Simplification List for SAP BW/4HANA

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| 1.1     | 2017-09-01 | • Update of Simplification Items (especially related to ODP)  
• New Simplification Items for BI Add-on for SAP GUI, Hierarchy / Attribute Change Run, SEM APIs, BI Content Analyzer, and Change Documents for Analysis Authorizations |
| 1.2     | 2017-11-01 | • New Simplification Item for SAP Business Planning & Consolidation (BPC), Conversion of DataSource Field into InfoObject  
• Update of Simplification Items for DataStore Objects (classic), InfoSets, Persistent Staging Area, Update Rules, Open Hub Service, BEx Objects, Interfaces and Customer-Specific ABAP Development, BI Content, Other Unavailable Objects |
| 1.3     | 2018-04-25 | • Update of Simplification Items for InfoObjects, BEx Objects, Interfaces and Customer-Specific ABAP Development, Analysis Process Designer, Local Provider and Local CompositeProvider, Data Federator Façade, Process Chains and Process Variants, DataStore Objects (classic), DataStore Object (advanced), InfoPackages and Persistent Staging Areas, Data Archiving (3.x), Other Front-end Objects |
| 1.4     | 2018-07-13 | • Corrected SAP Note in section 2.10 – SAP BW Administration Cockpit / Technical Content (SAP Note 2467074)  
• Update of Simplification Items for InfoCubes, DataStore Objects (classic), Aggregation Levels, Data Archiving Processes  
• Update of Interfaces and Customer-Specific ABAP Development |
| 1.5     | 2018-12-01 | • Corrected SAP Note in section 2.7 – Business Planning and Simulation (SAP Note 2468702)  
• Update of Simplification Items for Data Archiving Processes |
| 1.6     | 2019-02-08 | • New Simplification Item for Report-Report-Interface  
• Update of Simplification Items for Process Chain Variants, Aggregates, Myself Source System, Data Archiving / NLS, Interfaces and Customer-Specific ABAP Development |
| 1.7     | 2019-18-09 | • Update Simplification Note 2482164                                                                                                                                 |
1 Simplification List for SAP BW/4HANA

SAP BW/4HANA is SAP’s next generation data warehouse solution. It is a new product (not a legal successor of any existing SAP Business Warehouse solution), built entirely on one of the most advanced in-memory platforms today – SAP HANA. It provides a simple set of objects that is well suited for modelling an agile and flexible layered architecture of a modern data warehouse. SAP BW/4HANA manages all sorts of data, whether from SAP applications or other systems, structured or unstructured, and allows accessing of all models through an open SQL interface. SAP BW/4HANA comes with state-of-the-art user interfaces for administrators, developers, and end users as well as completely SAP HANA-optimized processes that let you leverage huge amounts of data in real time for competitive advantage.

The core functionality of SAP BW is preserved and the transition to SAP BW/4HANA can be compared with the transition of 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. All future innovations will take place in SAP BW/4HANA. Prior releases of SAP BW powered by SAP HANA will move into maintenance, receiving little development or new functionality moving forward.

With SAP BW/4HANA, SAP has re-architected its solution for modern data warehousing processes that the ever-increasing digitization of the world demands. Re-architecting a solution that has been growing over the past 20 years and has, at points, evolved into different data structures and architectures means that we also must decide on one data structure and architecture as we move forward. This is the only way that we can prepare the solution for increased simplicity and faster innovation cycles.

In most cases, SAP is pursuing the functional strategies that were already laid out in the existing SAP Business Warehouse world, where many innovations originate from. Consequently, it is possible to prepare for the system conversion to SAP BW/4HANA by already adopting the future target capabilities in the classic SAP Business Warehouse powered by SAP HANA.

SAP is taking on responsibility for managing the impact of these decisions.

- Many of the changes are purely technical and will have no or only limited impact on people’s work; therefore, they will not trigger business change management. Such changes will be mandatory when converting a system to SAP BW/4HANA.
- Other decisions are of a more strategic nature, determining which version of functional support will evolve into the digital era and provide the capabilities that today’s unstoppable data warehousing and business analytics innovation demands. When these strategic directions demand change management through adoption, SAP will keep the traditional capabilities available as compatibility scope, enabling a technical migration of these processes and leaving the timing of change management as a customer decision. Change management may therefore take place during the initial conversion or be postponed to a later point in time.
When compared to the number of SAP Business Warehouse features that appear in this list, the total list of simplifications for SAP BW/4HANA may appear long. However, SAP does not foresee that any one customer system will be affected by all of them, because the simplifications cover all capabilities of the system, including rarely used functionality. This list should be treated as a complete inventory that needs to be mapped against a productive environment to determine the impact of converting.

SAP expects that the same applies to custom code that our customers or partners have implemented. This code has grown over time, and experience has shown that a large share of custom code is not even used anymore. Simplifying your own extensions will benefit the general simplification of your system. To ease this process, SAP is planning to provide an analysis to identify custom code in the context of these changes, thereby quantifying the effort involved in custom code migration into a projectable quantity.

In addition, customers should know that only supported SAP BW/4HANA packages and add-ons (and no other software) shall be deployed on an SAP BW/4HANA installation. Details are provided in SAP Note 2189708 “SAP BW/4HANA Add-On Handling and Usage”.

To enable our customers to better plan and estimate their path to SAP BW/4HANA, we have created the “Simplification List for SAP BW/4HANA”. In this list, we describe in detail, on a functional level, what happens to individual data models, transactions, and solution capabilities in SAP BW/4HANA. Compared to the SAP Business Warehouse products, we have in some cases merged certain functionality with other elements or reflected it within a new solution or architecture.

1.1 Purpose of the Document

The purpose of this document is to support customers in converting their system from SAP Business Warehouse to SAP BW/4HANA.

Note: The Simplification List for SAP BW/4HANA is release dependent. In this collection, we focus on SAP BW/4HANA 1.0. For future SAP BW/4HANA releases, a new list will be made available.

1.2 General Topics for the Simplification List

For a typical SAP BW customer, moving to the SAP BW/4HANA requires a database migration to SAP HANA (if the customer is not yet running SAP HANA), followed by the installation of the new simplified code. Changes in adaption on the customer’s side are also required.

The most prominent examples for which the customer needs to adapt to these SAP BW/4HANA simplifications are changes to the data model to SAP HANA-optimized object types, potentially switching from classical Business Explorer user interfaces to a modern SAP BusinessObjects experience (or a 3rd party tool), and the custom code, which needs to be compliant with the data structure and scope of the appropriate SAP BW/4HANA release.
Customers’ expectation related to the transition to the SAP BW/4HANA is that SAP informs and provides guidance about the required steps and tasks on this journey. Based on the “Simplification List for SAP BW/4HANA”, SAP will provide information about the SAP BW/4HANA related simplifications for each application/functional area and type of data warehousing object. The Simplification List is a collection of individual “Simplification Items” that focus on what needs to be considered throughout an implementation or system conversion project from SAP BW 7.0 or higher to SAP BW/4HANA 1.0.

1.2.1 Simplification Item Information

Each Simplification Item will provide the following information:

- Description, impact on data warehouse, and recommendations
- References to any available migration/conversion tools or steps in task lists (optional)
- References to SAP Notes or related help.sap.com documentation, pre-checks or custom code checks (optional)

Description

The Simplification List is structured into different application / functional areas that you should already be familiar with from SAP Business Warehouse, with a short explanation about the technical change.

Data Warehouse-Related Information

Here you will find a description of what the Simplification Item means for the related data warehouse processes.

Recommendations

The dedicated recommendations provide a description about how the related SAP BW process or data model needs to be adapted.

Note: The recommendations are formulated in a general manner corresponding to a standard customer SAP Business Warehouse architecture and may therefore differ depending on the System Landscape that is in place.

1.2.2 Simplification Categories

The simplification items can be categorized based on their type of impact:

- Re-architecting for SAP HANA in-memory platform
  Used for functionality that is optimized to leverage the capabilities of the SAP HANA database, for example the new data model based on SAP HANA-optimized object types.
• **Consolidation of existing functionalities**  
  Functionality that is unified in the core and optimized according to the principle of one, but from a data warehouse process and user perspective, the functionality basically remains the same.

• **No functional equivalent**  
  Compared to the SAP Business Warehouse, there may be no functional equivalent available in SAP BW/4HANA, because SAP BW/4HANA is not a legal successor of an SAP Business Warehouse product. Alternative functionality with application innovation is in many cases already available in an SAP BW/4HANA scope, or it is on the roadmap.

### 1.2.3 Related Business Impact Notes

With SAP BW/4HANA 1.0, the texts of the simplification items are maintained in separate SAP Notes. A spreadsheet with an overview of the Simplification Items and their corresponding SAP Notes and application components can be found as attachment in SAP Note 2421930 “Simplification List for SAP BW/4HANA”.

### 1.3 The Simplification List – This Document

The Simplification List for SAP BW/4HANA provides the information related to the Simplification List Items which are applicable for customers doing a system conversion from SAP BW 7.0 or higher to SAP BW/4HANA 1.0.

**The Simplification List Items and corresponding SAP Notes**

The text of the Simplification Items included in this Simplification List is generated based on corresponding SAP Notes (they are called in the context of the Simplification List the *Business Impact Notes*). Examples:

<table>
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<tr>
<th>Simplification Item</th>
<th>SAP Note</th>
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<tr>
<td>InfoSpoke</td>
<td>2437637</td>
</tr>
<tr>
<td>InfoCube</td>
<td>2443489</td>
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</table>

You can find the corresponding SAP Note in the Simplification List as a spreadsheet attachment. The Business Impact Note might contain additional information related to the Simplification Item, for example, references to other SAP Notes or additional How-To Guides.
In this sense, the Simplification List document is always a collection of the texts of the dedicated Simplification Item which are stored as original in the corresponding SAP Notes. In case you have questions or requests to improve the text related to a Simplification Item, please open a support ticket based on the component of the SAP Note.

The generation of the Simplification List document based on the SAP Notes does have an influence on the format and the length of this document.

The Simplification List items as Spreadsheet

Beside the Simplification List in PDF format (this document), the Simplification List is available additionally in XLS format as attachment of SAP Note 2421930. In this SAP Note you can find different spreadsheets for the different SAP BW/4HANA releases (so far only release 1.0).

A new, web-based UI for searching and displaying Simplification Items

In parallel to this PDF document, the SAP Simplification Item Catalog offers direct search and browse of SAP BW/4HANA Simplification Items in their current state via the SAP ONE Support Launchpad at https://launchpad.support.sap.com/#/sic/:
# Overview of Simplifications

The following tables show if a change from one capability to another capability is recommended or mandatory for a given solution.

Note: The “SAP BW/4HANA” column also refers to “SAP BW powered by SAP HANA” with “SAP BW/4HANA Starter Add-on” (formerly known as “SAP BW, edition for SAP HANA”).

## 2.1 General

<table>
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<tr>
<th>Add-ons</th>
<th>SAP BW 7.4 or 7.5</th>
<th>SAP BW/4HANA 1.0</th>
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<tr>
<td>SAP BW Accelerator ➔ SAP HANA</td>
<td>Optional</td>
<td>Mandatory</td>
</tr>
<tr>
<td>BI Add-on for SAP GUI ➔ SAP BW/4HANA Modeling Tools, SAP BusinessObjects or SAP Analytics Cloud</td>
<td>Recommended</td>
<td>Mandatory</td>
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## 2.2 Data Warehousing

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<tr>
<td>InfoObjects released for Real-time Data Acquisition ➔ Streaming Process Chains</td>
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<td>InfoObjects with ORECORDMODE as attribute ➔ n/a</td>
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<tr>
<td>DataStore Objects (classic) ➔ DataStore Objects (advanced)</td>
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<td>Mandatory</td>
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<tr>
<td>InfoCubes ➔ DataStore Objects (advanced)</td>
<td>Recommended</td>
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<tr>
<td>InfoSets ➔ CompositeProvider</td>
<td>Recommended</td>
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<tr>
<td>VirtualProviders ➔ Open ODS Views / SAP HANA Calculation Views</td>
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<td>MultiProviders ➔ CompositeProvider</td>
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<td>Aggregates ➔ n/a</td>
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<td>Sematic Partitioned Objects ➔ DataStore Objects (advanced) + Sematic Grouping</td>
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<td>SAP Source System (S-API) →</td>
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<td>Mandatory</td>
</tr>
<tr>
<td>Operational Data Provisioning (ODP) Source System</td>
<td></td>
<td>SAP Note 2443861</td>
</tr>
<tr>
<td>DB Connect Source System →</td>
<td>Recommended (7.5 only)</td>
<td>Mandatory</td>
</tr>
<tr>
<td>SAP HANA Source System</td>
<td></td>
<td>SAP Note 2447532</td>
</tr>
<tr>
<td>UD Connect Source System →</td>
<td>Recommended (7.5 only)</td>
<td>Mandatory</td>
</tr>
<tr>
<td>SAP HANA Source System</td>
<td></td>
<td>SAP Note 2441884</td>
</tr>
<tr>
<td>SAP Data Services Source Systems and External ETL →</td>
<td>Recommended (7.5 only)</td>
<td>Mandatory</td>
</tr>
<tr>
<td>SAP HANA Source System</td>
<td></td>
<td>SAP Note 2441836</td>
</tr>
<tr>
<td>Web Service Source System →</td>
<td>Optional</td>
<td>Not Available</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SAP Note 2441836</td>
</tr>
</tbody>
</table>

### 2.3 Data Staging

<table>
<thead>
<tr>
<th>Simplification</th>
<th>SAP BW/4HANA 1.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classic CompositeProviders → n/a</td>
<td>Optional</td>
</tr>
<tr>
<td>Analytic Indexes → n/a</td>
<td>Optional</td>
</tr>
<tr>
<td>External SAP HANA Attribute and Analytic Views →</td>
<td>Optional</td>
</tr>
<tr>
<td>SAP HANA Calculation Views</td>
<td></td>
</tr>
<tr>
<td>InfoObject Catalogs →</td>
<td>n/a</td>
</tr>
<tr>
<td>InfoAreas</td>
<td></td>
</tr>
</tbody>
</table>
## 2.4 Analytic Manager

<table>
<thead>
<tr>
<th>Feature</th>
<th>Simplification</th>
<th>Recommendation</th>
<th>SAP Note</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BEx Query Designer</strong></td>
<td>3.1</td>
<td>Mandatory</td>
<td>SAP Note 1911469</td>
</tr>
<tr>
<td><strong>BEx Query Designer</strong></td>
<td>7.1</td>
<td>Mandatory</td>
<td>SAP Note 2479683</td>
</tr>
<tr>
<td><strong>Query Designer in BW Modeling Tools</strong></td>
<td></td>
<td>Recommended</td>
<td>Mandatory</td>
</tr>
<tr>
<td><strong>BW Queries</strong></td>
<td>3.1</td>
<td>Mandatory</td>
<td>SAP Note 2467074</td>
</tr>
<tr>
<td><strong>BW Queries</strong></td>
<td>7.1</td>
<td>Mandatory</td>
<td></td>
</tr>
<tr>
<td><strong>Runtime Statistics</strong></td>
<td>3.1</td>
<td>Mandatory</td>
<td>SAP Note 1911469</td>
</tr>
<tr>
<td><strong>Runtime Statistics</strong></td>
<td>7.1 (based on CDS views)</td>
<td>Mandatory</td>
<td></td>
</tr>
<tr>
<td><strong>VirtualProvider and Query Snapshot</strong></td>
<td></td>
<td>Optional</td>
<td>Not Available</td>
</tr>
<tr>
<td><strong>Currency Translation Type, Quantity Conversion Type, Key Date Derivation based on InfoSets</strong></td>
<td></td>
<td>Optional</td>
<td>Not Available</td>
</tr>
<tr>
<td><strong>Quantity Conversion Type based on classic DataStore objects</strong></td>
<td></td>
<td>Optional</td>
<td>Mandatory</td>
</tr>
<tr>
<td><strong>Quantity Conversion Type based on DataStore objects (advanced)</strong></td>
<td></td>
<td>Optional</td>
<td>SAP Note 2443281</td>
</tr>
<tr>
<td><em><em>Personalization based on DSOs (OPERS</em>)</em>*</td>
<td></td>
<td>Optional</td>
<td>Mandatory</td>
</tr>
<tr>
<td><strong>Personalization based on specialized tables (RSPERS_*)</strong></td>
<td></td>
<td>Optional</td>
<td>SAP Note 2487535</td>
</tr>
<tr>
<td><strong>Data Federator Facade</strong></td>
<td></td>
<td>Optional</td>
<td>Mandatory</td>
</tr>
<tr>
<td><strong>SAP HANA Views</strong></td>
<td></td>
<td>Optional</td>
<td>SAP Note 2444930</td>
</tr>
<tr>
<td><strong>Report-Report-Interface</strong></td>
<td></td>
<td>Optional</td>
<td>Depends on Front-end</td>
</tr>
</tbody>
</table>

SAP BW 7.4 or 7.5: Mandatory or optional features for SAP BW 7.4 or 7.5.

SAP BW/4hana 1.0: Mandatory features for SAP BW/4hana 1.0.
## 2.5 Agile Information Access

<table>
<thead>
<tr>
<th></th>
<th>SAP BW 7.4 or 7.5</th>
<th>SAP BW/4HANA 1.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Composite Providers and Analytic Indexes with SAP BW</td>
<td>n/a</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Local Composite Providers and Analytic Indexes with SAP BW/4HANA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BW Workspaces with SAP BW</td>
<td>n/a</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Workspaces with SAP BW/4HANA</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## 2.6 Frontend Tools

<table>
<thead>
<tr>
<th></th>
<th>SAP BW 7.4 or 7.5</th>
<th>SAP BW/4HANA 1.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Explorer 3.x → 7.x</td>
<td>Mandatory</td>
<td>Not Available</td>
</tr>
<tr>
<td>BEx Workbooks 3.x → 7.x</td>
<td>Mandatory</td>
<td>Not Available</td>
</tr>
<tr>
<td>BEx Web Templates 3.x → 7.x</td>
<td>Mandatory</td>
<td>Not Available</td>
</tr>
<tr>
<td>Business Explorer → BusinessObjects Suite / SAP Analytics Cloud</td>
<td>Recommended</td>
<td>Mandatory</td>
</tr>
<tr>
<td>BEx Workbooks → Analysis Office</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BEx Web Templates → Lumira (recommended), Design Studio or Web Intelligence (alternatives)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BEx Report Designer → Crystal Enterprise</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reporting Agent, Information Broadcasting 3.x → 7.x</td>
<td>Mandatory</td>
<td>Not Available</td>
</tr>
<tr>
<td>Information Broadcasting 7.x</td>
<td>Mandatory</td>
<td>Not Available</td>
</tr>
<tr>
<td>BusinessObjects Broadcasting</td>
<td>Optional</td>
<td>Mandatory</td>
</tr>
<tr>
<td>SAP BW Enterprise Reports / SAP Crystal Reports</td>
<td>Optional</td>
<td>Mandatory</td>
</tr>
<tr>
<td>SAP Crystal Enterprise</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAP Xcelsius Dashboards →</td>
<td>Optional</td>
<td>Mandatory</td>
</tr>
<tr>
<td>SAP Design Studio / SAP Lumira</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Easy Query →</td>
<td>Optional</td>
<td>Mandatory</td>
</tr>
<tr>
<td>OData Query</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## 2.7 Planning Tools

<table>
<thead>
<tr>
<th></th>
<th>SAP BW 7.4 or 7.5</th>
<th>SAP BW/4HANA 1.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Planning (BW-BPS) →</td>
<td>Recommended</td>
<td>Mandatory</td>
</tr>
<tr>
<td>BPC version for SAP BW/4HANA (BPC embedded)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Integrated Planning (BW-IP) →</td>
<td>Optional</td>
<td>Mandatory</td>
</tr>
<tr>
<td>BPC version for SAP BW/4HANA (BPC embedded)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business Planning and Consolidation →</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BPC version for SAP BW/4HANA (BPC standard and embedded)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 2.8 Custom Developments

<table>
<thead>
<tr>
<th>Feature</th>
<th>SAP BW 7.4 or 7.5</th>
<th>SAP BW/4HANA 1.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjustments to Interfaces and Customer-Specific ABAP Development</td>
<td>Optional</td>
<td>Mandatory</td>
</tr>
<tr>
<td>CRM Tool and CRM BAPI → SAP HANA Views</td>
<td>Optional</td>
<td>Mandatory</td>
</tr>
<tr>
<td>SEM APIs → n/a</td>
<td>Optional</td>
<td>Mandatory</td>
</tr>
</tbody>
</table>

**SAP Notes:**
- SAP Note 2462639
- SAP Note 2463800
- SAP Note 2526508

### 2.9 Security

<table>
<thead>
<tr>
<th>Feature</th>
<th>SAP BW 7.4 or 7.5</th>
<th>SAP BW/4HANA 1.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Authorization Objects for classic BW objects → Authorization Objects for SAP BW/4HANA objects</td>
<td>Optional</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Reporting Authorizations → Analysis Authorizations</td>
<td>Mandatory</td>
<td>Mandatory</td>
</tr>
</tbody>
</table>

**SAP Notes:**
- SAP Note 1125108
- SAP Note 2478384
- SAP Note 2468657

### 2.10 Content

<table>
<thead>
<tr>
<th>Feature</th>
<th>SAP BW 7.4 or 7.5</th>
<th>SAP BW/4HANA 1.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>BI Content / BI Content XT → SAP BW/4HANA Basis Content / SAP BW/4HANA Content</td>
<td>n/a</td>
<td>Mandatory</td>
</tr>
<tr>
<td>BW Administration Cockpit / Technical Content for Data Warehousing → CDS Views</td>
<td>n/a</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Conversion of DataSource Field into InfoObject → n/a</td>
<td>n/a</td>
<td>Not available</td>
</tr>
<tr>
<td>BI Content Analyzer → n/a</td>
<td>n/a</td>
<td>Not available</td>
</tr>
<tr>
<td>Change Documents for Analysis Authorizations → CDS Views</td>
<td>n/a</td>
<td>Mandatory</td>
</tr>
</tbody>
</table>

**SAP Notes:**
- SAP Note 2400585
- SAP Note 2467074
- SAP Note 2487597
- SAP Note 2400585
- SAP Note 2467074
- SAP Note 2526601
## 2.11 Other Tools

<table>
<thead>
<tr>
<th>Analysis Process Designer (APD) →</th>
<th>SAP BW 7.4 or 7.5</th>
<th>SAP BW/4HANA 1.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Flows, Data Modeling (calculations on the fly), SAP HANA Analysis Processes, or SAP HANA Predictive Analytics</td>
<td>Optional</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Data Mining Models →</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data Modeling (calculations on the fly), SAP HANA Analysis Processes, or SAP HANA Predictive Analytics</td>
<td>Optional</td>
<td>Mandatory</td>
</tr>
</tbody>
</table>

SAP Note 2444220
3 The Simplification List for SAP BW/4HANA

3.1 SAP BW - General

3.1.1 BW4SL - Add-ons

SAP Note 2189708 - SAP BW/4HANA Add-On Handling and Usage

Version 51 from 2019-04-01
Component: BW - SAP Business Warehouse

Description

As one of the goals of SAP BW/4HANA is to simplify processes, not all SAP NetWeaver based add-ons are supported by SAP BW/4HANA.

In addition, SAP BW/4HANA itself does not support planning functionality, which is included in SAP BW as part of SAP NetWeaver. This is delivered SAP Business Planning and Consolidation based on BW/4HANA (including BW-IP/PAK).

This has implications to the SAP BW/4HANA Starter Add-On (formerly known as “SAP BW, edition for SAP HANA”) which you need to install on top of your SAP BW 7.5 system to enable the conversion to SAP BW/4HANA.

Other Terms

SAP BW/4HANA Starter, SAP BW, edition for SAP HANA, Supported Add-Ons, SAP NetWeaver

Prerequisites and Checks

This note will give you an overview which add-ons are supported by SAP BW/4HANA and the SAP BW/4HANA Starter Add-On (on an SAP BW 7.5 system as part of SAP NetWeaver).

Recommendations

Disclaimer: This list is not complete and shows currently only the add-ons where SAP knows that they are not working on SAP BW/4HANA and SAP BW/4HANA Starter Add-On. Currently, no add-ons from 3rd party vendors are not supported. If your Add-On is not listed here, please follow the process given at the end of this section.

For add-ons on SAP BW/4HANA and SAP BW/4HANA Starter Add-On you need to distinguish between the following cases.

1. The following add-ons are supported with SAP BW/4HANA Starter Add-On and SAP BW/4HANA. These add-ons will not be touched during the conversion.

<table>
<thead>
<tr>
<th>Add-on for SAP BW</th>
<th>Software Component (Technical Name)</th>
<th>Supported with SAP BW/4HANA Starter Add-on</th>
<th>Supported with SAP BW/4HANA 1.0</th>
<th>Comments</th>
</tr>
</thead>
</table>

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<table>
<thead>
<tr>
<th>Add-on for SAP BW</th>
<th>Old Software Component (Technical Name)</th>
<th>Supported with SAP BW/4HANA Starter Add-On</th>
<th>Supported with SAP BW/4HANA 1.0</th>
<th>Target Solution</th>
<th>New Software Component (Technical Name)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PI Basis</td>
<td>PI_BASIS</td>
<td>Yes</td>
<td>No</td>
<td>SAP BW/4HANA Core</td>
<td>DW4CORE</td>
</tr>
<tr>
<td>BI Content</td>
<td>BI_CONT</td>
<td>Yes</td>
<td>No</td>
<td>SAP BW/4HANA Content</td>
<td>BW4CONTB, BW4CONT</td>
</tr>
<tr>
<td>BI Extended Content</td>
<td>BI_CONT_XT</td>
<td>Yes</td>
<td>No</td>
<td>SAP BW/4HANA Content</td>
<td>BW4CONTB, BW4CONT</td>
</tr>
</tbody>
</table>
### Add-on for SAP BW

<table>
<thead>
<tr>
<th>Add-on for SAP BW</th>
<th>Software Component (Technical Name)</th>
<th>Supported with SAP BW/4HANA Starter Add-on</th>
<th>Supported with SAP BW/4HANA 1.0</th>
<th>Uninstall Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAP Strategic Enterprise Management</td>
<td>SEM-BW</td>
<td>Yes</td>
<td>No</td>
<td>SAP Note [2505027]</td>
</tr>
<tr>
<td>SAP Business Suite Foundation</td>
<td>SAP_BS_FND</td>
<td>Yes</td>
<td>No</td>
<td>SAP Note [2554906]</td>
</tr>
<tr>
<td>SAP Master Data Governance Foundation</td>
<td>MDG_FND</td>
<td>Yes</td>
<td>No</td>
<td>SAP Note [2513541]</td>
</tr>
<tr>
<td>SAP Financial Basis Framework</td>
<td>FINBASIS</td>
<td>Yes</td>
<td>No</td>
<td>SAP Note [2513541]</td>
</tr>
<tr>
<td>SAP Financial Supply Chain Management</td>
<td>FSCM_CCD</td>
<td>Yes</td>
<td>No</td>
<td>SAP Note [2513541]</td>
</tr>
<tr>
<td>SAP Web UI Framework</td>
<td>WEBCUIF</td>
<td>Yes</td>
<td>No</td>
<td>SAP Note [2417905]</td>
</tr>
<tr>
<td>SAP POS Data Management</td>
<td>POSDM</td>
<td>Yes</td>
<td>No</td>
<td>SAP Note [2569045]</td>
</tr>
<tr>
<td>Logging for SAP BW Access</td>
<td>LOGCOM, LOGBW</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

b. For the following add-ons you can install the SAP BW/4HANA Starter Add-on and transfer the BW objects, but need to take action before the system conversion.

**Caution:** Although the SAP BW/4HANA Starter Add-on and SAP BW/4HANA Transfer Cockpit can be installed with these add-ons, this does **not** mean that you can transfer the classic SAP BW data models that these add-ons run on (for example, InfoCubes) to data models compatible with SAP BW/4HANA (advanced DataStore objects)! You must check with each add-on, if HANA-optimized data models are supported.
### Simplification List for SAP BW/4HANA 1.0

#### Add-ons for / Solution with SAP BW

<table>
<thead>
<tr>
<th>Add-on for / Solution with SAP BW</th>
<th>Software Component (Technical Name)</th>
<th>Supported with SAP BW/4HANA Starter Add-on</th>
<th>Supported with SAP BW/4HANA 1.0</th>
<th>Uninstall Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAP Spend Performance Management</td>
<td>ANAXSA</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>SAP Supply Chain Performance Management</td>
<td>ANASCPM</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Financial Service Application</td>
<td>FSAPPL</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Financial Service Process Object Types</td>
<td>FSPOT</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>SAP Notes Management</td>
<td>NOTESMG</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Analytics OPM Foundation</td>
<td>OPMFND</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

3. The following add-ons are not supported, neither with SAP BW/4HANA Starter Add-on nor with SAP BW/4HANA:

If any of these add-ons or solutions are installed, the installation of the SAP BW/4HANA Started Add-on will not be possible.
<table>
<thead>
<tr>
<th>Add-on for SAP BW</th>
<th>Software Component (Technical Name)</th>
<th>Supported with SAP BW/4HANA Starter Add-on</th>
<th>Supported with SAP BW/4HANA 1.0</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAP Business Planning and Consolidation 11.0, version for SAP BW/4HANA</td>
<td>BPC4HANA</td>
<td>No</td>
<td>Yes</td>
<td>PAM / RIN / Conversion / Installation / Support Packages / Documentation</td>
</tr>
<tr>
<td>SAP BW/4HANA, business consolidation add-on 1.0</td>
<td>BCS4HANA</td>
<td>No</td>
<td>Yes</td>
<td>PAM / RIN / Conversion / Installation / Support Packages / Documentation</td>
</tr>
<tr>
<td>SAP Demand Signal Management 1.0, version for SAP BW/4HANA</td>
<td>DSIM4H</td>
<td>No</td>
<td>Yes</td>
<td>PAM / RIN / Conversion / Installation / Support Packages / Documentation</td>
</tr>
</tbody>
</table>
5. Special Case - Business Planning (including SAP BPC Planning)

a. SAP BW/4HANA

SAP BW/4HANA does not contain any planning functionality. SAP Business Planning and Consolidation, version for SAP BW/4HANA provides the known planning features for BPC standard as well as embedded model (including BW-IP/PAK).

b. SAP BW 7.5 with SAP BW/4HANA Starter Add-on (SAP BPC 10.1)

SAP BPC 10.1 Planning standard model is supported with SAP BW/4HANA Starter Add-On only in the Compatibility Mode from SAP BW 7.5 SP 7 onwards. Please apply the namespace /CPMB/* to the whitelist for the TLOGO objects CUBE and MPRO.

SAP BPC 10.1 Planning embedded model is supported with SAP BW/4HANA Starter Add-on after implementing SAP Note 2373204. This allows a customer using the embedded model to make their overall system ready for SAP BW/4HANA, but for clarification, it does not currently support the final system conversion from an SAP BW 7.5 system with the Starter Add-on to the final state SAP BW/4HANA system. Please see point below. Same holds for customers just using PAK and BW-IP, which are subsets of the BPC embedded model.

c. SAP BW 7.0 to 7.4 with SAP BPC 10.0 or 10.1 add-on

SAP BPC 10.x Planning standard model can be converted to SAP BPC 11.0, version for SAP BW/4HANA using backup & restore (see SAP Note 2510414).

SAP BPC 10.1 Planning embedded model can be converted to SAP BPC 11.0, version for SAP BW/4HANA using a remote conversion (see SAP Note 2602319).

d. SAP BW Integrated Planning 7.0 to 7.5

SAP BW-IP can be converted to SAP BPC 11.0, version for SAP BW/4HANA embedded model using a remote or shell conversion.

6. What happens if you have an add-on installed on your system, which is not supported anymore on SAP BW/4HANA?

- Prior to the system conversion, the add-on must be uninstalled. A list of add-ons, which can be uninstalled is available in SAP Note 2011192.
- If your add-on is from a 3rd party vendor, please contact the vendor and inquire if there are plans to support SAP BW/4HANA or make an uninstallation available.
- If your add-on is from SAP and not listed in this SAP Note but required by your business, please open a customer incident on the component BW-B4H-LM.
- Alternatively, consider a shell or remote conversion to SAP BW/4HANA.

7. How do I prepare the SAP BW for uninstalling add-ons?

Implement SAP BW Note Analyzer (program Z_SAP_BW_NOTE_ANALYZER) and run it with the XML file for the SAP BW/4HANA Add-on Uninstall. Note Analyzer will display the attribute change packages and SAP Notes that are required to uninstall add-ons found on your system (if uninstall is available). Follow the instructions provided by Note Analyzer to install the packages and SAP Notes to prepare your system for the uninstall. The uninstallation can then be performend using transaction SAINT.

Program and XML file are included in the ZIP file attached to this SAP Note. For more details, please see the User Guide for SAP BW Note Analyzer, which is available on SAP Help Portal.

References

<table>
<thead>
<tr>
<th>SAP Note</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>69455</td>
<td>Servicetools for Applications ST-A/PI (ST14, RTCCTOOL, ST12)</td>
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</table>
### 3.1.2 BW4SL - SAP BW Accelerator

**SAP Note** [2442939](#) - BW4SL - SAP BW Accelerator

Version 6 from 2017-07-10
Component: BW-BEX-OT-BIA - BW Accelerator

**Description**

SAP BW Accelerator (BWA) is not available for SAP BW/4HANA.

**Other Terms**

$BWA, BWA, BW Accelerator

**Prerequisites and Checks**

SAP BW Accelerator (BWA) is not available for SAP BW/4HANA.

**Recommendations**

For converting SAP BW Accelerator functionality to SAP BW/4HANA in the context of

- a Local Provider and a Local CompositeProvider in BW Workspaces, see SAP Note [2444273](#)
- a CompositeProvider and an Analytical Index, see SAP Note [2442062](#)
- Query Snapshots, see SAP Note [2442781](#)

"BWA-Only" InfoCubes are not available in SAP BW/4HANA. If such InfoCubes have a corresponding persistence in a classic DataStore Object, then this DSO can be converted to an DataStore Object (advanced) making the need for the InfoCube obsolete. If there is no persistency of the data available in your SAP BW system (data is really in BWA-only), then we recommend to create a DSO in SAP BW first and fill it from the BWA-only InfoCube before you start the conversion to SAP BW/4HANA.

**References**

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<td>2442062</td>
<td>BW4SL - CompositeProvider and Analytical Index</td>
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<tr>
<td>2442781</td>
<td>BW4SL - VirtualProvider and Query Snapshots</td>
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<tr>
<td>2444273</td>
<td>BW4SL - Local Provider and Local CompositeProvider in BW Workspaces</td>
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</table>
3.1.3 BW4SL - BI Add-on for SAP GUI

SAP Note 2481504 - BW4SL - BI Add-on for SAP GUI

Version 3 from 2017-08-31
Component: BW-BEX-ET - Enduser Technology

Description

The BW/BI Add-on for SAP GUI - also called SAP Business Explorer (BEx) - is not available in SAP BW/4HANA. Therefore, the following front-end tools are not available in SAP BW/4HANA:

- BEx Query Designer
- BEx Web Application Designer
- BEx Analyzer
- BEx Enterprise Report Designer

Other Terms

$BEX

Prerequisites and Checks

There is currently no automated analysis available, if the BI Add-on is used or not.

Recommendations

BEx Query Designer has been replaced with the Query Designer perspective of the SAP BW/4HANA Modeling Tools. The other front-end tools need to be replaced by SAP BusinessObjects, SAP Analytics Cloud or 3rd party tools for end-user access or for designing analytic applications.

Semi-automated transition of SAP BEx Analyzer Workbooks to SAP Analysis Office is available as a service offering. For more details, see Automated Mass Migration/Conversion of BEx Workbooks to Analysis Office.

For temporary usage of BEx Web Application Designer with SAP BW/4HANA and more details, see SAP Note 2444138.

Related Information

SAP Business Intelligence Solutions

SAP Business Explorer Maintenance and Support Policy

Transition from SAP Business Explorer (BEx) to Modern User Interfaces for SAP BW/4HANA

References

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<td>2444138</td>
<td>BW4SL - BEx Objects (to be redesigned)</td>
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3.2 SAP BW - Data Warehousing

3.2.1 BW4SL - InfoObjects

SAP Note 2442621 - BW4SL - InfoObject Catalogs and InfoObjects

Version 9 from 2018-10-26
Component: BW-WHM-DBA-IOBJ - InfoObjects

Description

InfoObject Catalogs (IOBC)

InfoObject Catalogs are not available in SAP BW/4HANA. InfoObject Catalogs have been replaced by InfoAreas (AREA).

InfoObjects (IOBJ)

The following types of InfoObjects are not available in SAP BW/4HANA:

- Characteristics that use ORECORDMODE as an attribute
- Characteristics that are enabled for real-time-data acquisition
- Characteristics that use class CL_RSR_REMOTE_MASTERDATA as their master data read class
- Key figures of data type "Date" or "Time" with aggregation SUM

Also note that extraction out of InfoObjects in SAP BW/4HANA to target systems is no longer possible using Export DataSources but only using ODP-BW. For further information see SAP Note 2483299 - BW4SL - Export DataSources (SAP BW/4HANA as Source).

Other Terms

IOBC, DIOC, IOBJ, DIOB

Prerequisites and Checks

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are available in or can be converted to SAP BW/4HANA.

See node: Automated Clean-up --> Adjustments --> TLOGO IOBC (InfoObject Catalog)

See note: Manual Redesign (take the necessary action) --> BW Object Type --> TLOGO IOBJ (InfoObject)

Recommendations

InfoObject Catalogs (IOBC)

You can migrate the assignments of InfoObjects to InfoObject Catalogs to InfoAreas by using report RSDG_IOBJ_IOBC_MIGRATE_TO_AREA. When running the report the system is set to an "InfoArea-only" mode. Please note that once the system has been switched to the "InfoArea-only" mode the authorization object S_RS_IOBJA is evaluated instead of S_RS_IOBJ.

InfoObjects (IOBJ)

You need to adjust the identified InfoObjects manually.
Material InfoObjects with conversion exits MATN1 or MATNB are handled in a special way. For details, see SAP Note 2635167 - Handling of Material InfoObjects with Conversion to SAP BW/4HANA.

For details about key figures of type DATS or TIMS and SUM aggregation, see SAP Note 1940630.

InfoObjects that are shipped with SAP BW or SAP BW/4HANA (see table RSDIOBJFIX) might require special handling. These InfoObjects are not part of BI or BW4 Content and generally activated at installation time. This includes for example the well-known time characteristics. We recommend to use the latest version of and keep the delivered settings for these InfoObject (adding custom attributes is allowed) If you are using an out-of-date, the system might not function properly or missing features. This includes for example pre-delivered master data read classes (value help might not work properly without it) and attributes for time characteristics (like number of days per period). If you are doing an in-place conversion, we therefore recommend to reactivate these InfoObjects after conversion to SAP BW/4HANA to ensure you have the latest version. For remote conversion, the latest version will be used when installing SAP BW/4HANA (at the beginning of the project), so adjustments are not required.

Related Information

For more information refer to the documentation:

- InfoAreas
- Authorizations for InfoObjects
- Creating InfoObjects

References

SAP Note Title
2635167 Handling of Material InfoObjects with Conversion to SAP BW/4HANA
1940630 Key Figure with Data Type DATS or TIMS and Aggregation SUM on gives SQL error
2364958 InfoObject 0RECORDMODE no longer supported as attribute in BW/4HANA system

3.2.2 BW4SL - DataStore Objects (classic)

SAP Note 2451013 - BW4SL - DataStore Objects (classic)

Version 8 from 2018-09-20
Component: BW-WHM-DBA-ODS - DataStore Object (classic)

Description

The SAP BW DataStore Object (classic) is not available in SAP BW/4HANA. It can be converted to a DataStore Object (advanced) via the SAP BW/4HANA Transfer Tool.

Other Terms

ODSO, DODS, ADSO, DSO

Prerequisites and Checks

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are available in or can be converted to SAP BW/4HANA:

See node: "Supported by Transfer Tool" --> "BW4 Transfer Tool"

For the in-place conversion your system needs to be on SAP BW 7.5 SP 5, powered by SAP HANA or higher.
Recommendations

Under node "Supported by Transfer Tool" --> "BW4 Transfer Tool" --> "TLOGO ODSO (DataStore Object (classic))" the DataStore Objects are listed. They can be transferred "in-place" or via "remote conversion" to DataStore Objects (advanced) (ADSOs).

Transfer:

- **Write-optimized ODSOs** used in Queries or MultiProviders
  - Will be transferred into ADSOs with option "Keep inbound data, extract from inbound queue".
  - Please note that the write-optimized ODSO needs to have a semantic key. Write-optimized ODSOs w/o semantic key cannot be transferred and will cause the Transfer Tool to stop. Remove the ODSO from the MultiProvider or delete the Queries to continue.
  - The data won’t automatically be activated after the transfer.

- **Write-optimized ODSO** not used in Queries or MultiProviders
  - Will be transferred into ADSOs without activation.
  - Please note that ADSOs provide more flexibility for write-optimized use-cases like corporate memories.

- **Standard ODSOs**
  - Will be transferred into ADSOs with activation and change log.

- **ODSO for direct update**
  - Will be transferred into ADSOs for direct update.

- In ODSOs, if a characteristic is key, compounding characteristics did not have to be in the key as well. This has changed for ADSOs. The transfer tool will check and adapt the key during transfer, so that also the compounding characteristics are included in the key automatically.

- The Transfer Tool will automatically replace process chain variant "Activate Data in DataStore Objects (classic)" with process chain variant "Activate Data in DataStore Objects (advanced)".

- The Transfer Tool will automatically replace process chain variant "Deletion of Requests from Change Log of DSO (classic)" and "Deletion of Requests from Write-optimized DSO (classic)" with process chain variant "Clean Up Old Requests in DataStore Objects (advanced)".

Restrictions:

- In-memory optimized DataStore Objects: ODSOs with option "HANA-optimized" cannot be converted into ADSOs. Use report RSDRI_RECONVERT_DATASTORE to revoke the option first.
- Field based DSO are not supported by the BW/4 conversion. Please remodel this kind of scenario manually.
- For write-optimized ADSOs, a semantic key cannot be defined without enabling the option "Activate Data". If a write-optimized ODSO is transferred into such an ADSO, the semantic key will be ignored. This might produce an unexpected behavior if the semantic key was used in a transformation for currency conversion for example. Please remodel this kind of scenario manually as follows:
  - Create an InfoSource with the corresponding ODSO as template
  - Make sure that the semantic key of the ODSO is defined as the key for the InfoSource
  - Create a transformation connecting the source of the ODSO with the InfoSource
  - Enable the currency conversion in the corresponding rule
  - Create a transformation connecting the InfoSource with the ODSO

- If a process variant for the deletion of old requests from changelogs or write-optimized ODSOs is used, please note that there are restrictions on the corresponding process variant for the deletion of old requests from DataStore objects (advanced). See SAP Note 2448086 for details.

- Transfer of ODSO with Key Figure Aggregation Type NO2 is only supported for direct update ODSOs, for other DSO types manual redesign is required before transfer.

Related Information

See the documentation for more details:

Templates for Modeling the Data Warehousing Layers
References

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<td>1849498</td>
<td>SAP HANA: Reconversion of SAP HANA-optimized DataStores</td>
</tr>
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3.2.3 BW4SL - InfoCubes

SAP Note [2443489] - BW4SL - InfoCubes

Version 6 from 2018-07-19
Component: BW-WHM-DBA-ICUB - InfoCubes

Description

The SAP BW InfoCube is not available in SAP BW/4HANA. Basic InfoCubes can be converted to a DataStore Object (advanced) (ADSO) with option "All characteristics are key, reporting on union of inbound and active table" using the BW4 Transfer Tool.

Other Terms

CUBE, DCUB

Prerequisites and Checks

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are available in or can be converted to SAP BW/4HANA:

See node: Supported by Transfer Tool --> BW4 Transfer Tool (using transaction RSB4HTRF).

For the in-place conversion your system needs to be on SAP BW 7.5 SP 5, powered by SAP HANA or higher.

Recommendations

Under node Supported by Transfer Tool --> BW4 Transfer Tool --> TLOGO CUBE (InfoCube), the Basis InfoCubes are listed. They can be transferred using the Transfer Tool "in-place" or via "remote conversion" to DataStore objects (advanced).

Transfer:

- The Transfer Tool will automatically replace process chain variant "Compression of InfoCubes" with process chain variant "Clean Up Old Requests in DataStore objects (advanced)".
- DataStore objects (advanced) expose navigation attributes for staging processes only. It is not possible to consume navigation attributes of an ADSO directly in the query. The Transfer Tool will therefore automatically generate a CompositeProvider that enables the navigation attributes of the ADSO and redirects the query to it. See also SAP Note 2185212.
- For InfoCubes with non-cumulative key figures and near-line storage solution (NLS), see SAP Note 2618005.

Restrictions:

- InfoCubes of type VirtualProvider or HybridProvider cannot be converted (see SAP Notes 2444913 and 2442730).
- The DataStore object (advanced) does not support "zero elimination" at present.
- Transfer of InfoCubes with key figure aggregation type NO2 is not supported. Manual redesign required before transfer.
• SID materialization: ADSOs are transferred from InfoCubes without generating materialized SID columns. This might result in impaired performance in some cases. SID materialization can be enabled for selected characteristics containing mass data after the transfer, which will cause a remodeling job.
• Partitioning: InfoCubes are distributed across the SAP HANA nodes round-robin; ADSOs are distributed using a hash function. The fields that will be hashed are determined automatically, but can be changed after the transfer.
• InfoCubes on SAP HANA that are not HANA-optimized cannot be converted. HANA-optimized these InfoCubes using transaction RSMIGRHANADB.
• InfoCubes with an audit dimension, i.e. InfoCubes for which the checkbox ‘Auditable’ flag has been checked, cannot be converted at present. In order to convert them, the flag ‘Auditable’ has to be removed.

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<td>2185212</td>
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<tr>
<td>2618005</td>
<td>Archiving advanced Data Store Objects with non-cumulative key figures</td>
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3.2.4 BW4SL - InfoSets

SAP Note 2444912 - BW4SL - InfoSets

Version 4 from 2017-10-27
Component: BW-WHM-DBA-ISET - InfoSet

Description

The SAP BW InfoSet is not available in SAP BW/4HANA. It can be converted to a CompositeProvider via the BW4 Transfer Tool.

Other Terms

ISET, DISE

Prerequisites and Checks

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are available in or can be converted to SAP BW/4HANA:

See node: Supported by Transfer Tool --> BW4 Transfer Tool (use transaction RSB4HTRF)

Recommendations

Under node Supported by Transfer Tool --> BW4 Transfer Tool --> TLOGO ISET (InfoSet), the InfoSets are listed. They can be transferred “in-place” or via “remote conversion” to a CompositeProvider.

During the conversion, an InfoObject mapping is necessary, as InfoSet names of InfoObjects are not supported in the CompositeProvider. This requires an adoption of Queries and Query Views and other dependent objects, which are defined on top. Queries and Query Views are adopted in the BW4 Transfer Tool.

Restrictions:

• InfoSets with “Most Recent Reporting for InfoObjects” are not supported by the BW4 Transfer Tool
- InfoSets with "Left Outer: Add Filter Value On-Condition" are not supported by the BW4 Transfer Tool
- InfoSets without "Additional Grouping Before Join" and without "Join Is Time-Dependent" are not supported by the BW4 Transfer Tool
- InfoSets with only one PartProvider are not supported by the BW4 Transfer Tool
- InfoSets which use navigational attributes from an InfoCube in combination with a temporal join are not supported by the BW4 Transfer Tool.
- InfoSets with fields based on InfoObjects compounded to referenced key figures are not supported by the BW4 Transfer Tool.

Related Information

Creating InfoSets

CompositeProvider

3.2.5 BW4SL - MultiProviders

SAP Note 2444718 - BW4SL - MultiProviders

Version 5 from 2018-09-20
Component: BW-WHM-DBA-MPRO - MultiProvider

Description

The SAP BW MultiProvider is not available in SAP BW/4HANA. It can be converted to a CompositeProvider using the SAP BW/4HANA Transfer Tool.

In the following cases, it is not possible to convert a MultiProvider to a CompositeProvider:

- The setting “Accept Inconsistency During Compounding” is set to true.
- Navigation attributes from InfoObjects based on HANA Model are mapped in a way, that they cannot be used as navigation attributes anymore (see explanation below).

Other Terms

MPRO, DMPR

Prerequisites and Checks

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are available in or can be converted to SAP BW/4HANA:

See node: Supported by Transfer Tool --> BW4 Transfer Tool (transaction RSB4HTRF).

For the In-place Conversion, your system needs to be on SAP BW 7.5 SP 5, powered by SAP HANA or higher.

Recommendations

Under "Supported by Transfer Tool" --> "BW4 Transfer Tool" --> "TLOGO MPRO (MultiProvider)" the MultiProviders are listed. They can be converted to CompositeProviders either in-place or by remote conversion.

During conversion, it might be necessary to perform an InfoObject mapping. This is necessary because the CompositeProvider requires a consistent mapping of navigation attributes. Navigation attributes therefore always need to be mapped consistently with the characteristic that the navigation attribute belongs to. If A is
mapped to A, A__B needs to be mapped to A__B. If A is not mapped, no mapping is allowed for A__B. If A is mapped to A1, A__B needs to be mapped to A1__B. If A is mapped, A__B must also be mapped. If this is not guaranteed, a new mapping for the navigation attribute to a new characteristic is required.

A new "Compatibility Mode" for the CompositeProvider is now available, which allows an association of fields to navigation attributes (see SAP Notes 2659899 and 2666703):

- Avoids more than 90% of the name changing relate to inconsistent navigational attribute mappings in MultiProviders
- Limitation: The transferred CompositeProvider is not reusable in other CompositeProviders and must not include joins

InfoSet-InfoObjects are no longer supported in the CompositeProvider either, so a new mapping is also needed, if InfoSets are using as part of a MultiProvider. If an InfoObject mapping is required, this automatically requires adaptation of queries/query views/aggregation levels and other dependent objects, which are defined on top. Queries, query views and aggregation levels are adapted using the SAP BW/4HANA Transfer Tool.

Related Information

**MultiProvider**

**CompositeProvider**

### 3.2.6 BW4SL - VirtualProviders

**SAP Note 2444913 - BW4SL - VirtualProviders**

Version 3 from 2019-01-10
Component: BW-WHM-DBA-ICUB - InfoCubes
Other Components: BW-BEX-OT-VC - Virtual Cube (Remote Cube)

**Description**

The SAP BW VirtualProvider is not available in SAP BW/4HANA.

**Other Terms**

CUBE, DCUB, $VIRT

**Prerequisites and Checks**

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are available in or can be converted to SAP BW/4HANA.

**Recommendations**

There is no tool support to replace an SAP BW VirtualProvider by another InfoProvider. A manual redesign is necessary.

VirtualProvider based on Data Transfer Process:

- We recommend to remodel the VirtualProvider as an Open ODS View.

Virtual Provider based on BAPI:
- We recommend to remodel the VirtualProvider as an Open ODS View.

Virtual Provider based on Function Module:

- We recommend to remodel the logic of the function module in a SAP HANA Calculation View. Afterwards, this Calculation View can be embedded into a CompositeProvider.

Virtual Provider based on SAP HANA Model:

- We recommend to add the SAP HANA Model directly as PartProvider to a CompositeProvider. If data type conversions are necessary, the conversions should be done in calculated attributes in the SAP HANA Model, or the SAP HANA Model should be used as source of an Open ODS View, which generates the necessary conversions.

Related Information

VirtualProvider Based on the Data Transfer Process
VirtualProvider with BAPI
VirtualProviders with Function Modules
VirtualProviders Based on an SAP HANA Model
OpenODS View
CompositeProvider

3.2.7 BW4SL - HybridProviders

SAP Note 2442730 - BW4SL - HybridProviders

Version 1 from 2017-06-26
Component: BW-WHM-DBA-HPR - HybridProvider

Description

The SAP BW HybridProvider is not available in SAP BW/4HANA.

Other Terms

HYBR, DHYB

Prerequisites and Checks

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are available in or can be converted to SAP BW/4HANA.

Recommendations

Automatic conversion to an available SAP BW/4HANA object is not possible.
As an alternative for the HybridProvider, based on DataStore Object (classic), use the DataStore Object (advanced).

As an alternative for the HybridProvider, based on direct access, use the DataStore Object (advanced) combined with streaming process chain.

Related Information

SAP BW 7.50 documentation for HybridProvider

SAP BW/4HANA documentation for DataStore Object (advanced)

3.2.8 BW4SL - Aggregates

SAP Note 2470050 - BW4SL - Aggregates

Version 3 from 2019-01-11
Component: BW-BEX-OT-AGGR - Aggregates (Definition and Filling)

Description

Aggregates are not available in SAP BW/4HANA.

Other Terms

$AGGR

Prerequisites and Checks

You can use the SAP BW Checklist Tool for SAP HANA (see SAP Note 1729988) to find configuration related to aggregates.

Recommendations

In-place conversions start on SAP BW powered by SAP HANA and therefore no aggregates should exist in the system. However, sometimes aggregates still exist (see Checklist Tool) and need to be deleted before the system conversion to SAP BW/4HANA is possible. You can use program RSDU_AGGR_GARBAGE_DEL_HDB to drop any remaining aggregates in SAP BW powered by SAP HANA.

Remote conversions simply ignore aggregates.

3.2.9 BW4SL - Semantic Partitioning Objects

SAP Note 2472609 - BW4SL - Semantically Partitioned Objects

Version 7 from 2018-08-09
Component: BW-WHM-DBA-SPO - Semantically Partitioned Object

Description

Semantically Partitioned Objects (SPO) are not available in SAP BW/4HANA.

Other Terms

LPOA, LPOD
Prerequisites and Checks

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are supported or can be converted to SAP BW/4HANA.

See node: Manual Redesign --> BW Object Type

Recommendations

Semantically Partitioned Objects can be converted automatically to DataStore objects (advanced) and Semantic Groups (since Q1/2018).

SPOs were designed for huge SAP BW InfoProviders (InfoCubes or DataStore objects) before SAP HANA was released. One of the main reasons for using SPOs was performance. With SPOs, it was possible to design a logical partition concept in an easy way. For these objects the result set was reduced and you got a better data access performance (due to pruning). This kind of performance oriented data modeling is not as important for SAP BW powered by SAP HANA and SAP BW/4HANA as in systems without SAP HANA. Nevertheless, it could still make sense to use semantically partitioned objects or semantic groups for other reasons like administration or operations.

Related Information

Using Semantic Partitioning

Semantic Groups

3.2.10 BW4SL - DataStore Objects (advanced)

SAP Note 2487023 - BW4SL - DataStore Object (advanced)

Version 3 from 2018-01-26
Component: BW-WHM-DBA-ADSO - DataStore Object (advanced)

Description

Data Transfer Processes created before SAP BW release 7.5 SP 4 are storing request IDs in as meta data for each data load into DataStore objects (advanced). However, request IDs are not available in SAP BW/4HANA.

Other Terms

ADSO, DDSO

Prerequisites and Checks

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are available in or can be converted to SAP BW/4HANA.

See node: Supported by Transfer Tool --> BW4 Transfer Tool

Recommendations

DataStore objects (advanced) which include request IDs (old request management) in the meta data have to be processed once using the Scope Transfer Tool to clean-up the meta data. This is a fast process since transaction data is not touched.
Note: The clean-up is not necessary for DTPs created with SAP BW 7.5 SP 4 or higher. This is taken into consideration by the check program mentioned above.

3.2.11 BW4SL - CompositeProviders

SAP Note 2442062 - BW4SL - CompositeProvider and Analytical Index

Version 11 from 2019-05-10
Component: BW-WHM-DBA-COPR - CompositeProvider (local version)

Description

The central CompositeProvider created with transaction RSLIMO is not available in SAP BW/4HANA.

The analytical index (AINX), created in the APD (Analysis Process Designer) or directly in transaction RSDD_LTIP, is not available in SAP BW/4HANA.

Other Terms

COPR, DCOP, AINX

Prerequisites and Checks

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are available or can be converted to SAP BW/4HANA:

See node in the application log: Automated Cleanup --> Deletions --> TLOGO AINX (Analytical Index)

See node: Supported by Transfer Tool --> BW4 Transfer Tool --> TLOGO COPR (local CompositeProvider and central CompositeProvider).

Recommendations

In order to replace an existing analytic index (created with BW 7.5 or earlier releases), you can create a new field-based DataStore object (advanced) manually using the BW Modeling Tools.

In order to replace an existing central CompositeProvider (created with SAP BW 7.5 or earlier releases), you can create a new SAP HANA CompositeProvider (TLOGO HCPR) manually using the BW Modeling Tools.

Automatic conversion of the central CompositeProvider to a SAP HANA CompositeProvider is possible and is supported by the BW4 Transfer tool.

Related Information

For local CompositeProvider created within BW Workspaces (TLOGO COPR), see SAP Note 2444273 and the documentation:

Creating CompositeProviders in BW Workspace Designer

For APD, see SAP Note 2444220 and the documentation:

Analysis Process Designer
3.2.12 BW4SL - Analytical Indexes

SAP Note 2442062 - BW4SL - CompositeProvider and Analytical Index

See "BW4SL - CompositeProviders".

3.2.13 BW4SL - External SAP HANA Attribute and Analytic Views

SAP Note 2442775 - BW4SL - External SAP HANA Attribute and Analytic View

Version 1 from 2017-06-26
Component: BW-WHM-MTD-HMOD - HANA Model Generation in BW

Description

External SAP HANA views of type Attribute or Analytic View are not available in SAP BW/4HANA.

Other Terms

RS2HANA

Prerequisites and Checks

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are available in or can be converted to SAP BW/4HANA.

Recommendations

Implement SAP Note 2236064 and follow the instructions in the solution section to change all external SAP HANA views to type Calculation View.

Related Information

SAP BW/4HANA documentation:

Generating SAP HANA Views from the BW System

3.2.14 BW4SL - InfoObject Catalogs

SAP Note 2442621 - BW4SL - InfoObject Catalogs and InfoObjects

See "BW4SL - InfoObjects".

3.3 SAP BW - Data Staging

3.3.1 BW4SL - Data Transfer Processes

SAP Note 2464541 - BW4SL - Data Transfer Processes

Version 9 from 2018-11-07
Component: BW-WHM-DST-DTP - Data Transfer Process

Description
Please note the following limitations on Data Transfer Processes (DTP) in SAP BW/4HANA:

1. The persistent staging area service (PSA) is no longer available in SAP BW/4HANA. As of that, the following limitations apply:
   a. Data Transfer Processes that use error handling are not available (no error stacks, no error stack maintenance and no error DTPs)
   b. No distribution of data extracted from source systems to the PSA and from there to several target objects (extract once – deploy many)
   c. Potential for out of memory situations when using the DTP feature "Semantic Groups" (semantically grouped extraction of data) in combination with ODP DataSources as source objects (the same limitation applies in SAP BW when using the DTP data extraction setting "Directly from source system. PSA not used")
   d. "SAP HANA Execution" is not possible for DTPs and Transformations that use ODP DataSources as source objects (the same limitation applies in SAP BW when using the DTP data extraction setting "Directly from source system. PSA not used")
2. DTPs of type "Real-time Data Acquisition" or "Direct Access" are not available in SAP BW/4HANA.
3. DTPs using error handling and SAP HANA runtime for transformations are not available in SAP BW/4HANA 1.0

Other Terms

DTPA, DTPD

Prerequisites and Checks

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are available or can be converted to SAP BW/4HANA.

See node: Manual Housekeeping --> Clean-up Error Stacks

See node: Manual Redesign --> BW Object Type

Recommendations

For 1 a): Since SAP BW/4HANA Support Package 04 the new technology “Data Transfer Intermediate Storage (DTIS)” is provided, which covers the DTP error stack functionality (excluding the maintenance of the error stack – see the SAP Knowledge Base Article 2494151 – “Display and Edit records of Error DTP is not available (BW/4HANA)”).

As no transfer of open error requests into the new DTIS technology is possible, the current error stack tables must be cleared prior to the system conversion, either by deleting the corresponding requests or by processing them with an error DTP.

In addition, the system checks for error DTPs, which have no standard DTP or a standard DTP, which has error handling switched off. These are marked to be deleted in the transfer tool and removed automatically.

For 1 b): Currently, an Advanced DataStore Object (ADSO) must be used as replacement for the Persistent Staging Area (PSA) to allow for “extract once – deploy many” scenarios. The SAP BW/4HANA conversion tools do support this conversion step (See SAP Note 2464367 – “BW4SL - InfoPackages and Persistent Staging Areas”).

For 1 c): With SAP Note 2497506 – “DTP load from ODP source with semantic grouping” packaging of data is introduced for DTPs based on ODP DataSources that use “Semantic Groups”. This correction will eliminate out of memory situations on source system level. Memory shortages may however still occur in the SAP BW/4HANA target system.
Alternatively, an Advanced DataStore Object (ADSO) can be used as source object for DTPs that use “Semantic Groups” and would hence replace the Persistent Staging Area (PSA). The SAP BW/4HANA conversion tools do support this conversion step (See SAP Note 2464367 – “BW4SL - InfoPackages and Persistent Staging Areas”).

For 1 d): Currently, an Advanced DataStore Object (ADSO) must be used as replacement for the Persistent Staging Area (PSA) to allow for “SAP HANA Execution” on top of data from ODP DataSources. The SAP BW/4HANA conversion tools do support this conversion step (See SAP Note 2464367 – “BW4SL - InfoPackages and Persistent Staging Areas”).

For 2): DTPs for "Real-time Data Acquisition" and "Direct Access" need to be redesigned. It’s recommended to use streaming process chains and Open ODS Views instead. See also See SAP Note 2447916 – “BW4SL - Real-time Data Acquisition (RDA)” for further details.

For 3): It’s not possible to convert such DTPs automatically for SAP BW/4HANA 1.0. We plan to support DTPs using error handling and SAP HANA runtime for transformations in SAP BW/4HANA 2.0. For details, see SAP Note 2580109.

### Related Information

- SAP Note 2464367 - BW4SL - InfoPackages and Persistent Staging Areas
- SAP Note 2447916 - BW4SL - Real-time Data Acquisition (RDA)
- SAP Knowledge Base Article 2494151 – Display and Edit records of Error DTP is not available (BW/4HANA)

### References

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<tr>
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### 3.3.2 BW4SL - InfoPackages and Persistent Staging Areas

**SAP Note 2464367 - BW4SL - InfoPackages and Persistent Staging Areas**

Version 10 from 2018-05-25  
Component: BW-WHM-DST-PSA - Persistent Staging Area

**Description**

The persistent staging area service (PSA) and InfoPackages are not available in SAP BW/4HANA. Therefore, it is no longer possible to load data via InfoPackage.

**Other Terms**

ISIP, SHIP

**Prerequisites and Checks**
Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are available or can be converted to SAP BW/4HANA.

See node: Manual Housekeeping --> Delete PSA

See node: Supported by Transfer Tool --> 3.x Migration

See node: Manual Redesign --> BW Object Type

**Recommendations**

In SAP BW/4HANA, a data transfer process (DTP) is the only object type to load data into the system. It can access all supported source system types directly without using a PSA. If the PSA has been used in SAP BW to distribute data to several target objects or for a sorted access to the data, or to have a SAP HANA transformation based on the data, then a write-optimized DataStore object (advanced) must be put in between the DataSource and the target DataStore object (advanced). Also, it is required to create an aDSO from the PSA if you have Full-InfoPackages with different filter conditions or file names to be extracted. The different InfoPackages will then be transferred to different Full-DTP's, and Delta can be extracted from the PSA-aDSO using a Delta-DTP. If no aDSO is created from the PSA, there must be only one Full-InfoPackage, which will then be merged into the Delta-DTP.

The Transfer Tool will allow you to either skip the InfoPackage and create the DTP directly on the DataSource, or transfer the PSA to an DataStore object (advanced) and replace the InfoPackage by a DTP.

The following InfoPackages cannot be handled by the Transfer Tool:

- InfoPackages for 3.x DataSources
  Migrate the 3.x DataSources and InfoPackage to 7.x DataSources (using transaction RSMIGRATE)
- InfoPackages for Read-time Data Acquisition
  See SAP Note 2447916 BW4SL - Real-Time Data Acquisition (RDA)
- Push InfoPackage for Web Service Source Systems
  See SAP Note 2441826 BW4SL - Web Service Source Systems
- Multiple Delta InfoPackages for File Source Systems which read different files for same DataSource (or have different routines to determine the filename)

If a process variant for the deletion of old requests from PSAs is used, please note that there are restrictions on the corresponding process variant for the deletion of old requests from DataStore objects (advanced). See SAP Note 2448086 for details.

**Related Information**

See SAP Note 2464541 - BW4SL - Data Transfer Process / Error Stack

See the documentation for more information:

- [InfoPackage --> Data Transfer Process](#)
- [Persistent Staging Area (PSA)](#)
- [InfoPackage](#)
- [Data Transfer Process](#) in SAP BW/4HANA
- [Working with Source Systems](#) in SAP BW/4HANA
**3.3.3 BW4SL - InfoPackage Groups**

**SAP Note 2487598 - BW4SL - InfoPackage Groups**

Version 1 from 2017-07-04  
Component: BW-WHM-DST - Data Staging

**Description**

InfoPackage Groups are not available in SAP BW/4HANA.

**Other Terms**

ISIG, DISG

**Prerequisites and Checks**

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are available in or can be converted to SAP BW/4HANA.

See node: Supported by Transfer Tool --> 3.x Migration

**Recommendations**

InfoPackage Groups have to be replaced by Process Chains manually.

**Related Information**

*InfoPackage Group --> Process Chain*

**References**

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<th>SAP Note</th>
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</table>

**3.3.4 BW4SL - Update Rules**

**SAP Note 2470352 - BW4SL - Data Flows (3.x)**

Version 8 from 2018-10-25  
Component: BW-WHM-DST-UPD - Update Rules

**Description**

The following object types related to 3.x data flows are not available in SAP BW/4HANA:

Objects to be replaced:
• Update Rules
• 3.x InfoSources
• Transfer Rules
• 3.x DataSources
• Transfer and Communication Structures

Objects to be adapted:

• InfoPackages
• Process Chains
• Process Chain Variants
• VirtualProviders based on 3.x InfoSource (Cube Type=V, Cube Sub-type=S)

The 3.x data flow migration tool (transaction RSMIGRATE) is therefore also not available in SAP BW/4HANA.

Other Terms

UPDR, DUPD, ISCS, DSCS, ISTD, DSTD, ISTS, SHTR, ISMP, SHMP, ISFS, SHFS, ISIP, SHIP, RSPC, DSPC, RSPV, RSPV, CUBE, DCUB

Prerequisites and Checks

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are available or can be converted to SAP BW/4HANA.

See node: Supported by Transfer Tool --> 3.x Migration

Recommendations

In order to migrate the data flows to objects types compatible with SAP BW/4HANA, transaction RSMIGRATE can be called in order to create migration projects.

However, in releases lower than SAP BW 7.3 the migration has to be performed manually. Also hierarchy DataSources and their associated transfer rules cannot be migrated automatically. See documentation links below.

This migration from 3.x to 7.x data flows has to be performed before the SAP BW/4HANA Transfer Toolbox can be used to convert data flows and model to objects compatible with SAP BW/4HANA.

Related Information

See the documentation for details:

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<th>Changes to the Data Flow</th>
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<tr>
<td>BW 7.02</td>
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</table>
3.3.5  **BW4SL - Transfer Rules**

SAP Note **2470352** - BW4SL - Data Flows (3.x)

See “BW4SL - Update Rules”.

3.3.6  **BW4SL - Transfer Structures**

SAP Note **2470352** - BW4SL - Data Flows (3.x)

See “BW4SL - Update Rules”.

3.3.7  **BW4SL - DataSources (3.x)**

SAP Note **2470352** - BW4SL - Data Flows (3.x)

See “BW4SL - Update Rules”.

3.3.8  **BW4SL - Generic and Export DataSources**

SAP Note **2470315** - BW4SL - Generic and Export DataSources

Version 5 from 2017-07-05  
Component: BW-WHM-DBA-DMA - Data Marts  
Other Components: BW-WHM-DST-DS - DataSource

Description

The Service API for DataSources (S-API) is not available in SAP BW/4HANA. Therefore, the following types of DataSources are not available:

- Generic DataSources (maintained in transaction RSO2)
- Export DataSources (8*, generated from transaction RSA1)
- Technical Content DataSources (0TCT*, activated via transaction RSA1)
Other Terms

OSOA, OSOD

Prerequisites and Checks

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are available or can be converted to SAP BW/4HANA.

See node: Manual Redesign --> Check Service API target systems

See node: Automated Cleanup --> Deletion of SAP Delivered Technical Content

Recommendations

To support generic extraction from tables or views, we recommend creating corresponding ABAP CDS views and using source system type ODP with ABAP-CDS context in the target system.

All relevant objects are exposed via the ODP context BW. If you want to load data from a SAP BW/4HANA system into another SAP BW/4HANA or SAP BW system (or load within the same system to another InfoProvider), you need to choose source system type ODP with BW context in the target system.

DataSources from technical content are replaced over time with ABAP CDS views (namespace RV*). These CDS views can be used for real-time monitoring or extraction of system statistics.

Related Information

Export DataSource --> Data Transfer Process

Transferring Data from SAP Systems via ODP (ABAP CDS Views)

Transferring Data from SAP BW or SAP BW/4HANA Systems Using ODP (InfoProviders, Export DataSources)

Statistical Analyses of the Data Warehouse Infrastructure

3.3.9 BW4SL - InfoSources (3.x)

SAP Note 2470352 - BW4SL - Data Flows (3.x)

See "BW4SL - Update Rules".

3.3.10 BW4SL - Hierarchy DataSources

SAP Note 2480284 - BW4SL - Hierarchy DataSources

Version 6 from 2019-04-10
Component: BW-WHM-DST-DS - DataSource
Other Components: BC-BW-ODP - Operational Data Provisioning (ODP) and Delta Queue (ODQ)

Description

Loading hierarchy DataSources via Operational Data Provisioning (ODP) is not available in a SAP NetWeaver 7.0x to 7.3x Source System. This affects the following ODP Provider Contexts:
ODP-BW (Hierarchies from InfoObjects in SAP BW Source Systems) in SAP BW as Source System for releases in between SAP BW 7.0x and SAP BW 7.3x

ODP-SAPI (Hierarchy DataSources / Extractors in any SAP Source System) in an SAP Source System (ERP, CRM, SCM, etc.) that only uses the ODP Data Replication API 1.0 or the ODP Replication API 2.0 in conjunction with PI_BASIS 7.30:

- Information on the availability of the ODP Replication API 1.0: See SAP Note 1521883
- Information on the availability of the ODP Replication API 2.0: See SAP Note 1931427

Other Terms

RSDS

Prerequisites and Checks

There is currently no automated analysis available.

Recommendations

For ODP-BW (Hierarchies from InfoObjects in SAP BW as Source System)

- SAP BW starting from 7.0x but lower than 7.3x:
  - Please implement SAP Note 2418250 - Extraction of hierarchies via ODP in NetWeaver < 7.30 on your SAP BW source system and your target SAP BW and SAP BW/4HANA system in order to extract InfoObject hierarchies via ODP.
- SAP BW 7.3x:
  - Please implement SAP Note 2469120 - ODP & Hierarchies in PI_BASIS 7.30 / BW 7.3x on your SAP BW source system in order to extract InfoObject hierarchies via ODP.

For ODP-SAPI (Hierarchy DataSources / Extractors in any SAP Source System)

- SAP Source Systems (ERP, CRM, SCM, etc.) that only use the ODP Data Replication API 1.0:
  - Please implement SAP Note 2418250 - Extraction of hierarchies via ODP in NetWeaver < 7.30 on your source system and your target SAP BW and SAP BW/4HANA system in order to extract Hierarchy DataSources / Extractors via ODP.
  - Please also note the mandatory manual pre-step required for SAP Note 2418250 in a PI_BASIS 7.0-7.11 source system: SAP Note 2768527 - ODP_API1.5_Hierarchie Support UDO (referenced in SAP Note 2418250).
- SAP Source Systems (ERP, CRM, SCM, etc.) with ODP Replication API 2.0 and PI_BASIS 7.30:
  - Please implement SAP Note 2469120 - ODP & Hierarchies in PI_BASIS 7.30 / BW 7.3x on your source system in order to extract Hierarchy DataSources / Extractors via ODP.

As long as the above limitations apply (= the mentioned SAP Notes are not implemented on your SAP Source System or your SAP BW Source System), you can (instead of ODP) use the SAP BW Source System type for loading InfoObject hierarchies or the SAP Source System type for loading Hierarchy DataSources. This applies only for SAP BW target systems on a release 7.3x, 7.4x or 7.5x. In SAP BW/4HANA there is no alternative as ODP is the only source system type for extracting data from SAP Source Systems and SAP BW Source Systems.

As a alternative workaround, the following is possible:

- Load your hierarchy from your SAP Source System to a Hierarchy InfoObject in a SAP BW >= 740 SP5 using the SAP Source System (instead ODP). From this Hierarchy InfoObject, you can load your hierarchy to SAP BW/4HANA using the ODP-BW Source System in SAP BW/4HANA.
- Load your hierarchy to the Embedded BW of you SAP Source System. From there, use an Open Hub Destination to save the hierarchy to a file or DB table and load it from there to SAP BW/4HANA.
Please finally note the following for SAP BW/4HANA remote conversion scenarios from SAP BW >= 7.00 but < SAP BW 7.30: Business Content Hierarchy DataSources that only support the transfer method ‘IDoc’ (ROOSOURCE-TFMETHODS = '1') can only use the “old” SAP BW 3.x data flow (transfer rules and update rules) in SAP BW target releases >= 7.00 but < 7.30. The “new” data flow (transformations) for such hierarchies is only available with SAP BW >= 7.30. Hence, the respective data flows on SAP BW side need to be removed before conversion to SAP BW/4HANA. After conversion to SAP BW/4HANA, the respective Hierarchy DataSource can get connected again to their target InfoObjects in SAP BW/4HANA using a transformation and the ODP-SAPI Source System (in case the restriction under “Symptom” does not apply).

For general information about availability and functionality of ODP based extractions from SAP Systems to SAP BW or SAP BW/4HANA see SAP Note 7481315.

General information on ODP is available in the Operational Data Provisioning FAQ.

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<td>1931427</td>
<td>ODP Data Replication API 2.0</td>
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<td>ODP &amp; Hierarchies in PI_BASIS 7.30 / BW 7.3x</td>
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### 3.3.11 BW4SL - Transformations

**SAP Note 2479567 - BW4SL - Transformations**

Version 6 from 2017-08-31
Component: BW-WHM-DST-TRF - Transformation

**Description**

Transformations with rule type “Read from DataStore (classic)” are not available in SAP BW/4HANA.

Transformation containing a rule "Read from DataStore" cannot be activated after a conversion, because not all keys of the DataStore are specified.

Transformations that contain non-conform ABAP Objects (OO) Coding in SAP BW/4HANA, have restricted usage. These Transformations cannot be displayed with the BW Modeling Tools and new features are not available.

**Other Terms**

TRFN, DTRF, ODSO, DODS

**Prerequisites and Checks**

There is currently no automated analysis available, if the such transformation rules are used or not.

A SAP BW system was migrated to a SAP BW/4HANA system and transformations contain non-compatible ABAP OO coding or read data from a (classic) DataStore.

**Recommendations**

When converting classic DataStore objects to advanced DataStore objects, the Transfer Tool will automatically convert the transformation rules to rule type “Read from DataStore (advanced)”. 

A transformation with a rule “Read from DataStore” can only be activated, if all keys of the DataStore are specified in the rule. If not, the rule has to be changed manually.

Transformations that contain ABAP coding, that is not ABAP OO compatible (e.g. obsolete statements are used like header tables, includes, etc.), cannot be created in a SAP BW/4HANA system and existing transformations can only be opened in SAP GUI and in the BW Modeling Tools. Such transformations can be used and changed in a SAP BW/4HANA system, but it is highly recommended to change the coding to make them ABAP OO compatible. Further enhancements and new features can only be modeled in the BW Modeling Tools and are therefore not available for such transformations.

Related Information

You can use the SAP BW Transformation Finder to scan your system for specific transformation rules (see SAP Note 1908367).

3.3.12 BW4SL - Communication Structures

SAP Note 2470352 - BW4SL - Data Flows (3.x)

See “BW4SL - Update Rules”.

3.3.13 BW4SL - InfoSources

SAP Note 2755139 - BW4SL - InfoSources

Version 1 from 2019-02-19
Component: BW-WHM-DST - Data Staging

Description

In the SAP BW Data Warehousing Workbench, InfoSource (7.x) are organized and authorized by Application Component. In SAP BW/4HANA (and SAP BW Modeling Tools), InfoSources are organized and authorized by InfoArea.

Other Terms

TRCS, DTRC

Prerequisites and Checks

There is currently no automated analysis available, if the InfoSources are assigned to an InfoArea or not. In SAP BW 7.5, you can check field INFOAREA of table RSKSNEW manually.

Recommendations

When converting the system to SAP BW/4HANA, existing InfoSources are by default located in InfoArea "Unassigned Nodes (NODESNOTASSIGNED)”. If you want to retain security for InfoSources on a grouped level, then you will have to assign InfoSources to InfoAreas.

For SAP BW 7.5, we recommend to maintain the assignment using the SAP BW Modeling Tools before the technical conversion of the system to SAP BW/4HANA (either the new authorization S_RS_TRCS or the old authorization S_RS_ISNEW are sufficient). There will be no post conversion adjustments of InfoSources and related authorizations necessary (only S_RS_TRCS will be checked).

For SAP BW 7.0 to 7.4 (shell conversion) and 7.3 to 7.4 (remote conversion), the assignment must be performed in the target SAP BW/4HANA system.
Tip: In the SAP BW Modeling Tools, you can select several InfoSources and assign them together to a new InfoArea.

Related Information

SAP Note 2468657 - BW4SL - Standard Authorizations

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3.3.14 BW4SL - Process Chains and Process Variants

SAP Note 2448086 - BW4SL - Process Chains and Process Variants

Version 13 from 2019-05-09
Component: BW-WHM-DST-PC - Process Chains

Description

With SAP BW/4HANA, a number of process types is no longer available or have to be adjusted. The process chains as such are still fully supported, but if a process must be deleted, then the corresponding process chain has to be adjusted accordingly, i.e. the process has to be removed from the chain, and the gap between the preceding and subsequent processes must be closed. In some cases, a process type must be replaced by the corresponding new process type. Here, the process chain also has to be adjusted accordingly.

Other Terms

RSPC, DSPC, RSPV, DSPV

Prerequisites and Checks

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are available in or can be converted to SAP BW/4HANA.

Recommendations

For the vast majority of process types, this functionality is part of either the SAP BW/4HANA Transfer Tool, or the task list which switches the mode to “Ready for Conversion” state (for in-place conversion). The following table lists all the affected process types, grouped by the tool which must be used to do the adjustment.

3.x Objects

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<th>Description</th>
<th>Action</th>
<th>Details</th>
</tr>
</thead>
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<tr>
<td>HIERSAVE</td>
<td>Save Hierarchy (3.X)</td>
<td>Replacement</td>
<td>3.x process types can be migrated with transaction RSMIGRATE</td>
</tr>
<tr>
<td>LPI</td>
<td>Logically Partitioned InfoPackages</td>
<td>Replacement</td>
<td>3.x process types can be migrated with transaction RSMIGRATE</td>
</tr>
<tr>
<td>ODSPROCESS</td>
<td>Update DataStore Object Data (Further Update)</td>
<td>Replacement</td>
<td>3.x process types can be migrated with transaction RSMIGRATE</td>
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</table>
**BPC Process Types**

<table>
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<tr>
<th>Process Type</th>
<th>Description</th>
<th>Action</th>
<th>Details</th>
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</thead>
<tbody>
<tr>
<td>BPCADMCDM</td>
<td>BPC: Create Dimension</td>
<td>Install BPC or removal</td>
<td>Process type requires SAP BPC, version for SAP BW/4HANA</td>
</tr>
<tr>
<td>BPCADMOTC</td>
<td>BPC: Optimize Application</td>
<td>Install BPC or removal</td>
<td>Process type requires SAP BPC, version for SAP BW/4HANA</td>
</tr>
<tr>
<td>BPCADMVLG</td>
<td>BPC: Validate Logic</td>
<td>Install BPC or removal</td>
<td>Process type requires SAP BPC, version for SAP BW/4HANA</td>
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<tr>
<td>BPCADTARC</td>
<td>BPC: Archive Audit</td>
<td>Install BPC or removal</td>
<td>Process type requires SAP BPC, version for SAP BW/4HANA</td>
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<tr>
<td>BPCAPPS</td>
<td>BPC: Application Source</td>
<td>Install BPC or removal</td>
<td>Process type requires SAP BPC, version for SAP BW/4HANA</td>
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<td>BPCBADIRT</td>
<td>BPC: BAdI Retractor</td>
<td>Install BPC or removal</td>
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<td>BPCCLCUBE</td>
<td>BPC: Delete Application</td>
<td>Install BPC or removal</td>
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<td>BPCCLEAR</td>
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<td>BPCCMCOVT</td>
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<td>BPCCOMS</td>
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<td>BPCEPURPT</td>
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<td>BPCFILE</td>
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<td>BPCFINOPT</td>
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<tr>
<td>BPCIFS</td>
<td>BPC: InfoProvider Source</td>
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<tr>
<td>BPCIOBJS</td>
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<tr>
<td>BPCJORNAL</td>
<td>BPC: Journal</td>
<td>Install BPC or removal</td>
<td>Process type requires SAP BPC, version for SAP BW/4HANA</td>
</tr>
<tr>
<td>BPCLOAD</td>
<td>BPC: Load</td>
<td>Install BPC or removal</td>
<td>Process type requires SAP BPC, version for SAP BW/4HANA</td>
</tr>
<tr>
<td>BPCMADLOAD</td>
<td>BPC: Master Data Description</td>
<td>Install BPC or removal</td>
<td>Process type requires SAP BPC, version for SAP BW/4HANA</td>
</tr>
<tr>
<td>BPCMALOAD</td>
<td>BPC: Master Data</td>
<td>Install BPC or removal</td>
<td>Process type requires SAP BPC, version for SAP BW/4HANA</td>
</tr>
<tr>
<td>BPCMDDEAL</td>
<td>BPC: Master Data Processing</td>
<td>Install BPC or removal</td>
<td>Process type requires SAP BPC, version for SAP BW/4HANA</td>
</tr>
<tr>
<td>BPCMODIFY</td>
<td>BPC: Modify Dynamically</td>
<td>Install BPC or removal</td>
<td>Process type requires SAP BPC, version for SAP BW/4HANA</td>
</tr>
<tr>
<td>BPCONLINE</td>
<td>BPC: Online Status</td>
<td>Install BPC or removal</td>
<td>Process type requires SAP BPC, version for SAP BW/4HANA</td>
</tr>
<tr>
<td>BPCOWCALC</td>
<td>BPC: Ownership Calculation</td>
<td>Install BPC or removal</td>
<td>Process type requires SAP BPC, version for SAP BW/4HANA</td>
</tr>
<tr>
<td>BPCPSAS</td>
<td>BPC: PSA Source</td>
<td>Install BPC or removal</td>
<td>Process type requires SAP BPC, version for SAP BW/4HANA</td>
</tr>
<tr>
<td>BPCRUNLGC</td>
<td>BPC: Run Logic</td>
<td>Install BPC or removal</td>
<td>Process type requires SAP BPC, version for SAP BW/4HANA</td>
</tr>
<tr>
<td>BPCTDHVER</td>
<td>BPC: Manage TDH Version</td>
<td>Install BPC or removal</td>
<td>Process type requires SAP BPC, version for SAP BW/4HANA</td>
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</tbody>
</table>

**Supported by Scope Transfer Tool**

<table>
<thead>
<tr>
<th>Process Type</th>
<th>Description</th>
<th>Action</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADSODEL</td>
<td>Deletion of Requests from DataStore Objects (advanced)</td>
<td>Replacement</td>
<td>Replace by process type ADSOREM</td>
</tr>
<tr>
<td>AGGRFILL</td>
<td>Initial Fill of New Aggregates</td>
<td>Removal</td>
<td>Converted InfoCubes will be removed from the process variant. When all InfoCubes are removed, the process will be deleted and removed from the process chain.</td>
</tr>
<tr>
<td>Simplification</td>
<td>Description</td>
<td>Action</td>
<td></td>
</tr>
<tr>
<td>----------------</td>
<td>-------------</td>
<td>--------</td>
<td></td>
</tr>
<tr>
<td><strong>CHGLOGDEL</strong></td>
<td>Deletion of Requests from Change Log of DSO (classic)</td>
<td>Replacement</td>
<td></td>
</tr>
<tr>
<td><strong>COMPRESS</strong></td>
<td>Compression of the InfoCube</td>
<td>Replacement</td>
<td></td>
</tr>
<tr>
<td><strong>DROPCUBE</strong></td>
<td>Complete Deletion of Data Target Contents</td>
<td>Adjustment</td>
<td></td>
</tr>
<tr>
<td><strong>DROPINDEX</strong></td>
<td>Delete Index</td>
<td>Removal</td>
<td></td>
</tr>
<tr>
<td><strong>INDEX</strong></td>
<td>Generate Index</td>
<td>Removal</td>
<td></td>
</tr>
<tr>
<td><strong>LOADING</strong></td>
<td>Execute InfoPackage</td>
<td>Replacement</td>
<td></td>
</tr>
<tr>
<td><strong>ODSACTIVAT</strong></td>
<td>Activate Requests in DataStore Objects (classic)</td>
<td>Replacement</td>
<td></td>
</tr>
<tr>
<td><strong>PLSWITCHL</strong></td>
<td>Switch Real-time InfoCube / aDSO to Load Mode</td>
<td>Adjustment</td>
<td></td>
</tr>
<tr>
<td><strong>PLSWITCHP</strong></td>
<td>Switch Real-time InfoCube / aDSO to Plan Mode</td>
<td>Adjustment</td>
<td></td>
</tr>
<tr>
<td><strong>PSADELETE</strong></td>
<td>Deletion of PSA data</td>
<td>Removal / Replacement</td>
<td></td>
</tr>
</tbody>
</table>

**CHGLOGDEL**: Replace by process type `ADSOREM`.

Note that the age of the requests to be deleted can only be given relatively (older than x days) but not absolutely (created before mm-dd-yyyy) in process type `ADSOREM`. The transfer of a variant with absolute date is therefore not possible. Replace by process type `ADSOREM`.

**COMPRESS**: Note that the age of the requests to be activated (i.e. compressed) can only be given relatively (older than x days) but not absolutely (created before mm-dd-yyyy) in process type `ADSOREM`. The transfer of a variant with absolute date is therefore not possible.

**DROPCUBE**: Converted InfoCubes will be removed from the process variant. When all InfoCubes are removed, the process will be deleted and removed from the process chain.

**DROPINDEX**: Converted InfoCubes will be removed from the process variant. When all InfoCubes are removed, the process will be deleted and removed from the process chain.

**INDEX**: Converted InfoCubes will be removed from the process variant. When all InfoCubes are removed, the process will be deleted and removed from the process chain.

**LOADING**: Replace by process type `DTP_LOAD`.

**ODSACTIVAT**: Replace by process type `ADSOACT`.

Newly loaded requests can be activated together or one by one. To activate a certain number of requests or requests older than x days, use process type `ADSOREM`.

**PLSWITCHL**: References to InfoCubes will be replaced by DataStore objects (advanced).

References to InfoCubes will be replaced by DataStore objects (advanced).

**PLSWITCHP**: References to InfoCubes will be replaced by DataStore objects (advanced).

If the referenced object is transferred into a DataStore object (advanced), the process will be replaced by an `ADSOREM` process. Otherwise, the process will be removed from the chain.

**PSADELETE**: Note that the age of the requests to be deleted can only be given relatively (older than x days) but not absolutely (created...
before mm-dd-yyyy) in process type ADSOREM. The transfer of a variant with absolute date is therefore not possible.

Deletion of red requests is not possible with process type ADSOREM; therefore, the option for deletion of only successfully loaded requests must be set whereas the option for deletion of only red requests must not be set; otherwise, the variant cannot be transferred. --- If you have the latest version of the revision 9 notes (2748962 and 2751585), then you do not need to change switches for deletion of only successfully loaded requests or deletion of only red requests, but the transfer will nevertheless behave as if these settings were as demanded (option for deletion of successfully loaded requests set, option for deletion of red requests not set).

Replace by process type ADSOOLR.

Note that several options for the selection of the requests to be deleted are no longer available in process type ADSOOLR. In case such options are used, an automatic transfer is not possible. For details, see SAP Note 2723776. Although customer routines can still be used in ADSOOLR, they cannot be transferred automatically, because the interface of the routine is different.

Converted InfoCubes will be removed from the process variant. When all InfoCubes are removed, the process will be deleted and removed from the process chain.

Replace by process type ADSOREM.

Note that the age of the requests to be deleted can only be given relatively (older than x days) but not absolutely (created before mm-dd-yyyy) in process type ADSOREM. The transfer of a variant with absolute date is therefore not possible.

<table>
<thead>
<tr>
<th>Deleted in Ready for Conversion Task List</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Process Type</strong></td>
</tr>
<tr>
<td>ANPR</td>
</tr>
<tr>
<td>Process Code</td>
</tr>
<tr>
<td>--------------</td>
</tr>
<tr>
<td>ATTRIBCHAN</td>
</tr>
<tr>
<td>BIA_TPS</td>
</tr>
<tr>
<td>BIINDEX</td>
</tr>
<tr>
<td>DATACHANGE</td>
</tr>
<tr>
<td>DBSTAT</td>
</tr>
<tr>
<td>MDREORG</td>
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<tr>
<td>MULTIHIER</td>
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<tr>
<td>OPENHUB</td>
</tr>
<tr>
<td>RDA_CLOSE</td>
</tr>
<tr>
<td>RDA_RESET</td>
</tr>
<tr>
<td>RDA_START</td>
</tr>
<tr>
<td>REPA_BB</td>
</tr>
<tr>
<td>REPA_BC</td>
</tr>
<tr>
<td>REPA_BP</td>
</tr>
</tbody>
</table>
### Display Component Hierarchy for Process Chains

In SAP BW/4HANA 1.0, process chains are still organized using a display component hierarchy. With SAP BW/4HANA 2.0, the display components used to organized process chains will be migrated to corresponding InfoAreas. For in-place conversion, the migration will be done automatically during the technical upgrade to SAP BW/4HANA (post conversion XPRA). For shell or remote conversion, we recommend to transport the display component hierarchy to the target SAP BW/4HANA 2.0 system first, before you transfer any process chains. Without transport, process chains will be temporarily transferred to InfoArea NODESNOTCONNECTED. Once the component is there, the process chains get re-assigned to the correct InfoArea. To transport the display component hierarchy, add the program id R3TR, object RSDC, and object name RSPC to your transport request.

### Related Information

- **Process Types SAP BW 7.5**
- **Process Types SAP BW/4HANA**
- **Cleaning Up Requests Using Process Chains**

### 3.3.15 BW4SL - Myself Source System

**SAP Note 2479674 - BW4SL - Myself Source System**

Version 3 from 2019-01-11
Component: BW-WHM-DST-SRC - Source Systems

**Description**

The "Myself" Source System is not available in SAP BW/4HANA.

**Other Terms**

LSYS, RSDS

**Prerequisites and Checks**

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are available in or can be converted to SAP BW/4HANA.

See node: Automated Cleanup --> Deletions

**Recommendations**
The Myself Source System needs to be replaced by an ODP Source System with BW context. This will allow transferring data between InfoProviders within the SAP BW/4HANA system.

Any Myself Source Systems left, when executing the switch to "Ready for conversion mode", will be automatically deleted.

**Related Information**

See also the following SAP Notes:

- [2473145] - BW4SL - SAP Source Systems
- [2483299] - BW4SL - Export DataSources (SAP BW/4HANA as Source)
- [2443863] - BW4SL - S-API DataSources (SAP BW/4HANA as Source)

**Creating an ODP Source System**

**References**

<table>
<thead>
<tr>
<th>SAP Note</th>
<th>Title</th>
</tr>
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<tbody>
<tr>
<td>2470315</td>
<td>BW4SL - Generic and Export DataSources</td>
</tr>
<tr>
<td>2473145</td>
<td>BW4SL - SAP and BW Source Systems</td>
</tr>
<tr>
<td>2480284</td>
<td>BW4SL - Hierarchy DataSources</td>
</tr>
<tr>
<td>2481315</td>
<td>Operational Data Provisioning (ODP): Extracting from SAP Systems to SAP BW or SAP BW/4HANA – Availability and Limitations</td>
</tr>
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</table>

### 3.3.16 BW4SL - SAP Source Systems

**SAP Note** [2473145] - BW4SL - SAP and BW Source Systems

**Version 11 from 2017-08-23**  
**Component: BW-WHM-DST-SRC - Source Systems**

**Description**

The SAP and BW Source Systems based on Service API (S-API) are not available in SAP BW/4HANA.

**Other Terms**

LSYS, RSDS

**Prerequisites and Checks**

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are available in or can be converted to SAP BW/4HANA.

See node: Manual Redesign --> Replace by HANA or ODP Source System

**Recommendations**

SAP BW/4HANA does not connect to other SAP systems using the SAP Source System. If you want to transfer data from Extractors / DataSources (Service API) of an SAP system to SAP BW/4HANA, then you can configure a ODP Source System with the "SAP (Extractors) Context". Note: Check for ODP compatibility of DataSources in
SAP Note 2232584 - Release of SAP extractors for operational data provisioning (ODP). Alternatively, you can transfer data from SAP source systems using other ODP contexts, like "BW" (also applies to SAP BW/4HANA source systems), "SLT Queue" (for real-time replication), or "ABAP CDS Views" (for SAP S/4HANA source systems).

For further information please also refer to SAP Note 2481315 - Operational Data Provisioning (ODP): Extracting from SAP Systems to SAP BW or SAP BW/4HANA – Availability and Limitations and the Operational Data Provisioning (ODP) FAQ.

The BW/4HANA Transfer Tool will automatically copy your DataSources which load from as SAPI or BW source system to a corresponding ODP source system of context SAPI or BW, respectively. It will also seamlessly clone the delta queues, so that no delta data is lost or loaded double, and no downtime in the source systems is required. This however requires the implementation of a few notes in the corresponding source system, as given by the BW/4HANA Transfer Tool Note Analyzer.

If you cannot install these notes in your source system for organizational reasons, then you will have to stop any operations in the source system which push data into the Delta Queue (Push extractors), and perform an Init Simulation in the BW after the DataSource has been copied.

If you cannot install the notes in your source system due to technical reasons (system is too old), then you will have to upgrade your source system or search for an individual solution.

Any SAP Source Systems left, when executing the switch to “Ready for conversion mode”, will be automatically deleted.

Related Information

Creating an ODP Source System

SAP Note 2464541 - BW4SL - Data Transfer Processes

References

<table>
<thead>
<tr>
<th>SAP Note</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>2443863</td>
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</tr>
<tr>
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</tr>
<tr>
<td>2483299</td>
<td>BW4SL - Export DataSources (SAP BW/4HANA as Source)</td>
</tr>
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3.3.17 BW4SL - DB Connect Source Systems

SAP Note 2447932 - BW4SL - DB Connect Source Systems

Version 9 from 2017-06-30
Component: BW-WHM-DST-SRC - Source Systems
Other Components: BW-WHM-DST-DBC - DB Connect

Description

Source systems of type "DB Connect" are not available in SAP BW/4HANA.
Other Terms

LSYS, RSDS

Prerequisites and Checks

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are available in or can be converted to SAP BW/4HANA.

Recommendations

As of SAP BW 7.5 SP 5, source systems of type DB Connect and connection types One logical system per DB Schema or HANA Smart Data Access can be replaced with source systems of type SAP HANA and connection types Local SAP HANA Database Schema or SAP HANA Smart Data Access. To replace this kind of source system (which refers to the DEFAULT database connection) run program RSDS_HANA_MIGRATE_DBCONNECT.

The above-mentioned program can’t migrate DB Connect source systems of connection type Source System = DB Connection. Source systems which refer to another ABAP database connection (DCON) have to be replaced manually with a SAP HANA source system of type SAP HANA Smart Data Access, using the corresponding SAP HANA Smart Data Integration Data Provisioning Adapter or SAP HANA Smart Data Access Adapter for the given database.

For an overview on available SAP HANA Smart Data Integration Data Provisioning Adapters see:

- Data Provisioning Adapters

SAP HANA 1.0:

- Data Provisioning Adapters

SAP HANA 2.0:

- Data Provisioning Adapters

For an overview on available SAP HANA Smart Data Access Adapters see:

SAP HANA 1.0

- SAP HANA Smart Data Access

SAP HANA 2.0

- SAP HANA Smart Data Access

Any DB Connect Source Systems left, when executing the switch to “Ready for conversion mode”, will be automatically deleted.

Related Information

Refer to Migrating a DB Connect Source System to a SAP HANA Source System for more details on program RSDS_HANA_MIGRATE_DBCONNECT.

For more information on the SAP HANA Source System see Transferring Data with an SAP HANA Source System (SAP BW 7.50) or Creating an SAP HANA Source System (SAP BW/4HANA 1.0).
3.3.18 BW4SL - UD Connect Source Systems

SAP Note 2441884 - BW4SL - UD Connect Source Systems

Version 6 from 2019-08-02
Component: BW-WHM-DST-SRC - Source Systems
Other Components: BW-BEX-UDI-UDC - BI UD Connect

Description

Source systems of type "UD Connect" are not available in SAP BW/4HANA.

Other Terms

LSYS, RSDS

Prerequisites and Checks

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are supported with or can be converted to SAP BW/4HANA.

See node: Automated Cleanup --> Deletions

Recommendations

For the primary UD Connect source system use case (connector type JDBC) as documented with SAP BW >= 7.30 (see p.e.g. Creating a UD Connect Source System in SAP BW 7.50) these source systems have to be replaced manually with source systems of type “SAP HANA”.

For other use cases previously documented for UD Connect in SAP BW < 7.30 (see p.e.g. Creating a UD Connect Source System in SAP BW 7.01) such as BI ODBO Connector, BI SAP Query Connector, BI XMLA Connector or SDK_JAVA this approach doesn't apply (no replacement at this time).

Any UD Connect Source Systems left, when executing the switch to “Ready for conversion mode”, will be automatically deleted.

Related Information

SAP Help Documentation on UD Connect: Transferring Data via UD Connect

For additional information on the SAP HANA Source System and available SAP HANA Smart Data Access Adapters or SAP HANA Smart Data Integration Data Provisioning Adapters see SAP Note 2447932 - BW4SL - DB Connect Source Systems.

For more information on the SAP HANA Source System see Transferring Data with an SAP HANA Source System (SAP BW 7.50) or Creating an SAP HANA Source System (SAP BW/4HANA 1.0).

3.3.19 BW4SL - SAP Data Services Source Systems

SAP Note 2441836 - BW4SL - SAP Data Services Source Systems

Version 8 from 2019-05-13
Component: BW-WHM-DST-SRC - Source Systems

Description
Source systems of type "SAP Data Services" or "External System (Partner ETL)" are not available in SAP BW/4HANA.

**Other Terms**

LSYS, RSDS, BODS, Staging BAPI

**Prerequisites and Checks**

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are supported with or can be converted to SAP BW/4HANA.

See node: Automated Cleanup --> Deletions

**Recommendations**

With SAP BW/4HANA 2.0, there is a new capability "Write Interface" for DataStore Objects allowing to push data into inbound queue tables of Staging DataStore Objects and Standard DataStore Objects. This capability replaces the push capability of PSA tables of DataSources used in SAP Data Services to send data to SAP BW.

SAP Data Services (On Premise) equal or higher version 4.2 SP12 can now use this new (RFC) interface for data integration to SAP BW/4HANA 2.0. Support for SAP Cloud Platform Integration for Data Services is planned for Q3 2019.

Please find more information in the documentation DataStore Object with Write Interface, in the What's new with SAP BW/4HANA 2.0 (page 24) and in the SAP BW/4HANA Community. The "Write Interface" in SAP BW/4HANA 2.0 is not an open external interface (no certification scenario) and therefore can not be used by SAP Partners for ETL processing.

Please note that there is no automated conversion path from DataSources of SAP Data Services or External Source Systems in SAP BW to DataStore Objects with "Write Interface" in SAP BW/4HANA 2.0. For a manual conversion, we recommend the following approach:

- In SAP BW, create a Staging or Standard DataStore Object with an existing Data Source as template. Integrate this new DataStore Object as additional source object to the data flows on top of the respective DataSource. Replicate transformation logic if necessary.
- Before conversion, please make sure that all data from the PSA table of your DataSource is distributed to further objects along that data flow.
- In conversion, any "SAP Data Services" or "External System" Source Systems left, when executing the switch to "Ready for conversion mode", will be automatically deleted.
- After conversion to SAP BW/4HANA 2.0, please add the property "Write Interface enabled" to the new DataStore Object and activate it.
- After activation, the respective DataStore Object can be used in SAP DataServices as a data target.

As the "Write Interface" capability is not available in SAP BW/4HANA 1.0, we recommend instead to use SAP Data Services (or external systems) to write to a native SAP HANA database table and then use a SAP HANA Source System with connection type "Local SAP HANA Database Schema" to bring the data into SAP BW/4HANA.

**Related Information**

SAP Help Documentation on the SAP Data Services Source System: Transferring Data with SAP Data Services

SAP Help Documentation on the External (Partner) Source System: Transferring Data Using Staging BAPIs

For more information on the SAP HANA Source System see Transferring Data with an SAP HANA Source System (SAP BW 7.50) or Creating an SAP HANA Source System (SAP BW/4HANA 1.0).
3.3.20  BW4SL - Web Service Source Systems

SAP Note 2441826 - BW4SL - Web Service Source Systems

Version 10 from 2019-05-09
Component: BW-WHM-DST-SRC - Source Systems

Description

Source systems of type "Web Service" are not available in SAP BW/4HANA.

Other Terms

LSYS, RSDS, XML, SOAP, OData, CPI, SAP NetWeaver PI

Prerequisites and Checks

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are supported with or can be converted to SAP BW/4HANA.

See node: Automated Cleanup --&gt; Deletions

Recommendations

With SAP BW/4HANA 2.0, there is a new capability "Write Interface" for DataStore Objects allowing to push data into inbound queue tables of Staging DataStore Objects and Standard DataStore Objects. This capability replaces the push capability of PSA tables of DataSources of Web Service Source Systems.

SAP Cloud Platform Integration and SAP NetWeaver Process Integration equal or higher SAP NetWeaver 7.50 Process Integration SP15 (see SAP Note 2757524) can use this new http (REST) interface for data integration to SAP BW/4HANA 2.0. Please find more information in the documentation DataStore Object with Write Interface, in the What's new with SAP BW/4HANA 2.0 (page 24) and in the SAP BW/4HANA Community.

Please note that there is no automated conversion path from DataSources of Web Service Source Systems in SAP BW to DataStore Objects with "Write Interface" in SAP BW/4HANA 2.0. For a manual conversion, we recommend the following approach:

- In SAP BW, create a Staging or Standard DataStore Object with an existing Web Service Data Source as template. Integrate this new object as additional source object to the data flows on top of the respective Web Service DataSource. Replicate transformation logic if necessary.
- Before conversion, please make sure that all data from the PSA table of your Web Service DataSource is distributed to further objects along that data flow.
- In conversion, any Web Service Source Systems left, when executing the switch to "Ready for conversion mode", will be automatically deleted.
- After conversion to SAP BW/4HANA 2.0, please add the property "Write Interface enabled" to the new DataStore Object and activate it.
- After activation, the URIs to be used in SAP Cloud Platform Integration or SAP NetWeaver PI for sending data to SAP BW/4HANA are display in the properties section of the DataStore Object editor in the BW Modeling Tools under"Template URIs".

As the "Write Interface" capability is not available in SAP BW/4HANA 1.0 the following alternatives apply:

- the SAP HANA Smart Data Integration (SDI) OData Adapter and the SAP HANA Source System in SAP BW/4HANA to connect to OData APIs in case of a cloud application integration scenario. Please check, if the cloud application provides an OData API for data extraction of the business data you want to integrate to SAP BW/4HANA.
- the **SAP HANA Smart Data Integration (SDI) SOAP Adapter** to load data from SOAP based web services into native SAP HANA tables residing on a local HANA schema of your SAP BW/4HANA instance. As of technical restrictions, the SOAP Adapter can’t get directly used within the SAP HANA Source System provided in SAP BW/4HANA and has to be consumed using HANA native data provisioning capabilities.

- SAP NetWeaver Process Integration or SAP Cloud Platform Integration to write data from a web service into native SAP HANA tables residing on a local HANA schema of your SAP BW/4HANA instance.

**Related Information**

Data Transfer Using Web Services

**3.3.21 BW4SL - External Source Systems (Partner ETL)**

SAP Note 2441836 - BW4SL - SAP Data Services and External System Source Systems

See “BW4SL - SAP Data Services Source Systems”.

**3.3.22 BW4SL - BW Source Systems**

SAP Note 2473145 - BW4SL - SAP and BW Source Systems

See “BW4SL - SAP Source Systems”.

**3.3.23 BW4SL - Open Hub Destinations**

SAP Note 2469516 - BW4SL - Open Hub Destinations

Version 4 from 2018-09-20
Component: BW-WHM-DBA-OHS - Open Hub Service

**Description**

The following Open Hub Destinations are not available in SAP BW/4HANA:

- 3.x destinations (InfoSpokes)
- Destination type "Third Party Tool"

The following Open Hub Destinations will require deletion of data in the target table:

- Destination type "Database table" with "Technical Key"

**Other Terms**

DEST, DDES

**Prerequisites and Checks**

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are available in or can be converted to SAP BW/4HANA.

See node: Supported by Transfer Tool --> 3.x Migration

See node: Manual Redesign --> BW Object Type
**Recommendations**

3.x or "Third Party Tool" Open Hub Destinations must be deleted or replaced by features available in SAP BW/4HANA like SAP HANA smart data integration. Use a database table in SAP HANA as a target and then SAP HANA smart data integration or for example SAP Data Services to pick up the data from there.

"Database table" Open Hub Destinations with "Technical Key" store data by Request ID. However, SAP BW/4HANA uses a new Request Transaction Sequence Number for storing such data. Therefore, the existing data must be deleted from the target database table.

- If the target database table is located in the same database schema as SAP BW/4HANA (i.e. SAP<SID> schema), then the conversion will be performed automatically when switching from "Compatibility Mode" to "B4H Mode". Since this conversion can take some time especially for larger data volumes, it's recommended to truncate these target database tables before switching modes.
- If the target database table is located in another database schema, then the table must be truncated before switching modes (or the switch will fail with a corresponding error message).

**3.3.24 BW4SL - InfoSpokes**

**SAP Note 2437637 - BW4SL - InfoSpokes**

Version 3 from 2017-07-05  
Component: BW-WHM-DBA-OHS - Open Hub Service

**Description**

The SAP BW InfoSpoke is not available in SAP BW/4HANA.

**Other Terms**

SPOK

**Prerequisites and Checks**

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are available in with or can be converted to SAP BW/4HANA:

See node: Automated Cleanup --> Deletions --> $LOGO SPOK (InfoSpoke)

**Recommendations**

In order to replace existing InfoSpokes (created with SAP BW 7.3 or lower releases), you can create new Open Hub Destinations with Data Transfer Processes (DTPs).

For details about the existing InfoSpokes, use the program RSB_INFOSPOKE_DISPLAY. This information can be used to create equivalent Open Hub Destinations and a corresponding DTPs.

Any InfoSpokes left, when executing the switch to "B4H mode", will be automatically deleted.

**Related Information**

InfoSpoke --> Open Hub Destination, Data Transfer Process
3.3.25  BW4SL - Real-Time Data Acquisition (RDA)

SAP Note 2447916 - BW4SL - Real-Time Data Acquisition (RDA)

Version 4 from 2017-06-29
Component: BW-WHM-DST-RDA - Realtime Data Acquisition

Description

Real-Time Data Acquisition (RDA) is not available in SAP BW/4HANA.

Other Terms

$RDA, RDAC

Prerequisites and Checks

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are supported or can be converted to SAP BW/4HANA.

See node: Manual Redesign --&gt; BW Object Type

Recommendations

In BW/4HANA, Real-time Data Acquisition is not available, but instead streaming process chains have to be used. Currently, there is no automatic transfer available yet, which replaces RDA settings with streaming process chains, so please proceed manually as follows. During the procedure, you will not be able to load data in RDA mode.

The first step is to remove and disable RDA settings in the original BW and replace them with standard BW loading. To do this, proceed as follows: The first step is to remove and disable RDA settings in the original BW and replace them with standard BW loading. To do this, proceed as follows:

- RDA using Service API (S-API)
  - Unassign the RDA daemon in the RDA monitor.
  - Close the open RDA requests in the RDA monitor if needed.
  - Delete all processes referring to the RDA InfoPackage. This can be processes for closing RDA requests (RDA_CLOSE), for stopping RDA load processes (RDA_RESET), or for starting RDA load processes (RDA_START). There is no direct replacement for these process types in SAP BW/4HANA as they are considered obsolete when streaming data.
  - Create a new process chain to replace the RDA process logic which is defined by (a) the RDA InfoPackage, (b) the DTPs assigned to the corresponding DataSource in the RDA monitor, and (c) the subsequent process chains assigned to these DTPs in the RDA monitor.
  - Create a standard delta InfoPackage to replace the RDA InfoPackage (a) and add it to the process chain.
  - Switch all assigned DTPs (b) to standard mode and add them to the process chain after the InfoPackage.
  - Create processes for activating data in the InfoProvider or InfoObject if applicable and add them to the process chain after the corresponding DTP.
  - Add the assigned subsequent process chains (c) to the process chain after the corresponding data-activation process or DTP.
  - Delete the RDA InfoPackage.
- RDA using Web Service Push
  - Refer to SAP Note 2441826 on how to deal with source system for Web Service Push.
- RDA using ODP Data Replication API
  - Unassign the RDA daemon in the RDA monitor.
  - Close the open RDA requests in the RDA monitor if needed.
- Delete all processes referring to DTPs for RDA. This can be processes for closing RDA requests (RDA_CLOSE), for stopping RDA load processes (RDA_RESET), or for starting RDA load processes (RDA_START). There is no direct replacement for these process types in BW/4HANA as they are considered obsolete when streaming data.
- Create a new process chain to replace the RDA process logic which is defined by (d) the DTP for RDA, and (e) the subsequent process chains assigned to this DTP in the RDA monitor.
- Switch the DTP for RDA (d) to standard mode and add it to the process chain.
- Create a process for activating data in the InfoProvider or InfoObject if applicable and add it to the process chain.
- Add the assigned subsequent process chains (e) to the process chain after the data-activation process or DTP.

You now have a standard process chain which loads delta data. You can use this process chain, but you should not load it with high frequency. To transfer it to streaming, please do the following:

Run the transfer tool either in In-Place or Remote scenario for your process chain. This will transfer your InfoPackage to DTP (if required) and the SAPI DataSources to ODP DataSources. The resulting chain then can be switched to streaming mode and scheduled accordingly.

**Related Information**

Refer to [Process Chains for Streaming](#) for more details.

**References**

<table>
<thead>
<tr>
<th>SAP Note</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>2441826</td>
<td>BW4SL - Web Service Source Systems</td>
</tr>
</tbody>
</table>

### 3.3.26 BW4SL - Near-line Storage (NLS) Partner Solutions

**SAP Note 2441922 - BW4SL - Near-line Storage (NLS) Partner Solutions**

Version 2 from 2017-07-03
Component: BW-WHM-DST-ARC - Archiving

**Description**

SAP BW Nearline Storage (NLS) Partner Solutions are not available in SAP BW/4HANA.

**Other Terms**

DAPA, DAPD, NW-BI-NLS certification, NW-BW-NLS certification

**Prerequisites and Checks**

There is currently no automated analysis available, if Partner NLS solutions are used or not.

Check transaction RSDANLCON, if any NLS connections are configured other than "SAP IQ (former Sybase IQ)" or "Hadoop".

**Recommendations**

There is no automated conversion from Partner NLS to an SAP NLS solution (SAP IQ) available from SAP.

Please check with your NLS vendor if they offer a conversion to SAP NLS based on SAP IQ.
Alternatively, consider using Data Tiering Optimization (DTO) in SAP BW/4HANA for managing hot, warm, and cold storage.

**Related Information**

- [Information Lifecycle Management in SAP BW/4HANA (including Data Tiering Optimization)](#)
- [Creating Near-Line Storage Connections](#)

See also [SAP NLS Solutions for SAP BW](#)

### 3.3.27 BW4SL - Data Archiving (3.x)

**SAP Note** [2469514](https://support.sap.com/notes) - BW4SL - Data Archiving (DAP) / Near-line Storage (NLS)

**Version 10 from 2019-03-28**  
**Component:** BW-WHM-DST-ARC - Archiving

**Description**

There is no tool for migrating the following data archives (DAP) and near-line storage (NLS) to SAP BW/4HANA:

- 3.x data archiving
- Data archiving processes with only 'ADK-Based Archiving'
- Data archiving processes belonging to Semantically Partitioned Objects
- Data archiving processes which have a non-key characteristic for time slice, which is still to be used in archive as primary partitioning characteristic. Please find additional information on this case in [SAP Note 2767207](https://support.sap.com/notes).

**Other Terms**

- DAP, ADK, SPO, RSARCHIPRO, RSARCHIPROLOC, RSDADAP

**Prerequisites and Checks**

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are available in or can be converted to SAP BW/4HANA:

See node: Manual Redesign --> Archives

For Data archiving processes belonging to InfoCubes with non-cumulative key figures see the prerequisites in [SAP Note 2618005](https://support.sap.com/notes).

**Recommendations**

There is no tool for migrating the cases mentioned above to data archiving processes based DataStore objects (advanced). Reload all data for the InfoProviders described above. Afterwards, you can convert the InfoProviders to DataStore objects (advanced). You can then archive data again using the new concept, use near-line storage, or data tiering features available in SAP BW/4HANA (Data Tiering Optimization, DTO).

**Related Information**

- [Old Data Archiving Concept](#)
3.3.28 BW4SL - Data Archiving Processes

SAP Note 2469514 - BW4SL - Data Archiving (DAP) / Near-line Storage (NLS)

See "BW4SL - Data Archiving (3.x)".

3.3.29 BW4SL - Request and Status Management

SAP Note 2482164 - BW4SL - Request and Status Management

Version 5 from 2019-07-16

Description

The classic request and status management (RSSM) based on Request IDs (OREQUID) is not available with SAP BW/4HANA. Therefore, interfaces relying on RSSM are not available either (like APO write interface, open "yellow" requests, BAPI_RSREQUEST_GETSTATUS, etc.). The same applies to functionality associated with it such as archiving request administration data via archiving object BWREQARCH.

Other Terms

$RSSM, OREQUID, OREQTSN

Prerequisites and Checks

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are available in or can be converted to SAP BW/4HANA.

InfoObjects, Open Hub Destinations, and DataStore Objects (advanced) which are still using classic request management are displayed in the log.

Recommendations

SAP BW/4HANA has a new request status and process management (RSPM) based on Request Transaction Sequence Numbers (OREQTSN). The following corner stones were defined for RSPM:

- Completeness
  All operations are using the status manager
- Granularity
  Every independent set of changed data is reflected in the status manager separately
- Consistency
  Lock management is realized via status management
- Unification
  All changes are stored in the same model (including logging and data package management)
- Performance
  Status and lock checking are fast

RSPM is used in data staging, distribution, streaming, and planning processes for InfoObjects, DataStore objects (advanced), and Open Hub Destinations. Please also note that monitoring RSPM requests happens with a new
monitoring transaction (RSPM_MONITOR) that is integrated with all objects and processes in SAP BW/4HANA using RSPM.

The Request Transaction Sequence Number (TSN) is based on a time stamp of the enqueue server with collision number (23 digits with 9 decimals). It has a conversion exit to display the time stamp in local time zone. Example: 99991231235959.000009900 (internal view of TSN), {9999-12-31 23:59:59 0000099 CET} (user view of TSN). Request TSN has two navigational attributes: User (OUSER) and Source of Data (OASOURCE) which are populated at creation time of the Request TSN and available as metadata in BW queries.

Planning scenarios do not use “open” (yellow) requests anymore. Each user transaction - a save of plan data - is associated with its own Request TSN.

When converting from SAP BW to SAP BW/4HANA, the request metadata is converted automatically by the Transfer Toolbox (for in-place as well as for remote conversions).

Before Revision 10 all requests of an InfoProvider, and all inbound delta DTP Requests in InfoObjects and Open Hub Destinations were converted into new TSN based Requests (in a TSN Range starting with 01.01.1900 and ending roughly in the year 1968).

With Revision 10 of the Transfer Toolbox a new optimized Request Transfer is introduced. This alternative request transfer is based on a preliminary processing of the data in the InfoProviders before transfer. Thus, compared with the old approach, it results in a reduced number of TSN based Requests in the resulting ADSOs, InfoObjects and Open Hub Destinations.

Therefore, the optimized request transfer is between 5 and 100 times faster, depending on your system (hardware, model complexity). This means that instead between 5 and 100 Requests per Minute, now between 500 and 1000 Requests can be transferred per Minute.

This also means that it is not necessary to reduce the requests before the transfer, only a reduced number of requests will be transferred, which in turn will minimize the exposure to follow up problems in the life cycle of the transferred requests.

In detail, this alternative procedure consists of the following:

**Switching on the optimized request-transfer**

With revision 10, in the selection screen of the start objects a toggle box “use optimized request transfer” will be introduced. It will be switched off by default. Once the scope is collected, the flag can not be changed anymore.

**New Checks and activities during the prepare phase**

**Inplace-Transfer**

- all 3.5 DataFlows must be converted into 7.0 DTP based DataFlows
- all closed loops consisting of only delta DTPs must be interrupted:
  - a closed loop may consist of an delta DTP having the same object as source and target. It may, of course consist of multiple delta DTPs, in which one DTP extracts from the target of its predecessor and the target of the last one is the source of the first one
  - in each loop, one of these deltas DTPs must be logically deleted with the help of the report RSBK_LOGICAL_DELETE_DTP
- all ‘yellow’ or ‘red’ requests, in all InfoProviders contained in the scope must either be deleted, or their overall Status set to ‘green’
- all delta DTPs, which have as source an object in scope and themselves are not part of the scope, must also be logically deleted with the help of the report RSBK_LOGICAL_DELETE_DTP
- all active delta DTPs in scope must be executed. All source data must be transferred by this delta DTPs prior to the transfer. This must be done also for DTPs extracting from the PSA of DataSources.
• all DataMart Scenarios originating from the BW System must either be transferred to ODP BW Context, or be deleted
  o all the resulting or existing delta ODP BW Scenarios, based on InfoProviders in Scope, must be executed in the corresponding target BW systems so that all data is extracted
• all requests in Standard DSOs must be activated
• all requests in InfoCubes must be compressed. Exception: Cubes of the Inbound Layer, i.e. which receive data directly from DataSources can have 20 uncompressed requests

Remote-Transfer

• 3.5 DataFlows Objects cannot be taken into the scope (they will get the Special Option Flag 'Object will be skipped')
• all closed loops consisting of only delta DTPs must be interrupted:
  o a closed loop may consist of an delta DTP having the same object as source and target. It may, of course consist of multiple delta DTPs, in which one DTP extracts from the target of its predecessor and the target of the last one is the source of the first one
  o in each loop, one of this delta DTPs must be skipped
• all 'yellow' or 'red' requests, in all InfoProviders contained in the scope must either be deleted, or their overall Status set to 'green'
• Caution: All DTPs, which have as source or target an object in scope, and themselves are not part of the scope, cannot be included later in another scope
• all active delta DTPs in scope must be executed. All source data must be transferred by this delta DTPs prior to the transfer. This must be done also for DTPs extracting from the PSA of DataSources. This is true also for outbound delta DTPs not in scope.
• all requests in Standard DSOs must be activated
• all requests in InfoCubes must be compressed. Exception: Cubes of the Inbound Layer, i.e. which receive data directly from DataSources can have 20 uncompressed requests

During Request Transfer:

• For all resulting Objects (ADSOs, InfoObjects and Open Hub Destinations) a transfer request will be created for each inbound delta DTP. This request which is marked as delta init, will ensure the delta consistency (i.e. that each record of the source is transferred exactly once). This Requests cannot be deleted individually as they have the status 'Moved', a renewed initialization of the delta DTPs is possible only if the whole content of the object is deleted. Their TSN is based on the Date 31.12.1899.
• For ADSOs created from write-optimized ODSOs:
  o each Request is transferred 1:1 into TSN based Request
  o the resulting requests lose their connection to the DTP from which they resulted. Deleting this requests will NOT cause the renewed propagation of the source records by the corresponding DTP
• For ADSOs created from InfoCubes:
  o An activation Request is created for the compressed data
  o if the InfoCube was part of the Inbound Layer, a maximum of 20 uncompressed Requests will be transferred 1:1 into TSN based Request. Again, this requests lose their connection to the DTP from which they resulted.
• For ADSOs create from standard ODSOs:
  o An activation Request is created for the active data. This request has the status ‘Moved’ in the change log, so it cannot be rolled back.

Related Information

InfoObject Management

Managing DataStore Objects (advanced)

Managing Open Hub Destinations
3.3.30    BW4SL - Hierarchy/Attribute Change Run

SAP Note 2526218 - BW4SL - Hierarchy/Attribute Change Run

Version 1 from 2017-08-31
Component: BW-WHM-DST - Data Staging

Description

The Hierarchy/Attribute Change Run is not required in SAP BW/4HANA.

Other Terms

$ACR, CHANGERUNMONI

Prerequisites and Checks

SAP BW/4HANA does not store pre-aggregated data (i.e. aggregated or materialized views).

Recommendations

There is no need for Hierarchy/Attribute Change Run in SAP BW/4HANA.

3.4    SAP BW - Analytic Manager

3.4.1    BW4SL - BW Queries

SAP Note 2479683 - BW4SL - BW Queries

Version 6 from 2018-11-07
Component: BW-BEX-OT-OLAP - Analyzing Data

Description

Certain SAP BW Queries are not available in SAP BW/4HANA:

- Queries in 3.x Format
- Queries with Calculations Before Aggregation
- Queries with Constant Selection with Append
- Queries that reference technical characteristic Request ID (OREQUID)
- Queries using audit dimension/characteristics (OAMODE, OASOURCE, OATIMESTAMP, OAUSER)
- Queries using navigational attributes directly on persistency (DSO or InfoCubes)

The RSADMIN parameter 'RSROA_CL_FORM_SWITCH' has no relevance in SAP BW/4HANA since its corresponding feature is not implemented in SAP BW/4HANA.

Other Terms

ELEM, DELM, RSROA_CL_FORM_SWITCH, conditional formula,

Prerequisites and Checks

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are available in or can be converted to SAP BW/4HANA.
See node: Automated Cleanup --> Deletions

See node: Automated Cleanup --> Adjustments

See node: Manual Redesign --> BW Object Type

For SAP BW systems below release 7.4, check all queries using program SAP_QUERY_CHECKER_740.

The parameter RSROA_CL_FORM_SWITCH only works for SAP BW 7.5 SP 4 and following, SAP BW 7.51 and SAP BW 7.52. Before SAP BW 7.5 SP 4 the default behavior in formula calculation was 0 * N MIXED = 0. With SP 4 it was changed to 0 * N MIXED = 0 MIXED. With the parameter RSROA_CL_FORM_SWITCH switched to 'ON' the old behavior was re-enabled.

Recommendations

When executing the switch to "B4H Mode", the system will check and generate all BW queries in 3.x format. Queries in 3.x format will be automatically adjusted to 7.x format. Queries that are inconsistent (i.e. cannot be read) or raise errors during generation have to be adjusted manually or will be deleted automatically.

Queries identified using program SAP_QUERY_CHECKER_740 or queries referencing Request ID (OREQUID) have to be adjusted manually.

Queries referencing Request ID (OREQUID) have to be adjusted manually after the system conversion to SAP BW/4HANA (since OREQUID is not supported anymore).

Queries using audit characteristics have to be adjusted manually to use attributes of the new Request TSN (OREQTSN, OASOURCE, OUSER).

Queries using navigational attributes on DataStore objects or InfoCubes (without a MultiProvider) will be converted by the SAP BW/4HANA Transfer Cockpit to corresponding queries on a CompositeProvider. This will change the name of the query (since the InfoProvider changes). Therefore, configuration or tools referencing such queries much be pointed to the new query.

Related Information

See SAP Note 1911469 - Check report for discontinued query features in SAP NetWeaver BW 7.4 and beyond (including SAP BW/4HANA)

See SAP Note 2470572 - Switch RSROA_CL_FORM_SWITCH for enabling 0 * N MIXED = 0 (no unit/cur)

3.4.2 BW4SL - VirtualProvider and Query Snapshots

SAP Note 2442781 - BW4SL - VirtualProvider and Query Snapshots

Version 1 from 2017-06-26
Component: BW-BEX-OT-VC - Virtual Cube (Remote Cube)

Description

The SAP HANA Index for a VirtualProvider and SAP HANA Index for a Query (Snapshot) created via transaction RSDDB are not available in SAP BW/4HANA

Other Terms

ICS, ICV, QPO
Prerequisites and Checks

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are available in or can be converted to SAP BW/4HANA.

Recommendations

Snapshots created in transaction RSDDB will be deleted automatically when switching to B4H mode in a dedicated task.

Related Information

SAP BW 7.5 documentation:

Indexing BW Data in the SAP HANA Database

3.4.3  BW4SL - Currency Translations

SAP Note 2443281 - BW4SL - Currency Translations, Quantity Conversions, Key Date Derivations

Version 1 from 2017-06-15
Component: BW-BEX-OT-OLAP-CUR - Translation of Currencies or Units

Description

Currency translation types, unit conversion types, or key date derivations that are using a field/InfoObject from an InfoSet in their definition (name contains three underscores), are not available in SAP BW/4HANA (since InfoSets are not available).

Unit conversion types that are based on a classic DataStore object are not available in SAP BW/4HANA.

Other Terms

CTRT, DCRT, UOMT, DUOM, THJT, DTHJ

Prerequisites and Checks

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are supported or can be converted to SAP BW/4HANA.

See node: Manual Redesign --> BW Object Type

See node: Supported by Transfer Tool --> BW4 Transfer Tool

Recommendations

The currency translation types, unit conversion types, and key date derivations based on InfoSets have to be adapted manually or deleted.

Unit conversion types based on classic DataStore objects can be converted to use DataStore objects (advanced) using the Transfer Tools.

Related Information

Currency Translation Types
Quantity Conversion Types

3.4.4 BW4SL - Unit of Measure Conversions

SAP Note [2443281] - BW4SL - Currency Translations, Quantity Conversions, Key Date Derivations

See "BW4SL - Currency Translations".

3.4.5 BW4SL - Key Date Derivations

SAP Note [2443281] - BW4SL - Currency Translations, Quantity Conversions, Key Date Derivations

See "BW4SL - Currency Translations".

3.4.6 BW4SL - Personalization

SAP Note [2487535] - BW4SL - Personalization

Version 2 from 2017-07-04
Component: BW-BEX-OT-OLAP-VAR - Using Variables

**Description**

Personalization in SAP Business Explorer (BEx) is not available in SAP BW/4HANA. The corresponding classic DataStore Objects (0PERS*) are not available.

Trying to activate Personalization in SAP BW/4HANA ends with error message "activation failed".

**Other Terms**

ODSO, DODS, OPERS_VAR, OPERS_VR1, OPERS_BOD, OPERS_WTE, RS_PERS_ACTIVATE

**Prerequisites and Checks**

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are available in or can be converted to SAP BW/4HANA.

See node: Automated Cleanup --> Adjustments

**Recommendations**

When executing the switch from Compatibility Mode to B4H Mode, the system will save the personalization settings (for example user-specific variable values) to transparent tables:

<table>
<thead>
<tr>
<th>Description</th>
<th>DataStore Object (classic) in SAP BW</th>
<th>Database Table in SAP BW/4HANA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data for Variable Values</td>
<td>0PERS_VAR/0PERS_VR1</td>
<td>RSPERS_VAR</td>
</tr>
<tr>
<td>Data for BEx Open Dialog</td>
<td>OPERS_BOD</td>
<td>RSPERS_BOD</td>
</tr>
<tr>
<td>Data for Web Templates</td>
<td>OPERS_WTE</td>
<td>RSPERS_WTE</td>
</tr>
</tbody>
</table>
3.4.7 BW4SL - Data Federator Facade

SAP Note 2444890 - BW4SL - Data Federator Facade

Version 3 from 2018-02-01
Component: BW-BEX-OT-DBIF - Interface to Database
Other Components: BI-BIP-DF - Data Federation Service

Description

The SAP BW Data Federator Facade is not available in SAP BW/4HANA.

Other Terms

$DF, Data Federator, RSDRI_DF,..., RSDRI_INFOPROV_READ_DF, RSDRI_DF_GET_SYSTEM_INFO

Prerequisites and Checks

There is currently no automated analysis available, if the Data Federator Facade is used or not.

You may check your systems for usage of function module RSDRI_INFOPROV_READ_DF (RFC calls) and RSDRI_DF_GET_SYSTEM_INFO.

Recommendations

Instead of the Data Federator Facade, you can use the external SAP HANA views of the SAP BW/4HANA InfoProviders. This allows direct SQL access to SAP BW/4HANA data. The external SAP HANA views need to be generated for all objects where a SQL access is necessary.

Related Information

Data Federator
Generating SAP HANA Views from the BW System

3.4.8 BW4SL - Report-Report-Interface

SAP Note 2739095 - BW4SL - Report-Report-Interface

Version 1 from 2019-01-11

Description
The report-report-interface (RRI) is still available in SAP BW/4HANA. However, RRI was primarily supported for and used by the SAP Business Explorer front-end which is not available with SAP BW/4HANA.

**Other Terms**
RRCA, RRQA

**Prerequisites and Checks**

There is currently no automated analysis available, if the RRI is used by front-end tools for SAP BW. You can check in tables RSBBSCUBEDIR and RSBSQUERYDIR, if RRI is configured in the SAP BW backend.

**Recommendations**

If you have configured the report-report-interface for your end-user tools, you should check if those tools are still available with SAP BW/4HANA and are supporting RRI. If not, then there might be an alternative feature available in the tool of your choice.

**Related Information**

* Using the Report-Report-Interface

**3.5 SAP BW - Agile Information Access**

**3.5.1 BW4SL - Local Provider and Local CompositeProvider in BW Workspaces**

**SAP Note** [2444273 - BW4SL - Local Provider and Local CompositeProvider in BW Workspaces](https://support.sap.com/pool.query?searchId=32653859&userGuid=32653859&language=en)

Version 2 from 2018-01-18
Component: BW-BEX-OT-WSP - BW Workspace
Other Components: BW-WHM-DBA-COPR - CompositeProvider (local version)

**Description**

SAP BW Workspaces are a fully supported functionality for agile information access in SAP BW/4HANA.

**Other Terms**
COPR, DCOP, AIXN

**Prerequisites and Checks**

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are available in or can be converted to SAP BW/4HANA:

See node: Automated Cleanup --> Deletions --> TLOGO AINX (Analytical Index)

See node: Supported by Transfer Tool --> BW4 Transfer Tool --> TLOGO COPR (local CompositeProvider)

It is not possible to convert BW Workspace scenarios by means of remote conversion, as BW Workspace scenarios are completely local and cannot be transported.
In-place conversion is generally possible however as of release SAP BW 7.5 SP 5, powered by SAP HANA or higher.

**Recommendations**

What the in-place conversion does:

- If a MultiProvider is used as the main provider in a BW Workspace, it is replaced by a CompositeProvider in the BW Workspace metadata.
- An InfoCube or DataStore Object (classic) used in a main provider is replaced by a DataStore Object (advanced).
- The metadata of the local CompositeProvider is also adjusted (InfoCube replaced by DataStore Object (advanced) and so on).
- Local analytic indexes created in a BW Workspace are not affected.

**Restrictions:**

- Any central analytic indexes (created in APD for example) used in BW Workspaces are deleted during the conversion process. Please have a look at your scenarios first to identify cases, where this should occur and replace the central analytic indexes manually with DataStore Objects (advanced) in BW Workspaces (exchange manually in local CompositeProvider).

**Remote conversion:**

- Local objects used in BW Workspaces cannot be transferred to the SAP BW/4HANA target system.

**Related Information**

- Agile Information Access: BW Workspace

### 3.6 SAP BW - Front-end Tools

#### 3.6.1 BW4SL - BEx Workbooks

**SAP Note 2444138** - BW4SL - BEx Objects (to be redesigned)

Version 14 from 2018-04-20
Component: BW-BEX-ET-WB - Queries in Workbooks

**Description**

The following SAP Business Explorer (BEx) objects are not available in SAP BW/4HANA:

- BEx Workbooks
- BEx Web Item (Format SAP BW 7.x)
- BEx Web Template (Format SAP BW 7.x)
- BEx Broadcast Settings
- BEx Precalculation Server

The following SAP Business Explorer (BEx) settings are not available in SAP BW/4HANA:

- BEx Web Design Time Item and Parameter Metadata
- BEx Themes
- BEx Conversion Services
Other Terms

XLWB, DXLW, BITM, DBIT, BTMP, DBTM, BRSE, DBRS, WWIB, DWIB, WWPA, DWPA, THEM, THED, BIXP, DBIX, RSPRECADMIN, RSPRECALCADMIN

Prerequisites and Checks

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are supported with or can be converted to SAP BW/4HANA.

See node: Manual Redesign --> BEx

Caution: Neither this pre-check (program RS_B4HANA_CONVERSION_CONTROL) nor the SAP Readiness Check take BEx Workbooks stored external to the SAP BW system (for example, on local PCs or network drives) into consideration!

Recommendations

The above-mentioned objects can be used for a manual redesign before deleting them. The exception are BEx Web Templates and Items (7.x format), which can be retained in preparation for optimized support of front-end tools (see below).

Recommendations

For a redesign of BEx workbooks, we recommend to use SAP BusinessObjects Analysis, edition for Microsoft Office.

- Semi-automated transition of SAP BEx Analyzer Workbooks to SAP Analysis Office is available as a service offering
- For more details, see the following blog

For BEx Web scenarios, we recommend to use SAP Lumira Designer or SAP Analytics Cloud.

- Planned support for temporary use of the existing SAP BEx Web Applications in SAP BW/4HANA through a dedicated pilot program
- Exclusively available with the In-Place Conversion to SAP BW/4HANA 1.0 SP 6 or higher (support for a limited time until end of 2019)
- For more details, see SAP Note 2496706

For Broadcasting scenarios, we recommend to use SAP Crystal Reports for publishing and distribution.

Deletion

All objects listed above - with the exception of BEx Web Templates and Items (in 7.x format) - are deleted in the following cases:

- In-place Scope Transfer:
  BEx objects related to objects processed by the Scope Transfer Tool will be deleted as part of the corresponding task list in task “Delete unsupported objects”. For example, when transferring an InfoCube to a DataStore object (advanced), any BEx Workbooks related to this InfoCube will be deleted.
- Switch of Operating Mode:
  Any remaining BEx objects will be automatically deleted when executing the switch “B4H mode”.
- Manual Deletion:
  You can delete BEx objects using program RS_DELETE_TLOGO.

Related Information
SAP BusinessObjects Analysis, edition for Microsoft Office
SAP BusinessObjects Design Studio
SAP Lumira
SAP Analytics Cloud
SAP Crystal Reports

References

<table>
<thead>
<tr>
<th>SAP Note</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>2444136</td>
<td>BW4SL - BEx Objects (to be deleted)</td>
</tr>
<tr>
<td>2496706</td>
<td>BEx Web Application Add-on for SAP BW/4HANA - Deployment and Limitations</td>
</tr>
</tbody>
</table>

3.6.2 BW4SL - BEx Web Templates (3.x)

SAP Note 2444136 - BW4SL - BEx Objects (to be deleted)

Version 6 from 2017-07-03
Component: BW-BEX-ET-WEB - BEx Web ABAP Runtime

Description

The following SAP Business Explorer (BEx) objects are not available in SAP BW/4HANA:

- BEx Web Item (Format SAP BW 3.x)
- BEx Web Template (Format SAP BW 3.x)
- Reporting Agent Scheduling Package
- Reporting Agent Setting

Other Terms

ITEM, DITM, TMPL, DTMP, RAPA, RASE

Prerequisites and Checks

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are supported or can be converted to SAP BW/4HANA:

See node: Automated Cleanup --> Deletions

Recommendations

Any of the above-mentioned objects will be automatically deleted when executing the switch "B4H mode".

For BEx Web scenarios, we recommend to use SAP BusinessObjects Design Studio or SAP Lumira. For Reporting Agent scenarios, we recommend to use SAP Crystal Reports for publishing and distribution.

Related Information

Reporting Agent


**BEx Web**

**SAP BusinessObjects Design Studio**

**SAP Lumira**

**SAP Crystal Reports**

### References

<table>
<thead>
<tr>
<th>SAP Note</th>
<th>Title</th>
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<tbody>
<tr>
<td>2444138</td>
<td>BW4SL - BEx Objects (to be redesigned)</td>
</tr>
</tbody>
</table>

3.6.3 **BW4SL - BEx Web Templates (7.x)**

SAP Note [2444138](#) - BW4SL - BEx Objects (to be redesigned)

See "BW4SL - BEx Workbooks".

3.6.4 **BW4SL - BEx Reporting Agent**

SAP Note [2444136](#) - BW4SL - BEx Objects (to be deleted)

See "BW4SL - BEx Web Templates (3.x)".

3.6.5 **BW4SL - BEx Broadcast Settings**

SAP Note [2444138](#) - BW4SL - BEx Objects (to be redesigned)

See "BW4SL - BEx Workbooks".

3.6.6 **BW4SL - BEx Web Design Time Item Metadata**

SAP Note [2444136](#) - BW4SL - BEx Objects (to be deleted)

See "BW4SL - BEx Web Templates (3.x)".

3.6.7 **BW4SL - BEx Web Design Time Parameter Metadata**

SAP Note [2444136](#) - BW4SL - BEx Objects (to be deleted)

See "BW4SL - BEx Web Templates (3.x)".

3.6.8 **BW4SL - BEx Themes**

SAP Note [2444136](#) - BW4SL - BEx Objects (to be deleted)

See "BW4SL - BEx Web Templates (3.x)".

3.6.9 **BW4SL - BEx Precalculation Server**

SAP Note [2444138](#) - BW4SL - BEx Objects (to be redesigned)

See "BW4SL - BEx Workbooks".
3.6.10  BW4SL - Crystal Reports

SAP Note 2478346 - BW4SL - Other Front-end Objects

Version 5 from 2018-10-11
Component: BW-BEX-ET-FR - Crystal Reports

Description

The following front-end objects are not available in SAP BW/4HANA:

- SAP Crystal Reports (published to SAP BW)
- SAP Xcelsius Dashboards (published to SAP BW)
- BW Enterprise Reports

Other Terms

CRWB, DCRW, XCLS, DXCL, ERPT, DRPT

Prerequisites and Checks

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are supported with or can be converted to SAP BW/4HANA.

See node: Manual Redesign --> BEx

Recommendations

The above-mentioned objects can be used for a manual redesign before deleting them.

Recommendations

While SAP Crystal Reports and SAP Xcelsius Dashboards cannot be published (persisted) in SAP BW/4HANA, you are still able to publish these objects to the SAP BusinessObjects Business Intelligence platform.

For Enterprise Reporting scenarios, we recommend to use SAP Crystal Reports for publishing and distribution.

Deletion

The objects listed above are deleted in the following cases:

- In-place Scope Transfer:
  BEx objects related to objects processed by the Scope Transfer Tool will be deleted as part of the corresponding task list in task "Delete unsupported objects".
- Switch of Operating Mode:
  Any remaining BEx objects will be automatically deleted when executing the switch "B4H mode" using task list RS_COMPATIBILITY_TO_B4H (you can run the tasks related to the objects mentioned above also individually).
- Manual Deletion:
  You can delete BEx objects using program RS_DELETE_TLOGO (for deleting SAP Xcelsius Dashboards and BW Enterprise Reports, check SAP Note 2705147).

Related Information

SAP Crystal Reports
Publishing predefined reports to SAP BusinessObjects Business Intelligence platform

References

<table>
<thead>
<tr>
<th>SAP Note</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>2444136</td>
<td>BW4SL - BEx Objects (to be deleted)</td>
</tr>
<tr>
<td>2444138</td>
<td>BW4SL - BEx Objects (to be redesigned)</td>
</tr>
<tr>
<td>2705147</td>
<td>740SP12: ‘RS_DELETE_TLOGO’ minor Enhancements</td>
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</tbody>
</table>

3.6.11  BW4SL - Xcelsius Dashboards

SAP Note 2478346 - BW4SL - Other Front-end Objects

See "BW4SL - Crystal Reports".

3.6.12  BW4SL - Enterprise Reports

SAP Note 2478346 - BW4SL - Other Front-end Objects

See "BW4SL - Crystal Reports".

3.6.13  BW4SL - Easy Query

SAP Note 2470206 - BW4SL - Easy Query

Version 5 from 2017-06-29
Component: BW-BEX-OT-BICS-EQ - BICS Easy Query

Description

The Easy Query interface is not available in SAP BW/4HANA.

Other Terms

OData, easy consumption, $EASY

Prerequisites and Checks

There is currently no automated analysis available, if the Easy Query is used or not.

You can check table RSEQ_DIR to see a list of all queries released for Easy Query access.

Recommendations

Easy Query has been replaced by OData Query in SAP BW/4HANA. Accessing BW Queries via OData is more flexible than Easy Query:

- Ability to handle free characteristic and dynamically change query result set
- Hierarchy handling
- Optimized performance
- Optimized lifecycle – it is a transportable object (EQ was regenerated in each system transported to)
- Support for CDS based queries
OData Query is consequently optimized for OData consumption (for example, by SAP Fiori clients) and therefore no longer offers RFC and SOAP access. Since the Easy Query was RFC and a not http based protocol, we decided to substitute it with the OData Query. The OData Query is a more open standard using OData protocol based on REST services.

Note: There are still some restrictions left like key figure on columns, characters on rows – see documentation for more details.

Related Information

Lightweight Consumption of Queries

Architectural Overview of Easy Queries and OData Queries

3.7 SAP BW - Planning Tools

3.7.1 BW4SL - Business Planning & Simulation

SAP Note 2468702 - BW4SL - Business Planning & Simulation

Version 3 from 2019-02-07
Component: BW-PLA-BPS - Business Planning and Simulation

Description

SAP BW Business Planning & Simulation (BW-BPS) applications are not available in SAP BW/4HANA.

Other Terms

$BPS, SEM, PLA

Prerequisites and Checks

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are available in or can be converted to SAP BW/4HANA.

See node: Required actions for switch to B4H mode --> BW Planning --> BW-BPS

y planning area(s) in client xxx and/or z planning level(s) in client xxx

Recommendations

A conversion of BPS applications is not available. To set the system to Ready-for-Conversion status, which is a prerequisite for an in-place conversion to SAP BW/4HANA, it is necessary to delete all BPS applications.

In transaction BPS01, it is only possible to delete one application at a time. To simplify the deletion, you can use the attached program. The program deletes all BPS applications (planning areas and dependent levels, packages, etc.). There's no option to select any subset of the applications. After a confirmation prompt, the program will delete all applications without further prompt. The is no option to reverse the deletion!

InfoCubes and InfoObjects will not be deleted.
3.7.2 BW4SL - Aggregation Levels

SAP Note 2443001 - BW4SL - Aggregation Levels

Version 7 from 2018-07-25
Component: BW-PLA-IP - Integrated Planning

Description

Planning scenarios with aggregation levels (BW Integrated Planning or BPC embedded), which are created on top of a plannable InfoCube or on top of a DataStore object directly (i.e. without a MultiProvider or CompositeProvider in between), cannot be converted automatically into a SAP BW/4HANA compatible scenario if navigational attributes should be used.

Other Terms

ALVL, DALV

Prerequisites and Checks

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are supported or can be converted to SAP BW/4HANA.

Recommendations

Such scenarios need to be remodeled by introducing a MultiProvider or a CompositeProvider on top of the plannable InfoCube or DataStore object and creating the aggregation levels on top.

Furthermore, for a particular type of models, the manual post-conversion efforts can be reduced, if the following models are modified before a conversion: If a MultiProvider, which is used as the basis for an aggregation level, contains a mapping where the navigational attribute of a characteristic is mapped from some characteristic in a provider, i.e. if a MultiProvider has a field which technically looks like a navigation attribute but which semantically is a characteristic, then the conversion will result in a CompositeProvider containing additional characteristics. These additional characteristics must be taken into account in modelling objects like the aggregation levels and the functions on top, and any automated conversion can only use heuristics for that. So, if these MultiProviders are remodeled before the conversion, the post-conversion efforts can be reduced.

Related Information

InfoProviders

Editing Aggregation Levels

3.7.3 BW4SL - Planning

SAP Note 2443189 - BW4SL - Business Planning & Consolidation

Version 2 from 2017-10-19
Component: BW-PLA-IP - Integrated Planning

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)

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

Other Terms

AABC, AADT, AAPP, ABPC, ABPF, ABRU, ACGA, ACGP, ACGS, ACLB, ACTR, ADAF, ADEE, ADEI, ADEL, ADIM, ADMC, ADMD, ADMF, ADMG, ADML, ADMS, ADTG, AFLC, AFLD, AFLE, AFLG, AJUT, AKPI, AMBR, AMPF, APPS, ARTP, ASPD, ASPF, ASPR, ATEM, ATPF, AWSS, BAOE, ALVL, BBPF, BDAP, ENVH, MODL, PCLR, PLDS, PLSE, PLSQ, PLST, TEAM, WKSP

Prerequisites and Checks

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are supported with or can be converted to SAP BW/4HANA.

See node: Required actions for switch to B4H mode --> BW Planning --> BPC Embedded / BPC Standard

Recommendations

Objects related to Business Planning can be used with SAP BPC 11.0, version for SAP BW/4HANA (or higher). Install the SAP BPC add-on (technical name BPC4HANA) on the target SAP BW/4HANA system.

Related Information

SAP BPC, version for SAP BW/4HANA documentation

References

<table>
<thead>
<tr>
<th>SAP Note</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>2343286</td>
<td>Planning on BW/4HANA</td>
</tr>
<tr>
<td>2450774</td>
<td>SAP Business Planning and Consolidation 11.0 SP00, version for SAP BW/4HANA Central Note</td>
</tr>
<tr>
<td>2510414</td>
<td>Conversion to SAP Business Planning and Consolidation 11.0, version for SAP BW/4HANA Central Note</td>
</tr>
</tbody>
</table>

3.8 SAP BW - Custom Developments

3.8.1 BW4SL - Interfaces and Customer-Specific ABAP Development

SAP Note 2462639 - BW4SL - Interfaces and Customer-Specific ABAP Development

Version 18 from 2019-03-01
Component: BW - SAP Business Warehouse
Other Components: BC-ABA - ABAP Runtime Environment - ABAP Language Issues Only
Description

Converting from SAP BW to SAP BW/4HANA might have an impact on customer-specific ABAP development. Custom Code Migration might be required.

Other Terms

$CUST, ABAP

Prerequisites and Checks

This SAP Note lists changes to system software that could have an impact on custom code.

Custom Code Migration describes the tools that help you with the migration of custom code – for example, if you want to migrate your current database to SAP HANA and/or convert your SAP Business Warehouse system to SAP BW/4HANA. In this SAP Note, you will find information about the tools that support you in this process.

The SAP BW/4HANA Transfer Cockpit provides a Code Scan Tool to check custom code objects as well as code embedded in transformations and many other locations in SAP BW. For more details, see the Conversion Guide for SAP BW/4HANA. A list of DDIC and ABAP objects that are not available in SAP BW/4HANA is included in the Code Scan Tool (see class CL_RS_B4HANA_CODE_SCAN method GET_BLACKLIST_WITH_TLOGO).

Note: SAP Readiness Check for SAP BW/4HANA and the Pre-check Tool of the SAP BW/4HANA Transfer Cockpit do not scan or check any custom code.

Recommendations

Impact Due to Change of Database

When converting to SAP BW/4HANA running on SAP HANA from SAP BW running a different database platform, specific ABAP coding needs to be investigated, revisited, and possibly adapted. Functional adjustments and SQL performance tuning might be required.

Impact Due to Simplification of Application Functionality

As documented in other simplification items, SAP BW/4HANA provides many simplifications of application functionality compared to SAP BW. Therefore, many programs, function modules, and classes (millions of lines of standard code) and thousands of standard dictionary objects of SAP BW are not available in SAP BW/4HANA. Any use of such objects needs to be replaced in custom code. It’s recommended to use only documented standard interfaces (API). See SAP Documentation.

Impact Due to Change of Application Technology

SAP BW-specific customer enhancements (often called “customer exits”, transaction CMOD) are not available in SAP BW/4HANA. For several SAP BW releases, SAP has offered corresponding enhancement spots. If customer enhancements are used in SAP BW, the code will have to be adjusted and converted to enhancement spots in SAP BW/4HANA.

The following customer exits are not available with SAP BW/4HANA:

<table>
<thead>
<tr>
<th>Customer Exits</th>
<th>Description</th>
<th>Enhancement Spots</th>
</tr>
</thead>
</table>

Simplification List for SAP BW/4HANA 1.0
The Simplification List for SAP BW/4HANA

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<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIBW0001, AIBW0002</td>
<td>IM-BCT: Assignment of Actual Values to Budget Categories / Corporate IM: Settings for Group Currency</td>
<td>n/a</td>
</tr>
<tr>
<td>RSR00001, RSR00002</td>
<td>BI: Enhancements for Global Variables in Reporting / BI: Virtual Characteristics and Key Figures in Reporting</td>
<td>RSROA_VARIABLES_EXIT and RSROA, see SAP Note 2458521 for details on how to switch to the enhancement spot</td>
</tr>
<tr>
<td>SEMBPS01, SEMBPS02</td>
<td>SEM-BPS: Enhancement for checking characteristic value combinations / Enhancement for characteristic derivation</td>
<td>Corresponding functionality in Integrated Planning or SAP Business Planning and Consolidation (BPC)</td>
</tr>
</tbody>
</table>

**Impact Due to Simplification of Object Types**

Several types of objects are not available in SAP BW/4HANA. Depending on the type of object, active versions of obsolete object types can be converted to objects that are compatible with SAP BW/4HANA. For example, the InfoCubes or classic DataStore objects can be converted to DataStore objects (advanced). If unavailable object types are used in custom code, the code might have to be adjusted. For example, if custom code contains a lookup of a classic DataStore object (SELECT ... FROM /BIx/ATESTDSO00 ...), the lookup might fail after converting to an advanced DataStore object which has a different database representation (SELECT ... FROM /BIx/A TESTDSO2 ...). After implementing SAP Note 2539205 (or the equivalent support package), the system will generate compatibility views corresponding to the activation queue and the active data table of the classic DSO reducing the effort to adjust custom code significantly. Nevertheless, note that depending on the type of object, there might also be different technical fields, like “Request TSN” instead of “Request ID” in change logs and there is no compatibility view for the change log itself.

See the other object-specific simplification items, for recommendations on how to deal with custom code embedded in object types unavailable in SAP BW/4HANA (like Virtual InfoCubes).

**Impact Due to Simplification of Content Objects**

Several BI Content and SAP BW Technical Content objects are not available in SAP BW/4HANA. Depending on the type of object, active versions of the content can be taken over or converted to objects that are compatible with SAP BW/4HANA (see “simplification of object types” above). If content that is used in custom code is not available in SAP BW/4HANA, the code will have to be adjusted.

For example, InfoObject “Request ID” (0REQUID) is not used in SAP BW/4HANA (except for the transition period). Therefore, any custom code built around “Request ID” will not work with SAP BW/4HANA. Instead “Request Transaction Sequence Number” (0REQTSN) should be used.

Another example is reusing logic provided by BI Content like SAP exit variables in custom code (CALL FUNCTION ‘RSVAREXIT...’). Since some SAP exit variables are not available, custom code might have to be adjusted.

For more details, see SAP Note 2673734.

**Impact Due to Change of Personalization Objects**

DataStore objects (0PERS_*) for persistency of personalization data are not available in SAP BW/4HANA. Instead the system uses transparent tables (RSPERS*). Custom code using these DataStore objects needs to be adjusted.
Impact Due to Simplification of Authorization Objects

Several authorization objects, for example S_RS_ICUBE, are not available in SAP BW/4HANA. In case these objects are used for authorization checks in custom code, the code will have to be adjusted. See SAP Note 2466657, for details.

Impact Due to Changes of Application Interfaces

Usage of standard application interfaces in custom code or external applications needs to be evaluated and in some cases adjusted. The following table contains the most prominent changes that have been made in SAP BW/4HANA:

<table>
<thead>
<tr>
<th>SAP BW Interface</th>
<th>Description</th>
<th>SAP BW/4HANA Interface</th>
</tr>
</thead>
<tbody>
<tr>
<td>RSNDI_MD_ATTRIBUTES_UPDATE</td>
<td>APIs for Master Data</td>
<td>RSDMD_API_ATTRIBUTES_UPDATE</td>
</tr>
<tr>
<td>RSDMD_WRITE_ATTRIBUTES_TEXTS</td>
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<td>RSDMD_API_ATTR_TEXTS_MAINTAIN</td>
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<tr>
<td>RSNDI_MD_TEXTS_UPDATE</td>
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<td>RSDMD_API_DELETE</td>
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<tr>
<td>RSNDI_MD_...</td>
<td></td>
<td>RSDMD_API_TEXTS_UPDATE</td>
</tr>
<tr>
<td>RSDMD_API_XXL_ATTR_UPDATE</td>
<td>See SAP Documentation</td>
<td></td>
</tr>
<tr>
<td>RSNDI_SHIE_ACTIVATE</td>
<td>APIs for Hierarchies</td>
<td>RSDMD_API_HI_ACTIVATE</td>
</tr>
<tr>
<td>RSNDI_SHIE_CATALOG_GET</td>
<td></td>
<td>RSDMD_API_HI_BW_NODENMCREATE</td>
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<tr>
<td>RSNDI_SHIE_DELETE</td>
<td></td>
<td>RSDMD_API_HI_DELETE</td>
</tr>
<tr>
<td>RSNDI_SHIE_MAINTAIN</td>
<td></td>
<td>RSDMD_API_HI_EX_NODENMCREATE</td>
</tr>
<tr>
<td>RSNDI_SHIE_STRUCTURE_GET3</td>
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<td>RSDMD_API_HI_HEADER_GET_ALL</td>
</tr>
<tr>
<td>RSNDI_SHIE_STRUCTURE_UPDATE3</td>
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<td>RSDMD_API_HI_STRUCTURE_GET</td>
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<td>RSNDI_SHIE_SUBTREE_DELETE</td>
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<td>See SAP Documentation</td>
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<tr>
<td>BAPI_ODSO_READ_DATA_UC</td>
<td>APIs for DataStore Objects</td>
<td>RSDSO_WRITE_API</td>
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<tr>
<td>RSDRI_ODSO_INSERT</td>
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<td>RSDSO_WRITE_API_RFC</td>
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<td>RSDRI_ODSO_MODIFY</td>
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<td>RSDSO_DU_WRITE_API</td>
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<tr>
<td>RSDRI_ODSO_ARRAY_DELETE</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>BAPI_...</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RSCRM...</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CL_RSCRM...</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BAPI_REP...</td>
<td>APIs for other object types like InfoCube, MultiProvider, etc. which are not available in SAP BW/4HANA</td>
<td>Functions still exist but will raise an error message when called in SAP BW/4HANA</td>
</tr>
<tr>
<td>RSCRM...</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CL_RSCRM...</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
RSDRI_DF,...  
RSDRI_INFOPROV_READ_DF  
Data Federator Facade is not available in SAP BW/4HANA  
n/a, see SAP Note 2444890

RSSEM,...  
CL_RSSEM,...  
SEM APIs are not available in SAP BW/4HANA  
n/a, see SAP Note 2526508

RRW3_GET_QUERY_VIEW_DATA  
Web Service API  
Functions still exist but is not supported with SAP BW/4HANA. The functionality has been replaced by the OData interface for BW Queries.  
See SAP Documentation

Impact Due to Enhanced Data Types for Characteristics and Constants

When converting to SAP BW/4HANA from a SAP BW release below 7.4, data types and lengths for characteristics will be changed. Previously, the maximum length of characteristic values was 60 characters. The maximum length is now 250 characters, which corresponds to 500 bytes. Domain RSCHAVL has therefore been changed from CHAR60 to SSTRING.

For details, see SAP Documentation and SAP Note 1823174.

Impact Due to Change of Front-end Technology

SAP Business Explorer is not available with SAP BW/4HANA. Any custom code build on SAP BEx Web Templates or SAP BEx Workbooks (in 3.x as well as 7.x versions) will not work with SAP BW/4HANA.

Data Federator Façade is not available in SAP BW/4HANA. Instead, generated SAP HANA views can be used. Easy Query is not available in SAP BW/4HANA. Instead, OData queries can be used. Custom code using either Data Federator Façade or Easy Query needs to be adjusted.

Impact Due to Changes in Other Software Components

SAP BW/4HANA 1.0 is delivered with the following software components and version:

<table>
<thead>
<tr>
<th>Software Component</th>
<th>Release</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAP_BASIS</td>
<td>750</td>
</tr>
<tr>
<td>SAP_ABA</td>
<td>75A</td>
</tr>
<tr>
<td>SAP_GWFND</td>
<td>750</td>
</tr>
<tr>
<td>SAP_UI*</td>
<td>750 / 752</td>
</tr>
<tr>
<td>DW4CORE</td>
<td>100</td>
</tr>
</tbody>
</table>
* Starting with SAP BW/4HANA 1.0 SP 8, SAP_UI 7.52 is required.

SAP BW/4HANA 2.0 is delivered with the following software components and version:

<table>
<thead>
<tr>
<th>Software Component</th>
<th>Release</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAP_BASIS</td>
<td>753</td>
</tr>
<tr>
<td>SAP_ABA</td>
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</tr>
<tr>
<td>SAP_GWFND</td>
<td>753</td>
</tr>
<tr>
<td>SAP_UI</td>
<td>753</td>
</tr>
<tr>
<td>DW4CORE</td>
<td>200</td>
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<tr>
<td>UIBAS001</td>
<td>400</td>
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</tbody>
</table>

When converting to SAP BW/4HANA, these components can undergo a release upgrade, which could therefore impact custom code. SAP_ABA release 75A and higher, for example, supports long material numbers (CHAR 40 instead of CHAR 18). Custom code which uses 0MATERIAL - or variations thereof - should be checked for compatibility with long material numbers. See also SAP Note 2635167 - Handling of Material InfoObjects with Conversion to SAP BW/4HANA.

See the following SAP Notes for details:

- SAP Note 2215424 - Material Number Field Length Extension - General Information
- SAP Note 2215852 - Material Number Field Length Extension: Code Adaptions
- SAP Note 2267140 - S4TWL - Material Number Field Length Extension
- SAP Note 2272014 - Code Inspector check for field length extensions

**Impact on System Modifications and Enhancements**

Modifications and enhancements need to be adapted using the standard transactions SPDD, SPAU and SPAU_ENH. This is the same process as in previous upgrades of SAP BW, only the tools SPDD and SPAU have been renewed. Especially when moving from older system to SAP BW/4HANA many modifications and enhancements can be removed or set to SAP standard. For this purpose, the UI was invented for SPAU, which supports mass activities in order to adjust modifications and enhancements or reset objects to SAP standard more easily. The general recommendation is to reset as many objects as possible to SAP standard.

**SAP Custom Development Projects (CDP)**

If the SAP BW system contains any Custom Development Projects - customer-specific implementations done by SAP -, please contact SAP to ensure that the solution is properly evaluated and transitioned to SAP BW/4HANA.

**Partner Development Projects**

If the SAP BW system contains solutions developed by Partners, please contact the original vendor to see if the solution can be transitioned to SAP BW/4HANA.

**Recommended Process for Custom Code Adjustments**
The custom code adjustment process consists of two major phases. Before SAP BW/4HANA system conversion – during discovery and preparation phase – we recommend to get rid of old unused custom code (custom code evaluation) and then analyze remaining custom ABAP code (based on the Simplification List) and find out which objects need to be changed to get adapted to the SAP HANA and SAP BW/4HANA. After SAP BW/4HANA system conversion – during the realization phase – you need to adapt custom ABAP code to the new SAP BW/4HANA software (functional adaptation) and optimize performance for SAP HANA database (performance tuning).

Related Tools

The following table gives you an overview of how to detect potential functional, application, and performance-related issues during transition and of the relevant tools in the context of conversion to SAP BW/4HANA:

<table>
<thead>
<tr>
<th>Use Case</th>
<th>Description</th>
<th>Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Custom code evaluation</td>
<td>For this purpose, we recommend to turn on the Usage Procedure Log (UPL) in your productive system to find out, which custom ABAP objects are used within your running business processes. You can also use this step for prioritization: to find out which objects are more important as the others. An alternative is to use the ABAP Call Monitor (SCMON). The advantage compared to the UPL is that using this tool you not only collect the usage data (how often a specific ABAP object was called), but also the information about the calling context. Solution Manager Custom Code Lifecycle Management (CCLM) can retrieve the usage data from your productive system and visualize them for your convenience. Based on the graphical presentation you get better transparency of the usage of your custom ABAP code and can easier analyze it then using only UPL or SCMON technical data.</td>
<td>Usage and Procedure Logging (UPL) ABAP Call Monitor (SCMON) Custom Code Management Decommissioning</td>
</tr>
<tr>
<td>Functional adaptations</td>
<td>The ABAP Test Cockpit (ATC) and the Code Inspector provide static code checks that enable you to detect ABAP code which relies on database-specific features. Example: ABAP source code that relies on the sort order of the result of an SQL statement.</td>
<td>ABAP Test Cockpit and Code Inspector in Context of HANA Migration</td>
</tr>
<tr>
<td>SQL performance optimization</td>
<td>The SQL Monitor allows you to monitor all SQL statements and operations that are executed by running ABAP applications. The collected SQL Monitor data then enables you to detect performance hot spots.</td>
<td>SQL Monitor</td>
</tr>
<tr>
<td>Runtime checks</td>
<td>The Runtime Check Monitor allows you to execute a limited range of runtime checks in your productive system. You can use the check results to identify issues that lead to poor performance or high memory consumption.</td>
<td>Runtime Check Monitor</td>
</tr>
<tr>
<td>Functional adaptation and optimization of custom code embedded in generated programs</td>
<td>The SAP BW/4HANA Transfer Cockpit (since the March 2018 update) can be used to scan the system for custom code embedded in SAP BW configuration like update and transfer rules, transformations, planning functionality, analysis process designer, as well as SAP BW-specific customer exits, business add-ins, and enhancement spots. The Transfer Cockpit scans for usage of incompatible BW objects and obsolete ABAP code. In addition, you can use the SAP BW ABAP Routine Analyzer, which will perform a similar scan but focus on best practices and performance optimization.</td>
<td>Conversion Guide for SAP BW/4HANA &gt; Custom Code Scan SAP BW ABAP Routine Analyzer (part of SAP BW Migration Cockpit)</td>
</tr>
</tbody>
</table>
References

<table>
<thead>
<tr>
<th>SAP Note</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1823174</td>
<td>BW 7.4 changes and customer-specific programs</td>
</tr>
<tr>
<td>2362955</td>
<td>Interface for data exchange of master data and hierarchies RSDMD_API</td>
</tr>
<tr>
<td>2444890</td>
<td>BW4SL - Data Federator Facade</td>
</tr>
<tr>
<td>2458521</td>
<td>Conversion of obsolete customer exits (CMOD) to enhancement spots in SAP BW</td>
</tr>
<tr>
<td>2463800</td>
<td>BW4SL - Customer Relationship Management (CRM) BAPI &amp; Customer Segmentation</td>
</tr>
<tr>
<td>2468657</td>
<td>BW4SL - Standard Authorizations</td>
</tr>
<tr>
<td>2526508</td>
<td>BW4SL - Strategic Enterprise Management (SEM) APIs</td>
</tr>
<tr>
<td>2635167</td>
<td>Handling of Material InfoObjects with Conversion to SAP BW/4HANA</td>
</tr>
<tr>
<td>2719160</td>
<td>Uninstallation of software component SAP_BW during the BW/4HANA 2.0 Conversion</td>
</tr>
<tr>
<td>2749804</td>
<td>Support Package levels of SAP BW/4HANA installations/upgrades</td>
</tr>
</tbody>
</table>

3.8.2 BW4SL - Customer Relationship Management (CRM) BAPI

SAP Note 2463800 - BW4SL - Customer Relationship Management (CRM) BAPI & Customer Segmentation

Version 4 from 2019-03-04
Component: BW-BCT-CRM - please use CRM-ANA (Customer Relationship Management)

Description

The CRM tools and CRM BAPI are not available in SAP BW/4HANA.

Furthermore, the following functionality to perform high data volume CRM customer segmentation is not available in SAP BW/4HANA:

- Segmentation with High Data Volume from SAP NetWeaver BW
- Distinction Between BWA and BW High-Volume Segmentation with HANA

Other Terms

$CRM, BAPI, BAPI_REP..., RSCRM..., RSDRCRM, RSDRCRM_SEG

Prerequisites and Checks

There is no analysis available, if the CRM tool, BAPI, or customer segmentation are used or not.

Recommendations

Instead of the CRM BAPI, you can use the external SAP HANA views of the SAP BW/4HANA InfoProviders. This allows direct SQL access to SAP BW/4HANA data. The external SAP HANA views need to be generated for all objects where a SQL access is necessary.

There is currently no replacement for the other CRM-related features.

Related Information
3.8.3 BW4SL - Strategic Enterprise Management (SEM) APIs

SAP Note 2526508 - BW4SL - Strategic Enterprise Management (SEM) APIs

Version 1 from 2017-08-31
Component: FIN-SEM - Strategic Enterprise Management

Description

The SEM APIs are not available in SAP BW/4HANA.

Other Terms

$SEM, BAPI, RSSEM..., CL_RSSEM...

Prerequisites and Checks

You can use the SAP BW ABAP Routine Analyzer to check if SEM APIs are used in custom code embedded in SAP BW objects (see SAP Note 1847431). However, there is no standard tool available to scan other custom developments.

Recommendations

Instead of SEM APIs, you should use standard APIs provided by SAP BW/4HANA. See SAP Note 2462639 - BW4SL - Interfaces and Customer-Specific ABAP Development.

References

<table>
<thead>
<tr>
<th>SAP Note</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>2462639</td>
<td>BW4SL - Interfaces and Customer-Specific ABAP Development</td>
</tr>
</tbody>
</table>

3.9 SAP BW - Security

3.9.1 BW4SL - Standard Authorizations

SAP Note 2468657 - BW4SL - Standard Authorizations

Version 10 from 2019-07-16
Component: BW-BEX-ET-AUT - Authorizations
Other Components: BW-WHM-DST-AUT - Authorizations

Description

Several standard authorizations objects used in SAP BW are not available in SAP BW/4HANA.

Other Terms

$STDAUTH, Authorizations, Profiles, Roles, PFCG

Prerequisites and Checks
The simplification of object types in SAP BW/4HANA has an impact on authorization objects. When converting a SAP BW system to SAP BW/4HANA, authorizations for object types that are not available in SAP BW/4HANA (like InfoCubes) have to be replaced by authorizations for corresponding object types (like DataStore Objects (advanced)).

The SAP BW/4HANA Transfer Cockpit includes a tool to automatically transfer roles and standard authorizations.

**Recommendations**

The attached file contains a list of authorization objects available in SAP BW and shows if they are available in SAP BW/4HANA or need to be replaced with a different authorization object.

Adjust your security profiles and roles accordingly. To do so, you can use the Authorization Transfer Tools included in the SAP BW/4HANA Transfer Cockpit (programs RS_B4HTAU_*). You first perform an initial run to analyze the existing authorization usage. Then you convert the data model and flow objects. And finally, you perform a delta run to adjust the standard authorizations according to the attached rules. For more details, see Conversion Guide.

The column "Treatment" in the attached file has 4 values:

- **Assume:** Nothing do to. This authorization objects will work 1:1 after the SAP BW/4HANA conversion.
- **Adjust:** Check and adapt the values. If there are Cube/DSO/... names in use, please change it to the new ADSO name.
- **Replace:** A manual task is necessary and a new authorization object ("Replacement" column) instead of the old one ("Technical Name" column) must be included in the roles.
- **Obsolete:** The authorization object is not needed anymore.

For Remote and Shell Conversion, you either maintain new roles in the SAP BW/4HANA target system (see SAP Note 2468657) or you transport the original roles to the target system and use the Authorization Transfer Tool (Report "RS_B4HTAU_CREATE_RUN") to make the required adjustments in the target system.

**Attachments**

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<tr>
<td>BW4_Authorisation 20170613.pdf</td>
<td>142 KB</td>
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</tbody>
</table>

3.9.2 **BW4SL - Reporting Authorizations**

**SAP Note** 2478384 - BW4SL - Reporting Authorizations

Version 2 from 2017-07-05
Component: BW-BEX-OT-OLAP-AUT - Authorizations

**Description**

SAP BW Reporting Authorizations (3.x format) are not available in SAP BW/4HANA.

**Other Terms**

$REPAUTH

**Prerequisites and Checks**
There is no analysis available, if the Reporting Authorizations are used or not.

Recommendations

Reporting authorizations are obsolete since SAP BW 7.3. If you are converting from lower SAP BW releases to SAP BW/4HANA and are still using reporting authorizations, you have to switch to Analysis Authorizations.

Related Information

Reporting Authorizations --> Analysis Authorizations

Analysis Authorizations

Migration of Reporting Authorizations to the New Concept

References

<table>
<thead>
<tr>
<th>SAP Note</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>820183</td>
<td>New authorization concept in BI</td>
</tr>
<tr>
<td>964905</td>
<td>New concepts and generation of analysis authorizations</td>
</tr>
<tr>
<td>1125108</td>
<td>Use of obsolete 3.x authorizations in BW 7.x</td>
</tr>
</tbody>
</table>

3.10 SAP BW - Content

3.10.1 BW4SL - BI Content

SAP Note [2400585](https://support.sap.com) - Collective Note: SAP BW/4HANA Content 1.0 (BW4CONT 100 & BW4CONTB 100)

Version 22 from 2019-06-26
Component: BW-BCT - BW only - Business Content and Extractors

Description

This is a Collective SAP Note for SAP BW/4HANA Content 1.0.

Important: For SAP BW/4HANA Content 2.0 there exists an own Collective SAP Note: [2785525](https://support.sap.com) - Collective Note: SAP BW/4HANA Content 2.0 (BW4CONT 200 & BW4CONTB 200).

Other Terms

SAP BW/4HANA Content Basis Add-On, SAP BW/4HANA Content Add-On, SAP BW/4HANA, BW4CONT, BW4CONTB, SAP HANA-optimized BW Content

Prerequisites and Checks

You are using SAP BW/4HANA Content 1.0 (BW4CONTB 100 and/or BW4CONT 100).

Recommendations

This is a collective SAP Note for the SAP BW/4HANA Content 1.0 (BW4CONT 100 and BW4CONTB 100).

In the section References all relevant SAP Notes concerning the SAP BW/4HANA Content 1.0 are listed.
For an overview about the shipped content for SAP BW/4HANA 1.0 please see the following online documentation:

**SAP Online Help**

SAP BW/4HANA Content

http://help.sap.com/bw4content

**Frequently Asked Questions:**

2785514 - FAQ: SAP BW/4HANA Content (BW4CONT & BW4CONTR)

**References**

<table>
<thead>
<tr>
<th>SAP Note</th>
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<tbody>
<tr>
<td>2289424</td>
<td>S4TWL - SAP S/4HANA and SAP Business Warehouse Content - BI_CONT / BW4CONT</td>
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<tr>
<td>2393067</td>
<td>Release strategy for the ABAP add-on BW4CONT / BW4CONTRB</td>
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<tr>
<td>2395679</td>
<td>SAP BW/4HANA Content - Additional information on delivered variables</td>
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<td>2396513</td>
<td>SAP BW/4HANA Content - Additional information on delivered InfoObjects</td>
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<tr>
<td>2397520</td>
<td>SAP BW/4HANA Content - Differences to SAP HANA optimized BI Content delivered with BI CONT 7.57</td>
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<tr>
<td>2398990</td>
<td>ORT_WRF1_ATTR missing when trying to collect or activate BW4CONT infoobject OPLANT</td>
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<tr>
<td>2400685</td>
<td>SAP BW/4HANA Content 1.0 - Recommended SAP BW/4HANA 1.0 support package and SAP Notes</td>
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<td>2404023</td>
<td>Syntax Error in CL_RSMD_RS_UTILITIES - RSRTS_CDS_VAR_F4_BADI conversion</td>
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<tr>
<td>2433354</td>
<td>Missing Business Content DataSources or Transformations when using ODP framework</td>
</tr>
<tr>
<td>2448371</td>
<td>SAP HANA-optimized BW Content for Inventory Management: 0CUSTOMER wrongly mapped (2LIS_03_BF)</td>
</tr>
<tr>
<td>2500202</td>
<td>S4TWL - BW Extractors in SAP S/4HANA</td>
</tr>
<tr>
<td>2548065</td>
<td>SAP HANA-optimized BI Content and SAP S/4HANA</td>
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<tr>
<td>2678507</td>
<td>Composite SAP Note for SAP ERP / S/4HANA Inventory Management in SAP BW/4HANA</td>
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<tr>
<td>2808613</td>
<td>Creation of DTP for extraction from OC_BILLINGDOCUMENTITEMBASICDEX to /IMO/D_SD431 fails</td>
</tr>
</tbody>
</table>

**3.10.2 BW4SL - Administration Cockpit and Technical Content**

**SAP Note 2467074 - BW4SL - Administration Cockpit and Technical Content**

Version 4 from 2017-07-03
Component: BW-BCT-TCT - BW only - Technical Content and BW Administration Cockpit

**Description**

SAP BW Administration Cockpit and Technical Content (OBWTC*, ORSTT*, OTCT* name ranges) are not available in SAP BW/4HANA. Also, VirtualProviders for change log of Analysis Authorizations (OTCA* name range) are not available in SAP BW/4HANA.

Note: Central InfoObjects are still shipped with SAP BW/4HANA (see attachment for list as of release 1.0 SP 4).
**Other Terms**

$TCT, 0TCT, $TCA, 0TCA

**Prerequisites and Checks**

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are available in or can be converted to SAP BW/4HANA.

See node: Manual Redesign (take the necessary action) --> BW Object Type --> TLOGO CUBE (InfoCube, but not VirtualProviders), TLOGO ODSO (DataStore Object), TLOGO MPRO (MultiProvider), TLOGO IOBJ (InfoObjects)

See node: Automated Clean-up --> Deletion of SAP Delivered Technical Content --> All other technical content objects

**Recommendations**

Technical content objects can be deleted using program RS_DELETE_TECHNICAL_CONTENT. Executing that program with default parameters will not process objects related to persistency and reporting. This will allow customer to preserve the data models and statistical data by converting the models to SAP BW/4HANA compatible objects. If you do not need these objects, execute the report with option "Include ODSO/CUBE/MPRO".

In general, SAP BW Technical Content is being replaced by ABAP CDS views. For more details, see CDS Views for Data Warehouse Monitoring.

**Attachments**

<table>
<thead>
<tr>
<th>File Name</th>
<th>File Size</th>
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<tbody>
<tr>
<td>SAP_BW4HANA_OTC_InfoObjects.xlsx</td>
<td>32 KB</td>
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</table>

**3.10.3 BW4SL - Conversion of DataSource Field into InfoObject**

**SAP Note** 2487597 - BW4SL - Conversion of DataSource Field into InfoObject

Version 1 from 2017-10-18
Component: BW-BCT-GEN - BW Only - BL_CONT/BL_CONT_XT + BW4CONTB/BW4CONT

**Description**

Conversion of DataSource Field into InfoObject for Business Content is not available in SAP BW/4HANA. The corresponding classic DataStore Object (0GN_CONV) is not available.

Trying to activate Conversion of DataSource Fields in SAP BW/4HANA end with error message "activation failed".

**Other Terms**

ODSO, DODS, 0GN_CONV, RS_CONV_ACTIVATE, RS_BCT_GN_CONVERT_IOBJ

**Prerequisites and Checks**

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are available in or can be converted to SAP BW/4HANA.

See node: Automated Cleanup --> Adjustments
Recommendations

Although function module RS_BCT_GN_CONVERT_IOBJ exists in SAP BW/4HANA, it cannot be used to convert field to InfoObject values because the corresponding DataStore Object is not available in SAP BW/4HANA.

As an alternative, you can use standard transformation rules or a look-up using a customer DataStore Object (advanced).

Related Information

Conversion of DataSource Field into InfoObject

References

<table>
<thead>
<tr>
<th>SAP Note</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>2451013</td>
<td>BW4SL - DataStore Objects (classic)</td>
</tr>
<tr>
<td>2487535</td>
<td>BW4SL - Personalization</td>
</tr>
</tbody>
</table>

3.10.4 BW4SL - BI Content Analyzer

SAP Note 2526601 - BW4SL - BI Content Analyzer

Version 1 from 2017-08-31
Component: BW-BCT-ANA - BW only - BI Content Analyzer

Description

The BI Content Analyzer is not available in SAP BW/4HANA.

Other Terms

$BICA, RSBICA

Prerequisites and Checks

There is no analysis available, if the BI Content Analyzer is used or not.

Recommendations

Currently, there is no function equivalent available. You can use SAP Information Steward to perform metadata analysis.

3.10.5 BW4SL - Change Documents for Analysis Authorizations

SAP Note 2467074 - BW4SL - Administration Cockpit and Technical Content

See “BW4SL - Administration Cockpit and Technical Content”.

3.11 SAP BW - Other

3.11.1 BW4SL - Analysis Process Designer

SAP Note 2444220 - BW4SL - Analysis Process Designer
Version 4 from 2018-11-06  
Component: BW-EI-APD - Analysis Process Designer

Description

The SAP BW Analysis Process Designer (APD) is not available in SAP BW/4HANA.

Other Terms

ANMO, DANM, ANPR, DANP, ANSO, DANS, RSANWB

Prerequisites and Checks

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are available in or can be converted to SAP BW/4HANA:

See node: Automated Cleanup --> Deletions --> TLOGO ANMO, ANPR, ANSO (Analysis Process Designer)

Recommendations

The objects related to APD are deleted when converting to SAP BW/4HANA. There is no 1:1 replacement for all the features contained in APD in one place, but there is a set of features available in SAP BW/4HANA which make it possible to cover the important features and functions even more efficiently.

Four main use cases are often covered with the APD as a very generic tool-kit:

1. Analysis processes for data mining / predictive
2. (Lightweight) data staging / transformation, including query result downloads
3. Local, ad hoc analysis
4. Combine data (several sources) with unions/joins

Use case 1. should mainly be covered with the SAP product SAP Analytics Cloud. Some lightweight/straight-forward scenarios can be built with SAP HANA Analysis Processes in SAP BW/4HANA (i.e. a few PAL/AFL functions are implemented such as ABC Analysis, K-means and others).  
See also Creating a SAP HANA Analysis Process

Use case 2. should mainly be covered by modeling Data Flows  
See also Modeling Data Flows

Use case 3. should mainly be covered with BW Workspaces.

Use case 4. should mainly be covered by using the regular SAP BW/4HANA staging capabilities or modelling virtually in a CompositeProvider (with Open ODS View for the integration of external sources).

This is always a case-by-case decision however, depending on the customer scenario.

Some examples and ideas:

- For ad-hoc analysis you want to write files to a DataStore Object (advanced) --> use the local provider in BW Workspaces (load file or query result to local provider)
- Write a query result to persist it in SAP BW/4HANA or externally --&gt; use a Query (Query is used as InfoProvider) as source of a DTP and load the data to a DataStore Object (advanced) or use an Open Hub Destination

- Join with master data --&gt; use "Read master data" in transformations (mass data enabled)

- Writing data output to a file --&gt; use an Open Hub Destination

For semi-automated conversion of APD processes to Process Chains You can use the APD Transfer Tool. The Tool is part of the SAP BW/4HANA Conversion Toolbox, Revision 7 (SAP Note 2383530). Detailed information incl. user guide You will find in the document "Conversion Guide for SAP BW/4HANA" -&gt; https://help.sap.com/doc/c3f4454877614bc7b9e85ae1f9d1d2c71_1.0/en-US/SAP_BW4HANA_10_Conversion_Guide.pdf

Related Information

**Analysis Process Designer**

3.11.2  BW4SL - Analytical Model

SAP Note 2444220 - BW4SL - Analysis Process Designer

See "BW4SL - Analysis Process Designer".

3.11.3  BW4SL - Analytical Data Source

SAP Note 2444220 - BW4SL - Analysis Process Designer

See "BW4SL - Analysis Process Designer".

3.11.4  BW4SL - Data Mining Model

SAP Note 2444220 - BW4SL - Analysis Process Designer

See "BW4SL - Analysis Process Designer".

3.11.5  BW4SL - Other Unavailable Objects

SAP Note 2470123 - BW4SL - Other Unavailable Objects

Version 3 from 2017-10-04
Component: BW - SAP Business Warehouse

**Description**

The following object types are not available in SAP BW/4HANA:

- Analytical Service
- Analytical Service Types
- Data Access Service
- Data Mining Model
- Inspection Plan
- KPI Catalog Entry
- KPI Definition
- Hierarchy Object
- Enhancement Object
These object types are obsolete already in SAP BW.

The following object types are related to objects not available in SAP BW/4HANA:

- Call Package
- Transfer InfoSource master data
- Intelligent Services
- Intelligent Services Classes
- Operational Data Provider (Enterprise Search-Based)
- BPC Application
- BPC Web documents - LiveReport
- BPC Member Access Profile
- BPC Appset
- BPC Web document category
- BPC Web document folder
- BPC Web document - workspace
- BPS Excel Templates
- BPS STS Documents
- BI Conversion Services

**Other Terms**

ANSE, ANST, DDAS, DDDA, DMMO, DDMM, INSP, DINS, KPCE, DKPC, KPFD, DKPD, HIER, ISCP, DISC, ISMT, ISRV, ISVC, 1APP, ALPT, AMPF, APPS, AWDC, AWFD, AWKP, BRCL, PSRO, SWHL, SWHP, SWHR, SWKL, SWKP, SWKR, BIXP, DBIX, ENHO

**Prerequisites and Checks**

Run program RS_B4HANA_CONVERSION_CONTROL to determine which objects are available in or can be converted to SAP BW/4HANA.

See node: Automated Cleanup --> Deletions

**Recommendations**

The objects will be automatically deleted when switching to “B4H mode”. If you need any of the related functionality, then you must replace it before the switch to “B4H mode”.