

Browse the Book

This sample chapter provides you with the lay of the land in SAP Analysis for Microsoft Office. You'll learn how to manage your data sources and navigate in queries. You'll also explore key panels and views that you'll use in your analysis.

-  **"Navigating in Reports"**
-  **Contents**
-  **Index**
-  **The Author**

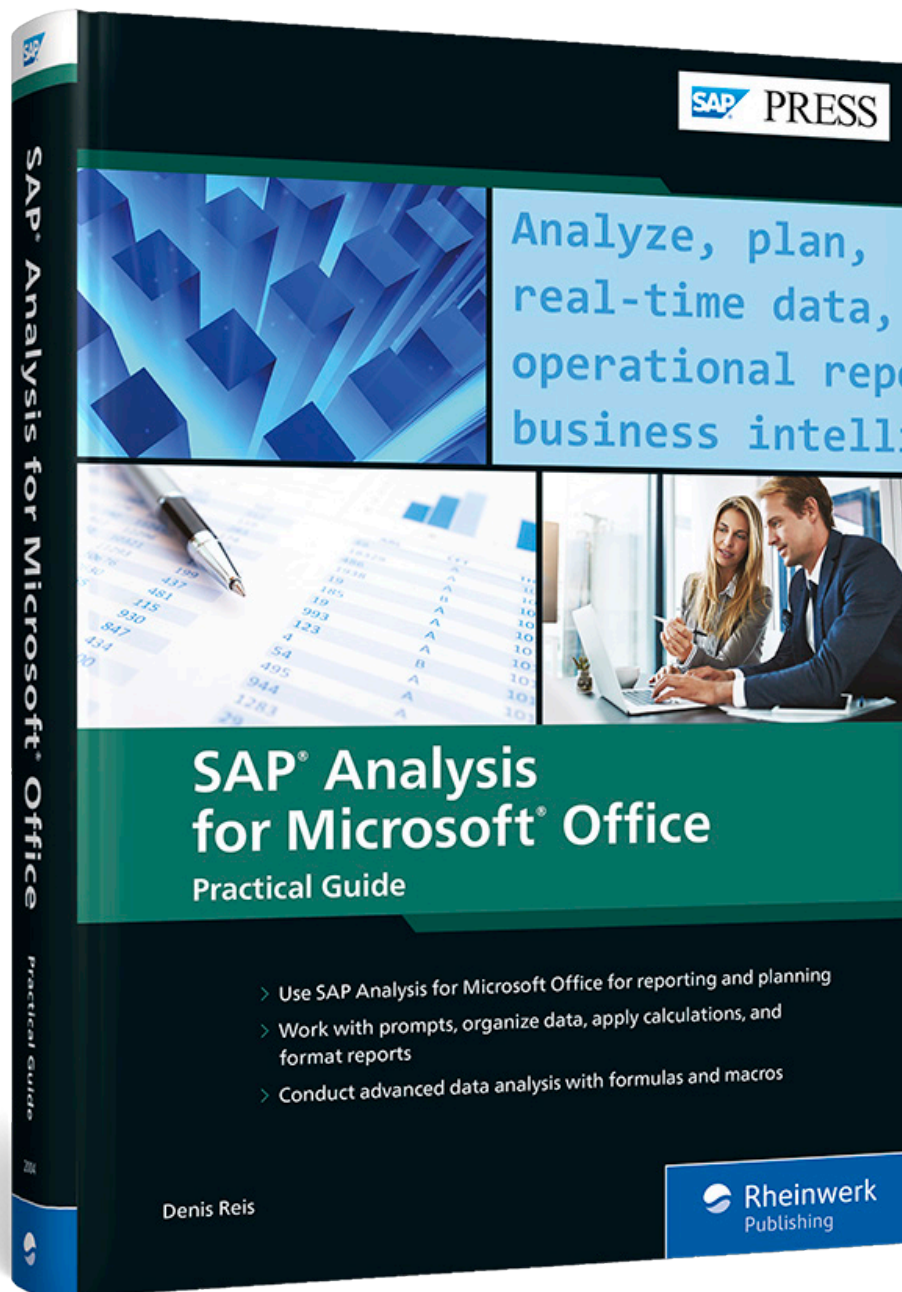
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Chapter 2

Navigating in Reports

In this chapter, you'll learn how to navigate in SAP Analysis for Microsoft Office. First, you'll learn how to update your data sources. Then, you'll learn how to navigate in reports.

Self-service business intelligence is all the buzz right now. Per this buzzword, users should be enabled to obtain the necessary information by themselves. If required, additional data for analysis should be available immediately, without the help of the IT department, which may need several days to adapt existing reports.

However, few people know that you can use SAP Analysis for Microsoft Office as a self-service tool and easily extract insight from data. In this chapter, we'll introduce you to the basics of navigating in SAP Analysis for Microsoft Office. After you've worked through this chapter, as a user, you can analyze data in your own way without having to rely on IT help.

Since you should always work with the most current data, in Section 2.1, you'll learn how to update your data sources. You'll get tips on designing your workbooks so that manual updating is unnecessary, and you'll learn how to reset a data source to reflect the latest changes.

Subsequently, you'll learn how to navigate in reports in Section 2.2, including using the **Design Panel** for analysis purposes and how to add further dimensions to reports to gain detailed insights into your data. Since looking at data at an aggregated level for an overview might be useful, we'll also briefly explain how you can create individual views of your data and set up background filters. Finally, this section will show you how to make navigation as efficient as possible so you don't waste valuable time waiting for the data to be retrieved and instead can focus on the analysis.

Then, in Section 2.2.8, we'll show you how to return to an earlier navigation step if necessary. Section 2.2.9 provides an overview of the information, warning, or error messages you'll encounter in SAP Analysis for Microsoft Office. In Section 2.2.10, you'll learn how to view detailed information about the entire workbook and about individual data sources as well as currently available filters and variables.

2.1 Working with Current Data

To ensure that you’re always working with the most current data in your analysis, you must update your data sources. In the following sections, we’ll look at the various options and discuss how you can design workbooks in a useful way.

The first option available in SAP Analysis for Microsoft Office is the **Refresh All** button, which can be found under the **Analysis** tab in the **Data Source** menu group, as shown in Figure 2.1. This button allows you to update all the data sources in the workbook, including updating all queries with the corresponding data from the server. Your cross-table will be redisplayed.



Figure 2.1 Refresh All Data Sources



Refresh Workbook on Opening Setting

With the **Refresh Workbook On Opening** setting, you can ensure that the contents of your workbook are automatically updated each time it is opened. To enable this setting, select the **Refresh Workbook On Opening** checkbox. You can find the setting in the **Design Panel (Display • Display Design Panel)** in the **Refresh Behavior** area under the **Components** tab. For more information, see Chapter 7, Section 7.4.

Instead of refreshing the entire workbook, you can also refresh only selected data sources. This approach can be useful for performance reasons, for example, if a workbook contains a large number of queries.

To update the data in a query of your choice, select a cell within the relevant crosstab. By selecting a cell, you are selecting the corresponding data source. Then, in the **Refresh All** dropdown list, shown in Figure 2.2 ❶, select the **Refresh Data Source** option ❷.

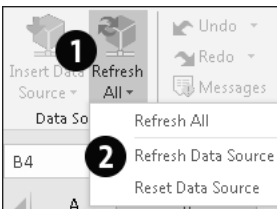


Figure 2.2 Refresh Data Source

The selected data source will be updated with the corresponding data from the server, and the crosstable will be redisplayed. In everyday life, not only does your data change,

so does the structure of queries. New dimensions are often added, or the definition of the key figures might change. If changes have been made to a query, these changes will not initially be reflected in SAP Analysis for Microsoft Office.

To update a query of your choice, select a cell within the relevant crosstab, which selects the relevant data source. Then, select the **Refresh All** dropdown list ❶, as shown in Figure 2.3, and then select the **Reset Data Source** option ❷.

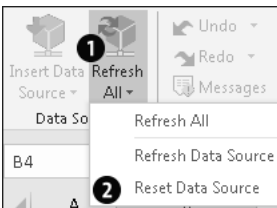


Figure 2.3 Reset Data Source

The latest version of the query will be retrieved and displayed. This function is mainly used when testing new developments. Note that this action resets the navigational state of the query to its initial state as defined in the Query Designer. The navigation steps that you performed as a user, such as the defined drilldown report, will be lost.



Resetting a Data Source on Workbook Open Setting

In the properties of the data source (under the **Components** tab in the **Design Panel**), you can set the **Behavior on Opening Workbook** dropdown list to **Reset**, as shown in Figure 2.4. This option shows the initial state of the query defined in the Query Designer each time you open a workbook.

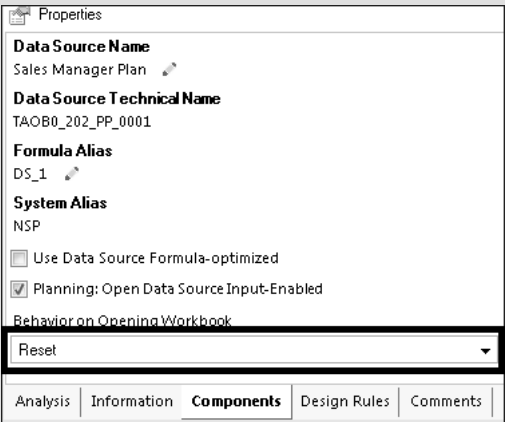


Figure 2.4 Automatically Reset Data Source

However, you cannot subsequently save a navigational state with the workbook because the initial state will be loaded each time. This setting is particularly useful

during the initial phases of a project, when changes occur frequently and queries are adjusted regularly. You can find more information about data source properties in Chapter 7, Section 7.4.

2.2 Navigating in Queries

In the following sections, we'll provide some tips for navigating in SAP Analysis for Microsoft Office and show you how to analyze your data in a targeted manner. For extended analysis and to gain further knowledge from the data, expanding the query drilldown report by additional characteristics, such as company code or calendar year, might be useful. These characteristics are called *free characteristics*. You'll also learn how to aggregate data to get a quick overview. During analysis, you'll probably need to filter certain data to focus on what's really important, which we'll also cover in this section. Finally, you'll learn how to make your data analysis as efficient as possible.

2.2.1 Design Panel

With the **Design Panel** of SAP Analysis for Microsoft Office, you can generate new views of your data and find information about the data sources used. The **Analysis** view (Section 2.2.2) and the **Information** tab (Section 2.2.10) are particularly relevant for data analysis.

You can show and hide the **Design Panel** as an additional element on the user interface by clicking the **Display** dropdown list (under the **Analysis** tab in the **Design Panel** menu group), as shown in Figure 2.5. Alternatively, you can select the **Display Design Panel** option from the list by clicking on the **Expand** button.

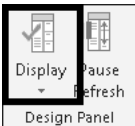


Figure 2.5 Display Design Panel

You can change the size and position of the **Design Panel** in Microsoft Excel. These changes to the **Design Panel** remain in effect even if you close SAP Analysis for Microsoft Office or hide and display the **Design Panel** again.

2.2.2 Analysis View

The **Analysis** view in the **Design Panel** shows the fields available for a data source; these fields are determined by the structure of the data source. You can also see which fields

of the data source are currently used to display the data in the columns and rows of the crosstab. An example is shown in Figure 2.6.

If your workbook contains multiple data sources, you can select an option from the **View for** dropdown list ❶, and the information displayed will automatically adjust. Alternatively, you can simply select the desired data source from any cell in the crosstab.

For larger data sources, which may contain many fields, using the search function ❷ might be useful. In the **Find** field, you can enter an alphanumeric string and start the search by pressing the **Enter** key or clicking the **Search** button. Then, the search results will be highlighted (❸ and ❹). To delete the search query, click the **Delete** button.

The relevant nodes in the **Columns**, **Rows**, and **Background Filter** areas are automatically expanded so that you can review the results. The nodes in the **Data Source** area are not expanded automatically, for performance reasons. However, if you expand the nodes manually, you can see the (highlighted) results. When you expand the nodes manually, the data is loaded; in addition, the nodes are automatically expanded during the next search.

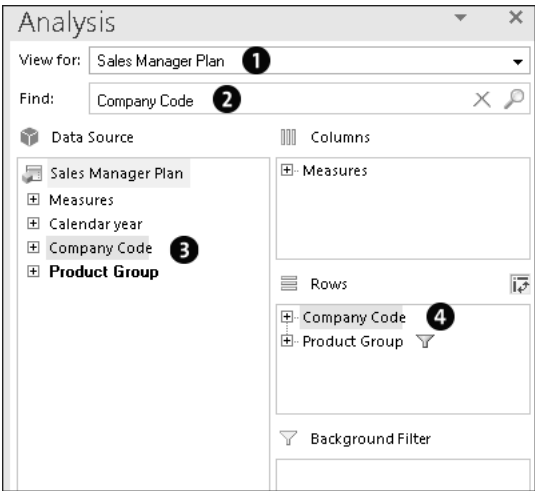


Figure 2.6 Structure of the Analysis View for a Data Source

By default, only the descriptions of the characteristics contained in the relevant data source, such as company code or calendar year, are displayed on the **Analysis** view. However, as shown in Figure 2.7, you can also display technical names of the characteristics via the **Display** dropdown list ❶ by clicking on the **Expand** button. Then, select the **Show Technical Names** option ❷, which will add a checkmark to this option.

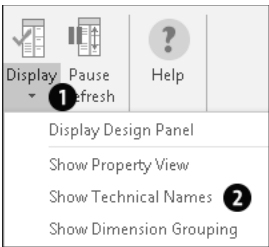


Figure 2.7 Show Technical Names

As shown in Figure 2.8, the technical names of the features will now be displayed enclosed in square brackets, which enables you to clearly differentiate among the available characteristics if you're working with a data source that contains many characteristics with similar descriptions. To hide the technical names again, deselect the **Show Technical Names** option.

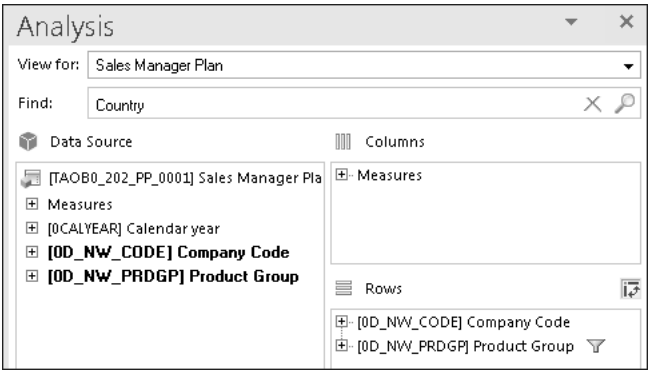


Figure 2.8 Technical Names Shown

In addition to the technical names, you can also display properties under the **Analysis** tab. Expand the **Display** dropdown list, as shown in Figure 2.9, by clicking the arrow again. Then, select the **Show Property View** option.

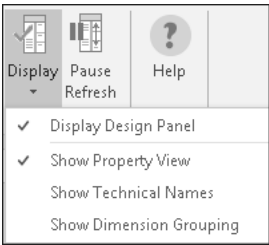


Figure 2.9 Show Property View

In addition to the **Analysis** view we encountered earlier, another area of the data source, called **Properties**, will be displayed when the crosstab opens, as shown in Figure 2.10. In

this area, under the **General** heading ❶, the description and the technical name of the data source will be displayed in the **Description** and **Technical Name** fields. This information can also be obtained from the **Information** tab, which we'll describe in more detail in Section 2.2.10.

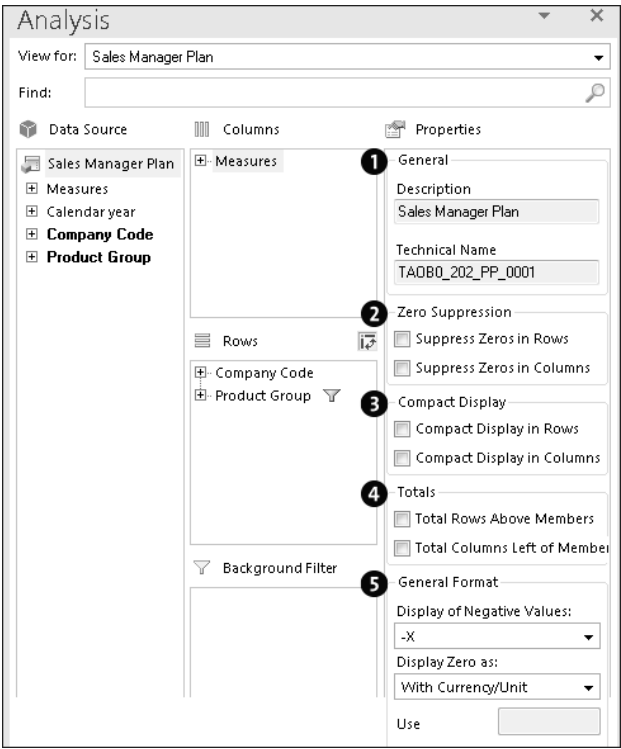


Figure 2.10 Display Properties of the Crosstab

In addition, you can maintain the settings under the **Zero Suppression** heading ❷ (also accessible via the **Filter** dropdown list in the **Data Analysis** menu group; see Chapter 4, Section 4.1) and under the **Compact Display** heading ❸ (also accessible via **Hierarchy** dropdown list in the **Data Analysis** menu group; see Chapter 4, Section 4.3).

Finally, in the **Properties** area under the **Totals** heading ❹, you can adjust the display of the results (also accessible via the **Totals** dropdown list in the **Display** menu group, see Chapter 4, Section 4.4) and configure the general formatting in under the **General Format** heading ❺ (also accessible via the **General Format** option in the **Measures** dropdown list in the **Display** menu group, see Chapter 4, Section 4.4).

Although the **Properties** area offers the most important settings at a glance, it takes up a lot of space and can make data analysis more difficult. To hide the **Properties** area again, deselect the **Show Property View** option.

As shown in Figure 2.11, the **Analysis** view is divided into four areas: **Data Source** ❶, **Columns** ❷, **Rows** ❸, and **Background Filter** ❹.

The **Columns** area ❷ contains all fields currently displayed in the columns, while the **Rows** area ❸ contains all the fields displayed in the rows. The **Background Filter** area ❹ displays all fields that are defined as background filters.

As the name suggests, the **Data Source** area represents the selected data source. The name of the selected data source (e.g., **Sales Manager Plan**) is found under the heading for this area. Thus, you can immediately see whether you’ve selected the desired data source. Under the **Data Source** heading, you’ll see all the fields found in the data source: key figures (measures), characteristics, attributes, and hierarchies.

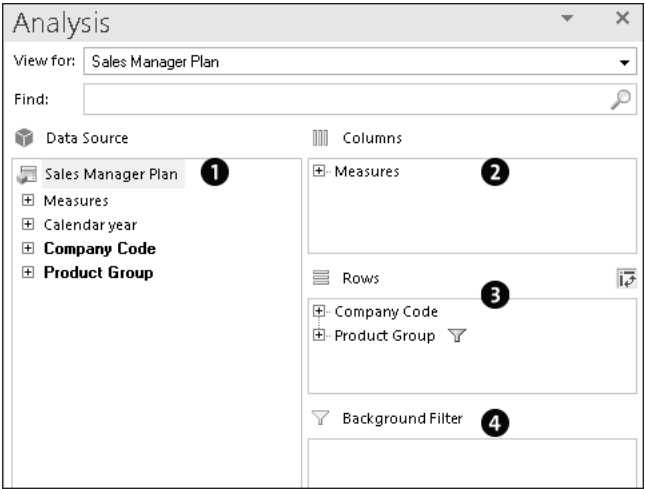


Figure 2.11 Areas of Analysis View

From the **Data Source** area, you can drag and drop a field into another area (**Columns**, **Rows**, or **Background Filter**) to add that field to your crosstab. You can also use the context menu to move fields by right-clicking. Figure 2.12 shows an example. For our example, let’s add the **Company Code** characteristic from the **Data Source** area to the rows of the crosstab.

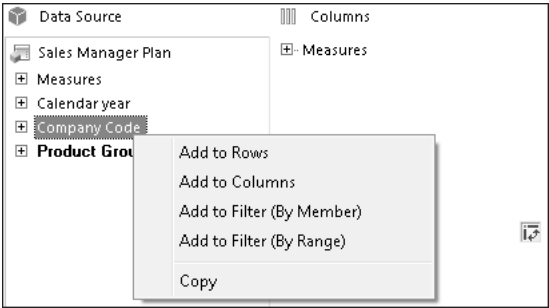


Figure 2.12 Navigation via Context Menu

When a field is moved to another area, its name appears in both the **Data Source** area and the respective crosstab area, such as **Rows** or **Columns**. Dimensions, attributes, and hierarchy fields added to a crosstab area are displayed in bold in the **Data Source** area, as shown in Figure 2.13.

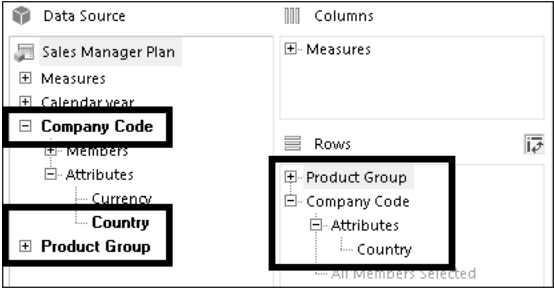


Figure 2.13 Added Fields Displayed in Bold

You can specify that a characteristic should not be displayed. In the Query Designer, for example, you would follow the path **Display • Value Display • Display As**, but in the Eclipse-based BW Modeling Tools, you would follow the path **Sheet Definition • Display Output Format • Display As**. These hidden dimensions will be displayed in gray in the **Data Source** area, as shown in Figure 2.14.

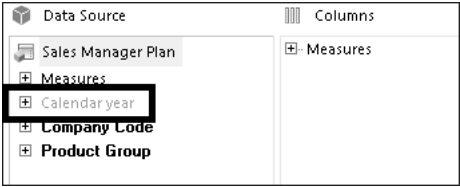


Figure 2.14 Hidden Characteristic

Although you can still add these characteristics to the crosstab as filters, these fields will not be displayed. They will influence the data and, accordingly, the result of the crosstab. If you want a hidden characteristic to be displayed in the crosstab, you must adjust the definition in the Query Designer.

2.2.3 Extending Data Analysis

To refine your data analysis or to take a different view of the data, you can add more rows and columns to the crosstab using drag and drop. For example, let’s say you’re working with a query that displays sales at company code level, as shown in Figure 2.15. Now, you want to see which product groups generate the most sales; you can add this characteristic to the query. The product group characteristic that is relevant in this case is not part of the initial drilldown report displayed when the query is started, but is available as a free characteristic.

	Quantity	Revenue	Price
Company Code	PC	EUR	EUR / PC
Reis Telefon DE	800,000	115.000,00	143,75
Reis Telephones USA	380,000	56.000,00	147,37
Overall Result	1.180,000	171.000,00	144,92

Figure 2.15 Overview of Company Code Sales

To add free characteristics to the drilldown report, click the **Display** dropdown list in the **Design Panel** group ❶ and switch to the **Analysis** view. The screen shown in Figure 2.16 appears, where you can drag a free characteristic from the data source ❷ to the **Rows** or **Columns** area.

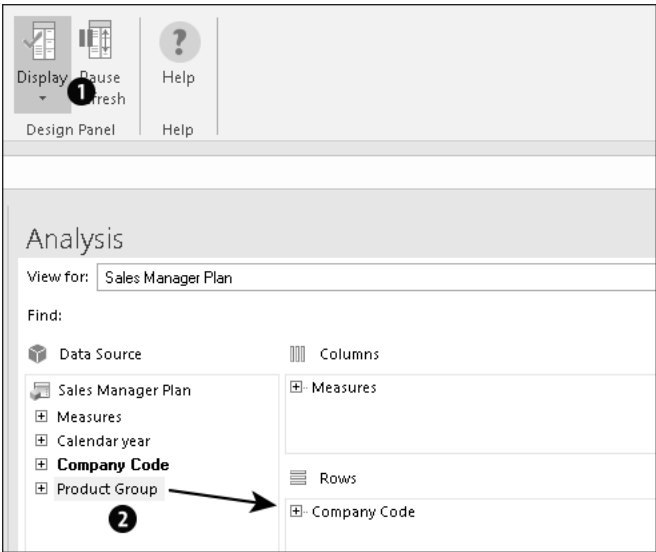


Figure 2.16 Adding a Free Characteristic to a Drilldown Report

Alternatively, you can use the context menu. Simply right-click on the desired characteristic in the **Data Source** area and select an action, as shown in Figure 2.17.

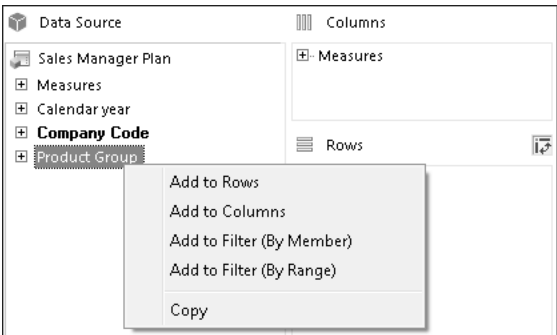


Figure 2.17 Adding a Free Characteristic via the Context Menu

Another option is to simply drag the desired characteristic to the desired position in the query itself. In this case, the field is automatically added to the corresponding area under the **Analysis** tab.

The crosstab is then updated, and the changed drilldown report is displayed. Figure 2.18 shows the result. You can now perform detailed analysis of the product groups for each company code.

		Quantity	Revenue	Price
Company Code	Product Group	PC	EUR	EUR / PC
Reis Telefon DE	Smartphone Mini	200,000	15.000,00	75,00
	Smartphone Plus	100,000	10.000,00	100,00
	Tablet Mini	200,000	40.000,00	200,00
	Tablet Plus	300,000	50.000,00	166,67
	Result	800,000	115.000,00	143,75
Reis Telephones USA	Smartphone Plus	200,000	20.000,00	100,00
	Tablet Mini	180,000	36.000,00	200,00
	Result	380,000	56.000,00	147,37
Overall Result		1.180,000	171.000,00	144,92

Figure 2.18 Sales per Product Group

Plan Buffers between Crosstabs

As you add new characteristics to the drilldown report, the area of the crosstab increases as more data is displayed.

However, if another crosstab gets in the way, that crosstab is not automatically moved. Instead, the extended crosstab is simply cut off. The message shown in Figure 2.19 will appear, indicating that the components overlap.

Messages

Message

Component Crosstab1 overlaps with another component. 1 columns have been cut

Details

Component Crosstab1 overlaps with another component. 1 columns have been cut (ID-103008)

Close

Figure 2.19 Message when Crosstabs Overlap

You should therefore leave enough space between the individual crosstabs when designing your workbooks. The easiest way is to use several empty rows or columns as buffers. You can then set the width of the rows or columns to zero.

2.2.4 Aggregating Data during Analysis

Conversely, you can also remove characteristics from a crosstab to get a higher-level overview. For example, if a manager is not interested in individual product groups, as shown in Figure 2.18, but instead wants an overview of the sales for individual company codes, different fields can be selected.

To remove a characteristic from the drilldown report, click the **Display** dropdown list the **Design Panel** group and switch to the **Analysis** view. Now, you'll see the **Analysis** view, shown in Figure 2.20, where you can drag and drop a characteristic ❶ (for example, a **Product Group**) into the **Data Source** area ❷.

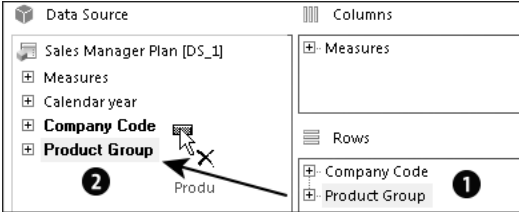


Figure 2.20 Remove Product Group from Drilldown Report Menu

Alternatively, you can use the context menu by right-clicking on the characteristic and selecting the **Remove** option, as shown in Figure 2.21.

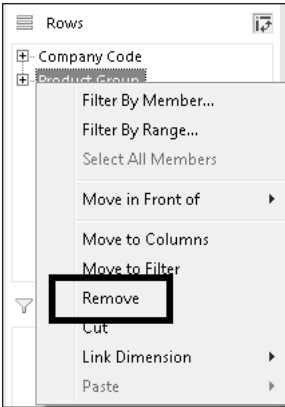


Figure 2.21 Removing a Characteristic via the Context Menu

You can also drag and drop a characteristic from the crosstab by selecting the edge of the cell with the heading of the characteristic. The cursor changes to include a cross-hair, as shown in Figure 2.22. Now, you can drag and drop the characteristic out of the crosstab.

If a characteristic is removed from the drilldown report, the data is automatically aggregated. In our case, the total of the individual product groups will be displayed on the company code level. Figure 2.23 shows an example.

		Quantity	Revenue	Price
Company Code	Product Group	PC	EUR	EUR / PC
Reis Telefon DE	Smartphone Mini	200,000	15.000,00	75,00
	Smartphone Plus	100,000	10.000,00	100,00
	Tablet Mini	200,000	40.000,00	200,00
	Tablet Plus	300,000	50.000,00	166,67
Overall Result		800,000	115.000,00	143,75

Figure 2.22 Removing a Characteristic via Drag and Drop from a Crosstab

	Quantity	Revenue	Price
Company Code	PC	EUR	EUR / PC
Reis Telefon DE	800,000	115.000,00	143,75
Reis Telephones USA	380,000	56.000,00	147,37
Overall Result	1.180,000	171.000,00	144,92

Figure 2.23 Automatically Aggregated Values

2.2.5 Customizing Data Analysis

Of course, you can take different perspectives in your analysis. In our example, we have so far considered the sales by **Product Group** and **Company Code**, as shown in Figure 2.24.

		Quantity	Revenue	Price
Company Code	Product Group	PC	EUR	EUR / PC
Reis Telefon DE	Smartphone Mini	200,000	15.000,00	75,00
	Smartphone Plus	100,000	10.000,00	100,00
	Tablet Mini	200,000	40.000,00	200,00
	Tablet Plus	300,000	50.000,00	166,67
	Result	800,000	115.000,00	143,75
Reis Telephones USA	Smartphone Plus	200,000	20.000,00	100,00
	Tablet Mini	180,000	36.000,00	200,00
	Result	380,000	56.000,00	147,37
Overall Result		1.180,000	171.000,00	144,92

Figure 2.24 Sales by Product Group and Company Code

Now, let's say we're interested in how the individual product groups sell for each company code. To calculate this information, we'll swap the order of the product group and the company code characteristics in the crosstab.

Drag and drop the **Product Group** characteristic to position it in front of the **Company Code** characteristic in the **Design Panel**. In this step, you'll select and hold down the mouse button while you drag the **Product Group** characteristic to the desired position, as shown in Figure 2.25.



Figure 2.25 Swapping the Order in the Design Area

Another way is via the context menu by right-clicking on the **Product Group** characteristic ❶, as shown in Figure 2.26. Then, select the **Move in Front of** and **Company Code** options ❷ from the context menu.

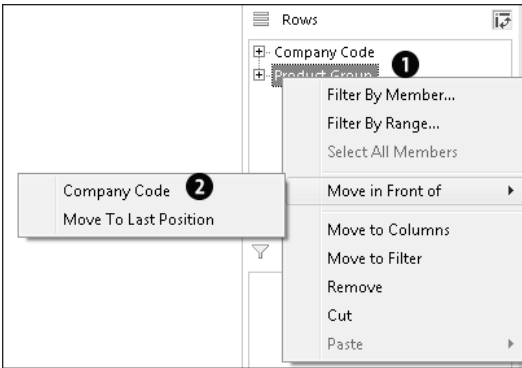


Figure 2.26 Moving Characteristics via the Context Menu

You can also change the sequence of the characteristics directly within the crosstab. First, select the edge of the cell with the heading of the characteristic. The cursor changes to include a crosshair. Now, by holding down the mouse button, you can drag and drop the characteristic into the desired position in the crosstab, as shown in Figure 2.27.

		Quantity	Revenue	Price
Company Code	Product Group	PC	EUR	EUR / PC
Reis Telefon DE	Smartphone Mini	200,000	15.000,00	75,00
	Smartphone Plus	100,000	10.000,00	100,00
	Tablet Mini	200,000	40.000,00	200,00
	Tablet Plus	300,000	50.000,00	166,67
Reis Telephones USA	Smartphone Plus	200,000	20.000,00	100,00
	Tablet Mini	180,000	36.000,00	200,00
Overall Result		1.180,000	171.000,00	144,92

Figure 2.27 Swapping the Order in the Crosstab



Swapping the Order of Individual Values Using Drag and Drop

You can use these same principles to change the sequence of individual values within a characteristic. For example, you can drag the value **Tablet Mini** under **Smartphone Mini** to adjust the evaluation.

Not only can you swap the order of characteristics within a row, you can also move columns. This flexibility provides helpful visualization options, particularly when it comes to time-based information such as years or months.

For example, as shown in Figure 2.28, you can drag the **Company Code** characteristic to the column above the key figures. As a result, the quantities sold and the corresponding sales per company code will be displayed in separate columns.


		Quantity	Revenue	Price
Company Code	Product Group	PC	EUR	EUR / PC
Reis Telefon DE	Smartphone Mini	200,000	15.000,00	75,00
	Smartphone Plus	100,000	10.000,00	100,00
	Tablet Mini	200,000	40.000,00	200,00
	Tablet Plus	300,000	50.000,00	166,67
Reis Telephones USA	Smartphone Plus	200,000	20.000,00	100,00
	Tablet Mini	180,000	36.000,00	200,00
Overall Result		1.180,000	171.000,00	144,92

Figure 2.28 Adding a Characteristic to Columns

In this example, you can also drag the characteristic under the headings of the key figure. As a result, the quantities per company code, then the sales per company code, and so on will be displayed, as shown in Figure 2.29.

	Quantity		
Company Code	Reis Telefon DE	Reis Telephones USA	Overall Result
Product Group	PC	PC	PC
Smartphone Mini	200,000		200,000
Smartphone Plus	100,000	200,000	300,000
Tablet Mini	200,000	180,000	380,000
Tablet Plus	300,000		300,000

Figure 2.29 Displaying a Characteristic's Data Side by Side

You can also completely swap the rows and columns for your evaluation by clicking the **Swap Axes**  button next to the **Rows** area, as shown in Figure 2.30.

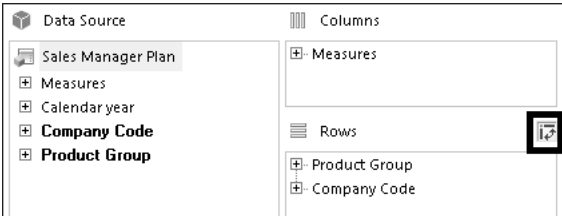


Figure 2.30 Swapping Axes

2.2.6 Working with Background Filters

You can also create or change filters in the **Analysis** tab. A filter restricts the displayed data to a subset. You can use a filter to create individual views of your data. The filters work in sequence; each additional filter is applied after previous filters and further reduces the subset of data.

Basically, you can distinguish between two types of filters. You can restrict the dimensions displayed in the crosstable to only the data you require (this type of filter is explained in Chapter 4, Section 4.1). However, you can also select elements for filtering that should not be displayed in the crosstab. These filters, which are not visible in the crosstab, are called *background filters*. In our example with the company code and product group characteristics, the data source contains the sales for the years 2018, 2019, and 2020. If we're only interested in the sales for the year 2019, we can add the year dimension as a background filter to filter for the year 2019. Thus, the analysis shows the data for the year 2019, but the dimension year itself is not visible in the crosstab.

We'll walk through the available background filter options in the following sections.

Filtering by Member

You can filter according to individual members (characteristic values) or according to a range (an interval of characteristic values). You can use the filter to restrict the display to certain characteristic values. In the **Design Panel**, right-click on the respective characteristic and select the **Add to Filter (By Member)** option from the context menu, as shown in Figure 2.31.

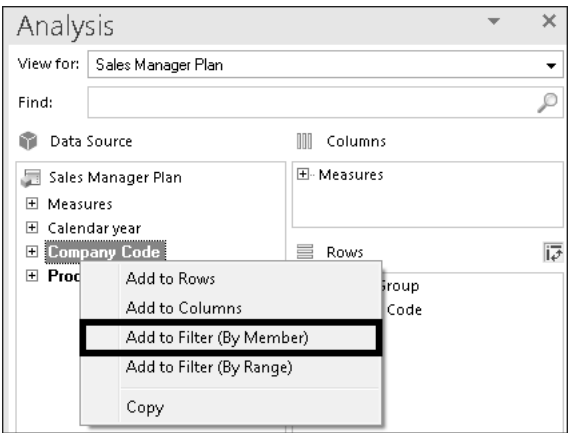


Figure 2.31 Filter by Member

A popup window will appear where you can select the values to which you want to restrict the display, as shown in Figure 2.32. By default, all elements are selected. To deselect a specific element, deselect the corresponding checkbox. To deselect all

elements, deselect the **Select All** checkbox ❶. For example, if you only want to display the company code **Reis Telephone DE (1000)**, select this value.

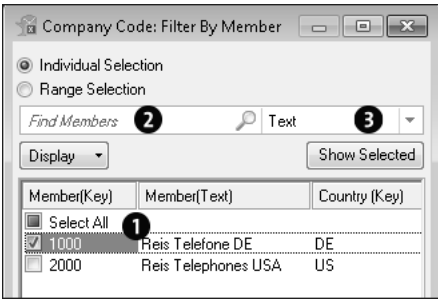


Figure 2.32 Showing Selected Members

If you want to search for a specific member, enter a search term in the **Find Members** field ❷. Using the dropdown list next to this field, you can choose to search using a key or a text ❸. The elements corresponding to the search term are displayed in the list and can be selected.

With the **Display** dropdown list, shown in Figure 2.33, you can specify how members should be displayed in the list. You can choose to display members by **Text**, **Key**, **Text and key**, or **Key and text**.

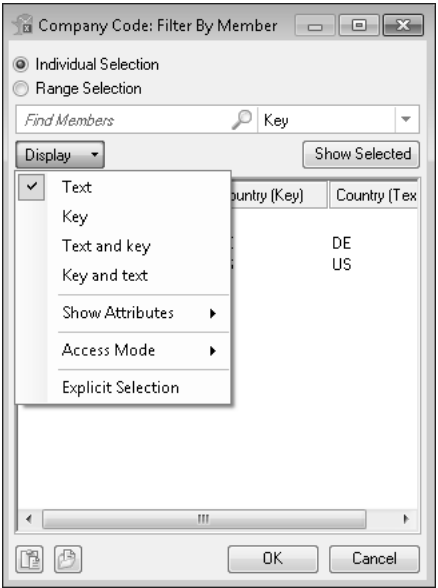


Figure 2.33 Adjusting the Display of the Members



No Defined Text

If no text has been defined for a characteristic value, the key is displayed as text. These options are displayed first in the filter dialog box. Although the key is displayed as text, the text search is not possible if no text has been defined; the results list is empty.

You can also use the **Show Attributes** option to display attributes that are available for this member. For example, a company code could have a country and a currency as attributes. You can select these attributes to display them in the list.

You can use the following trick to restrict the display using certain attribute values: As shown in Figure 2.34, select the desired attribute from the dropdown list next to the search field ❶. Then, enter the attribute value in the search field ❷. For example, if you want to select all company codes belonging to the country Germany, enter “DE” in the search field. Only those elements that correspond to this attribute value will appear in the results.

You can select the elements using attributes by checking the **Select Matches** checkbox ❸.



Figure 2.34 Restricting the Display to Certain Attributes

Selecting a Source for Filter Elements

In the **Display** dropdown list, you can also select the **Access Mode** option, as shown in Figure 2.35. In this mode, you can define which elements should be available for selection. The options available for the access mode differ according to the data source and

may include SAP Business Warehouse (SAP BW) views, SAP HANA analytic views, or SAP HANA calculated views.

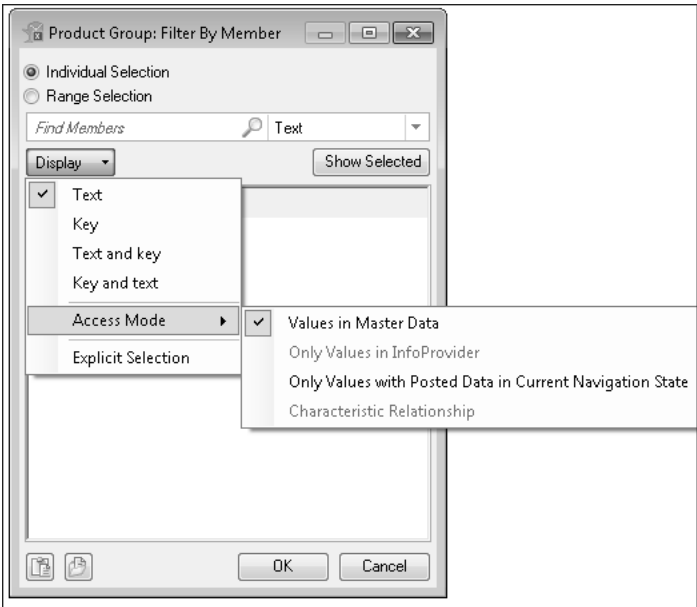


Figure 2.35 Defining the Access Mode

The following options are available for SAP BW data sources in the **Access Mode** dropdown list:

- **Values in Master Data**
If you choose this option, you can choose from all elements of the characteristic, regardless of whether data was posted for them. You can therefore also select values for which no data exists. At first glance, this option may seem pointless. However, remember that you can save the filter with the workbook and thus filter according to data that will be added in the future.
- **Only Values in InfoProvider**
If, on the other hand, you select this option, you'll only see elements with actually booked data. Other theoretically available elements are hidden.
- **Only Values with Posted Data in Current Navigation State**
Using this option, you can display elements with booked data that are available in the current navigation status. We'll explain this setting later with an example.
- **Characteristic Relationship**
If this option is active, only the values valid according to the active characteristic relationships can be selected. You can use characteristic relationships to define rules for checking permissible combinations of characteristic values.

Consider the query shown in Figure 2.36, which shows the sales per product group in different company codes. While the company code **Reis Telefone DE** sells four different product groups, company code **Reis Telephones USA** concentrates on two product groups.

		Quantity	Revenue	Price
Company Code	Product Group	PC	EUR	EUR / PC
Reis Telefone DE	Smartphone Mini	200,000	15.000,00	75,00
	Smartphone Plus	100,000	10.000,00	100,00
	Tablet Mini	200,000	40.000,00	200,00
	Tablet Plus	300,000	50.000,00	166,67
	Result	800,000	115.000,00	143,75
Reis Telephones USA	Smartphone Plus	200,000	20.000,00	100,00
	Tablet Mini	180,000	36.000,00	200,00
	Result	380,000	56.000,00	147,37
Overall Result		1.180,000	171.000,00	144,92

Figure 2.36 Query with Two Company Codes

Let's say we now want to create a filter for the product group dimension. The **Only Values with Posted Data in Current Navigation State** option will initially offer all product groups for selection, as shown in Figure 2.37.

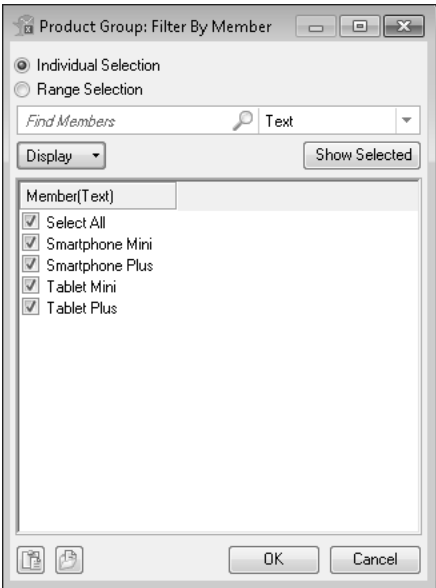


Figure 2.37 All Product Groups Available for Selection

Next, we'll restrict the report to company code **Reis Telephones USA**. As shown in Figure 2.38, this company code only sells the product groups **Smartphone Plus** and **Tablet Mini**.

		Quantity	Revenue	Price
Company Code	Product Group	PC	EUR	EUR / PC
Reis Telephones USA	Smartphone Plus	200,000	20.000,00	100,00
	Tablet Mini	180,000	36.000,00	200,00
	Result	380,000	56.000,00	147,37
Overall Result		380,000	56.000,00	147,37

Figure 2.38 Report Restricted to Company Code USA

Now, to create a filter for the dimension product groups, only these two product groups are available for selection. The product groups **Smartphone Mini** and **Tablet Plus** are missing because they do not exist in connection with company code **Reis Telephones USA**, as shown in Figure 2.39. Notice how the selection adapts to the current navigation status.

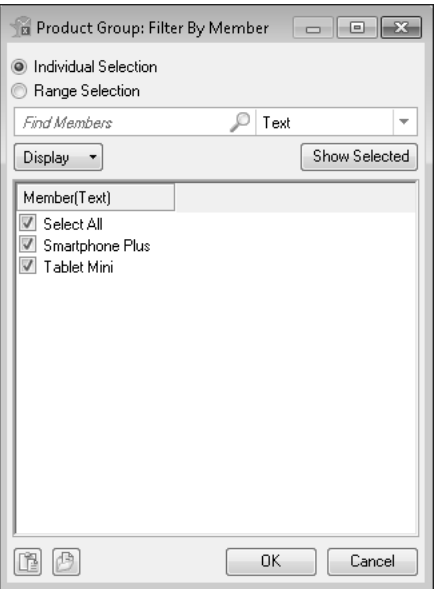


Figure 2.39 Only Two Product Groups Displayed

«

Display Access Mode

The ability to select the **Access Mode** option, as shown previously in Figure 2.35, is only available if you activate the **Show Access Mode for Member Display** setting in the **Advanced** options (see Chapter 12, Section 12.2.2), as shown in Figure 2.40. It is deactivated by default.

Alternatively, you can select the **AllowChangingAccessMode** checkbox in the **Technical Configuration** dialog box, as shown in Figure 2.41. For more information, see Chapter 12, Section 12.3.

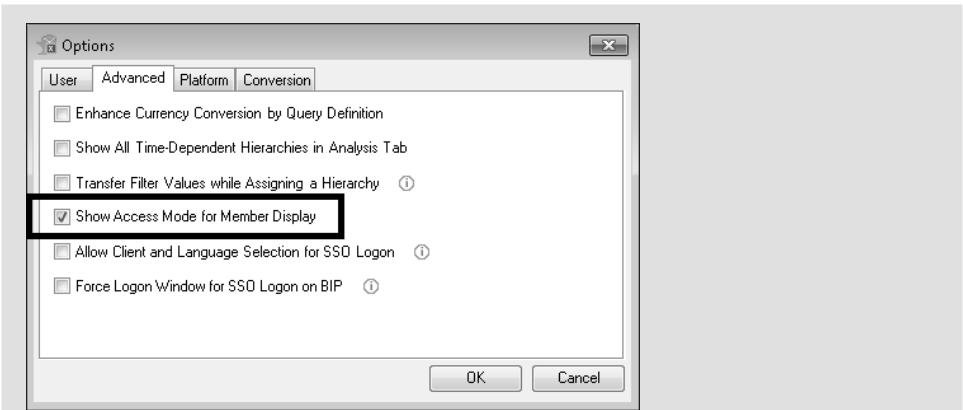


Figure 2.40 Display Access Mode

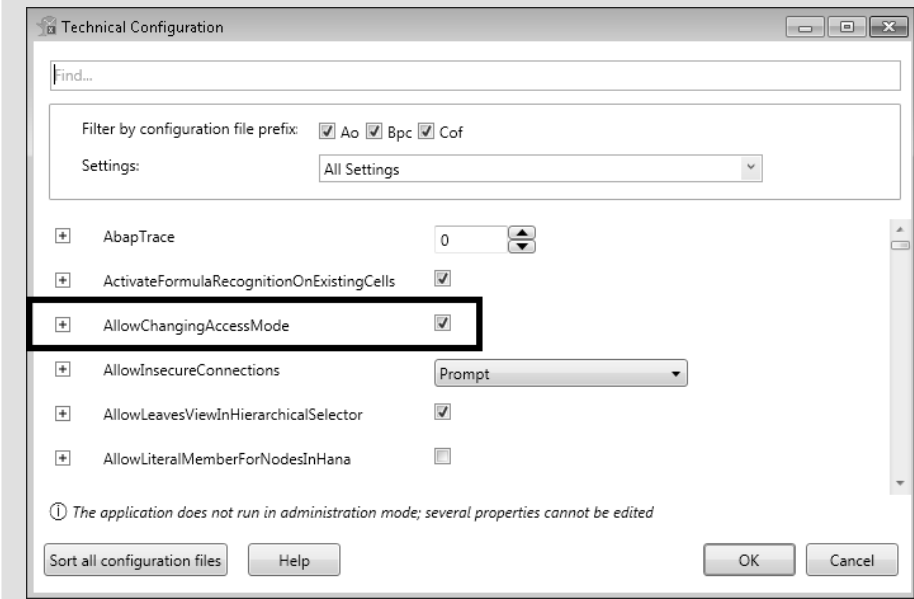


Figure 2.41 Technical Configuration

If you use an SAP HANA analytic view as a data source, the following options are available in the **Access Mode** dropdown list:

- **Values in Master Data**
Select this option to display all elements of a dimension, regardless of whether posted data exists or not.
- **Values in Fact Table**
This option works in the same way as the **Only Values in InfoProvider** option for an SAP BW data source. Only items with actually posted data are displayed.

- **Only Values with Posted Data in Current Navigation State**
Only items with posted data that correspond to the current navigation status are displayed.
- **Only Values for Existing Attribute Combinations in Master Data**
Select this option to display all elements for existing attribute combinations.

If using an SAP HANA calculated view as the data source, you can choose between the **Values in Fact Table** and **Only Values with Posted Data in Current Navigation State** options. The first option displays all elements with posted data, and the second option displays the elements with posted data that corresponds to the current navigation status.

Using the Explicit Selection Option

Finally, you can activate the **Explicit Selection** option via the **Display** dropdown list, as shown in Figure 2.42.

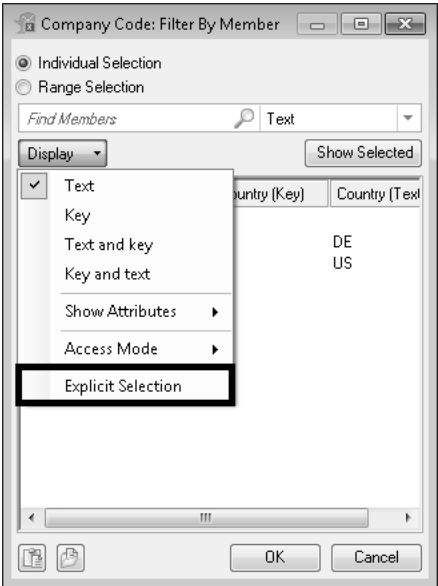


Figure 2.42 Activating the Explicit Selection Option

This setting is useful for authorization-relevant characteristics. Suppose a user is only authorized for the company codes **Reis Telefone Deutschland** and **Reis Telephones USA**. If this user now selects the **Select All** checkbox and the **Explicit Selection** setting is deactivated, no filter is applied, and nothing is excluded when querying the data, as shown in Figure 2.43.

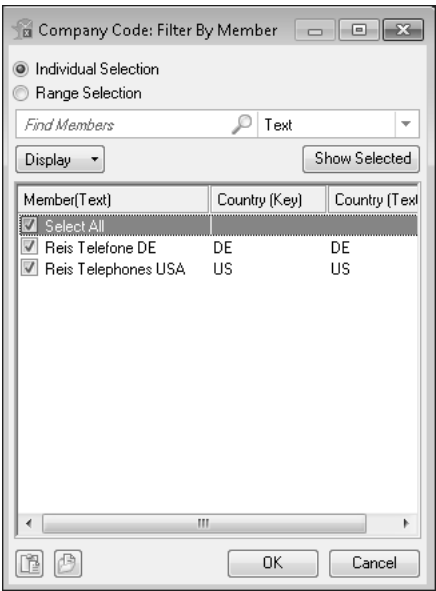


Figure 2.43 Selecting All Elements

However, the subsequent authorization check fails, which can be irritating for the user, as shown in Figure 2.44. The reason for the error message is that the system tries to select everything (technically *) because no filter is set. However, the user is only authorized for a subset of this data, the two company codes. According to the “all or nothing” rule, no data is displayed at all in this case.

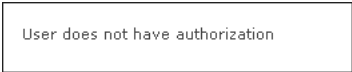


Figure 2.44 Insufficient Authorization

If **Explicit Selection** is active, the report is filtered according to the individual elements. In this case, if you click on **Select All**, the two individual company codes are selected and used as a filter. In the filter dialog box, an information icon indicates that the explicit selection is active, as shown in Figure 2.45.

In this case, these two company codes are explicitly requested by the system. Since the user is authorized for these two company codes, the authorization check is successful. As shown in Figure 2.46, the report is displayed.

You can save the **Explicit Selection** setting with the workbook. Note, however, that you’ll have to adjust the selection manually if your authorizations change. If you’re authorized for additional values, in our case, for additional company codes, these elements are not automatically selected.

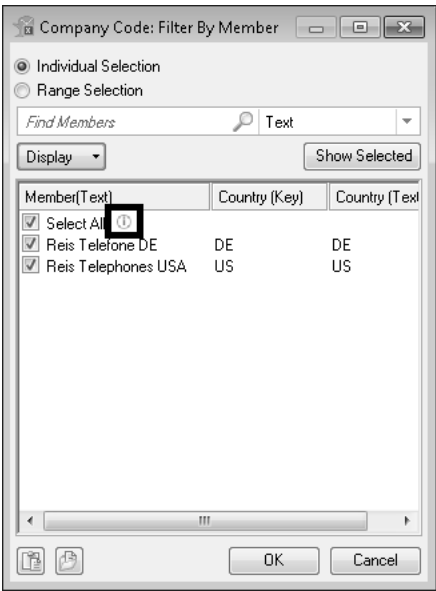


Figure 2.45 Filter with Explicit Selection

	Quantity	Revenue	Price
Company Code	PC	EUR	EUR / PC
Reis Telefon DE	800,000	115.000,00	143,75
Reis Telephones USA	380,000	56.000,00	147,37
Overall Result	1.180,000	171.000,00	144,92

Figure 2.46 Report Displayed

Click the **Show Selected** button to restrict the display to the currently selected elements, as shown in Figure 2.47. The label of the button will change to **Show All**. Click the button again to display all elements again.

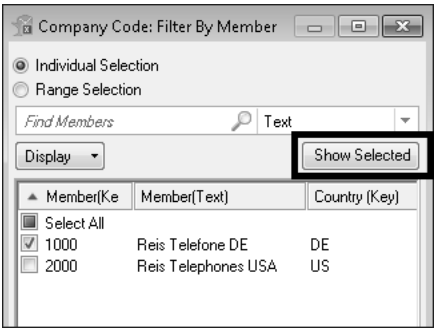


Figure 2.47 Restricting the Display to Selected Elements

You can paste additional elements that you want to use for filtering from the clipboard by clicking the **Paste from Clipboard** button at the bottom left of the filter dialog box. When copied elements are pasted from the clipboard, they are automatically selected in the element list. Copying from a file works the same way—simply click the **Paste from File** button. Confirm your selection by clicking the **OK** button. The characteristic is then moved to the **Background Filter** area, and only the corresponding values are displayed in the query.



Copying Filter Elements from the Clipboard

Elements that you want to copy can be displayed either as text or as a key. When you copy a list of elements, you can use the following separators:

- : (colon)
- ; (semicolon)
- | (concatenation mark)
- \t (tab)
- \r\n (new line)

If you expand characteristics in your query using a plus button, you'll see the values defined as filters.

Filtering by Range

Using the **Add to Filter (By Range)** option, you can also define an interval for the background filter instead of individual values, as shown in Figure 2.48.

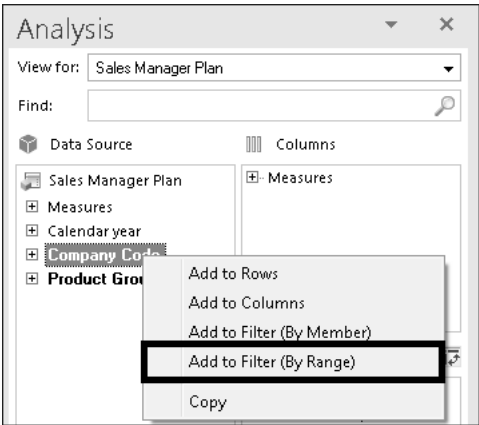


Figure 2.48 Filter by Range

The input dialog box shown in Figure 2.49 opens. A number of criteria are available here. First, you can define the operator ❶ for your filter. The following operators are available:

- = (equal to)
- != (not equal to)
- >= (greater than or equal to)
- > (greater than)
- < (less than)
- <= (less than or equal to)
- [] (between)
- ![] (not between)

Then, you can set the limits for the interval ❷. You can either type them directly into the input bar or select them by clicking the **Open Value Help** button. Then, click on the **Add** button ❸ to apply these settings.

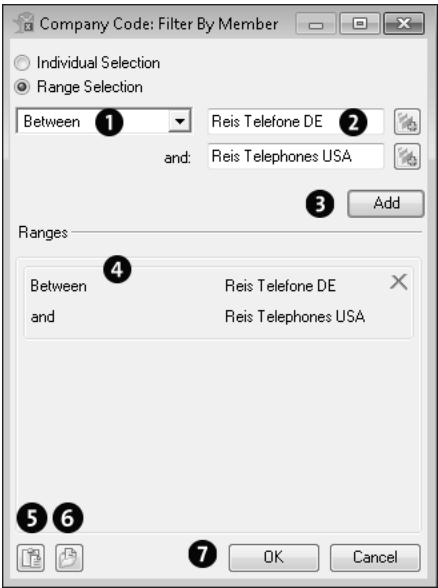


Figure 2.49 Defining a Range Selection for the Filter

The defined selection now appears in the lower half of dialog box ❹ where you'll see all defined filter values. You can define several filter values. To delete a defined area, click on the **Remove** button.

To define filter values, you can paste them from the clipboard ❺ by clicking the **Paste from Clipboard** button. Alternatively, you can also import filter values from a file by clicking the **Paste from File** button ❻. Then, click the **OK** button ❼ to apply the filter.



Allowed Separators

When you copy a list of values, the following separators are allowed between the values:

- : (colon)
- ; (semicolon)
- | (concatenation mark)
- \t (tab)
- \r\n (new line)

Another way to filter the report by specific values is to drag and drop the individual values into the **Background Filter** area. In this step, you'll expand the **Members** tree under the characteristic and select the value to which you want to restrict the evaluation. Then, drag this element into the **Background Filter** area, as shown in Figure 2.50, and release the mouse button.

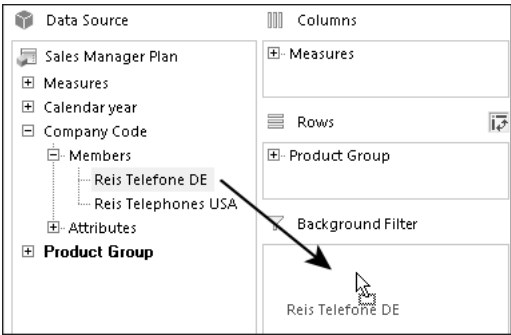


Figure 2.50 Defining a Background Filter via Drag and Drop

Of course, you can also use the context menu in this view to set up a background filter. Select the element you want and select **Add to Filter (By Member)** from the context menu, as shown in Figure 2.51.



Adding Multiple Elements to Filters

Select multiple elements while holding down the **Ctrl** key and use the context menu to add multiple values to the filter at once. You can also use the **Shift** key to select a range of elements. Hold down the **Shift** key to select the first and last element. All elements in between are selected automatically. Then, use the context menu to define the filter.

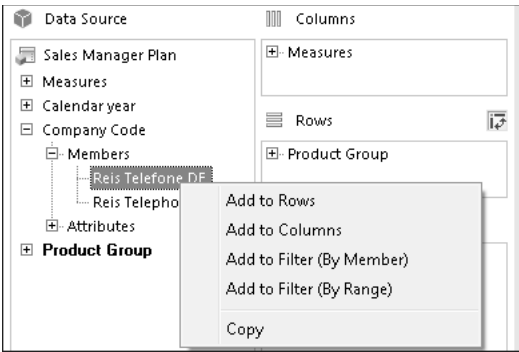


Figure 2.51 Adding a Single Member to a Filter

Adjusting a Filter

Once you've defined the background filter, you can use the context menu to adjust it, as shown in Figure 2.52. For example, you can adjust the existing filter via the **Filter By Member...** and **Filter By Range...** options. If you use the **Select All Members** option, the filter is resolved because, if all elements are selected, no restriction exists. You can also delete the filter using the **Remove** option. Afterwards, all values are again included in the report.

You can also display the filter value in the rows or columns of the report using the **Move to Rows** or **Move to Columns** option. The **Cut** option is also suitable for this purpose, which allows you to insert the value in rows or columns.

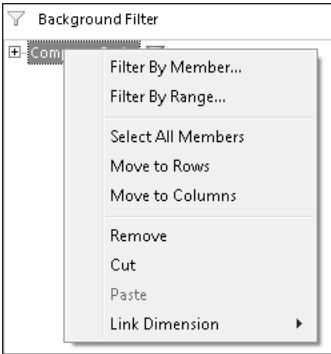


Figure 2.52 Context Menu of the Background Filter

The **Link Dimension** option offers interesting possibilities. If you're working with a workbook that contains multiple data sources, you can apply the filter of one data source to the other filters. For example, if you want to filter by the same company code, select the **Link Dimension** and **To Company Code of DS_2** option from the context menu, as shown in Figure 2.53.

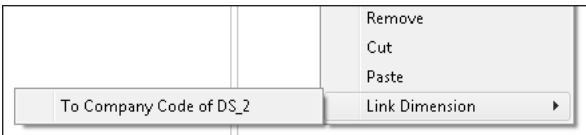



Figure 2.53 Link Dimension

Filtering is not only possible in the background filter. You can also leave the characteristic in the rows or columns and filter according to specific values. Right-click the desired characteristic and then select the **Filter By Member...** or **Filter By Range...** options from the context menu, as shown in Figure 2.54. If a filter has been defined for a characteristic, a filter icon  appears next to it. You can remove a filter created in this way by clicking on the **Select All Members** option in the context menu.

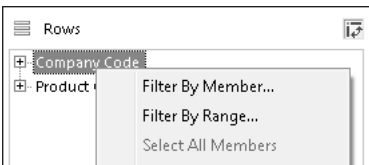


Figure 2.54 Filtering the Row Characteristic



Fast Filtering

The quickest way to restrict to a specific characteristic value is to double-click on it in the report. If, for example, you're only interested in company code **Reis Telefon DE**, double-click on the cell **Reis Telefon DE**, and a filter is automatically created.

2.2.7 Pause Refresh

Each time you change the drilldown report of your crosstab, the display is updated, and the values are recalculated. With a large number of values, this updating can take some time. If you want to add several characteristics to the drilldown report one after the other or remove some characteristics from the drilldown report at the same time, we recommend that you pause the recalculation by using the **Pause Refresh** function, as shown in Figure 2.55, to deactivate the automatic update.

You can then create a new view of your data in several navigation steps. In this way, you can insert new characteristics in rows or columns, adjust key figures, or set up background filters. When you select the **Pause Refresh** function again, the refresh is reactivated. All previously defined navigation steps are executed at once.

Note that many functions of the **Data Analysis** menu group are not available when the **Pause Refresh** function is active, as shown in Figure 2.56.

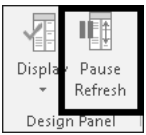


Figure 2.55 Pause Refresh

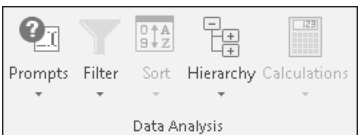


Figure 2.56 Unavailable Functions in the Data Analysis Section

However, these restrictions are usually not disastrous for your work since you'll usually use the **Analysis** tab in the **Design Panel** anyway if automatic refresh is disabled. In addition, you can still use the context menu, in which the following functions are available:

- Define characteristic display (see Chapter 4, Section 4.4.1)
- Adjust the number format (see Chapter 4, Section 4.4.2)
- Display or hide totals in the crosstab (see Chapter 4, Section 4.4.3)
- Define calculation of sums (see Chapter 4, Section 4.4.3)
- Calculate or add a new key figure using existing key figures (see Chapter 5, Section 5.1)

Figure 2.57 shows an example of the context menu for a key figure.

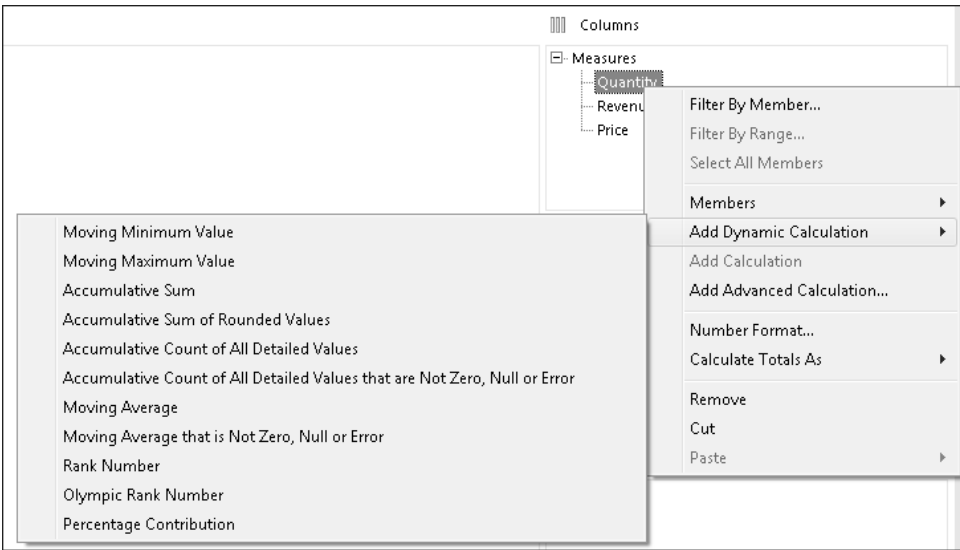


Figure 2.57 Functions Available via the Context Menu in the Analysis Tab

2.2.8 Undoing Navigation Steps

During your data analysis, you can change the drilldown report, filter out certain data, sort data, and perform new calculations. You can undo these navigation steps or repeat them if necessary.

Click **Undo** or **Redo** in the **Actions** menu group to undo or restore steps that you performed in SAP Analysis for Microsoft Office, as shown in Figure 2.58.

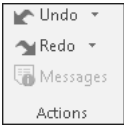



Figure 2.58 Undoing Actions

Undo reverses the last step of SAP Analysis for Microsoft Office, while with **Redo**, the last undone step is repeated. You can also display a list of executed steps by clicking the **Unfold**  button next to the respective function, as shown in Figure 2.59, which allows you to quickly jump to a specific navigation state.

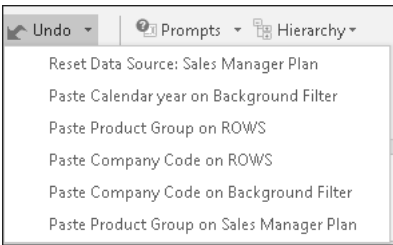


Figure 2.59 Displaying Executed Steps

2.2.9 Showing Messages

As you work with SAP Analysis for Microsoft Office, you'll encounter a number of messages. Ideally, they'll inform you that your desired actions have been successful. However, unfortunately, errors can also occur when working with SAP Analysis for Microsoft Office, displayed in error messages. By clicking the **Messages** button in the **Actions** menu group, as shown in Figure 2.60, you can display a dialog box with information, warning, or error messages. In this dialog box, you can study recent messages in detail.

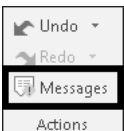


Figure 2.60 Displaying Messages

The displayed message icon varies depending on the type of message received, allowing you to see at a glance whether a message is an information, warning, or error message. Information messages are displayed in blue, warning messages in yellow, and error messages in red.

2.2.10 Getting Information about a Data Source

Under the **Information** tab in the **Design Panel**, you can view detailed information about a data source or about the entire workbook. You'll also find information about the active filters and variables.

From the **Information for** dropdown list, shown in Figure 2.61, you can select one of the inserted data sources or the entire workbook. Information fields for the selected object are then displayed as text elements. If you select **Workbook** **1**, the name of workbook and the creator **2** will be displayed.

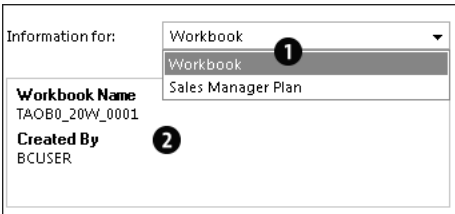


Figure 2.61 Select Information

Below this information, you'll see the variables used in the workbook, as shown in Figure 2.62.



Figure 2.62 Variables of the Workbook

In addition, the **Information** area displays the logged in user, the time of the last update, and the time of the last change, as shown in Figure 2.63.

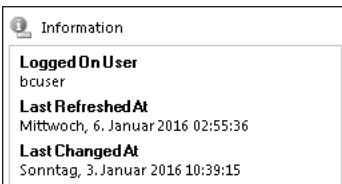


Figure 2.63 General Information

When you switch to the information for a data source, the name of the data source, the key date, and the time of the last data update will be displayed, as shown in Figure 2.64.

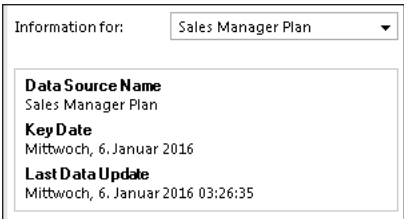


Figure 2.64 Information for the Data Source

You'll also see filters defined for this data source. Figure 2.65 shows an example. This section contains the elements that were defined during navigation in the report. Furthermore, the filters defined in the Query Designer that cannot be changed by the user are also displayed. The filter information is updated with each navigation step. You can find out which options are available for filtering in Section 2.2.6 and in Chapter 4, Section 4.1.



Figure 2.65 Filter of the Data Source

In the **Information** area, as shown in Figure 2.66, you'll also see the technical name of the query ❶ and the technical name of the InfoProvider ❷. In addition to the technical name, the description of the InfoProvider ❸ is also displayed.



Figure 2.66 Information for the Data Source

You can also see who created ❹ or changed ❺ this data source. Next, you'll see the time of the last change ❻. Finally, the name of the system ❼ used and the logged-on user ❽ are displayed.

Use Information Fields in the Workbook

The fields displayed in the **Information** tab can be added to a workbook using drag and drop. This capability is useful, for example, when you want to display the selected prompts next to the report. To add an information field to the workbook, select it and drag it to the desired location, as shown in Figure 2.67.

Figure 2.67 Adding an Information Field to the Workbook

Then, release the mouse button. As shown in Figure 2.68, the system automatically creates the description of the information field and the value—so-called SAP formulas. We'll discuss formulas in more detail in Chapter 10.

Figure 2.68 Automatically Created Formula

2

2.3 Summary

After you've worked through this chapter, you can retrieve current data and compile individual reports. If necessary, you can filter and sort data to gain new insights from your analysis. You also learned how to undo navigation steps and display messages. Finally, you can also retrieve existing information about the data sources used.

In the next chapter, you'll learn how to use prompts to narrow down your analysis from the start.

Contents

Preface	15
1 Create Your First Workbook	21
1.1 Data Sources as the Basis of Analysis	21
1.2 Inserting Data Sources into a Workbook	23
1.2.1 Inserting Data Sources via the Analysis Tab	23
1.2.2 Inserting Data Sources via the File Tab	29
1.3 Saving Workbooks	30
1.3.1 Selecting Save Settings	31
1.3.2 Removing Data before Saving	34
1.4 Defining a Default Workbook	35
1.5 Opening Saved Workbooks	37
1.6 Adjusting Workbook Name	39
1.7 Deleting a Workbook	40
1.8 Summary	41
2 Navigating in Reports	43
2.1 Working with Current Data	44
2.2 Navigating in Queries	46
2.2.1 Design Panel	46
2.2.2 Analysis View	46
2.2.3 Extending Data Analysis	51
2.2.4 Aggregating Data during Analysis	54
2.2.5 Customizing Data Analysis	55
2.2.6 Working with Background Filters	58
2.2.7 Pause Refresh	72
2.2.8 Undoing Navigation Steps	74
2.2.9 Showing Messages	74
2.2.10 Getting Information about a Data Source	75
2.3 Summary	77

3	Working with Prompts	79
3.1	Getting Started	79
3.2	Prompts Dialog	81
3.2.1	Selecting a Prompt Value	83
3.2.2	Selecting Multiple Values	87
3.2.3	Selecting a Value Range	91
3.2.4	Prompts as Selection Options	92
3.2.5	Working with Hierarchy Variables	93
3.2.6	Working with Formula Variables	95
3.2.7	Texts as Prompts	96
3.3	Using Variants for Prompts	96
3.3.1	Creating a User-Specific Variant	97
3.3.2	Creating a Global Variant	98
3.3.3	Modes for Working with Variants	100
3.3.4	Using a Variant	102
3.3.5	Adjusting a Variant	102
3.3.6	Deleting a Variant	103
3.4	Viewing Selected Values	104
3.5	Summary	106
4	Process Data	107
4.1	Filtering Data	108
4.1.1	Filter Elements	110
4.1.2	Filter Data in Hierarchies	113
4.1.3	Filtering Key Figures	117
4.1.4	Suppressing Zeros	129
4.1.5	Working with Query Conditions	132
4.2	Sorting Data	134
4.2.1	Sorting Elements	135
4.2.2	Sorting Key Figures	137
4.3	Working with Hierarchies	138
4.3.1	Using Characteristics with Hierarchies	138
4.3.2	Navigating in Hierarchies	140
4.3.3	Displaying Characteristics Hierarchically	146
4.4	Customizing the Display of Elements, Key Figures, and Results	152
4.4.1	Customizing the Appearance of Elements	152

4.4.2	Adjusting the Display of Key Figures	154
4.4.3	Customizing the Results Display	159
4.5	Summary	166
5	Organize Data	167
5.1	Calculating New Key Figures	167
5.1.1	Calculation Types	167
5.1.2	Creating Simple Calculations	169
5.1.3	Adding Dynamic Calculations	173
5.1.4	Adding Advanced Calculations	177
5.1.5	Adding Restrictions	182
5.2	Using Comments	184
5.2.1	Properties of Comments	184
5.2.2	Creating Comments	186
5.2.3	Saving Comments	188
5.3	Using the Report-to-Report Interface	190
5.4	Summary	192
6	Working with Planning Applications	193
6.1	Displaying the Planning Tab	194
6.2	Planning Data Manually	196
6.2.1	Changing Existing Data Cells	196
6.2.2	Adding New Data Cells	198
6.3	Working with Planning Functions and Sequences	211
6.3.1	Planning Functions	211
6.3.2	Planning Sequences	218
6.4	Using Change Mode and Display Mode	221
6.4.1	Locking Input-Ready Cells	223
6.4.2	Recalculating Planning Data	225
6.4.3	Undoing Changes to Planning Data	226
6.4.4	Saving Planning Data	227
6.4.5	Setting Work Statuses	227
6.5	Planning-Relevant Settings	229
6.5.1	Determining the Planning System to Save Data	230

6.5.2	Defining Cell Locking Settings	230
6.5.3	Defining the Planning Model	231
6.5.4	Switching Automatically to Change Mode	232
6.5.5	Refreshing Planning Objects	233
6.5.6	Opening a Data Source in Input-Ready Mode	234
6.5.7	Defining the Number of New Lines	234
6.5.8	Determining Rules for the New Line Validation	235
6.6	Summary	235

7 Shape Your Reports 237

7.1	Extending Reports with Local Data	237
7.1.1	Creating a Local Provider	238
7.1.2	Updating Data in a Local Provider	243
7.1.3	Including Local Providers in Reports	245
7.2	Linking Dimensions of Different Reports	248
7.2.1	Linking Dimensions	248
7.2.2	Unlinking Dimensions	250
7.3	Merging Reports	253
7.3.1	Grouping Reports	254
7.3.2	Ungrouping Reports	258
7.4	Important Settings	261
7.4.1	Setting Refresh Behavior	261
7.4.2	Adjusting General Settings	263
7.4.3	Setting Properties of the Data Source	264
7.4.4	Setting the Properties of the Crosstab	267
7.5	Summary	268

8 Format Reports 269

8.1	Adjusting Formatting	269
8.1.1	Working with Conditional Formatting Rules	269
8.1.2	Formatting Cells	279
8.1.3	Adding New Rows and Columns	284
8.1.4	Adding Texts to New Lines	289
8.1.5	Adding Formulas to New Lines	291
8.1.6	More Formatting Options	294

8.2	Managing Design Rules	297
8.3	Working with Styles	298
8.3.1	Creating a Style	299
8.3.2	Applying Styles	302
8.3.3	Exporting Style Sheets	303
8.3.4	Importing Style Sheets	304
8.3.5	Deleting Style Sheets	304
8.4	Extending Workbooks with Diagrams, Info Fields, and Filters	305
8.4.1	Inserting Dynamic Diagrams	305
8.4.2	Inserting Waterfall Diagrams	307
8.4.3	Inserting Info Fields	309
8.4.4	Inserting Filter Components	310
8.5	Summary	312

9 Working with Tools in SAP Analysis for Microsoft Office 313

9.1	Using SAP Analysis for Microsoft Office Tools	313
9.1.1	Converting Cells of a Crosstab into Formulas	313
9.1.2	Creating Web Applications	316
9.1.3	Starting the Query Designer	317
9.2	Working with Views	318
9.2.1	Copying a View	318
9.2.2	Inserting a View	318
9.2.3	Saving a View	318
9.3	Converting a Workbook Created with the SAP BEx Analyzer	320
9.3.1	Converting a Workbook	320
9.3.2	Conversion Settings	323
9.3.3	Conversion Protocol	324
9.4	Protecting Workbooks	325
9.4.1	Activating Protection	325
9.4.2	Removing Protection	326
9.5	Summary	327

10	Working with Formulas	329
10.1	Working with Formula-Optimized Mode	329
10.2	Creating Formulas	331
10.2.1	Basic Formula Creation	331
10.2.2	SAPGetData	333
10.2.3	SAPSelectMember	336
10.2.4	SAPGetUniformScaling	339
10.2.5	SAPGetDimensionDynamicFilter	341
10.2.6	SAPGetDimensionStaticFilter	342
10.2.7	SAPGetDimensionEffectiveFilter	343
10.2.8	SAPGetDimensionInfo	344
10.2.9	SAPGetInfoLabel	346
10.2.10	SAPGetWorkbookInfo	349
10.2.11	SAPGetSourceInfo	350
10.2.12	SAPGetMeasureInfo	352
10.2.13	SAPGetDisplayedMeasures	354
10.2.14	SAPGetMember	354
10.2.15	SAPGetVariable	356
10.2.16	SAPGetMeasureFilter	357
10.2.17	SAPListOfMeasureFilters	358
10.2.18	SAPListOf	360
10.2.19	SAPListOfDimensions	361
10.2.20	SAPListOfDynamicFilters	364
10.2.21	SAPListOfStaticFilters	365
10.2.22	SAPListOfEffectiveFilters	366
10.2.23	SAPListOfMembers	367
10.2.24	SAPListOfMessages	369
10.2.25	SAPListOfVariables	370
10.2.26	SAPSetFilterComponent	372
10.2.27	SAPSetData	375
10.3	Summary	377
11	Using Macros	379
11.1	Creating Macros	380
11.2	Debugging Macros	382
11.2.1	Getting Started	383
11.2.2	Working with Breakpoints	384
11.2.3	Adding a Watch Expression	385

11.3	Syntax Rules for Entering Values	386
11.4	Working with API Methods	388
11.4.1	SAPAddMessage	388
11.4.2	SAPCallMemberSelector	389
11.4.3	SAPSetFilter	395
11.4.4	SAPSetPlanParameter	398
11.4.5	SAPExecutePlanningFunction	400
11.4.6	SAPExecutePlanningSequence	401
11.4.7	SAPGetCellInfo	403
11.4.8	SAPGetProperty	409
11.4.9	SAPLogOff	415
11.4.10	SAPLogon	416
11.4.11	SAPMoveDimension	417
11.4.12	SAPOpenWorkbook	420
11.4.13	SAPSetRefreshBehaviour	423
11.4.14	SAPSetVariable	424
11.4.15	SAPExecuteCommand	425
11.4.16	SAPSuppressMessage	442
11.5	Working with Callbacks	444
11.5.1	Callback Execution	444
11.5.2	AfterRedisplay	445
11.5.3	BeforePlanDataSave	446
11.5.4	BeforePlanDataReset	447
11.5.5	BeforeMessageDisplay	447
11.5.6	BeforeFirstPromptsDisplay	450
11.6	Using Formulas from SAP Analysis for Microsoft Office in Macros	451
11.7	Adjusting Design Rules via Macros	452
11.7.1	SAPSetFormat	452
11.7.2	SAPInsertLine	465
11.7.3	SAPFixLineSize	469
11.7.4	SAPListOfDesignRules	469
11.7.5	SAPDeleteDesignRule	470
11.8	Summary	471
12	Configure SAP Analysis for Microsoft Office	473
12.1	Customizing the User Interface	473
12.1.1	Creating a Profile	474
12.1.2	Customizing Your Profile	476

12.1.3	Setting a Profile as Default	484
12.1.4	Embedding a Profile in a Workbook	485
12.1.5	Setting Up a Company Profile	486
12.1.6	Using Read-Only User Profiles	489
12.2	Options Dialog	490
12.2.1	User Tab	491
12.2.2	Advanced Tab	491
12.2.3	Platform Tab	493
12.2.4	Conversion Tab	495
12.3	Technical Configuration	497
12.3.1	Basics	497
12.3.2	Changing the Technical Configuration	498
12.3.3	Settings for the SAP Analysis for Microsoft Office Add-In	500
12.3.4	Settings for the SAP Analysis for Microsoft Office Plug-In	501
12.4	Summary	502
 13 Troubleshooting		503
13.1	Troubleshooting Modes	503
13.1.1	Support Mode	504
13.1.2	Profiling Mode	504
13.1.3	Advanced Mode	506
13.2	Reactivating the SAP Analysis for Microsoft Office Add-In	512
13.3	Summary	513
 Appendices		515
A	Settings for the SAP Analysis for Microsoft Office Add-in	517
B	Settings for the SAP Analysis for Microsoft Office Plug-In	523
C	Glossary	547
D	The Author	553
 Index		555

Index

A

Access mode	60, 153
<i>display</i>	63, 85
<i>enable</i>	492
<i>SAP BW data sources</i>	61
<i>SAP HANA analytic view data source</i>	64
<i>SAP HANA calculated view data source</i>	65
<i>settings</i>	525
<i>values in master data</i>	86
Accumulative count of all detailed	
values operators	174
Accumulative sum of rounded	
values operator	174
Accumulative sum operator	174
Advanced calculations	168, 177
Advanced DataStore Object	
(Advanced DSO)	21, 205, 550
Advanced mode	506
Advanced options	491
<i>hierarchies</i>	139
Aggregate functions	180
Aggregation levels	206, 547
<i>dimensions</i>	216
<i>planning sequences</i>	219
<i>select</i>	214
All or nothing rule	66
AllowChangingAccessMode setting	85
Analysis Design tab	19, 313
Analysis tab	18, 46
<i>filters</i>	58
<i>insert data sources</i>	23
<i>nodes</i>	47
<i>properties</i>	48
<i>settings</i>	533
Anchors	461
Ao_app.config files	497, 501
API methods	379, 388
<i>display without refreshing</i>	423
<i>merge variables</i>	264
<i>PlanDataToChangeMode</i>	222
<i>SAPAddMessage</i>	388
<i>SAPCallMemberSelector</i>	389, 397, 399
<i>SAPDeleteDesignRule</i>	470
<i>SAPExecuteCommand</i>	205, 222, 226, 227, 410, 425
<i>SAPExecutePlanningFunction</i>	218, 400
<i>SAPExecutePlanningSequence</i>	221, 401

API methods (Cont.)	
<i>SAPFixLineSize</i>	469
<i>SAPGetCellInfo</i>	403
<i>SAPGetProperty</i>	197, 409, 428, 435, 437
<i>SAPInsertLine</i>	465
<i>SAPListOfDesignRules</i>	457, 469
<i>SAPLogOff</i>	205, 263, 415
<i>SAPLogon</i>	416
<i>SAPMoveDimension</i>	417
<i>SAPOpenWorkbook</i>	420
<i>SAPSetFilter</i>	216, 395
<i>SAPSetFormat</i>	452, 455, 464
<i>SAPSetPlanParameter</i>	216, 220, 392, 398
<i>SAPSetRefreshBehaviour</i>	423
<i>SAPSetVariable</i>	424
<i>SAPSuppressMessage</i>	442
AppBuilderConfiguration	501, 517, 518
Arguments	332, 349, 460
Arrays	451
Ascending trends	271
Attributes	60
<i>add to hierarchies</i>	146
<i>elements in hierarchies</i>	114
<i>select</i>	85
<i>sort</i>	136
Authorizations	22, 547
<i>characteristics</i>	65
<i>checks</i>	66
<i>objects</i>	547
<i>profiles</i>	547
<i>roles</i>	31
<i>variants</i>	97
<i>work status</i>	227
Automated mode	542
Automatic checks	200, 201
Automatic refresh	410, 436

B

Backend cell locking	224, 231
Background filters	50, 58, 107, 419
<i>adjust</i>	71
<i>by range</i>	68
<i>define via drag and drop</i>	70
<i>exclude elements</i>	111
<i>explicit selection</i>	65
<i>filtering by member</i>	58
<i>link dimension</i>	71

Background filters (Cont.)

- operators* 68
- select source* 60

BexAdvancedMode setting 157

BicsNewLineFillInitial setting 535

BoeConfiguration 501, 523, 524

Boolean operators 179

Bpc_app.config files 497

Break hierarchies 134, 136

Breakpoints 384

Buffers 53

Business add-ins (BADIs) 547

- implement* 440
- RSAO_GET_INITIAL_APPL_CONTEXT* 439, 440
- use values* 441

Business application programming

- interfaces (BAPIs)* 547

Business content 547

Business intelligence 43

Buttons 479

BW Modeling Tools 21

- display characteristics* 51
- hierarchies* 141
- start* 317
- zero suppression* 130

BW server tracing 504, 507, 540

- activate* 508

C

Caching 493

Calculation types 167

Calculations 167

- add advanced calculations* 177
- add dynamic calculations* 173
- add restrictions* 182
- create* 169
- errors* 181
- insert function* 178
- names* 168

Calendar day variables 537

Callbacks 379, 444

- AfterRedisplay* 411, 445
- BeforeFirstPromptsDisplay* 450
- BeforeMessageDisplay* 447
- BeforePlanDataReset* 447
- BeforePlanDataSave* 446
- execute* 444
- register* 437, 444
- unregister* 439
- Workbook_SAP_Initialize* 444

Cell formatting 279

- adjust* 282
- apply new formatting* 279
- data cells* 281
- delete* 282
- result cells* 281

Change mode 196, 221

- automatic display* 198
- automatic switch* 232
- data sources* 197
- switch* 222, 427

Changed data 214, 219

Characteristics 548

- add* 50
- authorization-relevant* 65
- conditional formatting rules* 273
- display* 51
- display hierarchically* 146
- drag and drop* 53, 54
- filter* 58, 395
- filter in row* 72
- format* 280, 453, 454
- hidden* 51
- hierarchies* 93, 138
- move* 417
- move columns* 57
- no defined text* 60
- position* 417
- relationships* 61, 200, 209, 210, 548
- remove* 54
- restrict values* 70
- selection options* 92
- swap order* 55
- technical names* 47, 403
- value list* 367
- value sequence* 56

Charts 305

- design tools* 306
- options* 306
- waterfall* 307

Client profiling statistics 504

clientProfiling setting 501, 517, 520

Cof_app.config files 487, 497, 500, 517

Cof_user_roaming.config files 489

Columns 50

- add* 284, 285, 465
- format* 287, 458
- move* 57
- names* 240
- suppress zeros* 129

Commands 425

- AutoRefresh* 436

Commands (Cont.)

- Hide* 429
- PauseVariableSubmit* 429
- PlanDataClientReset* 427
- PlanDataReset* 426
- PlanDataSave* 426
- PlanDataToChangeMode* 427
- PlanDataToDisplayMode* 427
- PlanDataTransfer* 426
- Refresh* 434
- RefreshData* 436
- RegisterCallback* 437, 444
- Restart* 437
- SetFunctionalArea* 439
- ShowPrompts* 433
- UnregisterCallback* 439

Comments 184

- create* 186
- delete* 187
- edit* 186
- properties* 184
- save* 188
- show/hide* 187
- storage* 493, 530
- store in SAP BW/4HANA* 190
- view context* 189

Common axis 253

Common programming interface

- communication (CPIC) protocol* 511
- enable tracing* 511

Compact display 146

Company profiles 475

- apply by default* 488
- prevent user creation* 488
- set up* 486

CompositeProviders 206, 246, 348, 548

- create* 246
- display field connections* 247
- technical name* 246

Compounding 367

Conditional formatting rules 253, 269

- adjust* 276
- apply to characteristics* 273
- create* 270
- customize visualization* 274
- delete* 278
- disable* 278
- priorities* 272

Configuration 473

- files* 497, 498
- levels* 497, 500
- options dialog* 490

Configuration (Cont.)

- profiles* 476
- SAP Analysis for Microsoft Office*

 - add-in* 500
 - SAP Analysis for Microsoft Office*

 - plug-in* 501
 - technical* 497
 - user interface* 473

- ConnectionServiceConfiguration* 500, 517
- Content assistance* 180
- Context menu* 50

- key figures* 73
- properties* 483

- Conversion* 320, 544

- log* 324, 495
- protocol* 324
- settings* 323, 495
- status* 324

- Convertible objects* 321
- Copied elements* 68
- Crashes* 512
- Cross-query locking* 224
- Crosstabs* 22

- add fields* 50
- add planning data* 196
- add rows and columns* 51, 284
- buffers* 53
- change* 196
- convert into formulas* 313, 315
- customize* 152
- dependent* 256
- display symbols* 296
- filter member* 110
- format new cells* 456
- group* 253, 255
- highlight* 452
- insert new lines* 535
- maximum number* 528
- names* 256
- number of new lines* 234, 428
- optimum cell width and height* 295
- overlap* 53
- properties* 409
- read alias* 408
- remove characteristics* 54
- restore* 316
- settings* 229, 267, 532
- sort* 261
- swap order* 55
- ungroup* 258

- Currency conversion* 156

- enable* 492

Currency translation 156

- from a query definition* 157
- settings* 541
- types* 157

Current data 44

Customer exit variables 80, 548

Customization 152

- elements* 152
- key figures* 154
- results display* 159

D

Data aggregation 54

Data analysis 46, 107

- aggregate data* 54
- customize* 55
- extend* 51

Data cells 281

- format* 459

Data functions 179

Data organization 167

Data privacy popup 519

Data processing 107

Data protection 519

Data records 245

Data reload 243

Data removal 34, 263

- set centrally* 35
- setting* 527

Data source area 50

- added fields* 51
- drag and drop fields* 50

Data sources 21

- alias* 264
- Analysis tab* 23
- available fields* 46
- behavior on opening workbook* 266
- check refresh behavior* 437
- display in change mode* 197
- display prompts* 434
- File tab* 29
- formula-optimized mode* 265
- formulas* 330
- hierarchies* 113
- information* 75
- Information tab* 77
- input-ready mode* 229, 234
- insert* 23, 36
- list of recently opened* 330
- locked* 197, 222
- mode* 101

Data sources (Cont.)

- multiple* 35, 47, 71
- nodes* 47
- planning* 22
- prompts* 263
- properties* 48, 409
- read alias* 403
- refresh* 44, 184, 434, 436
- reset* 289
- reset on opening* 45
- restart* 437
- rules* 298
- select* 27
- settings* 264, 525
- technical names* 24, 246
- types* 28
- update* 44
- view selected values* 105

DataProviders 324

DataSourceConfiguration 501, 523, 525

DataStore Object (DSO) 206, 548

DataUpdateMaximum setting 351

DateTimeConfiguration 501, 523, 529

Debugging 383

- breakpoints* 384
- display toolbar* 383
- example* 383
- watch expressions* 385

Default formatting 267

Default profiles 194, 475, 484

DefaultBWQueryDesigner setting 525

Dependent dimensions 248, 250

- separate dimensions* 251, 252

Dependent tables 254

- highlight* 257

Derivation 208

- activate* 209
- activate for initial values* 210

Descending trends 272

Design Panel 18, 46

- Analysis view* 46
- display* 46
- hierarchies* 148
- key figures* 169
- settings* 538

Design rules 269, 453

- adjust via macros* 452
- copy* 298
- create via macro* 469
- delete* 284
- delete via macro* 470
- list via macro* 469

Design rules (Cont.)

- manage* 297
- manage formats* 283
- manage formulas* 292
- manage new lines* 288
- reset and clear* 266
- texts* 290, 291
- types* 297

Developer tab 380

Development environment 381

Dimensions 548

- derive values* 208
- display as hierarchies* 147
- expand* 147
- filter* 58
- filter by key figures* 119, 121
- filter by most detailed* 122
- format* 280
- hidden* 51
- hierarchies* 138, 139
- link to other reports* 248
- local* 238
- number of elements* 109
- return list* 361
- types* 240
- unlink* 250
- without master data* 202

Disaggregation 548

Display mode 196, 221, 233

- switch* 222, 427

Document list 31

- refresh* 39

Document mode 100

Document variants 100

DocumentCacheFolderPath setting 494

DocumentConfiguration 501, 523, 530

DocumentStores 190, 266

- Editor* 190

DoSelectorHierarchyExplicitSelection

- setting* 116

DPPConfiguration 501, 517, 519

Drilldown reports 51

- remove characteristics* 54
- update* 72

Duplicate values 205, 207

- activate check* 207

Dynamic calculations 167

- add* 173

Dynamic diagrams 305

Dynamic filters 341, 391

E

Embedded mode 520, 542

Embedded profiles 475, 485

Environments 232, 548

- development* 381
- planning* 390

Epm_app.config files 497

Errors 413, 503

- codes* 413
- display* 412
- formula-optimized mode* 331
- messages* 74, 181
- troubleshoot* 503

Exception aggregations 181

Explicit selection 65

- active* 66, 89
- prompts* 88
- save* 66

External keys 355, 396

F

File tab 29, 38

Filter by Measure dialog 124

Filters 58, 108, 110, 419

- add multiple elements* 70
- adjust* 71
- adjust element display* 114
- assignment of values* 531
- attribute values* 60
- by member* 58, 87, 113, 536
- by range* 68
- change* 126
- change display* 115
- components* 372
- current navigation state* 62
- data in hierarchies* 113
- define* 311
- define filter rules* 124
- delete* 128
- dialog box settings* 535
- document* 190, 266
- exclude elements* 111
- explicit selection* 65
- formulas* 341
- insert components* 310
- key figures* 117, 132
- link dimension* 71
- list* 364, 366
- macro* 395
- mass data* 537

Filters (Cont.)	
<i>members</i>	110
<i>number of elements</i>	108
<i>operators</i>	68
<i>planning functions</i>	216
<i>planning sequences</i>	218
<i>query conditions</i>	132
<i>Query Designer</i>	76
<i>remove</i>	217
<i>remove from members</i>	112
<i>row characteristics</i>	72
<i>select source</i>	60
<i>selected values</i>	395
<i>selector</i>	390
<i>static</i>	342, 365
<i>suppress zeros</i>	129
<i>swap members</i>	110
<i>technical configuration</i>	499
<i>transfer values</i>	529
<i>types</i>	107
<i>valid</i>	343
Flat presentation	144, 149
<i>ungroup</i>	151
Format templates	299
<i>define</i>	300
Formatting	269
<i>add rows and columns</i>	284, 285
<i>add texts to new lines</i>	289
<i>adjust</i>	269, 282, 445
<i>apply new formats</i>	279
<i>cells</i>	279
<i>characteristic values</i>	454
<i>characteristics</i>	453
<i>crosstab settings</i>	267
<i>data cells</i>	281, 459
<i>delete</i>	282
<i>formula mode</i>	314
<i>hierarchy nodes</i>	455
<i>manage in design rules</i>	283
<i>member area and data</i>	280
<i>new cells</i>	456
<i>new rows and columns</i>	287
<i>options</i>	294
<i>properties</i>	283
<i>result cells</i>	281, 455
<i>scope</i>	279
<i>scope area</i>	461
<i>standard</i>	296
<i>styles</i>	271
Formula extension (FOX) formulas	549
Formula mode	313
<i>functions</i>	314
Formula mode (Cont.)	
<i>limitations</i>	314
FormulaConfiguration	501, 523, 531
FormulaEditorConfiguration	532
Formula-optimized mode	265, 329, 334
<i>error handling</i>	331
<i>insert data sources</i>	330
<i>switch</i>	330
Formulas	329
<i>add to new lines</i>	291
<i>adjust</i>	293
<i>alias</i>	219, 264, 267, 334, 420
<i>cell range</i>	292
<i>convert</i>	315
<i>create</i>	177, 331
<i>define</i>	292
<i>edit definition</i>	294
<i>filter components</i>	311
<i>info fields</i>	310
<i>inverse</i>	207, 549
<i>location</i>	293
<i>manage with design rules</i>	292
<i>read variables</i>	215
<i>results</i>	332
<i>SAPGetData</i>	333
<i>SAPGetDimensionDynamicFilter</i>	341
<i>SAPGetDimensionEffectiveFilter</i>	343
<i>SAPGetDimensionInfo</i>	344
<i>SAPGetDimensionStaticFilter</i>	342
<i>SAPGetDisplayedMeasures</i>	354
<i>SAPGetInfoLabel</i>	346
<i>SAPGetMeasureFilter</i>	357
<i>SAPGetMeasureInfo</i>	352
<i>SAPGetMember</i>	354
<i>SAPGetSourceInfo</i>	350
<i>SAPGetUniformScaling</i>	339
<i>SAPGetVariable</i>	215, 356
<i>SAPGetWorkbookInfo</i>	349
<i>SAPListOf</i>	360, 441
<i>SAPListOfDimensions</i>	361
<i>SAPListOfDynamicFilters</i>	364
<i>SAPListOfEffectiveFilters</i>	366
<i>SAPListOfMeasureFilters</i>	133, 358
<i>SAPListOfMembers</i>	367
<i>SAPListOfMessages</i>	369, 401, 403, 448
<i>SAPListOfStaticFilters</i>	365
<i>SAPListOfVariables</i>	370
<i>SAPSelectMember</i>	336
<i>SAPSetData</i>	375
<i>SAPSetFilterComponent</i>	372
<i>settings</i>	534
<i>system requirements</i>	330

Formulas (Cont.)	
<i>use in macros</i>	451
<i>validation frequency</i>	532
<i>variables</i>	95
Free characteristics	46, 51
<i>add</i>	52
Free text cells	35
Front-end cell locking	224, 230
Functional areas	361, 440
<i>set</i>	439
Functions	331
<i>arguments</i>	332
<i>types</i>	333
G	
General formatting	49
General settings	263
Global providers	241
Global variants	97
<i>create</i>	98
GridConfiguration	501, 523, 532
Grouping	254
<i>ungroup</i>	258
H	
HanaConfiguration	501, 523, 532
Hierarchical data display	107, 146
<i>group members</i>	149
<i>navigate</i>	147
Hierarchies	113, 138, 549
<i>add attributes</i>	146
<i>add members</i>	150
<i>add new rows</i>	466
<i>change active hierarchy</i>	144
<i>change display</i>	144
<i>change level display</i>	143
<i>collapsed</i>	140
<i>expand</i>	140
<i>expand by default</i>	141
<i>expand/collapse all nodes</i>	141
<i>format nodes</i>	455
<i>format templates</i>	301
<i>group members</i>	150
<i>levels</i>	142
<i>navigate</i>	140
<i>nodes</i>	94, 116
<i>sort data</i>	134
<i>time-dependent</i>	139, 492, 533
<i>ungroup</i>	151
<i>variables</i>	93
Hierarchies (Cont.)	
<i>variants</i>	139
<i>waterfall charts</i>	307
<i>work status</i>	228
I	
IDs	479
IgnoreQueryDesignerVersionCheck	
<i>setting</i>	526
Immediate window	383
Info fields	309, 348–350, 352
<i>language-dependent labels</i>	346
<i>planning</i>	310
InfoAreas	549
<i>display</i>	539
InfoCubes	21, 205, 549
InfoObjects	84, 549
<i>keys</i>	238
<i>master data</i>	202, 205
InfoProviders	21, 205, 237, 348, 549
<i>local</i>	239
<i>missing values</i>	85
<i>technical names</i>	76
Information tab	46, 49, 75, 310
<i>add fields to workbook</i>	77
<i>filters</i>	76
<i>general information</i>	75
Input help	83
<i>call via API method</i>	389
<i>prefilter</i>	199
<i>search</i>	86, 109
<i>settings</i>	535
Input-ready cells	196, 223
Input-ready variables	424
Internal keys	355, 396
Intervals	68, 108
<i>limits</i>	69
Inverse formulas	207, 549
IsCachingDocuments setting	494
J	
Jump targets	190
K	
Key figures	57, 167, 549
<i>apply filter to a dimension</i>	119
<i>apply formatting</i>	270
<i>calculate</i>	167, 169, 171
<i>change filters</i>	126

Key figures (Cont.)

- currency translation 156
- customize 154
- define filter for all dimensions 121
- define rules for filter 124
- delete filters 128
- descriptions 354
- display list 357
- display of zeros and negative values 158
- display/hide 118
- exception aggregations 181
- filter 107, 117, 119
- filter by the most detailed dimension 122
- number formats 154
- properties 352
- restrict 168, 182
- reverse signs 172
- scaling 340
- sort 137
- technical names 405
- types 240

L

Language settings 346

LastDataUpdateMaximum setting 348

Leaves option 115

Link Dimension option 71

Linked reports 248

Local data 237

Local providers 238

- aggregated reports 242
- column name 240
- combine data 246
- create 238
- include in reports 245
- insert query 241
- select 243, 246
- target workspace 239
- technical name 240
- update data 243

Locals window 383, 385

Locking 223

- backend 224
- front end 224
- options 224
- set 224
- settings 230
- unlock 223

Log files 510

Log in 416

- settings 541

Log off 415

M

Macros 379, 480

- adjust design rules 452
- AfterRedisplay 411, 445
- API methods 388
- BeforeFirstPromptsDisplay 450
- BeforeMessageDisplay 447
- BeforePlanDataReset 447
- BeforePlanDataSave 446
- change modes 222
- create 380, 381
- debug 382
- define 480
- embed 382
- enable 380
- insert modules 381
- planning functions 218
- planning sequences 221
- recalculations 226
- reset planning data 226
- run 382
- SAPAddMessage 388
- SAPCallMemberSelector 389, 397, 399
- SAPDeleteDesignRule 470
- SAPExecuteCommand 410, 425
- SAPExecutePlanningFunction 400
- SAPExecutePlanningSequence 401
- SAPFixLineSize 469
- SAPGetCellInfo 403
- SAPGetProperty 409, 428, 435, 437
- SAPInsertLine 465
- SAPListOfDesignRules 457, 469
- SAPLogOff 415
- SAPLogon 416
- SAPMoveDimension 417
- SAPOpenWorkbook 420
- SAPSetFilter 395
- SAPSetFormat 452, 455, 464
- SAPSetPlanParameter 398
- SAPSetRefreshBehaviour 423
- SAPSetVariable 424
- SAPSuppressMessage 442
- save planning data 227
- security 380
- steps 384
- syntax rules 386
- toggle buttons 481

- use formulas 451

Mandatory variables 80, 89

Master dimensions 248, 250

- separate dimensions 251

Master tables 253, 256

- highlight 257
- move 257

Mathematical functions 178

Member combination 335, 340

Members 58, 214, 216, 220, 274

- customize 152
- display 59
- display attributes 60
- filter 113
- filter and swap with 110
- group 149
- remove filters 112
- repeat 267, 295
- return 354
- search 59

Menu groups 479

- add 482

Menus 479

Merged reports 253, 254

Messages 74

- backend system 526
- classes 370
- display 369, 447
- display settings 539
- Hello world! 388
- ID 388, 443
- IDs 370
- severity 369, 448
- show suppressed messages 512
- suppress 442

MinorVersion setting 501, 517, 521

Models 231, 550

- environments 232

Modules 381

Monitoring 386

Moving Average operator 175

Moving Maximum Value operator 174

Moving Minimum Value operator 173

MultiProviders 21, 206, 348

My Documents tab 32

N

Navigation 43, 550

- extended reports 247
- hierarchical displays 147
- hierarchies 140

- linked reports 248

Navigation (Cont.)

- macros 384
- queries 46
- undo 74

NavPaneConfiguration 501, 523, 533

Negative values 158

New line validation 200, 533

- derive values 208
- determine rules 235
- not used 210
- properties 201
- switch off 202

NewLinesConfiguration 501, 523, 533

Nodes 47

- expand 147

NoScaling option 377

Number formats 154

O

Object lists 360

OfficeConfiguration 501, 517, 520

Olympic rank number operator 176

Olympic ranking lists 176

One-dimensional arrays 448, 451

Online analytical processing (OLAP) 550

Open Database Connectivity (ODBC)

- connections 496

Operators 124, 169, 173, 178, 272

- Boolean 179
- settings 543

Optional variables 89

Options dialog 490

- advanced 491
- conversion 495
- platform 493
- user tab 491

P

Parallel processes 526

Passwords 27

Paste from clipboard 68, 208

Paste from file 68

Pause Refresh function 29, 72, 279

- unavailable functions 72

Percentage contribution operator 177

Percentage difference operator 170

Percentage functions 179

Percentage share operator 171

Planning	22, 193	PlanningConfiguration	501, 523, 534
<i>add new data cells</i>	198	Platform settings	493
<i>automatic checking of new rows</i>	200	Predelivered templates	28
<i>change and display mode</i>	221	Preferred platform	25, 38, 493, 526, 527
<i>change data cells</i>	196	Priorities	272
<i>define logic</i>	446	Processing statistics	504
<i>define mode</i>	231	Profile-relevant settings	518
<i>define new values</i>	198	Profiles	474
<i>define number of new lines</i>	234	<i>add new elements</i>	479
<i>determine system to save data</i>	230	<i>create</i>	474, 475
<i>display tab</i>	194	<i>customize</i>	476
<i>double value combinations</i>	205	<i>default</i>	475
<i>embedded</i>	400	<i>delete elements</i>	484
<i>environment</i>	390	<i>embed in a workbook</i>	485
<i>functions</i>	193, 211, 550	<i>folder path</i>	489
<i>input-ready mode</i>	234	<i>images</i>	489
<i>manual</i>	196	<i>prevent user creation</i>	488
<i>models</i>	231	<i>rearrange elements</i>	477
<i>new line validation</i>	235	<i>set as default</i>	484
<i>objects</i>	212, 233, 398	<i>show/hide</i>	477
<i>paste new value combinations</i>	208	Profiling	504
<i>recalculate data</i>	426	<i>activate</i>	506
<i>refresh objects</i>	233	<i>mode</i>	504, 520
<i>reset</i>	426	<i>statistics</i>	504, 506
<i>save</i>	227, 426	<i>workbooks</i>	509
<i>sequences</i>	218, 550	Prompts	79, 80, 263
<i>settings</i>	229, 534	<i>change values</i>	106
<i>successful execution of functions</i>	401	<i>combine</i>	264
<i>undo changes</i>	226	<i>default values</i>	81
<i>unwanted values</i>	209	<i>define</i>	83
<i>update data</i>	375	<i>define input-ready variables</i>	424
<i>upload values from file</i>	211	<i>display</i>	434
<i>values from other dimensions</i>	208	<i>display options</i>	82
<i>values without master data</i>	202	<i>enter text</i>	96
<i>verify system</i>	197, 213	<i>explicit selection</i>	89
<i>without new line validation</i>	210	<i>hierarchies</i>	93
Planning functions	211	<i>merge</i>	82
<i>configure</i>	213	<i>multiple hierarchy nodes</i>	94
<i>define filters</i>	216	<i>multiple values</i>	87
<i>define input-ready variables</i>	398	<i>save values</i>	105
<i>define variables</i>	214	<i>selection options</i>	92
<i>execute</i>	217, 400	<i>selector</i>	390
<i>integrate</i>	211	<i>store with workbook</i>	263
<i>process changed data</i>	214	<i>value range</i>	91
<i>search</i>	212	<i>variants</i>	96
<i>start using a macro</i>	218	<i>view selected values</i>	104
Planning sequences	211, 218	Prompts dialog	81
<i>add</i>	218	<i>adjust behavior</i>	80
<i>define input-ready variables</i>	398	<i>custom logic</i>	450
<i>execute</i>	220, 401	<i>define variables with values</i>	79
<i>properties</i>	219	<i>display</i>	433
<i>variables</i>	220	<i>formula variables</i>	95

Prompts dialog (Cont.)		Ranking numbers	176
<i>hierarchy variables</i>	93	Reactivation	512
<i>open</i>	79	Read-only user profiles	489
<i>prompts as selection options</i>	92	Recalculate function	196, 201, 225
<i>select attributes</i>	85	Recalculated data	218, 225
<i>select multiple values</i>	87	Redo action	74
<i>select value range</i>	91	Refresh All function	44, 184, 233, 261, 263, 528
<i>select values</i>	81, 83	<i>setttings</i>	262
<i>settings</i>	543	Refresh behavior settings	261
<i>show all master data values</i>	85	<i>force prompt</i>	261
<i>texts as prompts</i>	96	Reload areas	243
<i>value display</i>	84	Remote function call (RFC)	509
<i>value help</i>	84	<i>traces</i>	518
<i>variant mode</i>	100	RemoveDataBeforeSaving setting	35
<i>variants</i>	100, 102	Reports	237
Properties	409	<i>conditional formatting rules</i>	269
<i>view</i>	48, 49	<i>extend with formulas</i>	291
Protection password	326	<i>extend with local data</i>	237
		<i>format</i>	269
		<i>grouping</i>	254
		<i>include local providers</i>	245
		<i>link dimensions</i>	248
		<i>merge</i>	253
		<i>settings</i>	261
		<i>ungroup</i>	258
		Report-to-report interface (RRI)	190
		Reset option	266
		Restart	437
		Restrictions	182
		Result cells	281
		<i>format</i>	455
		Results	159
		<i>define</i>	161
		<i>show/hide</i>	159
		Reverse engineering	457
		<i>tuples</i>	460
		Roles	550
		Rows	285
		<i>add</i>	284, 285, 465
		<i>add text</i>	289
		<i>adjust height</i>	286
		<i>delete</i>	288
		<i>fix row height</i>	286
		<i>format</i>	287, 458
		Rules	124, 272, 453
		<i>adjust</i>	277
		<i>change</i>	126
		<i>copy</i>	298
		<i>logic</i>	125
		<i>types</i>	297

Q

R

S

SAP Analysis for Microsoft Office 17
 add-in settings 500, 517, 520
 charts 307
 configure 473
 create first workbook 21
 display version 91
 extend ribbon 482
 format templates 222
 migrate analysis views 496
 multiple active platforms 31
 navigate 43, 46
 objects 321
 overview 17
 planning functions 193
 plug-in settings 497, 501, 507, 523
 reactivate add-in 512
 results 161
 tools 313
 user interface 473
 versions 33, 496, 521
SAP Analytics Cloud 21
SAP BEx Analyzer 89, 320
 convert workbooks 320
 objects 321
 settings 495
SAP Blue 28
SAP Business Explorer (SAP BEx) 89, 550
 conditions 132
 display settings 539
SAP Business Planning and Consolidation
 (SAP BPC) 22, 194, 229, 231, 548
 plug-in settings 497
SAP Business Warehouse (SAP BW) 21, 61
 display settings 539
 hierarchies 138
 integrated planning 22, 211
 login 26
 member grouping 149
 queries 193
 query runtime statistics 541
 replace connections 494
 retrieve data 315
 retrieve information 440
 RRI 190
 views 61
SAP BusinessObjects Business Intelligence 22
 analysis views 319
 comments 188
 global variants 98

SAP BusinessObjects Business Intelligence
 (Cont.)
 login 24
 save workbooks 30
 settings 523, 524
 skip login 25
SAP BW workspaces 237
 create 238
SAP BW/4HANA 21, 205, 266
 store comments 190
SAP connector for Microsoft .NET 517
 trace 509
SAP Enterprise Performance Management
 (SAP EPM) 497
 performance trace 506
SAP GUI 27
SAP HANA 21
 analytic views 61, 64
 calculated views 61, 65
 replace connections 494
 settings 533
SAP Lumira, designer edition 316
SAP NetWeaver 22, 509
 login 24
Save settings 31
SaveAs1xByDefault setting 33
Scaling 340
Scaling factors 154
 no scaling option 376
 show/hide 155
 specify 154
 sum 164
Scope 279
 define axis parameters 464
 define scope area 461
 options 280
Secure network communications (SNC) 539
Selected elements 67
Selection options 92
 operators 92
Selection types 373
Selector modes 337
SelectorConfiguration 501, 523, 535
Self-service business intelligence 43
Separators 70, 88, 440, 479
SetOnly option 376
Severity 448
 levels 369
SID tables 203
 update 204

T

Single sign-on (SSO) 492
 certificate 527
Single-element selections 184
Sort ascending 134
Sort descending 134
Sorting 134
 attributes 136
 display types 136
 elements 135
 hierarchies 136
 key figures 137
 measure 137
 options 134
 refine 135
Split buttons 479
Standard deviation 164
Static filters 341, 342
 list 365
Statistical events 509
Status symbols 271
Step into option 385
Step out option 385
Step over option 385
Steps 384
Strings 440, 451
Styles 28, 269, 298
 apply 302
 copy 301
 create 280, 299
 custom style sheets 300, 301
 default 302
 define 300
 delete style sheets 304
 elements 272
 export style sheets 303
 import style sheets 304
 modify 300
 name 302
 options 271
 save 302
 standard format templates 299
Subnodes 147
 collapse 148
Support mode 504
SupportAutomatedOffice setting 520
SupportConfiguration 501, 517, 520
Swap Axes button 57
Syntax rules 386
System alias 265

Table RSADMIN 200
Table RSDDSTAT_OLAP 540
Target currencies 156
Target systems 420
TaskPaneConfiguration 501, 523, 538
Technical configuration 497
 basics 497
 change 498, 500
 detail view 500
 dialog 498
 filters 499
Technical keys 152, 405
Technical names 24, 32, 40, 76, 83, 239, 246,
 329, 339, 350, 420
 hide 48
 show 47
Termination dialog 541
Threshold values 124, 274
Time stamps 529
Toggle buttons 479
 macros 481
Tools 313
 convert crosstabs into formulas 313
 create web applications 316
 Query Designer 317
Top-down distribution 548
Totals 49, 161
 average 164
 define position 160
 hide/reset 165
 maximum 161
 median 162
 minimum 161
 show/hide 159
 standard deviation 164
 sum 163
 sum of rounded values 164
 total number of detailed values 163
 variance 165
Trace tool monitor 507
Transaction
 RSBBS 190
 RSCUR 157
 RSTT 507
 RSWSP 238, 246, 247
 RSWSPW 238
 SE18 440
 SE38 200, 203, 207, 209, 210
 SE91 370

Troubleshooting 503

customize 506

modes 503

Tuples 459, 468

reverse engineering 460

Two-dimensional arrays 448, 451

Two-factor authentication 524

U

UICommonConfiguration 501, 523, 539

Undo action 74

Update options 39, 44

UseNewLinesLegacyMode setting 202

User interface 316, 317

create profiles 474

customize 473

hide/show components 429

planning tab 194

settings 539

User profiles 474, 486, 487, 518

read-only 489

User settings 491, 498

User-defined hierarchies 150

User-specific variants 97

change type 98

create 97

UtilitiesConfiguration 502, 523, 540

V

Value help 84

attributes 85

Value ranges 91

Value recognition 198

VariableConfiguration 502, 523, 542

Variables 80, 214, 550

list 370

merge 81, 82, 101, 104, 264, 543

pause execution 429

planning functions 214

planning sequence 220

properties 356

protect 216

read using formulas 215

settings 542

technical names 83

transfer 372, 420

types 80

Variants 96

adjust 102

create 97

Variants (Cont.)

delete 103

hierarchies 139

modes 100

settings 98, 103

technical names 98

use 102

VBA debugger 383

VersionConfiguration 501, 517, 521

Versions 139

Views 318

copy 318

delete 319

insert 318, 319

save 318

Visual Basic for Applications (VBA) 379, 382

crosstab names 256

refresh 434

Visualization 274, 275

W

Watches 385

Waterfall charts 307

hierarchies 307

insert 308

settings 544

WaterfallChartConfiguration 502, 523, 544

Web applications 316

Wildcard searches 28

Work status 227, 551

criteria 228

hierarchies 228

Workbook profiling 509

statistics 509

Workbook_Open event 444

WorkbookConversionConfiguration 502, 523, 544

Workbooks 22, 550

add info fields 348, 350, 352

add information fields 77

add planning functions 211

conversion settings 544

convert 320

create 23

default 22, 30, 35, 36, 491

define 35

delete 40

embedded profiles 485

enable caching 493

enhance 237

extend 305

Workbooks (Cont.)

location 36

log off 415

merge prompts 82

merge variables 101

number of formats 531

open 37, 420

planning sequences 218

properties 409

protect 325

refresh 39, 44, 324, 495

remove data 34

remove protection 326

rename 39

replace system 494

SAP Analysis for Microsoft Office

versions 528

save 30, 32

save comments 188, 189

save locally 33

save prompt values 105

search 38

settings 263, 530

Workbooks (Cont.)

technical names 32, 40, 420

variables 75

verify systems 197

version 1.x 33

Workspaces 237

dimensions 241

graphical view 247

key figures 241

local providers 241

select 243, 245

X

XML 482

formats 303

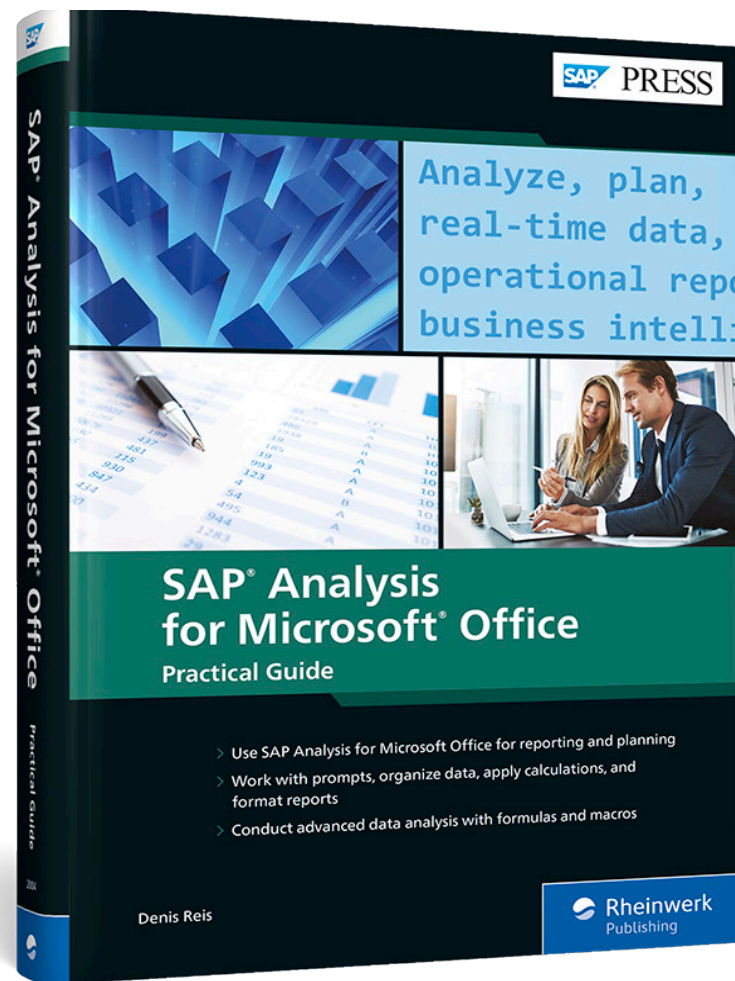
Z

Zero suppression 129

structures 130

toggle function 131

Zeros 159



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