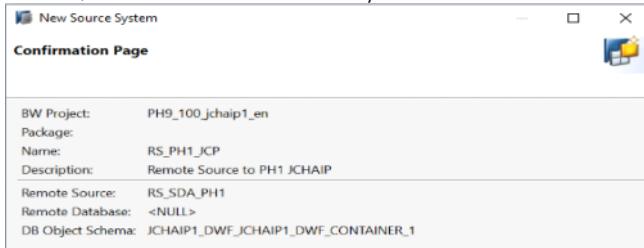
- Select the remote source: RS\_SDA\_PH1



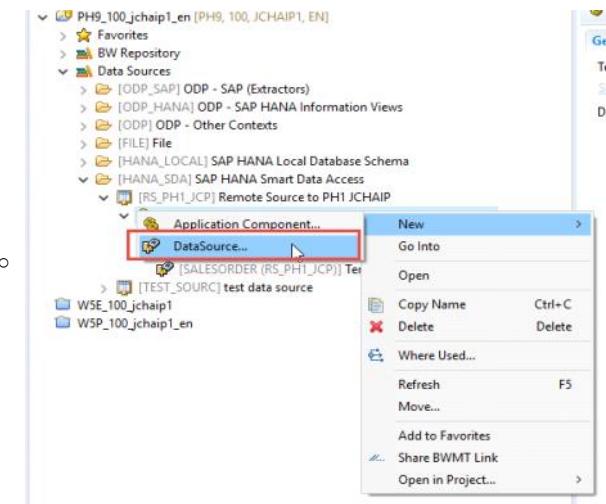
- Choose the specific DB Object Schema / Container



- Confirm, and activate the new source system



## 5) Create a new data source proposal from SAP HANA NDSO



New DataSource

Select Template or Source object

Source System: RS\_PH1\_JCP  
Source System Type: HANA

None  
 Copy from DataSource (Same Source System Only)  
 Proposal from Operational Data Provider  
 Proposal from SAP HANA Table or View  
 Proposal from SAP HANA Native DataStore Object  
 DataSource as Template

- Once successfully created, there are differences between choosing the data source directly as 'SAP HANA Table / View' and data source as a 'Proposal from SAP HANA NDSO' itself
- At 'Extraction' tab that Extraction with delta process is allowed for the NDSO; where only FULL load is allowed for tables/views

**Extraction: SALESORDER**

**Extraction Properties**

Delta Process: No delta, only Full  
Direct Access: No delta, only Full  
Streaming: Overwrite delta without deletions (BW local)  
Adapter: Extraction from SAP HANA

Data Source: NDSO Change log table

**Extraction: NDSO\_SALESORDER**

**Extraction Properties**

Delta Process: Additive or overwrite delta (delta queue) ser. by package  
Direct Access: Additive or overwrite delta (delta queue) ser. by package  
Streaming: Streaming can be triggered by this DataSource  
Adapter: Extraction from SAP HANA

Data Source: Proposal from SAP HANA NDSO

#### 6) Create the target ADSO with 'write change log' to be able to do delta extractions

**General: NDSO\_SO**

**DataStore Object (advanced)**

Technical Name: NDSO\_SO  
Description: NDSO Sales Order Prize  
 External SAP HANA View

**Modeling Properties**

**Activation:**

Activate Data  
 Write Change Log  
 Keep Inbound Data, Extract from Inbound Table  
 Unique Data Records  
 Snapshot Support

#### 7) Create the transformation, check, and activate

\*\*\*\* If the role is set up correctly, you should be able to preview the data source

#### 8) Create the DTP with 'Delta Extraction Mode'

#### 9) Execute the DTP to load the data into the ADSO inbound table

#### 10) Manage the ADSO to activate the data into the ADSO Active table (You can manually done it this way, or schedule a process chain)

- Choose request list to display all the request
- Select the load request, and activate

**Manage Datastore Object NDSO\_SO**

DataStore Object (advanced) NDSO\_SO NDSO Sales Order Prize  
 Filter by Time from 01.01.2017 to 11.04.2018 Requests Displayed 20 of 20  
 Filter by Status

Request List Time Zone: CST Filter Activate Delete Find Hide Detail Show Connections

Load	Request	Loaded	Load M	CL In	Act.	Activation Request	Act.	Err.
✓ {2018-04-10 22:26:15 000001 CST}	8	8	1			{not activated}	0	
✓ {2018-04-02 11:25:08 000001 CST}	4	4	1			{2018-04-02 11:30:02 000009 CST}	4	

Result:

- 1st load to ADSO Active Table

**Data Browser: Table /BIC/ANDSO\_SO2 Select Entries 4**

SALESORDERID	RECORDMODE	ORDERDATE	CUSTOMERNAME	PRODUCTNAME	ORDERQUANTITY	SALES	T
1	N	2010101300000000000000	Muhammed MacIntyre	Eldon Base for stackable storage shelf, platinum	10	436.00	
2	N	2012100100000000000000	Barry French	Cardinal Slant-D® Ring Binder, Heavy Gauge Vinyl	40	607.00	
3	N	2011071000000000000000	Clay Rozendal	R380	30	4,965.76	
4	N	2010082800000000000000	Carlos Soltero	Holmes HEPA Air Purifier	19	394.27	

- Then, new records added to the NDSO

technicalAttribute...	SalesOrderID	OrderDate	CustomerName	ProductName	OrderQuantity	Sales
A	1	2010-10-13T00:00:00	Muhammed MacIntyre	Eldon Base for stackable	4	174.46
A	2	2012-10-01T00:00:00	Barry French	Cardinal Slant-D® Ring	13	362.43
N	5	2011-06-17T00:00:00	Carl Jackson	SAFCO Mobile Desk Sld	22	905.08
N	6	2011-03-24T00:00:00	Carl Jackson	SAFCO Mobile Desk Sld	21	2781.82
N	7	2010-02-26T00:00:00	Clay Rozendal	R380	44	228.41
N	8	2010-11-23T00:00:00	Carlos Soltero	Holmes HEPA Air Purifie	45	196.85

- Once successfully executed the DTP, all the data is loaded into the ADSO Inbound table

RECORD	PRODUCTNAME	ORDERQUANTITY	SALES	TECHNICALKEY_ACTIVATIONID	TECHNICALKEY_RECORDNO	TECHNICAL
1	Eldon Base for stackable storage shelf, platinum	10-	436.00-	87	1	X
2	Eldon Base for stackable storage shelf, platinum	14	610.46	87	2	
3	Cardinal Slant-D® Ring Binder, Heavy Gauge Vinyl	40-	607.00-	87	3	X
4	Cardinal Slant-D® Ring Binder, Heavy Gauge Vinyl	53	969.43	87	4	
5	SAFCO Mobile Desk Side File, Wire Frame	22	905.08	87	5	N
6	SAFCO Mobile Desk Side File, Wire Frame	21	2,781.82	87	6	N
7	R380	44	228.41	87	7	N
8	Holmes HEPA Air Purifier	45	196.85	87	8	N

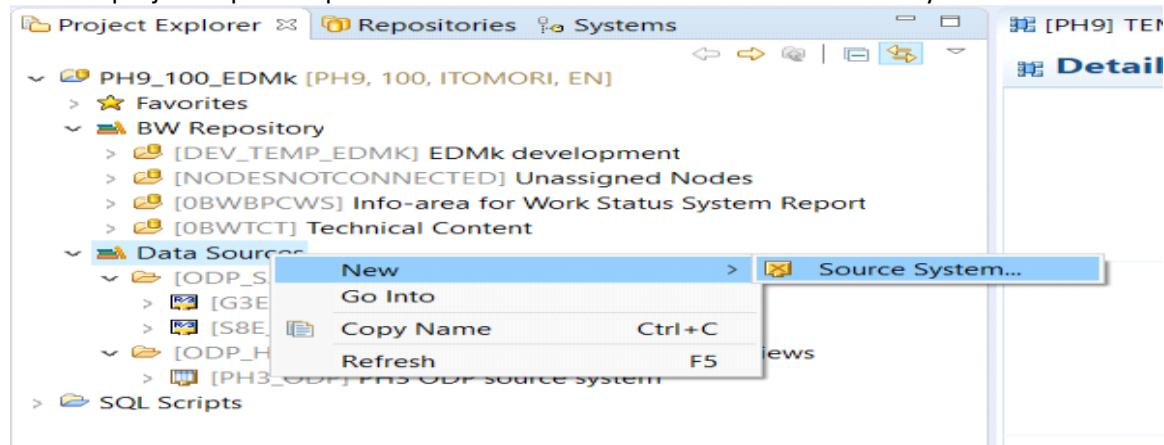
- Successfully activate the ADSO, all the data is loaded into the ADSO Active table

# Load data from flat file

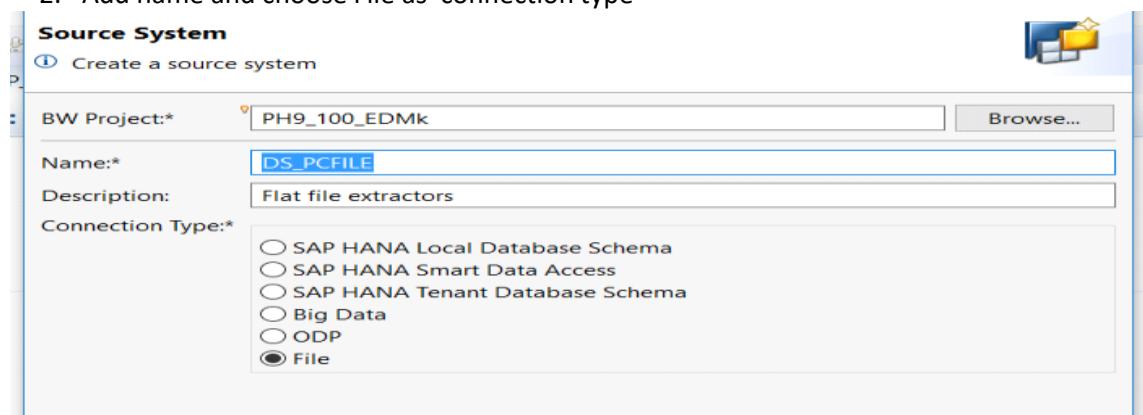
Thursday, November 16, 2017 15:52

For flat file load we need to define a new flat file source system:

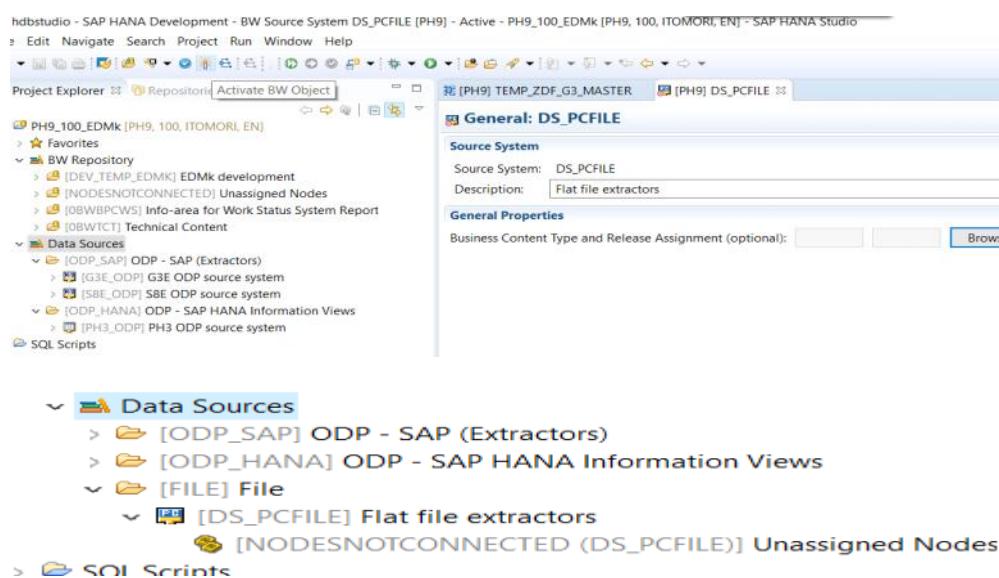
1. In project explorer open Data Source context menu > New -> Source System...



2. Add name and choose File as connection type

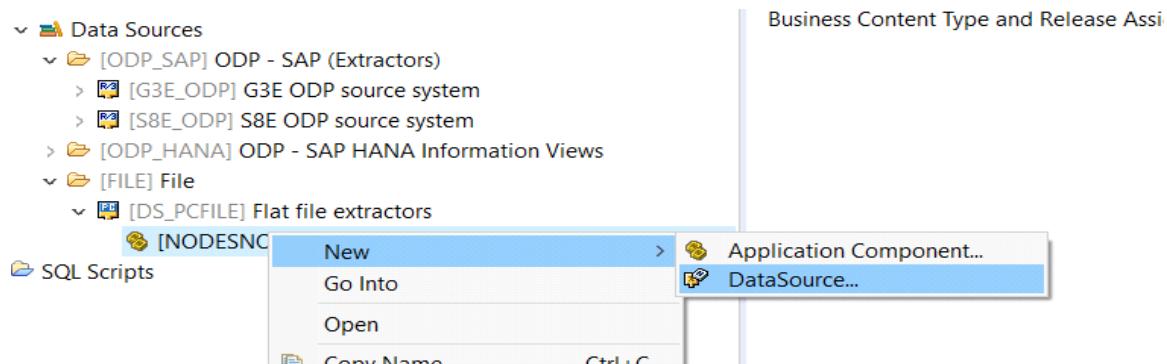


3. Click Finish and new source system appears in the hierarchy

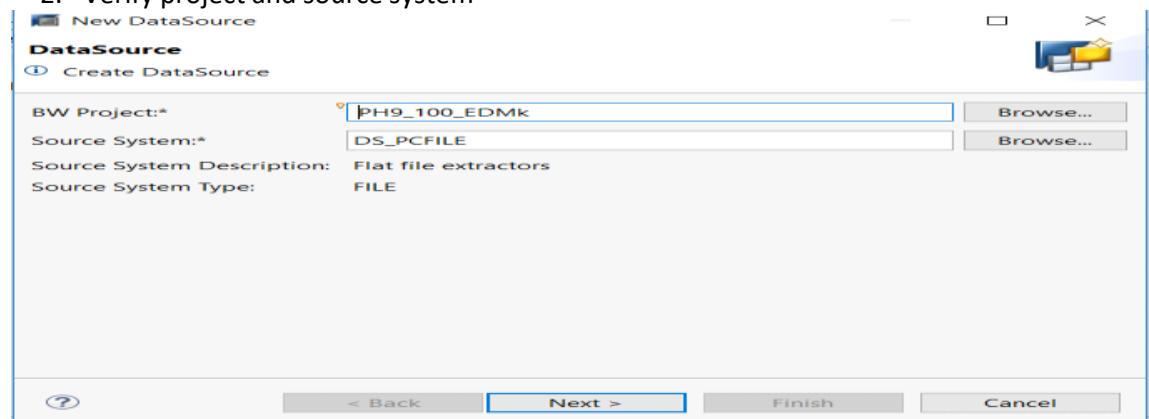


## Create new datasource for file extraction:

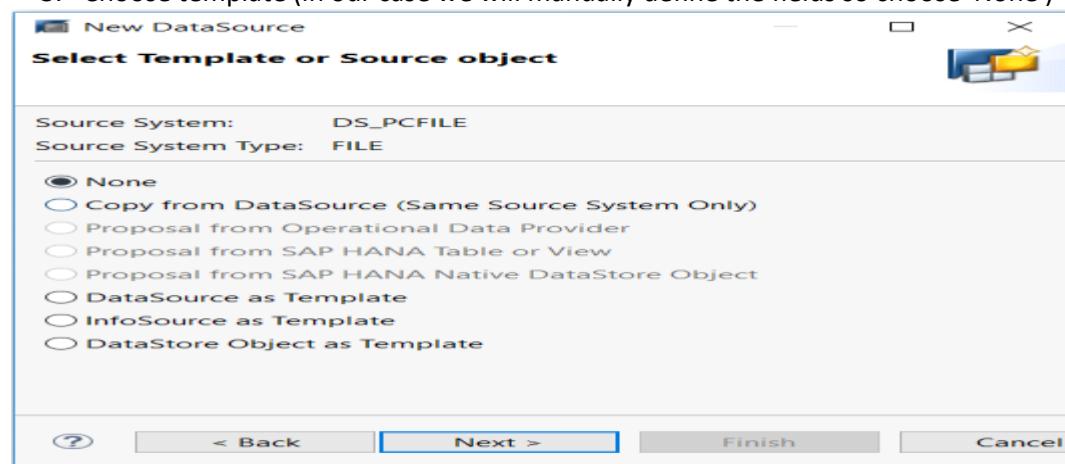
1. Open the context menu of the application component



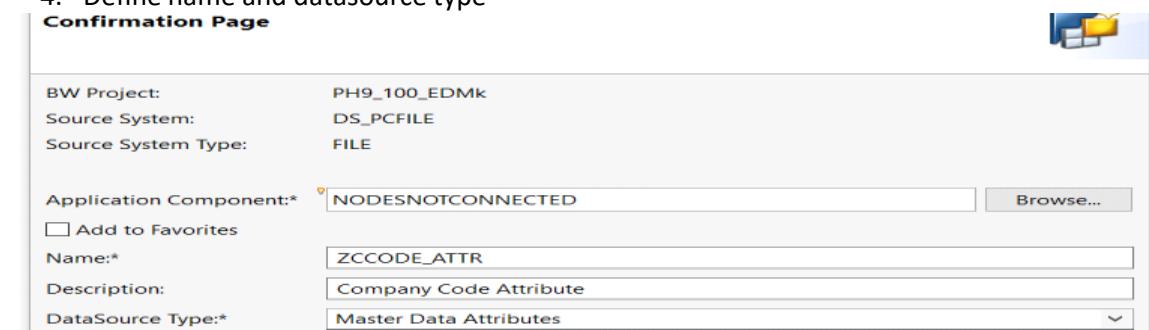
2. Verify project and source system



3. Choose template (in our case we will manually define the fields so choose 'None')



4. Define name and datasource type



**Confirmation Page**

BW Project: PH9\_100\_EDMK  
 Source System: DS\_PCFILE  
 Source System Type: FILE

Application Component: \* NODESNOTCONNECTED

Add to Favorites

Name: \* ZCCODE\_ATTR

Description: Company Code Attribute

DataSource Type: \* Master Data Attributes

Master Data Attributes  
 Master Data Text  
 Hierarchies  
 Transactional Data

5. Classic BW view appears for configuration

**[PH9] ZCCODE\_ATTR**

DataSource: ZCCODE\_ATTR  
 Source System: DS\_PCFILE Flat file extractors  
 Version: Modified  
 Active Version: Does Not Exist

General Info. Extraction Proposal Fields Preview

General Properties

Long Description	Company Code Attribute
Application Comp.	NODESNOTCONNECTED
Last Changed By	ITOMORI
Changed On	16.11.2017 / 08:37:40
<input type="checkbox"/> DS for Data Reconciliation	<input type="checkbox"/> Data is Language-Dependent
<input type="checkbox"/> Opening Balance	<input type="checkbox"/> Data is Time-Dependent
Delivery of Duplicate Records	Undefined

ned Nodes  
Attribute

PH9 (1) 100 H

6. On Extraction page select extraction mode and place to load file from:

Active Version Does Not Exist

General Info. Extraction Proposal Fields Preview

Delta Process: No Delta, only Full  
 Direct Access: Not Allowed; Data Replication Without PSA Allowed  
 Streaming: Streaming Can Not Be Triggered By This DataSource

Adapter: Load Text-Type File from Local Workstation

File Name: Load Microsoft Excel File (XLS) from Local Workstation  
 Header Rows to be Skipped: Load Binary File from Local Workstation  
 Character Set Setting: Load Binary File from Application Server  
 System Codepage: Load Text-Type File from Local Workstation  
 Data Format: Load Text-Type File from Application Server  
 Separated with Separator (for Example, CSV)

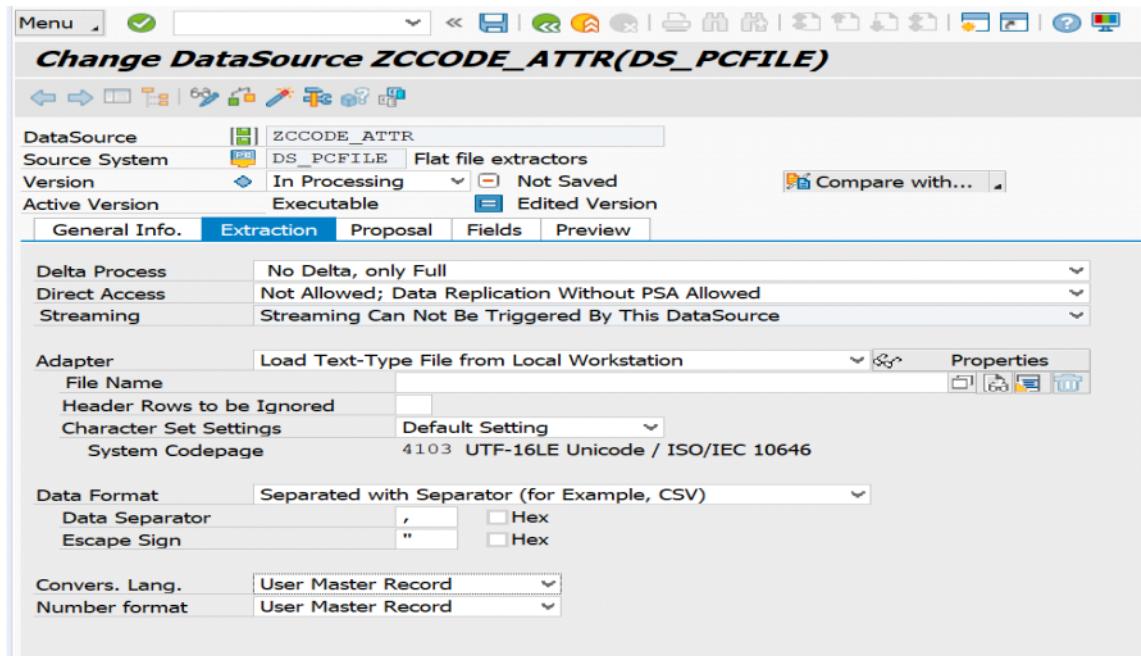
We have the same option as in BW, can load from application server or local workstation.

7. Set adapter to local workstation, data format to CSV and data separator to comma

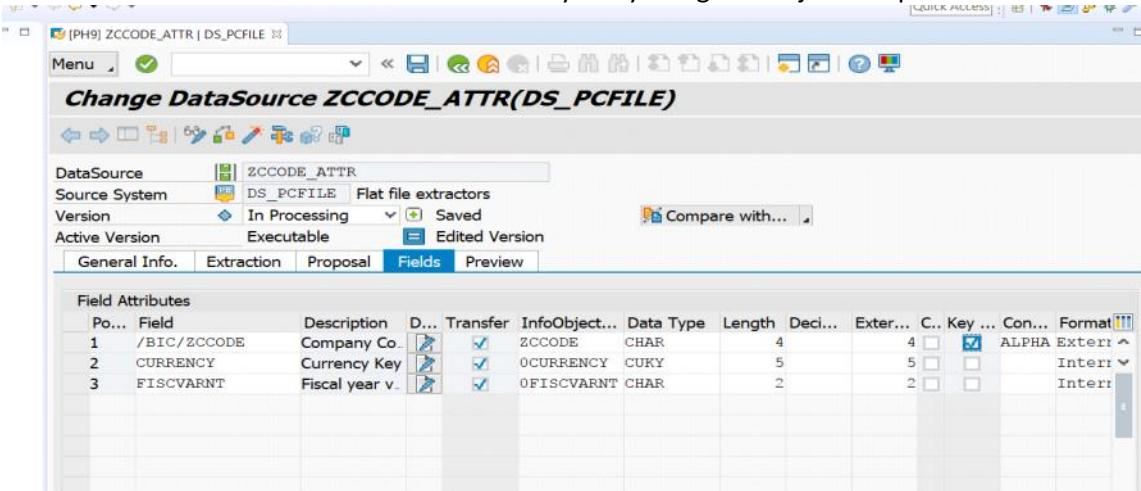
**Change DataSource ZCCODE\_ATTR(DS\_PCFILE)**

DataSource: ZCCODE\_ATTR  
 Source System: DS\_PCFILE Flat file extractors  
 Version: In Processing  Not Saved  
 Active Version: Executable  Edited Version

Compare with...

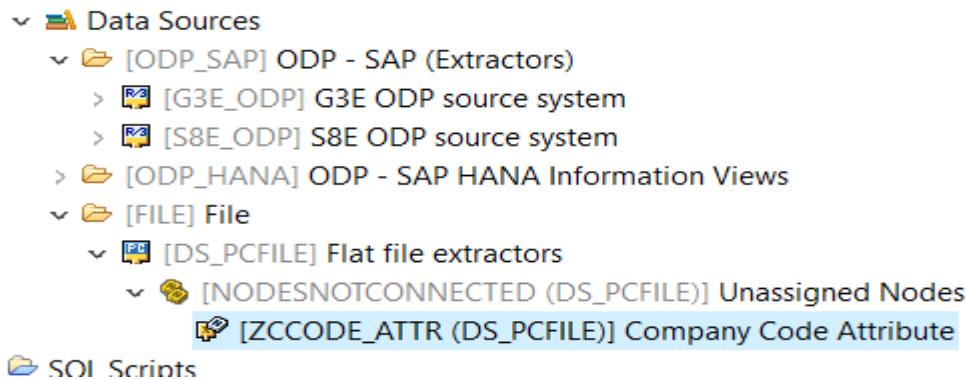


8. On field tab we can create fields manually or by using InfoObject template



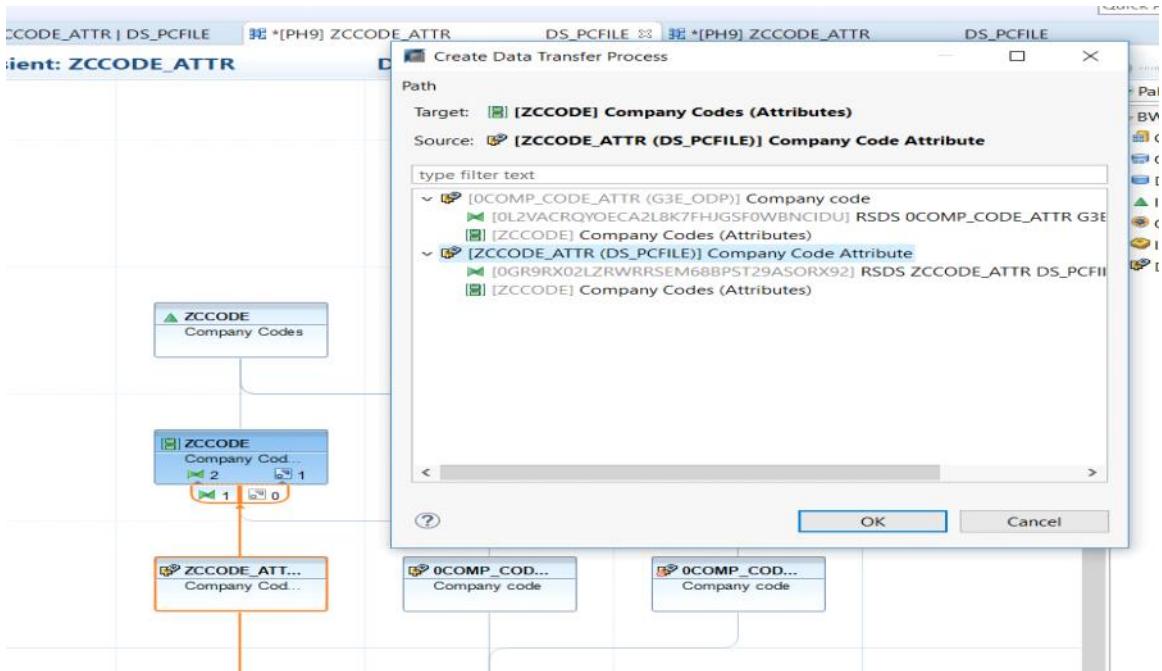
Make sure the transfer checkbox is checked for all fields you want to use, and Key field checkbox set for the keys.

9. Save/Activate and the new extractor will appear in the hierarchy

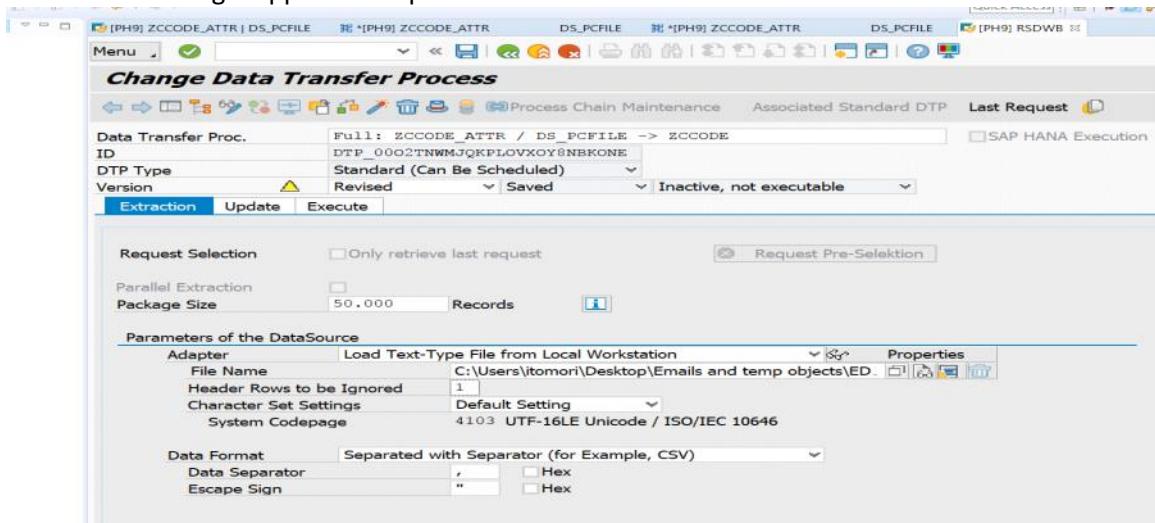


#### Load data from flat file with dataflow:

1. Create DTP from flat file extractor to target (attributes master ZCODE)

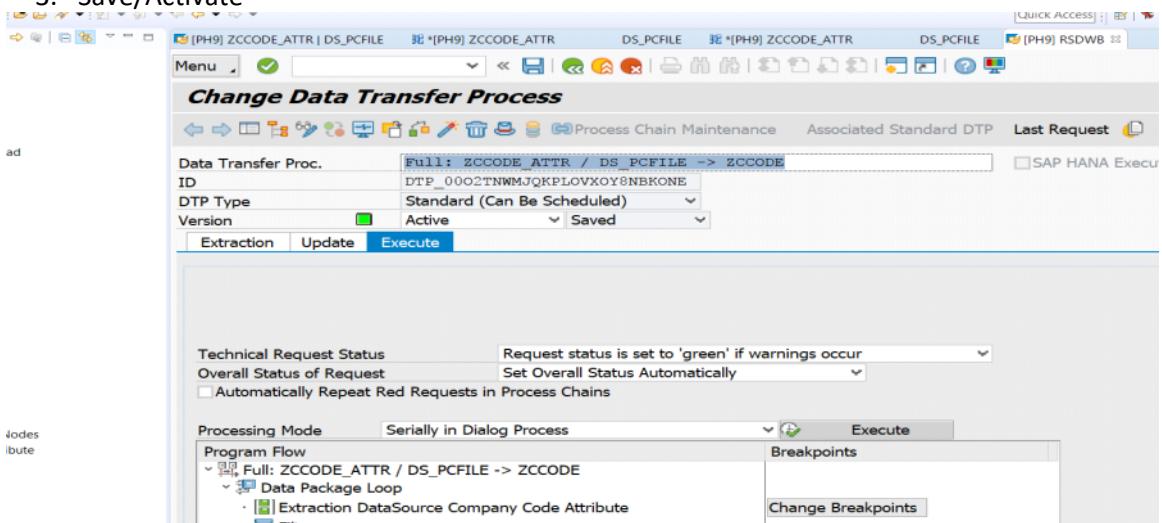


2. Classic BW gui appears. Set path of file in the File name.



If file has header, make sure Headers to be ignored is set to 1.

3. Save/Activate



#### 4. Execute

**Monitor: Data Transfer Process {2017-11-16 09:12:57 000003 CST}**

Request ID	(2017-11-16 09:12:57 000003 CST)																																																							
Start Time	16.11.2017 09:12:57																																																							
Finish Time	16.11.2017 09:13:05																																																							
Header																																																								
Details																																																								
<table border="1"> <thead> <tr> <th>Request Processing</th> <th>M...</th> <th>D...</th> <th>Time Stamp</th> <th>Duration</th> </tr> </thead> <tbody> <tr> <td>Request (2017-11-16 09:12:57 000003 CST)</td> <td></td> <td></td> <td>16.11.2017 09:12:58</td> <td></td> </tr> <tr> <td>  Generate Request</td> <td></td> <td></td> <td>16.11.2017 09:12:58</td> <td></td> </tr> <tr> <td>  Set Status to 'Executable'</td> <td></td> <td></td> <td>16.11.2017 09:12:58</td> <td></td> </tr> <tr> <td>  Process Request</td> <td></td> <td></td> <td>16.11.2017 09:12:58</td> <td>6 Sec.</td> </tr> <tr> <td>  Data Package 1 ( 26 Data Records )</td> <td></td> <td></td> <td>16.11.2017 09:12:58</td> <td>6 Sec.</td> </tr> <tr> <td>    Extraction DataSource ZCCODE_ATTR : 26 Data Records</td> <td></td> <td></td> <td>16.11.2017 09:12:58</td> <td>6 Sec.</td> </tr> <tr> <td>    Filter Out New Records with the Same Key : 26 -&gt; 26 Data Records</td> <td></td> <td></td> <td>16.11.2017 09:13:04</td> <td></td> </tr> <tr> <td>    RSDS ZCCODE_ATTR DS_PCFILE -&gt; IOBJ ZCCODE : 26 -&gt; 26 Data Records</td> <td></td> <td></td> <td>16.11.2017 09:13:04</td> <td></td> </tr> <tr> <td>    Updating attributes for InfoObject ZCCODE : 26 -&gt; 26 Data Records</td> <td></td> <td></td> <td>16.11.2017 09:13:04</td> <td></td> </tr> <tr> <td>  No More Data Available</td> <td></td> <td></td> <td>16.11.2017 09:13:04</td> <td></td> </tr> </tbody> </table>		Request Processing	M...	D...	Time Stamp	Duration	Request (2017-11-16 09:12:57 000003 CST)			16.11.2017 09:12:58		Generate Request			16.11.2017 09:12:58		Set Status to 'Executable'			16.11.2017 09:12:58		Process Request			16.11.2017 09:12:58	6 Sec.	Data Package 1 ( 26 Data Records )			16.11.2017 09:12:58	6 Sec.	Extraction DataSource ZCCODE_ATTR : 26 Data Records			16.11.2017 09:12:58	6 Sec.	Filter Out New Records with the Same Key : 26 -> 26 Data Records			16.11.2017 09:13:04		RSDS ZCCODE_ATTR DS_PCFILE -> IOBJ ZCCODE : 26 -> 26 Data Records			16.11.2017 09:13:04		Updating attributes for InfoObject ZCCODE : 26 -> 26 Data Records			16.11.2017 09:13:04		No More Data Available			16.11.2017 09:13:04	
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No More Data Available			16.11.2017 09:13:04																																																					

Results:

File contents:

	A	B	C
1	COMP_CODE	CURR_KEY	FISC_VAR
2	9900	USD	K4
3	9901	USD	K4
4	9902	USD	K4
5	9903	USD	K4
6	9904	USD	K4
7	9905	USD	K4
8	9906	USD	K4
9	9907	USD	K4
0	9908	USD	K4
1	9909	CHF	K4
2	9910	CHF	K4
3	9911	CHF	K4
4	9912	CHF	K4
5	9913	CHF	K4
6	9914	CHF	K4
7	9915	CHF	K4
8	9916	CHF	K4
9	9917	CHF	K4
0	9918	EUR	K4
1	9919	EUR	K4
2	9920	EUR	K4
3	9921	EUR	K4
4	9922	EUR	K4
5	9923	EUR	K4
6	9924	EUR	K4
7	9925	EUR	K4

Data in PH9 ZCCODE master data:

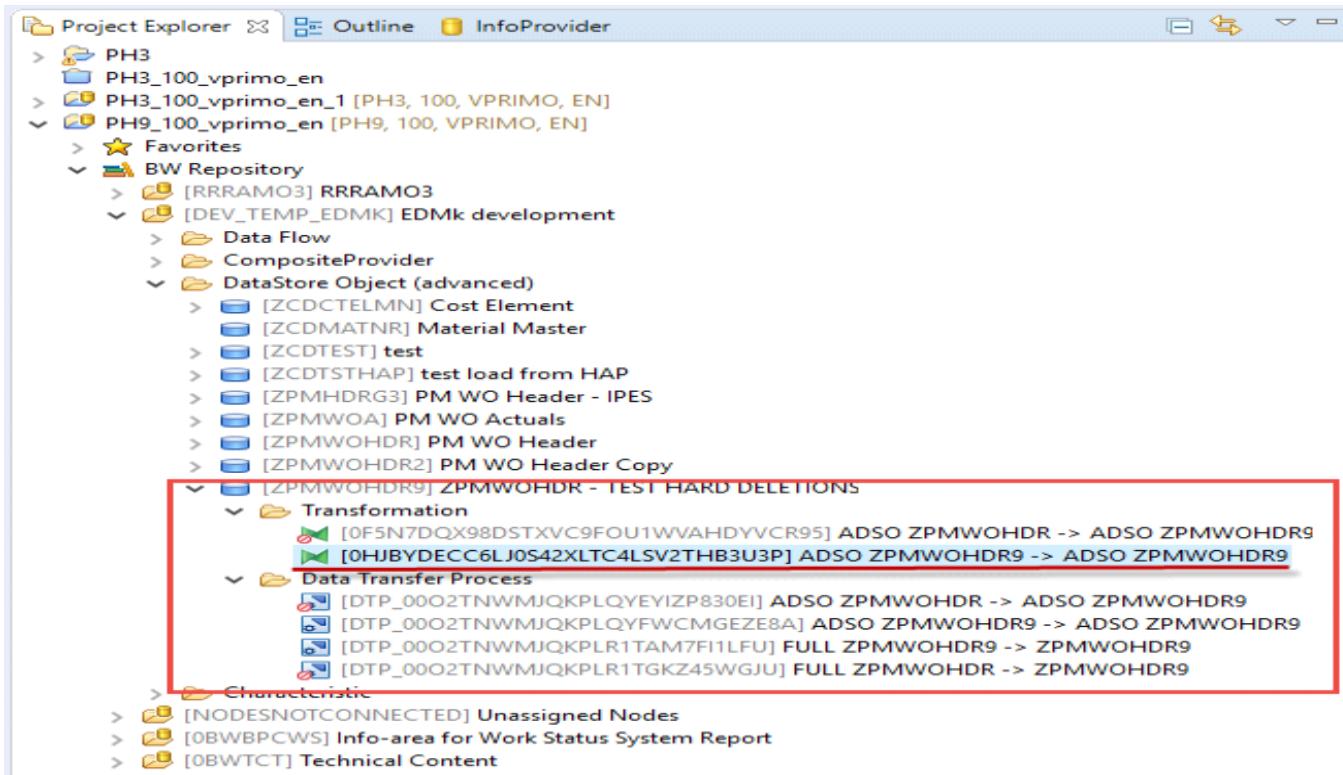
The screenshot shows a SAP Fiori application interface for maintaining master data. The title bar reads "PH9: Change Master Data of InfoObject ZCCODE". The top navigation bar includes links for Search, Where-Used List, History, Quick View, and Master Data Maintenance. Below the title bar are standard SAP navigation buttons: Save, New, Delete Keys, Application Log, and Display Values without Master Data.

The main area is titled "Selection" and contains a table for "Master Data". The table has four columns: "Source system ID", "Company Codes", "Medium description", "Currency Key", and "Fiscal year variant". There are 11 rows in the table, each representing a different source system ID (PC) and its corresponding company codes (9900 through 9910). The "Medium description", "Currency Key", and "Fiscal year variant" columns are all consistently populated with "USD" and "K4" respectively.

Source system ID	Company Codes	Medium description	Currency Key	Fiscal year variant
PC	9900		USD	K4
PC	9901		USD	K4
PC	9902		USD	K4
PC	9903		USD	K4
PC	9904		USD	K4
PC	9905		USD	K4
PC	9906		USD	K4
PC	9907		USD	K4
PC	9908		USD	K4
PC	9909		CHF	K4
PC	9910		CHF	K4

# ADSO compatibility for table comparison: “Old” vs “New” data tables

December 08, 2017 9:07 AM



Rule	Rule Name	Pos	Key	InfoObject	Field
1	AUFNR	1		AUFNR	AUFNR
2	OSOURSYSTEM	2	x	OSOURSYSTEM	OSOURSYSTEM
3	DRECORDMODE	3		DRECORDMODE	DRECORDMODE
4	ROCANCEL	4	x	ROCANCEL	ROCANCEL
5	AUART	5		AUART	AUART
6	AWERK	6		AWERK	AWERK
7	BAUTL_HD	7		BAUTL_HD	BAUTL_HD
8	DLZBRUTTO	8		DLZBRUTTO	DLZBRUTTO
9	DLZNETTO	9		DLZNETTO	DLZNETTO
10	EHTAG	10		EHTAG	EHTAG
11	EQUNR	11		EQUNR	EQUNR
12	ERDAT	12		ERDAT	ERDAT
13	GETRI	13		GETRI	GETRI
14	GEWRK	14		GEWRK	GEWRK
15	GLTRP	15		GLTRP	GLTRP
16	GLTRS	16		GLTRS	GLTRS
17	GSTR1	17		GSTR1	GSTR1
18	GSTRP	18		GSTRP	GSTRP
19	GSTRS	19		GSTRS	GSTRS
	ILART	20		ILART	ILART
	INGRP	21		INGRP	INGRP

```

METHOD end_routine.
*== Segments ==
FIELD-SYMBOLS:
<RESULT_FIELDS>    TYPE _ty_s_TG_1.

DATA:

```

```

    MONITOR_REC      TYPE rstmonitor.
*$* begin of routine - insert your code only below this line      *-*  

... "insert your code here  

*-- fill table "MONITOR" with values of structure "MONITOR_REC"  

*- to make monitor entries  

... "to cancel the update process  

* raise exception type CX_RSROUT_ABORT.  

data: ls_result_fields  type _ty_s_TG_1.

DATA: BEGIN OF ls_KEYS_ZPMWOHDR9_NEW,  

      SOURSYSTEM      TYPE RSSOURSYSID,  

      AUFNR(12)       TYPE C ,  

END   OF ls_KEYS_ZPMWOHDR9_NEW.  

DATA: lt_KEYS_ZPMWOHDR9_NEW like SORTED TABLE OF ls_KEYS_ZPMWOHDR9_NEW  

WITH UNIQUE  

KEY  

      SOURSYSTEM  

      AUFNR.  

* Internal table for DSO keys for existing (active) data for comparison  

DATA: BEGIN OF ls_KEYS_ZPMWOHDR9_ACT,  

      SOURSYSTEM      TYPE RSSOURSYSID,  

      AUFNR(12)       TYPE C ,  

END   OF ls_KEYS_ZPMWOHDR9_ACT.  

DATA: lt_KEYS_ZPMWOHDR9_ACT like SORTED TABLE OF ls_KEYS_ZPMWOHDR9_ACT  

WITH UNIQUE  

KEY  

      SOURSYSTEM  

      AUFNR.  

*-----  

* End of internal tables declaration  

*-----  

select  *  

from /BIC/AZPMWOHDR92  

into corresponding fields of table lt_KEYS_ZPMWOHDR9_ACT.  

select  *  

from /BIC/AZPMWOHDR91  

into corresponding fields of table lt_KEYS_ZPMWOHDR9_NEW.  

loop at lt_KEYS_ZPMWOHDR9_ACT into ls_KEYS_ZPMWOHDR9_ACT.  

read table lt_KEYS_ZPMWOHDR9_NEW with key  

  SOURSYSTEM      = ls_KEYS_ZPMWOHDR9_ACT-SOURSYSTEM  

  AUFNR          = ls_KEYS_ZPMWOHDR9_ACT-AUFNR  

  into ls_KEYS_ZPMWOHDR9_NEW.  

if sy-subrc NE 0.  

  move ls_KEYS_ZPMWOHDR9_ACT-SOURSYSTEM to  

  LS_RESULT_FIELDS-SOURSYSTEM.  

  move ls_KEYS_ZPMWOHDR9_ACT-AUFNR      to LS_RESULT_FIELDS-AUFNR.  

  move 'R'           to  

  LS_RESULT_FIELDS-RECORDMODE.  

  APPEND LS_RESULT_FIELDS            to RESULT_PACKAGE.  

endif.  

endloop.  

*$* end of routine - insert your code only before this line      *-*  

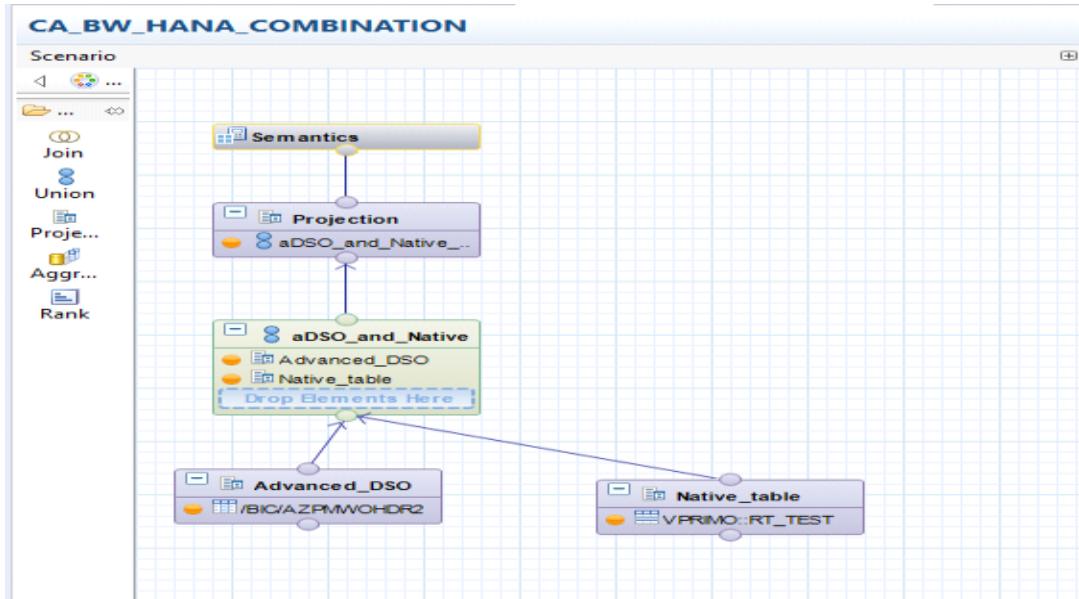
      ENDMETHOD.
```

# Combined data: BW/4HANA & Native HANA

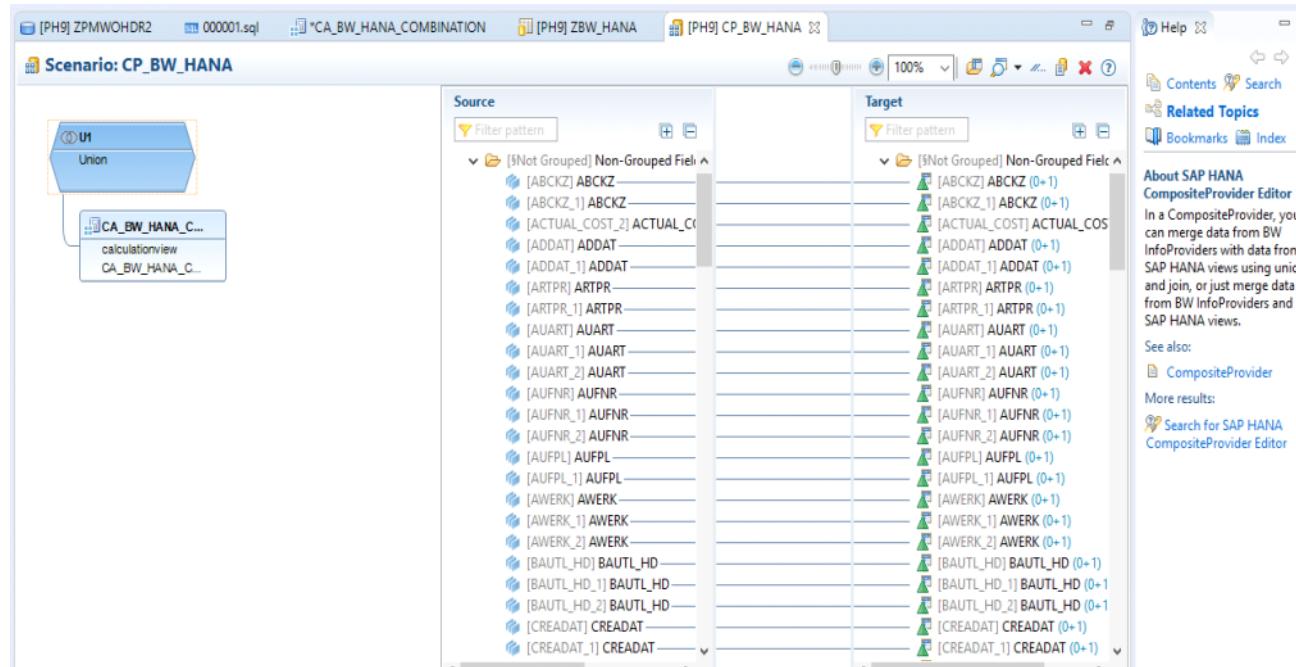
December 22, 2017 2:09 PM

Data from BW/HANA and Native HANA can be combined just as we are currently doing in BW on HANA environment.  
Test scenario described below:

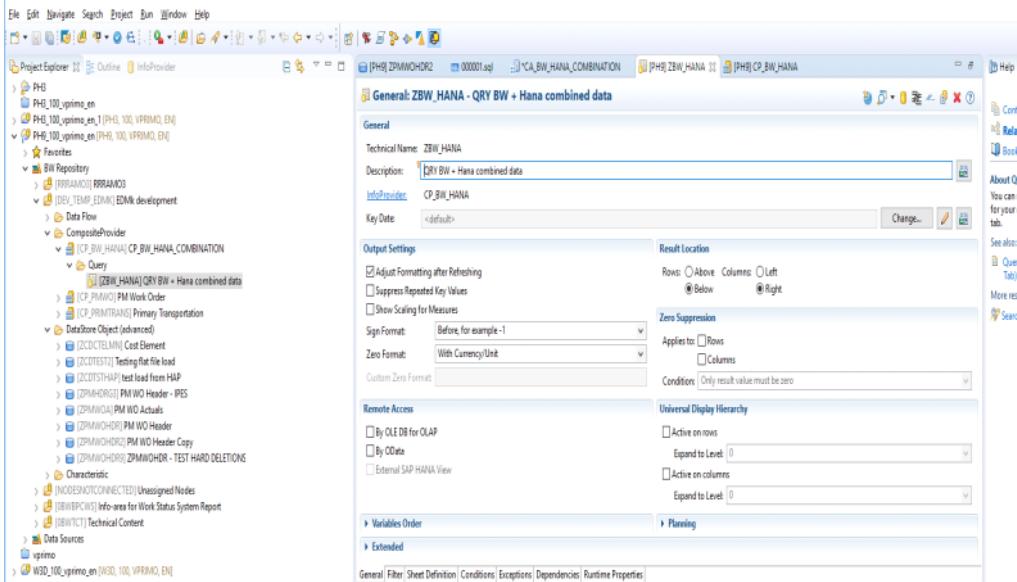
- 1) Created HANA view joining Adso ZPMWOHDR and native hana table VPRIMO::RT\_TEST



- 2) Created Composit Provider CP\_BW\_HANA\_COMBINATION



- 3) Created BEX Query ZBW\_HANA on top of Composit Provider: CP\_BW\_HANA\_COMBINATION



#### 4) Query ZBW\_HANA executed from PH9 ABAP layer using tcode RSRT:

**BW - output test**

Relational browse    Key Figure Definition    Key Figure Detail    Menu

**BW - output test**

**Messages:**

```
'ABCKZ 'ARTPR 'AUFNR
'A    'PM    '# 
'B    'PM    '# 
'C    'PM    '# 
'D    'PM    '# 
'#   'PM    '#
```

**Additional information:**

InfoObject	Name	Hierarchy Name
4CP_BW_HANA-ABCKZ	ABCKZ	
4CP_BW_HANA-ARTPR_1	ARTPR	
4CP_BW_HANA-AUFNR_2	AUFNR	

**Attributes:**

InfoObject	Attribute	HiText

**Structures:**

**Text symbols:**

Description	Value
Author	VPRIMO
Last_Changed_by	VPRIMO
InfoProvider	CP_BW_HANA
Query_Technical_Name	ZBW_HANA

**Query Description**: QRY BW + Hana combined data

**Key Date**: 22.12.2017

**Changed At**: 22.12.2017 06:54:23

**Current User**: VPRIMO

**Last Refreshed**: 22.12.2017 10:07:36

**Status of Data**: 22.12.2017 10:07:36

**Relevance of Data (D)**: 22.12.2017 10:07:36

**Relevance of Data (T)**: 22.12.2017 10:07:36

**Status of Data From**: 22.12.2017 10:07:36

**Status of Data To**: 22.12.2017 10:07:36

# ODP Conversions

Friday, January 5, 2018 3:10 PM

ODP extractor not available from SAP and no easy other way to extract the data besides BAPI technology (like N9/J9 extractors).



2232584 -  
Release o...

According to attached OSS note above (2232584 - Release of SAP extractors for ODP replication), if the extractor are not available after step 2 below, you can raise and incident to SAP asking the conversion:

- 1 - Any Generic Datasource can be converted using program RODPS\_OS\_EXPOSE
- 2 - Most of the delivered SAP extractors are already released for ODP replication. You can release the corresponding DataSources in your SAP source system by implementing this SAP Note in your source system and then executing the program BS\_ANLY\_DS\_RELEASE\_ODP in the relevant source system.
- 3 - For other SAP extractors that are not currently released for ODP replication but that you require, please open an incident in the application component BW-BCT-GEN.
- 4 - There is a list of exception where ODP would not working and the solution to them under OSS Note 1932459 - DataSource: Data loading to multiple SAP BW or SAP BW/4HANA target systems is not supported



1932459 -  
DataSour...

## APD -> HAP

Tuesday, November 28, 2017 9:01 AM

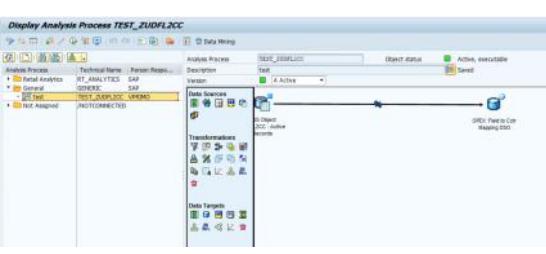
### Objective:

- Check HAP Availability
- Check HAP Functionality comparing to APD
  - Create an easy process flow with Direct input aDSO as a Data Target [aDSO is not available as an option for Data Target]
  - Connect Query to the Data Target [ There is no option for Query Element as a Data Source]
  - Test load data to the data target; Analytic Index, and add HAP to the process chain.
  - Test load data to the data target; Embedded in DTP, and add HAP to the process chain.

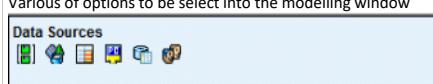
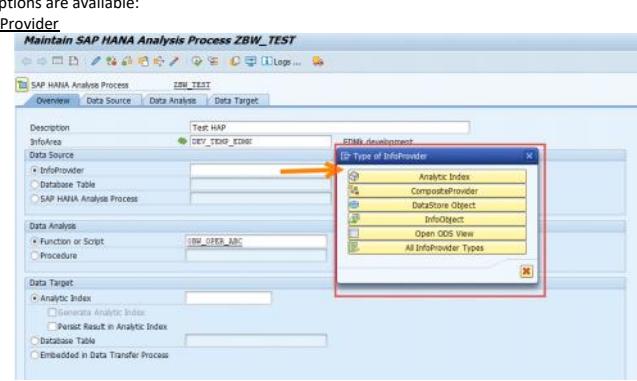
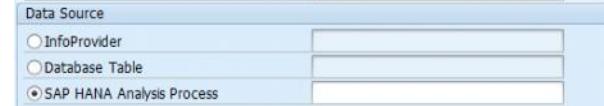
## SAP HANA Analysis Process (HAP)

- With HAP, users are able to use the Predictive Analysis Library (PAL) functions of the SAP HANA database.
- HAP is always made up of exactly one data source, a function for data analysis, and a data target.
- There are no JOIN / UNION like APD; If needed, create a CompositeProvider

## To access APD & HAP

Analysis Process Designer (APD)	HANA Analysis Process (HAP)				
<ul style="list-style-type: none"> <li>Either go with T-Code: RSA1, and click on APD</li>    <b>OR</b>   <li>T-Code: RSANWB to access APD Designer</li>  </ul>	<ul style="list-style-type: none"> <li>T-Code: RSDHAAP           <ul style="list-style-type: none"> <li>SAP HANA Analysis Process Designer</li> </ul> </li>    <ul style="list-style-type: none"> <li>Addition T-Code           <table border="1"> <tr> <td>RSDHAAP_MONITOR</td> <td>SAP HANA Analysis Process Monitor</td> </tr> <tr> <td>RSDHATR</td> <td>SAP HANA Transformation</td> </tr> </table> </li> </ul> </ul>	RSDHAAP_MONITOR	SAP HANA Analysis Process Monitor	RSDHATR	SAP HANA Transformation
RSDHAAP_MONITOR	SAP HANA Analysis Process Monitor				
RSDHATR	SAP HANA Transformation				

## Comparing APD & HAP

Analysis Process Designer (APD)	HANA Analysis Process (HAP)
<p><b>Data Sources</b></p> <p>*You can design a flow choosing multiple sources, define some transformation then to intermediate Provider, and to a target, visualizing the target data.</p> <p>Various of options to be select into the modelling window</p>  <ul style="list-style-type: none"> <li>Read attributes of a characteristics</li> <li>Read data from InfoProvider</li> <li>Use query to read data</li> <li>Read data from file</li> <li>Read data from Database Table</li> <li>Read Analysis Authorizations</li> </ul>	<p><b>Data Sources</b></p> <p>* Only InfoProviders that a column view exists for on the SAP HANA database are supported as data source. * HAP is always made up of exactly one data source, a function for data analysis, and a data target.</p> <p>3 Mains options are available:</p> <ul style="list-style-type: none"> <li><b>InfoProvider</b>  <ul style="list-style-type: none"> <li><b>Analytic Index</b> <ul style="list-style-type: none"> <li>Stores its data in a star schema and is an InfoProvider that a BEX query can be executed on.</li> <li>When created, a new InfoProvider in the '@3'-namespace is derived and can directly be used for reporting scenarios. This '@3'-namespace prevents naming conflicts and shows the difference between ad-hoc and standard scenarios.</li> <li>To maintain an analytic index the transaction RSDD_LTIP in the BW backend needs to be called.</li> <li>If join or unions data sources is needed, Composite Provider is recommended to be used.</li> </ul> </li> <li><b>Database Table</b></li> <li><b>SAP HAP</b>  </li> </ul> </li> </ul>

- It is not possible to use HAP which is not DTP embedded as a source.
- It allows execution of a series of HAPs in sequence, and only to save the final result only.

## Transformations



- Restricted amount of data
- Aggregate data
- Join different sources
- Union two sources
- Projection
- Sort data
- Formula
- Transform list into data record
- Transform data record into list
- ABAP Routine
- ABC Classification
- Weighted table scoring
- Regression Analysis
- Prediction with decision tree
- Prediction with Cluster model
- Prediction with 3rd party Data Mining Model

## Data Analysis

### • Function or Script

- Libraries e.g. PAL, R, etc.

Operation: \* (1) 9 Entries found

#### Restrictions



#### Analysis Type Sub Cat. Long Description

Analysis Type	Sub Cat.	Long Description
OBW_OPER_ABC	LFUNC	ABC Analysis
OBW_OPER_APRIORI	LFUNC	Association Analysis (Apriori Algorithm)
OBW_OPER_DOUBLE_SMOOTH	LFUNC	Double Exponential Smoothing
OBW_OPER_K_MEANS	LFUNC	K-Means Algorithm
OBW_OPER_OUTLIERS	LFUNC	Anomaly Detection
OBW_OPER_SINGLE_SMOOTH	LFUNC	Single Exponential Smoothing
OBW_OPER_TRIPLE_SMOOTH	LFUNC	Triple Exponential Smoothing
OBW_OPER_WEIGHTED_SCORING	LFUNC	Weighted Scoring Method
OBW_PROJECTION		Projection

□ More info about PAL ([http://help.sap.com/hana/SAP\\_HANA\\_Predictive\\_Analysis\\_Library\\_PAL\\_en.pdf](http://help.sap.com/hana/SAP_HANA_Predictive_Analysis_Library_PAL_en.pdf))

### • Procedure



□ Select one that you implemented in SAP HANA Modeler as a content procedure located in a particular schema and are assigned to a package

□ Implement, and adjust to your requirements with the following pattern:

OBW:DAP:<name Analysis Process>>-PN

□ Select ABAP managed database procedure created in ABAP

★ □ Can be reused

★ □ Need to transport

## Data Targets



- Change Attributes of a characteristic
- Write data directly to DSO
- Write data to file
- Update CRM Attributes
- Write data to analytical index
- Train decision tree
- Train clustering model
- Create Association Analysis model
- Train scoring model
- Train 3rd party Data Mining Model

## Data Targets

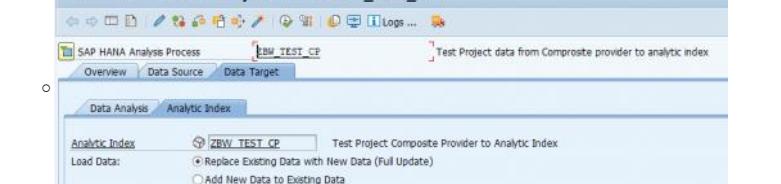
3 Options are available:



### • Analytic Index (Obsolete; Instead, use an ADSO based on the Embedded in DTP option)

- Either have the system generate an analytic index (default), or choose an existing one
- Need the authorization for creating, changing, or loading, and deleting

Maintain SAP HANA Analysis Process ZBW\_TEST\_CP



■ You can choose to load the data either as a full with deleting the existing data or add new data (Delta Load)

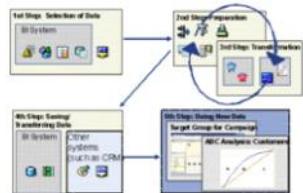
### • Database Table

### • Embedded in DTP (Recommended Option)

- You can create a transformation for your SAP HAP

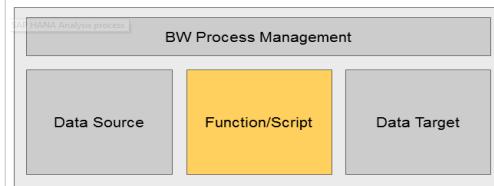
## Dataflow

### Dataflow



(Image Ref: <https://archive.sap.com/discussions/thread/3884347>)

## Dataflow



### Execution option:

- Execute the analysis process directly
- Schedule in the background
- Insert the analysis process into a process chain (T-Code: RSPC). Choose 'Execute SAP HANA Analysis Process' process type in 'other process types'.

## Testing

### Case 1: Project the data, and create the Process chain to load the HAP

- Data Source = Composite Provider
- Data Target = Analytic Index

The screenshot shows the SAP HANA Analysis Process ZBW\_TEST interface. On the left, there's a navigation bar with icons for Overview, Data Source, and Data Target. The main area is titled 'Test HAP'. Under 'Data Source', it shows 'InfoArea' set to 'DEV\_TEMP\_ECOMK' (EDMK development), 'Data Source' set to 'CP\_PMWO' (PM Work Order), and 'Function or Script' set to 'OBW\_PROJECTION' (Projection). Under 'Data Target', it shows 'Analytic Index' selected, with 'ZBW\_TEST' chosen. A note says '(Analytic index has not been generated yet)'. There are also options for 'Generate Analytic Index' and 'Persist Result in Analytic Index'.

In the Data Source tab, you can select which fields to be project (If using other function, field selection will be disabled), all these fields will be shown in the data target. As well as filter the data by the steps in the picture below:

This screenshot illustrates the filtering process. On the left, a list of fields for the '4CP\_PMWO-COUNC\_KEY' InfoObject is shown, with 'County Code' highlighted. On the right, a 'Maintain Filter for InfoObject 4CP\_PMWO-COUNC' dialog box is open, showing a table with columns for Status, Sign, Option, Variable, Lower Limit, Offset, Variable, Upper Limit, and Offset. The 'Status' column is highlighted with a red circle labeled '1'. The 'Variable' column is highlighted with a red circle labeled '2'. The 'Lower Limit' column is highlighted with a red circle labeled '3'.

Check, and activate.

If you selected the data target as Analytic Index, it will be generated.

All the derived InfoObject will have the '@3' in the namespace

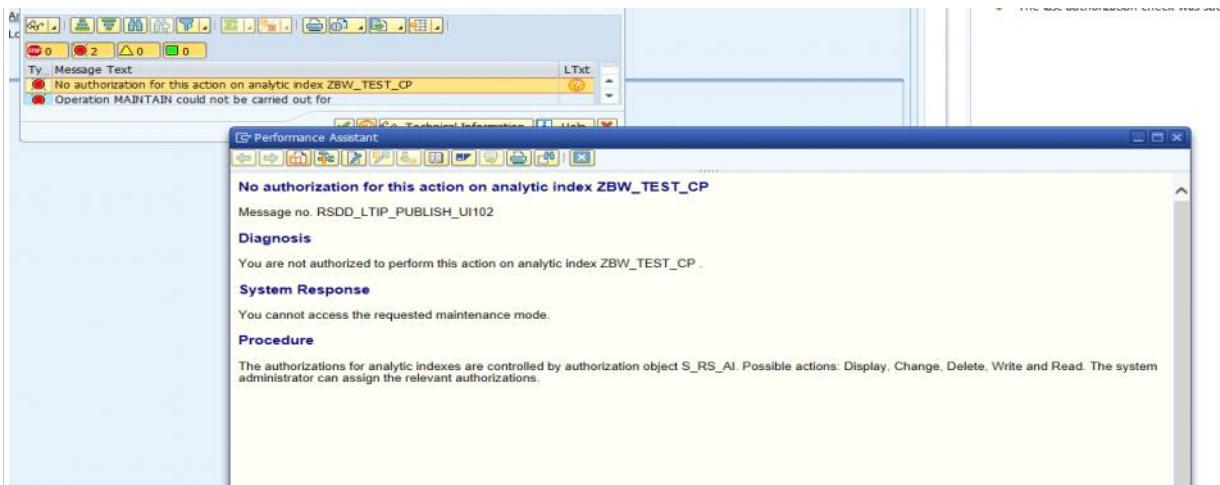
The screenshot shows the SAP HANA Analysis Process ZBW\_TEST interface with the 'Data Target' tab selected. It shows the 'Analytic Index' set to 'ZBW\_TEST'. Below that, under 'Load Data:', there are two radio button options: 'Replace Existing Data with New Data (Full Update)' (selected) and 'Add New Data to Existing Data'. The 'Properties' tab is active, displaying a table of derived InfoObjects. The table includes columns for Name, Data Type, Key At., Text, InfoObject, Reference, Authorization, and Derived InfoObject. Some rows are expanded to show their details. A red box highlights the 'Derived InfoObject' column.

Name	Data Type	Key At.	Text	InfoObject	Reference	Authorization	Derived InfoObject
0datapakid	STRING	Char...	...data Package	0INFOPROV	<input checked="" type="checkbox"/>	<input type="checkbox"/>	@3ZBW_TEST@F0000
0infoprov	STRING	Char...	...InfoProvider		<input type="checkbox"/>	<input type="checkbox"/>	@3ZBW_TEST@F0001
0record	INT	Char...	...Data Record Number		<input type="checkbox"/>	<input type="checkbox"/>	@3ZBW_TEST@F0002
0reqtsn	STRING	Char...	...Request Transaction Sequ...		<input type="checkbox"/>	<input type="checkbox"/>	@3ZBW_TEST@F0003
0sourcystem	STRING	Char...	...Source system ID	0SOURCYSTEM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	@3ZBW_TEST@F0004
4cp_pmwo-auart_key	STRING	Char...	...Order Type		<input type="checkbox"/>	<input type="checkbox"/>	@3ZBW_TEST@F0005
4cp_pmwo-aufnr_key	STRING	Char...	...Order Number		<input type="checkbox"/>	<input type="checkbox"/>	@3ZBW_TEST@F0006
4cp_pmwo-awerk_key	STRING	Char...	...Plant associated with main		<input type="checkbox"/>	<input type="checkbox"/>	@3ZBW_TEST@F0007
4cp_pmwo-bukrs_key	STRING	Char...	...Company Code		<input type="checkbox"/>	<input type="checkbox"/>	@3ZBW_TEST@F0008

When executing the data, currently no data is loaded to the data target. The authorization must be assigned using authorization object S\_RS\_AI.

This screenshot shows the SAP HANA Analysis Process ZBW\_TEST interface with the 'Data Target' tab selected. It shows the 'Analytic Index' set to 'ZBW\_TEST'. Under 'Load Data:', the 'Replace Existing Data with New Data (Full Update)' option is selected. The 'Properties' tab is active, displaying a table with columns for Data, Facts, and Authorizations. The 'Data' row shows 'Number of Records' as 0, 'Memory Size (KB)' as 118, and 'Last Indexing' as Index ID 0BNV:APD:ZBW\_TEST:CUBE~FACTS. The 'Facts' row shows '0' for both 'Number of Records' and 'Memory Size (KB)', and '61' for 'Last Indexing'. The 'Authorizations' row shows '0' for both 'Number of Records' and 'Memory Size (KB)', and '179' for 'Last Indexing'. A red box highlights the 'Number of Records' column in the 'Data' row.

Data	Facts	Authorizations
Number of Records: 0	Memory Size (KB): 118	Last Indexing: Index ID 0BNV:APD:ZBW_TEST:CUBE~FACTS
Number of Records: 0	Memory Size (KB): 61	Last Indexing: 61
Number of Records: 0	Memory Size (KB): 179	Last Indexing: 179



Although the Procedure suggested by SAP that the authorization object S\_RS\_AI must be add to the ID -> The object is already obsolete. It seems that we missed the authorization of the RSAHP for the BWREMOTE ID, and the problem above for data target; Analytic index is now fixed.

#### To display the data in the Analytic Index

- Go to the Data Target -> Analytic Index
- Select the 'facts' row
- And Display data

Go to RSPC to create a process chain

#### Case 2: Project the data, and create the Process chain to load the data

- Data Source = Advanced DataStore Object
- Data Target = Embedded in DTP

**Maintain SAP HANA Analysis Process ZBW\_TEST\_HAP\_ADSO**

SAP HANA Analysis Process    ZBW TEST HAP\_ADSO    Test Projection ADSO to ADSO

Overview... Data Source | Data Target

Description: Test Projection ADSO to ADSO

InfoArea

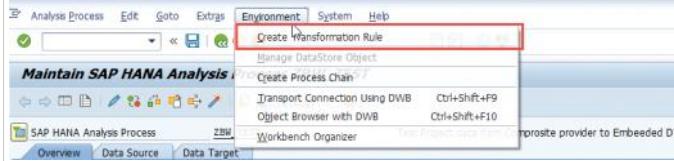
Data Source: InfoProvider: ZPMIDR03, PM WO Header - IPES

• InfoProvider: Near-Line Access, Database Table, SAP HANA Analysis Process

Data Analysis: Function or Script: DBW\_PROJECTION, Procedure

Data Target: Analytic Index, Database Table, • Embedded in Data Transfer Process

You can create a transformation for HAP, using this process as a source, go to environment menu to create the transformation rule, and select the target of the transformation OR create it in HANA Studio BWMT.

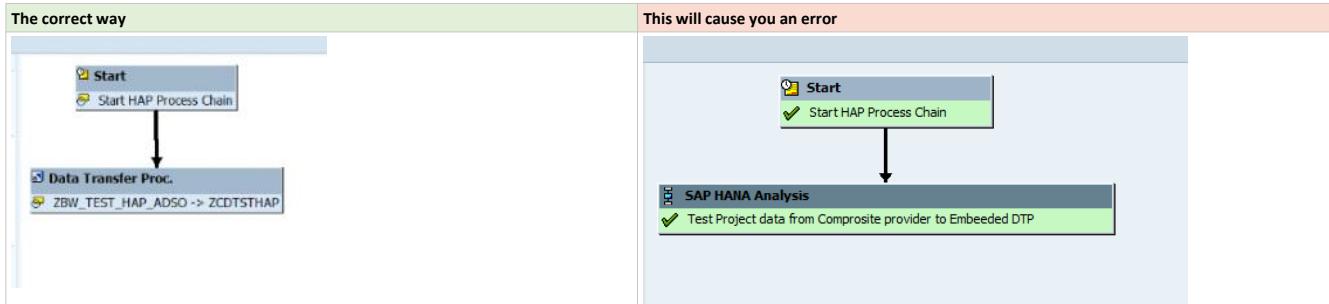


In this scenario, I create the transformation from BWMT, choosing ADSO as my target to embed the DTP.

- Save, and Activate the Transformation.
  - Follow with the creation of DTP.
  - Save and activate the DTP.
- ✓ [ZCDTSTHAP] Test HAP
- ✓ Transformation  
[OC19SVXEPZN3FB1RIVOKJ1V5TRX10Z0] HAAP ZBW\_TEST\_HAP\_ADSO -> ADSO ZCDTSTHAP
  - ✓ Data Transfer Process  
[DTP\_0002TNWMJQKPOWF7NMIR9M0GD] HAAP ZBW\_TEST\_HAP\_ADSO -> ADSO ZCDTSTHAP

#### Putting HAP into the process chain.

Be careful when including HAP with data target as 'Embedded in DTP' into process chain. You should put 'DTP' in the process chain instead of HAP, otherwise the execution for your process chain is not possible.



Got an error when trying to execute the process chain

Dec 6th

"In order to execute the SAP HANA Analysis Process you require authorization for the authorization object 'Authorization for SAP HANA Analysis Process' with the field values stated above and activity 16"

557714

Dec 18th

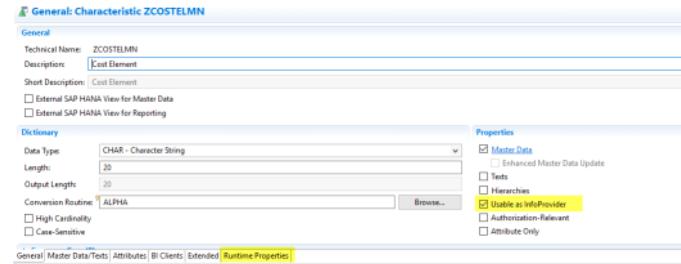
Even though we have our object activated. We still got the error message per below.

**Analysis process 'ZBW\_TEST' is not active. Execution not possible.**

## Findings

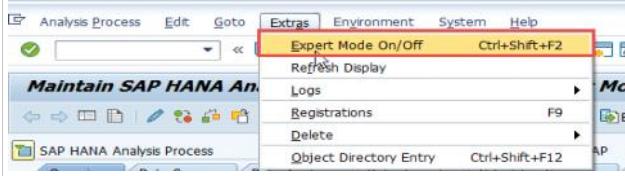
### Data Source

- To make Data Source available in HAP
  - For InfoObject, 'Usable as InfoProvider' should be enable. More properties can be modify in 'Runtime Properties' Tab.

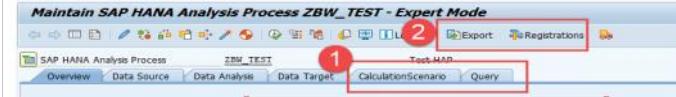


### Expert Mode

It offers an extra functions for use by administrators and by support.



2 Additional tabs will appear "Calculation Scenario", and "Query", as well as 2 additional functions on the toolbar



- Calculation Scenario**
  - Source of reading while a query is running.
  - The runtime simulation provides you with a prior consistency check. You can view both the XML representation and the script definition.
    - In the XML, you can click on underlined elements to navigate to them, and view sample data. This allows you to check whether the result is the one you want.
- Query**
  - The Query Monitor (T.code: RSRT) is embedded, allowing us to run standard queries for the analysis process
- Export**
  - Export HAP as an XML file for analysis if errors occur
- Registrations**
  - Display an overview of all existing registrations

# Time-dependent master data

Thursday, December 14, 2017 15:59

## Time-dependent attributes:

You can specify whether the attribute is time-dependent. Even if only one attribute is time-dependent, a time-dependent master data table is created. There can still be time-independent attributes for this characteristic however. These are stored in a separate table.

If the characteristic has at least one time-dependent attribute, a time interval is specified for this attribute. As master data must exist between the period of 01.01.1000 and 12.31.9999 in the database, the gaps are filled automatically.

## Time-dependent texts:

You can specify whether the texts are time-dependent. If so, the date is included in the key of the text table. If you create time-dependent texts, the system always displays the text for the key date in the query.

If texts and attributes are time-dependent, the time intervals do not have to agree.

## Example:

Create custom IO (ZCUSTOMER)

### General tab:

In the properties section you can define what master tables the IO should have, including text and hierarchies.

### Master Data/Text tab

For text we need to check the Time-Independent checkbox in the Text section. This will add the Valid to and Valid from fields to the text table and uses former as a key.

### Attributes tab

For attributes we can to select individually a for each attribute.

### Test data used for attribute upload:

A	B	C	D	E	F	G	H	I	J
Source System ID	Customer	Valid from	Valid to	Country Street Name		Location	Name	Telephone 1	
EU	102	01.01.1000	31.12.2017	US	13501 KATY FREEWAY	HOUSTON	EXXON CHEMICAL CO USA		
EU	102	01.01.2018	31.12.9999	US	13501 JUDY FREEWAY	HOUSTON	EXXON CHEMICAL CO USA	12345666777	
EU	105	01.01.1000	31.12.9999	CN	3/F,225FU TE R01(N)WAI GAO QIAO FT	SHANGHAI	ZAFF EXXON CHEMICAL EASTERN INC		
EU	108	01.01.1000	31.12.9999	EG	ABU FEDA BUILDING	"ZAMALEK, CAIRO"	ZAFF ESSO SUEZ INC		
EU	116	01.01.1000	31.12.9999	GB	ERMYN WAY	LEATHERHEAD SURRY	ESSO PETROLEUM COMPANY KT228UX		
EU	120	01.01.1000	31.12.2017	US			ZAFF EXXON EASTERN INC CONS		
EU	120	01.01.2018	31.12.9999	US	11 SEATTLE ROAD	PORTLAND	ZAFF EXXON EASTERN INC CONS	77766654321	
EU	125	01.01.1000	31.12.9999	US	P O BOX 4276 – 601 JEFFERSON	HOUSTON	EM MANAGEMENT SUPPORT SVCS		
EU	137	01.01.1000	31.12.9999	US	1301 FANNIN	HOUSTON	EXXON CORPORATION		

### Upload attributes with simple transformation:

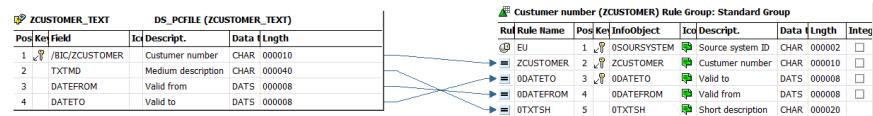
## Result for attributes:

The screenshot shows the SAP Master Data Maintenance interface for the ZCUSTOMER table. It displays a list of customers with their source system ID, customer number, validity period, address, location, name, and phone number. The data includes entries for Exxon Chemical Co USA, ZAFF Exxon Chemical EA, ZAFF ESSO SUEZ INC, ESSO PETROLEUM COMPANY, ZAFF Exxon Eastern Inc, EM MANAGEMENT SUPPORT, and Exxon Corporation.

Test data used for text upload:

	A	B	C	D	E	F
1	Customer	Valid from	Valid to	Name		
2	102	01.01.1000	31.12.2017	EXXON CHEMICAL COMPANY		
3	102	01.01.2018	31.12.9999	EXXON CHEMICAL CO USA		
4	105	01.01.1000	31.12.9999	ZAFF EXXON CHEMICAL EASTERN INC		
5	108	01.01.1000	31.12.9999	ZAFF ESSO SUEZ INC		
6	116	01.01.1000	31.12.9999	ESSO PETROLEUM COMPANY KT228UX		
7	120	01.01.1000	31.12.2020	ZAFF EXXON EASTERN INC CONS		
8	120	01.01.2021	31.12.9999	ZAFF EXXON EASTERN GMBTH		
9	125	01.01.1000	31.12.9999	EM MANAGEMENT SUPPORT SVCS		

Upload text with simple transformation:



Result for text:

The screenshot shows the SAP Master Data Maintenance interface for the ZCUSTOMER table. It displays a list of customers with their source system ID, customer number, validity period, and short description. The data includes entries for Exxon Chemical Co USA, ZAFF Exxon Chemical EA, ZAFF ESSO SUEZ INC, ESSO PETROLEUM COMPANY, ZAFF Exxon Eastern Inc, EM MANAGEMENT SUPPORT, and Exxon Corporation. The short description column now contains values like 'EXXON CHEMICAL COMPAN' and 'EM MANAGEMENT SUPPORT SVCS'.

Note that the validity for the text does not need to overlap the date ranges of the attributes (like for costumer 120).

## Time-dependent Hierarchies:

Reference:

<https://help.sap.com/viewer/107a6e8a38b74ede94c833ca3b7b6f51/1.0.6/en-US/801a6702e07211d2acb80000e829fbfe.html>

Example:

General tab

[PH9] ZCUSTOMER ::

### General: Characteristic ZCUSTOMER

**General**

Technical Name: ZCUSTOMER  
 Description: Customer number  
 Short Description: Customer number  
 External SAP HANA View for Master Data  
 External SAP HANA View for Reporting

**Dictionary**

Data Type: CHAR - Character String  
 Length: 10  
 Output Length: 10  
 Conversion Routine: ALPHA

**Properties**

Master Data  
 Enhanced Master Data Update  
 Texts  
 Hierarchies  
 Usable as InfoProvider  
 Authorization-Relevant  
 Attribute Only

Hierarchies checkbox needs to be enabled.

Hierarchies tab:

[PH9] ZCUSTOMER ::

### Hierarchies: Characteristic ZCUSTOMER

**Hierarchy Type**

Hierarchy Type: Standard  Time-Dependent

**Time-Dependent Properties**

Entire Hierarchy is Time-Dependent  
 Time-Dependent Hierarchy Structure  
 Use Temporal Hierarchy Join

**Remote Hierarchy Properties**

Remote Hierarchy Class: No values maintained

**Miscellaneous**

Intervals Permitted in Hierarchy  
 Reverse +/- Sign for Nodes

> External Characteristics in Hierarchies (0)

Time-Dependent Hierarchy checkbox needs to be enabled.

Entire Hierarchy is Time-Dependent:

If you want to create views of a hierarchy that are valid for a specific period of time, you can specify the entire hierarchy as time-dependent.

Time-Dependent Hierarchy Structure:

If you want to model relationships that change time-dependently, you can specify the hierarchy structure as time-dependent.

Use temporal hierarchy join:

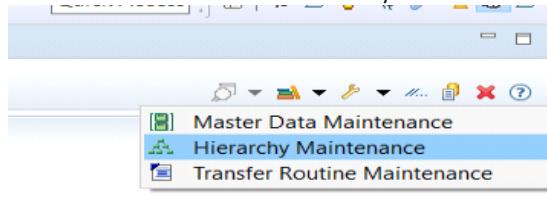
The hierarchy has a temporal hierarchy join and is used as a display hierarchy. The key date is derived from the posted data.

Miscellaneous options:

Intervals permitted: Enable if you want to use ranges at the leaves of the hierarchy.

Reverse +/- Sign for Nodes: Enable to be able to reverse the sign for specific nodes.

Hierarchies can be loaded with DTPs or by direct maintenance shown below:



Nodes and leaves can be added with child/parent relationship and validity dates:

PH9: Change Hierarchy 'Customer hierarchy' - 'Modified Version'

Customer hierarchy activated for basic characteristic ZCUSTOMER

**Hierarchy**

Level	Node Name	Link	Valid from	To
1	NORTH		01.01.1000	30.04.2018
2	AAA		01.01.1000	31.12.9999
3	ZCUSTOMER		01.01.1000	31.12.9999
3	ZCUSTOMER		01.01.1000	31.12.9999
3	ZCUSTOMER		01.01.1000	31.12.9999
2	SOUTH		01.01.1000	31.12.9999
3	EXXON CHEM SERV ARAB		01.01.1000	31.12.9999
3	ZCUSTOMER		01.01.1000	31.12.9999
3	ZCUSTOMER		01.01.1000	31.12.9999
3	ZCUSTOMER		01.01.1000	31.12.9999
2	EAST		01.01.1000	31.12.9999
3	BBB		01.01.1000	01.01.2017
3	ZCUSTOMER		01.01.1000	31.12.9999
3	ZCUSTOMER		01.01.1000	31.12.9999
2	BBB		01.01.1000	31.12.9999
3	ZCUSTOMER		01.01.1000	31.12.9999
3	ZCUSTOMER		01.01.1000	31.12.9999

## Restrictions:

In a scenario where we want to use a HANA database table for master data we need to take into consideration the below recommendation:

To achieve optimum reporting performance when using master data (text, attributes, hierarchies), we recommend using InfoObjects with persistent attribute, text and hierarchy tables instead of virtual access to master data via SAP HANA views. As it is not possible to guarantee referential integrity on SAP HANA views, a considerable number of SAP HANA optimizations (push down) in the SAP BW/4HANA Analytic Engine are not possible with virtual access to master data.

If you intend to model a virtual access to master data, we still recommend using Open ODS views as the central object for accessing data from SAP BW/4HANA. Note however that restrictions to Open ODS views might apply, which could force you to continue using InfoObjects based on SAP HANA views:

- **Hierarchies are not supported in Open ODS views.**
- **Key date-based access to time-dependent master data is not supported in the Open ODS views**
- In the case of planning scenarios with CompositeProviders based on field-based DataStore objects (advanced), navigation attributes cannot be used.
- The implementation of authorizations in InfoObjects and associations to Open ODS views in CompositeProviders is different.

# BW Hierarchy Time-dependent

Friday, January 5, 2018 9:50 AM

Still working fine in BW4Hana

1 - First testing Text time and language dependent:

SQL   Result						
	/BIC/ZHIERTEST	LANGU	DATETO	DATEFROM	TXTSH	TXTMD
1	00001	E	20161231	19000101	Super Father	Super Father
2	00001	E	99991231	20170101	Big Father	Big Father
3	00002	E	99991231	19000101	Father 1	Father 1
4	00003	E	99991231	19000101	Father 2	Father 2
5	00004	E	99991231	19000101	Father 3	Father 3
6	00005	E	99991231	19000101	Son 1	Son 1
7	00006	E	99991231	19000101	Son 2	Son 2
8	00007	E	99991231	19000101	Son 3	Son 3
9	00008	E	99991231	19000101	Son 4	Son 4
10	00009	E	99991231	19000101	Son 5	Son 5
11	00010	E	99991231	19000101	Son 6	Son 6
12	00011	E	99991231	19000101	Son 7	Son 7
13	00012	E	99991231	19000101	Son 8	Son 8
14	00013	E	99991231	19000101	Son 9	Son 9

2 - change infoobject available to Hierarchies

**General**

Technical Name:	ZHIERTEST
Description:	Testing Hierarchy time-dependent
Short Description:	Test Hier Time Dep
<input type="checkbox"/> External SAP HANA View for Master Data	
<input type="checkbox"/> External SAP HANA View for Reporting	

**Dictionary**

Data Type:	NUMC - Numerical Text
Length:	5
Output Length:	5
Conversion Routine:	<input type="text"/>
<input type="checkbox"/> High Cardinality	
<input type="checkbox"/> Case-Sensitive	

**Properties**

<input type="checkbox"/> Master Data	
<input type="checkbox"/> Enhanced Master Data Update	
<input checked="" type="checkbox"/> Texts	
<input checked="" type="checkbox"/> Hierarchies	
<input type="checkbox"/> Usable as InfoProvider	
<input type="checkbox"/> Authorization-Relevant	
<input type="checkbox"/> Attribute Only	

**Compoundings (0)**

3 - Select the hierarchy as Time-Dependent:

**Hierarchies: Characteristic ZHIERTEST**

<b>Hierarchy Type</b>	<b>Remote Hierarchy Properties</b>
Hierarchy Type: <input checked="" type="checkbox"/> Standard	Remote Hierarchy Class: No v
<input type="checkbox"/> Version-Dependent	
<input checked="" type="checkbox"/> Time-Dependent	
<b>Time-Dependent Properties</b>	<b>Miscellaneous</b>
<input checked="" type="radio"/> Entire Hierarchy is Time-Dependent <input type="radio"/> Time-Dependent Hierarchy Structure <input type="checkbox"/> Use Temporal Hierarchy Join	<input type="checkbox"/> Intervals Permitted in Hierar <input type="checkbox"/> Reverse +/- Sign for Nodes
<b>External Characteristics in Hierarchies (0)</b>	

4 - Test 1: Creating manually hierarchy and change to check time-dependent functionality:

InfoObject:	ZHIERTEST	Search	Reset
<a href="#">Create Hierarchy</a> <a href="#">Display Hierarchy</a> <a href="#">Edit Hierarchy</a> <a href="#">Copy Hierarchy</a> <a href="#">Delete Hierarchy</a> <a href="#">Activate Hierarchy</a>			
Short description	Hierarchy name	InfoObject	Hierarchy version
Testing Hier 1	ZTEST1	ZHIERTEST	Active 01.01.1000 31.12.2016
Testing Hier 1	ZTEST1	ZHIERTEST	Active 01.01.2017 31.12.9999

5 - Loading hierarchy by datasource using Flat Files

The screenshot shows the SAP BW Hierarchy Management interface. At the top, there's a navigation bar with buttons for Details, Create Text Node, Insert Key(s), Delete Node(s), and various icons. Below this is a tree view of a hierarchy structure:

Node Name
N_GENERAL
00001
ZHIERTEST
00002
ZHIERTEST
00005
ZHIERTEST
00006
ZHIERTEST
00007
ZHIERTEST
00008
ZHIERTEST
00003
ZHIERTEST
00009
ZHIERTEST
00010
ZHIERTEST
00011

Below the tree view is a search bar with 'InfoObject: ZHIERTEST' and buttons for Search and Reset.

Further down, there's a table for managing hierarchies:

Short description	Hierarchy name	InfoObject	Hierarchy version	Version	Valid from	To
Testing Hier 1	ZTEST1	ZHIERTEST		Active	01.01.1000	31.12.2016
Testing Hier 1	ZTEST1	ZHIERTEST		Active	01.01.2017	31.12.9999

At the bottom, there's another tree view and a search bar for 'InfoObject: ZHIERTEST'.

The main focus is the 'Data Transfer Proc.' dialog, which is open over the hierarchy management interface. The dialog shows:

- Data Transfer Proc.: ZHIERTEST\_HIER / DS\_PCFFILE -> ZHIERTEST - Load 1
- ID: DTP\_0002TNWQKPLUB26ZBEGCC7E
- DTP Type: Standard (Can Be Scheduled)
- Version: Active
- Buttons: Extraction, Update, Execute
- Parameters of the DataSource section:
  - Hierarchy: ZHIER\_FROMFILE / 20161231 / 20160101 / Testing load hier fro (highlighted with a red box)
  - Adapter: Load Text-Type File from Local Workstation
  - File Name: \\vctcnas001ac11\prsample\$\Sync\Actividades\Project...
  - Header Rows to be Ignored: 1
  - Character Set Settings: Default Setting
  - System Codepage: 4103 UTF-16LE Unicode / ISO/IEC 10646
- Data Format: Hierarchy Separated by Separator

Below the dialog, there's a search bar for 'InfoObject: ZHIERTEST'.

Finally, at the very bottom, there's another table for managing hierarchies:

Short description	Hierarchy name	InfoObject	Hierarchy version	Version	Valid from	To
Testing Hier 1	ZTEST1	ZHIERTEST		Active	01.01.1000	31.12.2016
Testing Hier 1	ZTEST1	ZHIERTEST		Active	01.01.2017	31.12.9999
Testing load hier fr	ZHIER_FROMFILE	ZHIERTEST		Active	01.01.2016	31.12.2016

## Hierarchy

		InfoObject	Node Name
Testing load hier from file	Big Father	ZHIERTEST	00001
	Father 1	ZHIERTEST	00002
	Son 1	ZHIERTEST	00005
	Son 2	ZHIERTEST	00006
	Son 3	ZHIERTEST	00007
	Father 2	ZHIERTEST	00003
	Father 3	ZHIERTEST	00004

Data Transfer Proc. ZHIERTEST\_HIER / DS\_PCFFILE -> ZHIERTEST - Load 2  SAP HANA Execution

ID DTP\_0002TNWMJQKPLUBCDWVJ7XP6Y

DTP Type Standard (Can Be Scheduled)

Version  Active  Saved

Extraction Update Execute

Package Size 2000000.000 Records

Parameters of the DataSource

Hierarchy	ZHIER_FROMFILE / 20171231 / 20170101 / Testing load fro
Adapter	Load Text-Type File from Local Workstation
File Name	\\\ctcnas001ac11\prsampa\$\Sync\Atividades\Project...
Header Rows to be Ignored	1
Character Set Settings	Default Setting
System Codepage	4103 UTF-16LE Unicode / ISO/IEC 10646

InfoObject: ZHIERTEST

Search Reset

Hierarchy						
Create Hierarchy		Display Hierarchy		Edit Hierarchy		
Short description	Hierarchy name	InfoObject	Hierarchy version	Version	Valid from	To
Testing Hier 1	ZTEST1	ZHIERTEST		Active	01.01.1000	31.12.2016
Testing Hier 1	ZTEST1	ZHIERTEST		Active	01.01.2017	31.12.9999
Testing load hier fr	ZHIER_FROMFILE	ZHIERTEST		Active	01.01.2016	31.12.2016
Testing load hier fr	ZHIER_FROMFILE	ZHIERTEST		Active	01.01.2017	31.12.2017

## Hierarchy

		InfoObject	Node Name
Testing load hier from file	Big Father	ZHIERTEST	00001
	Father 1	ZHIERTEST	00002
	Father 2	ZHIERTEST	00003
	Father 3	ZHIERTEST	00004
	Son 1	ZHIERTEST	00005
	Son 2	ZHIERTEST	00006
	Son 3	ZHIERTEST	00007

# Non-cumulative key figures

Friday, January 12, 2018 12:32

## Non-cumulative key figures

Reference:

<https://help.sap.com/viewer/107a6e8a38b74ede94c833ca3b7b6f51/1.0.6/en-US/4a245d6fb1160456e10000000a421937.html>

<https://assets.cdn.sap.com/sapcom/docs/2016/02/7656180b-617c-0010-82c7-eda71af511fa.pdf>

Example:

Key figure

General tab:

The screenshot shows the SAP Fiori interface for creating a key figure. The title bar says "[PH9] ZINVENT". The main area is titled "General: Key Figure ZINVENT". The "General" tab is selected, showing the following fields:

- Technical Name: ZINVENT
- Description: Non-cumulative Inventory
- Short Description: Non-cumulative Inventory

The "Dictionary" section includes:

- Key Figure Type: Quantity
- Data Type: QUAN - Quantity Field in BCD Format

The "Properties" section contains checked options:

- Non-Cumulative (checked)
- Attribute Only (unchecked)

The "Aggregation" section includes:

- Aggregation: Summation
- Exception Aggregation: Last value
- Referenced Characteristic: (empty)

The "Properties" section also includes:

- High Precision (unchecked)
- Stock Coverage (unchecked)
- Non-Cumulative (checked)
- Attribute Only (unchecked)

The "BI Clients" section includes:

- Display: Not Defined
- Description: Use short description
- Decimal Places: Not Defined

The "Currency/Unit" section includes:

- Fixed Unit: bbl (radio button selected)
- Unit InfoObject: (empty)

If you set the Non-Cumulative flag, the key figure becomes a non-cumulative key figure. You can then see and use the Non-Cumulative tab page.

Non-cumulative tab:

The screenshot shows the SAP Fiori interface for the Non-Cumulative tab of the key figure ZINVENT. The title bar says "[PH9] ZINVENT". The main area is titled "Non-Cumulative: Key Figure ZINVENT". The "Non-Cumulative" section includes:

- Inflow/Outflow: (radio button for Inflow is selected, Outflow is empty)
- Non-Cumulative Value Change: (radio button for Non-Cumulative Value Change is selected, value: ZINVCHNG)

1. You can enter a key figure that represents the non-cumulative change of the non-cumulative value. There do not have to be values for this key figure in every time unit. For the non-cumulative key figure, values are only stored for selected times (markers). The values for the remaining times are calculated from the value in a marker and the intermediary non-cumulative changes.
2. Alternatively, you can specify two key figures that represent the inflow and outflow of a non-cumulative value.

For non-cumulatives with non-cumulative change, or inflow and outflow, the two key figures themselves are not allowed to be non-cumulative values, but must represent cumulative values. They must be the same type (for example, amount, quantity) as the non-cumulative value.

## Use in aDSO

If you set the Inventory flag, you can use non-cumulative key figures in your DataStore object. You can then add non-cumulative key figures to the DataStore object (advanced) and define validity characteristics.

#### Prerequisites

The DataStore objects either has the properties:

- Activate/Compress Data and All Characteristics are Key, Reporting on Union of Inbound and Active Table or
- Activate/Compress Data und Write Change Log.

The reference points that is required for calculation of the non-cumulatives is updated with the change log data. The DataStore object must therefore have a change log. A key also must have been defined for the DataStore object. InfoObjects must be used as key figures, non-cumulative key figures and validity characteristics. Fields are not supported for this.

#### Procedure

##### General tab:

**General: ZADINVENT**

**DataStore Object (advanced)**

Technical Name: ZADINVENT  
Description: Non-cumulative Inventory  
 External SAP HANA View

**Modeling Properties**

**Activation:**

- Activate Data
- Write Change Log
- Keep Inbound Data, Extract from Inbound Table
- Unique Data Records
- Snapshot Support

**Special Types:**

- Direct Update
- All Characteristics are Key, Reporting on Union of Inbound and Active Table
- Inventory

The selected properties match template 'D...yer - data mart' and template 'Inventory'

If you select the Inventory flag on the General tab page, another tab page appears with the name Inventory.

#### Details tab:

##### Define fields

Name	InfoObject	Key	Type	Column Length	Aggregation	Criteria
[GROUP1]						
[OSOURSYSTEM] Source system ID	OSOURSY...	CHAR	2		NONE	
[OCALYEAR] Calendar Year	OCALYEAR	NUMC	4			
[OCALMONTH] Calendar Year/Mont	OCALMO...	NUMC	6			
[ZCCODE] Company Codes	ZCCODE	CHAR	4		NONE	
[ZMATNR] Material Master	ZMATNR	CHAR	18		NONE	
[ZINVCHNG] Inventory change	ZINVCHNG	QUAN	17		SUM	
[ZINVENT] Non-cumulative Invento	ZINVENT	QUAN	17		SUM	

**Details: ZADINVENT**

**Fields**

Add InfoObject...  
Add Field  
Add Group  
Delete  
Manage Keys...  
Maintain Properties...

You can now add a non-cumulative key figure. When the non-cumulative key figure is added, the key figure for non-cumulative changes, or the key figures for inflows and outflows, is/are also added to the DataStore object.

#### Inventory tab:

The most granular time characteristic is automatically set.

The time-reference characteristic is determined automatically if there is a valid time characteristic.

You can choose valid characteristics from the characteristics in the key, which are not time characteristics.

Example loads:

Set up Initial balance

Initial balance loaded from file

A	B	C	D	E	F	G
Source System	Year	Month	Company code	Material	Balance	
G3	2017	201710	119	111222	100	
G3	2017	201710	320	444888	100	
G3	2017	201710	320	666000	100	
G3	2017	201710	420	111222	100	
G3	2017	201710	420	666000	100	

If the extractor has setting Opening Balance set our DTP can be executed in Initialization mode:

After activation we will see the Initial stock in the Reference Point table /BIC/Axxx5:

Source system	ID	Company Codes	Material Master	R	Record Type	Calendar Year	Calendar Month	Inventory change
G3	0119	000000000000111222		1	0000	201710		100,000
G3	0320	000000000000444888		1	0000	201710		100,000
G3	0320	000000000000666000		1	0000	201710		100,000
G3	0420	000000000000111222		1	0000	201710		100,000
G3	0420	000000000000666000		1	0000	201710		100,000

While writing the initial stock balances into the inbound table, BW filled the technical field 'Record Type' (RECORDTP) with value '1'. Why was this done?

Non-cumulative advanced DSOs use the technical field 'Record Type' (RECORDTP) to differentiate between

- the so-called reference points with RECORDTP='1',

- records that are not yet (semantically) contained in the reference points with RECORDTP='0' and

- records that are already (semantically) contained in the reference points with RECORDTP='2'.

As you can see, the semantics of the record type is identical as compared to HANA-optimized InfoCubes in SAP BW 7.3x, 7.40 and 7.50 (see chapter 3.3.1).

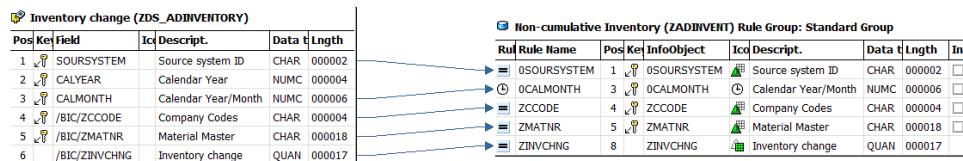
For advanced DSOs, reference points (RECORD\_TP='1') contain the initialization records i.e. the initial stock balances in our scenario. Unlike for InfoCubes, they are not stored for the fixed date 9999-12-31 (infinity) but for the date as provided in the data record.

## Delta movements

Movements loaded from file:

	A	B	C	D	E	F	G
1	Source System	Year	Month	Company code	Material	Change	
2	G3	2017	201712		119	111222	300
3	G3	2018	201801		119	111222	500
4	G3	2018	201802		119	111222	-200
5	G3	2018	201803		119	111222	50
5	G3	2017	201709		320	444888	1000
7	G3	2017	201711		320	444888	1500
3	G3	2018	201801		320	444888	-3000
9	G3	2018	201803		320	444888	500
0	G3	2018	201801		320	666000	5
1	G3	2018	201802		320	666000	35
2	G3	2017	201711		420	111222	300
3	G3	2018	201801		420	111222	600
4	G3	2018	201803		420	111222	900
5	G3	2018	201801		420	666000	12
6	G3	2018	201802		420	666000	37
7							

Delta changes are moved in to our cumulative key figure ZINVCHNG:



Load data with normal DTP:

**Display Data Transfer Process**

After activation our data in active table appears with record type 2:

**Data Browser: Table /BIC/AZADINVENT2 Select Entries 15**

Source system ID	Company Codes	Material Master	R	Record Type	Calendar Year	Calendar Month	Inventory change
G3	0119	000000000000111222	N	2	2017	201712	300,000
G3	0119	000000000000111222	N	2	2018	201801	500,000
G3	0119	000000000000111222	N	2	2018	201802	200,000-
G3	0119	000000000000111222	N	2	2018	201803	50,000
G3	0320	000000000000444888	N	2	2017	201709	1.000,000
G3	0320	000000000000444888	N	2	2017	201711	1.500,000
G3	0320	000000000000444888	N	2	2018	201801	3.000,000-
G3	0320	000000000000444888	N	2	2018	201803	500,000
G3	0320	000000000000666000	N	2	2018	201801	5,000
G3	0320	000000000000666000	N	2	2018	201802	35,000
G3	0420	000000000000111222	N	2	2017	201711	300,000
G3	0420	000000000000111222	N	2	2018	201801	600,000
G3	0420	000000000000111222	N	2	2018	201803	900,000
G3	0420	000000000000666000	N	2	2018	201801	12,000
G3	0420	000000000000666000	N	2	2018	201802	37,000

Also reference point table is updated with new markers:

**Data Browser: Table /BIC/AZADINVENT5 Select Entries 5**

Source system ID	Company Codes	Material Master	R	Record Type	Calendar Year	Calendar Month	Inventory change
G3	0119	000000000000111222		1	0000	201710	750,000
G3	0320	000000000000444888		1	0000	201710	100,000
G3	0320	000000000000666000		1	0000	201710	140,000
G3	0420	000000000000111222		1	0000	201710	1.900,000
G3	0420	000000000000666000		1	0000	201710	149,000

Create query with filter

<https://blogs.sap.com/2015/10/27/steps-to-consider-for-inventory-cubes-non-cumulative-during-bw-on-hana-migration/>

### Issue: Running the query does not produce values for the non-cumulative key figure:

Running the query in RSRT2 safe mode:

### Solution:

Incident opened to SAP:

32171 / 2018 Non-cumulative key figure shows no value in query on aDSO or CompositeProvider

Solution by SAP:

The master-data-table of OCALMONTH is inconsistent. Apply note 2608688 and after that call the transaction "rsrhierarchyvirt" and rebuild the master-data of the time-characteristics (as described in the note).

After applying solution the non-cumulative values show up, and are correct:

Eg. Running the query for 01/2018 we get all the inventory changes cumulatively. For G3/119/111222 we had inventory changes in 2017/12 (+300) and 2018/01(+500), also our initial balance was set as a 100. This gives us  $100+300+500=900$ .

**ZQ\_INVENTORY**

**Navigation Panel**

**Dimensions**

Search Dimensions

**Rows**

- Source syst...
- Company C...
- Material Ma...

**Columns**

- Key Figures

**Available Fields**

Calendar Month/Year is between 01.2016 and

Add Criteria To Exclude

Start Selection Clear Entries Reset to Default Save Selection As:

**DataGrid** Query Information

Sour...	Compa...	Material Master	Inventory change	Non-cumulative Inven...
G3	119	111222	500 bbl	900 bbl
		Result	500 bbl	900 bbl
		444888	-3.000 bbl	-400 bbl
		320	5 bbl	105 bbl
		Result	-2.995 bbl	-295 bbl
		111222	600 bbl	1.000 bbl
		420	12 bbl	112 bbl
Result	Result	612 bbl	1.112 bbl	
	Result	Result	-1.883 bbl	1.717 bbl
	Result	Result	-1.883 bbl	1.717 bbl

# Webdynpro

Tuesday, December 19, 2017 11:16 AM

Webdynpro in BW/4HANA is fully compatible with "classic BW". Below are the tests executed.

1 - As the first time using Webdynpro in PH9, I had to activate the necessary services into tcode SICF (you can find all necessary services into link below) [http://help.sap.com/saphelp\\_nw70ehp1/helpdata/en/46/d28dfa34bb12bee1000000a1553f7/content.htm](http://help.sap.com/saphelp_nw70ehp1/helpdata/en/46/d28dfa34bb12bee1000000a1553f7/content.htm)

Here is one example how to activate the services:

The screenshot shows the SAP Define Services interface. In the top left, there are two buttons: a green circle with a checkmark and a red square with a minus sign. A red box highlights the red minus sign button. Below these are filter fields for 'Hierarchy Type' (set to 'SERVICE'), 'Virtual Host', 'Service Path', 'Service Name', 'Reference Service', 'Description', and 'Language' (set to 'English').

In the middle section, there's a 'Filter Details' area with fields for 'Virtual Host' (empty), 'Service Path' (empty), 'ServiceName' (set to 'VIEWDESIGNER'), 'Description' (empty), and a 'Lang.' dropdown set to 'English'. Below this are 'Apply', 'Reset', and 'Fine-Tune' buttons. A red box highlights the 'Apply' button.

The main list area shows 'Virtual Hosts / Services' under 'default\_host/sap/public/bc/webdynpro'. A context menu is open over the 'ViewD...' entry, with a red box highlighting the 'Activate Service' option. The menu also includes 'New Sub-Element', 'Display Service', 'Delete Service', 'Rename Service', 'Deactivate Service', 'Test Service', 'References to Service', 'Obj. Directory Entry', 'Cut', 'Copy', and 'Paste'.

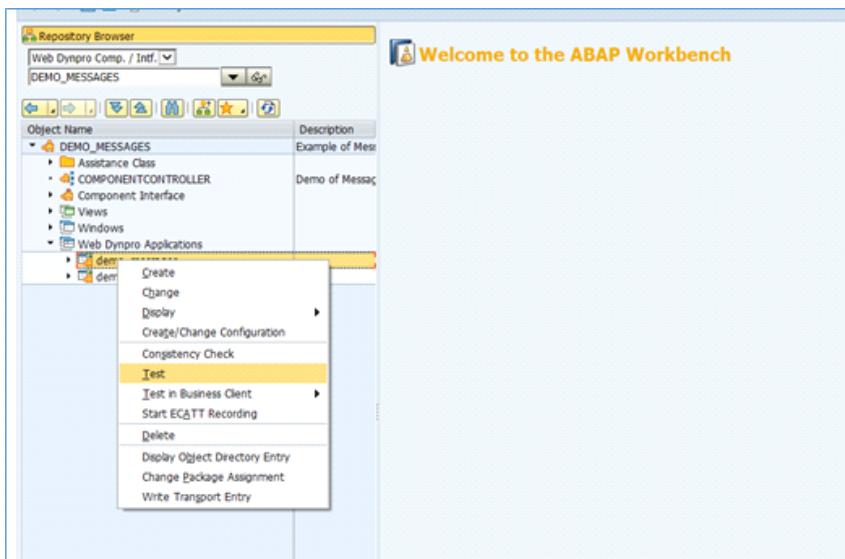
At the bottom, a detailed view of the 'webdynpro' node shows its sub-components: 'adobeChallenge', 'mimes', 'Polling', 'ssr', 'ViewDesigner', and 'webicons'. Each component has a brief description next to it.

2 – We had to ask Basis to create these entries in table HTTPURLLOC

Data Browser: Table HTTPURLLOC Select Entries 2						
	MANDT	SORT_KEY	PROTOCOL	APPLICATN	FOR_DOMAIN	HOST
	100	010	HTTPS	*	*	HOEPH9W1.NA.XOM.COM
	100	020	HTTP	*	*	HOEPH9W1.NA.XOM.COM

3 – Testing demo SAP webdynpro (Activate the service into SICF tcode)

Virtual Hosts / Services	Documentation	Reference Service
default_host	VIRTUAL DEFAULT HOST	
sap	SAP NAMESPACE; SAP IS OBLIGED NOT T...	
bc	BASIS TREE (BASIS FUNCTIONS)	
webdynpro	Web Dynpro (WD) Runtime	
sap	NAMESPACE SAP	
demo_messages	Example of the Message Display	



The screenshot shows a browser window with the URL [https://hoepht9w1.naxom.com/sap/bc/webdynpro/api/demo\\_messages?sap-language=EN#](https://hoepht9w1.naxom.com/sap/bc/webdynpro/api/demo_messages?sap-language=EN#). It displays an integer value of 0 and message categories: Success, Warning, Error, and Parameter error.

The screenshot shows a browser window with the URL [https://hoepht9w1.naxom.com/sap/bc/webdynpro/sap/demo\\_messages?sap-language=EN#](https://hoepht9w1.naxom.com/sap/bc/webdynpro/sap/demo_messages?sap-language=EN#). It displays an integer value of 0 and message categories: Success, Warning, Error, and Parameter error. A checkbox labeled 'Message Text Without Parameters' is checked.

#### 4 – Creating own Webdynpro application - Loading file into a Z table.

The screenshot shows the ABAP Workbench Repository Browser. The left pane displays a tree structure of objects under 'ZIP\_GENERIC\_FILE\_UPLOAD'. The right pane shows the 'File Upload' tab of the object's properties. It includes fields for 'File Name' and 'Upload File', and a message area: 'MessageArea: MESSAGE\_AREA'.

#### 5 – Created ZWEBDYNPROTEST table into SE11 to save the content from the file using Webdynpro

Transparent Table **ZWEBDYNPOTEST** Active  
Short Description Testing webdynpro reading file

Attributes Delivery and Maintenance Fields Input Help/Check Currency/Quantity Fields

**Fields**

Field	Key In...	Data element	Data Type	Length	Dec...	Short Description	Group
MANDT	<input checked="" type="checkbox"/>	MANDE	CLNT	3	0	Client	
FISCPER	<input checked="" type="checkbox"/>	/BIO/GIFISCPER	NUNC	7	0	Fiscal year / period	
FISCYEAR	<input type="checkbox"/>	/BIO/GIFISCTEAR	NUNC	4	0	Fiscal year	
FISCPER3	<input type="checkbox"/>	/BIO/GIFISCPER3	NUNC	3	0	Posting period	
VALUE	<input type="checkbox"/>	INTEGER	INT4	10	0	Whole Number with +/- Sign (-2.147.483.648 .. 2.147.483.647)	

6 – Created sample CSV file

Testing\_Ph9 - Notepad

```

File Edit Format View Help
Fiscal year,Fiscal year/period,Fiscal period,Value
2017,2017001,001,10
2017,2017002,002,15
2017,2017003,003,20
2017,2017004,004,25
2017,2017005,005,30
2017,2017006,006,12
2017,2017007,007,45
2017,2017008,008,14
2017,2017009,009,47
2017,2017010,010,84
2017,2017011,011,12
2017,2017012,012,9
2017,2017013,013,10
2017,2017014,014,15
2017,2017015,015,20
2017,2017016,016,25

```

7 – Executed the Upload using the Webdynpro test application

Data Browser: Table ZWEBDYNPOTEST: Selection Screen

Number of Entries

Fiscal year / period	<input type="text"/>
Fiscal year	<input type="text"/>
Posting period	<input type="text"/>
Integer	<input type="text"/>
Width of Output List	250
Maximum No. of Hits	200

**Display Number of Entries**

Number of entries that meet the selection criteria:  
0

Close

https://hoeph9w1naxom.com/sap/bc/webdynpro/sap/zip\_generic\_file\_upload?sap-language=EN#

### File Upload

Enter the selection criteria for your upload. This selection will be locked until you save or leave the file upload.

Enter the file name or "browse" to select the file.

File Name:  Browse...

Upload File  Reset DB Table

! Select a valid file

[https://hoeph9w1.sa.xom.com/sap/bc/webdynpro/sap/zip\\_generic\\_file\\_upload?sap-language=EN#](https://hoeph9w1.sa.xom.com/sap/bc/webdynpro/sap/zip_generic_file_upload?sap-language=EN#)

## File Upload

Enter the selection criteria for your upload. This selection will be locked until you save or leave the file upload.

Enter the file name or "browse" to select the file.

File Name:

[https://hoeph9w1.sa.xom.com/sap/bc/webdynpro/sap/zip\\_generic\\_file\\_upload?sap-language=EN#](https://hoeph9w1.sa.xom.com/sap/bc/webdynpro/sap/zip_generic_file_upload?sap-language=EN#)

## File Upload

Enter the selection criteria for your upload. This selection will be locked until you save or leave the file upload.

Enter the file name or "browse" to select the file.

File Name:

Data sucessfully saved

**Data Browser: Table ZWEBDYNPROTEST Select Entries 16**

Cl.	Fiscal year / period	Fiscal year	Posting period	Integer
100	2017001	2017	001	10
100	2017002	2017	002	15
100	2017003	2017	003	20
100	2017004	2017	004	25
100	2017005	2017	005	30
100	2017006	2017	006	12
100	2017007	2017	007	45
100	2017008	2017	008	14
100	2017009	2017	009	47
100	2017010	2017	010	84
100	2017011	2017	011	12
100	2017012	2017	012	9
100	2017013	2017	013	10
100	2017014	2017	014	15
100	2017015	2017	015	20
100	2017016	2017	016	25

[https://hoeph9w1.sa.xom.com/sap/bc/webdynpro/sap/zip\\_generic\\_file\\_upload?sap-language=EN#](https://hoeph9w1.sa.xom.com/sap/bc/webdynpro/sap/zip_generic_file_upload?sap-language=EN#)

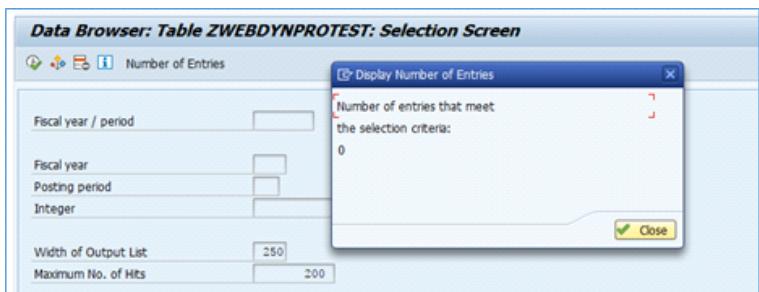
## File Upload

Enter the selection criteria for your upload. This selection will be locked until you save or leave the file upload.

Enter the file name or "browse" to select the file.

File Name:

Database table content cleaned



# Planning in BW/4HANA - License

Tuesday, February 6, 2018 4:21 PM

Check result to research below: all documents found confirmed that **BPC Embedded License is required to use planning in BW/4Hana.**

1 - According to SAP note 2343286, all kind of planning on BW4 requires the 'SAP BusinessObjects Planning and Consolidation, version for BW/4HANA' license  
<https://launchpad.support.sap.com/#/notes/2343286>

## Reason and Prerequisites

You have installed BW4HANA. Now you want to also leverage planning similar to Bw-IP, PAK or BPC on Netweaver.

You need to install also the BPC4HANA Addon. **All kind of planning on BW4 requires the 'SAP BusinessObjects Planning and Consolidation, version for BW/4HANA' license.**

Planning solutions based on BW-BPS are not supported in BW/4HANA and have to be migrated manually to a BPC embedded model.

2 - According to Detlef Wassmuth (advisor for SAP customers) on his blog: "The usage of planning model in BW/4Hana requires the BPC planning license".  
<https://blogs.sap.com/2018/01/25/many-roads-lead-to-sap-business-planning-and-consolidation-11.0-sap-bpc-11.0/>

## The Planning Models

The following planning models will be supported in SAP BW/4HANA and SAP BPC11.0:

	SAP BW ≤ SAP BW7.5x SAP BPC10.1	SAP BW/4HANA SAP BPC11.0
SAP BPS	✓	✗
SAP BW-IP	✓	✗
SAP BW-IP/PAK*	✓	✗
SAP BPC Standard Model*	✓	✓
SAP BPC Embedded Model*	✓	✓

\*The usage of this planning model requires the BPC planning license.

3 - According to document Simplification List for SAP BW/4HANA 1.0: "To use planning functionality with SAP BW/4HANA, you will need to install the SAP BPC add-on, version for SAP BW/4HNANA (page 72)"

[https://help.sap.com/doc/590752e646cc4b15a9092f32353b209a/1.0/en-US/SAP\\_BW4HANA\\_10\\_Simplification\\_List.pdf](https://help.sap.com/doc/590752e646cc4b15a9092f32353b209a/1.0/en-US/SAP_BW4HANA_10_Simplification_List.pdf)

### 3.7.3 BW4SL - Business Planning & Consolidation

#### SAP Note 2443189 - BW4SL - Business Planning & Consolidation

Version 2 from 2017-10-19

Component: BW-PLA-BPC - BPC 'embedded model'

Other Components: BW-PLA-IP

#### Description

Objects related to Business Planning & Consolidation functionality are not available with core SAP BW/4HANA.  
This includes:

- SAP BW Integrated Planning (BW-IP)
- Planning Application Kit (PAK)
- SAP Business Planning & Consolidation (embedded)
- SAP Business Planning & Consolidation (standard)

page 72

To use planning functionality with SAP BW/4HANA, you will need to install the SAP BPC add-on, version for SAP BW/4HNANA.

# Integrated Planning -Filters/functions/sequences

February 28, 2018 3:31 PM

IP functionalities in BW/4HANA works in the same way as for BW 7.4 or 7.4

## Aggregation level

- > Open ODS View
- > Aggregation Level
  - > [ZAGPLAN] Planning Cube - Aggregation level
  - > [ZAGTESTPR] Testing PRSAMPA Infocube-like
  - > [ZAGSTPR] Testing PRSAMPA Direct Update DSO
  - > [ZAG\_VKP] ZAG\_VKP
    - > Query
    - > Filter
      - [ZFL\_VKIP] Filter for ZAG\_VKP
  - > DataStore Object (advanced)
    - > [NDSO\_SO] NDSO Sales Order Prize
    - > [ZADINVENT] Non-cumulative Inventory
    - > [ZCDCTELMN] Cost Element
    - > [ZCOTEST2] Testing flat file load
    - > [ZCDTSHAP] Test HAP
    - > [ZCDVCA] Testing ADSO Arq.
    - > [ZPLANNING] Planning Cube - Test

**Output: ZAG\_VKP**

Provider Fields

Filter pattern

View Field Associated Object

- > [KEY FIGURES] KEY FIGURES
  - [4ZPMWHD-P-ACTUAL\_COST] ACTUAL\_COST [4ZPMWHD-P]
- > [NON\_KEY] Non-Key Fields
  - [OSOURSYSTEM] Source system ID [OSOURSYSTEM]
  - [ZCCODE] Company Codes [ZCCODE]
  - [OFISCVARNT] Fiscal year variant [OFISCVARNT]
  - [OFISCYEAR] Fiscal year [OFISCYEAR]
  - [4ZPMWHD-P-CURRENCY] Currency Key [4ZPMWHD-P]

General

Name: KEY FIGURES

Description: KEY FIGURES

## Planning Filter

- > Open ODS View
- > Aggregation Level
  - > [ZAGPLAN] Planning Cube - Aggregation level
  - > [ZAGTESTPR] Testing PRSAMPA Infocube-like
  - > [ZAGSTPR] Testing PRSAMPA Direct Update DSO
  - > [ZAG\_VKP] ZAG\_VKP
    - > Query
    - > Filter
      - [ZFL\_VKIP] Filter for ZAG\_VKP
  - > DataStore Object (advanced)
    - > [NDSO\_SO] NDSO Sales Order Prize
    - > [ZADINVENT] Non-cumulative Inventory
    - > [ZCDCTELMN] Cost Element
    - > [ZCOTEST2] Testing flat file load
    - > [ZCDTSHAP] Test HAP
    - > [ZCDVCA] Testing ADSO Arq.
    - > [ZPLANNING] Planning Cube - Test
    - > [ZPLANREF] Planning Reference
    - > [ZPMHORG3] PM WO Header - IPES
    - > [ZPMWOA] PM WO Actuals
    - > [ZPMWHD-P] PM WO HDR - Planning VKP
    - > [ZPMWHD-R] PM WO Header
    - > [ZPMWHD-R2] PM WO Header Copy
    - > [ZPMWHD-R3] ZPMWHD-R - TEST HARD DELETIONS
    - > [ZSALES\_VKP] ZSALES\_VKP
    - > [ZSDICMRC] SDI Data Mart
    - > [ZSDIMT] SDI Data Mart
      - [ZTESTPLAN] Testing Planning PRSAMPA - Infocube-like
      - [ZTMPIKTF] Testing non-cumulative KF
      - [ZTPSALES] Temp Open ODS view Sales
      - [ZTSTDOS] Test Open ODS View from Database Table
      - [ZTSTPLAN2] Testing Planning PRSAMPA - Direct update DSO
    - > Characteristic

**Filter: ZFL\_VKIP - Filter for ZAG\_VKP**

Properties

General

Technical Name: OFISCVARNT

Description: Fiscal year variant

Value Output Format

Display As: Text

Text Output Format: Standard

Sorting

Sorting Attribute: As in Query

Sort By: As in Query

Sort Direction: As in Query

Result Output Format

Show Result Rows: Always

Cumulate Values

Display Level

Display Characteristic: In Normal Overview

Extended

## Planning function:

**Display Planning Function Type ZFP\_VKP**

**Function Type** ZFP\_VKP  
**Description** Planning function TYPE vkp  
**Version** Active  
**Object Status** Active, executable

**Properties** **Parameter**

**General Data**  
Last Changed by VPRIMO  
Changed On 02.02.2018 05:58:23  
Person Respons.  
Content Release

**Implementation**  
Class ZCL\_VKP  
 Reference Data  
 Without Blocks  
 Process Empty Records  
 Hierarchy Nodes Selections Supported

**Characteristic Usage Display Interface**  
 Hide Column of Chars. To Be Changed

**Class Builder: Display Class ZCL\_VKP**

**Class/Interface** ZCL\_VKP Implemented / Active  
**Properties** **Interfaces** Friends Attributes Methods Events Types Aliases

Method	Level	Visibility	M... Description
IF_RSPLFA_SRVTYPE_IMP_EXEC_REF-INIT	Instance Method	Public	Initialization for Execution
IF_RSPLFA_SRVTYPE_IMP_EXEC_REF-GET	Instance Method	Public	Determine Selection for Reference Data
IF_RSPLFA_SRVTYPE_IMP_EXEC_REF-ADD	Instance Method	Public	Add New Blocks
IF_RSPLFA_SRVTYPE_IMP_EXEC_REF-EXEC	Instance Method	Public	Execution
IF_RSPLFA_SRVTYPE_IMP_EXEC_REF-FIN	Instance Method	Public	Actions at End of Execution
IF_RSPLFA_SRVTYPE_IMP_EXEC-INIT_EX	Instance Method	Public	Initialization for Execution
IF_RSPLFA_SRVTYPE_IMP_EXEC-EXECUTE	Instance Method	Public	Execution
IF_RSPLFA_SRVTYPE_IMP_EXEC-FINISH	Instance Method	Public	Actions at End of Execution

**Class Builder Class ZCL\_VKP Display**

```

Method IF_RSPLFA_SRVTYPE_IMP_EXEC_REF-EXECUTE Active
1   method IF_RSPLFA_SRVTYPE_IMP_EXEC_REF~EXECUTE.
2
3     DATA:
4       lt_ZPMWOHDP TYPE TABLE OF /BIC/AZPMWOHDP2,
5       ls_ZPMWOHDP LIKE LINE OF lt_ZPMWOHDP.
6
7     FIELD-SYMBOLS: <fs_ZPMWOHDP> TYPE ANY.
8
9     FIELD-SYMBOLS: <ZCODE>      TYPE any,
10    <SOURSYSTEM>  TYPE any,
11    <FISCYEAR>    TYPE any,
12    <FISCVARNT>  TYPE any,
13    <CURRENCY>   TYPE any,
14    <ACTUAL_COST> TYPE any.
15
16    REFRESH c_th_data.
17
18    LOOP AT i_th_ref_data ASSIGNING <fs_ZPMWOHDP>.
19
20      ASSIGN COMPONENT '4ZPMWOHDP-CURRENCY'  OF STRUCTURE <fs_ZPMWOHDP> TO <CURRENCY>.
21      ASSIGN COMPONENT 'OFISCVARNT'          OF STRUCTURE <fs_ZPMWOHDP> TO <FISCVARNT>.
22      ASSIGN COMPONENT 'ZCODE'              OF STRUCTURE <fs_ZPMWOHDP> TO <ZCODE>.
23      ASSIGN COMPONENT 'OSOURSYSTEM'        OF STRUCTURE <fs_ZPMWOHDP> TO <SOURSYSTEM>.
24      ASSIGN COMPONENT '4ZPMWOHDP-ACTUAL_COST' OF STRUCTURE <fs_ZPMWOHDP> TO <ACTUAL_COST>.
25
26      <ACTUAL_COST> = 10.
27
28      COLLECT <fs_ZPMWOHDP> INTO c_th_data.
29      MOVE <CURRENCY>      TO ls_ZPMWOHDP-CURRENCY.
30      MOVE <FISCVARNT>    TO ls_ZPMWOHDP-FISCVARNT.
31      MOVE <ZCODE>         TO ls_ZPMWOHDP-/BIC/ZCODE.
32      MOVE <SOURSYSTEM>   TO ls_ZPMWOHDP-SOURSYSTEM.
33
34      COLLECT ls_ZPMWOHDP INTO i_t_ZPMWOHDP.
35
36    ENDLOOP.
37
38    LOOP AT i_t_ZPMWOHDP INTO ls_ZPMWOHDP.
39    ls_ZPMWOHDP-ACTUAL_COST = 1.
40    COLLECT ls_ZPMWOHDP INTO c_th_data.
41
42  ENDLOOP.
43
endmethod.
```

Planning Sequence

**Display planning sequence**

Execute Planning Sequence Hide Application Log Save Planning Buffer Display Input Template

Planning Seq. ZPS\_VKP  
Description Planning sequence VKP InfoArea

Planning Sequen Trace

Step Type Type (Description) Level Aggregation Level (Description) Filter Filter (Description) Function Planning Function (Description)

1 2 Planning Function ZAG\_VKP ZAG\_VKP ZFL\_VKIP Filter for ZAG\_VKP ZPF\_VKP Function VKP

Ty. Message Text LTxt

Cache in database restricted to the application server  
179 records read, 0 generated, 179 changed, 0 deleted  
Function VKP executed without errors  
Planning sequence VKP executed without errors

This screenshot shows the SAP BW4HANA planning sequence display interface. At the top, there are navigation buttons and menu items: Execute Planning Sequence, Hide Application Log, Save Planning Buffer, and Display Input Template. Below this is a search bar with 'Planning Seq.' set to 'ZPS\_VKP' and 'Description' set to 'Planning sequence VKP'. A large central area displays a table titled 'Planning Sequen' with one row. The table columns are: Step, Type, Type (Description), Level, Aggregation Level (Description), Filter, Filter (Description), Function, and Planning Function (Description). The first row shows Step 1, Type 2, Type 'Planning Function', Level 'ZAG\_VKP', Aggregation Level 'ZAG\_VKP', Filter 'ZFL\_VKIP', Filter (Description) 'Filter for ZAG\_VKP', Function 'ZPF\_VKP', and Planning Function 'Function VKP'. At the bottom, a message log window titled 'Ty. Message Text' shows several entries: 'Cache in database restricted to the application server', '179 records read, 0 generated, 179 changed, 0 deleted', 'Function VKP executed without errors', and 'Planning sequence VKP executed without errors'. Each entry has a 'LTxt' column with three question mark icons.

# BPC - Integrated Planning - Introduction

Friday, January 26, 2018 11:23

## Introduction

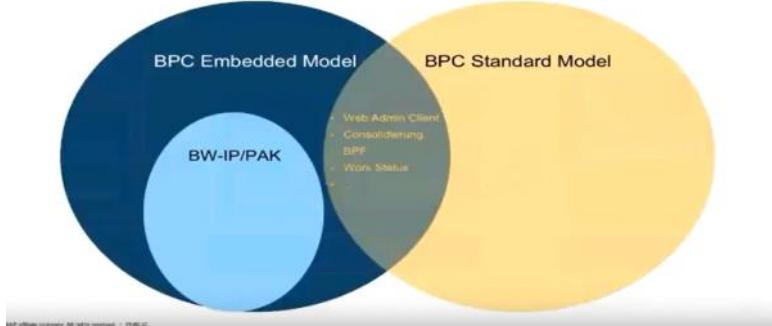
Integrated planning is a part of BPC(Business Planning and Consolidation) now. Specifically SAP Business Planning and Consolidation 11.0, version for SAP BW/4HANA also known as SAP BPC/4HANA version 1 (testing done on SP3).  
BW-BPS is no longer supported in BW4HANA.

Details:

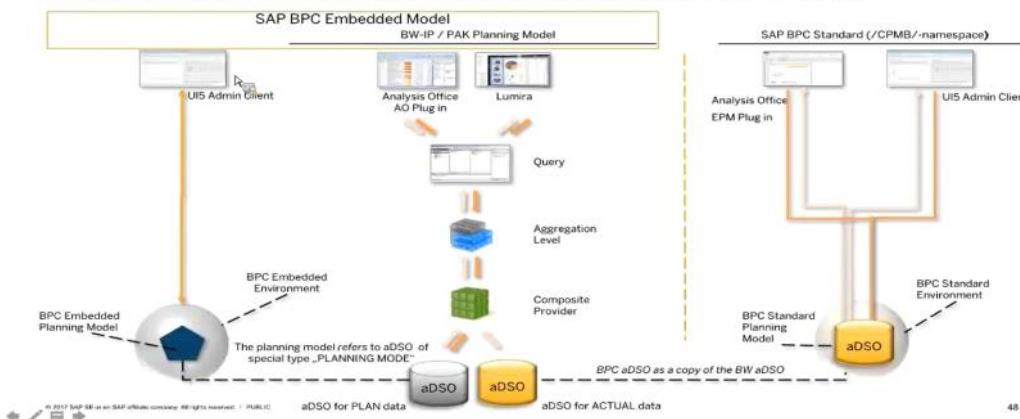
- 1.SAP BPC, version for SAP BW/4HANA is a brand new release of SAP BPC, it is not a successor to BPC
- 2.The 11.0 release offers Planning and Consolidation capabilities via the standard and embedded model. Much of it is based on functionality from BPC NW.
- 3.Due to the fact that it's BW/4HANA platform which leverages the SAP HANA database, BW-IP is no longer supported, and the BPC Standard model requires the SAP HANA platform

Source: <https://blogs.sap.com/2017/05/30/what-is-sap-business-planning-and-consolidation-11.0-version-for-sap-bw4hana/>

IP modelling as part of BPC:



## SAP BusinessObjects Planning and Consolidation Planning Models and their relationship in SAP BPC 11.0 version for SAP BW4/HANA



Planning concepts:

<https://help.sap.com/viewer/69ec98e0c0e54128a61c32f3255fa438/11.0.3/en-US/4ccb4ebeed80606be1000000a42189e.html>

## Creating a planning model in BW4HANA

### Creating a InfoProvider suitable for planning

You can use the following InfoProviders for this:

- DataStore object (advanced)
  - With the modeling property "All Characteristics are Key, Reporting on Union of Inbound and Active Table"
  - With the modeling property "Direct Update"

Example:

Check Planning mode checkbox

[PH9] ZPLANNING ::

**General: ZPLANNING**

Datastore Object (advanced)

Technical Name: ZPLANNING  
Description: Planning Cube - Test  
External SAP HANA View

**Modeling Properties**

Annotations

- Activate Data
- Write Change Log
- Keep Inbound Data Extract from Inbound Table
- Unique Data Record
- Snapshot Support

Source Type:

- InfoCube
- All Characteristics are Key, Reporting on Union of Inbound and Active Table
- Planning Mode

Identity

The selected properties match template Planning on InfoCube-like.

**Data Tiering Properties**

Data Tiering Optimization

Temperature Scheme

- Standard Tier (Hot)
- Intermediate Tier
- External Tier (Cold)

Temperature Maintenance

- On Object Level
- On Partition Level

[PH9] ZPLANNING ::

**Details: ZPLANNING**

**Fields**

Filter Pattern

Name	InfoObject	Key	Type	Column Length	Aggregation	Criteria
↳ [GROUP1]						
↳ [OSOURSYSTEM] Source system ID	OSOURSY...		CHAR	2		
↳ [OFISCYEAR] Fiscal year	OFISCYEAR		NUMC	4		
↳ [OFISCVARNT] Fiscal year variant	OFISCVAR...		CHAR	2		
↳ [ZCODE] Company Codes	ZCCODE		CHAR	4		
↳ [ZSERVICE] Service	ZSERVICE		CHAR	4		
↳ [ZAMT] AMOUNT	ZAMT		CURR	17	SUM	
↳ [OCURRENCY] Currency Key	OCURREN...		CUKY	5		

Loaded test data:

**Data Browser: Table /BIC/AZPLANNING2 Select Entries** 13

Source system ID	Fiscal Year	Variant	Fiscal year	Company Codes	Service	Currency R	AMOUNT
PC	K4		2016 0212	BUDG	EUR	N	100,00
PC	K4		2016 0212	FORE	EUR	N	200,00
PC	K4		2016 0212	PLAN	EUR	N	100,00
PC	K4		2016 0513	BUDG	EUR	N	100,00
PC	K4		2016 0513	FORE	EUR	N	200,00
PC	K4		2016 0513	PLAN	EUR	N	100,00
PC	K4		2017 0212	BUDG	EUR	N	100,00
PC	K4		2017 0212	FORE	EUR	N	200,00
PC	K4		2017 0212	PLAN	EUR	N	100,00
PC	K4		2017 0513	BUDG	EUR	N	100,00
PC	K4		2017 0513	FORE	EUR	N	200,00
PC	K4		2017 0513	PLAN	EUR	N	100,00
PC	K4		2017 0606	BUDG	EUR	N	666,00

### Creating an aggregation level

For a better overview, you can create an aggregation level for a B...

for a B...

for an InfoArea, the system pres...

**New Aggregation Level**

**Aggregation Level**

Create a new Aggregation Level

BW Project: \* PH9\_100\_EDMK

InfoArea: \* DEV\_TEMP\_EDMK

Add to Favorites

Name: \* ZAGPLAN

Description: Planning Cube - Aggregation level

InfoProvider: \* ZPLANNING

Copy From:

Output tab:

The following composite InfoProviders are suitable as the basis for aggregation levels:

- CompositeProviders that contain at least one basis InfoProvider that is suitable for planning. The participating InfoProvider s (including SAP HANA models) can only be assigned using a UNION.

#### Input-Ready Key Figures in Local CompositeProviders:

In the context menu for Additional Key Figures, choose Add New Input -Ready Key Figures.

Note that the following modeling types of CompositeProviders are not supported in BW Integrated Planning: •CompositeProviders in which at least one of the input-ready InfoProviders is assigned by JOIN.

- CompositeProviders that contain a local provider.
- CompositeProviders that contain navigation attributes that do not appear in all input-ready InfoProviders of the current model.

#### Creating reference DSO

Will be used to determine valid values for planning.

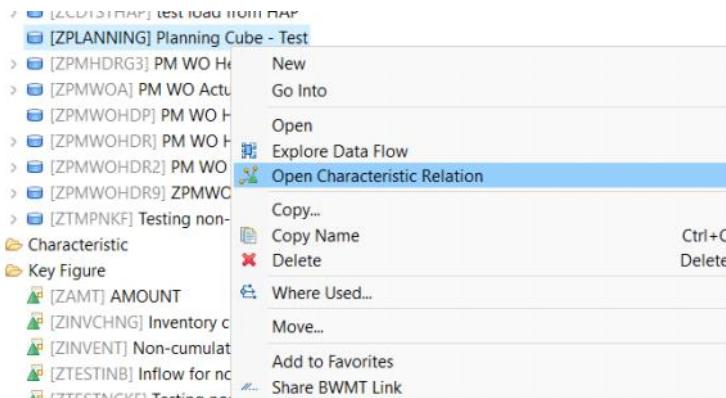
It cannot be a planning DSO.

Loading reference data

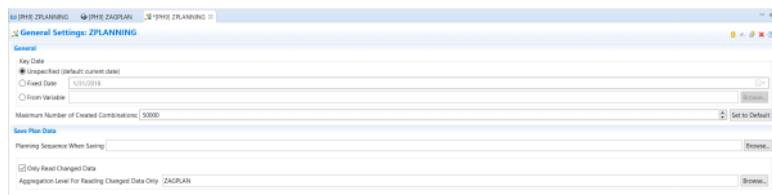
Data Browser: Table /BIC/AZPLANREF2 Select Entries 8

Source system ID	Fiscal year	Company Codes	Service R	AMOUNT	Currency
PC	2016 K4	0212	BUDG	N	100,00 EUR
PC	2016 K4	0212	PLAN	N	100,00 EUR
PC	2016 K4	0513	BUDG	N	100,00 EUR
PC	2016 K4	0513	PLAN	N	100,00 EUR
PC	2017 K4	0212	BUDG	N	100,00 EUR
PC	2017 K4	0212	PLAN	N	100,00 EUR
PC	2017 K4	0513	BUDG	N	100,00 EUR
PC	2017 K4	0513	PLAN	N	100,00 EUR

#### Creating Characteristic Relationships

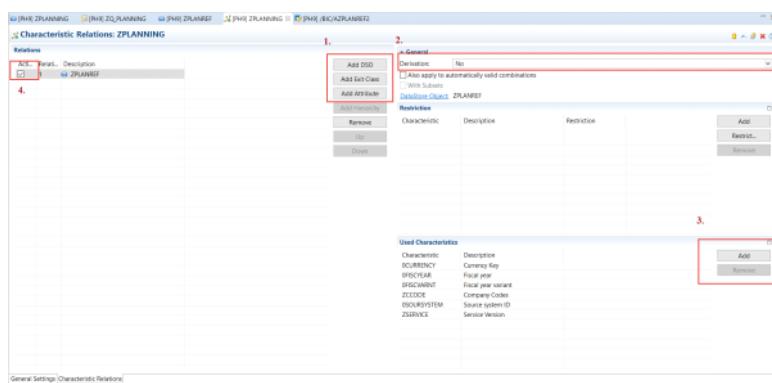


General tab:



- 1.Under Key Date, you can set a fixed date or variable as the key date, thus deviating from the default value.
- 2.In the Maximum Number of Created Combinations field, you can set the maximum number of combinations to be created by the system for the selected InfoProvider.
- 3.Under Save Plan Data, you can define whether the system checks the validity of the data of the selected InfoProvider with a planning sequence prior to saving, and what basis the changed data should be read on.
  - You can define whether or not the changed data should be processed. The Only Read Changed Data setting has an effect on performance.
  - In the Aggregation Level For Reading Changed Data Only field, you can specify which aggregation level is used to read the changed data. By pressing Browse, you can call input help for this setting.

Characteristic relations tab:



1. Add reference DSO
2. Set derivation
3. Add characteristics to be used for reference
4. Activate relation

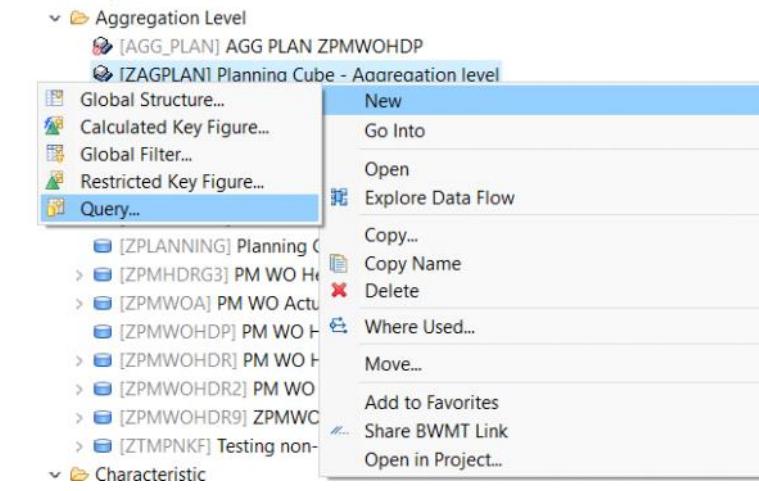
The following types of DataStore Objects are supported as the basis of a characteristic relationship:

DataStore Object (advanced), if the properties 'All Characteristics are Key, Reporting on Union of Inbound and Active Table' and 'Inventory' are not set. In addition, a unique key has to be defined.

Depending on your selection in the Derivation field, you can either select check characteristics in the Used Characteristics table or source and target characteristics in the Source and Target tables:

- If you have not selected a derivation, you can select check characteristics.
- If you have selected with derivation, you can select source and target characteristics, and move these between the tables either by pressing Add and Remove or by drag & drop.

**Creating Input-ready query**



New Query

### Query

Create a new Query

BW Project\*: PH9\_100\_EDMk

InfoProvider\*: ZAGPLAN

Show master data objects

Add to Favorites

Name\*: ZQ\_PLANNING

Description: Planning Cube - Test query

Copy From:

Set at least one key figure as Input-ready in the Planning properties

Set Start Query in Input Mode on the general tab:

You can also specify the disaggregation behavior (top-down distribution):

- No disaggregation
- Disaggregation of the specified value
- Disaggregation of the difference between the specified value and the original value

In the properties for a characteristic, you can specify the access type for result values. You have the following options:

- Posted values
- Characteristic relationships
- Master data

#### Testing functionality:

Load test data to planning cube:

**Data Browser: Table /BIC/AZPLANNING2 Select Entries 13**

Source system ID	Fiscal Year Variant	Fiscal year	Company Codes	Service Version	Currency	R	AMOUNT
PC	K4	2016 0212	BUDG	EUR	N	100,00	
PC	K4	2016 0212	FORE	EUR	N	200,00	
PC	K4	2016 0212	PLAN	EUR	N	100,00	
PC	K4	2016 0513	BUDG	EUR	N	100,00	
PC	K4	2016 0513	FORE	EUR	N	200,00	
PC	K4	2016 0513	PLAN	EUR	N	100,00	
PC	K4	2017 0212	BUDG	EUR	N	100,00	
PC	K4	2017 0212	FORE	EUR	N	200,00	
PC	K4	2017 0212	PLAN	EUR	N	100,00	
PC	K4	2017 0513	BUDG	EUR	N	100,00	
PC	K4	2017 0513	FORE	EUR	N	200,00	
PC	K4	2017 0513	PLAN	EUR	N	100,00	
PC	K4	2017 0606	BUDG	EUR	N	666,00	

Set to planning mode in management screen

Input-ready query did not seem to work in the HANA Studio/BW Data Preview (when clicking save, data is not saved).

Query run in RSRT produces the desired results (only the lines loaded into the reference DSO are input ready):

Source system ID	Fiscal Year Variant	Fiscal year	Company Codes	Service Version	Key Figures	Currency	Amount
PC	K4	2016	212	BUDG	100,00	EUR	
				PLAN	200,00		
				FORE	100,00		
		2017	212	BUDG	100,00	EUR	
				PLAN	200,00		
				FORE	100,00		
			513	BUDG	100,00	EUR	
				FORE	200,00		
				PLAN	100,00		
			606	BUDG	666,00	EUR	

Changing values then transferring/saving records:

Source system ID	Fiscal Year Variant	Fiscal year	Company Codes	Service Version	Key Figures	Currency	Amount
PC	K4	2016	212	BUDG	100,00	EUR	3 100,00
				FORE	200,00		2 100,00
				PLAN	200,00		2 100,00
		2017	212	BUDG	100,00	EUR	400,00
				FORE	200,00		300,00
			513	PLAN	2 000,00		2 000,00
				FORE	200,00		200,00
			606	BUDG	666,00	EUR	

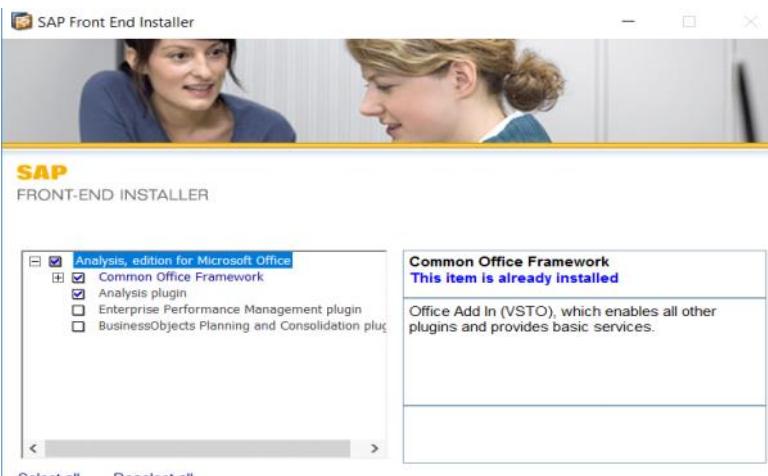
Results in data appearing in new request in DSO management:

Load Request	Activated	Activation Request	Act. Err.
{2018-02-02 07:54:10 000005 CST}	5	{not activated}	0
{2018-02-02 07:43:04 000001 CST}	13	{2018-02-02 07:43:19 000008 CST}	13

#### Embed input ready query into Analysis for Office

SAP Analysis for Office 2.4 SP03(onwards) is the Excel add-in for BPC for BW/4HANA. But to use the IP functionality you don't need to install the AOs BPC add-in, just the core modules.

The below packages are enough:



Input-readiness is correct:

Input-readiness is correct:																																																																																																																																																																																																							
Analysis ribbon																																																																																																																																																																																																							
<table border="1"> <thead> <tr> <th>A1</th><th>B</th><th>C</th><th>D</th><th>E</th><th>F</th><th>G</th><th>H</th><th>I</th><th>J</th></tr> </thead> <tbody> <tr> <td>1</td><td></td><td></td><td></td><td></td><td>AMOUNT</td><td></td><td></td><td></td><td></td></tr> <tr> <td>2</td><td></td><td></td><td></td><td></td><td>Currency</td><td></td><td></td><td></td><td></td></tr> <tr> <td>3</td><td>Source system ID</td><td>Fiscal Year Variant</td><td>Fiscal year</td><td>Company Codes</td><td>Service Version</td><td>EUR</td><td></td><td></td><td></td></tr> <tr> <td>4</td><td>PC</td><td>K4</td><td>2016</td><td>212</td><td>BUDG</td><td>3,100.00</td><td></td><td></td><td></td></tr> <tr> <td>5</td><td></td><td></td><td></td><td></td><td>FORE</td><td>200.00</td><td></td><td></td><td></td></tr> <tr> <td>6</td><td></td><td></td><td></td><td></td><td>PLAN</td><td>2,100.00</td><td></td><td></td><td></td></tr> <tr> <td>7</td><td></td><td></td><td></td><td>513</td><td>BUDG</td><td>100.00</td><td></td><td></td><td></td></tr> <tr> <td>8</td><td></td><td></td><td></td><td></td><td>FORE</td><td>200.00</td><td></td><td></td><td></td></tr> <tr> <td>9</td><td></td><td></td><td></td><td></td><td>PLAN</td><td>400.00</td><td></td><td></td><td></td></tr> <tr> <td>10</td><td></td><td></td><td>2017</td><td>212</td><td>BUDG</td><td>100.00</td><td></td><td></td><td></td></tr> <tr> <td>11</td><td></td><td></td><td></td><td></td><td>FORE</td><td>200.00</td><td></td><td></td><td></td></tr> <tr> <td>12</td><td></td><td></td><td></td><td></td><td>PLAN</td><td>300.00</td><td></td><td></td><td></td></tr> <tr> <td>13</td><td></td><td></td><td></td><td>513</td><td>BUDG</td><td>2,000.00</td><td></td><td></td><td></td></tr> <tr> <td>14</td><td></td><td></td><td></td><td></td><td>FORE</td><td>200.00</td><td></td><td></td><td></td></tr> <tr> <td>15</td><td></td><td></td><td></td><td></td><td>PLAN</td><td>100.00</td><td></td><td></td><td></td></tr> <tr> <td>16</td><td></td><td></td><td></td><td>606</td><td>BUDG</td><td>666.00</td><td></td><td></td><td></td></tr> <tr> <td>17</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td>18</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>										A1	B	C	D	E	F	G	H	I	J	1					AMOUNT					2					Currency					3	Source system ID	Fiscal Year Variant	Fiscal year	Company Codes	Service Version	EUR				4	PC	K4	2016	212	BUDG	3,100.00				5					FORE	200.00				6					PLAN	2,100.00				7				513	BUDG	100.00				8					FORE	200.00				9					PLAN	400.00				10			2017	212	BUDG	100.00				11					FORE	200.00				12					PLAN	300.00				13				513	BUDG	2,000.00				14					FORE	200.00				15					PLAN	100.00				16				606	BUDG	666.00				17										18									
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In AO 2.4 we have the option to turn on Planning related actions by customizing the ribbon in File -> Analysis -> Customize User Interface.

Results in data appearing in new request in DSO management:

**Manage DataStore Object ZPLANNING**

Planning Mode

DataStore Object (advanced) ZPLANNING Planning Cube - Test

Filter by Time from 01.01.2018 to 07.02.2018 Requests Displayed 3 of 3

Filter by Status

Request List Time Zone: CST Filter Activate Delete Find Hide Detail Show Connections

Load Load Request Loaded Load M | Act. Activation Request Act. Err.

Load	Load Request	Loaded	Load M   Act.	Activation Request	Act. Err.
✓ {2018-02-07 09:52:52 0000013 CST}	2		(not activated)	0	
✓ {2018-02-02 07:54:10 0000005 CST}	5		(2018-02-02 08:08:03 0000008 CST)	5	
✓ {2018-02-02 07:43:04 0000001 CST}	13		(2018-02-02 07:43:19 0000008 CST)	13	

Alternative option with VBA

Define macros for the planning actions:

```

(General)
Sub Save()
    lResult As Long
    lResult = Application.Run("SAPExecuteCommand", "PlanDataSave")
End Sub
Sub Display()
    Dim lResult As Long
    lResult = Application.Run("SAPExecuteCommand", "PlanDataToDisplayMode")
End Sub
Sub Change()
    Dim lResult As Long
    lResult = Application.Run("SAPExecuteCommand", "PlanDataToEditMode")
End Sub
Sub Reset()
    Dim lResult As Long
    lResult = Application.Run("SAPExecuteCommand", "PlanDataReset")
End Sub

```

Add buttons and assign macros:

A	B	C	D	E	F	G	H	I
				AMOUNT				
				Currency	Euro			
3	Source system ID	Fiscal Year Variant	Fiscal year	Company Codes	Service Version	EUR		
1	PC	K4	2016	212	BUDG	3,100.00		
5				FORE		200.00		
7				PLAN		2,100.00		
3				513	BUDG	100.00		
3				FORE		200.00		
3				PLAN		4,000.00		
0					BUDG	1,000.00		
1			2017	212				
1				FORE		200.00		
2				PLAN		3,000.00		
3				513	BUDG	2,000.00		
4				FORE		200.00		
5				PLAN		1,000.00		
6				606	BUDG	666.00		
7								
8								
9								
0								
1								
2								
3								

Buttons on the right:

- Display
- Change
- Reset
- Save

Result: data can be manipulated with the help of macros as well:

**Manage DataStore Object ZPLANNING**

Planning Mode

DataStore Object (advanced) ZPLANNING Planning Cube - Test

Filter by Time from 01.01.2018 to 08.02.2018 Requests Displayed 5 of

Filter by Status

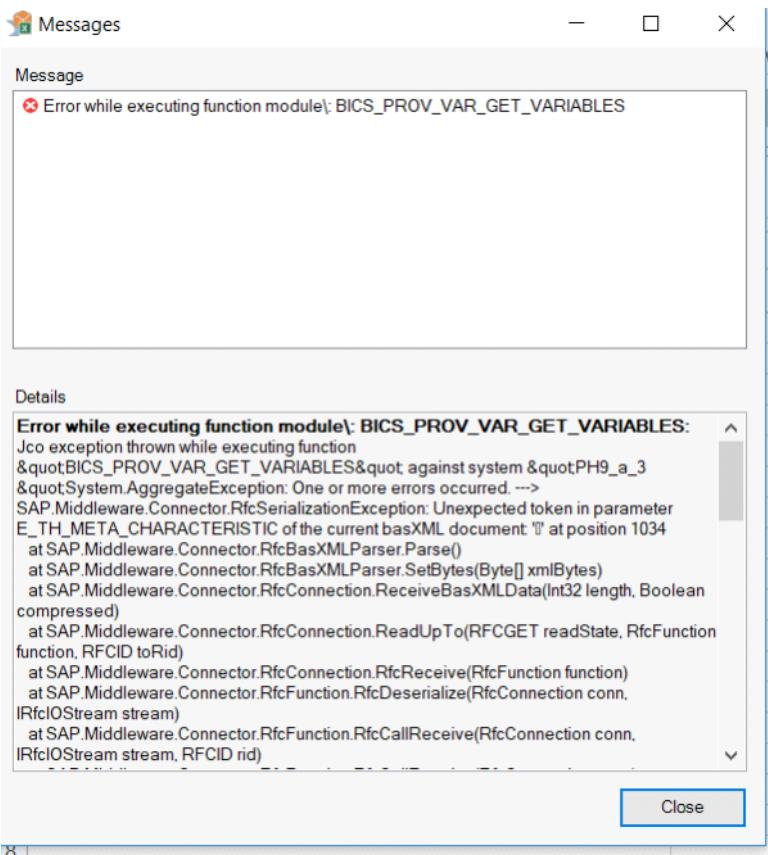
Request List Time Zone: CST Filter Activate Delete Find Hide Detail Show Connections

Load	Load Request	Loaded	Load M	Act.	Activation Request	Act. Err.
✓	{2018-02-08 05:08:03 0000017 CST}	1			{not activated}	0
✓	{2018-02-08 04:10:56 0000008 CST}	1				0
✓	{2018-02-07 09:52:52 0000013 CST}	2				0
✓	{2018-02-02 07:54:10 0000005 CST}	5			{2018-02-02 08:08:03 0000008 CST}	5
✓	{2018-02-02 07:43:04 0000001 CST}	13			{2018-02-02 07:43:19 0000008 CST}	13

## Issues

Issue 1:

Error while running different queries. Issue appeared after the BPC4HANA add-on was installed on PH9.



Error unrelated to AO version based on note:  
2426952 - Error Provider Selection Object: Initialization Issue

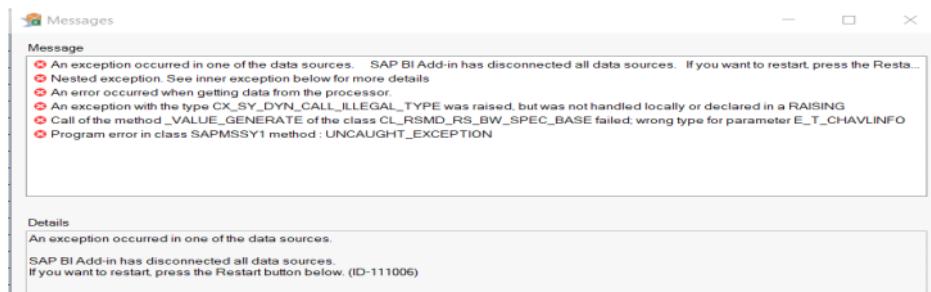
#### Resolution:

Delete the cache files from below directory for all users on affected computers  
"C:\Users\<USER\_ID>\AppData\Roaming\SAP AG\SAP BusinessObjects Advanced Analysis\cache"

#### Issues 2:

When trying to add new lines to the Infoprovider we get error:

A	B	C	D	E	F	G
Source system ID	Fiscal Year Variant	Fiscal year	Company Codes	Currency	Service Version	AMOUNT
PC	K4	2016	212	BUDG	3,100.00	
				FORE	200.00	
				PLAN	2,100.00	
			513	BUDG	100.00	
				FORE	200.00	
				PLAN	4,000.00	
		2017	212	BUDG	1,000.00	
				FORE	200.00	
				PLAN	300.00	
			513	BUDG	2,000.00	
				FORE	200.00	
				PLAN	100.00	
			606	BUDG	666.00	
PC	K4	K4/2016	PC/213	PLAN	1050	
PC	K4	K4/2017	PC/213	PLAN	2050	



Error related to below note:

					Currency	AMOUNT
Source system ID	Fiscal Year Variant	Fiscal year	Company Codes	Service Version	EUR	Euro
PC	K4	2016	212	BUDG	3,100.00	
				FORE	200.00	
			513	PLAN	2,100.00	
				BUDG	3,001.00	
				FORE	200.00	
				PLAN	45,000.00	
		2017	212	BUDG	1,000.00	
				FORE	200.00	
			513	PLAN	3,000.00	
				BUDG	2,000.00	
				FORE	200.00	
			606	PLAN	1,000.00	
				BUDG	666.00	
PC	K4	K4/2017	PC/606	PLAN	45000	
	(?)					

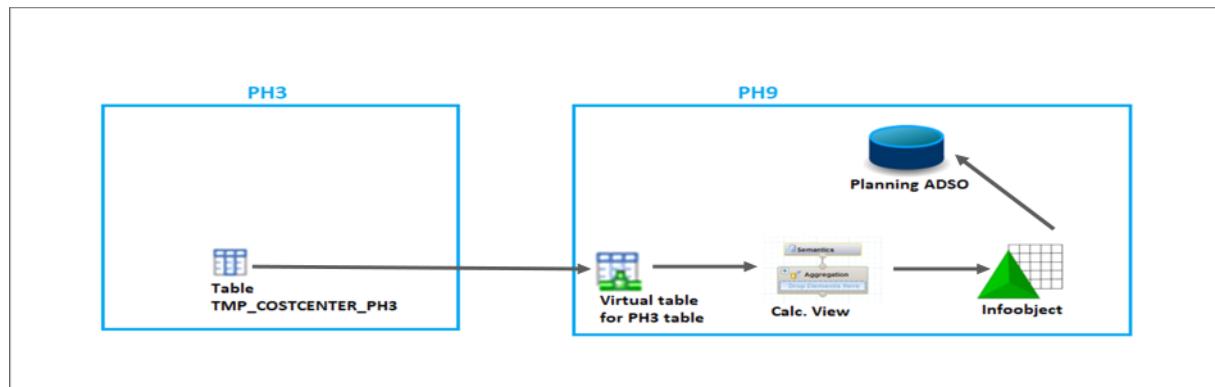
Active table:

Data Browser: Table /BIC/AZPLANNING2 Select Entries 14						
<b>Source system ID</b> Fiscal Year Variant Fiscal year Company Codes Service Currency R AMOUNT						
PC	K4	2016 0212	BUDG	EUR	3.100,00	
PC	K4	2016 0212	FORE	EUR	N 200,00	
PC	K4	2016 0212	PLAN	EUR	2.100,00	
PC	K4	2016 0513	BUDG	EUR	3.001,00	
PC	K4	2016 0513	FORE	EUR	N 200,00	
PC	K4	2016 0513	PLAN	EUR	45.000,00	
PC	K4	2017 0212	BUDG	EUR	1.000,00	
PC	K4	2017 0212	FORE	EUR	N 200,00	
PC	K4	2017 0212	PLAN	EUR	3.000,00	
PC	K4	2017 0513	BUDG	EUR	2.000,00	
PC	K4	2017 0513	FORE	EUR	N 200,00	
PC	K4	2017 0513	PLAN	EUR	1.000,00	
PC	K4	2017 0606	BUDG	EUR	N 666,00	
PC	K4	2017 0606	PLAN	EUR	N 45.000,00	

## Planning using virtualized table

Friday, May 11, 2018 4:56 PM

The idea of this test is to verify if we can use Hana native table as master data for plan and also if it can be a virtualized table.

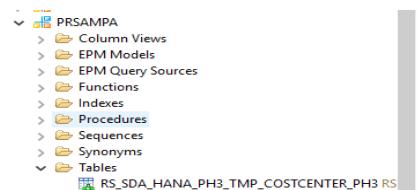
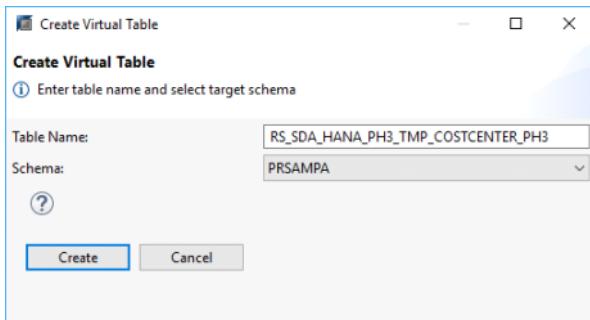


### 1 - Create table TMP\_COSTCENTER\_PH3 into PH3

COSCENTER	CO_AREA	SOURSYSTEM	DESCRIPTION
00210A	2002	P3	SANTA YNEZ UNIT GROUP
5270027600	EM01	P3	operations
5273001200	EM01	P3	em above field
012TEST12	EM01	P3	Testing PH3 Virtualizing table
E2731CR063	AM01	P3	Exploration Admin General
E2732PAC01	AM01	P3	PACUMA EXPLORATION ADMIN AFF/V...
0127520CA	CAN1	P3	HEBRON DRILLING 4597

### 2 - Create remote source to PH3 into PH9

### 3 - Add table TMP\_COSTCENTER\_PH3 as Virtual table into PH9 using Remote Source connection



4 - Create calculation view to project the virtual table

Type	Key	Name	Label	Aggregation
	RB	COSCENTER	COSCENTER	
	RB	CO_AREA	CO_AREA	
	RB	SOURSYSTEM	SOURSYSTEM	
	RB	DESCRIPTION	DESCRIPTION	

5 - Create your infoobject that will be used as master data for your planning scenery

6 - Go to Master Data/Texts tab and change the Access type to SAP Hana View. Into details you can assign your Calculation View to the infoobject and create the mapping between infoobject attributes x Calculation View columns.

**Master Data/Texts: Characteristic ZUOVIRTCC**

**Read Access**

Access Type: SAP HANA View

**Configure Authorization**

Master Data Maintenance with Authorization Check

**Edit Read Access Properties of Master Data**

Read Access Type: SAP HANA View

SAP HANA Package: dev\_temp.PRSAMPA

SAP HANA View: CA\_VIRTPH3\_COSTCENTER\_MD

Name	Category	SAP HANA View Field
[ZUOVIRTCC] Virtualized Cost Center from	InfoObject	COSCENTER
[DSOURSYSTEM] Source system ID	Compounding	SOURSYSTEM
[CO_AREA] Controlling Area	Attribute	CO_AREA
[1TXTLG] 1TXTLG	Text	DESCRIPTION

OK Cancel

7 - After that you can use your infoobject into your planning modeling and it will work fine reading data from the remote system: Planning DSO --> Aggregation Level --> Planning query.

**Details: ZADVRTPLN**

**Fields**

Filter Pattern

Name	Key	Type	Length/ Precision:Scale	Aggregation	Criteria	InfoObject	Action Buttons
[CHAR]							Add InfoObjects... Add Field Add Group Remove Manage Keys... Maintain Properties...
[DSOURSYSTEM] Source system ID	1	CHAR	2			OS	
[0FISCVARNT] Fiscal year variant	2	CHAR	2			OF	
[0FISCPER] Fiscal year / period	3	NUMC	7			OF	
[ZCCODE] Company Codes	4	CHAR	4			ZC	
[ZUOVIRTCC] Virtualized Cost Center from PH3	5	CHAR	10			ZU	
[KF]							
[0CURRENCY] Currency Key	6	CUKY	5			OC	
[ZAMT] AMOUNT		CURR	17:2	SUM		ZA	

**DP\_1 ZUQ\_ZAGVRPLN\_001**

**Information on Query**

**Query Planning query to test Virtual MD**

Up-to-Dateness of Data: 11.05.2018 15:23:22 CST

**Key Figures**

Source system ID	Virtualized Cost Cen	Key Figures	AMOUNT
P3	00210A	SANTA YNEZ UNIT GROUP	\$
	0127520CA	HEBRON DRILLING 4597	\$
	012TEST12	Testing PH3 Virtualizing table	\$
	S270027600	operations	\$
	S273001200	em above field	\$
	E2731CR063	Exploration Admin General	\$
	E2732PAC01	PACUMA EXPLORATION ADMIN AFF/VENTURE	\$

# Planning using MD

Friday, May 25, 2018 3:12 PM

Now we are able to create input queries direct into Master Data allowing users to maintain the master data by themselves instead of create flat file loads or create any ABAP logic to allow that.

- 1 – Create your infoobject and set the flag “Planning mode”

**General**

Technical Name: ZPLNMD  
Description: Test Planning Master Data - Cost Center  
Short Description: Test Plan MD CC

External SAP HANA View for Master Data  
 External SAP HANA View for Reporting

**Dictionary**

Data Type: CHAR - Character String  
Length: 10  
Output Length: 10  
Conversion Routine: ALPHA

High Cardinality  
 Case-Sensitive

**Properties**

Master Data  
 Texts  
 Enhanced Master Data Update  
 Hierarchies  
 Usable as InfoProvider  
 Planning Mode [Characteristic Relations](#) [Data Slices](#)  
 Authorization-Relevant  
 Attribute Only

**Compoundings (1)**

Superior Characteristic	Referenced Characteristic	Constant Value	Data Type	Length
[OCO_AREA] Controlling Area			CHAR	4

- 2 – Create an aggregation level on top of your infoobject and you will see that all texts, attributes and time-dependents fields will be added as characteristics like key-figures.

**Output: ZAGPLMD**

**Provider Fields**

Filter pattern

View Field

- [KEY] Key Part
  - [OCO\_AREA] Controlling Area
  - [ZPLNMD] Test Planning Master Data - Cost Center
- [DATA] Attributes
  - [1KYF\_0SOURSYSTEM] Source system ID
  - [1KYF\_1DATEFROM] Valid from
  - [1KYF\_1DATETO] Valid to
  - [1KYF\_1TXTMD] Medium description
  - [1KYF\_1TXTSH] Short description
  - [1KYF\_ZCCODE] Company Codes

Associated Object

- [OCO AREA]
- [ZPLNMD]
- [1KYF\_0SOURSYSTEM]
- [1KYF\_1DATEFROM]
- [1KYF\_1DATETO]
- [1KYF\_1TXTMD]
- [1KYF\_1TXTSH]
- [1KYF\_ZCCODE]

**General**

Field Type: Key Figure  
Name: 1KYF\_1TXTSH  
Description: Short description

**Association**

With: InfoObject 1KYF\_1TXTSH  
 Usage of System-Wide Unique Name:  
 Direct Usage of Associated Object by Name: 1KYF\_1TXTSH

**Data Type**

Integral Number

**Key Figure-Specific Properties**

Aggregation: No aggregation (X = if more than one value)  
 Currency Element:  
 Fixed Currency:

**Reporting Properties**

Decimal Places: Not Defined  
Display: Not Defined

- 3 – Create an input query on top of it and you will be able to change / create new entries for your infoobject master data table.

Query Testing planning master data      Up-to-Dateness of Data: 25.05.2018 11:52:16 CST

The screenshot shows a SAP BW4HANA query interface. At the top, there's a toolbar with various icons: Refresh, Swap Axes, Documents, Conditions, Exceptions, Dynamic Selections, Bookmark, Transfer Values, Save Values, Discard Entries, Planning, and Help. To the right of the toolbar, it says "Up-to-Dateness of Data: 25.05.2018 11:52:16 CST". Below the toolbar is a header row with columns: Key Figures, Short description, Medium description, Source system ID, Company Codes, Valid from, and Valid to. A secondary header row shows Controlling Area, Test Plan MD CC, and other fields. The main data table has rows for AM01, EM01, and a blank row. The first two rows contain data such as E7702STB00, GUYANA FUTU, G3, etc. The last row is mostly blank with some '#'. At the bottom, there are navigation controls for Row (1, -4, 4) and Column (1, -6, 6).

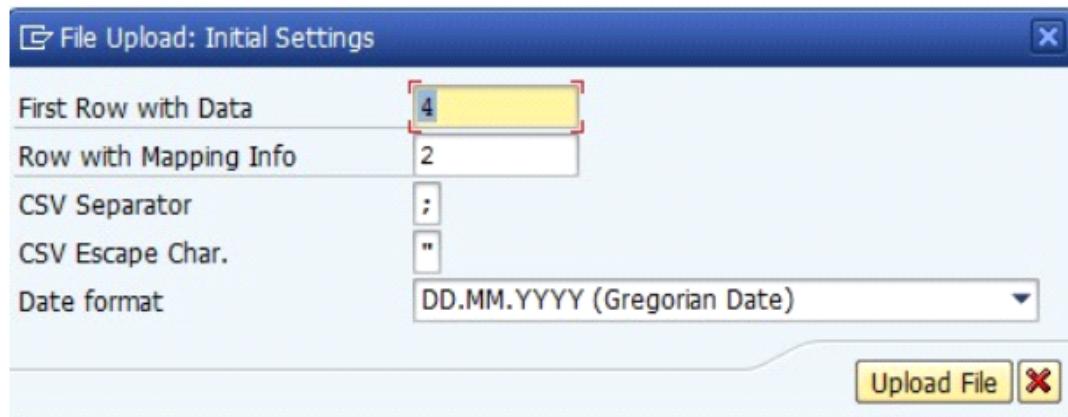
Testing planning master data							Up-to-Dateness of Data: 25.05.2018 11:52:16 CST	
Key Figures		Short description	Medium description	Source system ID	Company Codes	Valid from	Up-to-Dateness of Data: 25.05.2018 11:52:16 CST	
Controlling Area		Test Plan MD CC						
AM01	AM01	E7702STB00	GUYANA FUTU	G3	G3/0156	01.01.1000	31.12.9999	
EM01	EM01	5270037300	Statfjord Opera	G3	G3/0119	01.01.1000	31.12.9999	
#	Not assigned	#	#	#	#/#	01.01.1000	31.12.9999	

# Planning - File Upload

Monday, June 25, 2018 9:36 AM

New planning function provided by SAP to File Upload using Planning Modeling.  
When you execute a planning function of type “0RSPL\_FILE\_UPLOAD\_AO” a pop up will come to upload the data file.

This we ship with B/4HANA SP08 and Analysis Office 2.7. It can be also used with NW BW 12 or with note 2621959 from 7.50 SP6 onwards.



The interface has a blue header bar with the title 'Display Planning Function ZJS\_KURS\_UPLOAD\_NEW'. Below the header are two main sections:

- File Settings**:
  - 'File Separator': ';'.
  - 'Escape Character': '".'
  - 'Date Format': 'DD.MM.YYYY (Gregorian Da...)'.
  - 'Decimal Notation': '123.456,78'.
  - 'Start Line': '4'.
- Map InfoObjects to File Columns**:
  - 'Map from Header Line': '2'.

Below these sections is a toolbar with icons for Create, Copy, Delete, and navigation. At the bottom are tabs: 'Position in File', 'Details', 'InfoObject Name', and 'Details'.

## Analysis

By Data Source       By Sheet

Book1

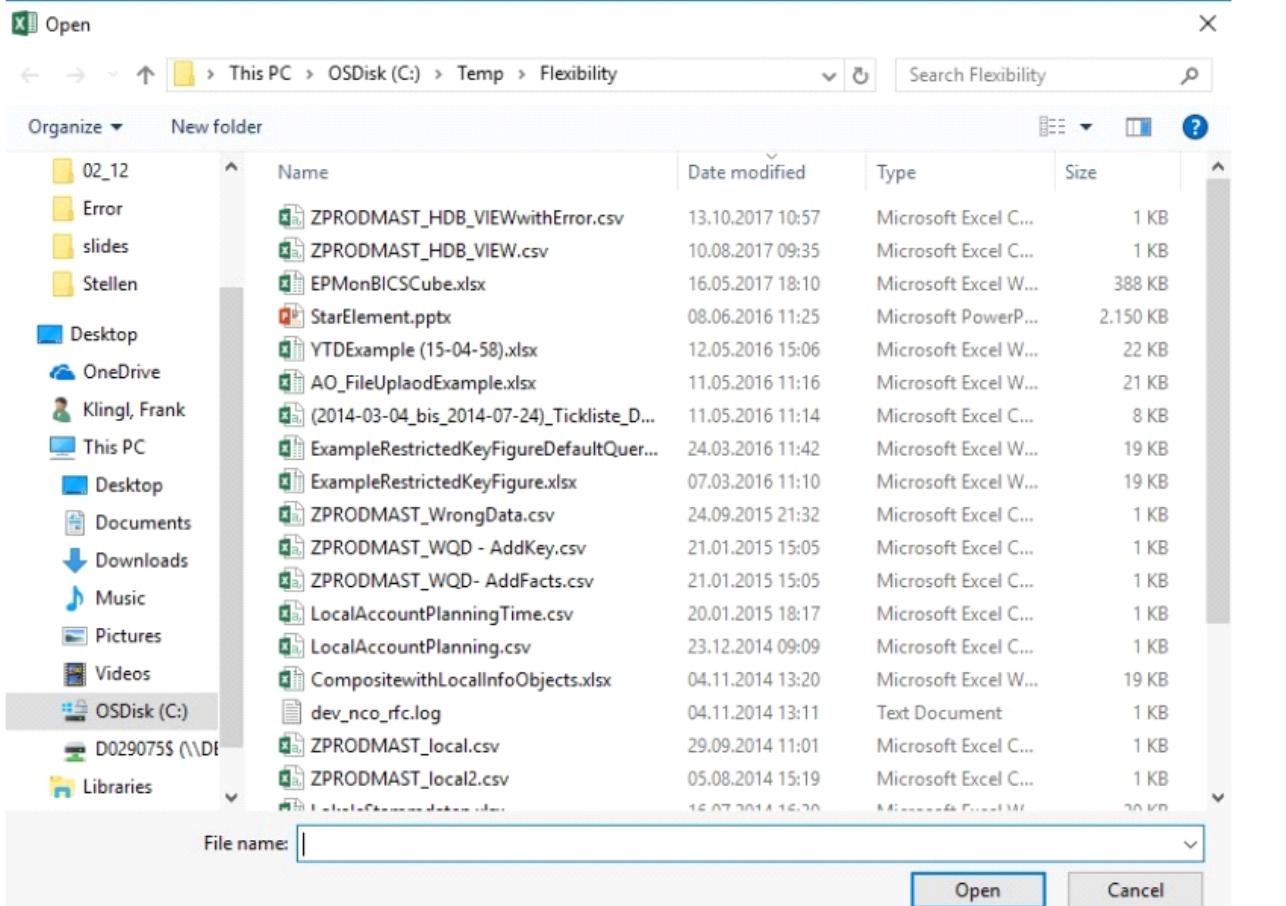
Planning Objects

sample ps for testing - TK [PS\_2]

ZTK\_FILE\_UP[PF\_11]

Execute Planning Function

Delete



# Deep copy and new lines

Monday, June 25, 2018 9:56 AM

- New lines on any level

An input enabled query can now have free characteristics which are in the aggregation level but not in the drill down. Only units and 0INFOPROV have to be drilled down or specified in the restriction. The values in new lines will be disaggregated. The disaggregation is then done equally on master data or characteristic relationships within the fixed filter

The screenshot shows the 'Output Settings' dialog in SAP BW. It includes sections for 'Output Settings', 'Result Location', 'Zero Suppression', 'Universal Display Hierarchy', and 'Planning'. The 'Planning' section contains checkboxes for 'Start Query in Input Mode', 'Symmetrical Calculation Mode', 'New Lines on any Level', and 'Always disaggregate unposted'. The last two checkboxes are highlighted with a red box.

## Deep copy of planning sequences

Very often, during error situations it is use full to do a deep copy of the scenario and make it then smaller. For Planning sequences, we now introduced this possibility with a report. All used objects like functions, filter and variants can be copied.

The screenshot shows the 'Deep Copy Planning Sequence' dialog. It displays a template 'OBICS\_PS\_005' and its copy 'OBICS\_PS\_005 (PF OBICS\_ACTFF)'. Under 'Copy Functions', 'Copy Filters', and 'Copy Variants', checkboxes are checked. In the 'Name: Prefix or Postfix' field, 'CP\_' is entered. In the 'Text: Prefix or Postfix' field, 'Copy of' is selected. Below these fields are 'Prefix or Postfix' and 'Deep\_Copy' buttons. At the bottom, there is a table titled 'Elements of Planning Sequence' with columns: DO\_CO..., ELEM\_TYPE, NAME, TEXT, NEW\_NAME, and NEW\_TEXT. Two rows are shown: one for 'FLTR' with value 'OBICSAG00\_EMPTY' and another for 'FUNC' with value 'OBICS\_ACTFF'. The 'NEW\_NAME' column shows 'ZCP\_0BICSAG00\_EM...' and 'ZCP\_0BICS\_ACTFF' respectively, with a note 'Copy of OBICSAG00\_EMPTY' and 'Copy of OBICSP01T copy ACTUAL to OBICSFIREFLY'.

# Process chains and monitoring

Thursday, November 16, 2017 15:51

To create a process chain we need to sign in to PH9 with SAP GUI and create the chains from backend.

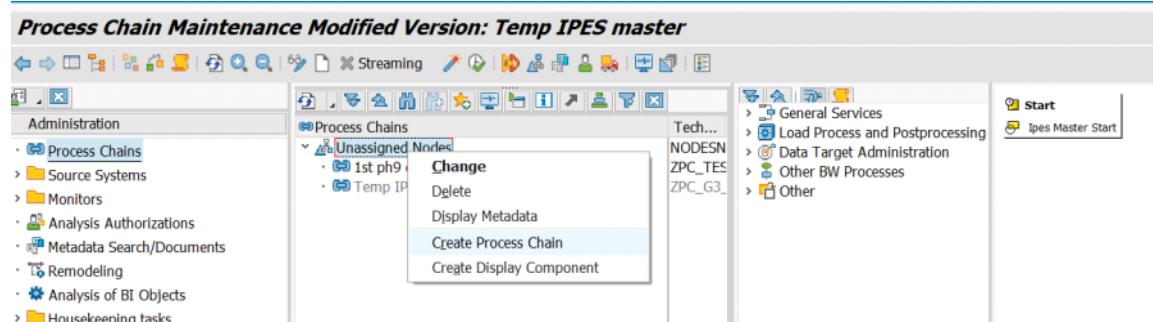
## Create process chain:

1. In administrative workbench (RSA1) click Process chain

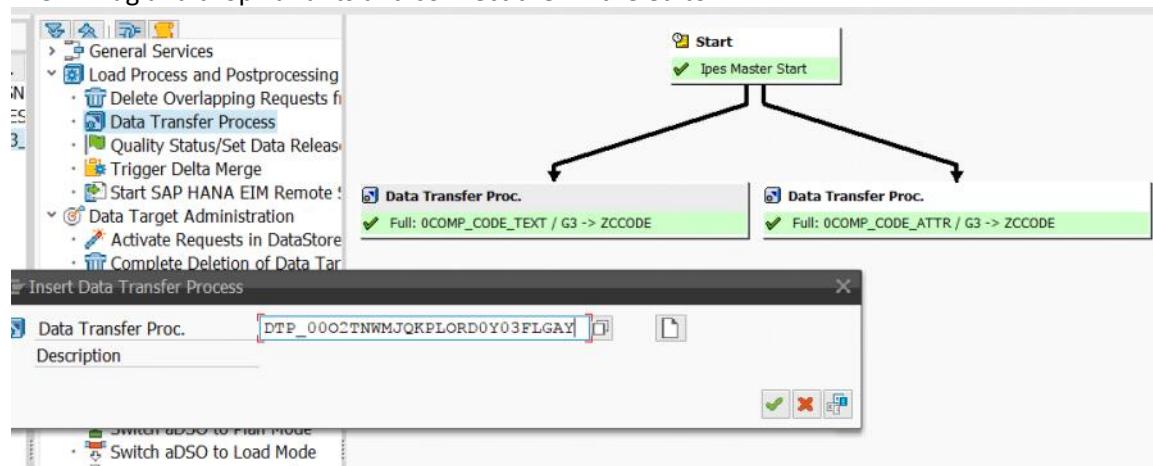
OR

Tcode: RSPC

2. Right click node -> Create Process Chain

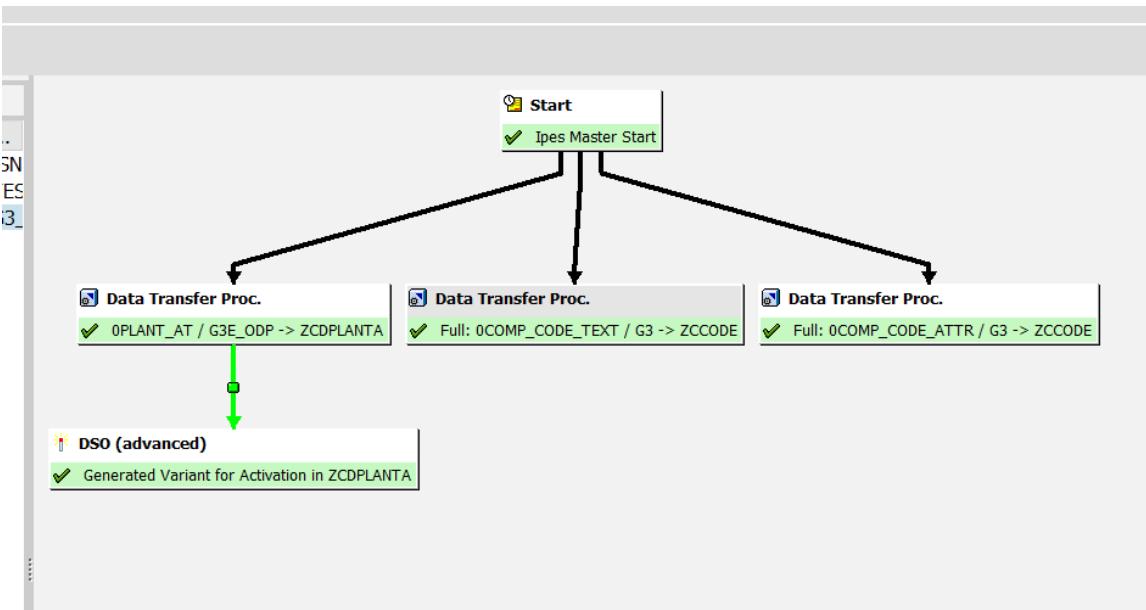


3. Drag and drop variants and connect them | the editor



4. Save/activate

Test run of chain: successful



#### Monitoring options:

Process chain monitoring with RSPCM (alternatively RSA1 -> Monitors -> Process Chain )

**Process Chain Maintenance Log View**

Administration

- Process Chains
- Source Systems
- Monitors
  - Process Chains
  - Process Chains App
  - BW CCMS
  - Process Monitor

Process Ch

- Unassign
  - 1st p
  - Plant
  - Tem

We can add manually chains to monitor with below icons

**Monitor List ITOMORI of Process Chains**

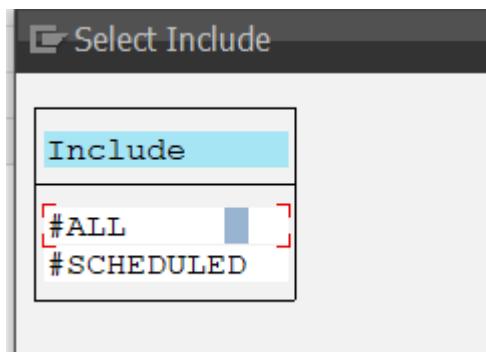
Status Chain	Name	Date	Time	Streaming Time	Monitoring Runtime	Status	Duration	Del.	Next Sta...
ZPC_G3_MAST	Temp IPES master	14.11.2017	06:20:32						
ZPC_PMWO	Plant Maintenance loads	14.11.2017	07:32:01						
ZPC_TEST_PH9	firt test process chain.ph9	13.11.2017	12:02:45						

We also can set or choose an existing include to list a specific group of chains.  
Set up to see all chains:

Monitor Edit Goto Extras System Help

Yellow All Compress Includes

Status Chain	Name	Date	Time	Streaming	Monitoring	Runt...
ZPC_G3_MAST	Temp IPES master	14.11.2017	06:20:32	<input type="checkbox"/>	<input type="checkbox"/>	
ZPC_PMWO	Plant Maintenance loads	14.11.2017	06:25:46	<input type="checkbox"/>	<input type="checkbox"/>	
ZPC_TEST_PH9	firt test process chain ph9	13.11.2017	12:02:45	<input type="checkbox"/>	<input type="checkbox"/>	

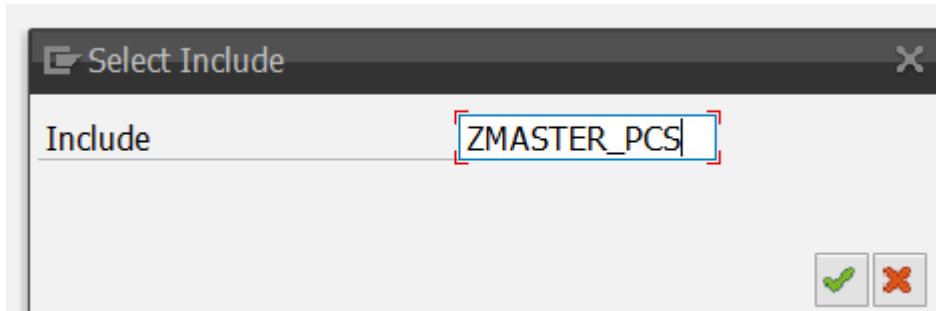
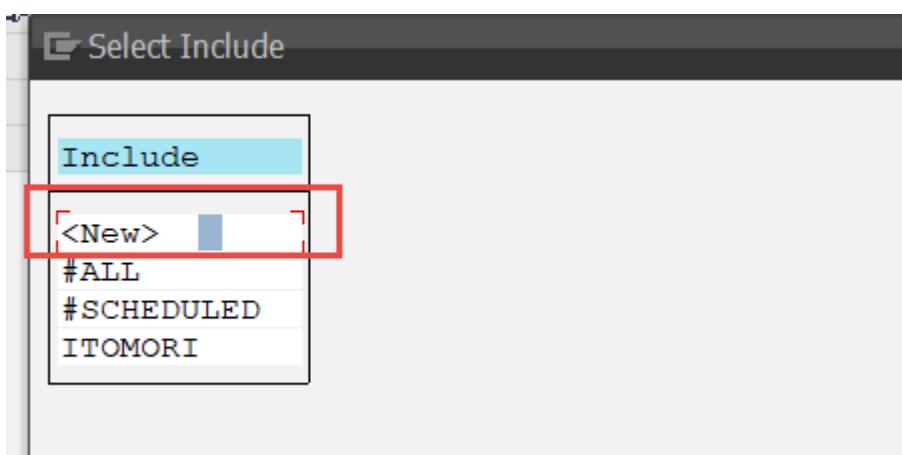


Create custom include:

Monitor List ITOMORI of Process Chains

Yellow All Compress Includes

Status Chain	Name	Date	Time	Streaming	Monitoring	Runt...	Duration	Del.	Next Sta...
ZPC_G3_MAST	Temp IPES master	14.11.2017	06:20:32	<input type="checkbox"/>	<input type="checkbox"/>				
ZPC_PMWO	Plant Maintenance loads	14.11.2017	07:32:01	<input type="checkbox"/>	<input type="checkbox"/>				
ZPC_TEST_PH9	firt test process chain ph9	13.11.2017	12:02:45	<input type="checkbox"/>	<input type="checkbox"/>				



Add chains to include:

Monitor List .ZMASTER_PCS of Process Chains								
Yellow		All		Job		File		
Status Chain	Name	Date	Time	Streaming	Time Monitoring	Runtime	Status	Run
ZPC_G3_MASTE	Temp IPES master	14.11.2017	06:20:32					

### Process chain App:

Shows last run of chains in a web gui.

RSA1 -> Monitors -> Process Chain App

The screenshot shows the SAP Fiori Launchpad interface. The top navigation bar includes icons for search, refresh, and various system status indicators. Below the header, the title "Process Chain Display Planning View" is displayed in bold. The main content area features a navigation tree on the left and a list table on the right. The navigation tree under "Administration" has the following structure:

- Process Chains
- Source Systems
- Monitors
  - Process Chains
  - Process Chains App** (highlighted)
  - BW CCMS

The list table on the right displays process chains with their names and technical names:

Process Chains	Tech...
Unassigned Nodes	NODESN
1st ph9 chain (OVENTURE_ATTR) to ADSO	ZPC_TES
Plant Maintenance loads	ZPC_PML
Temp IPES master	ZPC_G3_

Service not configured yet:



### Service cannot be reached

#### What has happened?

URL call was terminated because the corresponding service is not available.

#### Note

The termination occurred in system with error code **403** and for the reason **Forbidden**.

#### What can I do?

Select a valid URL.

HTTP 403 - Forbidden

Your SAP Internet Communication Framework Team

# Process chain monitoring via AMT

November 29, 2017 9:10 AM

Check process chains still use the same RSPC tables as in BW NW - PASSED

BW/4HANA uses the same RSPC\* tables as BW NW and statistics are updated at the same way

Data Browser: Table RSPCPROCESSLOG Select Entries 29

Table: RSPCPROCESSLOG									
Displayed Fields: 10 of 19 Fixed Columns:			List Width 0250						
LOG_ID	TYPE	EVENT_START	EVENTTP_START	JOB_COUNT	BATCHDATE	BATCHTIME	BACKLINK_START	VARIANTE	INSTANCE
DPRHFTQNSMVA0B9D1P621VXZ	DTP_LOAD	RSPPROCESS	DPYRF9HERIX0ZBCRTBUJ7652	16460000	07.11.2017	16:46:00		DTP_002TINWMAQKELNNUJHOUNGLQ	DUMMY_NO_REQ_CREATED
DPYRF1QSVNVA0B9D1P621VXZ	TRIGGER			16460000	07.11.2017	16:46:00		ZPV_TEST_P99	DPYRF1QSVNMAQKELNNUJHOUNGLQ
DPYRFHFTQFWW0NTLAQFLMEN5Q	DTP_LOAD	RSPPROCESS	DPYRF9HERIX0ZBCRTBUJ7652	16472900	07.11.2017	16:47:29		DTP_002TINWMAQKELNNUJHOUNGLQ	DTPR_20111107164732000003000
DPYRFHFTQFWW0NTLAQFLMEN5Q	TRIGGER			16472900	07.11.2017	16:47:29		ZPV_TEST_P99	DPYRFHFTQFWW0NTLAQFLMEN5Q
DPZWRSH721E821NTL788P90	AOSACT	RSPPROCESS	DPZNVQQE7M0F2PTI0URSQS0508Y	18024400	13.11.2017	18:02:44		ZUVENT_ACTIVATE	ADA_AB1FNKT62YPNMMTTIBNPV2LAZI
DPZWRSH722E821NTL788P90	DTP_LOAD	RSPPROCESS	DPZNR260TIXXXW5D0XEGT15GBA	18024400	13.11.2017	18:02:44		DTP_002TINWMAQKELQOQCHR2A9HGW	DTPR_20111131180249000005000
DPZWRSH722E821NTL788P90	TRIGGER			18024400	13.11.2017	18:02:44		ZPV_TEST_P99	DPZWRSH722E821NTL788P90
DQ037UBRN118M0X807E1TDFAD0	AOSACT	RSPPROCESS	DQ037UBRN118M0X807E1TDFAD0	12203100	14.11.2017	12:20:31		ZCDPLANT_ACTIVATE	ADA_AB1FNKT62YPNMMGV4LSFPDAI
DQ037UBRN118M0X807E1TDFAD0	DTP_LOAD	RSPPROCESS	DQ036KTF85D0346T3LOGA5906	12203100	14.11.2017	12:20:31		DTP_002TINWMAQKFL0P2NE797V7BQ	DTPR_20111114122034000010000
DQ037UBRN118M0X807E1TDFAD0	TRIGGER			12203200	14.11.2017	12:20:32		DTP_002TINWMAQKFL0P2F362UE6YY	DTPR_20111114122035000103000
DQ037UBRN118M0X807E1TDFAD0	DTP_LOAD	RSPPROCESS	DQ036KTF85D0346T3LOGA5906	12203200	14.11.2017	12:20:32		DTP_002TINWMAQKFL0RDY03FLGK	DTPR_20111114122034000020000
DQ037UBRN118M0X807E1TDFAD0	TRIGGER			12203200	14.11.2017	12:20:32		ZPV_G3_MASTER	DQ037UBRN120BKF7XHFV73B
DQ038Y6KG03PEEHT744691P7A	AOSACT	RSPPROCESS	DQ038PUZU9Q347N67STAIMEVQ	12254500	14.11.2017	12:25:46		ZPMODCR_ACTIVATE	ADA_AB1FNKT62YPNMMT63SN2H2AZI
DQ038Y6KG03PEEHT744691P7A	DTP_LOAD	RSPPROCESS	DQ038STYTQJG3ECKT4XANVOMM	12254600	14.11.2017	12:25:46		DTP_002TINWMAQKFL0QBKB3C6HNE	DTPR_20111114122548000005000
DQ038Y6KG03PEEHT744691P7A	TRIGGER			12254600	14.11.2017	12:25:46		DTP_002TINWMAQKFL0QBIMR2PQHQ	DTPR_20111114122556000001000
DQ038Y6KG03PEEHT744691P7A	DTP_LOAD	RSPPROCESS	DQ038STYTQJG3ECKT4XANVOMM	12254600	14.11.2017	12:25:46		ZPV_PMO_START	DQ038Y6KG03PEEHT744691P7A
DQ03DB282T102B8RKLNUA8P946	AOSACT	RSPPROCESS	DQ038PUZU9Q347N67STAIMEVQ	12461800	14.11.2017	12:46:18		ZPMODCR_ACTIVATE	DTPR_2011111412462000005000
DQ03DB282T102B8RKLNUA8P946	DTP_LOAD	RSPPROCESS	DQ038STYTQJG3ECKT4XANVOMM	12461800	14.11.2017	12:46:18		DTP_002TINWMAQKFL0QBKB3C6HNE	DTPR_2011111412462000005000
DQ03DB282T102B8RKLNUA8P946	TRIGGER			12461800	14.11.2017	12:46:18		DTP_002TINWMAQKFL0QBIMR2PQHQ	DTPR_20111114124630000001000
DQ03DB282T102B8RKLNUA8P946	DTP_LOAD	RSPPROCESS	DQ038STYTQJG3ECKT4XANVOMM	12461800	14.11.2017	12:46:18		ZPV_PMO_START	DQ03DB282T102B8RKLNUA8P946
DQ03M7Y0HNGY105R1E1MSAYV11	AOSACT	RSPPROCESS	DQ038PUZU9Q347N67STAIMEVQ	13320100	14.11.2017	13:32:01		ZPMODCR_ACTIVATE	ADA_AB1FNKT62YPNMMTIAHCEEEAZI
DQ03M7Y0HNGY105R1E1MSAYV11	DTP_LOAD	RSPPROCESS	DQ038STYTQJG3ECKT4XANVOMM	13320100	14.11.2017	13:32:01		DTP_002TINWMAQKFL0QBKB3C6HNE	DTPR_20111114133205000005000
DQ03M7Y0HNGY105R1E1MSAYV11	TRIGGER			13320100	14.11.2017	13:32:01		DTP_002TINWMAQKFL0QBIMR2PQHQ	DTPR_20111114133212000005000
DQ03M7Y0HNGY105R1E1MSAYV11	DTP_LOAD	RSPPROCESS	DQ038STYTQJG3ECKT4XANVOMM	13320100	14.11.2017	13:32:01		ZPV_PMO_START	DQ03M7Y0HNGY105R1E1MSAYV11
DQ03G1L7G1AV690000CSL5J9H2	AOSACT	RSPPROCESS	DPZNVQQE7M0F2PTI0URSQS0508Y	18233500	28.11.2017	18:23:35		ZUVENT_ACTIVATE	ADA_AB1FNKT62YPNMMT63SN2H2AZI
DQ03G1L7G1AV690000CSL5J9H2	DTP_LOAD	RSPPROCESS	DPZNR260TIXXXW5D0XEGT15GBA	18233500	28.11.2017	18:23:35		DTP_002TINWMAQKFL0QCNR2A9HGW	DTPR_201111281233800005000
DQ3G29B9BAP2MTRP2259EHR2	TRIGGER			18233500	28.11.2017	18:23:35		ZPV_TEST_P99	DQ3G1L7G1AV690000CSL5J9H2
DQ3G29B9BAP2MTRP2259EHR2	DTP_LOAD	RSPPROCESS	DPZNR260TIXXXW5D0XEGT15GBA	18245800	28.11.2017	18:24:58		DTP_002TINWMAQKFL0QCNR2A9HGW	DTPR_201111281233800005000
DQ3G29B9BAP2MTRP2259EHR2	TRIGGER			18245800	28.11.2017	18:24:58		ZPV_TEST_P99	DQ3G29B9BAP2MTRP2259EHR2

Check program YBWR0001\_LOAD\_AUTO\_ALERT (AMT) can be converted/adjusted to work for BW/4HANA - PASSED

Table RSPCLOGCHAIN has to be declared slightly differently, but in general the same program as working for BW NW can be converted to work for BW/4HANA with low effort

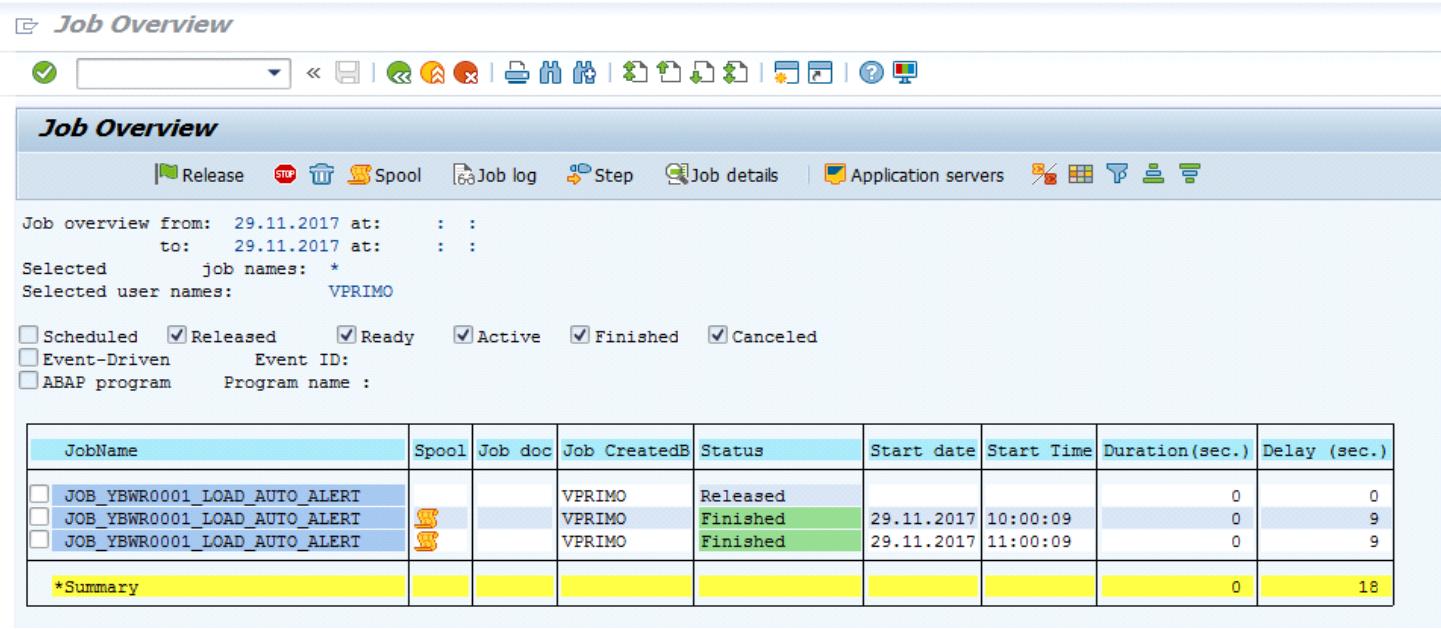
```

29 L *-----+
30
31 REPORT YBWR0001_LOAD_AUTO_ALERT message-id 00.
32
33 * BW Tables
34 TABLES: SNAP. "ABAP/4 Snapshot for Runtime Errors
35 TABLES: RSSELDONE. " Monitor: Selections for executed request
36 TABLES: RSREQDONE. " Monitor: Saving of the QM entries
37 TABLES: RSLDPOT. " Texts about variants logpid
38 TABLES: RSBKDPTH. " Texts on Data Transfer Processes
39 TABLES: RSPCLOGCHAIN. "Cross-Table Log ID / Chain ID
40 *TABLES: RSPCLOGCHAIN. "Cross-Table Log ID / Chain ID
41 TABLES: RSPCPROCESSLOG. "Msg for the Chain Runs
42 TABLES: TBTCO. "Job Status Overview Table
43 TABLES: ARFCSSSTATE. "Description of ARFC Call Status (Send)
44 TABLES: ARFCSDATA. "ARFC Call Data (Callers)
45 *TABLES: RSAADMIN. "Data import administration settings
46
47 * Custom transparent tables
48 TABLES: /BIC/PZUOLAAADM. "Load Auto Alert - Administration settings
49 TABLES: /BIC/PZUOLARC. " Message recipients
50 TABLES: /BIC/PZUOLAFI. " Table for delay process chains and zero records
51 TABLES: YBW_LAA_RFLOG. "Load auto alert - Log for RFC issues alerted
52 TABLES: YBW_LAA_ZEROREC. "Load auto alert - Zero records control
53 TABLES: YBW_LAA_LOGISSUE. "Load auto alert - Issues log
54
55 DATA: WA_RSPCLOGCHAIN TYPE STANDARD TABLE OF RSPCLOGCHAIN.
56
57 *
58 DATA: tmp_RSPCLOGCHAIN type table of RSPCLOGCHAIN WITH HEADER LINE.
59 DATA: fd_RSPCLOGCHAIN like line of tmp_RSPCLOGCHAIN.
60
61 DATA: tmp_d1l_auto_RSPCLOGCHAIN type table of RSPCLOGCHAIN WITH HEADER LINE.
62 DATA: fd_d1l_auto_RSPCLOGCHAIN like line of tmp_RSPCLOGCHAIN.
63
64 DATA: tmp_RSPCPROCESSLOG type table of RSPCPROCESSLOG WITH HEADER LINE.
65 DATA: fd_RSPCPROCESSLOG like line of tmp_RSPCPROCESSLOG.
66
67 DATA: tmp_RSREQDONE type table of RSREQDONE WITH HEADER LINE.
68 DATA: fd_RSREQDONE like line of tmp_RSREQDONE.
69
70 DATA: tmp_PZUOLAAPI type table of /BIC/PZUOLA API WITH HEADER LINE.
71 DATA: fd_PZUOLAAPI like line of tmp_PZUOLAAPI.
72
73 DATA: tmp_ZUOLAARC type table of /BIC/PZUOLAARC WITH HEADER LINE.
74 DATA: fd_ZUOLAARC like line of tmp_ZUOLAARC.

```

ABAP

Check ABAP scheduling process - PASSED  
 ABAP program can be scheduled normally via SM36 and monitored via SM37



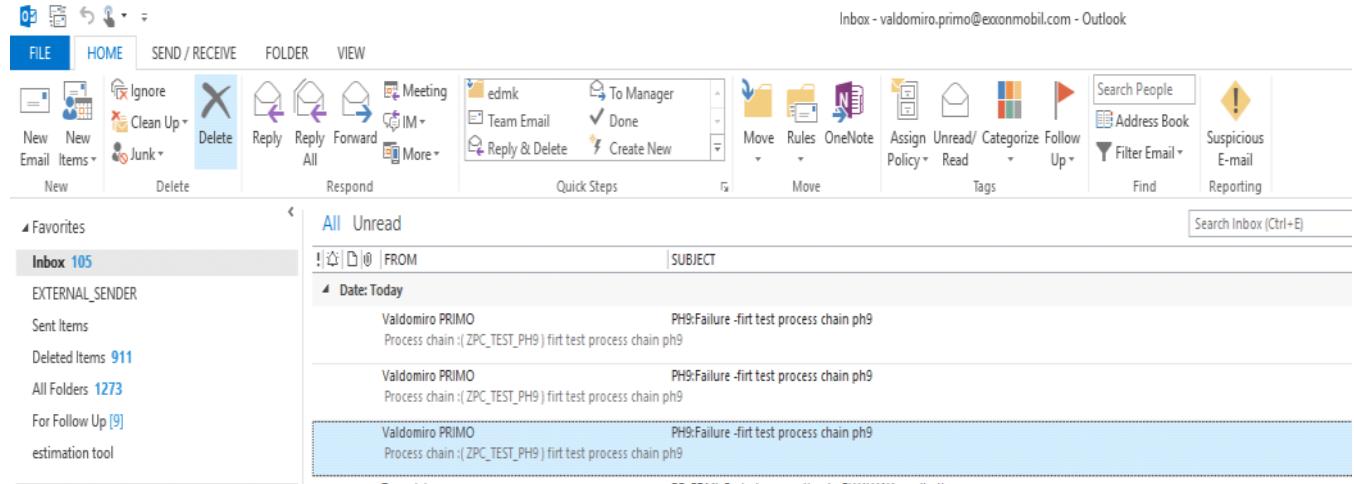
**Job Overview**

Job overview from: 29.11.2017 at: : :  
 to: 29.11.2017 at: : :  
 Selected job names: \*  
 Selected user names: VPRIMO

Scheduled  Released  Ready  Active  Finished  Canceled  
 Event-Driven Event ID:  
 ABAP program Program name :

JobName	Spool	Job doc	Job CreatedB	Status	Start date	Start Time	Duration(sec.)	Delay (sec.)
JOB_YBWR0001_LOAD_AUTO_ALERT			VPRIMO	Released			0	0
JOB_YBWR0001_LOAD_AUTO_ALERT	S		VPRIMO	Finished	29.11.2017	10:00:09	0	9
JOB_YBWR0001_LOAD_AUTO_ALERT	S		VPRIMO	Finished	29.11.2017	11:00:09	0	9
*Summary							0	18

Check AMT alert still can be received thru E-MAIL - PASSED



Inbox - valdomiro.primo@exxonmobil.com - Outlook

**FILE** **HOME** SEND / RECEIVE FOLDER VIEW

New New Items **Ignore** **Clean Up** **Delete** Reply Reply & Delete All Respond Quick Steps Move Rules OneNote Assign Unread/ Categorize Follow Policy Read Up Tags Find Filter Email Suspicious E-mail Reporting

**Inbox 105**

EXTERNAL\_SENDER Sent Items Deleted Items 911 All Folders 1273 For Follow Up [9] estimation tool

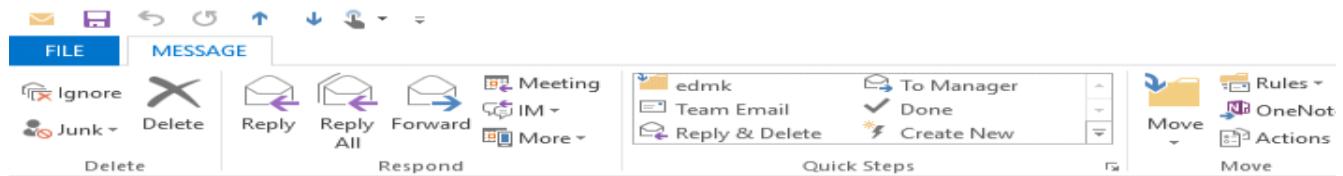
All Unread | SUBJECT | FROM

Date: Today

Valdomiro PRIMO PH9:Failure -firt test process chain ph9  
 Process chain :(ZPC\_TEST\_PH9 ) firt test process chain ph9

Valdomiro PRIMO PH9:Failure -firt test process chain ph9  
 Process chain :(ZPC\_TEST\_PH9 ) firt test process chain ph9

Valdomiro PRIMO PH9:Failure -firt test process chain ph9  
 Process chain :(ZPC\_TEST\_PH9 ) firt test process chain ph9



Process chain :( ZPC\_TEST\_PH9 ) firt test process chain ph9

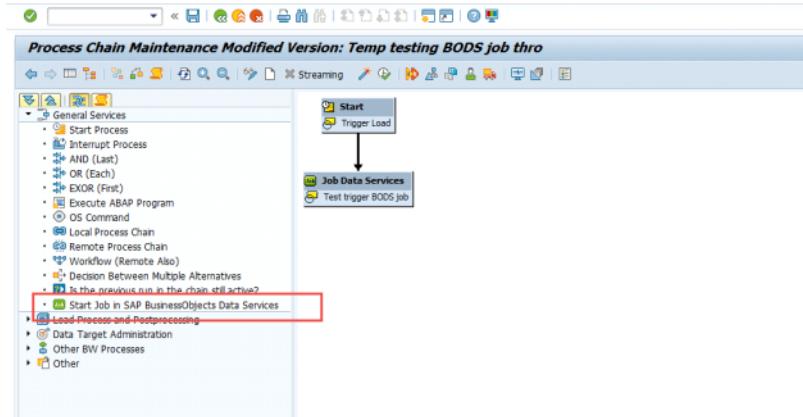
LOG ID: DQ3G29R9BAP2MTJRP22S9EFH2  
Process type failed: DTP\_LOAD  
(\*) Variant: ( DTP\_0002TNWMJQKPLOQCNR2A9HGWA ) OVENTURE\_ATTR / S8E\_ODP -> ZUDVENT  
(\*) Instance: DUMMY\_NO\_REQ\_CREATED  
(\*) Batch Date: 28.11.2017  
(\*) Process chain restart parameters from failed step

# Process chain to trigger BODS job

Friday, December 22, 2017 10:45 AM

In BW4HANA BODS source system is not available anymore. However we still able to trigger any BODS job through BW Process chain

## 1 - Use new step available - Start Job in SAP Business Objects Data Services



## 2 - Setting for BODS job step

The screenshot shows the 'Process Maintenance: Start Job in SAP BusinessObjects Data Services' dialog. The configuration includes:

- Variant: ZPC\_TEST\_BODS\_V01
- Last Changed By: PRSAMPA
- Changed On: 21.12.2017 At 10:24:51
- Source System (Optional): Data Services System
- Destination: DS\_BODS (a)
- Repository: DS\_LOCAL\_ACOE\_TEST (b)
- Job Server: JobServer\_1 (c)
- Job Name: Job\_G3S\_Test (d)
- Parameters: (e)
- Global Variables: (e)

a - RFC to BODS system

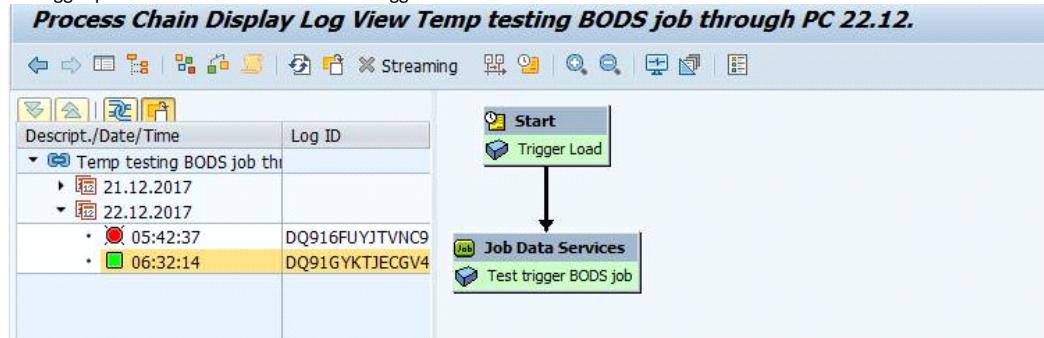
b - BODS repository

c - Job server

d - Job name

e - Global variables (parameters) in your job

## 3 - Trigger process chain and the Job will be triggered in BODS side



## 4 - Job status in BODS side

Repository: DS\_LOCAL\_ACOE\_TEST

Batch Job Status    Batch Job Configuration    Repository Schedules

Job name: All batch jobs  Wildcard search string (optional)

Display:  Last execution of job  Last  All executions 5 Days  
From:   
To:

Batch Job	Status	Job name	System configuration	Job Server	Job information	Start time	End time	Duration
<input type="checkbox"/>	<span style="color: green;">✓</span>	Job_G3S_Test		DALDSS02:3500	Trace,Monitor,Error,Performance Monitor	Dec 22, 2017 6:32:38 AM	Dec 22, 2017 6:38:33 AM	5m 55s
<input type="checkbox"/>	<span style="color: red;">✗</span>	Job_G3S_Test		DALDSS02:3500	Trace,Monitor,Error,Performance Monitor	Dec 22, 2017 5:42:41 AM	Dec 22, 2017 5:50:21 AM	7m 40s

**Successful Run**    **Failed with Missing authorization**

5 - Example of job using Global variables

**Process Maintenance: Start Job in SAP BusinessObjects Data Services**

Variant: ZPC\_TEST\_BODS\_V01    Test trigger BODS job

Last Changed By: PRSAMPA    Changed On: 21.12.2017 At: 10:24:51

Source System (Optional)

Data Services System

Destination:	DS_BODS
Repository:	DS_LOCAL_ACC_EMPC
Job Server:	JobServer_1

Job Name: JOB\_LOG\_LoadReservationSummary

Parameters:

**Global Variables**

Name	Value
\$gv_LoadFromDate	
\$gv_LoadToDate	
\$gv_Operation_ID_1	
\$gv_Operation_ID_2	

# BW/4HANA Conversion tool

Wednesday, May 2, 2018 10:31 AM

## Word version



Transfer

Tool User ...

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# What is BW/4Hana?

Thursday, May 3, 2018 1:38 PM

SAP BW/4HANA is a new, next generation data warehouse product from SAP that, like SAP S/4HANA, is optimized for the SAP HANA platform, including inheriting the high performance, simplicity, and agility of SAP HANA. SAP BW/4HANA delivers real time, enterprise wide analytics that minimize the movement of data and can connect all the data in an organization into a single, logical view, including new data types and sources.

# Different Paths

Thursday, May 3, 2018 2:26 PM

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# New installation

Thursday, May 3, 2018 1:39 PM

Also referred to as “greenfield approach”, this path start by installing a brand new SAP BW/4HANA system. Get the [SAP BW/4HANA master guide](#) and follow the steps to check prerequisites, plan and prepare your landscape and installation. Then start the installation using the SAP Software Provisioning Manager. There is a new automated task list available to simplify the basic system setup tasks, like creating and configuring the SAP BW/4HANA background user, setting the SAP BW/4HANA client and installing the essential technical content.

If you run already a SAP Business Warehouse (BW) system today and want a fresh start, you can get a head start by transporting certain configuration and data models from your existing landscape to SAP BW/4HANA. Please note that this is only supported for the initial system setup, not for continuously updating the new landscape. And, of course, it's only supported for objects that are fully compatible with SAP BW/4HANA. If you are, for example, running already SAP BW powered by SAP HANA 7.4 and have used Advanced DataStore Objects and CompositeProviders, you could transport these to your new SAP BW/4HANA system.

# System Conversion

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A system conversion addresses customers who want to change their current SAP BW system into a SAP BW/4HANA system. Using the Transfer Toolbox provided by SAP, the SID of the system can be kept (in-place conversion) or a new SID can be used (remote conversion).

## 1. In-place Conversion

Systems running on SAP BW 7.50 powered by SAP HANA can be converted in-place keeping their SID. In the realization phase of the conversion project, classic objects have to be transferred into their HANA optimized replacements using the Transfer Toolbox. This transfer can be performed scenario-by-scenario.

When all classic objects have been replaced, the system conversion to BW/4HANA can be triggered. SAP highly recommends to use the latest support package for BW/4HANA 1.0 when performing the conversion.

## 2. Remote Conversion

For SAP BW systems on releases from 7.00 to 7.50 running on Any-DB, a remote conversion can be performed. For that conversion type, a green field installation (new SID) of BW/4HANA is used. The Transfer Toolbox is able to transport selected data models into the new installation and to perform a remote data transfer.

# Landscape Transformation

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The third and final option is to optimize more complex data warehousing landscapes resulting in a single, global SAP BW/4HANA system. One reason could be that you are running multiple legacy or SAP BW systems which you want to consolidate on the mighty SAP HANA platform. Another could be to carve out selected data models or flows into an existing SAP BW/4HANA system. In any case, the Data Management & Landscape Transformation team at SAP can help with a customer-specific migration project built around well-defined methodology and re-using standard tools.

One of the innovative tools is the “System Comparison Workbench” which can show you, for example, differences between several regional SAP BW systems and help define a strategy to integrating these into a global data model.