



Partition Wizard User's Guide
SAP BusinessObjects Planning and Consolidation 10.0,
version for the Microsoft platform

PUBLIC

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Icons in Body Text

Icon	Meaning
	Caution
	Example
	Note
	Recommendation
	Syntax

Additional icons are used in SAP Library documentation to help you identify different types of information at a glance. For more information, see *Help on Help → General Information Classes and Information Classes for Business Information Warehouse* on the first page of any version of *SAP Library*.

Typographic Conventions

Type Style	Description
<i>Example text</i>	Words or characters quoted from the screen. These include field names, screen titles, pushbuttons labels, menu names, menu paths, and menu options. Cross-references to other documentation.
Example text	Emphasized words or phrases in body text, graphic titles, and table titles.
EXAMPLE TEXT	Technical names of system objects. These include report names, program names, transaction codes, table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE.
Example text	Output on the screen. This includes file and directory names and their paths, messages, names of variables and options +arguments, source text, and names of installation, upgrade and database tools.
Example text	Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation.
<Example text>	Variable user entry. Angle brackets indicate that you replace these words and characters with appropriate entries to make entries in the system.
EXAMPLE TEXT	Keys on the keyboard, for example, F2 or ENTER.

Document History

Date	Version	Description
June 29, 2012	1.1	Initial version
September 9, 2016	1.2	Changed product name from SAP Business Planning and Consolidation to SAP BusinessObjects Planning and Consolidation.

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Overview of Partition Wizard

Use

SAP BusinessObjects Planning and Consolidation models containing many records may generate performance problems when the system reads data from reports or input schedules. Partitioning into smaller models can solve this performance problem. To support partitioning, BusinessObjects Planning and Consolidation provides the Partition Wizard.

Partition Wizard is a tool that enables you to easily create custom partitions. Custom partitions are also managed inside Microsoft SQL Management Studio. Partition Wizard, however, has a Web-based user interface that you can use without any software installation. Moreover, Partition Wizard shows all information about your dimensions as well as a data count so you can create custom partitions based on current information. Partition Wizard helps you save and load custom partition settings that you have already created in BusinessObjects Planning and Consolidation so you can apply them to other BusinessObjects Planning and Consolidation servers easily.

About Partitions

In SAP BusinessObjects Planning and Consolidation 10.0, version for the Microsoft platform, Microsoft SQL Server Analysis Services is used for the storage of analytic data, which supports partitions in storage management. A *partition* is a group of analytic data that is manageable by users. You can split up an Analysis Services cube into several partitions without impacting your ability to view the data in the cube, as partitions are merely a storage management option.

The following table shows the default partition structure for BusinessObjects Planning and Consolidation:

Name	Description
FACT	Long-term data storage. Unlimited growth.
FAC2	Intermediate data storage. Shrinks by full/incremental optimization.
FACTWB	Write-back partition. Short-term storage. Shrinks by any optimization method.

Custom partitions through Partition Wizard are created based on combinations of selected dimensions and members from the Web-based user interface. The number of custom partitions that are going to be created by Partition Wizard equals the number of cases of selected dimensions and pairs; a pair is a set of members.



Selected dimensions and pairs are stored in a SQL table named `ptwPairs[Model_Name]` of the current environment.

Structure of the `ptwPairs[Model_Name]` Table

Column Name	Description
DIMNAME	The name of the dimension.
PAIR	Index of a pair. Index starts from zero.
MEMBER	The name of the dimension member.

Example

Assume that Category and Time that are assigned to the Finance model are set as partitioned dimensions from Partition Wizard. The Category dimension has two pairs: (P0 = Actual; P1 = Budget, ActBud), and the Time dimension has a pair (P0= 2012.JAN to 2012.DEC). Combinations of the selected dimensions and their pairs (members) are stored in the ptwPairs table.

Stored Information of Dimension Pairs in the ptsPairs Table

DIMNAME	PAIR	MEMBER
Category	P0	Actual
Category	P1	Budget
Category	P1	ActBud
Time	P0	2012.JAN
Time	P0	2012.FEB
Time	P0	...
Time	P0	2012.DEC

Partition Wizard creates partitions based on the stored combinations of dimensions with pairs from the pair table. Since the pair table stores only selected members, however, unselected members are managed as a dummy pair when analyzing all cases of custom partitions at run-time. As a result, each partitioned dimension has one more dummy pair for making combinations. For example:

Category dimension

- P0: Actual
- P1: Budget, ActBud
- Others (managed internally)

Time dimension

- P0: 2012.JAN to 2012.DEC
- Others (managed internally)

Therefore, 6 partitions are created based on the combinations above, as the following table shows:

Partition Name	Combination of dimensions with pairs
Finance_FACT_0	Category = P0 and Time = P0
Finance_FACT_1	Category = P0 and Time = Others
Finance_FACT_2	Category = P1 and Time = P0
Finance_FACT_3	Category = P1 and Time = Others
Finance_FACT_4	Category = Others and Time = P0
Finance_FACT_5	Category = Others and Time = Others



The name of the custom partition is [Model_Name]_FACT_[Index] by default, where [Model_Name] is the name of current model and [Index] is a number that starts from zero.

Using Partition Wizard

Partition Wizard is installed with the BusinessObjects Planning and Consolidation installation, and has a Web-based user interface. You connect to it through a browser such as Internet Explorer using the URL http://BPC_Server:port/PartitionWizard/.



Login and Security

Currently, only SysAdmin and Admin users set during BusinessObjects Planning and Consolidation installation are able to connect to Partition Wizard and see a list of environments. Other users are not granted access; Partition Wizard shows them a warning message and the browser automatically closes.



Environment Selection

To create a custom partition, you must select the specific environment in which to create the partition.



Main Page

On the main page, you view information about the configured partition of an environment and model, including its name, description, last processed date, storage type, source, table name, slice, and query string.

You can change the environment on this page as well as create a new partition. Also, you can create custom partitions for an environment and model using the dimension names, types, and member counts in the dimension list. Use the tabs on the main page to move to each dimension.

The following topics describe the functions you can perform on the main page.

Simulating a Partition

After selecting a dimension member pair for a custom partition, you can see how much data each partition will have. The simulation result displays in a table with the partition name, query structure, and data count, and a chart with a graph and a count of the data.

To give a partition a name, enter the name in the Target Partition Name field. The wizard creates the partition name in the form "Name"_FACT_n (where "n" is an incrementing number). Entering a target partition name is optional. If you do not enter a name, the wizard assigns one in the form "Model_name"_FACT_n.

Creating a Partition

To create a custom partition, choose "Make Partition".

Assigning a name to the partition is the same as when you simulate a partition. To give a partition a name, enter the name in the Target Partition Name field. The wizard creates the partition name in the form "Name"_FACT_n (where "n" is an incrementing number). Entering a target partition name is optional. If you do not enter a name, the wizard assigns one in the form "Model_name"_FACT_n.

The wizard shows each step of the partition creation in the progress bar. When complete, the information on the main page updates to reflect the newly created partition.



If a user attempts to connect to Partition Wizard when another user is creating a partition, the wizard prevents the connection until the partition creation has finished. The wizard displays a warning message to inform the user that it is busy creating a partition.



The status of the Admin client changes to Offline when creating a partition. The status returns to its previous status when finished.

Saving a Partition

You can save the current partition settings as a file for future use or to apply on another BusinessObjects Planning and Consolidation server. This file is saved locally.

To save a partition, choose “Save” after setting the member for the dimension. Select where to save the file and assign it a name. The default file name is:

“Partition”_”Environment_name”_”Model_name”_”YYYYMMDDHHMMSS”.

The wizard saves the file as XML.

Loading a Partition

You can load a saved partition file on another server by running Partition Wizard on that server. You can also create a custom partition with same settings.

Before loading a saved file, the wizard validates the dimension and member. If they are different than those of the server, the wizard displays a message to inform you that the dimension or member is incorrect.



Selecting Dimension Member Pairs for a Partition

You can select dimension members for a custom partition and easily search dimension members by name.

You can set a pair as a group composed of multiple members by choosing “Add” after selecting multiple members, or set it as a single member by choosing “Automatic”.

Choosing “Reset” initializes this setting.

You can remove a pair by choosing “X” in a line. This setting is shown on the main page as a tab.

Limitations

- Only dimension members are available for Partition Wizard. “Property” is not allowed in partition combinations. For example, [YEAR] < 2012 in the TIME dimension.
- Running Partition Wizard is required if a combination in a custom partition needs to be changed because the ability to edit a partition is not available in the wizard yet. All custom partitions are re-created and processed after running Partition Wizard.
- Server Manager does not support creating custom partitions when restoring an environment.

- Running Partition Wizard is recommended when deleting or changing dimension members used in a custom partition combination while processing a dimension on the Admin client.
- Running Partition Wizard is required after removing a dimension that is used in a custom partition combination from a model while modifying an environment on the Admin client.

Best Practices for Custom Partitions

The following are best practices from MS-SQL Analysis Services for working with custom partitions:

- Query less data
- Match common queries
- Base partitions on size



Query Less Data

Using partitioning improves query performance because there is less data for the server to scan for a query. For example, if a year of data is partitioned by month, then a query for July data would have 1/12th of the data to scan. Even with Analysis Services' effective indexing scheme, it is better to have less data to scan per query.



Partitioning raises the concern that queries requiring data from multiple partitions will be slow. To avoid this, follow the next best practice of partitioning based on common queries as described below.

In Partition Wizard, you can simulate partitions before actually creating them. As a result, you can see how many records exist in each partition and therefore you can figure out the best way to organize partitions in your environment.



Match Common Queries

Partition data in a manner that matches common queries, such as by selecting an element of time like day, month, quarter, or year, or a combination of time elements. Avoid partitioning that results in queries having to scan many partitions.

In BusinessObjects Planning and Consolidation, Shared Query Engine, which is the main engine for querying SQL and Analysis Services, writes a log containing queries. You can find this log in the file system on the BusinessObjects Planning and Consolidation server, and from it you can ascertain which queries are being sent to the server and processed. You can also find the most frequently used queries on the server. Partitioning based on this data helps query performance. To do this, you should turn on SQE logging in BusinessObjects Planning and Consolidation Server Manager. For more information on this, see the *BusinessObjects Planning and Consolidation Administrator's Guide*.

The following is a sample Shared Query Engine log containing an MDX query:

LogID	JobName	UserName	Date Written	Message
96295	clsSUAccess::getOlapData	BPCUser	6/8/2012	MDX(0): SELECTNONEMPTYCROSSJOIN...



Base Partitions on Size

Partitions should contain less than 20 million records. Each group should contain less than 2,000 total partitions. Also, do not define partitions that contain less than two million records because having too many partitions can cause an operational slowdown. Lastly, having too few partitions can result in missed chances for streamlining data searches.