Release Notes for SAP NetWeaver '04
Business Information Warehouse

2 BW SAP Business Information Warehouse

2.1 Entries in IMG (changed)

Use

In SAP BW 3.5 the BW Customizing Implementation Guide has been integrated into the SAP Customizing Implementation Guide. You can now find setings for SAP BW under *SAP Customizing Implementation Guides SAP NetWeaver -> SAp Business Information Warehouse*.

With SAP BW 3.5 there are the following new activities in BW IMG:

- Manage precalculation server: With this activity you can create a precalculation server to precalculate workbooks for information broadcasting. For more information, see the release information Precalculation of BW workbooks
- Maintain RFC Destination for EP 6.0: In this activity you create an RFC destination for integration between BW and Enterprise Portal 6.0.
- Maintain Portal Server Settings: This activity is necessary for integration between BW and Enterprise Portal 6.0.
- Hide Menu Entry "Publish to Enterprise Portal 5.0": In this activity you can hide the menu entry *Publish to Enterprise Portal 5.0* in the BEx Web Application Designer.
- BAdI: User-Defined Functions in Formula Builder: This Business Add-In (BAdI) is used in the transformation library of the formula editor. You can use this BAdI to integrate self-defined functions into the transformation library of the formula builder.
- BAdIs for document management: These Business Add-Ins (BAdIs) can be applied when using documents for BW objects.
  - BAdI: documents: You can use this BAdI to access BW documents during saving and reading to make customer-specific changes.
  - BAdI: Web item "Single document": You can use this BAdI to change HTML generated by "Single document" or you can define it completely yourself.
  - BAdI: Web Item "List of documents": You can use this BAdI to change HTML generated by "List of documents" or you can completely define it yourself.
  - BAdI:Maintenance of text documents in theWeb:You can use this BAdI to adapt document maintenance in the Web to customer specifications.

The following activity changed:

- Determine settings for Web templates: In this activity you can now only find settings for properties of Web templates and style sheets. You determine Web templates in the activity Setting Standard Web Templates. The settings for BEx Broadcasting have been added to the Web template settings.

The following structure nodes are new or have been changed:

- *Web-Based Settings* have been renamed as *BEx Web*; You will now find setttings for the SAP Enterprise Portal under an individual structure node.
- You can now find activities that are only relevant for BW2.x under the node *Web-Based Settings for BW 2.x*.

The following activity was deleted as it is obsolete:

- Establishing URL at the start of the BBS in the source system

2.2 Web Services in SAP BW

Use

A Web service is understood as a service that communicates using the SOAP protocol and describes its interface using WSDL (WebServices Description Language).

For an initiator or a sender, a Web service is a black box that can demand input and deliver a result. Web services offer business-wide and cross-company integration irrespective of the communication technology.

Various Web services are available in SAP BW:

Web service for accessing query data

You request the description of a navigation status or a result set using a Web service. You have to specify a query name or a query view name. The structure of the XML corresponds to the structure already made available in the context of the Web API in the table interface area. The BW authorization for the user is checked when the Web service is called up.

Web Services are automatically available after you have installed an SAP BW system. The URL of the Web service has to be built according to the following schema:

< Protocol> ://< Server> :< Port> /sap/bw/xml/soap/queryview

A description of the Web service can be called using a URL whose syntax corresponds to the following schema:

< Protocol> ://< Server> :< Port> /sap/bw/xml/soap/queryview?wsdl

Open Analysis Interfaces: XML for Analysis

XML for analysis is a protocol for swapping analytical data between client applications and servers using HTTP and SOAP as services on the Web. Using XML for analysis in the Business Information Warehouse facilitates the direct communication between a third-party reporting tool that is connected to the BW system and the OLAP processor.

XML for analysis is automatically available as a Web service after installing an SAP BW system. The URL of the Web service has to be built in the following way:

< Protocol> ://< Server> :< Port> /sap/bw/xml/soap/xmla

A description of the Web service can be called using a URL whose syntax corresponds to the following schema:

< Protocol> ://< Server> :< Port> /sap/bw/xml/soap/xmla?wsdl

Web service for loading data

You can create Web services for XML DataSources and use them to transfer data into the SAP BW. A Web service of this type delivers a WSDL description that can be used for loading data, independent of the technology used.

Create a Web service definition and a virtual interface (that represents a Web service interface externally) using the Web service creation wizard for SAP Web AS. Release the Web service for SOAP runtime. The call-up address for the Web service is generated when you release it. You can call up the WSDL description of the Web service in the administration for SOAP runtime (transaction WSADMIN).

2.3 BW-BEX Business Explorer

2.3.1 New Web item key figure overview for BEx Web Applications

Use

From Release 3.50 a Web item key figure overview is available for you in Web Application Designer (WAD) with which you can create Web applications.

The Web item displays a key figure catalog created in the component

Strategic Enterprise Management (SAP SEM).

Using the Web item, detailed information for the respective key figures (the basic Query or Query View) can be called by enabling a jump to the associated Web templates.

A prerequisite for the Web item is SAP SEM Release 3.5, Support Package 08.

See also

For more information about this Web item see the documentation for SAP Business Information Warehouse under *Business Explorer -> Web Application Design: BEx Web Application Designer -> Web Items -> Key Figure Overview*.

2.3.2 Display of document links (changed)

Use

From Release SAP BW 3.5 it is possible to more precisely control the display of document links during query and Web application execution. Until now, you were able to turn this display for a query or a DataProvider on and off. Switching on and off applied to all document

classes.

From Release SAP BW 3.5 you are able to turn the links for the various document classes on and off separately. The available document classes are listed as follows:

- Documents for metadata (InfoObject, query etc.)
- Documents for master data
- Documents for InfoProvider data

Now, for example, you can establish that only the document links for the InfoProvider data be displayed, but not those for the metadata.

Switching the document links on and off is possible both during definition and execution of queries.

2.3.3 Characteristic display (changed)

Use

From Release SAP BW 3.5, characteristic values can be displayed in Business Explorer with any available combination of key and text type. The text type (short text, medium text and long text) can be set independent of display type (text, text and key, key and text).

This setting can be made on the various levels of the application: In the settings for the Business Explorer in InfoObject maintenance, in the structure specific properties of InfoProvider maintenance, in the characteristic properties in the BEx Query Designer and Ad-hoc Query Designer, in the context menu of the BEx Analyzer and in the characteristic properties in BEx Web Applications.

Effects on Existing Data

The functionality is downward compatible, that is, settings made in older systems remain and function as usual.

2.3.4 BW-BEX-ET End User Technology

2.3.4.1 CM Repository Manager for BW Documents and BW Metadata (new)

Use

Documents and metadata created in BW (especially the documentation for the metadata) can be integrated into the Knowledge Management of the portal with repository management. There, they are displayed together with other documents for the end user in a directory structure.

It is still possible to link to these objects in Knowledge Management.

In addition, all generic services of Knowledge Management, such as feedback, rating and text

search can be applied to this object.

Furthermore that Repository Manager is used for BW metadata in the context of BEx Information Broadcasting in order to include links to online queries or Web applications in the BEx Portfolio.

Effects on System Administration

The repository manager must be installed in the portal.

Effects on Customizing

In the BW system:

- When maintaining the Portal Server in BW you have to enter the BW Metadata Repository Manager Prefix each time.
- A "single sign on" from the portal to the BW system must be set up for the BW system. That means that the portal system has to be recognized by the BW system as a "trusted system".

In the portal:

- An entry in the *System Landscape Directory* of the portal must be created for each relevant BW system.
- An instance of one or both of the repository managers must be created for every relevant BW system (KM configuration in the portal).

2.3.4.2 BEx Web Analyzer and Standard Web Template for Ad-hoc Analysis (new)

Use

BEx Web Analyzer

As of release BW 3.5 a new Web application is available with the BEx Web Analyzer for the analysis of ad-hoc analysis. This supports analysis based on a query or a view. Analysis can be started for an existing query or an existing view both using parameterized URL call ups and BEx open and save dialogs.

More views are avaiable to the user for existing data sources:

- Data analysis with tabular view including interaction and navigation possibilities with BW.
- Graphical display including the selection of different graphic types.
- Information on the data source
- Information broadcasting with the BEx Broadcasting Application

New Standard Web Template for Ad-hoc Analysis

Along with the complete application, a standard Web template is also offered for ad-hoc analysis. This offers a similar set of options as the BEx Web Analyzer but is optimized to the call up from a context. This means that this Web template is always called with an existing

view or an existing query in the following way:

- from the query designer using *Display Query on the Web*
- from the Web application designer for view maintenance using *Tools -> View Definition*
- from various Web applications

Settings can be made for this Web template in Customizing in SAP BW for call up from the query designer and from the Web application. This means that it can be changed and swapped. See the section on "Effects on Customizing".

Effects on Customizing

Determine Web Template Settings

2.3.4.3 BEx Information Broadcasting (new)

Use

BEx Information Broadcasting enables users to precalculate BEx Web

Applications, BEx queries and BEx Analyzer workbooks or to distribute them either in SAP Enterprise Portal or by e-mail, according to their. requirements. The BEx Portfolio is the central point of entry for accessing Business Intelligence information in SAP Enterprise Portal.

Information broadcasting includes the following components:

- BEx Broadcaster (including wizard) as the Web-based user interface
- BEx Broadcasting precalculation and distribution services as the infrastructure
- BEx Analyzer precalculation server for precalculating BEx Analyzer workbooks (optional)
- Business Intelligence Services for integration into SAP Enterprise Portal and for displaying the BEx Portfolios (optional)
- BEx Portfolio with precalculated documents and current documents in an overview

You can call the BEx Broadcaster from the following tools:

- BEx Web Application Designer
- BEx Query Designer
- BEx Analyzer

You can also call the broadcasting wizard in the context menu of Web Applications.

The following scenarios that existed previously are replaced by BEx Information Broadcasting:

- The precalculation of BEx Web Applications for use off-line
  Previously you were able to precalculate BEx Web Applications with the Reporting Agent and download them with the BEx Download Scheduler. This function, which is still possible with SAP BW 3.5, supports the grouping of precalculated documents using scheduling packages in the Reporting Agent and the periodic scheduling of the download in the Download Scheduler.
  As of SAP BW 3.5 this scenario is also possible with BEx Information Broadcasting. This

is done by sending precalculated BEx Web Applications by E-Mail or by downloading documents or directories from the BEx Portfolio using Knowledge Management services. BEx Information Broadcasting facilitates the following functions:

- Grouping precalculated documents in directories
- Notification when changes are made to precalculated documents
- Sending changed documents

- Publishing BEx Web Applications from the Web Application Designer to the Enterprise Portal
  Integration between SAP BW and SAP Enterprise Portal 5.0 was previously carried out by migrating roles or importing iView files to the Portal.
  As of SAP BW 3.5, BEx Web Applications can be created as iViews directly in Enterprise Portal 6.0 using the BEx Application Designer or the BEx Query Designer. An explicit migration or import of iView files is no longer necessary.

Effects on Existing Data

BEx Information Broadcasting works with existing BEx Web Applications, BEx Queries and BEx Analyzer workbooks. It is not necessary to convert data.

Existing settings or scheduling packages in the Reporting Agent for precalculating BEx Web Applications are not used in BEx Information Broadcasting.

Effects on System Administration

To precalculate BEx Web Applications and BEx Queries or distribute them by e-mail, the following steps are necessary in the administration of the BW system:

- Include process type DATACHANGE in process chains for loading data to enable the processing of broadcast settings when changes are made to data
- Schedule report RSRD_BROADCAST_FOR_TIMEPOINT to determine when the broadcast settings are to be processed
- Specify administrator authorizations in broadcasting (authorization object S_RS_ADMWB with field RSADMWBOBJ = BR_SETTING)
- Specify authorizations for scheduling from broadcast settings (authorization object S_RS_BCS) for the end-user; maintain e-mail addresses and *E-Mail* as the form of communication in the user master data.
- Install the mail server in the Web application server (Simple Mail Transfer Protocol (SMTP) - links under SAPconnect SCOT)

For the precalculation and distribution of BEx Analyzer workbooks, the following is necessary:

- Install the precalculation server from the server components CD
- Install the .NET-Frameworks, Microsoft Excel 2000 or higher on the precalculation server (see installation guides on the server components CD)

For the integration with SAP Enterprise Portal and using BEx Portfolios, the following is necessary:

- Install an SAP Enterpise Portals 6.0

- Install SAP BW 3.5 Frontend for publishing BW Web Applications from the Web Application Designer (optional)
- Set up the RFC service connection between the ABAP server and the Portal
- Deploy SAP BW 3.5 Java components in the Portal
- Customizing of the Repository Manager for displaying online links to current BW objects (Web templates, queries, workbooks) in the Portal

Effects on Customizing

You can influence how BEx Web Applications and BEx Queries are precalculated using Customizing in SAP BW under Determining Settings for Web Templates:

- Standard Web template for broadcasting
- Standard Web template for query precalculation

Under Administrate Precalculation Server you determine which BEx Analyzer precalculation servers are available to the BW system. You can find more information on setting up the precalculation server in installation guides on the server components CD.

The J2EE Engine RFC service and the RFC connection have to be set up for the BEx Portfolios to function correctly. The BW system and the Repository Manager for the system that contains the objects for the online links also have to be maintained in the Portal.

To maintain the name of the Repository Manager for online links to BEx Web templates, workbooks and queries, use the following link to table RSPOR_T_PORTAL: Maintain Portal Server.

In this table you can also make settings for the connected Portal. These will be used when you select a folder in the broadcaster.

See also

Precalculation of Workbooks

CM Repository Manager for BW Documents and for BW Metadata

2.3.4.4 Converting Chart Settings (new)

Use

You need to convert the chart settings if you have used charts in BEx Web applications in BW 2.x or SAP BW 3.0/3.1/3.2. Conversion takes place using a conversion program that can be started after the technical upgrade to SAP BW 3.5 and the installation of a SAP IGS with the Chart Migrator. The following chart setttings are supported:

- Chart settings of chart Web items that have been saved for reuse in an SAP Library
- Local chart settings in BEx Web applications
- Chart settings that have been saved as bookmarks.

Effects on System Administration

Install the SAP Internet Graphics Service 6.40 for the Win32 platform that contains the Chart Migrator. You can download this version from the SAP Service Marketplace under service.sap.com/patches.

Installation has to be in place before the program for converting charts is started.

See also

You can find more information in the *Upgrade Guide - SAP Business Information Warehouse* in the section *SAP BW: Post-Upgrade Activities* under *Converting Chart Settings*. This can be found in the SAP Service Marketplace at service.sap.com/instguides -> service.sap.com/instguides -> SAP NetWeaver -> Release ´04 -> Upgrade.

2.3.4.5 Web Item for Navigation between Query Views (new)

Use

As of Release SAP BW 3.5, a new Web item "Query view - selection" is available in the Web application designer.

The Web item enables simple navigation between query views and queries. A pre-defined Web item (Web item from a SAP Library) can be assigned to each query view or query. Each assignment appears as an entry in a dropdown box. The query view defines the navigation status, that is the data configuration, and the Web item defines visualization type for the type for the data, that is the display in a table or as a graphic.

With the "Query view - selection" Web item you can switch from one navigation status of a query (for example, dispay in a table) to another navigation status (for example, display in a bar chart) in one step.

The switch is enabled by the selection of an entry in the dropdown box. Every entry in the dropdown box represents a combination of a query view (or query) and a Web item.

One or more "Query view - selection" Web items can be used in one Web template. Several entries for the dropdown box in the BEx Web Application Designer are defined in a Web template with this Web item. You can also enter the query views, Web items for data visualization and the texts for dropdown box entries in the properties of the Web item.

The end user of a Web template into which the "Query view - selection" Web item was inserted can define new entries for the dropdown box and can delete them again. To do this, the end user must have available functions that suitably parameterize and dispatch a URL.

Effects on System Administration

WebTemplates are delivered with the BI Content 3.5.2 Add-On that contain the "Query view - selection" Web item with pre-defined entries in a dropdown box. If you want to add or remove these entries, the Web template has to be changed. These changes are then visible for all end users of the Web template.

2.3.4.6 New Features in the BEx Query Designer (new)

Use

As of SAP BW 3.5 the following functions are available in the BEx Query Designer:

Displaying characteristics and attributes

In the *Display as* area of the properties dialog for characteristics and attributes you are able to set the text type (short text, medium text, or long text) independently of the display type (text, text and key, key and text). In an executed query, the corresponding characteristics and attributes are displayed in the text type selected.

You can find more information under Characteristic Display.

Publishing The query designer toolbar has been enhanced with the new entry Publish. The following options are available:

- Publish to roles: The save dialog box appears and you can select the role to which you want to publish the query. The system saves a link to the current query in the role selected.
- Publish to Enterprise Portal 6.0: The save dialog box appears and you can publish the query to the Enterprise Portal. You have several options here. You can, for example, publish the query to your portfolio or place it in a Collaboration Room.
- BEx Broadcaster: The BEx Broadcaster is started with the current query. You can precalculate and distribute the query.

For more information, see BEx Information Broadcasting.

Display document links

In the query properties you can now choose those document classes for which you want to switch on document links. The following options are available:

- Document links for InfoProvider data
- Document links for metadata
- Document links for master data

For more information, see Displaying document links.

Suppression of zero rows and zero columns

In the query properties you can now make the following settings for suppressing zero rows and zero columns:

- None
- Active
- Active (all values = 0)

Here you are also able to define whether the suppression should be active for both axes or whether it should only have an effect on the rows or only on the columns.

In the structure properties you are also able to set whether the suppression of zero rows and/or

zero columns is to be applied in the structure.

For more information, see Suppressing zero rows/ columns.

Effects on Existing Data

Note that these new functions can be used with the query designer as of SAP BW 3.5 Frontend Patch 0. Queries that use one or more of these new settings can no longer be used with an old release or frontend patch status.

2.3.4.7 Interface Enhancements (changed)

Use

The following enhancements and changes have been made in the area of BEx Web Applications for Release BW 3.5:

Interaction

- *Context menu*
  You trigger the context menu in Web applications using the right mouse button. This function was performed with the left mouse button in BW 3.0. This change unifies usage with the Enterprise Portal.
- *New settings for Web item "generic navigation block"*
  - Group axes
    SHOW_AXES_GROUPING
    Free characteristics, the characteristics in the rows and the columns, are shown grouped together.
  - Characteristics in rows collapsed
    ROWS_CLOSED
    Characteristics in rows are collapsed in the grouped display.
  - Characteristics in columns collapsed
    COLUMNS_CLOSED
    Characteristics in columns are collapsed in the grouped display.
  - Free characteristics collapsed
    FREE_CHARACTERISTICS_CLOSED
    Free characteristics are collapsed in the grouped display.
  - Display empty filter
    SHOW_EMPTY_SLICER
    Empty filter are shown in the grouped display.
  - Margin between characteristics
    SHOW_MARGIN
    Characteristics are separated from each other in non-grouped display.
  - Show characteristics in rows
    SHOW_ROWS
    Characteristics in rows are displayed.

- Show characteristics in columns
  SHOW_COLUMNS
  Characteristics in columns are displayed.
- Show free characteristics
  SHOW_FREE_CHARACTERISTICS
  Free characteristics are displayed.
- Show navigation icons
  SHOW_NAVIGATION_ICONS
  Navigation icons are displayed.
- Show filter icons
  SHOW_FILTER_ICONS
  Filter icons are displayed.

- *Precalculating Web templates with the Reporting Agent*
  If a control query is used for filtering, a navigation block displays the values of the control query in a dropdown box in the precalculated Web Template.
- *New setting for Web Item "Alert Monitor"*
  Do not display the number of alerts
  SUPPRESS_NUMBERS
  The number of alerts is not displayed.

Visual Design

The visual appearance has been changed for Release BW 3.5. Five new stylesheets are available, under two high-contrast specifications. These are stored in the MIME Repository, as in Release 3.0, and cannot be changed. For each of these new stylesheets there is a counterpart in SAP Enterprise Portal 6.0. This means that BEx Web Applications are embedded in Enterprise Portal 6.0 als BW iViews and the same stylesheets are available in the Enterprise Portal as in BW.

Stylesheets that were available with Release BW 3.0 have not been enhanced. However, they are still available in the MIME Repository. Information on the differences between the statuses of the two releases is available in the online documentation on the Business Explorer.

The icons used in Web Applications have been modified for the new design.

2.3.4.8 New Web Item Chart in BEx Web Application Designer (changed)

Use

As of Release BW 3.5 a **changed Web item*Chart*** is available.
The following chart types have been **added**:

- Profile Area
- Stacked Profile Area

- Split Pie
- Polar
- Time Scatter
- Stacked Radar

The following chart types are **no longer available**:

- Surface
- Stacked Cylinder

Changes exist for the following chart types:

Steps no longer exist as an individual chart type but can be set with a line type chart or scatter with the appropriate Customizing.

- Cylinder, cones and pyramids no longer exist as independent chart types but can be set as a block style with, for example, the bars or columns chart types.
- Quadrants no longer exist as an independent chart type but can be created with the portfolio chart type.

The server component for the new Internet Graphic Server (IGS) is available for both Windows and for supported UNIX platforms.

Similarly, as of Release BW 3.5, a **new tool for editing charts** is available; the Chart Designer (including wizard).

Effects on Existing Data

A migration of existing chart-customizing entries during the upgrade process.

Restrictions to the upgrade process are described in a separate document.

Effects on System Administration

The use of the new Web item *Chart* requires setting up corresponding IGS.

It is not possible to use both the old and new charts at once.

The use of Web item *Chart* requires a sapchart.ocx > = 6200.5.39.0 and an upgrade to an appropriate 620 GUI or 640 GUI (presumably at least Frontend Compilation CD 6 of the 620 GUI).

See also

in Customizing the SAP BW under IGS settings

in installation and upgrade guidelines for SAP BW, found on the SAP Service Marketplace at Internet address service.sap.com/instguides*Installation & Upgrade Guides*.

2.3.4.9 New Web items (new)

Use

As of Release BW 3.5, the following new Web items are available:

- Broadcaster (CL_RSRD_WWW_ITEM_BROADCASTER)
- Web template (CL_RSR_WWW_ITEM_TEMPLATE)
- Data Provider - Information (CL_RSR_WWW_ITEM_XML:_QUERYVIEW)
- Object catalog of Web application (CL_RSR_WWW_ITEM_XML_CATALOG)
- Query View - selection (CL_RSR_WWW_ITEM_VIEW)
- Key figure overview (CL_RSR_WWW_ITEM_KFY_WATCHLIST)

BEx Broadcaster

The Web item *Broadcaster* serves to precalculate and distribute queries, Web templates and workbooks. It should normally be presented like the the ad-hoc query designer, not as a part of a Web application but as an independent page. For more information, see BEx Information Broadcasting.

Web template

The Web item *Web template* enables insertion of a Web template object which inserts the contents of another Web template in this position during runtime.

Objects for this Web template are inserted into the object tree of the main template.

Data provider - information

The Web item *Data provider - information* is used for the XML generation of results data for the Data Providers and XML generation of the navigation status.

Object catalog of the Web application

The Web item *Object catalog of the Web application* is used to generate the following as XML:

- Information on the Web template - properties
- Specifications on the Data Providers in use
- Information on the Web Item being used in the Web template

Query view - selection, key figure overview

The Web item *Query view - selection* is described in the following release information:Web item for navigating between query views

The Web item *Key figure - Overview* is described in the following release informatiion: Key figure overview

Effects on System Administration

The Web item *Web template* enables the storage of fragments of a BEx Web application (such as header or footer areas, for example) in its own Web template. This Web template can then

be stored and changed centrally.

The Web Application Designer offers only limited support in editing Web template fragments.

Therefore the implementation of this concept should be carefully limited to the selected application scenarios and typical cases (model- based Web templates, static HTML fragments).

2.3.4.10 New Features in the BEx Web Application Designer 3.5 (new)

Use

As of Release BW 3.5, the following new features are available in the BEx Web Application Designer:

- The following **new** menu entries exist in the "Publish" menu:
  - The "Publish to Portal" menu entry allows storage in a portal KM folder, if an Enterprise Portal is set up and administrated. This means you can publish the Web application in your portfolio, for example, or place it in a Collaboration Room.
  - The "BEx Broadcaster.." menu entry starts the BEx Broadcaster. This precalculates and distributes queries and Web applications. You can find more information under BEx Information Broadcasting.
  - In the "Publish" menu, the "as iView" menu entry **no longer exists**.
- Text mode

The text mode of the Web Application Designer enables text editing of Web templates that cannot be opened in layout mode and which, up to now, could only be edited by exporting them into an external HTML editor and then importing them back into the Web Application Designer. YOu can find more information on text mode in the SAP Library under Business Information Warehouse -> Business Explorer -> Enhanced Editing in Text Mode.

Effects on System Administration

The menu entry "Publish to Portal" is only displayed if an Enterprise Portal has been set up and administrated.

The menu entry "BEx Broadcaster" is only displayed if the user has the necessary authorization.

2.3.4.11 Enhancements in the Web API (new)

Use

As of Release BW 3.5 the following enhancements exist for the Web API:

- EXPORT - data provider command (enhancement)
  As well as XLS and CSV format, XML format is now also offered. Export in XML delivers a description of the current navigation status and the data for the selected data provider as XML. The XML schema is equivalent to the data description in the table interface of the Web API.
  The generated XML can be forwarded automatically to another service as a form field if you specified REDIRECT_URL for its address when the export command was called. This enhancement is particularly useful for integration scenarios in which the post-processing of query data is to take place in another service.
- RESET_DATA_PROVIDER - data provider command (enhancement)
  You transfer filter and variable values from the old data provider to the new by specifying the parameter RRI= X. This uses the mechanism of the Report-Report Interface without you having to first maintain a jump target for the Report-Report Interface.

2.3.4.12 Suppressing Zero Rows/ Zero Columns (enhanced)

Use

The enhanced functionality for suppressing zero rows and/or zero columns applies to the following areas:

- Cross-classified tables:
  If there are characteristics in the rows and columns, the former functionality used to check whether the results area of the respective axes contain zeros only. If this is the case, the entry is suppressed. However, there are scenarios in which suppression is not desirable, despite there only being zeros in the axes: For example, if there is drilldown by periods. In one period a value was posted and in another this was cancelled so that the overall result for all periods is zero.
  As of SAP BW 3.5 three possible settings are available in the query properties for zero suppression:
  - *none*: Rows and columns with zeros are displayed.
  - *active*: The row in the example cited above is suppressed, along with rows that only contain zeros.
  - *active (all values = 0)* (new): The row in the example cited above is not suppressed but all others that only contain zeros are suppressed.

  You can choose whether suppression is to apply to columns and rows, or just to rows or just to columns.
- Structure components:
  In the structure properties you can decide whether suppression of zero rows and columns is also to apply to the structure. In this way you can determine whether the values of all structure components have to be zero so that a characteristic combination is suppressed (function as was previously), or whether individual structural components like characteristic values are to be treated and suppressed if only zeros are available for these structural

components.

Effects on Existing Data

Existing queries continue to function as before. These are simply new implementation options that are available to you as of SAP BW 3.5.

2.3.4.13 Precalculation of Workbooks (new)

Use

As of SAP BW 3.5 you are able to precalculate and distribute workbooks. You can precalculate workbooks in the BEx Broadcaster. Open this from the BEx toolbar in the BEx Analyzer. Distribution takes place by e-mail or using the Enterprise Portal.

Effects on System Administration

To precalculate workbooks it is necessary that you have RFC server software installed on at least one PC. You can find this software on the server components CD.

Effects on Customizing

The following activities are necessary in Customizing:

Administrate precalculation server

See also

BEx Information Broadcasting

2.3.5 BW-BEX-OT OLAP Technology

2.3.5.1 Suppressing Zero Rows/ Zero Columns (enhanced)

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- Cross-classified tables:
  If there are characteristics in the rows and columns, the former functionality used to check whether the results area of the respective axes contain zeros only. If this is the case, the entry is suppressed. However, there are scenarios in which suppression is not desirable, despite there only being zeros in the axes: For example, if there is drilldown by periods. In one period a value was posted and in another this was cancelled so that the overall result for all periods is zero.
  As of SAP BW 3.5 three possible settings are available in the query properties for zero suppression:
  - *none*: Rows and columns with zeros are displayed.

- *active*: The row in the example cited above is suppressed, along with rows that only contain zeros.
- *active (all values = 0)* (new): The row in the example cited above is not suppressed but all others that only contain zeros are suppressed.

You can choose whether suppression is to apply to columns and rows, or just to rows or just to columns.

- Structure components:
  In the structure properties you can decide whether suppression of zero rows and columns is also to apply to the structure. In this way you can determine whether the values of all structure components have to be zero so that a characteristic combination is suppressed (function as was previously), or whether individual structural components like characteristic values are to be treated and suppressed if only zeros are available for these structural components.

Effects on Existing Data

Existing queries continue to function as before. These are simply new implementation options that are available to you as of SAP BW 3.5.

2.4 BW-WHM Warehouse Management

2.4.1 Customer and Partner Content (enhanced)

Use

SAP refers to Content that is delivered by SAP Business Information Warehouse customers or consulting partners to their business areas or customers as Customer or Partner Content. Customer Content and Partner Content functionality enhances and supplements the opportunities for using the Business Content delivered by SAP. The concept and technical implementation of Customer and Partner Content are largely similar.

Customer Content

Customer Content spans the following areas:

- Development of a customer-defined system landscape
- Deliery of SAP Business Content by SAP
- Development of Business Content defined by SAP BW customers
- Changing SAP Business Content (however this involves a manual effort when new SAP Business Content is delivered as versions have to be merged.)
- Delivery of Customer Content by SAP BW customers to their customers.

Customer Content in OLTP System

SAP BW customers are also able to develop their own Content in SAP source systems (OLTP systems) and, for example, deliver this to their business areas.

Restrictions: You are not able to change Business Content delivered by SAP.

Partner Content

Partner Content spans the following areas:

- Development of a system landscape (see system landscape)
- Development of Content defined by the partner
- Delivery of SAP Business Content and Partner Content by partners to their customers.

Restrictions

SAP Business Content: You are able to change Business Content delivered by SAP but you cannot change it.

Name space for development of BW objects: You have to use your own name space.

Effects on Data Transfer

Customer Content has special features regarding the transport and the delivery of source system-dependent objects, roles, InfoAreas, application components, and InfoPackage Groups that must be taken into account.

Effects on System Administration

To deliver SAP Business Content and develop your own Content to be delivered as Customer Content, you at least need a BW system for developing Content. If you want to develop extractors and DataSources, you also need an OLTP system for Content development. SAP recommends that you connect a Content test system for each Content development system.

By using special system settings you can use a system as a Content development system and implement the performance of this system according to user-specific requirements.

See also

You will find more information in the online documentation on Customer and Partner Content.

2.4.2 Query Processing of Transactional InfoCubes with Oracle (changed)

Use

In SAP BW 3.5 query processing of transactional InfoCubes for the DB platform has been changed. Previously, the following commands were executed before accessing the F fact table of a transactional InfoCube:

- `ALTER SESSION SET "_B_TREE_BITMAP_PLANS" = TRUE`
- `ALTER SESSION SET OPTIMIZER_MAX_PERMUTATIONS = 2000`

The parameters were reset to FALSE or to the original value after access. As the settings cited above correspond to the default settings for Oracle 9i, it is not possible to set this parameter

explicitly in SAP BW 3.5. If you are operating BW 3.5 with Oracle 8i, set the parameters above explicitly in ORA< SID> .INI file (see below).

Effects on System Administration

If you are operating SAP BW 3.5 with Oracle 8i, set the parameters above explicitly in ORA< SID> .INI file. No modifications are necessary for Oracle 9i or higher.

2.4.3 Currency translation type: Time base and target currency from variable (new).

Use

From Release BW 3.5, when creating a currency translation type, you can also select time base from from variable and target currency from variable. You can select a variable using input help that was created for 0DATE or 0CURRENCY.

2.4.4 BW-WHM-AWB Administrator Workbench

2.4.4.1 Enhancements in the Open Hub Service (new)

Use

Integration of third-party tools:

As of Release BW 3.5 you are able to extract data in non-SAP systems with the Open Hub Service. Various APIs allow you to extract data from BW data targets to a database table in the BW system. From there you can load it into non-SAP systems using a third-party tool (Ascential, for example). By using a process chain, you can start this extraction process either in the BW system itself or from third-party tools. The system notifies the third-party tool when the extraction process has been completed. It is possible to define parameters for the non-SAP system and to oversee the process in the BW Monitor.

Logical file name:

As of Release BW 3.5 you have two option for defining the file name with the Open Hub Service if data is to be written to an application server for the BW system. Before Release BW 3.5, the only name available was generated from the name of the InfoSpoke and could not be changed. Now you can also specify a logical file name that you have defined in Customizing. A logical file name can be composed of defined path specifications or variables such as calendar day and time.

2.4.4.2 Follow-up activity report-report interface in the Reporting Agent (deleted)

Use

As of Release SAP BW 3.5 the report-report interface follow-up activity is no longer available in the Reporting Agent.

To map the business scenarios that this function used to enable, SAP recommends that as of Release SAP BW 3.5 you use the Business Add-In for the Reporting Agent (RSRA_ALERT).

See also

You will find more information on Business Add-In in the SAP Library at *Business Information Warehouse -> BI Platform -> Reporting Agent -> Define exception settings -> Edit follow-up activity: Export.*

2.4.5 BW-WHM-DBA Data Basis

2.4.5.1 SID determination when deact. "excl. attrib." characteristics (changed

Use

ODS Objects can use characteristics that are designated as *exclusive attributes*. If this option is deactivated, SID values after Release 3 and master data for all characteristic values that are saved in ODS are determined.

Note: Due to the functionality, deactivation can take much more time in comparison to previous releases.

2.4.5.2 Deleting master data and keeping the entries in the SID table

Use

After Release BW 3.5, while deleting master data for a characteristic, the user can decide whether to keep entries in the SID table or to delete them. Deleting from the SID table corresponds to the functions in older BW Release versions.

Effects on Existing Data

If entries in the SID table are not deleted, where-used flags CHCKFL, DATAFL and INCFL are initialized.

2.4.5.3 Master data where-used list in ODS objects.

Use

When deleting master data the system checks which values are used in an ODS object. These values cannot be deleted.

Effects on Existing Data

The where-used list is run for all data in ODS objects.

2.4.6 BW-WHM-DST Data Staging

2.4.6.1 Connection of Non-BW Clients Within the Same BW System

Use

For applications that run on a BW system (for example SAP APO) it was previously only possible to access client-specific data by data extraction (InfoPackage) within the system, by starting the extraction process in every client that contained data. This had to have been loaded using the Myself source system. SAP Note 522569 also had to be implemented to do this.

Now a seperate source system can be defined within the BW system for each client. This then enables load access to other clients from the BW standard clients.

This means that it is now only possible to work with BW functionality (in particular starting the Administrator Workbench), in BW standard client. This applies even if SAPNote 522569 is implemeted.

Effects on System Administration

In the BW destination (the one that has the same name as the logical name of the BW standard clients), you have to enter the BW standard clients and a valid user (the BW background user) with the profile S_BI-WHM_RFC. Compare this with SAP Note 538052.

See also

SAP Notes 384057, 522569, 609167 und 538052.

2.4.6.2 Transferring Data with UD Connect

Use

UD Connect (Universal Data Connect) facilitates reporting and analysis for both SAP and non-SAP data using the SAP Web AS J2EE connectivity. You can access practically all relational and multidimensioanl data sources using UD Connect. UD Connect transfers data as flat data. Multidimensional data is converted to a flat format when you use UD Connect.

UD Connect can use the JCA-enabled (J2EE Connector Architecture) BI Java Connectors as resource adapters for the connection to data sources.

These are available for various drivers, protocols and providers:

- BI JDBC Connector
- BI ODBO Connector
- BI SAP Query Connector
- BI XMLA Connector

Effects on System Administration

The prerequisite for using UD Connect is that you have installed the SAP WAS J2EE Engine with the BI Java components.

The following configurations are necessary for using UD Connect:

- Configuration of BI Java Connects to the J2EE Engine (connection between the data sources and the J2EE Engine)
- Set up of RFC destination for SAP BW to J2EE Engine
- Set up of RFC destination for J2EE Engine in SAP BW

2.4.6.3 Transferring Data Using SAP XI

Use

With the SAP XI Infrastructure (SAP XI) you can realize cross-system business processes. Within the overall SAP NetWeaver architecture, SAP XI has the task of process integration.

The integration of SAP XI and SAP BW allows you to send data from various sources to the SAP BW delta queue using SAP XI. A generated DataSource with an RFC-enabled function module is used to transfer data. You create an inbound message interface by importing the function module into SAP XI. You generate a proxy for this interface in SAP BW. You generate an outbound message interface for the data source. Then you perform the configuration required in SAP XI in order to set the cross-system defined process for a concrete system landscape. You can then send data to the SAP XI Integration Server. This transfers this data to the SAP BW delta queue at runtime using proxy communication. You can then process the data further in SAP BW with the staging methods.

The integration of SAP XI and SAP BW has the following advantages:

- Central maintenance of the message flow between logical systems in your system landscape.
- The possibility to transform the content of messages between the sender and the receiver. You can modify the values and structures of your mesages for the receiver using mapping. In this way you are able to transfer files of different types into an SAP BW system using interface mapping. It is, however, always necesary to transform data into a format that corresponds to the interface of the function module generated in SAP BW and used to transfer data. The function module contains a table parameter with a flat structure. This means that data has to be transformed so that it arrives in SAP BW in a flat structure.

- Using proxy communication with SAP BW Proxies are interfaces generated in application systems that can be executed for communicating with the SAP XI Integration Server. For the communication with SAP BW, SAP recommends that you use proxies as they guarantee full quality of service (exactly once in order). This also guarantees that the data is delivered once only, and in the correct order. The SAP XI Integration Server retains the serialization as it has been determined by the sender.

2.5 BW-EI Expanded Infrastructure

2.5.1 Analysis Process Designer (changed)

Use

With Release BW 3.5 the analysis process designer is no longer part of Business Content, it is now part of BW technology. In addition, the functionality has been developed considerably - the data mining function of the BW integrated in.

Using the analysis process designer information in the BW System can be combined to create new information. This new information can be attained with analytical processes, such as data-mining methods or even simpler customer-specific calculations.

The following overview introduces the functions (more detailed information can be found in the online documentation):

- Interactive interface for visual modeling of an analysis process thatcan be comprised of several single steps
- Data can be read from InfoProviders and queries. Various sources can be joined.
- The result of an analysis process is usally saved in a transactional ODS object or in master data attributes.
- Integration of Data-Mining functions of the BW (more detailed information on this subject can be found in the online documentation):
  - Creating and maintaining data-mining models with the analysis process designer
  - Training of data-mining models with various kinds ofg BW data (query results, InfoProvider)
  - Prediction and visualization of data-mining models
- Integration in BW Metadata: Versioning (active, inactive version, content version and delivery), transport connection of analysis processes, where-used list
- An analysis process can also be executed directly, in the background
- Basic statistical data can be displayed for each node.
- Performance optimization:

- Interim results can be saved for each node for use by subsequent nodes.
- Optimization of the structures

Effects on System Administration

Integration into the BW metadata repository enables the usual transport- and activation logic.

2.5.2 BW-EI-DM Data Mining

2.5.2.1 Integration of Data Mining with APD and IS

Use

From this release onwards, *Data Mining* is integrated with *Analysis Process Designer* (APD)and *Intelligent Services* (IS). This integration would enable the data mining modeler to control the input data provided to the model. The APD, with its easy-to-use graphical interface is a modeling tool that helps you to model the complete data flow from source to target.

In the data mining workbench, you can perform the following activities:

- Create, change, activate, delete or reset a model
- View model results
- Perform *What If* analysis on a model that has already been trained
- Export a model as PMML file
- Maintain DataSource for association rules

In the APD, you can perform the following activities for data mining which were, in the previous releases, executed in the Data Mining Workbench:

- Train and evaluate a model
- Execute prediction and *What If* prediction
- View mining results
- Load mining results in SAP BW

For detailed information on data mining, see *Business Information Warehouse -> BI Platform -> Data Mining* in the SAP Library.

Effects on System Administration

To access the data mining methods, you need to be assigned to the role *Customer Behavior Analysis* (SAP_BW_CUSTOMER_BEHAVIOR_ANALYSIS)

See also

Release information for the *Analysis Process Designer*

Business Information Warehouse -> BI Platform -> Analysis Process Designer in the SAP Library

2.6 BW-PLA Planning

2.6.1 BW-PLA-BPS Business Planning and Simulation

2.6.1.1 Business Planning and Simulation (BW-BPS) in BW Technology (new)

Use

Fundamental elements of the former SEM-BPS component are being delivered with BW technology in BW Release 3.5. These elements allow you to create a user-defined planning application. The corresponding software components were previously delivered in an SEM-AddOn. Planning essentially incorporates the planning workbench, the Web Interface Builder, the Status and Tracking System, and planning folders.

You can find additional information in the Business Information Warehouse online documentation at *Business Intelligence Platform -> Business Planning and Simulation (BW-BPS)*.

As standard practice, Content is delivered in the corresponding BW Content Releases. Retractors in R/3 also belong to this Content. Financials Content will continue to be delivered with the SEM-AddOn.

The following functions have been newly implemented with BW 3.5:

1. A where-used list for characteristic relationships. You can execute this where-used list either with the definition of characteristic relationships or in the planning definition.
2. Forecasting functionality. The *forecast* type planning function has been completely revised and enhanced. You can find additional information by creating a parameter group in the F1 help for the fields.
3. You can specify an exit class in the Web Interface Builder, with which you are able to implement customer-specific enhancements in Web applications. You can find additional information in the F1 help for the property *Generate Class*.
4. New functions in Status and Tracking System (STS):
   a) Using status "Any" when maintaining the status change with planning sequences (new)
   When Customizing planning sessions for a subplan, you can choose the over-arching status "Any" in the input area *Execute planning sequence at status change* for the *From status* and the *To status*. Example: If "New" is selected as the *From status* and "Any" is selected as the *To status*, when changing status from "New" to any other status, the planning sequence specified is executed.
   b) Function for copying planning sessions (new)
   With this function, Customizing settings for a planning session can be copied from this planning session to another planning session. The following Customizing settings

can be selected for copying: Attributes for planning session, selection of header characteristics for planning session, planning layout and control report URLs/ links, planning sequences/ events at status change. It is possible to copy the selected Customizing from one planning session to another within a subplan or to copy from a planning session in one subplan to a planning session in a different subplan. The system checks to what extent the hierarchies of the subplans involved correspond to one another. This means that in the target planning session, planning layout and control report URLs/ links, and planning sequences/ events at status change are only replaced if the hierarchy nodes are identical.

c) Function for deleting subplans (new) With this function, the following data for the specified subplan is completely deleted from the Status and Tracking System: Hierarchies imported into the STS, and any Customizing for the planning session affected.

d) Function for deleting Customizing for a planning session of a subplan (new)
With this function you can choose which Customizing of the specified planning session for the subplan selected is to be deleted: Attributes of the plannings session specified, selection of header characteristics in the planning session, planning layout and control report URLs/ links, planning sequences/ events at status change, lock entries on nodes, comments entered for the specified planning session in the monitor, status history. Note that if you delete the status history, the specified planning session has to be reinitialized if you want to continue to use it for the subplan chosen.

e) New text symbols in STS E-Mails with the text referring to the hierarchy node of the receiver and sender (new)
`&nodetext_receiver&` is the text symbol for the hierarchy node text of the receiver of the E-Mail.
`&nodetext_sender&` is the text symbol for the hierarchy node text of the sender of the E-Mail.
The description of the hierarchy node is chosen when the text is chosen. The following convention applies: Long texts have priority over medium texts, medium texts have priority over short texts, short texts are never prioritized over other texts.

f) Integration of the administrative functions copy, delete, transport, and reminder function in the Customizing transaction `bps_tc` menu bar in the STS (menu path *Goto-> Administration*) (new)

5. In planning layouts, totals can now also be created in data columns and in individually defined rows. You make these settings in the second screen in the Layout Builder. These totals are supported in the following front ends: SAPGUI with Excel in Place or ALV and in Web applications created with the Web Interface Builder.

6. Planning folders have been enhanced with the following functions:

   a) In planning folders with input and output areas, the areas can be arranged horizontally or vertically..

   b) The display of variables and global planning sequences can be hidden.

   c) All variables can now be set (analog to the planning workbench) from the planning folders.

   d) If no functions have been defined, the container for the pushbuttons is no longer displayed.