# Content

1. **Getting Started.**
   - 1.1 What is SAP BusinessObjects Analysis, edition for Microsoft Office? ........................................... 5
   - 1.2 Introduction to the Analysis Plug-in. ........................................................................................................ 5
   - 1.3 Introduction to the EPM Plug-in. ................................................................................................................ 6
   - 1.4 Introduction to the BusinessObjects Planning and Consolidation Plug-in (BPC plug-in). ..................... 8

2. **About this Guide.**
   - 2.1 About the documentation set ................................................................................................................. 9

3. **Installation.**
   - 3.1 System Requirements. .......................................................................................................................... 11
   - 3.2 To install SAP BusinessObjects Analysis, edition for Microsoft Office. ........................................... 11
   - 3.3 Parallel installation of Analysis and other SAP Add-Ins. ...................................................................... 12
   - 3.4 To install the Analysis BI platform Add-On for Scheduling for the Analysis Plug-in. ....................... 13
   - 3.5 To uninstall SAP BusinessObjects Analysis, edition for Microsoft Office. .................................... 14

4. **Settings.**
   - 4.1 To Maintain Settings in the File System. .............................................................................................. 16
   - 4.2 Settings for the Analysis Add-in. ........................................................................................................... 17
   - 4.3 Settings for the Analysis Plug-in. .......................................................................................................... 21
   - 4.4 Settings for the EPM Plug-in. ............................................................................................................... 39
   - 4.5 Configuring Files with SAP Setup. ...................................................................................................... 40

5. **Administration for the Analysis Plug-In.**
   - 5.1 Supported BI Platforms. ..................................................................................................................... 42
   - 5.2 Upgrade. ............................................................................................................................................... 42
   - 5.3 To configure the load behavior of the Analysis Add-In. ..................................................................... 43
   - 5.4 Defining system connections to SAP BusinessObjects Business Intelligence. .................................. 44

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- SAP BusinessObjects Business Intelligence Platform. ............................................................................. 42
- SAP NetWeaver Server. ............................................................................................................................... 43
- SAP BW/4HANA. ........................................................................................................................................ 44
- Migrating to Analysis 2.4. ............................................................................................................................. 44
- Using existing Workbooks and Presentations in Analysis 2.4. ................................................................. 46
- Saving a workbook with 1.x format. ............................................................................................................... 47
- To define a system connection to SAP BusinessObjects Business Intelligence ........................................ 49
- Creating and managing BW system connections in SAP BusinessObjects Business Intelligence ............ 51
5.5 Defining system connections to SAP NetWeaver ........................................ 52
5.6 Defining system connections to SAP BW/4HANA .................................... 53
5.7 Configuration for SAP HANA ........................................................... 54
   To create an SAP HANA connection on the BI platform ....................................... 55
   To create a local SAP HANA connection ........................................................... 57
   Troubleshooting for SAP HANA HTTP connections .............................................. 58
5.8 Caching documents .............................................................................. 59
5.9 User Interface Customization ............................................................... 60
5.10 Defining style sets for crosstabs .......................................................... 60
5.11 Query runtime statistics ........................................................................ 61
5.12 Security ............................................................................................ 62
   User management and authentication ................................................................. 62
   Authentication and single sign-on ..................................................................... 63
   Authorizations ............................................................................................... 64
   Network and communication security .............................................................. 68
   Data Storage Security .................................................................................... 70
   Security for additional applications ................................................................. 70
   Logging security relevant events ..................................................................... 70
   General security recommendations ................................................................. 71
5.13 Logging ............................................................................................. 71
5.14 Language Recognition and Processing .................................................. 72
   Supported languages ....................................................................................... 73
5.15 Lifecycle Management ........................................................................... 74
   Lifecycle Management with Business Intelligence Platform ............................... 74
   Life-Cycle Management with SAP NetWeaver .................................................... 75
5.16 Troubleshooting ................................................................................... 75
   Support Settings ............................................................................................. 76
   End-to-End Tracing .......................................................................................... 78
   To enable the Analysis Add-In after system crash (Microsoft Office 2010 and higher) ............................................................................................................... 79
6 Administration for the EPM Plug-in ......................................................... 80
6.1 Creating and Configuring Connections ................................................. 80
   Creating Local Connections ............................................................................ 80
   Creating Planning and Consolidation Connections .......................................... 103
   Creating SAP BusinessObjects Enterprise Connections .................................... 106
   Creating the SAP BW (INA Provider) Connection ............................................ 115
   User Preferences Configuration ...................................................................... 117
6.2 Deploying the Same Options for Several Users ...................................... 117
6.3 EPM Plug-in for Microsoft Office Technical Log Configuration .............. 128
6.4 EPM Plug-in Report Size Limitations ................................................... 130
6.5 General Limitations .............................................................................. 131


1  Getting Started

1.1  What is SAP BusinessObjects Analysis, edition for Microsoft Office?

SAP BusinessObjects Analysis, edition for Microsoft Office, is a Microsoft Office Add-In that allows multidimensional analysis of OLAP sources. It consists of the following components:

- Analysis Plug-in
- Enterprise Performance Management Plug-in
- Business Planning and Consolidation plug-in

The plug-ins include versions for Microsoft Excel and Microsoft PowerPoint. They are installed in one common installation. After the installation, the Analysis plug-in and the Enterprise Performance Management (EPM) plug-in are available as separate tabs in the ribbon. The Business Planning and Consolidation plug-in is available in the interface as a pane named Activity.

In the edition for Microsoft Excel, you can use the plug-ins in one workbook. The sheet type defines which plug-in is active. The available sheet types are: Analysis, EPM, Neutral and Non-COF. Empty sheets are defined as neutral. If you add a data source into a neutral sheet with one plug-in, the corresponding sheet type is assigned. If you switch within a workbook to a sheet of another type, the respective plug-in is enabled automatically. To reset a sheet to type neutral, you have to remove all inserted data sources from the sheet.

Sheets of type Non-COF are not checked from the Analysis Add-In. It might be useful to assign this type to sheets that do not contain Analysis content to improve the performance.

In the edition for Microsoft PowerPoint, you can add data sources with the plug-ins into one presentation and define the analysis with the respective plug-in.

The Business Planning and Consolidation plug-in pane can be displayed for each tab in the Ribbon: Analysis and EPM.

1.2  Introduction to the Analysis Plug-in

The Analysis plug-in allows multidimensional analysis of OLAP sources in Microsoft Excel, MS Excel workbook application design, and intuitive creation of BI presentations with MS PowerPoint. The Plug-in is available for the following Microsoft Office versions:

- Microsoft Office 2016 (Excel and PowerPoint)
- Microsoft Office 2013 (Excel and PowerPoint)
- Microsoft Office 2010 (Excel and PowerPoint)

In the Analysis plug-in, you can use SAP Queries, query views and InfoProvider as data sources. The data is displayed in the workbook in crosstabs. You can insert multiple crosstabs in a workbook with data from different
sources and systems. If the workbook will be used by different users, it is also helpful to add info fields with information on the data source and filter status.

Using the design panel, you can analyze the data and change the view on the displayed data. You can add and remove dimensions and measures to be displayed easily with drag and drop. To avoid single refreshes after each step, you can pause the refresh to build a crosstab. After ending the pause, all changes are applied at once.

You can refine your analysis using conditional formatting, filter, prompting, calculations and display hierarchies. You can also add charts to your analysis. If you want to keep a status of your navigation, you can save it as an analysis view. Other users can then reuse your analysis.

For more sophisticated workbook design, the Analysis plug-in contains a dedicated set of functions in Microsoft Excel to access data and meta data of connected BW systems. There are also a number of API functions available that you can use with the Visual Basic Editor, to filter data and set values for BW variables.

You can also plan business data based on the current data in your data source. You can enter the planning data manually and you can enter planning data automatically using planning functions and planning sequences of SAP BW Integrated Planning.

The Analysis plug-in, must be installed on your local machine. You can connect directly to a SAP BW system or you can connect via a to include data sources. You can use the following platforms to store and share workbooks and presentations: SAP BusinessObjects business intelligence platform, SAP NetWeaver platform and SAP BW/4HANA.

Using the business intelligence platform enables you to save workbooks and presentations with their navigation state in a central management system and to reuse these analysis views in other applications such as SAP Crystal Reports or Analysis, OLAP edition.

To get a first impression of the look and feel of the Plug-in, you can have a look at the Analysis eLearning tutorials. They are available in the SAP Community Network at http://scn.sap.com/docs/DOC-7679.

1.3 Introduction to the EPM Plug-in

The EPM Plug-in is a plug-in for Microsoft Office Excel and Microsoft Office PowerPoint.

The EPM Plug-in is designed to give access to SAP Business Objects EPM Solutions product data and perform reporting and analysis on this data.

The plug-in permits analysis of data from several EPM solutions at the same time.

For certain data sources, the plug-in also permits to enter data and save it to the database.

You access the various data sources via connections. For more information on connections, see Creating and Configuring Connections [page 80].

Note

As a consequence, depending on the connection you use, some EPM features are not supported and therefore the commands are automatically hidden or greyed out.
Data Retrieval

The EPM Plug-in enables you to analyze the data of the following OLAP data sources:

- Microsoft SSAS cubes, including SSAS cubes created with SAP BusinessObjects Financial Consolidation, cube designer.
- SAP NetWeaver BW InfoCubes, including BW InfoCubes created with SAP BusinessObjects Financial Consolidation, cube designer.
- SAP BusinessObjects Profitability and Cost Management models.
- SAP BusinessObjects Strategy Management models.
- SAP BusinessObjects Planning and Consolidation, version for SAP NetWeaver, models - version 10.0 and version 10.1.
- SAP BusinessObjects Planning and Consolidation, version for the Microsoft platform, models.
- SAP HANA analytic views.

Data Input

You can also enter data against the following data sources:

- SAP NetWeaver BW InfoCubes
- SAP BusinessObjects Planning and Consolidation, version for SAP NetWeaver, models - version 10.0 and version 10.1.
- SAP BusinessObjects Planning and Consolidation, version for the Microsoft platform, models.

When working with a Planning and Consolidation 10.0, the Data Manager tab is added to the Microsoft Office Excel ribbon. The Data Manager is a Planning and Consolidation module that helps you move data into the system, copy or move data within and across applications, and export data from an application for use in an external tool. In addition, the Data Manager supports mapping and complex transformations of data. The Data Manager also allows you to export transactional and master data from an application within Planning and Consolidation to a file that you can use in an external tool. For more information, see the Data Manager section.

Retrieving Data from 7.5 Data Sources

In replacement of Extended Analytics Analyzer 7.5, you can use the EPM Plug-in 2.1 to retrieve and analyze data that comes from the following 7.5 data sources:

- SSAS cubes created with SAP BusinessObjects Financial Consolidation, cube designer.
- SAP NetWeaver BW InfoCubes created with SAP BusinessObjects Financial Consolidation, cube designer.
- SAP BusinessObjects Planning and Consolidation, version for SAP NetWeaver, models.
- SAP BusinessObjects Planning and Consolidation, version for the Microsoft platform, models.

Note

Use local connections (.oqy files) to connect to the data sources though ODBO.
1.4 Introduction to the BusinessObjects Planning and Consolidation Plug-in (BPC plug-in)

The BPC plug-in is a component to SAP BusinessObjects Analysis, edition for Microsoft Office, as of version 2.3.

The plug-in allows to execute the Microsoft Excel or PowerPoint-related tasks for the activities defined on the web client of SAP BusinessObjects Planning and Consolidation, as part of the Business Process Flows feature.

**Note**

The plug-in supports only SAP BusinessObjects Planning and Consolidation 10.1 Support Package 10, version for SAP NetWeaver or higher.

BPC Plug-in Interface Areas

The plug-in is available in the interface as a pane named Activity. This pane can be displayed for each tab in the Ribbon: Analysis and EPM.
2  About this Guide

2.1  About the documentation set

The documentation set for SAP BusinessObjects Analysis, edition for Microsoft Office, comprises the following guides and online help products:

➤ Tip

The guides and tutorials are regularly updated and enhanced. Make sure that you have the latest version by checking the SAP Help Portal and SAP Community Network on a regular basis.

Administrator Guide

The Administrator Guide contains detailed information that a user needs to install, configure and administer the edition for Microsoft Office. The guide is available on the SAP Help Portal.

User Guide

The User Guide contains the conceptual information, procedures and reference material that a user needs to create and analyze Microsoft Excel workbooks and Microsoft PowerPoint slides with the edition for Microsoft Office. There are two user guides for Analysis: the Analysis Plug-in User Guide and the EPM Plug-in User Guide. The guides are available on the SAP Help Portal.

Online Help

The online help contains the same information as the User Guide. It is included in the plug-ins. To access context sensitive help, move the mouse cursor to a field in the ribbon and select F1. For dialogs, you can access context sensitive help by selecting F1 when the dialog is open.

What’s New Guide

The What’s New guide for SAP BusinessObjects Analysis, edition for Microsoft Office, provides a complete list of the new and modified features for SAP BusinessObjects Analysis since the previous release. The guide is available on the SAP Help Portal.
eLearning Tutorials

The tutorials show you how to use SAP BusinessObjects Analysis. They give you a quick introduction to different features so that you can learn the basics of working with the Add-In. They also give you a first impression of the look and feel. The tutorials are available in the SAP Community Network at http://scn.sap.com/docs/DOC-7679?refer=product-help.
3 Installation

3.1 System Requirements

Before installing Analysis, ensure that the following components are installed on the local machines:

- Microsoft Office 2016, Microsoft Office 2013 or Microsoft Office 2010 (Excel and PowerPoint)
- Microsoft .NET Framework 4.5 Redistributable Package

If you use the SAP BusinessObjects Business Intelligence 4.1 platform with Analysis, Microsoft .NET Framework 4.5 or higher must be installed on the client PC.

**Note**

During installation, the Analysis setup checks whether Microsoft .NET Framework 4.5 is installed on the PC. If not, it provides a link to download this software. The Analysis setup also checks whether Primary Interop Assemblies are installed. If not, the setup installs this component automatically.

A list of all supported operating systems for SAP BusinessObjects Analysis, edition for Microsoft Office, is available on SAP Service Marketplace at [http://service.sap.com/pam](http://service.sap.com/pam) where you can enter SBOP ANALYSIS OFFICE into the search box and choose the Search in PAM button to retrieve the information.

As data sources Analysis takes the data from the BW system of SAP NetWeaver 7.0 or higher releases of SAP NetWeaver. For more information about SAP NetWeaver Business Warehouse, see the SAP Help Portal at [http://help.sap.com](http://help.sap.com).

Before users can begin working with Analysis, you have to create at least one connection object to a BW system. To define these data source connections, you require SAP BusinessObjects Business Intelligence XI 4.1 SP5 as platform. It is also possible to run Analysis with SAP NetWeaver as platform on your PC, using the SAP GUI for connection information. For more information about the platforms, see the corresponding guides on SAP Help Portal at [http://help.sap.com](http://help.sap.com).

**Related Information**

To install SAP BusinessObjects Analysis, edition for Microsoft Office [page 12]
To install the Analysis BI platform Add-On for Scheduling for the Analysis Plug-in [page 14]
3.2 To install SAP BusinessObjects Analysis, edition for Microsoft Office

Context

Analysis is a component of the SAP Front End installation. You can install Analysis centrally from an installation server or locally from a distribution medium such as DVD.

To install SAP Front End, follow the instructions in the installation steps under “Installation of the SAP Front End” in the SAP Front End Installation Guide on SAP Service Marketplace at http://service.sap.com/instguides.

For Microsoft Office 2010, Microsoft Office 2013 and Microsoft Office 2016, Analysis consists of the following installable components:

- Analysis plug-in
- Enterprise Performance Management plug-in
- Business Planning and Consolidation plug-in

Procedure

1. Start the installer file (.exe).
   The SAP Front-End Installer wizard appears.
2. Select Next >.
3. Select the components you want to install, in the component list of the SAP Front End Installer dialog box:
   ○ The Common Office Framework component is always selected and can not be deselected. If you select Add In is always active, the Add-in is always enabled when you open Microsoft Excel or PowerPoint (load behavior 3).
   ○ Select Analysis plugin, to install the Analysis plug-in.
   ○ Select Enterprise Performance Management plugin, to install the EPM plug-in.
   ○ Select Business Planning and Consolidation plugin, to install the BPC plug-in.
4. Choose Next.
   The SAP Front End Installer prompts you to confirm or change the target directory for Analysis.

   **Note**

   With the installation of Analysis 2.4, the configuration and setting values of the Analysis plug-in are set to the default values.
   Changes made in former installations, for example displaying the planning group in the ribbon, are not adopted automatically.

   ○ Select Enterprise Performance Management plugin, to install the EPM plug-in.
   ○ Select Business Planning and Consolidation plugin, to install the BPC plug-in.

The default path is C:\Program Files\SAP BusinessObjects\ Analysis.
5. If necessary, change the target directory and choose Next to start the installation.
6. In the confirmation screen, choose Done.

Results

The selected components of Analysis, edition for Microsoft Office have now been installed and are ready to use in Microsoft Excel and PowerPoint.

Related Information

To configure the load behavior of the Analysis Add-In [page 47]

3.2.1 Parallel installation of Analysis and other SAP Add-Ins

If the client PCs have other SAP Add-Ins installed like the SAP Business Explorer, be aware of the following:

- It is possible to install the other Add-Ins and SAP BusinessObjects Analysis, edition for Microsoft Office on one machine.
- Parallel activation of other Microsoft Excel SAP Add-Ins and Analysis, is not supported. For example, users cannot work with a Business Explorer Analyzer workbook and an Analysis workbook in parallel in the same Microsoft Excel application. Only one of these Microsoft Excel Add-Ins can be active at any one time.

You can configure the Analysis Add-In Launcher to define the starting behavior of Analysis.

Related Information

Configuring the Analysis Add-In Launcher [page 48]
3.3 To install the Analysis BI platform Add-On for Scheduling for the Analysis Plug-in

Context

After the installation of the Analysis BI platform Add-On, you can schedule Analysis workbooks in the BI Launch Pad and the Central Management Console.

The following prerequisites must be met for the installation:

- Administrative rights
- Microsoft .NET Framework 3.5 SP1 or higher
- BI platform 4.1 SP5
- Workbooks saved on BI platform with file format .xlsx or .xlsm.
- 64-bit operating system
- Adaptive Job Server is installed

Procedure

2. Log on to BIP node on Windows (with admin rights).
3. Execute setup.exe.
   - The installer checks if the prerequisites are met.
4. Select the setup language.
5. Accept the destination folder.
   - The folder is entered automatically and cannot be changed. The Add-On must be installed in the BusinessObjects folder in the Windows explorer.
7. Log on to BI platform as administrator.
8. After the installation, go to the CMC and choose Servers → Core Services.
10. In the section Analysis Scheduling Service, enter the path to the BI platform Add-On installation.
    - For example: C:\Program Files (x86)\SAP BusinessObjects\Analysis Precalculation\BiPrecalculation.exe
Results

You can now schedule Analysis workbooks stored on BI platform.

Note that the connection to BI platform and BW / HANA system must be configured as SSO to schedule an Analysis workbook.

3.4 To uninstall SAP BusinessObjects Analysis, edition for Microsoft Office

Prerequisites

Before uninstalling, make sure that Analysis is not running.

Procedure

1. In the Windows Control Panel, choose Add or Remove Programs. A list of installed applications appears.
3. Choose Next.
4. In the confirmation screen, choose Done.

Results

Analysis, edition for Microsoft Office is uninstalled and a log file generated.
4 Settings

Context

You can specify settings for the Analysis Add-in, the Analysis Plug-in and the EPM Plug-in. The settings can be predefined for individual users or user groups as default settings.

The settings are stored in the file system of the client PCs.

In former releases (1.x), the settings were specified in the registry. The registry settings cannot be migrated to the file system and have to be specified in the file system again.

Results

You set the default values of the Analysis settings for the users. Users can change the default settings, if required.

Related Information

To Maintain Settings in the File System [page 16]
Settings for the Analysis Add-in [page 17]
Settings for the Analysis Plug-in [page 21]
Settings for the EPM Plug-in [page 39]
Configuring Files with SAP Setup [page 40]

4.1 To Maintain Settings in the File System

Context

The Analysis specific settings are stored in the file system. You can change existing settings in the file system of the client PC.

As an administrator, you maintain the settings in three files: Cof_app.config, Ao_app.config and Epm_app.config. The files are located in the file system under C:\ProgramData\SAP\Cof. In these files, you can also define if a user has the rights to change a setting locally.

As a user, you can change the settings in the file system under Users\<UserID>\AppData\Roaming\SAP\Cof. The file names for changing the settings are cof_user_roaming.config, ao_user_roaming.config and
epm_user_roaming.config. These files are created automatically if you change a setting in the settings dialog. You can also create the files manually.

**Procedure**

1. Open the file system.
2. Navigate to the folder C:\ProgramData\SAP\Cof and open the file where you want to change the setting.
3. Navigate to the setting you want to edit and make the required changes. To be able to change settings in these files, you need admin rights.
   The settings are maintained in the settings list below the configSections area.
4. Define if a user should be able to change a setting locally.
   In the configSections area, each setting has a configuration level defined. The default level is UserRoaming. This means that a user can change the setting locally.
   If you change the configuration level to PerMachine, the setting can no longer be changed by a user locally.
5. Maintain a setting locally.
   Navigate to the folder Users\<UserID>\AppData\Roaming\SAP\Cof and open the file where you want to change the setting.
   If the setting is not already available in the file, you can copy it from the files under C:\ProgramData\SAP\Cof.

4.2 Settings for the Analysis Add-in

The following table describes the Analysis Add-in file system settings that you can define. The settings are delivered in the Cof_app.config file.

For more information about maintaining file system settings, see To Maintain Settings in the File System [page 16]
ConnectionServiceConfiguration

Table 1:

<table>
<thead>
<tr>
<th>Setting and Setting Values</th>
<th>Setting Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NcoTraceLevel = 0 (default value), 1, 2, 3 or 4</td>
<td>This setting can be used for SAP error handling. Analysis uses the .Net connector (NCO) for calling ABAP RFCs from client. NCO supports logging of RFC traces. You use this setting to specify the desired level for tracing. The default value is 0. This means no tracing takes place. You can change the parameter value to 1, 2, 3 or 4. If you now work with Analysis, log files will be created according to the selected level in the %temp% folder of windows. There you can find a dev_nco_rfc.log file and a number of files &quot;nco_rfc_XXXX_Y.trc&quot;. Additionally, there is the Analysis log file &quot;SAPAdvancedAnalysisXLS.log&quot;. You can zip all of them to attach them to the message.</td>
</tr>
<tr>
<td>UseUnicodeCodepageInNco = True or False (default value)</td>
<td>You use this setting to specify whether a password for an ABAP system may contain special characters such as €. The default value is False. This means that special characters are not supported. If you change the parameter value to True, special characters are supported. You should only set the setting to True if all your ABAP systems use Unicode.</td>
</tr>
</tbody>
</table>

AppBuilderConfiguration

Table 2:

<table>
<thead>
<tr>
<th>Setting and Setting Values</th>
<th>Setting Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AppBuilderDefaultProfilePath = &quot;&quot; (default value)</td>
<td>You use this setting to specify the path to the default profile that will be applied when Microsoft Excel is started. The path is set automatically as soon as a user defines a profile in the Customize User Interface dialog and then selects the Default Profile button. After the installation no path is defined. Therefore the default value is empty (&quot;&quot;&quot;). We do not recommend to change the path manually.</td>
</tr>
<tr>
<td>Setting and Setting Values</td>
<td>Setting Description</td>
</tr>
<tr>
<td>--------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>AppBuilderUserProfileDirectory= &quot;&quot; (default value)</td>
<td>You use this setting to specify the path to the directory which contains the current user profiles. The current user is the owner of these profiles and can modify them. Each time, the user creates a new profile in the Customize User Interface dialog, it will be stored in this directory. After the installation no directory is defined. Therefore the default value is empty (&quot;&quot;). As soon as a user saves the first profile, the path to the directory is set automatically. The path will be something like: C:\Users&lt;userID&gt;\AppData\Roaming\SAP\Cof \User Interface. A user can change the path manually to use another specific folder.</td>
</tr>
<tr>
<td>AppBuilderCompanyProfileDirectory= &quot;C:\ProgramData\SAP\Cof\User Interface&quot; (default value)</td>
<td>You use this setting to specify the path to the directory which contains the company profiles. The default value is C:\ProgramData\SAP\Cof\User Interface. The company profiles are owned by an administrator. The current user is not the owner of these profiles and he won’t be able to modify them. This setting can only be maintained by an administrator in the file system under C:\ProgramData\SAP\Cof.</td>
</tr>
<tr>
<td>AppBuilderReadOnlyProfileDirectories= &quot;path1;path2&quot;</td>
<td>You use this setting to specify a directory or a list of directories where users can share profiles without having to make a copy. You can enter a single path to a directory or paths to several directories. The paths should then be entered with a semicolon-separated list. The current user is not the owner of these profiles and he won’t be able to modify them.</td>
</tr>
</tbody>
</table>
VersionConfiguration

Table 3:

<table>
<thead>
<tr>
<th>Setting and Setting Values</th>
<th>Setting Description</th>
</tr>
</thead>
</table>
| MinorVersion=<integer value of the installed version> (default value) or any integer value lower than the installed version | You use this setting to specify the minor version that should be used.  
The default value is the integer value of the installed version, for example value 3 for version 2.3.  
If you change the value to 1, version 2.1 will be used.  
This setting can only be maintained by an administrator in the file system under C:\ProgramData\SAP\Cof. |

OfficeConfiguration

Table 4:

<table>
<thead>
<tr>
<th>Setting and Setting Values</th>
<th>Setting Description</th>
</tr>
</thead>
</table>
| SupportEmbeddedMode=True or False (default value) | You use this setting to specify whether the Analysis Add-in should be supported when the Microsoft Office tools are running in embedded mode (also called automated mode).  
The default value is False. This means that the Analysis Add-in is not supported.  
If you change the parameter value to True, the Analysis Add-in will be supported.  
If you set the setting to True, you can disable the Analysis Plug-in using the setting SupportAutomatedOffice in the Ao_app.config file. |

i Note

Microsoft does not support Add-ins if the MS Office tool is running in embedded mode. This is the case if the tool is embedded into a hosting window, for example in another MS Office tool or ABAP GUI, or when the MS Office tool is started with excel.exe -Embedding by Windows.

We do not recommend changing this setting because in many scenarios, for example if the tool is embedded in a hosting window, some issues can occur which cannot be resolved.
4.3 Settings for the Analysis Plug-in

The following tables describe the Analysis Plug-in file system settings that you can define. The settings are delivered in the Ao_app.config file.

For more information about maintaining file system settings, see To Maintain Settings in the File System [page 16]

BoeConfiguration

Table 5:

<table>
<thead>
<tr>
<th>Setting and Setting Values</th>
<th>Setting Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOESystems</td>
<td>This setting contains the configuration to the Business Intelligence Platform. For more information, see To define a system connection to SAP BusinessObjects Business Intelligence [page 49].</td>
</tr>
<tr>
<td>RetrieveMultilingualTexts</td>
<td>On the BI platform, the name and description of documents and folders can be translated. You use this setting to specify if the translated texts should be available in Analysis. The default value is True. This means that the translated names are available in Analysis. Depending on the selected language, you see the original version or a translated version. If you set the value to False, only the original version is available in Analysis.</td>
</tr>
<tr>
<td>DefaultLauncherScheme</td>
<td>You use this setting to specify the launcher scheme. The launcher scheme can be http or https. After the installation, no value is defined &quot;&quot;. This means that http is used as the default launcher scheme. If you want to use https as the scheme, you can change the value here.</td>
</tr>
</tbody>
</table>
### Table 6: Setting and Setting Values

<table>
<thead>
<tr>
<th>Setting and Setting Values</th>
<th>Setting Description</th>
</tr>
</thead>
</table>
| PreferredPlatform= 0 (default value), 1, 2 or 3 | You use this setting to define the preferred platform for your Analysis installation. After installation of Analysis, the default value of this parameter is set to 0. This means that all platforms are enabled.  
If you set the parameter value to 1, the SAP BusinessObjects Business Intelligence Platform is enabled. If you set the value to 2, SAP NetWeaver is enabled as platform.  
With parameter value 3, the SAP BusinessObjects Business Intelligence Platform with compatibility mode is enabled. This means that the workbook is saved as Analysis Workbook (Compatibility Mode). The Analysis Workbook (Compatibility Mode) object corresponds to the Microsoft Excel object used with former BI platform releases. |
| EnablePreferredPlatformSetting= true (default value) or false | You use this setting to specify whether a user should be enabled to select a preferred platform in the platform settings dialog box.  
After installation, the default value is True. This means that the preferred platform section is visible in the platform settings dialog box and that the user can change the selection.  
If you change the parameter value to False, this section is hidden in the platform settings dialog box, and the user cannot change the preferred platform. The user is therefore unable to change the preferred platform defined in the Preferred Platform setting. |
| SupportsSaveAs1x=true or false (default value) | You use this setting to define whether a workbook could be saved with 1.x format in Analysis 2.x versions..  
The default value is False. This means that it is not possible to save a workbook with 1.x format.  
If you change the parameter value to True, the checkbox Save as 1.x format is available in the saving dialog in Analysis. |
| RecentListSize= greater or equal 1, default value = 10 | This setting defines the number of entries in the list of last opened data sources in the Insert Data Source dialog box.  
You can also define this number in the User Settings in the Settings dialog box. By pressing the Delete Recently Used List button, you can delete the history of the recently used data sources. |
<table>
<thead>
<tr>
<th>Setting and Setting Values</th>
<th>Setting Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ResultSetSizeLimit = -1, n or empty (default)</td>
<td>This setting defines the maximum number of crosstab cells that are loaded from the server for one data source. If a data source contains data for more cells than defined here, a message displays. The standard value for this setting is empty and the maximum number of cells is 500000. If you set the parameter to a specific number greater than or equal to 0, you define the maximum number of cells with this value. If you set the parameter to -1, the setting uses the values defined in the BW system. In a BW system, the parameter is set in the RSADMIN table for object BICS_DA_RESULT_SET_LIMIT_MAX.</td>
</tr>
<tr>
<td>NoSystemMessages=true or false (default value)</td>
<td>You use this setting to specify whether back-end system messages should be displayed or not. The default value for this setting is false. This means that back-end system messages will be displayed. If you change the value to true, back-end system messages will not be displayed.</td>
</tr>
<tr>
<td>RfcBundling=true (default value) or false</td>
<td>This setting is recommended when working in an WAN environment to reduce network traffic. After installation, the default value is True.</td>
</tr>
<tr>
<td>MaxNumberOfParallelThreads=10 (default value) or any integer value</td>
<td>You use this setting to define the maximum number of parallel threads that Analysis can use to open the SAP HANA data sources of a workbook. The default value is 10. This means that up to 10 SAP HANA data sources can be opened with parallel threads. You can enter any integer value for this setting. If you set the value to 1 or lower, no parallel threads will be used. The data sources will be opened sequentially.</td>
</tr>
<tr>
<td>SaveAs1xByDefault=true or false (default value)</td>
<td>You use this setting to define whether a workbook should be saved by default with 1.x format in Analysis 2.x versions. The default value is False. This means that the checkbox Save as 1.x format is not selected by default in the saving dialog in Analysis. If you change the parameter value to True, the checkbox Save as 1.x format is selected by default in the saving dialog in Analysis.</td>
</tr>
<tr>
<td>Setting and Setting Values</td>
<td>Setting Description</td>
</tr>
<tr>
<td>---------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>EnableResetDataSource=true (default value) or false</td>
<td>You use this setting to specify whether the ‘Call Query Designer’ icon should be displayed in the ribbon tools group (true) or not (false). The default value is true.</td>
</tr>
<tr>
<td>PromptForCertificate=true or false (default value)</td>
<td>You use this setting to specify whether the certificate should be searched for automatically or entered manually.</td>
</tr>
<tr>
<td>IgnoreDesignerVersionCheck=true or false (default value)</td>
<td>You use this setting to define if the designer version on the machine should be checked.</td>
</tr>
<tr>
<td>UseDataSourceDeltaUpdate=true (default value) or false</td>
<td>You use this setting to specify whether only the delta data or the complete data of a data source should be reloaded and updated in Analysis. After installation, the default value is True. This means that only the delta data of the data source is updated in Analysis.</td>
</tr>
<tr>
<td>AllowChangingAccessMode=true (default value) or false</td>
<td>You use this setting to specify whether the access mode for member display should be enabled. After installation, the default value is True. This means that the access mode is enabled for the member display definition in the crosstab and for the Filter by Member dialog box. If you change the parameter value to False, the access mode option is not displayed in the menu.</td>
</tr>
</tbody>
</table>
### Setting and Setting Values

<table>
<thead>
<tr>
<th>Setting Description</th>
<th>Setting and Setting Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>You use this setting to specify the default behavior for executing <strong>Refresh All</strong>. After the installation, the default value is <strong>TransactionDataOnly</strong>. This means that for all data sources that are online in a workbook, the transactional data is updated when <strong>Refresh All</strong> is executed. If you change the parameter value to <strong>LogOffReconnect</strong>, executing <strong>Refresh All</strong> logs off and reconnects all data sources that are online.</td>
<td>SubsequentRefreshDefault=TransactionDataOnly (default value) or LogOffReconnect</td>
</tr>
</tbody>
</table>

### VariableConfiguration

#### Table 7:

<table>
<thead>
<tr>
<th>Setting and Setting Values</th>
<th>Setting Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>You use this setting to specify whether or not the <strong>Merge Variables</strong> check box in the <strong>Components</strong> tab in the design panel is selected when you create a new workbook. After installation, the default value is <strong>False</strong>. This means that the check box is not selected when you create a new workbook. You can change this manually by selecting the check box for single workbooks or setting the parameter value to <strong>True</strong>. The check box is then always selected when you create a new workbook.</td>
<td>MergeVariables=true or false (default value)</td>
</tr>
<tr>
<td>You use this setting to define the behavior of the prompting dialog box when inserting a new data source. After installation, the default value is <strong>True</strong>. This means that the prompting dialog box always appears automatically when you insert a data source containing variables. If you set this parameter to <strong>False</strong>, the prompts dialog only appears when the data source contains mandatory variables.</td>
<td>PrompWhenInsertingDataSource=true (default value) or false</td>
</tr>
<tr>
<td>You use this setting to define the display of variables in the summary view of the prompting dialog box. The default value is <strong>False</strong>. This means that the variables are displayed as display strings. For compound characteristics, the display string may not be unique. To display compound characteristics with the key instead of the display string, you can set the parameter value to <strong>True</strong>.</td>
<td>DisplayCompoundAsKeys=true or false (default value)</td>
</tr>
</tbody>
</table>
### Setting and Setting Values

<table>
<thead>
<tr>
<th>Setting Description</th>
<th>Setting and Setting Values</th>
</tr>
</thead>
</table>
| You use this setting to define whether the operator Contains Pattern (* Contains Pattern / !* Excludes Pattern) should be enabled for prompting.  
The default value is False. This means that the operator Contains Pattern cannot be used for prompting.  
(default To enable the contains pattern operator for prompting, you can set the parameter value to True.) | OperatorContainsPattern= true or false |
| You use this setting to define whether an input string should select a leaf or node if both have the same string.  
The default value is True. This means that the leaf will be selected. | PreferLeavesOverNodesInInputString= true (default value) or false |
| You use this setting to specify the mode for the prompting dialog when you open a document from the NetWeaver server that contains exactly one data source.  
The default value is False. This means that the prompting dialog is opened in document mode.  
If you change the parameter value to True, the prompting dialog is opened in data source mode. | ShowDSVariantsForWorkbooksWithOneDS= true or false (default value) |

### UiCommonConfiguration

Table 8:

<table>
<thead>
<tr>
<th>Setting Description</th>
<th>Setting and Setting Values</th>
</tr>
</thead>
</table>
| You use this setting to define the member display in the cross-tab.  
The default value is Default. This means that the selection made in the query designer defines the member display.  
You can change the parameter value to one of the listed values, for example Key. | TextKeyDisplay= Default (default value), TextKey, KeyText, Key or Text |
| You use this setting to specify whether messages that are suppressed with API method SAPSuppressMessage should be displayed.  
The default value is False. This means that the suppressed messages are not displayed.  
If you change the parameter value to True, the messages that are suppressed with API method SAPSuppressMessage will be displayed. | ShowSuppressedMessages= true or false (default value) |
### Setting and Setting Values

<table>
<thead>
<tr>
<th>Setting Description</th>
<th>Setting and Setting Values</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MessagePopupSeverity= &quot;&quot; (default value), Error, Warning or Success</strong></td>
<td>You use this setting to specify whether messages should be displayed in a pop-in or in a dialog box, depending on the message severity. Critical is the most severe category, Success is the least severe. The severity Success corresponds to severity Information in Analysis. The default value is &quot;&quot;. This means that after the installation no value is defined and only messages with severity Critical are displayed in a dialog box. Messages with lower severities (Error, Warning or Success) are displayed in a pop-in dialog. You can change the parameter value to Error, Warning or Success. If you select a severity, all messages are displayed which have this severity or higher. If you enter Warning, for example, all messages with severity Warning, Error and Critical are displayed in a dialog box. Messages with severity Success are displayed in a pop-in dialog.</td>
</tr>
<tr>
<td><strong>ForceRefreshConnectionInfo= true or false (default value)</strong></td>
<td>You use this setting to specify whether the SNC (Secure Network Communications) information is read from the launcher file or from the local saplogon.ini installation. The default value is False. This means that the SNC information is read from the launcher file. If you change the parameter value to True, only the SNC information in the local saplogon.ini is used. Therefore we do not recommend changing this setting to value True.</td>
</tr>
</tbody>
</table>

### SelectorConfiguration

<table>
<thead>
<tr>
<th>Setting and Setting Values</th>
<th>Setting Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FetchMemberLimit= 1000 (default value) or any integer value</strong></td>
<td>You use this setting to define the maximum number of members displayed in the Filter by Member dialog box for selection. If you filter on a dimension that contains more members than defined here, you only see the currently selected members (but you can search for all members). The default value is 1000. This means that up to 1000 members will be displayed. You can enter any integer value for this setting. You can also define the maximum number of members in the user settings in Analysis.</td>
</tr>
<tr>
<td>Setting and Setting Values</td>
<td>Setting Description</td>
</tr>
<tr>
<td>----------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>EnableMassDataSelector= true (default value) or false</td>
<td>You use this setting to specify whether the filter dialog box for mass data should be enabled. After installation, the default value is True. This means that the filter dialog box for mass data is opened if the maximum number of members defined in the User settings is reached. If you change the parameter value to False, the function is disabled and the filter dialog box for mass data is not opened.</td>
</tr>
<tr>
<td>EnforceDatePickerForCalendarDayVariable= true or false (default value)</td>
<td>You use this setting to specify whether the date picker for any variable of value type calendar / day should be enabled. After installation, the default value is False. This means that the date picker is not enabled and the dates are displayed in a flat list. Dates that are displayed in a flat list, are fetched from back-end and validated in Analysis. This could take longer than using the date picker. If you change the parameter value to True, the date picker is enabled. It is shown directly without fetching the date values from back-end. A validation does not take place and it is assumed that the selected date is valid.</td>
</tr>
<tr>
<td>PropagateSelectionInStructures= true or false (default value)</td>
<td>You use this setting to define the behavior of hierarchical structures in the filter dialog box. In characteristic hierarchies the selection of a node leads to the selection of all its children and vice versa. For hierarchical structures, selection of a node is independent to the selection of its children in the filter dialog box. This is the behavior for the default value False. If you change the value to True, hierarchical structures will behave like characteristic hierarchies in the filter dialog box.</td>
</tr>
<tr>
<td>DoSelectorHierarchyExplicitSelection= true or false (default value)</td>
<td>You use this setting to specify the behavior of the Filter By Member dialog for hierarchies. For hierarchies, the selection of a node means also the selection of its children in the filter dialog box. And vice versa, the selection of all children means also the section of the corresponding node. This is the behavior for the default value False. If you change the value to True, the hierarchy selection behaves different. The selection of a node still means the selection of its children. But you can select all children without having selected automatically the corresponding node.</td>
</tr>
</tbody>
</table>
PlanningConfiguration

Table 10:

<table>
<thead>
<tr>
<th>Setting and Setting Values</th>
<th>Setting Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NumberOfNewLines= 5 (default value)</td>
<td>You use this setting to define the default number of new lines. The default value is 5. This means that 5 new lines will be added to the crosstab. You can enter any integer value for this setting.</td>
</tr>
<tr>
<td>ShowNewLinesOnTop= true or false (default value)</td>
<td>You use this setting to specify whether the new lines should be added to the bottom or to the top of the crosstab. The default value is false. This means that new lines are added to the bottom of the crosstab. If you change the value to True, the new lines are added to the top of the crosstab.</td>
</tr>
<tr>
<td>InputReadyCellsValueHelpMemberAccessMode= P</td>
<td>You use this setting to specify the member access mode (value help) for input-ready cells. The default value is P (Planning). For more information on the existing modes, see <a href="#">2180059</a>.</td>
</tr>
<tr>
<td>SetEmptiedDoubleDataCellsToValue0= true or false (default value)</td>
<td>You use this setting to specify whether empty planning data cells are saved as 0(zero) or with their old value. The default value is false. This means that empty planning data cells are not saved as 0. The old value remains. If you change the value to True, the empty planning data cells are saved as 0.</td>
</tr>
</tbody>
</table>
### HanaConfiguration

Table 11:

<table>
<thead>
<tr>
<th>Setting and Setting Values</th>
<th>Setting Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HanaHttpConnectionTimeout = -1 (default value) or any integer value.</td>
<td>You use this setting to specify the time Analysis is waiting to get a connection to a HANA HTTP server. The default value is -1. This means that there is no timeout for connecting to a HANA HTTP server. You can enter any integer value for this setting to define the time Analysis is waiting to get a connection. The unit is millisecond. If you specify value 60000, for example, Analysis is waiting 60000 milliseconds to establish the connection. If it is not possible to connect to a HANA HTTP server in the defined timeout period, a message is displayed in Analysis.</td>
</tr>
</tbody>
</table>

### DocumentConfiguration

Table 12:

<table>
<thead>
<tr>
<th>Setting and Setting Values</th>
<th>Setting Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DefaultWorkbookPath = path to default workbook in directory.</td>
<td>Use this setting to define the path to the default workbook in the directory.</td>
</tr>
<tr>
<td>DocumentCacheFolderPath = &quot;&quot; (default value)</td>
<td>You use this setting to overwrite the default cache directory path. Analysis workbooks are saved to the directory sapaocache which is located beneath the users Temp directory. It is not possible to add the specific workbooks path to Excel’s Trusted Location section. This is due to the fact that Microsoft does not allow adding paths to Trusted Location which points to a directory beneath the users Temp directory whenever working with MS Office 2010 or higher. If you want to overwrite the default cache directory path, you can enter a path here.</td>
</tr>
</tbody>
</table>
### Setting and Setting Values

<table>
<thead>
<tr>
<th>Setting Description</th>
<th>IsCachingDocuments = true (default value) or false</th>
</tr>
</thead>
<tbody>
<tr>
<td>You use this setting to specify whether caching should be enabled. After installation, the default value is True. This means that caching is active. If you change the parameter value to False, the function is disabled and caching cannot be used.</td>
<td></td>
</tr>
</tbody>
</table>

### WorkbookConversionConfiguration

**Table 13:**

<table>
<thead>
<tr>
<th>Setting and Setting Values</th>
<th>Setting Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ShowSaveDialog = true or false (default value)</td>
<td>You use this setting to specify whether the save dialog box should be displayed after a workbook conversion. The default value is False, meaning that the save dialog box will not display after conversion. If you change the parameter value to True, the save dialog box will be displayed after conversion.</td>
</tr>
<tr>
<td>ConversionType = 0 (default value), 1 or 2</td>
<td>You use this setting to define which objects of a BEx workbook should be converted. The default value for this parameter is 0. This means that all objects are converted. If you set the parameter value to 1, data sources and cross-tabs are converted. If you set the value to 2, only data sources are converted.</td>
</tr>
<tr>
<td>LogType = 0 (default value), 1 or 2</td>
<td>You use this setting to define whether a log should be created during conversion. The default value for this parameter is 0. This means that no log will be created. If you set the parameter value to 1, a log is created and displayed on a workbook sheet. If you set the value to 2, a log is created and stored on a hidden workbook sheet.</td>
</tr>
<tr>
<td>RefreshType = 0 (default value), 1 or 2</td>
<td>You use this setting to define whether the workbook should be refreshed after conversion. The default value of this parameter is set to 0. This means that the workbook is always refreshed. If you set the parameter value to 1, the workbook is not refreshed. If you set the value to 2, the workbook is refreshed after conversion if the corresponding properties are selected on the components tab in the design panel.</td>
</tr>
<tr>
<td>Setting and Setting Values</td>
<td>Setting Description</td>
</tr>
<tr>
<td>----------------------------</td>
<td>---------------------</td>
</tr>
</tbody>
</table>
| EnableWorkbookConversion= true (default value) or false | You use this setting to define whether the conversion of BEx workbooks is enabled. The settings for the BEx workbooks conversion are available on the Conversion tab in the settings dialog.  
After installation, the default value is True. This means that conversion tab with the conversion settings and the menu entry for conversion are visible in Analysis.  
If you change the parameter value to False, the menu entry and conversion tab are hidden, and the user is not able to convert BEx workbooks. If you enable the setting EnableAnalysisViewConversion, the conversion tab with the conversion settings is visible in Analysis, but the menu entry for BEx workbook conversion is hidden. |

| EnableAnalysisViewConversion= true or false (default value) | You use this setting to define whether the Conversion tab with the Analysis View Migration setting in the settings dialog is displayed.  
After installation, the default value is False. Nevertheless, the conversion tab with the Analysis View Migration is visible as long as the setting EnableWorkbookConversion is set to True.  
If you change the parameter value to True, the Conversion tab is enabled and the Analysis View Migration is available even if the setting EnableWorkbookConversion is set to False. |

**WorkspaceConfiguration**

Table 14:

<table>
<thead>
<tr>
<th>Setting and Setting Values</th>
<th>Setting Description</th>
</tr>
</thead>
</table>
| EnableWorkspaces= true (default value) or false | You use this setting to define whether the workspace options should be enabled.  
After installation, the default value is True. This means that the workspace options are enabled and the menu entries are visible in the ribbon.  
If you change the parameter value to False, the menu entries are not displayed in the ribbon, and the user is not able to use the workspace options. |
UtilitiesConfiguration

Table 15:

<table>
<thead>
<tr>
<th>Setting and Setting Values</th>
<th>Setting Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>clientProfiling= true or false (default value)</td>
<td>You use this setting to activate client profiling. After installation, the default value is False. With a value of True, you can activate this setting. You can also activate the setting in the Support Settings dialog with setting Enable Client Profiling. For more information, see Support Settings [page 76].</td>
</tr>
<tr>
<td>Profiling= true or false (default value)</td>
<td>You use this setting to activate the query runtime statistics of SAP NetWeaver BW. For more information, see Query runtime statistics [page 61]. You can also activate the setting in the Support Settings dialog with setting Enable Workbook Profiling. For more information, see Support Settings [page 76].</td>
</tr>
<tr>
<td>SupportAutomatedOffice= true or false (default value)</td>
<td>You use this setting to specify whether the Analysis Plug-in should be supported if the Microsoft Office tools are running in embedded mode (also called automated mode). The default value is False. This means that the Analysis Plug-in is not supported. If you change the parameter value to True, the Analysis Plug-in will be supported. This setting is only evaluated if you set SupportEmbeddedMode in the Cof_app.config file to True.</td>
</tr>
</tbody>
</table>
| ShowPlanningToolbar= true (default value) or false | **Note**
As of release 2.4, you define the display in the ribbon with the Customize User Interface dialog. Therefore, this setting is only relevant if you use a minor version ≤ 3. You use this setting to specify whether the planning group should be displayed in the ribbon. After installation, the default value is True. This means that the planning group displays in the ribbon. If you change the parameter value to False, the planning group is not displayed in the ribbon. |
<table>
<thead>
<tr>
<th>Setting and Setting Values</th>
<th>Setting Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AbapTrace=1 or 0 (default value)</strong></td>
<td>You use this setting to activate the trace tool environment of SAP NetWeaver BW. The default value is 0, meaning that it is deactivated. With a value of 1, you can activate this setting. You can also activate the setting in the Support Settings dialog with setting <em>Enable BW Server Tracing</em>. For more information, see Support Settings [page 76].</td>
</tr>
<tr>
<td><strong>NcoTraceLevel=0 (default value), 1, 2, 3 or 4</strong></td>
<td>You use this setting to specify a default level for NCO Tracing. The default value is 0, meaning that it is deactivated. With a value of 1, 2, 3 or 4, you can activate this setting. Level 4 is the most detailed one. For more information, see Support Settings [page 76]</td>
</tr>
<tr>
<td><strong>UndoStackSize=10 (default value)</strong></td>
<td>You use this setting to specify the number of steps that can be undone or redone with the Analysis <em>Undo/Redo</em> function. The default value is 10.</td>
</tr>
<tr>
<td><strong>ShowConvertToFormulaInToolsGroup=true (default value) or false</strong></td>
<td>You use this setting to specify whether the <em>Convert To Formula</em> icon should be displayed in the ribbon tools group. After installation, the default value is True. This means that the icon displays in the ribbon. If you change the parameter value to False, the icon does not display in the ribbon.</td>
</tr>
</tbody>
</table>

**Note**

As of release 2.4, you define the display in the ribbon with the *Customize User Interface* dialog. Therefore, this setting is only relevant if you use a minor version ≤ 3.
<table>
<thead>
<tr>
<th>Setting Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ShowCreateWebApplicationInToolsGroup= true or false (default value)</strong></td>
</tr>
<tr>
<td>You use this setting to specify whether the Create Web Application icon should be displayed in the ribbon tools group. The setting is selectable only if an SAP BusinessObjects Design Studio with a minimum release version of 1.1 is installed. After installation, the default value is False. This means that the icon does not display in the ribbon. If you change the parameter value to True, the icon displays in the ribbon.</td>
</tr>
<tr>
<td><strong>ShowSsoLogonDialog= true or false (default value)</strong></td>
</tr>
<tr>
<td>You use this setting to specify whether the Logon dialog box should be displayed when using SSO with the SAP NetWeaver platform. The default value is False. This means that the logon dialog box is not displayed. If you change the parameter value to True, the logon dialog box is displayed and the user can change the client and the logon language. You can also enable this setting in the Advanced Settings dialog in Analysis.</td>
</tr>
<tr>
<td><strong>ShowSsoLogonDialogBip= true or false (default value)</strong></td>
</tr>
<tr>
<td>You use this setting to specify whether the Logon dialog box should be displayed when using SSO with the BI platform. The default value is False. This means that the logon dialog box is not displayed. If you change the parameter value to True, the logon dialog box is displayed and the user can select one of the available BI platforms and change the logon language. You can also enable this setting in the Advanced Settings dialog in Analysis.</td>
</tr>
</tbody>
</table>

**Note**

As of release 2.4, you define the display in the ribbon with the Customize User Interface dialog. Therefore, this setting is only relevant if you use a minor version ≤ 3.
### Setting and Setting Values

<table>
<thead>
<tr>
<th>Setting Description</th>
<th>Setting and Setting Values</th>
</tr>
</thead>
</table>
| CancelPopupDelay= 5 seconds (default value) or any integer value | You use this setting to specify after how many seconds the cancel dialog should be displayed when a data update is requested from the server (BW and HANA) and the crosstab is redrawn. This could be inserting a data source or navigating through the data, for example filtering data or adding dimensions to the crosstab. The default value is 5 seconds. This means that the cancel dialog will appear after 5 seconds. You can enter any integer value for this setting. If the cancel dialog (Fetching data from server) is displayed, you have two options:  
- You press Cancel to cancel the server request. In the following Messages dialog, you can select Restart to go back to the workbook and the data source is active. Or you select Close to go back to the workbook and the data source is offline.  
- You do not cancel the server request. The dialog will disappear automatically when the server request is completed. |

### FormulaEditorConfiguration

Table 16:

<table>
<thead>
<tr>
<th>Setting Description</th>
<th>Setting and Setting Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>FormulaExpressionValidationInterval= 2 (default value)</td>
<td>You can add a new measure based on a free-form calculation to a crosstab. The new measures are defined in the New Calculation dialog box. The formula that you enter in the dialog box is checked on a regular basis. You use this setting to specify the number of seconds. The default value is 2. This means that the formula is checked two seconds after your last change in the formula editor. You can enter any integer value for this setting.</td>
</tr>
</tbody>
</table>
### TaskPaneConfiguration

Table 17:

<table>
<thead>
<tr>
<th>Setting and Setting Values</th>
<th>Setting Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TaskPaneDockPosition= 1 (default value)</td>
<td>You use this setting to define where the design panel should be inserted. The default value is 1. This means that the design panel is inserted on the right. You can change the parameter to 2 to insert it on the left, to 3 to insert it on the top, or to 4 to insert it at the bottom. If you change the parameter to 0, the design panel is free-floating.</td>
</tr>
<tr>
<td>TaskPaneHeight= 975 (default value)</td>
<td>You use this setting to define the height of the design panel. The height is only relevant if the design panel is inserted at the top or bottom. The default value is 975 points.</td>
</tr>
<tr>
<td>TaskPaneWidth= 498 (default value)</td>
<td>You use this setting to define the width of the design panel. The width is only relevant if the design panel is inserted on the left or right. The default value is 498 points.</td>
</tr>
</tbody>
</table>

### FormulaConfiguration

Table 18:

<table>
<thead>
<tr>
<th>Setting and Setting Values</th>
<th>Setting Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SetFilterComponentApplyToAllDataSources= true (default value) or false</td>
<td>In Analysis, you can insert a filter component using the ribbon. If your workbook contains more than one data source, the Select Data Source dialog box appears where you can define the data sources for the filter. You use this setting to specify if the check box Apply filter to all data sources should be selected by default. After installation, the default value is True. This means that the filter is applied to all data sources. If you change the parameter value to False, the filter will only be applied to the selected data source.</td>
</tr>
</tbody>
</table>
NavPaneConfiguration

Table 19:

<table>
<thead>
<tr>
<th>Setting and Setting Values</th>
<th>Setting Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ShowAllHierarchies= true (default value) or false</td>
<td>You use this setting to specify whether all time-dependent hierarchies for a dimension should be available in the design panel. After installation, the default value is True. This means that all hierarchies are available in the design panel. If you change the parameter value to False, the hierarchies are no longer available in the design panel.</td>
</tr>
</tbody>
</table>

GridConfiguration

Table 20:

<table>
<thead>
<tr>
<th>Setting and Setting Values</th>
<th>Setting Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NrOfSingleCellsInContext= greater or equal 1, default value = 100</td>
<td>This setting defines the maximum number of crosstab cells that can be selected to execute analysis options, for example filtering. If more cells are selected in a crosstab, the analysis options are disabled. The default value is 100.</td>
</tr>
<tr>
<td>EnableDoubleClick= true (default value) or false</td>
<td>You use this setting to specify whether filtering a member with a double click should be enabled. After installation, the default value is True. This means you can filter for one member with a double click on the member cell. If you change the parameter value to False, the function is disabled.</td>
</tr>
</tbody>
</table>

WaterfallChartConfiguration

A waterfall chart is a specialized type of bar chart. The start and end values are always displayed in a column as totals. The individual interim values are not displayed as subtotals, but as delta values. You can use the following settings to define colors for displaying the three types of values.
### Table 21:

<table>
<thead>
<tr>
<th>Setting and Setting Values</th>
<th>Setting Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RGBValueColumns= #808080 (default value)</td>
<td>You use this setting to define the color for the columns that represent the start and end values. The default value is #808080. This means that the columns display in grey.</td>
</tr>
<tr>
<td>RGBValuePositive= #90CE00 (default value)</td>
<td>You use this setting to define the color for the positive delta values. The default value is #90CE00. This means that the positive values display in green.</td>
</tr>
<tr>
<td>RGBValueNegative= #FF000C (default value)</td>
<td>You use this setting to define the color for the negative delta values. The default value is #FF000C. This means that the negative values display in red.</td>
</tr>
</tbody>
</table>

### PaGridConfiguration

In Analysis, edition for Microsoft PowerPoint, you can insert data sources as tables. You can use the following settings to define default numbers for rows and columns. You can change the number of rows in the **Fit Table** dialog in Analysis.

**Table 22:**

<table>
<thead>
<tr>
<th>Setting and Setting Values</th>
<th>Setting Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LinesOfData=12 (default value)</td>
<td>You use this setting to define the default number of rows. After installation, the default value is 12.</td>
</tr>
<tr>
<td>ColumnsOfData=12 (default value)</td>
<td>You use this setting to define the default number of columns. After installation, the default value is 12.</td>
</tr>
</tbody>
</table>

### 4.4 Settings for the EPM Plug-in

The following table describes the EPM Plug-in file system settings that you can define. The settings are delivered in the `Epm_app.config` file.

For more information about maintaining file system settings, see To Maintain Settings in the File System [page 16]
EPMClientConfiguration

Table 23:

<table>
<thead>
<tr>
<th>Setting and Setting Values</th>
<th>Setting Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HasToProtectEpmFormattingSheet = true (default value) or false</td>
<td>You use this setting to specify whether EPM formatting sheets can be protected or not. The default value is True. This means that EPM formatting sheets can be protected. If you change the parameter value to False, a formatting sheet will never be protected. If an existing workbook with protected formatting sheets is opened, these will immediately be unprotected.</td>
</tr>
</tbody>
</table>

4.5 Configuring Files with SAP Setup

Context

You can configure files with a setup tool, for example SAP Setup, to keep your settings definition for upcoming installations. Without such files, the settings definition will be overwritten with the default values during a new installation of Analysis.

Procedure

1. Copy or unzip the installer. If you unzipped the installer, go to Setup folder. If you copied the complete installer, you might need to go to CdMirror first and then to the Setup folder.
2. Go to the documentation at SAPSetup\CdMirror\SAP Setup Guide.pdf.
3. Use NwCreateInstServer to create a folder e.g. "InstServer"
4. In the folder "InstServer", create a folder e.g. "Custom Files" with adapted content, for example Cof_app.config and Ao_app.config
5. Use InstServer\Setup\NwSapSetupAdmin to configure a package.
   a. It already has product COF imported, because it was created from a COF installer.
   b. Go to package.
   c. Create package.
   d. Select package > package configuration > On Installation End.

    strSrcFile = NwEngine.Variables.ResolveString("%SapSrcDir%\Custom Files\Cof_app.config")
    strDstFile = NwEngine.Variables.ResolveString("%ALLUSERSPROFILE%\SAP\Cof\Cof_app.config")
//note: SAPSetup does not know %ProgramData%, but you have to use %ALLUSERSPROFILE% instead.

NwEngine.Shell.CopyFileEx strSrcFile, strDstFile, vbTrue

e. Select the same for On Update End

6. If you now use InstServer\SetupAll.exe it will install with the updated files.
5 Administration for the Analysis Plug-In

5.1 Supported BI Platforms

SAP BusinessObjects Analysis supports the following platforms:

- SAP BusinessObjects Business Intelligence Platform XI 4.1 SP5
- SAP NetWeaver Server

Related Information

SAP BusinessObjects Business Intelligence Platform [page 42]
SAP NetWeaver Server [page 43]

5.1.1 SAP BusinessObjects Business Intelligence Platform

SAP BusinessObjects Analysis supports SAP BusinessObjects Business Intelligence XI 4.1 SP5 as platform.

If you use the SAP BusinessObjects Business Intelligence 4.1 platform with Analysis, Microsoft .NET Framework 4.5 must be installed on the client PC.

Usage with the SAP BusinessObjects BI platform

In the Central Management Console (CMC), you have to define connections to your SAP NetWeaver BW system(s). SAP BusinessObjects Analysis receives information about the connections in the CMC and establishes direct access to the defined BW systems for data exchange.

Microsoft Excel workbooks and Microsoft PowerPoint files, created with Analysis, are stored in the repository. As of SAP BusinessObjects Business Intelligence platform 4.1, you can save Analysis objects as Analysis Workbook and Analysis Presentation.

Related Information

Creating and managing BW system connections in SAP BusinessObjects Business Intelligence [page 51]
5.1.2 SAP NetWeaver Server

SAP BusinessObjects Analysis supports SAP NetWeaver as its platform. Using SAP NetWeaver as the platform, the Analysis objects are stored in the BW system.

The following functions of Analysis are supported only when using SAP NetWeaver as platform. The functions are available as of the listed releases. However, you might be required to implement additional SAP Notes. For more information, see SAP Note https://service.sap.com/sap/support/notes/1739153.

Table 24:

<table>
<thead>
<tr>
<th>Function</th>
<th>7.0 EHP1</th>
<th>7.0 EHP2</th>
<th>7.3</th>
<th>7.3 EHP1</th>
<th>7.40</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAP NetWeaver as platform</td>
<td>SP 11</td>
<td>SP 10</td>
<td>SP 05</td>
<td>SP 01</td>
<td></td>
</tr>
<tr>
<td>Conversion of BEx Workbooks</td>
<td>SP 11</td>
<td>SP 10</td>
<td>SP 05</td>
<td>SP 01</td>
<td></td>
</tr>
<tr>
<td>Launcher</td>
<td>SP 12</td>
<td>SP 12</td>
<td>SP 08</td>
<td>SP 05</td>
<td></td>
</tr>
<tr>
<td>Variants*</td>
<td>SP 12</td>
<td>SP 12</td>
<td>SP 08</td>
<td>SP 05</td>
<td></td>
</tr>
<tr>
<td>Workspaces</td>
<td></td>
<td></td>
<td>SP 07</td>
<td>SP 03</td>
<td></td>
</tr>
<tr>
<td>Caching</td>
<td>SP 18</td>
<td>SP 18</td>
<td>SP 14</td>
<td>SP 17</td>
<td>SP 13</td>
</tr>
</tbody>
</table>

*You can also use this function with lower SP levels. For more information, see SAP Note 1694658.

Usage with SAP NetWeaver

The BW systems have to be defined in the saplogon.ini file in the Windows directory on your local machine. SAP BusinessObjects Analysis receives the list of available BW systems in the saplogon.ini file and establishes direct access to the defined systems for data exchange.

Note

Ensure that SAP Graphical User Interface (SAP GUI) is installed on each client PC. This application contains the SAP Logon.

Analysis workbooks and presentations are stored in the BW system with object type AAOE (for workbooks) and AAOP (for presentations). With SAP NetWeaver, you can store the file formats for Excel (.xls, .xlsx, .xlsm, .xlsb) and PowerPoint (.ppt, .pptx, .pptm).

Local Usage

You can also use SAP BusinessObjects Analysis locally, without a platform.

In this case, you can reuse the BW systems defined in the saplogon.ini file in the Windows directory on your local machine.
Microsoft Excel workbooks and Microsoft PowerPoint presentations, created with Analysis, are stored locally on your client PC or on a fileshare. You can store the file formats for Excel (.xls, .xlsx, .xlsm, .xlsb) and PowerPoint (.ppt, .pptx, .pptm)

Related Information

Defining system connections to SAP NetWeaver [page 52]

5.1.3 SAP BW/4HANA

SAP BusinessObjects Analysis supports SAP BW/4HANA as its platform. Using SAP BW/4HANA as the platform, you can connect to SAP BW/4HANA systems and use the data sources for your analysis. The Analysis objects can then be stored in the BW/4HANA system.

The BW/4HANA systems have to be defined in the saplogon.ini file in the Windows directory on your local machine. SAP BusinessObjects Analysis receives the list of available BW/4HANA systems in the saplogon.ini file and establishes direct access to the defined systems for data exchange.

Note

Ensure that SAP Graphical User Interface (SAP GUI) is installed on each client PC. This application contains the SAP Logon.

Analysis workbooks and presentations are stored in the BW/4HANA system with object type AAOE (for workbooks) and AAOP (for presentations). With SAP BW/4HANA, you can store the file formats for Excel (.xls, .xlsx, .xlsm, .xlsb) and PowerPoint (.ppt, .pptx, .pptm).

The functions available in SAP BW/4HANA differ from the functions in SAP BW. For more information, see the SAP BW/4HANA documentation on the SAP Help Portal at http://help.sap.com/bw4hana10.

5.2 Upgrade

5.2.1 Migrating to Analysis 2.4

Context

If you have an earlier version of Analysis installed on your PC and you want to migrate to Analysis 2.4, you can start the Analysis installation file without uninstalling Analysis before.
Procedure

   The SAPSetup installation wizard appears.
2. Select Analysis, edition for Microsoft Office in the component list of the SAP Front End Installer dialog box.
3. Choose Next.
4. If necessary, change the target directory and choose Next to start the upgrade.
5. In the confirmation screen, choose Done.

Results

Analysis 2.4. edition for Microsoft Office has been installed and is ready to use.

i Note
With the installation of Analysis 2.4, the configuration and setting values of the Analysis plug-in are set to the default values.
Changes made in former installations, for example displaying the planning group in the ribbon, are not adopted automatically.
You can use the Customize User Interface dialog to define the display in the ribbon.

i Note
The following configurations that you defined in 1.x releases, cannot be migrated automatically:
- Settings are maintained in the file system and not in the registry. You have to specify the settings in the file system again.
- SAP HANA platform connections are now implemented as an HTTP connection. The ODBC connections that were used in former releases (1.x), are no longer supported. After creating an HTTP connection, you can change the connection type in a workbook or presentation.
- You can enhance the Analysis tab in the ribbon. The name space for the Analysis tab is now SapExcelAddIn. In 1.x releases the name space for the Analysis tab is SBOP.AdvancedAnalysis.Addin.1. You have to enhance the Analysis ribbon again.
You can find more information about enhancing the Analysis ribbon in the User Guide.

Related Information

Configuration for SAP HANA [page 54]
Settings [page 16]
User Interface Customization [page 60]
5.2.2 Using existing Workbooks and Presentations in Analysis 2.4

The usage of existing Analysis workbooks and presentations in Analysis 2.4 depends on the platform you use to store the files.

**BW Connections**

- **SAP NetWeaver server / Local storage**
  You can open existing workbooks and presentations in Analysis 2.4 and continue analyzing the data of the workbook with Analysis 2.4.

- **Storage in SAP BusinessObjects Business Intelligence**
  You can open existing workbooks and presentations that are stored on the business intelligence platform in Analysis 2.4 and continue analyzing the data with Analysis 2.4. You can save the changed workbooks and presentations on the BI platform.

- **BEx Analyzer workbooks**
  You can convert BEx Analyzer workbooks to Analysis workbooks. After the conversion, you can open them in Analysis 2.4 and continue your analysis. You can also save them to a platform.

**HANA Connections**

As of Analysis 2.0, the connection to the SAP HANA platform is implemented as an HTTP connection. The ODBC connections that were used in former releases (1.x), are no longer supported.

You can migrate the connection type in a workbook or presentation. If you open an object containing ODBC connections in Analysis 2.4, the *SAP HANA Data Source Migration* dialog appears automatically. In the dialog, you can select an existing HTTP connection for each ODBC connection.

Note that the HTTP connection must be created before you can migrate a workbook or presentation.

After assigning the HTTP connection, the migration can be started and you can refresh the corresponding data sources and save the workbook or presentation as 2.x object.

**Related Information**

Configuration for SAP HANA [page 54]
5.2.3 Saving a workbook with 1.x format

You can save workbooks with 1.x format in Analysis 2.4. Then you can open the workbook in a 1.x release. All changes made with functions that are only available as of Analysis 2.0 (for example, Table Design formatting), are deleted if you save workbook as 1.x format.

You can save workbooks with 1.x format on the Business Intelligence platform and on the NetWeaver server.

In order to enable this function in Analysis, the setting SupportsSaveAs1x must be set to true. With the setting SaveAs1xByDefault, you can define whether a workbook should be saved by default with 1.x format in Analysis 2.4.

Note that after saving a workbook in 2.x format, it is no longer possible to save the same workbook to 1.x format. If you want to save a 2.x workbook as 1.x again, you can delete the 2.x version using the context menu in the Save Workbook dialog and then save the workbook in 1.x format.

Related Information

Settings for the Analysis Plug-in [page 21]

5.3 To configure the load behavior of the Analysis Add-In

Context

To enable users to access Analysis in any Microsoft Excel and Microsoft PowerPoint file, you have to set the LoadBehavior parameter to the required value in the registry of the client PCs.

If the Add-In is enabled, it is always active when you start Microsoft Excel or PowerPoint. If it is disabled, it is active only after starting it with the Add-In Launcher in the Start menu, with he desktop shortcut, or following manual activation in the COM Add-In dialog.

Note

Before users can access Analysis in any Microsoft Excel or Microsoft PowerPoint file, ensure that Analysis has been started once directly in the Windows directory or by choosing the desktop icons.

Procedure

1. To open the registry editor, select Start > Run and enter regedit.
2. Navigate to the folder: HKEY_CURRENT_USER\Software\Microsoft\Office\Excel\Addins \SapExcelAddIn and select the LoadBehavior parameter.
After installation, the default value is 0. This means that the Analysis Add-In is disabled and is not activated automatically when Microsoft Excel or PowerPoint is started.

3. To enable the Analysis Add-In, set the parameter accordingly:

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>The Add-In is disabled. Users can enable the Add-In temporarily by activating the Add-In in the COM Add-In dialog box.</td>
</tr>
<tr>
<td>1</td>
<td>The Add-In is enabled. This temporary activation means that the Add-In is disabled again when Microsoft Excel is closed.</td>
</tr>
<tr>
<td>2</td>
<td>The Add-In is disabled. Users can enable it in the COM Add-In dialog box. This sets the value to 3.</td>
</tr>
<tr>
<td>3</td>
<td>The Add-In is enabled. If required, users can disable it in the COM Add-In dialog box. This sets the value to 2.</td>
</tr>
</tbody>
</table>


Results

Analysis is now ready for use in any Microsoft Excel file and in any Microsoft PowerPoint file.

5.3.1 Configuring the Analysis Add-In Launcher

You can configure the Analysis Add-In Launcher in the shortcut and in the registry.

The configuration in the shortcut is used if you start Analysis with the Start menu or the desktop shortcut. If you launch Analysis from SAP GUI or a browser, the configuration in the registry is used.

You can use the following parameters for the launcher configuration:

- /app XLS starts the Analysis Add-In in Microsoft Excel. This is the default setting.
- /app PPT starts the Analysis Add-In in Microsoft PowerPoint.
- /lb 0 starts the Analysis Add-In with load behavior set to 0.
- /lb 3 starts the Analysis Add-In with load behavior set to 3.
- /app XLS /AOnly starts only the Analysis Add-In in Microsoft Excel and no other Add-Ins.
- /app XLS /NoLO starts the Analysis Add-In in Microsoft Excel without starting SAP BusinessObjects Live Office.
- /app XLS /UseRunningProcess starts the Analysis Add-In using a Microsoft Excel process that is already running. If no Excel process is running, the Add-In is launched with the default setting.
- /app XLS /CreateProcess starts the Analysis Add-In using a new process if Microsoft Excel 2013 is already running. The default behavior in Microsoft Excel 2013 is to reuse a running process.
- /empty/app XLS starts the Analysis Add-In in Microsoft Excel when an Analysis workbook is launched without opening an additional template workbook.
A template workbook is opened in Analysis if a workbook template (*.xltx) is available in the XLSTART folder of Microsoft Excel. Using this parameter, you can avoid that an additional template workbook is opened. Note that the parameter /empty will be ignored if you use the parameter /CreateProcess in the launcher configuration. If you use the parameter /CreateProcess it is not possible to avoid that an additional template workbook is opened.

Shortcut configuration

1. Right-click the Analysis Add-In in the Start menu or in the desktop shortcut and select Properties.
2. Add the desired parameters to the path in the Target field on the Shortcut tab.
   The path in the target field contains the launcher executable and the optional parameters, for example "C:\Program Files (x86)\SAP BusinessObjects\Office AddIn\BiOfficeLauncher.exe" /app XLS.

Registry configuration

1. To open the registry editor, select Start Run and enter regedit.
2. Navigate to the appropriate folder.
   For the edition for Microsoft Excel: HKEY_CLASSES_ROOT\SAP.AO.Xl.Launch\shell\Open\command.
   For the edition for Microsoft PowerPoint: HKEY_CLASSES_ROOT\SAP.AO.Ppt.Launch\shell\Open\command.
3. Double-click the Default value and add the desired parameters to the path in the Value Data field.
   The path in the value data field contains the launcher executable and the optional parameters, for example "C:\Program Files (x86)\SAP BusinessObjects\Office AddIn\BiOfficeLauncher.exe" /app XLS /launchfile "%1".

5.4 Defining system connections to SAP BusinessObjects Business Intelligence

5.4.1 To define a system connection to SAP BusinessObjects Business Intelligence

Context

The BOESystems setting allows you to define system connections to the business intelligence platform. It is maintained in the file Ao_app.config that is stored in the file system under C:\ProgramData\SAP\Cof.

As administrator, you can define the setting and you can also define if a user should be able to change a setting locally.
As a user, you can change the setting in the file system under Users\UserID\AppData\Roaming\SAP\Cof. The file name for changing the settings locally is ao_user_roaming.config.

Users can select the defined system connections from the Web Service URLs list in the Logon to SAP BusinessObjects Enterprise dialog box when opening or saving workbooks.

Procedure

1. Navigate to the folder C:\ProgramData\SAP\Cof and open the file to change the setting.
2. Define the system connections in setting BOESystems.

Example with defined connections to three platform servers:

```xml
<BOESystems>
  <!--CDATA--><![CDATA[<?xml version="1.0" encoding="utf-16"?>
  <CoBoeSystemInfo>
    <SystemId>vm2468</SystemId>
    <Hostname>vm2468</Hostname>
    <Scheme>http</Scheme>
    <Port>8080</Port>
    <SessionServiceUrl>/dswsbobje/services/Session</SessionServiceUrl>
    <Active>true</Active>
    <UseSso>false</UseSso>
    <LastUsedAuthentication>secEnterprise</LastUsedAuthentication>
    <CMSNames><string/></CMSNames></CoBoeSystemInfo>
  <CoBoeSystemInfo>
    <SystemId>vm1357</SystemId>
    <Hostname>vm1357</Hostname>
    <Scheme>http</Scheme>
    <Port>8080</Port>
    <SessionServiceUrl>/dswsbobje/services/Session</SessionServiceUrl>
    <Active>false</Active>
    <UseSso>false</UseSso>
    <LastUsedAuthentication>secEnterprise</LastUsedAuthentication>
    <CMSNames><string/></CMSNames></CoBoeSystemInfo>
  <CoBoeSystemInfo>
    <SystemId>vml2145</SystemId>
    <Hostname>vml2145</Hostname>
    <Scheme>http</Scheme>
    <Port>8080</Port>
    <SessionServiceUrl>/dswsbobje/services/Session</SessionServiceUrl>
    <Active>false</Active>
    <UseSso>false</UseSso>
    <LastUsedAuthentication>secEnterprise</LastUsedAuthentication>
    <CMSNames><string/></CMSNames></CoBoeSystemInfo>
  </ArrayOfCoBoeSystemInfo>
  <![CDATA[]]></CDATA>]]>f(clean);
</BOESystems>
```

a. Enter the required value for the parameter SystemId.
b. As Hostname, enter the name of the machine that the business intelligence platform is installed on.
c. For the parameters Scheme, Port and SessionServiceUrl, enter the URL values that were defined during the installation of the business intelligence platform.
d. To set this connection to the business intelligence platform as the default connection, enter True for the Active parameter.
If you enter False for the Active parameter the connection appears as an entry that can be selected by the users in the list of connections in the logon dialog box.

e. For the parameter UseSso, you can specify if the SSO check box in the log-on dialog is checked or not. The value changes if the user selects or deselects the check box.

f. For the parameter LastUsedAuthentication, you can enter an authentication type that is used in the log-on dialog.

g. For the parameter CMSNames, you can enter a system to specify the central management system for the log-on dialog.

3. Save the file with the defined setting.

Results

The Logon to SAP BusinessObjects Enterprise dialog box contains the list with the three configured Web Service URLs that describe the connections to the business intelligence platform servers. The first entry in the settings file is the default connection.


**Note**

After creating a new connection in the Logon to SAP BusinessObjects Enterprise dialog box and logging on to this business intelligence platform server, Analysis adds this connection to the BOESystems setting and sets it as the default connection. If there is already data from this business intelligence platform server in the BOESystems setting, Analysis changes the diverging parameter values in the BOESystems setting and sets this connection as the default.

5.4.2 Creating and managing BW system connections in SAP BusinessObjects Business Intelligence

Prerequisites

You can use Analysis with SAP BusinessObjects Business Intelligence XI as the central content management system for Analysis workbooks and presentations, and as platform for managing data source connections.

Context

Before users can begin working with business data in Analysis, you have to create connections to BW systems so they can add data sources to their Analysis workbooks.
You create new connection objects and manage existing connection objects in the module *OLAP Connections* in the Central Management Console (CMC) of the business intelligence platform. To create a connection to a BW system, you define a connection to any object of the BW system.

**Note**
When you create a new connection with the module *OLAP Connections*, you should not use authentication type *Pre-defined* because the pre-defined user (and password) is not exposed to local clients such as Analysis.

You can also create an OLAP connection with SAP HANA as provider. With this HANA OLAP connection, you can use Analysis directly on top of a SAP HANA database.


You also have to make sure that the client PCs can communicate with the connected BW systems. If the BW system uses a message server the client PCs must specify the service name of the message server in the system services file at `<systemdrive>\WINDOWS\system32\drivers\etc\services`. Configure the system services file of each client PC accordingly.

**Results**

Once you have created BW system connections, these connections appear in the list of connections in the *Insert Data Source* dialog box in Analysis. Your users can add them to their Analysis workbooks. Users can access all BW objects (InfoProviders, queries and query views) of the connected BW system that they are authorized for by the BW authorization concept.

### 5.5 Defining system connections to SAP NetWeaver

**Prerequisites**

BW systems have to be defined in the `saplogon.ini` file in the Windows directory on your local machine. SAP BusinessObjects Analysis receives the list of available BW systems in the `saplogon.ini` file and establishes direct access to the defined systems for data exchange. The SAP Graphical User Interface (SAP GUI) contains the SAP Logon.

**Context**

You can reuse the BW systems defined in SAP Logon on the client PCs. SAP BusinessObjects Analysis receives the list of available BW systems in the SAP Logon and establishes direct access to the defined systems for data exchange.

You also have to make sure that the client PCs can communicate with the connected BW systems. If the BW system uses a message server, the client PCs must specify the service name of the message server in the system services file. Configure the system services file of each client PC accordingly.

Results

Once you have defined the BW system connections, these connections appear in the list of connections in the Insert Data Source dialog box in Analysis. Your users can add them to their Analysis workbooks. Users can access all BW objects (InfoProviders, queries and query views) of the connected BW system that they are authorized for by the BW authorization concept. Users can also save workbooks and presentations in the BW system if SAP NetWeaver is used as platform.

5.6 Defining system connections to SAP BW/4HANA

Prerequisites

SAP BW/4HANA systems have to be defined in the saplogon.ini file in the Windows directory on your local machine. SAP BusinessObjects Analysis receives the list of available BW/4HANA systems in the saplogon.ini file and establishes direct access to the defined systems for data exchange. The SAP Graphical User Interface (SAP GUI) contains the SAP Logon.

Context

You can reuse the BW/4HANA systems defined in SAP Logon on the client PCs. SAP BusinessObjects Analysis receives the list of available BW/4HANA systems in the SAP Logon and establishes direct access to the defined systems for data exchange.


You also have to make sure that the client PCs can communicate with the connected BW/4HANA systems. If the BW/4HANA system uses a message server, the client PCs must specify the service name of the message server in the system services file. Configure the system services file of each client PC accordingly.
**Results**

Once you have defined the BW/4HANA system connections, these connections appear in the list of connections in the *Insert Data Source* dialog box in Analysis. Your users can add them to their Analysis workbooks. Users can access all BW/4HANA objects of the connected system that they are authorized for by the BW authorization concept. Users can also save workbooks and presentations in the BW/4HANA system used as a platform.

### 5.7 Configuration for SAP HANA

If you use SAP NetWeaver Business Warehouse, powered by SAP HANA, you can analyze BW queries, query views and InfoProvider with Analysis. You can connect and use a BW system, powered by SAP HANA, like other BW systems with Analysis.

If you use the SAP HANA appliance software, you can analyze SAP HANA data sources with Analysis. The connection to the SAP HANA platform relies on the http(s) protocol for the communication with the SAP HANA server. You have the following options to connect to SAP HANA platform with an HTTP connection:

- You can connect to the SAP HANA platform via SAP BusinessObjects Business Intelligence platform. This connection can be created directly in the CMC of the SAP BusinessObjects BI platform.
- You can create local SAP HANA connections in Analysis. Note that ODBC connections that were used in former releases (1.x), are no longer supported. You can migrate the connection type in a workbook or presentation.

To create an SAP HANA HTTP connection, either on the BI platform or as local connection, the following prerequisites must be met:

- You use SAP HANA Platform SP09 or a higher version.
  With SAP HANA Platform SP09, we recommend that you use Revision 96 or higher.
- The SAP HANA Info Access Service (InA) with delivery unit HCO_INA_SERVICE is deployed on the SAP HANA platform.
  You can find more information in chapter [Importing the Info Access Service](#) in the SAP HANA Search Developer Guide.
- In the XS Admin Tool, you configured that the SAP HANA InA Service can be accessed with authentication method Basic (in addition to other authentication methods). For more information see SAP Note [2193057](#).
- The role `sap.bc.ina.service.v2.userRole::INA_USER` is assigned.
  The role is contained in delivery unit HCO_INA_SERVICE. Verify that the following authorizations are selected: Schema _SYS_BIC, Schema _SYS_BI and Schema _SYS_RT. For more information, see SAP Note [2097965](#).
- To make sure that your users can only view data in SAP HANA data sources (analytic views and calculation views) that they have authorization for, you have to perform the following activities:
  1. Copy the role `sap.bc.ina.service.v2.userRole::INA_USER`.
  2. In the copied role, remove the Select privilege on schema _SYS_BIC.
  3. Replace the original role `sap.bc.ina.service.v2.userRole::INA_USER` by assigning the copied role to your users.
  4. Define the detailed privileges for the new copied role as described in SAP Note [1907697](#).
You can use the setting `MaxNumberOfParallelThreads` to define the maximum number of parallel threads that Analysis can use to open the SAP HANA data sources of a workbook. The default value is 10. This means that up to 10 data sources can be opened with parallel threads.

**Related Information**

Creating and managing BW system connections in SAP BusinessObjects Business Intelligence [page 51]
To create an SAP HANA connection on the BI platform [page 55]
To create a local SAP HANA connection [page 57]
Troubleshooting for SAP HANA HTTP connections [page 58]
Using existing Workbooks and Presentations in Analysis 2.4 [page 46]
Settings for the Analysis Plug-in [page 21]

### 5.7.1 To create an SAP HANA connection on the BI platform

**Prerequisites**

The MDAS property `multidimensional.services.enable.hana.http.connections` is set to true on each machine where an MDAS service is running.

The configuration file can be found on Windows under `C:\Program Files (x86)\SAP BusinessObjects\Tomcat6\webapps\BOE\WEBINF\config\default` and on Unix under `<BI platform install directory>\SAP BusinessObjects Enterprise XI 4.0\java\pjs\services\MDAS\resources\com\businessobjects\multidimensional\services`.

**Note**

In order for this change to be effective, it is necessary to restart each instance of the Adaptive Processing Server which contains an MDAS service.

**Context**

On the BI platform, you can create an HTTP connection to an SAP HANA Server in the central management console.

To create an SAP HANA HTTP connection on the BI platform, you have to use a BI platform 4.1 SP5 or a higher version.
Procedure

1. Log on to the Central Management Console (CMC).
2. Select OLAP Connections.
3. Select the icon New Connection.
4. Enter a name and a description.
   The description is optional.
5. Select SAP HANA http as provider.
6. As Server Information, enter a URL with the following structure: \texttt{http(s)://<server>:<port>}
   We recommend to use HTTPS as scheme.
   The default HTTP port settings for SAP HANA XS include an SAP HANA instance number: 80\textless SAP HANA instance\textgreater, for example 8001. You can change the default settings, for example, to ensure that standard ports 80 and 443 are used for client access to the SAP HANA XS Web server HTTP (80) or HTTPS (443).
   For more information, see chapter Maintain Standard HTTP Port Numbers with SAP HANA XS in the SAP HANA Administration Guide.
7. Select the Authentication type:
   ○ Prompt
     When this type is selected for the connection, the end user will be prompted with a dialog box to enter a user ID and password.
   ○ SSO (single sign-on)
     With the single sign-on option selected, the user has to sign on once. The authentication method for this connection is SAML 2.0.
     For more information, see chapters User Authentication and Single-Sign On and Maintaining Single Sign-On for SAP HANA XS Applications in the SAP HANA Administration Guide.
     Note that you should not use authentication type Pre-Defined because the pre-defined user (and password) is not exposed to local clients such as Analysis.
8. Select Save to create the connection.
   Associated Universes are ignored for SAP HANA HTTP connections.

Results

The new connection is available in the OLAP Connection list.
You can also edit and delete existing SAP HANA connections in this dialog.
5.7.2 To create a local SAP HANA connection

Context

In Analysis, you can create a local connection to an SAP HANA server. A local SAP HANA connection is created in the Select Data Source dialog.

Procedure

1. Select the cell in the Analysis worksheet.
2. Select Insert Data Source ➤ Select Data Source... in the Analysis ribbon.
3. Select Skip to go to the local system connections.
4. Select Create New SAP HANA Connection... in the context menu in the Description area.
   The New SAP HANA Connection dialog box appears.
5. Enter a description for the new local HANA connection.
6. Select a scheme: HTTP or HTTPS
   We recommend to use HTTPS.
7. Enter a Host Name.
8. Enter a Port.
   The default HTTP port settings for SAP HANA XS include an SAP HANA instance number: 80<SAP HANA instance>, for example 8001. You can change the default settings, for example, to ensure that standard ports 80 and 443 are used for client access to the SAP HANA XS Web server by HTTP (80) or HTTPS (443).
   For more information, see chapter Maintain Standard HTTP Port Numbers with SAP HANA XS in the SAP HANA Administration Guide.
9. Select an Authentication Type:
   ○ Automatic
     This connection type delegates the authentication process to a browser control. Depending on the server configuration, the browser will use one of the supported authentication methods. In addition to the methods you can select explicitly in Analysis, this connection type supports e.g. identity providers based on SAML standard.
   ○ Basic
     When this type is selected for the connection, the end user will be prompted with a dialog box to enter a user ID and password.
   ○ X.509 Client Certificate
     Authentication with X.509 Certificates makes use of a Public Key Infrastructure (PKI) to securely authenticate users. In this case, user authentication takes place using the underlying Secure Sockets Layer (SSL) protocol and users do not need to interactively enter a password for logon.
   ○ Kerberos
The Kerberos authentication process involves several systems connected in a network, or a Kerberos realm. Kerberos authentication within a realm works on the basis of “tickets”, which serve to prove the authenticity of client requests. Kerberos authentication makes use of a trusted third party system called Key Distribution Center (KDC).

For more information, see chapters User Authentication and Single-Sign On and Maintaining Single Sign-On for SAP HANA XS Applications in the SAP HANA Administration Guide.

10. Select Create or Create and Logon... to create the connection.

Results

The new connection is available in the Select Data Source dialog.

You can also edit and delete existing local SAP HANA connections in this dialog.

5.7.3 Troubleshooting for SAP HANA HTTP connections

Verifying the URL for the SAP HANA HTTP connection

1. Add the server name and port of your connection to test the URL: http(s)://<server>:<port>/sap/bc/ina/service/v2/GetServerInfo
2. Open a browser and paste the URL.
3. You will receive one of the following responses:
   - HTTP 404 - not found
     This indicates that the server is not reachable (e.g. down or behind a firewall) or that the SAP HANA Info Access Service (InA) is not deployed.
   - The dialog box to enter user and password is displayed.
     If you have configured an SSO access, this indicates that the log-on was not successful.
   - A response is returned with a JSON format containing information about the server capabilities.
     This indicates that the log-on was successful.

Verifying Basic Data Base Access Rights (Index Server)

1. Complete the test URL with server name and port of your connection: http(s)://<server>:<port>/sap/bc/ina/service/v2/GetResponse?Request={%22Metadata%22:
   {%22Expand%22:[%22Cubes%22]}}
2. Open a browser and paste the URL.
3. Check that you receive a response without error.
5.8  Caching documents

Caching allows you to store copies of frequently used documents, Analysis workbooks and presentations, on a local client machine for quick access. In Analysis, caching can be used for documents that are stored on a SAP NetWeaver server or on a BI platform. The documents will be cached for each server (BW system) independently.

If you open a document that is already cached, the server provides information about the last change of the document. If the cached version is still valid, the cached version will be opened. If there is an updated version on the server, the cached version will be invalidated and the document is downloaded from the server.

The documents will be stored in the Analysis cache in an encrypted format. This encryption is specific for the current user and machine. This means that only the user that stored the document in the cache will be able to open the document from the cache. Furthermore, the document can only be opened on the same machine. The encryption uses the Microsoft Windows Data Protection (DPAPI) in combination with the Rijndael (AES) algorithm.

Caching documents stored on a SAP NetWeaver server

The documents can be cached if they are opened from Analysis and if they are launched from a BW system (transactions RAAOE/RAAOP).

To enable caching for documents stored on a SAP NetWeaver server, the following prerequisites have to be fulfilled:

- In the BW system(s), you enable document caching.
  Open report SAP_RSADMIN_MAINTAIN in transaction SA38 and add the object `AO_DOC_CACHE_ACTIVE` with value `X`.
- In Analysis, the setting `IsCachingDocuments` is set to true. This is the default value for the setting.
- You use a SAP NetWeaver releases listed under `SAP NetWeaver Server` in this guide.
  If you use lower release versions, you could check SAP Note 2179379 for correction instructions.

Caching documents stored in a SAP BW/4HANA system

The documents can be cached if they are opened from Analysis and if they are launched from a BW/4HANA system (transactions RAAOE/RAAOP).

Caching for documents stored in a SAP BW/4HANA system is always enabled.

Caching documents stored on a BI platform

The documents can be cached if they are opened from Analysis or if they are launched from the BI platform.

To enable caching for documents stored on a BI platform, the following prerequisites have to be fulfilled:
In the Central Management Console, the property *Enable Caching of Documents* is selected. By default, the property is not selected.

The property is available in the CMC under **Applications > Analysis Office Runtime > Actions > Properties**.

You use a BI platform with release 4.2 SP3 or higher.

**Related Information**

SAP NetWeaver Server [page 43]
Settings for the Analysis Plug-in [page 21]

### 5.9 User Interface Customization

You can customize certain user interface areas of Analysis to meet your business needs.

Using profiles, you can hide commands or add groups and commands to the Analysis tab of the Microsoft Excel Ribbon.

To customize your Analysis user interface, choose **File > Analysis > Customize User Interface**. The **Customize User Interface** dialog appears and you can customize your Analysis user interface, for example displaying the **Planning Group** in the ribbon.

The profiles you create are stored at the following location by default: `C:\Users\[user]\AppData\Roaming\SAP\Co\User Interface`

As an administrator, you can define a specific profile for your company and provide it to your end-users by copying the profile at the following location: `C:\ProgramData\SAP\COF\User Interface`

Note that you cannot customize user interface areas in the Microsoft PowerPoint edition for this version.

To see how you can customize user interface areas using profiles, check out this how-to video: [https://youtu.be/X1jXGF8NiFs](https://youtu.be/X1jXGF8NiFs)

### 5.10 Defining style sets for crosstabs

A style set is a selection of Microsoft Excel cell styles that is applied by Analysis to format the cells of a crosstab. Whenever users insert a new crosstab in a workbook, the styles of the current default style set are used to format the crosstab cells. You and your users can change the applied style set in the analysis. With Analysis, the following style sets and their cell styles are installed:

- SAP Tradeshow Plus
- SAP Blue
SAP Black&White

By modifying the cell styles of these style sets, you can create own style sets and share them with your users.

SAP standard styles are available after the installation of the Add-In. You can modify them in the Styles group on the Home tab of Microsoft Excel.

SAP custom styles are not available after the installation of the Add-In, but you can create them in the Styles group on the Home tab of Microsoft Excel.


5.11 Query runtime statistics

Analysis supports the query runtime statistics of SAP NetWeaver BW. You can activate the query runtime statistics in the User Settings dialog box on the Support Settings tab with the Enable Workbook Profiling setting or with the file system setting Profiling in the Ao_app.config file.

Using the query runtime statistics, you can find out how much time the execution of certain user actions require in Analysis and in the BW analytic engine. The system records the performance-critical parts of the processing (statistics events). It calculates the net times by calculating the runtime of an event using the difference between the start and end times (minus the times for other events called from within the event).

Each Analysis workbook has its own connections to the BW system. When the user closes a workbook, the connection to the BW system is also closed. The first workbook - for which a connection to a BW system is opened - shares its connections with the open services of Analysis. This means that the Insert Data Source dialog box reuses the connection from the first workbook.

The first connection to a BW system in a workbook is the “master” connection. The query runtime statistics for Analysis use the BW system of this master connection as the master system.

With the query runtime statistics activated in Analysis, all events raised by the BI consumer services client code and by the ABAP server code are written to the statistics tables of the BW system. Analysis also raises a small additional set of events, which facilitates analysis of the other events.

If the Analysis events should be written to the RSDDSTAT OLAP view (transaction code SE16), which contains the data from the front end and calculation layer events, they need to be in table RSDDSTATEVENTS as well. For more information, see SAP note 1462547.

The table below provides an overview of the Analysis events:

<table>
<thead>
<tr>
<th>Event ID</th>
<th>Long Text</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>20001</td>
<td>Net Application type</td>
<td>Type of .NET application (objnm is PIONEER EXCEL for example)</td>
</tr>
<tr>
<td>20002</td>
<td>Net Scenario</td>
<td>Scenario type of .NET application (refresh for example)</td>
</tr>
<tr>
<td>20003</td>
<td>Net Document ID</td>
<td>Document ID of a .NET application (only one per session)</td>
</tr>
<tr>
<td>20010</td>
<td>Command</td>
<td>Describes what the user did in the step.</td>
</tr>
</tbody>
</table>
### Event ID: 20200

<table>
<thead>
<tr>
<th>Long Text</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>User at dialog</td>
<td>The user waits at a dialog or does actions that return quickly.</td>
</tr>
</tbody>
</table>

Most user actions in Analysis will write an entry with event 20010. The time a user spends on a dialog during execution of the command and not executing another command will be made visible with event 20200. Each start of a statistic session will also contain events 20001, 20002 and 20003.

You can check the statistics in the Analysis ribbon Actions group under Messages > Show Workbook Profiling Statistics... The Messages entry is enabled only if statistics are available.


### Related Information

- Settings for the Analysis Plug-in [page 21]
- Support Settings [page 76]

### 5.12 Security

#### 5.12.1 User management and authentication

**Usage with SAP NetWeaver**

Using Analysis with SAP NetWeaver as platform, you have to configure user accounts in the connected BW systems. These user accounts can also be used for the local usage of Analysis.


**Usage with SAP BusinessObjects Business Intelligence / SAP BusinessObjects Enterprise**

Using Analysis with the business intelligence platform, you have to configure user accounts in the connected BW systems as well. You also have to configure user accounts on the business intelligence platform server.
5.12.2 Authentication and single sign-on

Single Sign-On with SAP NetWeaver

With SAP NetWeaver as platform, single sign-on works if the following conditions are true:

- Secure Network Communications (SNC) is installed on each client PC. For more information, see SAP Help Portal at http://help.sap.com SNC SAP NetWeaver SAP NetWeaver Library SAP NetWeaver by Key Capability Security Network and Transport Layer Security Transport Layer Security on the AS ABAP Secure Network Communications
- Each end user has a user account in the connected BW system.

The user signs on once to the client-side Secure Network Communications (SNC) with his/her credentials, and is then able to connect to the BW systems without having to enter the BW username and password.

The same settings are valid for using Analysis locally.

Single Sign-On with SAP BusinessObjects Business Intelligence platform

Once users are logged on to SAP BusinessObjects Business Intelligence platform, single sign-on enables users to access SAP systems without having to provide their logon credentials. Single sign-on works if the following conditions are true:

- BusinessObjects Business Intelligence platform is configured correctly for single sign-on. For more information, see “Configuring SAP authentication” in the SAP BusinessObjects Business Intelligence Platform Administrator’s Guide at http://help.sap.com/bobip41.
- In the Central Management Console under OLAP-connections, the parameter Authentication is set to SSO for the BW systems that should be used with single sign-on.
- In the Central Management Console under Users and Groups User List, the BI platform user accounts need to be mapped to the BW user accounts: In the Properties dialog box of a BI platform user, click Assigns Alias... to add the corresponding BW user.
- The SAP NetWeaver BW systems are configured as external authentication system. Proprietary SAP tokens (assertion tickets) are used to provide a mechanism that supports single sign-on for Analysis users connecting to BW systems. For more information, see “Setting up single sign-on to the SAP system” in the SAP BusinessObjects Business Intelligence Platform Administrator’s Guide at http://help.sap.com/bobip41.
With single sign-on, the user signs on once to SAP BusinessObjects Business Intelligence with his/her credentials (when inserting a data source in Analysis), and is then able to connect to the BW systems without having to enter a BW username and password.

**Single Sign-On with SAP HANA data source**

To use a local HANA connection, you have to enable SSO.
For more information, see Configuration for SAP HANA [page 54]

### 5.12.3 Authorizations

In Analysis, users can store documents (workbooks and presentations) on the business intelligence platform, on the SAP NetWeaver platform or as a local file. For security reasons, make sure that users do not have administrator rights on the client PCs. Otherwise the users could access other users log files on the client PC for example.

**Authorizations for local files**

To store documents locally, you can use a file share and assign authorizations for the file share to manage who should be able to save and open documents.

**Authorizations for the SAP BusinessObjects BI platform**

To store documents on the business intelligence platform, Analysis uses the SAP BusinessObjects Business Intelligence / SAP BusinessObjects Enterprise authorization concept to manage the folders containing Analysis workbooks and PowerPoint files. For more information on configuring the authorizations for these folders, see “Setting Rights” in the BusinessObjects Business Intelligence / BusinessObjects Enterprise Administrator’s Guide at http://help.sap.com.

**Authorizations for the SAP NetWeaver platform**

To store documents on the SAP NetWeaver platform, Analysis uses the SAP NetWeaver BW authorization concept for data access management. The authorization object for using SAP NetWeaver as platform is S_RS_AO.

The authorization object S_RS_AO has the following fields:
Table 25:

<table>
<thead>
<tr>
<th>Authorization Field</th>
<th>Short Description and Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>RSAO_OBJID</td>
<td>Analysis Client Technical Name</td>
</tr>
<tr>
<td></td>
<td>The options are: technical name of an Analysis document, a string ending with * for a namespace (e.g. ZZ*) and a single * to give the authorization for all documents.</td>
</tr>
<tr>
<td>RSAO_OBJTY</td>
<td>Analysis Client Object Type</td>
</tr>
<tr>
<td></td>
<td>The options are: Microsoft Excel, Microsoft PowerPoint, Excel NW Embedded, PowerPoint NW Embedded, Analysis Application, Design Studio Extension and * to select all options.</td>
</tr>
<tr>
<td>RSZOWNER</td>
<td>Owner (Person Responsible) for a Reporting Component</td>
</tr>
<tr>
<td></td>
<td>The options are: User ID for a single user, a group of users (team), the variable $USER and * to authorize all users.</td>
</tr>
<tr>
<td>ACTVT</td>
<td>Activity</td>
</tr>
<tr>
<td></td>
<td>The options are: Create or generate, Change, Display, Delete, Execute and * to select all options.</td>
</tr>
<tr>
<td></td>
<td>The authorization options are only related to the Analysis documents and not to the data of the underlying data source. For example, a user who is authorized to change a workbook (option: Change), is not automatically authorized to change the data of the underlying data source in the BW system.</td>
</tr>
</tbody>
</table>

In the BW system, the authorizations are maintained in transaction PFCG Role Maintenance.

A role can contain the authorization for several users, for example for user A and user B. If user A wants to open a workbook in the Role section in the Open Documents dialog in Analysis, he will only see the documents he is authorized to see, even if there are other documents attached to the role and user B.

Analysis does not support the concept of favorites. A user can see documents he created in the My Documents section in the Open Documents dialog. And in the Role section in the Open Documents dialog, a user will see the documents he is authorized to see.

For more information, see the SAP BW documentation on the SAP Help Portal at Overview Authorization Objects.

Related Information

Examples: Authorizations for the SAP NetWeaver platform [page 66]
5.12.3.1 Examples: Authorizations for the SAP NetWeaver platform

The following examples show how you can maintain authorizations on the SAP NetWeaver platform (transaction PFCG).

Authorization with restriction on activity

Table 26:

<table>
<thead>
<tr>
<th>Authorization Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>RSAO_OBJID (Analysis Client Technical Name)</td>
<td>*</td>
</tr>
<tr>
<td>RSAO_OBJTY (Analysis Client Object Type)</td>
<td>Microsoft Excel</td>
</tr>
<tr>
<td>RSZOWNER (Owner)</td>
<td>*</td>
</tr>
<tr>
<td>ACTVT (Activity)</td>
<td>Create or generate; Display</td>
</tr>
</tbody>
</table>

With these authorization settings, every user can save workbooks with an arbitrary name. All user can find the workbooks in the Open Documents dialog and display them in Analysis.

Authorization with restriction on owner

Table 27:

<table>
<thead>
<tr>
<th>Authorization Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>RSAO_OBJID (Analysis Client Technical Name)</td>
<td>Z*</td>
</tr>
<tr>
<td>RSAO_OBJTY (Analysis Client Object Type)</td>
<td>Microsoft Excel</td>
</tr>
<tr>
<td>RSZOWNER (Owner)</td>
<td>A</td>
</tr>
<tr>
<td>ACTVT (Activity)</td>
<td>*</td>
</tr>
</tbody>
</table>
Table 28:

<table>
<thead>
<tr>
<th>Authorization Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>RSAO_OBJID</td>
<td>X*</td>
</tr>
<tr>
<td>(Analysis Client Technical Name)</td>
<td></td>
</tr>
<tr>
<td>RSAO_OBJTY</td>
<td>Microsoft Excel</td>
</tr>
<tr>
<td>(Analysis Client Object Type)</td>
<td></td>
</tr>
<tr>
<td>RSZOWNER</td>
<td>B</td>
</tr>
<tr>
<td>(Owner)</td>
<td></td>
</tr>
<tr>
<td>ACTVT</td>
<td>*</td>
</tr>
<tr>
<td>(Activity)</td>
<td></td>
</tr>
</tbody>
</table>

With these authorization settings, user A can create workbooks starting with an Z (naming convention) and user B can create workbooks with naming convention X*. Both users can also display, change, execute or delete workbooks with these naming conventions.

User A cannot see any workbook with naming convention X* in the Open Documents dialog and user B will not find workbooks with naming convention Z*.

You can use the variable $USER as Owner to avoid to define the authorization for each user separately.

Table 29:

<table>
<thead>
<tr>
<th>Authorization Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>RSAO_OBJID</td>
<td>*</td>
</tr>
<tr>
<td>(Analysis Client Technical Name)</td>
<td></td>
</tr>
<tr>
<td>RSAO_OBJTY</td>
<td>Microsoft Excel</td>
</tr>
<tr>
<td>(Analysis Client Object Type)</td>
<td></td>
</tr>
<tr>
<td>RSZOWNER</td>
<td>$USER</td>
</tr>
<tr>
<td>(Owner)</td>
<td></td>
</tr>
<tr>
<td>ACTVT</td>
<td>*</td>
</tr>
<tr>
<td>(Activity)</td>
<td></td>
</tr>
</tbody>
</table>

With these authorization settings, all users have the authorization for workbooks they created themselves. The variable $USER is replaced by the corresponding user name during the creation with the authorization check.

If user A creates the workbook Y2, he will be the owner of the workbook after saving. User A can find the workbook in the Open Documents dialog and display and change it again. User B will not find the workbook as user A is the owner.
Authorization for a team

Table 30:

<table>
<thead>
<tr>
<th>Authorization Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>RSAO_OBJID</td>
<td>FC*; PF*</td>
</tr>
<tr>
<td>(Analysis Client Technical Name)</td>
<td></td>
</tr>
<tr>
<td>RSAO_OBJTY</td>
<td>Microsoft Excel</td>
</tr>
<tr>
<td>(Analysis Client Object Type)</td>
<td></td>
</tr>
<tr>
<td>RSZOWNER</td>
<td>A,B,C,D</td>
</tr>
<tr>
<td>(Owner)</td>
<td></td>
</tr>
<tr>
<td>ACTVT</td>
<td>*</td>
</tr>
<tr>
<td>(Activity)</td>
<td></td>
</tr>
</tbody>
</table>

A team consisting of the users A, B, C and D, has the authorization to create workbooks with naming convention FC* and PF*. The four members of the team can also display, change, execute or delete workbooks with these naming convention.

**Recommendation**

The naming conventions for the technical names of the workbooks need to be set up as detailed as the organization structure and the different authorization profiles are. So users can only see the workbooks which contain functions they are allowed to execute.

5.12.4 Network and communication security

Your network infrastructure is extremely important in protecting your system. Your network needs to support the communication necessary for your business needs without allowing unauthorized access.

Usage with SAP NetWeaver

If you use SAP NetWeaver as platform, the client PC communicates directly with the BW server. The BW system provides data access, authorizations for the data and OLAP functions for navigation in the data. The following steps describe the communication sequence:

1. There are two options:
   - The user starts Analysis and inserts a data source from the BW system into a new workbook or presentation.
   - The user starts Analysis and opens a workbook or presentation stored in the BW system.
2. The user logs on to the BW system to get the data.
3. The user navigates in the data.
4. The user saves the Analysis workbook or PowerPoint in the BW system.


Usage with SAP BusinessObjects Business Intelligence / SAP BusinessObjects Enterprise

The following steps describe the communication sequence and provide an overview of the communication channels:

1. There are two options:
   ○ The user opens an existing Analysis workbook or PowerPoint file located on the business intelligence platform server. S/he has to log on to the business intelligence platform.
   ○ The user starts Analysis and inserts a data source from the BW system into a new workbook or PowerPoint file. S/he has to log on to business intelligence platform. Analysis receives the defined connections and the system information for the BW system(s) from the business intelligence platform.
2. The user logs on to the BW system to get the data.

   *Note*
   If single sign-on is activated the user can access the BW system directly.

3. The user navigates in the data.
4. The user saves the Analysis workbook or PowerPoint file on the business intelligence platform server.

In steps 1 and 4, Analysis on the client PC communicates with the business intelligence platform server for requesting system information and saving the files. This communication is carried out with a Web service connection using HTTP or HTTPS as protocols. To provide better security with the HTTP protocol, the Web service connection should use HTTP POST operations, rather than HTTP GET operations. Configure the Web service connection on the business intelligence platform server accordingly.

You can protect this Web service connection using Secure Sockets Layer (SSL). Analysis uses the standard ports for HTTP and HTTPS, which are configured in your network. For more information about the configuration of the Web service connection on the business intelligence platform server, see “Working with Web Application Container Servers” and “Configuring HTTPS/SSL” in the BusinessObjects Business Intelligence / BusinessObjects Enterprise Administrator’s Guide at [http://help.sap.com](http://help.sap.com).

In steps 2 and 3, Analysis on the client PC requests data from the BW server. This communication is carried out with a synchronous Remote Function Call (RFC) connection. You can protect this RFC connection using Secure Network Communications (SNC). For more information, see SAP Help Portal at [http://help.sap.com](http://help.sap.com).
5.12.5 Data Storage Security

Using the business intelligence platform with Analysis, data is stored on the SAP BusinessObjects Business Intelligence / SAP BusinessObjects Enterprise server. Access to the Analysis workbooks and PowerPoint files is protected by the authorization concept of the corresponding folders on the business intelligence platform server. For more information on configuring the authorizations for these folders, see “Setting Rights” in the BusinessObjects Business Intelligence / BusinessObjects Enterprise Administrator’s Guide at http://help.sap.com.

If you use Analysis locally, users store the Analysis workbooks and PowerPoint files with the BW data on a file share or on the client PCs. You can protect the access to the data on the file share with authorizations. To ensure that the locally stored data cannot be viewed by non-authorized users, we advise against giving users administrator rights on the client PCs.

5.12.6 Security for additional applications

3rd party applications

Analysis uses the Essential Studio of Syncfusion Windows Forms as a UI control library. This application does not need any specific security measures.

SAP applications


5.12.7 Logging security relevant events

Security relevant information is stored in the log file if log severity is set to 16 (Debug Information). You can use the log file to help identify any potential unauthorized access to the system. The following events are logged for example:
- successful and unsuccessful logon attempts
- start time and end time of a session
- missing authorization for BW data or objects
- type of Web Service URL to BusinessObjects Business Intelligence / BusinessObjects Enterprise

**Note**
Access to person-related data is not logged in Analysis. You cannot track who accessed person-related data on the client. If required, we recommend using the relevant modelling tools in SAP NetWeaver BW instead.

### Related Information

- Settings for the Analysis Plug-in [page 21]
- Support Settings [page 76]

### 5.12.8 General security recommendations

The following topics provide an overview of additional security-related information and recommendations.

#### Virus scanner activation

As users upload Microsoft Excel and Microsoft PowerPoint files from Analysis into the business intelligence platform document repository, we recommend the use of a virus scanning application to protect your business intelligence platform server. You should only allow your users to store the files in a specific folder in the business intelligence platform. Configure a virus scan for this folder, by using a virus scanning application installed on the same server as the business intelligence platform. Whenever a file is added or modified in this folder, the virus scanner automatically scans the file.

### 5.13 Logging

Analysis uses Apache log4net to record log and trace information. The amount of log and trace information that should be stored is defined in the log.config file.

You can switch on the default logging and tracing as it is required for support messages in the Support Settings dialog.

The log and trace information is stored in .glf files. You can use SAP Snap-In for Microsoft Management Console (MMC) to view these files. SAP MMC provides a graphical user interface to manage the .glf files.
After the installation of Analysis, the log.config file is available under C:\ProgramData\SAP\Cof. This initial file defines that only log information containing error information is recorded. This corresponds to the default support setting for **Log Severity**: Error. The log files are stored under C:\Users\<user>\AppData\Local\Temp\Sap\Cof and have the name pattern Log_<process_id>.glf.

You can define the amount of stored log information with the level value in the log.config file. The following options are available: DEBUG, INFO, VERBOSE, WARNING, ERROR and FATAL. For more information, see the Apache log4net documentation.

You can also record traces to analyze problems in Analysis. The trace recording is enabled if you change the support setting for **Log Severity** to Support. Then the Support_log.config file under C:\ProgramData\SAP\Cof will be copied to C:\Users\<user>\AppData\Roaming\SAP\Cof with file name log.config overwriting the existing file. The trace files are also stored under C:\Users\<user>\AppData\Local\Temp\Sap\Cof and have the name pattern Trace_<process_id>.glf.

If you change the log.config file under C:\Users\<user>\AppData\Roaming\SAP\Cof manually (for example the value level), the support setting for **Log Severity** will be changed to Customized.

You can restore the initial state of the log.config file by selecting Error as log severity in the support settings. The log.config file will be deleted under C:\Users\<user>\AppData\Roaming\SAP\Cof and the initial file under C:\ProgramData\SAP\Cof will be used again.

### Related Information

Support Settings [page 76]

### 5.14 Language Recognition and Processing

In SAP BusinessObjects Analysis, edition for Microsoft Office different text types are displayed in a single user interface.

Analysis receives texts from the connected BW system, such as master data and metadata of the selected data source. These texts are language-dependent and are displayed in the logon language of the BW system. If the user does not enter a logon language in the logon screen when inserting a BW data source, Analysis takes the default language from the user settings in the BW system. This is also the case if you have configured single sign-on.

The language of the Analysis user interface itself (ribbon texts and menu entries for example) is determined by the Microsoft Office display language. The available Microsoft Office languages are processed in an intuitive algorithm.

**Note**

If the Microsoft Office display language is not supported by Analysis, the user interface texts are displayed in English.
The following Microsoft Office language values are recognized by Analysis and processed as **German** (LANGUAGE_GERMAN):

- 1031: // German - Germany
- 3079: // German - Austria
- 5127: // German - Liechtenstein
- 4103: // German - Luxembourg
- 2055: // German - Switzerland

### 5.14.1 Supported languages

#### List of supported languages

In the following table you can see the Microsoft Office language values and the corresponding language values in Analysis.

<table>
<thead>
<tr>
<th>Microsoft Office Language Value</th>
<th>Analysis Language Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1033, 2057, 3081, 10249, 4105, 9225, 15369, 16393, 14345, 6153, 8201, 17417, 5129, 13321, 18441, 7177, 11273, 12297</td>
<td>LANGUAGE_ENGLISH</td>
<td>English</td>
</tr>
<tr>
<td>1031, 3079, 5127, 4103, 2055</td>
<td>LANGUAGE_GERMAN</td>
<td>German</td>
</tr>
<tr>
<td>1036, 2060, 11276, 3084, 9228, 12300, 15372, 5132, 13324, 6156, 14348, 58380, 8204, 10252, 4108, 7180</td>
<td>LANGUAGE_FRENCH</td>
<td>French</td>
</tr>
<tr>
<td>1041</td>
<td>LANGUAGE_JAPANESE</td>
<td>Japanese</td>
</tr>
<tr>
<td>3082, 1034, 11274, 16394, 13322, 9226, 5130, 7178, 12298, 17418, 4106, 18442, 58378, 2058, 19466, 6154, 15370, 10250, 20490, 21514, 14346, 8202</td>
<td>LANGUAGE_SPANISH</td>
<td>Spanish</td>
</tr>
<tr>
<td>2052, 4100</td>
<td>LANGUAGE_SIMPLIFIED_CHINESE</td>
<td>Simplified Chinese</td>
</tr>
<tr>
<td>1028, 3076, 5124</td>
<td>LANGUAGE_TRADITIONAL_CHINESE</td>
<td>Traditional Chinese</td>
</tr>
<tr>
<td>1040, 2064</td>
<td>LANGUAGE_ITALIAN</td>
<td>Italian</td>
</tr>
<tr>
<td>1049, 2073</td>
<td>LANGUAGE_RUSSIAN</td>
<td>Russian</td>
</tr>
<tr>
<td>1043, 2067</td>
<td>LANGUAGE_DUTCH</td>
<td>Dutch</td>
</tr>
<tr>
<td>1042</td>
<td>LANGUAGE_KOREAN</td>
<td>Korean</td>
</tr>
<tr>
<td>1046, 2070</td>
<td>LANGUAGE_PORTUGUESE</td>
<td>Portuguese</td>
</tr>
<tr>
<td>1053</td>
<td>LANGUAGE_SWEDISH</td>
<td>Swedish</td>
</tr>
<tr>
<td>1045</td>
<td>LANGUAGE_POLISH</td>
<td>Polish</td>
</tr>
<tr>
<td>1030</td>
<td>LANGUAGE_DANISH</td>
<td>Danish</td>
</tr>
</tbody>
</table>
### 5.15 Lifecycle Management

Lifecycle management refers to the set of processes involved in managing information related to a product lifecycle, from design to delivery. It establishes procedures for governing the entire product lifecycle, including phases such as development, production, and testing.

Analysis 2.3 uses SAP BusinessObjects Business Intelligence or SAP NetWeaver as BI platform and thus its lifecycle management modules.

#### Related Information

- Lifecycle Management with Business Intelligence Platform [page 74]
- Life-Cycle Management with SAP NetWeaver [page 75]

#### 5.15.1 Lifecycle Management with Business Intelligence Platform

Analysis workbooks and presentations are stored in the repository of the business intelligence Platform. With the 4.1 platform, you can save Analysis Workbooks and Analysis Presentations.

In the Central Management Console (CMC) of the business intelligence platform, you have to define connections to your SAP NetWeaver BW system(s). SAP BusinessObjects Analysis gets the information of the connections in the CMC and establishes direct access to the defined BW systems for data exchange. The connection contains the fields Name, ID, and CUID. The Name can be maintained by the administrator, the ID is issued by the system and the CUID is constant, even after the connection has been transported.

You can use several business intelligence platform instances in your system landscape, for example one for testing and one for productive use, and you can transport objects from one instance to another. The transport of Analysis objects is based on two entities: transport of the connection defined in CMC and transport of the workbooks and presentations.

<table>
<thead>
<tr>
<th>Microsoft Office Language Value</th>
<th>Analysis Language Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1044, 2068</td>
<td>LANGUAGE_NORWEGIAN</td>
<td>Norwegian</td>
</tr>
<tr>
<td>1035</td>
<td>LANGUAGE_FINNISH</td>
<td>Finnish</td>
</tr>
<tr>
<td>1054</td>
<td>LANGUAGE_THAI</td>
<td>Thai</td>
</tr>
<tr>
<td>1029</td>
<td>LANGUAGE_CZECH</td>
<td>Czech</td>
</tr>
<tr>
<td>1038</td>
<td>LANGUAGE_HUNGARIAN</td>
<td>Hungarian</td>
</tr>
<tr>
<td>1051</td>
<td>LANGUAGE_SLOVAK</td>
<td>Slovak</td>
</tr>
<tr>
<td>1055</td>
<td>LANGUAGE_TURKISH</td>
<td>Turkish</td>
</tr>
</tbody>
</table>
After the transport of the connection, you can update it in the target business intelligence platform instance by maintaining the connection information to the associated BW system, for example if you use different BW systems for testing and productive use. The constant CUID ensures that the connection works correctly following the transport.

The transported workbooks and presentations use the connection CUID to read the appropriate connection information, and Analysis builds the connection to the target system or object.

**Note**

Ensure that the dependent objects on the Analysis workbooks and presentations (InfoProviders, queries, query views) are available in the BW system that is connected to the target business intelligence platform system.


### 5.15.2 Life-Cycle Mangement with SAP NetWeaver

Analysis workbooks and presentations are stored in the SAP Business Warehouse metadata repository. You can store the file formats .xls, .xlsx, .ppt and .pptx with SAP NetWeaver. The authorization object for using SAP NetWeaver as platform is S_RS_AO.

In SAP NetWeaver Business Warehouse, Analysis objects are stored with object type AAOE (for workbooks) and AAOP (for presentations). You can save an *Object Name* (technical name) and a *Long Description* (title) with an Analysis object.

Newly created objects are saved as an active version (A-TLOGO object). If you create a new object in a BI Content development system, it is saved as active version and delivery version (D-TLOGO object).

You can use several BW systems in your system landscape, one for testing and one for productive usage for example. You can also transport objects from one system to another. An Analysis object can contain connections to different BW systems. The system of the data source that is first inserted in the workbook or presentation, is the master system. If an object is transported, the connection to the master system will be replaced in the target system. The other connections are unaffected.

**Note**

You have to make sure that objects dependent on the Analysis workbooks and presentations (InfoProviders, queries, query views) exist in the target BW system.

For more information about object versioning and transporting objects in SAP NetWeaver BW, see see the SAP NetWeaver BW documentation at [http://help.sap.com/saphelp_nw73ehp1/helpdata/en/38/5ee7377a98c17fe10000009b38f842/content.htm](http://help.sap.com/saphelp_nw73ehp1/helpdata/en/38/5ee7377a98c17fe10000009b38f842/content.htm).

### 5.16 Troubleshooting

Analysis provides utilities for troubleshooting, such as error messages, log files and traces.
Checking the Workstation

To check the installation of Analysis, start the Check Workstation Wizard dialog box under Start Run nwccheckworkstation. The Check Workstation Wizard collects installation errors for SAP support. For more information, see “Diagnosing Front-End Software Installations using NWCheckWorkstation” in the SAP Front End Installation Guide on SAP Service Marketplace at http://service.sap.com/instguides SAP NetWeaver 7.0 (2004s) Installation Installation - Clients.

Creating Traces and Log Files

You can make various settings for creating traces and log files in the registry settings. See Settings for the Analysis Plug-in [page 21].

Users can access these settings in the User Settings dialog box on the Support Settings tab. To start the User Settings dialog box, choose Analysis Settings.

5.16.1 Support Settings

Log Severity

This setting defines the amount of log and trace information that is stored. The information is stored as .glf files under C:\Users\<user>\AppData\Local\Temp\Sap\Cof.

- **Error**: The system stores exceptions and error messages. This is the default setting after installation.
- **Support**: The system stores exceptions, error messages and traces.
- **Customized**: The system stores messages and traces that are defined in the log.config file under C:\Users\<user>\AppData\Roaming\SAP\Cof. For more information, contact your system administrator.

Enable BW Server Tracing

To activate the SAP NetWeaver BW trace tool environment, select the Enable BW Server Tracing check box.

You can also activate the BW server tracing with the file system setting AbapTrace in the Ao_app.config file.

The trace tool environment (transaction code RSTT in the connected BW system) has special tools to log and play back traces and process automatic regression tests.

For more information about the trace tool environment, see SAP Help Portal at http://help.sap.com SAP NetWeaver SAP NetWeaver by Key Capability Information Integration by Key Capability Business Intelligence BI Platform OLAP Performance Optimization BEx Monitor Trace Tool Environment.
Enable Workbook Profiling

To activate the SAP NetWeaver BW query runtime statistics, select the Enable Profiling check box.
You can also activate the workbook profiling with the file system setting Profiling in the Ao_app.config file.
Using the query runtime statistics, you can find out how much time it takes to execute certain user actions in Analysis and the BW analytic engine. The system records the performance-critical parts of the processing (statistics events). It calculates the net times by calculating the runtime of an event using the difference between the start and end times (minus the times for other events called from within the event).
You can check the statistics in the Analysis ribbon Actions group under Messages Show Workbook Profiling Statistics... The Messages entry is enabled only if statistics are available.
For more information about the query runtime statistics, see section Query runtime statistics in the Analysis Administrator guide.

Enable Client Profiling

To activate the Analysis client profiling, select the Enable Profiling check box.
You can also activate the client profiling with the file system setting clientProfiling in the Ao_app.config file.
If the setting is activated, Analysis will capture every interaction.
You can check the statistics in the Analysis ribbon Actions group under Messages Show Client Profiling Statistics... The Messages entry is enabled only if statistics are available.
In the Client Profiling Statistics dialog, the captured interactions are displayed as steps in a tree view and you can navigate to each interaction. You can see the overall processing time per step (in ms), the time the user spent in dialogs, the number of RFC calls per step and the time that was spent for RFC. In section Update UI, you can see if a navigation step has caused (unexpected) RFC calls.
At the bottom of the Client Profiling Statistics dialog, you find a summary containing the time that was used on client side for processing (in ms), the number of RFC calls (count) and the time that was used for that (in ms) and the time the user spent in dialogs (in ms).

Display Technical Names

To activate the technical names of the dimensions in your Analysis workbook, select the Display Technical Names check box. The dimensions are displayed with technical name and text.

Enable NCO Tracing

This setting may be used for SAP error handling.
Analysis uses the .Net connector (NCO) for calling ABAP RFCs from client. NCO supports logging of RFC traces. You can activate the tracing by selecting Enable NCO Tracing and choosing the desired level (usually 4).

If you now work with Analysis, log files will be created in the %temp% folder of windows. There you can find a dev_nco_rfc.log file and a number of files "nco_rfc_XXXX_Y.trc". Additionally, there are the Analysis log files of type .glf, for example AO_Log_<processID>.glf. You can zip all of them to attach them to the message.

Show Suppressed Messages

Select this check box you want the suppressed messages to be shown.

Related Information

Query runtime statistics [page 61]

5.16.2 End-to-End Tracing

A single user workflow can involve multiple interactions with different servers. Each of those servers writes tracing information to its own log file. With the SAP Client plug-in, you can see all the tracing information to a particular workflow.

1. Download and install the SAP Client plug-in.
   You can find the installation file and additional information in SAP note 1435190.
2. Make sure that the Analysis Add-In is enabled.
   The LoadBehavior parameter should be set to 3.
3. Start the SAP Client plug-in.
4. Select the Microsoft Office application you want to trace, for example Microsoft Excel.
5. Press Launch and proceed the steps you want to trace.

The SAP Client plug-in provides you with an XML file containing the traced information.

For more information, see the Trace Analysis chapter in the SAP Solution Manager documentation on the SAP Help Portal.

Related Information

To configure the load behavior of the Analysis Add-In [page 47]
5.16.3 To enable the Analysis Add-In after system crash (Microsoft Office 2010 and higher)

Context

If Microsoft Excel or Microsoft PowerPoint crashes, and you have to close the application, the Analysis Add-In might be disabled by the Microsoft application. If this happens, you have to re-enable the Analysis Add-In in Microsoft Excel or Microsoft PowerPoint.

Procedure

1. Open Analysis for Microsoft Excel or Microsoft PowerPoint. After the system crash the Analysis Add-In is not visible in the menu.
2. Choose File in Microsoft Excel or Microsoft PowerPoint.
4. In the Excel Options dialog box and in the PowerPoint Options dialog box in the categories pane, select Add-Ins.
5. In the Manage box, select Disabled Items.
6. Press Go....
7. In the Disabled Items dialog box, select the Analysis Add-In.
8. Press Enable.
9. In the Manage box, select COM Add-Ins.
10. Press Go....
11. In the COM Add-Ins dialog box, make sure that Analysis option is activated.
12. Press OK.

Results

The Analysis ribbon is available again.
6 Administration for the EPM Plug-in

6.1 Creating and Configuring Connections

This section explains how you create connections in the EPM Plug-in for Microsoft Office. You can create three types of connections:

- Local connections
- Planning and Consolidation connections
- SAP BusinessObjects Enterprise connections

⚠️ Caution
You cannot create two connections with the same name.

6.1.1 Creating Local Connections

Creating a Local connection enables you to analyze the data of the following OLAP data sources:

- SSAS cubes created with SAP BusinessObjects Financial Consolidation, cube designer
- SAP NetWeaver BW InfoCubes created with SAP BusinessObjects Financial Consolidation, cube designer
- SAP BusinessObjects Profitability and Cost Management
- SAP BusinessObjects Planning and Consolidation, version for SAP NetWeaver
- SAP BusinessObjects Planning and Consolidation, version for the Microsoft platform
- SSAS cubes
- SAP NetWeaver Cubes
- SAP HANA MDX Provider

6.1.1.1 Configuration Prerequisites for Creating Local Connections

Prerequisites

The connections you create are OQY queries, stored in .oqy files on your local disc.

When creating these connections, you must indicate in which folder these files will be stored.
Procedure

1. Open Microsoft Office Excel or Microsoft Office PowerPoint.
2. Select the EPM tab.
3. Click the Log On button.
   The EPM - Logon dialog box opens.
4. Click the browse button next to the Connection area.
   The Connection Manager opens.
5. Click the Display Local Connections option.
6. Click the Local Connection Folder button.
   The Local Connection Folder dialog box opens.

7. Make sure that:
   ○ the folders listed in this dialog box exist in your Windows Explorer,
   ○ you have Write permission on these folders.

Note
If you run Windows Terminal Services or Citrix and you want all users to see connections, you must put the .oqy files in a folder every user can read, like C:\Program Files (x86)\Common Files\ODBC\data source. Alternatively, you can add another folder.
6.1.1.2 Creating a Local Connection for Financial Consolidation with SSAS Cubes using XMLA or OLEDB Providers

Procedure

1. Open Microsoft Office Excel or Microsoft Office PowerPoint.
2. Select the EPM tab.
3. Select Options ➤ User Options ➤ . The EPM - User Options dialog box opens.
4. Select the Server Configuration tab.
5. In the SAP BusinessObjects Enterprise Server, enter the address of the SAP BusinessObjects Enterprise platform and click Check Server.

Note

The correct syntax is the following: http://<server_name><port_number>. You must not enter /BOE/CMC at the end of the URL.
6. If you have access to a dedicated SAP Portal, enter the address of the SAP Portal and click Check Server in the SAP Portal area. A message pops up, indicating if the server has responded.

7. Click Options and enter the two parameters (User Name and Password). Make sure those parameters are written in the exact same way the SAP Portal parameters are. The SAP Portal credentials can now be used to connect to your local connections.

8. Click OK.

9. Then select the EPM tab and click the Log On button.

**Note**

If a connection is already used on the file, select the EPM tab and then Report Actions > Manage Connections. The Connection Manager opens.

The EPM - Logon dialog box opens.

10. Click the browse button next to the Connection area. The EPM - Connection Manager opens.

11. Click the Create button. The Create Connection dialog box opens.

12. In the Connection Type list, select the Local option.

13. In the Local Connection area, select one of the following providers and click the Connect button.

- Use XMLA to connect to a Microsoft Analysis Source
- Microsoft OLEDB Provider for Analysis Services 10.0
- Microsoft OLEDB Provider for Analysis Services 9

The Create New OLEDB Data Source dialog box opens.

15. In the XMLA SSAS Authentication Method dropdown list, select the authentication method you require (for example, Enterprise BOE Authentication for FC).


17. Enter the user name and password for the SAP BusinessObjects Enterprise platform and click Log on.

18. Back in the Create Connection dialog box, select an SSAS cube.

19. Enter a name for the connection. The name appears in the Connection Manager list of connections.

   **Note**

   If the data source for which you are creating or editing the local connection is a large volume data source, select the Do not Load Members at Connection option.
6.1.1.3 Creating a Local Connection for Financial Consolidation with NetWeaver BW Cubes

Procedure

1. Open Microsoft Office Excel or Microsoft Office PowerPoint.
2. Select the EPM tab.
3. Click Log On.
   The EPM - Logon dialog box opens.
4. Click the browse button next to the Connection area.
   The EPM - Connection Manager opens.
5. Click Create.
   The Create Connection dialog box opens.
6. In the Connection Type list, select the Local option.

7. In the Local Connection area, select one of the following provider:
   - the SAP BW OLEDB Provider.
   - or the BAPI provider for BW NW if you want to connect to a large volume data source. In that case, you can click the Use Navigation Attribute option if you want to retrieve navigation attributes from your SAP NetWeaver environment.

The Create New OLEDB Data Source dialog box opens.
8. Click **Connect**.

9. In the **Application Server** field, enter the name of the BW server.

10. Depending on the provider you selected at step 7, select the appropriate authentication method in the **MDrmSap2 Authentication Method** or **BAPI_Generic Authentication Method** dropdown list.

11. If you selected a BAPI provider, select one of the following authentication method:
   - **SAP BW Authentication Basic**
   - **SAP Enterprise Authentication Basic**: use this option if you have access to a dedicated SAP Portal.

   **Note**
   You must enter the address of the SAP Portal in the SAP Portal area of the **EPM - User Options** dialog box.

12. In the **System Number** field, enter the system number of your SAP NetWeaver server.

13. In the **Client** field, enter your client number.

14. In the **Language** field, enter the language of your BW system.

15. Click **Next**.

   The **Logon** dialog box opens.

16. Enter the user name and password and click **Log on**.

17. In the **Create Connection** dialog box, select the model you want to use.

18. Enter a name for the connection.

   The name appears in the **Connection Manager** list of connections.

19. Click **OK**.
6.1.1.4 Creating a Local Connection for Profitability and Cost Management

Prerequisites

When installing the SAP Profitability and Cost Management application, you must install the following components:

- Core Components
- Connectivity Pack

Procedure

1. Open Microsoft Office Excel or Microsoft Office PowerPoint.
2. Select the EPM tab.
3. Select Options > User Options. The User Options dialog box opens.
4. In the **SAP BusinessObjects Enterprise Server** field, enter the address of the SAP BusinessObjects Enterprise platform and click **Check Server**.

   **Note**
   You must enter the SAP BusinessObjects Enterprise platform server address only if you want to authenticate through the BOE platform.

   **Note**
   The correct syntax is the following: `http://<server_name><port_number>`. Do not enter `/BOE/CMC` at the end of the URL.

   A message pops up, indicating if the server has responded.

5. In the **SAP Portal** field, enter the address of the SAP Portal and click **Check Portal**.

6. Click **Options** and enter the two parameters (**User Name Parameter** and **Password Parameter**). Make sure those parameters are written in the exact same way the SAP Portal parameters are.

   The SAP Portal credentials can now be used to connect to your local connections.

7. Click **OK**.

8. Select the **EPM** tab and click the **Log On** button.

   **Note**
   If a connection is already used on the file, select the **EPM** tab and then **Report Actions > Manage Connections** and the **Connection Manager** opens.

   The **EPM - Logon** dialog box opens.

9. Click the browse button next to the **Connection** area.

   The **Connection Manager** opens.

10. Click **Create**.

    The **Create Connection** dialog box opens.

11. Select the **Local** option.

12. Select the **Profitability and Cost Management** provider from the drop-down menu and click **Connect**.

    The **Create New OLEDB Data Source** dialog box opens.
13. In the **Application Server** field, enter the name of your Profitability and Cost Management server.

14. In the **EPMMDX.4 Authentication Method** dropdown list, select the appropriate authentication method.

15. Click **Next**.
   
   The **Logon** dialog box opens.

16. Enter the user name and password and click **Logon**.

17. Back in the **Create Connection** dialog box, select the model you want to use.

18. Specify a connection name and click **OK**.

**Note**

If the data source for which you are creating or editing the local connection is a large volume data source, select the **Do not Load Members at Connection** option.
6.1.1.5 Creating a Local Connection for Planning and Consolidation for Microsoft

Procedure

1. Open Microsoft Office Excel or Microsoft Office PowerPoint.
2. Select the **EPM** tab.
3. Select **Options > User Options**. The **User Options** dialog box opens.
4. In the **SAP BusinessObjects Enterprise Server**, enter the address of the SAP BusinessObjects Enterprise platform and click **Check Server**.
You must enter the SAP BusinessObjects Enterprise platform server address only if you want to authenticate through the BOE platform.

The correct syntax is the following: http://<server_name><port_number>. Do not enter /BOE/CMC at the end of the URL.

A message pops up, indicating if the server has responded.

5. Click OK.
6. Then select the EPM tab and click Log On.

If a connection is already used on the file, select the EPM tab and then Manage Connections. The Connection Manager opens.

The EPM - Logon dialog box opens.

7. Click the browse button next to the Connection area.
The EPM - Connection Manager opens.

8. Click Create.
   The Create Connection dialog box opens.

9. In the Connection Type area, select the Local option.

10. In the Local Connection area, select the SAP BusinessObjects Planning and Consolidation option and click Connect.
    The Create New OLEDB Data Source dialog box opens.

11. In the Application Server field, enter the name of the BW server.

12. In the BPCMDX.4 Authentication Method dropdown list, select the appropriate authentication method.

13. Click Next.
    The following dialog box opens.
14. Select the data source that you require.

15. Click *Finish*.

16. In the *Create Connection* dialog box, select the model you require.
17. Enter a name for the connection.
   The name appears in the **Connection Manager** list of connections.

18. Click **OK**.

### 6.1.1.6 Prerequisites for creating a local connection for Planning and Consolidation version for SAP NetWeaver

#### Prerequisites

Once the BW cube has been generated and before creating a local connection for Planning and Consolidation, version for SAP NetWeaver, from the EPM Plug-in, the following procedure is required.

#### Procedure

1. Log in to Planning and Consolidation.
2. In the Launch pane of the window, click Planning and Consolidation Administration. The Planning and Consolidation Administration opens.

3. In the left pane, select Dimensions and Models > Models.

4. Select the model for which you want to create a connection. The following window opens.
5. In the **Features Used with the Model** section, select the **Use as Source of Data for External Applications** option.

   **Note**
   Selecting this option is creating a virtual provider in the SAP NetWeaver application.

6. Click **Save** and **Close**.

   **Note**
   The next steps are not mandatory. They are intended only if you want to verify the creation of the virtual provider in the SAP NetWeaver application.

7. Open the SAP NetWeaver application.

8. Execute the **RSA1** transaction.
   The **DataWarehousing Workbench** opens.

9. In the left pane, expand the environment and click **InfoProvider**.

10. Under this section, you will find the virtual provider that was created during step 5.

   **Note**
   The virtual provider name is suffixed by the letter B. In this example: Consolidation_B, as the provider itself has no suffix.

11. You can now exit the SAP NetWeaver application.
6.1.1.7 Creating a Local Connection for Planning and Consolidation version for SAP NetWeaver

Procedure

1. Open Microsoft Office Excel or Microsoft Office PowerPoint.
2. Select the EPM tab.
3. Click Log On.
   The EPM - Logon dialog box opens.
4. Click the browse button next to the Connection area.
   The EPM - Connection Manager opens.
5. Click Create.
   The Create Connection dialog box opens.
6. In the Connection Type area, select the Local option.
7. In the Local Connection area, select the SAP BW OLEDB Provider option and click Connect.
   The Create New OLEDB Data Source dialog box opens.
8. In the Application Server field, enter the name of the BW server.
9. In the MDrmSAP.2 Authentication Method dropdown list, select the appropriate authentication method.
10. In the System Number field, enter the system number of your SAP NetWeaver server.
11. In the Client field, enter your client number.
12. In the Language field, enter the language of your BW system.
13. Click Next.
    The Logon dialog box opens.
14. Enter the user name and password and click Log on.

15. Click Next.
   The following dialog box opens.

You can see the list of all the virtual providers that have been created on the SAP NetWeaver server.

16. Select the $INFOCUBE data source and click Finish.

17. In the Create Connection dialog box, select a cube that contains TQ2_.

18. Enter a name for the connection.
   The name appears in the Connection Manager list of connections.
19. Click OK.

6.1.1.8 Creating a Local Connection for the SAP HANA Platform

Prerequisites

Before creating a local connection for the SAP HANA Platform, you must have installed the MDX Provider for SAP HANA.

Procedure

1. Open Microsoft Office Excel or Microsoft Office PowerPoint.
2. Select the EPM tab.
3. Click Log On.
   The EPM - Logon dialog box opens.
4. Click the browse button next to the **Connection** area. The **EPM - Connection Manager** opens.

5. Click **Create**. The **Create Connection** dialog box opens.

![Create Connection dialog box](image)

6. In the **Connection Type** list, select the **Local** option.

7. In the **Local** connection area, select the **SAP HANA MDX Provider** and click **Connect**. The **Create New OLEDB Data Source** dialog box opens.
8. In the **Application Server** field, enter the name of the SAP HANA server.

9. In the **SAPNewsDBMDXProvider Authentication Method**, select the **Other Basic** method.

10. In the **System Number** field, enter the system number of your SAP HANA server.

11. Click **Next**.
    
    The **Logon** dialog box opens.

12. Enter the user name and password and click **Log on**.

13. In the **Create Connection** dialog box, select the model you want to use.

14. Enter a name for the connection.
    
    The name appears in the **Connection Manager** list of connections.
6.1.2 Creating Planning and Consolidation Connections

Creating a Planning and Consolidation connection enables you to enter data on the following models of:

- SAP BusinessObjects Planning and Consolidation, version for the Microsoft platform
- SAP BusinessObjects Planning and Consolidation, version for SAP NetWeaver
6.1.2.1 Creating a Planning and Consolidation Connection for the Microsoft Platform

Procedure

1. Open Microsoft Office Excel or Microsoft Office PowerPoint.
2. Select the EPM tab.
3. Click Log On.
   The EPM - Logon dialog box opens.
4. Click the browse button next to the Connection area.
5. Click Create.
   The Create Connection dialog box opens.

6. In the Connection Type area, select the Planning and Consolidation option.
   The EPM - Connection Manager opens.
7. In the Planning and Consolidation Connection area, enter the Planning and Consolidation Server URL. For example: https://vmw3443:8443/sap/bpc/.
8. From the Type menu, select the Version for the Microsoft platform connection type.
9. Click Connect.
10. Enter your User Name and Password and click Logon.
11. Select a **Core Model** and a **Model**.
12. Click **Generate Connection Name** or enter manually a connection name.

### 6.1.2.2 Creating a Planning and Consolidation Connection for SAP NetWeaver

**Procedure**

1. Open Microsoft Office Excel or Microsoft Office PowerPoint.
2. Select the **EPM** tab.
3. Click **Log On**.
   - The **EPM - Logon** dialog box opens.
4. Click the browse button next to the **Connection** area.
   - The **EPM - Connection Manager** opens.
5. Click **Create**.
   - The **Create Connection** dialog box opens.

#### Create Connection Dialog Box

![Create Connection Dialog Box](image)

6. In the **Connection Type** area, select the **Planning and Consolidation** option.
7. In the **Planning and Consolidation Connection** area, enter the Planning and Consolidation Server URL. For example: **http://ldcie2f.wdf.sap.corp:50015/sap/bpc/**.
8. From the Type menu, select the Version for SAP NetWeaver connection type.

Note
If you select the Client Certificate option, you can select a certificate (the private key is installed on the client, the public key on the BW server) so you can connect without entering the user name and password. This is not valid if you connect through an SAP BusinessObjects Enterprise XI platform.

Note
If you use the SAP Portal credentials to create your Planning and Consolidation Connection for SAP NetWeaver connection, the authentication is performed directly at the SAP Portal level and not at the Planning and Consolidation server level. Beforehand, you must enter the SAP Portal parameters in the Server Configuration tab of the EPM - User Options dialog box.

9. Click Connect.
10. Enter your User Name and Password and click Log on.
11. Select an Environment and a Model.
12. Click Generate Connection Name or manually enter a connection name.

6.1.3 Creating SAP BusinessObjects Enterprise Connections

Creating an SAP BusinessObjects Enterprise connection enables you to analyze the data of the OLAP data sources below:

- SSAS cubes created with SAP BusinessObjects Financial Consolidation, cube designer
- SAP NetWeaver BW InfoCubes created with SAP BusinessObjects Financial Consolidation, cube designer
- SAP BusinessObjects Profitability and Cost Management models
- SAP BusinessObjects Planning and Consolidation, version for SAP NetWeaver
- SAP BusinessObjects Planning and Consolidation, version for the Microsoft platform
- SSAS Cubes
- SAP NetWeaver BW Cubes

To create an SAP BusinessObjects Enterprise connections, you must:

- Create an EPM Connection in the EPM Connection Manager in the Central Management Console.
- Create a BOE connection in the EPM plug-in.
6.1.3.1 Creating an EPM Connection for Financial Consolidation with SSAS Cubes in the Central Management Console

Prerequisites

- You must install the EPM Connection Manager on the SAP BusinessObjects Enterprise platform before creating an EPM connection.
- Install the Web services. To find out more about the installation procedure, see the SAP BusinessObjects Financial Consolidation Installation documentation.

Procedure

1. Log on to the Central Management Console.
2. In the Organize section, click EPM Connections.
3. Click New Connection.
   The following window opens.

   ![Edit EPM Connection Window](image)

   - Name: SSAS_FC
   - Description: SSAS_FC connection
   - Source Application: SAP BusinessObjects Financial Consolidation
   - Provider: Microsoft Analysis Services 2008
   - Server Information:
     - Server address: http://pmw2008r2.dhcp.pgdev.sap.corp/datapump/msmdpump.dll
     - Server Name: pmw2008r2
     - Catalog: FC_Vision
   - Web services URL: http://pmw2008r2.dhcp.pgdev.sap.corp/FCWebService/Services.dll
4. Enter a name for the connection.
5. In the Source Application field, select the SAP BusinessObjects Financial Consolidation application.
6. In the Provider field, select Microsoft Analysis Services 2005 or Microsoft Analysis Services 2008.
7. In the Server address field, enter the URL of the datapump located on the SSAS Server.
8. In the Server Name field, enter the name of the SSAS server. If you installed it with a named instance, do not forget to indicate the name of the instance.
9. In the Catalog field, select the SSAS database you are going to use.

Caution
You must select a catalog (an SSAS database) that is only created and used by Cube Designer.

Note
When creating the EPM connection, a message appears "database not found". This is normal as the database is only created after the first solution is deployed.

10. In the Web services URL field, enter the URL of the SAP BusinessObjects Financial Consolidation Web Services.
11. Click Save.

Once the connection is created, you must define the appropriate security in the Central Management Console.

The user must be granted the following rights:
○ View right on connections,
○ Publish right, if you want the user to publish workbooks in the BI launch pad.

6.1.3.2 Creating an EPM Connection for Financial Consolidation with NetWeaver BW Cubes in the Central Management Console

Prerequisites

- You must install the EPM Connection Manager on the SAP BusinessObjects Enterprise platform before creating an EPM connection.
- Install the Web services. To find out more about the installation procedure, see the SAP BusinessObjects Financial Consolidation Installation documentation.

Procedure

1. Log on to the Central Management Console.
2. In the Organize section, click EPM Connections.
3. Click **New Connection**. The following window opens.

![Edit EPM Connection Window](image)

- **Name**: BW_FC
- **Description**: BW-FC connection
- **Source Application**: SAP BusinessObjects Financial Consolidation
- **Provider**: ODBO Provider for NetWeaver BW
- **Server Information**:
  - Application Server: vmw3037.wdf.sap.corp
  - System Number: 26
  - Client: 600
- **Web services URL**: https://es-ana-fin64-2:1443/ANA PRO MAGISK_1000_SQL2K8/Services

4. Enter a name for the connection.
5. In the **Source Application** field, select the **SAP BusinessObjects Financial Consolidation** application.
6. In the **Provider** field, select **ODBO Provider for NetWeaver BW**.
7. In the **Application Server** field, enter the URL of the SAP NetWeaver server.
8. In the **System Number** field, enter the system number of your SAP NetWeaver server.
9. In the **Client** field, enter your client number.
10. In the **Web services URL** field, enter the URL of the SAP BusinessObjects Financial Consolidation Web Services.
11. Click **Save**.

Once the connection is created, you must define the appropriate security in the Central Management Console.

The user must be granted the following rights:
- View right on connections,
- Publish right, if you want the user to publish workbooks in the BI launch pad.
6.1.3.3 Creating an EPM Connection for Profitability and Cost Management in the Central Management Console

Context

You must install the EPM Connection Manager on the SAP BusinessObjects Enterprise platform before creating an EPM connection.

Procedure

1. Log on to the Central Management Console.
2. In the Organize section, click EPM Connections.
3. Click New Connection.
   The following window opens.

4. Enter a name for the connection.
5. In the Source Application field, select the SAP BusinessObjects Profitability and Cost Management application.
6. In the Provider field, select ODBO Provider for PCM.
7. In the Server address field, enter the URL of the Profitability and Cost Management application server.
8. In the Catalog field, enter EPM.
9. Click Save.

   Once the connection is created, you must define the appropriate security in the Central Management Console.
The user must be granted the following rights:
○ View right on connections,
○ Publish right, if you want the user to publish workbooks in the BI launch pad.

6.1.3.4 Creating an EPM Connection for Planning and Consolidation version for SAP NetWeaver in the Central Management Console

Prerequisites
You must install the EPM Connection Manager on the SAP BusinessObjects Enterprise platform before creating an EPM connection.

Procedure
1. Log on to the Central Management Console.
2. In the Organize section, click EPM Connections.
3. Click New Connection.
   The following window opens.
4. Enter a name for the connection.
5. In the Source Application field, select the SAP BusinessObjects Planning and Consolidation for SAP NetWeaver application.
6. In the Provider field, select ODBO Provider for NetWeaver BW.
7. In the Server address field, enter the URL of the SAP NetWeaver server.
8. In the System Number field, enter the system number of your SAP NetWeaver server.
9. In the Client field, enter your client number.
10. Click Save.

Once the connection is created, you must define the appropriate security in the Central Management Console.

The user must be granted the following rights:
- View right on connections,
- Publish right, if you want the user to publish workbooks in the BI launch pad.
6.1.3.5 Creating an EPM Connection for Planning and Consolidation version for Microsoft in the Central Management Console

Context

You must install the EPM Connection Manager on the SAP BusinessObjects Enterprise platform before creating an EPM connection.

Procedure

1. Log on to the Central Management Console.
2. In the Organize section, click EPM Connections.
3. Click New Connection.
   The following window opens.

   ![Edit EPM Connection Image]

   - Name: BPC_MS
   - Description: BPC_MS connection
   - Source Application: SAP BusinessObjects Planning and Consolidation for Microsoft
   - Provider: ODBO Provider for BPC M
   - Server Information:
     - Server address: https://vmw3443:8443
     - Catalog: MODELS_FG

4. Enter a name for the connection.
5. In the Source Application field, select the SAP BusinessObjects Planning and Consolidation for Microsoft application.
6. In the Provider field, select ODBO Provider for BPC MS.
7. In the Server address field, enter the URL of the Planning and Consolidation application server.
8. In the Catalog field, enter the environment you are going to use.
9. Click Save.

Once the connection is created, you must define the appropriate security in the Central Management Console.
The user must be granted the following rights:
○ View right on connections,
○ Publish right, if you want the user to publish workbooks in the BI launch pad.

6.1.3.6 Creating an SAP BusinessObjects Enterprise Connection

Procedure

1. Open the BI launch pad.
2. Click the Documents tab.
3. Click New > EPM Workbook (or EPM Document or EPM Presentation)
   The corresponding Microsoft Office application opens.
4. In the EPM - Logon dialog box, click the browse button next to the Connection area.
   The EPM - Connection Manager opens.
5. Click Create and in the Connection type area, select SAP BusinessObjects Enterprise.
6. Select the EPM Connection you want to use. To find out more about the EPM Connection creation, see the Creating an EPM Connection in the Central Management Console sections of this documentation.
   The list of Available Cubes/Models opens.
7. Select the cube or model you want to use.
8. Enter a *Connection Name* and click **OK**.

### 6.1.4 Creating the SAP BW (INA Provider) Connection

#### Prerequisites

⚠️ **Caution**

You can create a SAP BW (INA Provider) connection only if you installed the EPM Add-in, .Net Framework 4.0 (Version for Large Volume Data Sources and for Microsoft Office 64-bit) (*EPM Add-in_NET40.exe* setup file).

#### Procedure

1. Open Microsoft Office Excel or Microsoft Office PowerPoint.
2. Select the *EPM* tab.
3. Click **Log On**.
   The **EPM - Logon** dialog box opens.

4. Click the browse button next to the **Connection** area.
   The **EPM - Connection Manager** opens.

5. Click **Create**.
   The **Create Connection** dialog box opens.

6. In the **Connection Type** area, select the **SAP BW (INA Provider)** option.

7. In the **Custom System** area, enter a **System Name** and a **Server Name**.

8. Select the **BASIC** Authentication Method.

9. Select the protocol you want to use, enter a **Port Number** and a **Client Number**.

10. Click **Generate Connection Name**.

11. If you work with SAP Business Planning and Consolidation 10.1, version for SAP NetWeaver or higher, and you want to make the work status feature available, click **Connect**, then select an Environment and a Model.

12. Click **OK**.
6.1.5 User Preferences Configuration

Information about connections and user preferences is stored in different files, which are located in \%userprofile%\AppData\Local\EPMOfficeClient. These files are not deleted when upgrading your version with a patch or support package, or installing a new version.

These files are:

- **Connections.xml**: contains the list of all the Planning and Consolidation and SAP BusinessObjects Enterprise connections.
- **EPMXLClientPreference.XML**: contains the user preferences (options and context values).
- **.oqy files**: contain all the local connections you have created in the EPM plug-in and are stored in the Local Connections folder.

### Note
By default, the EPMXLClientPreference.xml and Connections.xml files are stored in C:\Users\<user>\AppData\Local\EPMOfficeClient. However, you can now add the key as follows in the FPMXLSilent.dll.config file and set the key to "true": "<add key="ConnectionDefinitionInRoamingUserProfiles" value="true"/>". The EPMXLClientPreference.XML and Connections.xml files will be stored in C:\Users\<user>\AppData\Roaming\EPMOfficeClient.

### Tip
The content of the files can be exported to other machines if you want to deploy the same connections and user preferences for several users.

6.2 Deploying the Same Options for Several Users

If you want to deploy the same options for several users, you can export the content of the EPMXLClientPreference.xml to several machines.

The table below lists the options contained in the EPMXLClientPreference.xml file and the corresponding options in the user interface:

- The user options that are in [Options > User Options](#).
- The sheet options that are saved as default options when clicking [Save as Default](#) in [Options > Sheet Options](#).
- The command display options that are in [Options > Command Display Options](#).

### Note
Some options are no longer used and are noted as deprecated.
<table>
<thead>
<tr>
<th><strong>in .xml</strong></th>
<th><strong>on the interface</strong></th>
<th><strong>where</strong></th>
</tr>
</thead>
</table>
| **Restriction**  
This option applies to BPC NetWeaver connections only  
ActivateMemberSetMode  
Values: **True** or **False** (**False** is the default value)  
When set to **True**, and if the server recognizes the relationship, the server performs the member expansion, not the client. If the server does not recognize the relationship (for example, the Offset relationship), the client performs the expansion.  
Setting this option to **True** improves performance.  
| (no equivalent option in the EPM plug-in interface) | | |
| **Caution**  
We recommend not to set this option to **True** before you install Planning and Consolidation for NetWeaver 10.0 Support Package 10. | | |
| **Restriction**  
This option applies to BPC NetWeaver connections only  
ActivateMemberSetModeForBaseLevel  
Values: **True** or **False** (**False** is the default value)  
When set to **True**, and when the **Base Level** relationship is used, the server performs the expansion of the base level members, not the client.  
Setting this option to **True** improves performance.  
<p>| (no equivalent option in the EPM plug-in interface) | | |</p>
<table>
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<tr>
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<th>on the interface</th>
<th>where</th>
</tr>
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<tr>
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<td>AutoFitColumns Values: <strong>True</strong> or <strong>False</strong></td>
<td>Auto Fit Column Width</td>
<td>Sheet Options ➤ Formatting ➤</td>
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<tr>
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<td>Automatic Refresh on Context Changes</td>
<td>User Options ➤ Navigation ➤</td>
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<td>Notify me when updates are available</td>
<td>User Options ➤ Others ➤</td>
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<td>SAP BusinessObjects Enterprise Server</td>
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<td>User Options ➤ Navigation ➤</td>
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<td>User Options ➤ Navigation ➤</td>
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<td>User Options ➤ Navigation ➤</td>
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<td></td>
<td>• Only Base Level</td>
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<td>where</td>
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<td></td>
</tr>
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<td>DefaultMemberRecognitionOn (deprecated)</td>
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<td></td>
</tr>
<tr>
<td>DefaultNotAnEPMSheet (deprecated)</td>
<td>(deprecated)</td>
<td></td>
</tr>
<tr>
<td>DeferLayoutUpdate</td>
<td><strong>Defer Layout Update</strong></td>
<td><img src="#" alt="EPM" /></td>
</tr>
<tr>
<td>Values: <strong>True</strong> or <strong>False</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DisplayCommentsUsingExcel</td>
<td>Show as Microsoft Excel Comments</td>
<td><img src="#" alt="Sheet Options" /> <img src="#" alt="General" /></td>
</tr>
<tr>
<td>Values: <strong>True</strong> or <strong>False</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DisplayDeprecatedFunctions</td>
<td><strong>Load EV Functions</strong></td>
<td><img src="#" alt="User Options" /> <img src="#" alt="Others" /></td>
</tr>
<tr>
<td>Values: <strong>True</strong> or <strong>False</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DisplayName</td>
<td><strong>Display Name</strong> options</td>
<td><img src="#" alt="User Options" /> <img src="#" alt="Formatting" /></td>
</tr>
<tr>
<td>Values:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>● to display the member captions, enter <strong>SoDnCaption</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>● to display the member captions, enter <strong>SoDnFullUniqueName</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DisplayUnrecognizedMembers (deprecated)</td>
<td>(deprecated)</td>
<td></td>
</tr>
<tr>
<td>DoNotStoreModelWarning</td>
<td>Warn if Connection or Environment in the Connection is not Stored</td>
<td>User Options ➤ Navigation</td>
</tr>
<tr>
<td>------------------------</td>
<td>---------------------------------------------------------------</td>
<td>----------------------------</td>
</tr>
<tr>
<td>Value: True or False</td>
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<table>
<thead>
<tr>
<th>DoubleClick</th>
<th>Enable Double-Click</th>
<th>User Options ➤ Navigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value: True or False</td>
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</table>

<table>
<thead>
<tr>
<th>EliminateEmptyAndZeroColumns</th>
<th>Remove Empty and Zero Values</th>
<th>Sheet Options ➤ General ➤ Columns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value: True or False</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EliminateEmptyAndZeroRows</th>
<th>Remove Empty and Zero Values</th>
<th>Sheet Options ➤ General ➤ Rows</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value: True or False</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EliminateEmptyColumns</th>
<th>Remove Empty</th>
<th>Sheet Options ➤ General ➤ Columns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value: True or False</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EliminateEmptyRows</th>
<th>Remove Empty Remove Empty</th>
<th>Sheet Options ➤ General ➤ Rows</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value: True or False</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EmptyValueReplacement</th>
<th>Empty Cell Default Value</th>
<th>Sheet Options ➤ Formatting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value: integer or string</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ExpandCollapse</th>
<th>Expand/Collapse on Single Member</th>
<th>User Options ➤ Navigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value: True or False</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ExpandToLowerLevel</th>
<th>Expand Options</th>
<th>Sheet Options ➤ General</th>
</tr>
</thead>
<tbody>
<tr>
<td>Values:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- To expand Member and Children, enter SoZiMemberChildren.</td>
<td>Expand Options</td>
<td>Sheet Options ➤ General</td>
</tr>
<tr>
<td>- To expand Children, enter SoZiChildren.</td>
<td>Expand Options</td>
<td>Sheet Options ➤ General</td>
</tr>
<tr>
<td>- To expand Member and Descendants, enter SoZiMemberDescendants.</td>
<td>Expand Options</td>
<td>Sheet Options ➤ General</td>
</tr>
<tr>
<td>- To expand Descendants, enter SoZiDescendants.</td>
<td>Expand Options</td>
<td>Sheet Options ➤ General</td>
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<table>
<thead>
<tr>
<th>ForceBasicWrite</th>
<th>Apply only Report Editor Definition for Faster Refresh</th>
<th>Sheet Options ➤ Refresh</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value: True or False</td>
<td></td>
<td></td>
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<table>
<thead>
<tr>
<th>ForceSymetricQueryWhenNecessary</th>
<th>Force Symetric Refresh for Large Asymmetric Axis</th>
<th>User Options ➤ Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value: True or False</td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>HideEmptyAndZeroColumns</th>
<th>Hide Empty and Zero Values</th>
<th>Sheet Options ➤ General ➤ Columns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value: True or False</td>
<td></td>
<td></td>
</tr>
<tr>
<td>in .xml</td>
<td>on the interface</td>
<td>where</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>--------------------------------------------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>Values: True or False</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HideEmptyAndZeroRows</td>
<td>Hide Empty and Zero Values</td>
<td>Sheet Options ➤ General ➤ Rows</td>
</tr>
<tr>
<td>Values: True or False</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HideEmptyColumns</td>
<td>Hide Empty</td>
<td>Sheet Options ➤ General ➤ Columns</td>
</tr>
<tr>
<td>Values: True or False</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HideEmptyRows</td>
<td>Hide Empty</td>
<td>Sheet Options ➤ General ➤ Columns</td>
</tr>
<tr>
<td>Values: True or False</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HideGhostConnect</td>
<td>(no equivalent option in the EPM plug-in interface)</td>
<td></td>
</tr>
<tr>
<td>HideLinks</td>
<td>(no equivalent option in the EPM plug-in interface)</td>
<td></td>
</tr>
<tr>
<td>HideMatrixSecurityWarning</td>
<td>Display Matrix Security Warning</td>
<td>User Options ➤ Others</td>
</tr>
<tr>
<td>Values: True or False</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HideRefreshWarning</td>
<td>Display Warning when Process Takes Time</td>
<td>User Options ➤ Others</td>
</tr>
<tr>
<td>Values: True or False</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HideSubmitWarning</td>
<td>Display Warning when Saving Data or Comment</td>
<td>User Options ➤ Others</td>
</tr>
<tr>
<td>Values: True or False</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IntelligentFormatting</td>
<td>Apply Dynamic Formatting</td>
<td>Sheet Options ➤ Formatting</td>
</tr>
<tr>
<td>Values: True or False</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IntelligentFormattingSheet</td>
<td>Default Formatting Sheet</td>
<td>Sheet Options ➤ Formatting</td>
</tr>
<tr>
<td>Values: name of the worksheet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>in .xml</td>
<td>on the interface</td>
<td>where</td>
</tr>
<tr>
<td>-------------------</td>
<td>--------------------------------</td>
<td>-------------------------------------------------</td>
</tr>
<tr>
<td>Default value: EPMFormattingSheet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IsNotAnEPMSheet</td>
<td><strong>EPM Worksheet</strong></td>
<td><img src="#" alt="Sheet Options ➤ General ➤" /></td>
</tr>
<tr>
<td>Values: <strong>True</strong> or <strong>False</strong></td>
<td><img src="#" alt="Caution" /></td>
<td><img src="#" alt="Sheet Options ➤ General ➤" /></td>
</tr>
<tr>
<td></td>
<td><img src="#" alt="Caution" /></td>
<td><img src="#" alt="Sheet Options ➤ General ➤" /></td>
</tr>
<tr>
<td>KeepEliminate</td>
<td><strong>Keep/Exclude on Single Member</strong></td>
<td><img src="#" alt="User Options ➤ Navigation ➤" /></td>
</tr>
<tr>
<td>Values: <strong>True</strong> or <strong>False</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KeepFormulaAfterRefresh</td>
<td><strong>Keep Formula on Data</strong></td>
<td><img src="#" alt="Sheet Options ➤ General ➤" /></td>
</tr>
<tr>
<td>Values: <strong>True</strong> or <strong>False</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LanguageEdition</td>
<td><strong>Application Language</strong></td>
<td><img src="#" alt="User Options ➤ Others ➤" /></td>
</tr>
<tr>
<td>Values: ISO 639-1 language codes</td>
<td><img src="#" alt="User Options ➤ Others ➤" /></td>
<td><img src="#" alt="User Options ➤ Others ➤" /></td>
</tr>
<tr>
<td></td>
<td>For example, <strong>en</strong> stands for English</td>
<td><img src="#" alt="User Options ➤ Others ➤" /></td>
</tr>
<tr>
<td>LanguageIsoCode</td>
<td><strong>Data Language</strong></td>
<td><img src="#" alt="User Options ➤ Navigation ➤" /></td>
</tr>
<tr>
<td>Values: ISO 639-1 language codes</td>
<td><img src="#" alt="User Options ➤ Navigation ➤" /></td>
<td><img src="#" alt="User Options ➤ Navigation ➤" /></td>
</tr>
<tr>
<td></td>
<td>For example, <strong>en</strong> stands for English</td>
<td><img src="#" alt="User Options ➤ Navigation ➤" /></td>
</tr>
<tr>
<td>LinkIsLocal</td>
<td><strong>Workbook Location options</strong></td>
<td><img src="#" alt="User Options ➤ Others ➤" /></td>
</tr>
<tr>
<td>Values: <strong>True</strong> or <strong>False</strong></td>
<td><img src="#" alt="User Options ➤ Others ➤" /></td>
<td><img src="#" alt="User Options ➤ Others ➤" /></td>
</tr>
<tr>
<td>LocalAndCustomMemberRecognition</td>
<td><strong>Activate Local Member Recognition</strong></td>
<td><img src="#" alt="Sheet Options ➤ General ➤" /></td>
</tr>
<tr>
<td>Values: <strong>True</strong> or <strong>False</strong></td>
<td><img src="#" alt="Sheet Options ➤ General ➤" /></td>
<td><img src="#" alt="Sheet Options ➤ General ➤" /></td>
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<tr>
<td>LocalMemberAsCellPosition</td>
<td><strong>Use Position in Axis</strong></td>
<td><img src="#" alt="Sheet Options ➤ General ➤" /></td>
</tr>
<tr>
<td>Values: <strong>True</strong> or <strong>False</strong></td>
<td><img src="#" alt="Sheet Options ➤ General ➤" /></td>
<td><img src="#" alt="Sheet Options ➤ General ➤" /></td>
</tr>
<tr>
<td>MeasureDisplayFormat (deprecated)</td>
<td><img src="#" alt="User Options ➤ Others ➤" /></td>
<td><img src="#" alt="User Options ➤ Others ➤" /></td>
</tr>
<tr>
<td></td>
<td>(deprecated)</td>
<td></td>
</tr>
<tr>
<td>MemberLinkColor</td>
<td><strong>Member Link Symbol Color button</strong></td>
<td><img src="#" alt="User Options ➤ Navigation ➤" /></td>
</tr>
<tr>
<td>Values: integer</td>
<td><img src="#" alt="User Options ➤ Navigation ➤" /></td>
<td><img src="#" alt="User Options ➤ Navigation ➤" /></td>
</tr>
<tr>
<td>Default value: 0</td>
<td><img src="#" alt="User Options ➤ Navigation ➤" /></td>
<td><img src="#" alt="User Options ➤ Navigation ➤" /></td>
</tr>
<tr>
<td>Use ARGB color values</td>
<td><img src="#" alt="User Options ➤ Navigation ➤" /></td>
<td><img src="#" alt="User Options ➤ Navigation ➤" /></td>
</tr>
<tr>
<td>MemberSelectorPagingSize</td>
<td><strong>Members Displayed on Node Expansion in Member Selector</strong></td>
<td><img src="#" alt="User Options ➤ Navigation ➤" /></td>
</tr>
<tr>
<td>Values: integer</td>
<td><img src="#" alt="User Options ➤ Navigation ➤" /></td>
<td><img src="#" alt="User Options ➤ Navigation ➤" /></td>
</tr>
<tr>
<td>Default value: 1000</td>
<td><img src="#" alt="User Options ➤ Navigation ➤" /></td>
<td><img src="#" alt="User Options ➤ Navigation ➤" /></td>
</tr>
<tr>
<td>in .xml</td>
<td>on the interface</td>
<td>where</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
<td>------------------------------</td>
</tr>
<tr>
<td>Enter the maximum number of members to display when expanding a node in the member selector</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NoMatchInMasterAxisValueReplacement</td>
<td>Member not Found Default Value</td>
<td>Sheet Options Formatting</td>
</tr>
<tr>
<td>Values: text</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Default value: #NOMEMBERFOUND</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enter the text to be displayed in the cells when a member is not found for the following reason.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NumberFormat</td>
<td>Number Format</td>
<td>only in Microsoft PowerPoint</td>
</tr>
<tr>
<td>Values: number</td>
<td></td>
<td>and Document Options Formatting</td>
</tr>
<tr>
<td>Default value: 0.##</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OnTheFlyMemberRecognition</td>
<td>Activate Member Recognition</td>
<td>Sheet Options General</td>
</tr>
<tr>
<td>Values: <strong>True</strong> or <strong>False</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OverrideEmptyValue</td>
<td>Set Default Value in Empty Cell</td>
<td>Sheet Options Formatting</td>
</tr>
<tr>
<td>Values: <strong>True</strong> or <strong>False</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OverrideNoMatchInMasterAxisValue</td>
<td>Set Default Value when Member not Found in Shared Axis</td>
<td>Sheet Options Formatting</td>
</tr>
<tr>
<td>Values: <strong>True</strong> or <strong>False</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OversizeQueryLimit</td>
<td>cells entry area</td>
<td>User Options Others</td>
</tr>
<tr>
<td>Values: integer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Default value: 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PauseRefresh</td>
<td>Freeze Data Refresh</td>
<td>User Options Navigation</td>
</tr>
<tr>
<td>Values: <strong>True</strong> or <strong>False</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RefreshOnOpen</td>
<td>Refresh Data in the Whole File when Opening it</td>
<td>Sheet Options Refresh</td>
</tr>
<tr>
<td>Values: <strong>True</strong> or <strong>False</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RefreshOnlyDataAfterSubmit</td>
<td>Refresh only Data on &quot;Save &amp; Refresh Data&quot;</td>
<td>User Options Others</td>
</tr>
<tr>
<td>Values: <strong>True</strong> or <strong>False</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RefreshOnlyExpandedMembers</td>
<td>Refresh only Expanded and Inserted Members</td>
<td>User Options Navigation</td>
</tr>
<tr>
<td>Values: <strong>True</strong> or <strong>False</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RemoveWorksheetBeforeGeneration</td>
<td>Remove EPM Worksheets Before Generation</td>
<td>User Options Others</td>
</tr>
<tr>
<td>Values: <strong>True</strong> or <strong>False</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ReportLinkColor (deprecated)</td>
<td>(deprecated)</td>
<td></td>
</tr>
<tr>
<td>in .xml</td>
<td>on the interface</td>
<td>where</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>RestoreDynamicOnRefresh (in the &lt;DefaultSheetOptions&gt; section)</td>
<td>Restore Dynamic Selection on Refresh after Navigation</td>
<td>Sheet Options &gt; Refresh</td>
</tr>
<tr>
<td>Values: <strong>True</strong> or <strong>False</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RepeatColumnHeaders</td>
<td>Repeat Columns Headers</td>
<td>Sheet Options &gt; Formatting</td>
</tr>
<tr>
<td>Values: <strong>True</strong> or <strong>False</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RepeatRowHeaders</td>
<td>Repeat Row Headers</td>
<td>Sheet Options &gt; Formatting</td>
</tr>
<tr>
<td>Values: <strong>True</strong> or <strong>False</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RestoreDynamicOnRefresh (not in the DefaultSheetOptions section: deprecated)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RowAxisTotalRefresh</td>
<td>(deprecated)</td>
<td></td>
</tr>
<tr>
<td>RowHeaderIndentation</td>
<td>Row Header Indentation options</td>
<td>Sheet Options &gt; Formatting</td>
</tr>
</tbody>
</table>
| Values:  
  - To indent children, enter `SoRhiChildren`  
  - To indent parents, enter `SoRhiParents`  
  - To specify no indentation, enter `SoRhiNone` | | |
<p>| SheetLocked (do not use) | (do not use) | |
| SheetPwd (do not use) | (do not use) | |
| SheetProtectionOptions (do not use) | (do not use) | |
| ShowDataComments | Show Source Data in Comments | Sheet Options &gt; Refresh |
| Values: <strong>True</strong> or <strong>False</strong> | | |
| ShowCurrentViewPane | Display EPM Context Bar | User Options &gt; Others |
| Values: <strong>True</strong> or <strong>False</strong> | | |
| ShowCurrentViewVertical | Display Context inside EPM Pane | User Options &gt; Others |
| Values: <strong>True</strong> or <strong>False</strong> | | |
| ShowLocalConnections | Display Local Connections | User Options &gt; Others |
| Values: <strong>True</strong> or <strong>False</strong> | | |
| ShowReportEditionPane | Display EPM Pane | User Options &gt; Others |
| Values: <strong>True</strong> or <strong>False</strong> | | |
| ShowUnrecognizedMemberWarning | Warn if Rows and Columns of Unrecognized Members Will be Kept | User Options &gt; Navigation |</p>
<table>
<thead>
<tr>
<th>in <code>.xml</code></th>
<th>on the interface</th>
<th>where</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>SmtpConfiguration/Address</code></td>
<td><code>Server Address</code></td>
<td>User Options &gt; Server Configuration</td>
</tr>
<tr>
<td><code>SmtpConfiguration/AuthenticationType</code></td>
<td><code>Authentication Type</code></td>
<td>User Options &gt; Server Configuration</td>
</tr>
<tr>
<td>Values:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>● enter 0 for <em>Anonymous</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>● enter 1 for <em>Basic</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>● enter 2 for <em>NTLM</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>SmtpConfiguration/EnableSsl</code></td>
<td><code>Enable SSL</code></td>
<td>User Options &gt; Server Configuration</td>
</tr>
<tr>
<td>Values: <em>True</em> or <em>False</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>SmtpConfiguration/Port</code></td>
<td><code>Server Port</code></td>
<td>User Options &gt; Server Configuration</td>
</tr>
<tr>
<td><code>SmtpConfiguration/User</code></td>
<td><code>User Name</code></td>
<td>User Options &gt; Server Configuration</td>
</tr>
<tr>
<td><code>TopMostDialog</code></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Values: <em>True</em> or <em>False</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If you enter <em>True</em>, any EPM plug-in dialog box will be displayed on top of any other application window.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>TotalsAtTheLeft</code></td>
<td><code>Left and Right</code></td>
<td>Sheet Options &gt; General &gt; Totals Placement</td>
</tr>
<tr>
<td>Values: <em>True</em> or <em>False</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>TotalsAtTheTop</code></td>
<td><code>Top and Bottom</code></td>
<td>Sheet Options &gt; General &gt; Totals Placement</td>
</tr>
<tr>
<td>Values: <em>True</em> or <em>False</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>UnauthorizedCellsText</code></td>
<td><code>Unauthorized Cell Text</code></td>
<td>User Options &gt; Others</td>
</tr>
<tr>
<td>Values: text</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enter the text to display in cells containing data that you are not authorized to view. Default value: #Unauthorized</td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>UnrecognizedMemberManagement</code></td>
<td><code>Keep Rows and Columns of Unrecognized Members</code></td>
<td>User Options &gt; Navigation</td>
</tr>
<tr>
<td>Values: <em>True</em> or <em>False</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>UseAsInputForm</code></td>
<td><code>Use as Input Form</code></td>
<td>Sheet Options &gt; General</td>
</tr>
<tr>
<td>Values: <em>True</em> or <em>False</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>UseCacheValidityDuration</code></td>
<td><code>Clear Metadata Cache Frequency</code></td>
<td>User Options &gt; Navigation</td>
</tr>
<tr>
<td>Values: <em>True</em> or <em>False</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Setting</td>
<td>Description</td>
<td>Where</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>--------------------------------------------------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>UseCustomDataLinkColor</td>
<td>Data Link Symbol Color</td>
<td>User Options ➤ Others</td>
</tr>
<tr>
<td>Values: True or False</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UseCustomMemberLinkColor</td>
<td>Member Link Symbol Color</td>
<td>User Options ➤ Others</td>
</tr>
<tr>
<td>Values: True or False</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UseCustomReportLinkColor</td>
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<td></td>
</tr>
<tr>
<td>(deprecated)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UseEPMemberIDInEPMFormulas</td>
<td>Use EPMMemberID in EPM Formulas</td>
<td>User Options ➤ Others</td>
</tr>
<tr>
<td>Values: True or False</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UseMetaDataCache</td>
<td>Activate Metadata Cache</td>
<td>User Options ➤ Navigation</td>
</tr>
<tr>
<td>Values: True or False</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VisibilityCollaborationAll</td>
<td>All Buttons</td>
<td>Command Display Options ➤ Collaboration Group</td>
</tr>
<tr>
<td>Values: True or False</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VisibilityDataAnalysisAll</td>
<td>All Buttons</td>
<td>Command Display Options ➤ Data Analysis Group</td>
</tr>
<tr>
<td>Values: True or False</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VisibilityDataManager</td>
<td>All Buttons</td>
<td>Command Display Options ➤ Data Manager Group</td>
</tr>
<tr>
<td>Values: True or False</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VisibilityReportAndAnalysisOpenSave</td>
<td>Open/Save</td>
<td>Command Display Options ➤ Reports Group</td>
</tr>
<tr>
<td>Values: True or False</td>
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<td></td>
</tr>
<tr>
<td>VisibilitySubmitDataAll</td>
<td>All Buttons</td>
<td>Command Display Options ➤ Data Input Group</td>
</tr>
<tr>
<td>Values: True or False</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VisibilityToolsCustomMembers</td>
<td>Custom Members</td>
<td>Command Display Options ➤ Tools Group</td>
</tr>
<tr>
<td>Values: True or False</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VisibilityToolsOffLineMode</td>
<td>Offline Mode</td>
<td>Command Display Options ➤ Tools Group</td>
</tr>
<tr>
<td>Values: True or False</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VisibilityToolsQuickLinks</td>
<td>Quick Links</td>
<td>Command Display Options ➤ Tools Group</td>
</tr>
<tr>
<td>Values: True or False</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VisibilityUndo</td>
<td>All Buttons</td>
<td>Command Display Options ➤ Undo Group</td>
</tr>
<tr>
<td>Values: True or False</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VisualizeUnauthorizedCells</td>
<td>Show Unauthorized Cell Text</td>
<td>Sheet Options ➤ Refresh</td>
</tr>
<tr>
<td>Values: True or False</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WarmDynamicRefresh</td>
<td>Warn if Navigation Will Break Dynamic Selection</td>
<td>User Options ➤ Navigation</td>
</tr>
<tr>
<td>Values: True or False</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 6.3 EPM Plug-in for Microsoft Office Technical Log Configuration

You should configure the EPM plug-in technical log in the following file:

```
C:\ProgramData\SAP\Cof\Log.Config
```

The log categories are listed below:

<table>
<thead>
<tr>
<th>Log Category</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>FPMXLClient.AnalyzerOne</td>
<td>Default for the entry point of the product</td>
</tr>
<tr>
<td>FPMXLClient.AnalyzerOne.Automation</td>
<td><em>Regular</em> EPMAddIn automation operations</td>
</tr>
<tr>
<td>FPMXLClient.AnalyzerOne.EPMExcelClientDMAutomation</td>
<td>DataManager EPMAddIn automation operations</td>
</tr>
<tr>
<td>FPMXLClient.AnalyzerOne.EPMExcelClientUIMacro</td>
<td>EPMAddIn automation operations displaying a UI</td>
</tr>
<tr>
<td>FPMXLClient.AnalyzerOne.EVFuns</td>
<td>EPMAddIn Excel function operations</td>
</tr>
<tr>
<td>FPMXLClient.AnalyzerOne.ExcelEvents</td>
<td>Excel event handling operations</td>
</tr>
<tr>
<td>FPMXLClient.AutoUpdate</td>
<td>EPMAddIn AutoUpdate operations</td>
</tr>
<tr>
<td>FPMXLClient.BOIntegration</td>
<td>BOE communication operations</td>
</tr>
<tr>
<td>FPMXLClient.Books</td>
<td>BPC Publication operations</td>
</tr>
<tr>
<td>FPMXLClient.BPCProxy</td>
<td>Communication with BPC MS/NW default category</td>
</tr>
<tr>
<td>FPMXLClient.BPCProxy.Datamanager</td>
<td>Communication with BPC MS/NW Datamanager operations</td>
</tr>
<tr>
<td>FPMXLClient.BPCProxy.Datamanager</td>
<td>Communication with BPC MS/NW Datamanager operations</td>
</tr>
<tr>
<td>FPMXLClient.BPCProxy.Datamanager</td>
<td>Communication with BPC MS/NW Datamanager operations</td>
</tr>
<tr>
<td>FPMXLClient.BPCProxy.Drillthrough</td>
<td>Communication with BPC MS/NW Drillthrough operations</td>
</tr>
<tr>
<td>FPMXLClient.BPCProxy.DynamicHierarchy</td>
<td>Communication with BPC MS/NW Dynamic hierarchy operations</td>
</tr>
<tr>
<td>FPMXLClient.BPCProxy.Filters</td>
<td>Communication with BPC MS/NW Filter operations</td>
</tr>
<tr>
<td>FPMXLClient.BPCProxy.Metadata</td>
<td>Communication with BPC MS/NW Metadata operations</td>
</tr>
<tr>
<td>Log Category</td>
<td>Explanation</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------</td>
</tr>
<tr>
<td>FPMXLClient.BPCProxy.Session</td>
<td>Communication with BPC MS/NW Session operations</td>
</tr>
<tr>
<td>FPMXLClient.BPCProxy.User</td>
<td>Communication with BPC MS/NW User operations</td>
</tr>
<tr>
<td>FPMXLClient.BPCProxy.Workstatus</td>
<td>Communication with BPC MS/NW Workstatus operations</td>
</tr>
<tr>
<td>FPMXLClient.BPF</td>
<td>BPF related operations</td>
</tr>
<tr>
<td>FPMXLClient.Connection</td>
<td>Connection mechanism common operations</td>
</tr>
<tr>
<td>FPMXLClient.Connection.ADONET_ODBOConnection</td>
<td>Connection mechanism ADO.NET specific operations</td>
</tr>
<tr>
<td>FPMXLClient.Connection.BPC10Connection</td>
<td>Connection mechanism BPC10 operations</td>
</tr>
<tr>
<td>FPMXLClient.Connection.ODBOConnection</td>
<td>Connection mechanism ODBO operations</td>
</tr>
<tr>
<td>FPMXLClient.Connection.XMLAConnection</td>
<td>Connection mechanism XMLA operations</td>
</tr>
<tr>
<td>FPMXLClient.DataManagement</td>
<td>Document data handling operations</td>
</tr>
<tr>
<td>FPMXLClient.DataManager</td>
<td>BPC DataManager operations</td>
</tr>
<tr>
<td>FPMXLClient.DataManager.TransformationFile</td>
<td>BPC DataManager Transformation/Conversion files operations</td>
</tr>
<tr>
<td>FPMXLClient.DynamicCharts.ChartObject</td>
<td>Charts related operations</td>
</tr>
<tr>
<td>FPMXLClient.EVDRE</td>
<td>EVDRE default category</td>
</tr>
<tr>
<td>FPMXLClient.EVDRE.Formatting</td>
<td>EVDRE formatting related operations</td>
</tr>
<tr>
<td>FPMXLClient.EVDRE.Suppress</td>
<td>EVDRE suppress related operations</td>
</tr>
<tr>
<td>FPMXLClient.FilesManagement</td>
<td>Document / File management operations</td>
</tr>
<tr>
<td>FPMXLClient.Flash</td>
<td>Flash related operations</td>
</tr>
<tr>
<td>FPMXLClient.Logon</td>
<td>Logon related operations</td>
</tr>
<tr>
<td>FPMXLClient.Migration</td>
<td>Migration default category</td>
</tr>
<tr>
<td>FPMXLClient.Persistence</td>
<td>Preference default category</td>
</tr>
<tr>
<td>FPMXLClient.Persistence.MetaDataPersistenceManager</td>
<td>Cache related operation</td>
</tr>
<tr>
<td>FPMXLClient.ReportManagement</td>
<td>Report management related operation default category</td>
</tr>
<tr>
<td>FPMXLClient.REST</td>
<td>REST connection related operations</td>
</tr>
<tr>
<td>FPMXLClient.Ribbon</td>
<td>EPM Plugin Office Ribbon related operation</td>
</tr>
</tbody>
</table>
The following *Report Size Limitations* apply to the EPM plug-in:

- The maximum memory that can be allocated to the Microsoft Excel application is 1.2 GB. This means that the EPM plug-in report size is limited to:
  - 200,000 rows and two million cells,
  - For 32-bit operating systems, 2 million members for each data source: this amount of 2 million = sum (for each dimension, number of dimension members * number of hierarchies).
- When importing data with the Data Manager, you cannot import more than 30,000 members at the same time.
- The maximum size of a file you can upload or download for the Data Manager is 800 MB. Beyond this size limit, we suggest that you upload or download files directly on the Planning and Consolidation server, that is without using the EPM plug-in.
- An amount coming from BPC NetWeaver can have a maximum of 13 digits before the comma and seven digits after.
- You cannot have more than 20 EPM plug-in reports in a single Excel sheet.
- Cell-based formula parameters cannot exceed 255 characters (this is a Microsoft Excel limitation).
- In the *Insert Member* dialog box, the option at Selected Cell is not supported in a report axis containing more than 150000 rows.
- Performing a multi-selection when the Page-axis option is enabled increases the refresh time of the EPM plug-in, especially for large reports (since this calculation is performed on the client side and not on the server side.)
- Regarding asymmetric reports:
  - The number of dimension members in an axis before applying a *remove empty or zero values* option cannot exceed 150,000 rows or columns.
  - When the *Force Symmetric Refresh for Large Asymmetric Axis* option is enabled, the number of members in each nested dimension in a report axis, when multiplied by themselves and before applying the *remove empty or zero values* option, cannot exceed 9,223,372,036,854,775,807.
  - If the excluded members feature is used in this report axis, the *Force Symmetric Refresh for Large Asymmetric Axis* option cannot be used and the limit of 150,000 rows or columns is applied.
6.5 General Limitations

Cell Functions

The following cell functions must be used for on demand data. They must not be used instead of, or as, an EPM report. If a performance issue occurs when using the cell functions, please design an EPM report instead:

- EPMRetreiveData
- EPMScaleData
- EPMScaleData
- EPMSaveData
- EPMSaveDataOnly
7 Administration for the BPC Plug-in

7.1 Embedded Models - Mandatory installation as of version 2.4

When using embedded models, to be able to work with your activities as of version 2.4, you need to install the two following SAP notes on the BW server: 2363387 and 2308662.

7.2 Creating SAP NetWeaver Connections

Prerequisites

1. Install either one of the following:
   ○ SAP Business Client 5.0 or 6.0
   ○ SAP Logon 7.4 and above. You must then set the following registry key: \[HKEY_LOCAL_MACHINE \SOFTWARE(\Wow6432Node)\SAP\SAPLogon "LandscapeFormatEnabled"=REG_DWORD:00000001. See SAP note 2220930.
2. Enable the SAP UI Landscape new format. See SAP note 2112449.

Creating an SAP NetWeaver connection

1. Select File > BPC > Open my Activities > Open Activity using NetWeaver Connection
2. Enter the following information in the dialog box that opens:
   ○ A name and optionally a description for the connection you are creating
   ○ How to access the BPC server: choose http or https and add the port number.

The system is already entered. The environment that is taken into account is the last one that you used when connected to the BPC web client. Once connected, you can select another environment from the view My Activities.
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