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SAP Analysis for Microsoft Office, edition for SAP Analytics Cloud

Document Version: 2.7 SP5 – 2019-03-14

Analysis for SAP Analytics Cloud Administrator Guide

THE BEST RUN SAP

Content

1 Getting Started

1.1 What is SAP Analysis for Microsoft Office, edition for SAP Analytics Cloud

SAP Analysis for Microsoft Office, edition for SAP Analytics Cloud, is a Microsoft Office Add-In that allows multidimensional analysis of SAP Analytic Cloud models as data sources.

Analysis allows multidimensional analysis of data sources in Microsoft Excel and MS Excel workbook application design. It is available for the following Microsoft Office versions:

- Microsoft Office 2016 (Excel and PowerPoint)

In Microsoft Excel, Analysis is available in two separate tabs in the ribbon: *Analysis* and *Analysis Design*.

In the Analysis , you can use SAP Analytics Cloud models 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.

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 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 variables.

You can also plan business data based on the current data in your data source. You can enter the planning data manually in existing data cells and you can work with public and private versions in the design panel for planning.

Analysis must be installed on your local machine. You can connect directly to a SAP Analytics Cloud system.

> **i Note**
>
> The following restrictions apply for the SAP Analytics Cloud models in Analysis:
>
> - Analysis only supports the usage of the default currency (similar to cloud chart behavior). You cannot access non-converted currencies (similar to a cloud table).
> - You cannot consume defined thresholds from the model definition. In Analysis, you can use conditional formatting and Table Design formatting.
> - Analysis cannot visualize SAP Analytics Cloud data locking. Therefore you can change the data in locked cells in Analysis, but you cannot recalculate and save the changed data.
>   For more information about SAP Analytics Cloud data locking, see Configure Data Locking.

- Comments added to SAP Analytics Cloud models are not displayed in Analysis.
  For more information about SAP Analytics Cloud comments, see Adding Comments to a Data Cell.

> **i Note**
>
> Microsoft Office documents contain free text fields. These text fields are not intended to store personal data without additional technical or organizational measures to safeguard data protection and privacy.
>
> In order to ensure that analytical data which is personal data and which is retrieved from the servers with Analysis functionality, does not get stored in documents, the Analysis workbook property *Remove Data Before Saving* can be active in those workbooks.

2 About this Guide

2.1 About the documentation set

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

> → Tip
>
> The guides are regulary updated and enhanced. Make sure that you have the latest version by checking the SAP Help Portal on a regular basis.

Administrator Guide

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

3 Installation

3.1 System Rquirements

Before installing Analysis, edition for SAP Analytics Cloud, ensure that the following components are installed on the local machines:

- Microsoft Office 2016 (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.

> **i 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 Analysis for Microsoft Office, is available in the Product Availability Matrix on SAP Support Portal at http://support.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 SAP Analytics Cloud. For more information about SAP Analytics Cloud, see the SAP Help Portal at http://help.sap.com.

Related Information

To install SAP Analysis for Microsoft Office, edition for SAP Analytics Cloud [page 7]

3.2 To install SAP Analysis for Microsoft Office, edition for SAP Analytics Cloud

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 the SAP Help Portal..

For Microsoft Office 2016, Analysis, edition for SAP Analytics Cloud, consists of the following installable components: Analysis for Microsoft Office, SAC Edition.

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.

   For SAP Analysis for Microsoft Office, edition for SAP Analytics Cloud, select *Analysis for Microsoft Office, SAC Edition*.

   If you select *Add In is always active*, the Add-in is always enabled when you open Microsoft Excel or PowerPoint (load behavior 3).
4. Choose *Next*.
   The SAP Front End Installer prompts you to confirm or change the target directory for Analysis.

   > **i Note**
   >
   > 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 for Microsoft Office have now been installed and are ready to use in Microsoft Excel and PowerPoint.

> **i 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.

Related Information

To configure the load behavior of the Analysis Add-In [page 59]

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 Analysis 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 60]

3.3 To uninstall SAP Analysis 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.
2. Select *Analysis for Microsoft Office*.
   The *SAP Front End Installer* dialog box appears.
3. Choose *Next*.
4. In the confirmation screen, choose *Done*.

Results

Analysis for Microsoft Office is uninstalled and a log file generated.

> **i** Note
>
> The installation and uninstallation of Analysis is done on local machine level. Therefore, nothing is uninstalled on user level. This might cause an error message when a user starts Microsoft Excel for the first time after uninstalling Analysis. This message can be clicked away and will not occur anymore.

For more information, see SAP Note 2279792.

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

Maintaining settings in the file system [page 11]
Maintaining settings in Analysis [page 12]
Settings for the Analysis Add-in [page 14]
Settings for the Analysis Plug-in [page 19]
Configuring Files with SAP Setup [page 57]

4.1 Maintaining 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.

Note: If you change settings under `C:\ProgramData\SAP\Cof`, these changes might be lost when you install a new version of Analysis. Therefore we recommend that you save the file with the changed settings in a different folder. After installing the new version, you can then reuse the saved file.

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 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`.

Results

The Analysis settings are modified according to your changes. The changed values are availabe in the corresponding files in the file system and in the *Technical Configuration* dialog in the Analysis backstage area.

4.2 Maintaining settings in Analysis

Besides maintaining settings directly in the file system, you can modify settings in the Analysis backstage area.

You can find more information about the single settings in chapter *Settings* in the Analysis Administrator Guide.

1. Open the *Technical Configuration* dialog.

   Select *File* > *Analysis* > *Adapt Analysis* > *Technical Configuration*.

While the dialog with all settings is loaded, you can already start the search for a specific setting and enter the setting name in the search field.

2. Display the settings you want to modify.
   You have the following options:
   - Enter a setting name in the search field.
     The search is executed immediately and the settings are displayed accordingly.
   - Select the configuration file prefix:
     Ao for the Analysis plug-in, *Bpc* for the BPC plug-in, *Cof* for the Analysis Add-in and *Epm* for the EPM plug-in.
     The setting are displayed according to their assignment in the file system.
3. Specify the settings to be displayed.
   You have the following options:
   - *All Settings*
     All settings are displayed.
   - *All Settings Deviating from Default Value*
     The settings that have already been modified are displayed.
   - *All Settings Containing a Value in File*
     All settings that contain a value in the corresponding file (e.g. Ao_app.config) are displayed.
4. Modify a setting.
   Change the default value for the setting. Depending on the type, you can select the check box for boolean values, enter an integer value or enter a text.
   In the details view, you get the following information per setting:
   - *Type:*
     The type can be *Bool* for boolean values, *Int32* for integer value or *String* for texts.
     For boolean values, the value is *True* if the check box is selected.
   - *Default:*
     The default value for the setting is displayed.
   - *Publish:*
     The value is always *True*. This means that the setting is public.
   - *Loaded From:*
     The path to the configuration file in the file system is displayed.
   - *Allowed Configuration Level:*
     The configuration level can be *UserRoaming* or *PerMachine*.
     A user can change settings with configuration level *UserRoaming*. The changed settings are stored in the file system under `Users\<UserID>\AppData\Roaming\SAP\Cof`. The file names for the changed settings are *cof_user_roaming.config*, *ao_user_roaming.config*, *bpc_user_roaming.config* and *epm_user_roaming.config*. These files are created automatically if you change a setting in the *Technical Configuration* dialog.
     An administrator can also change settings with configuration level *PerMachine*. The changed settings are stored in the file system under `C:\ProgramData\SAP\Cof`. The file names are *Cof_app.config*, *Ao_app.config*, *Bpc_app.config* and *Epm_app.config*.
     As an administrator, you can also change the configuration level from *UserRoaming* to *PerMachine* for any setting. Then, these settings can no longer be changed by a user.
   - *Config Prefix:*
     The prefix of the corresponding configuration file is displayed. The prefix can be *Ao* for the Analysis plug-in, *Bpc* for the BPC plug-in, *Cof* for the Analysis Add-in and *Epm* for the EPM plug-in.
5. Press *OK*.
   The changed setting values are executed.

The Analysis settings are modified according to your changes. The changed values are availabe in the *Technical Configuration* dialog and in the corresponding files in the file system.

4.3 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 Maintaining settings in the file system [page 11]

ConnectionServiceConfiguration

Setting and Setting Values	Setting Description
`NcoTraceLevel`= `0` (default value), `1`, `2`, `3`or `4`	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 "nco_rfc_XXXX_Y.trc". Additionally, there is the Analysis log file "SAPAdvancedAnalysisXLS.log". You can zip all of them to attach them to the message.
`UseUnicodeCodepageInNco`== `True` or `False` (default value)	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 character ares 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.

AppBuilderConfiguration

Setting and Setting Values	Setting Description
`AppBuilderDefaultProfilePath= ""` (default value)	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 (""). We do not recommend to change the path manually.
`AppBuilderUserProfileDirectory= ""` (default value)	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 (""). 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\<userID>\AppData\Roaming\SAP\Cof\User Interface`. A user can change the path manually to use another specific folder.
`AppBuilderCompanyProfileDirectory= "C:\ProgramData\SAP\Cof\User Interface"` (default value)	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`.

Setting and Setting Values	Setting Description
`AppBuilderReadOnlyProfileDirectories= "path1;path2"`	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.

DPPConfiguration

Setting and Setting Values	Setting Description
`DPPPopup_enforce= 1` (default value) or any integer value	You use this setting to specify whether the data protection and privacy pop-up should be displayed when Analysis is started. The data protection pop-up will be displayed when starting Analysis as long as the value for this setting is higher than the value for setting `DPPPopup_shown`. Therefore, you can also re-enforce that the pop-up is displayed with setting the value for this setting to a higher value than `DPPPopup_shown`. The default value is `1`. This means that the pop-up will be displayed as the default value for `DPPPopup_shown` is `0`. For more information on Data Protection and Pricacy, see .

Setting and Setting Values	Setting Description
`DPPPopup_shown= 0` (default value) or any integer value	You use this setting to specify whether the data protection and privacy pop-up should be displayed again when Analysis is started. The data protection pop-up will be displayed again when starting Analysis as long as the value for this setting is lower than the value for setting `DPPPopup_enforce`. Therefore, you can also re-enforce that the pop-up is displayed with setting the value for this setting to a lower value than `DPPPopup_enforce`. The default value is `0`. This means that the pop-up will be displayed as the default value for `DPPPopup_enforce` is `1`. If you select the check box *Do not show again* in the pop-up, the value is set to `1` and the pop-up will not be displayed when starting Analysis the next time as both settings have the same value.

OfficeConfiguration

Setting and Setting Values	Setting Description
`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.

SupportConfiguration

Setting and Setting Values	Setting Description
`clientProfiling=` `true` or `false` (default value)	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 Troubleshooting in Analysis [page 74].

VersionConfiguration

Setting and Setting Values	Setting Description
`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`.

4.4 Settings for the Analysis Plug-in

The settings for the Analysis Plug-in are delivered in the `Ao_app.config` file.

In this file, the settings are grouped in the following configuration sections:

- AsymetricReportingConfiguration
- BoeConfiguration [page 20]
- DataSourceConfiguration [page 21]
- DateTimeConfiguration [page 29]
- DocumentConfiguration [page 30]
- FormulaConfiguration [page 33]
- FormulaEditorConfiguration [page 33]
- GridConfiguration [page 34]
- HanaConfiguration [page 34]
- NavPaneConfiguration [page 35]
- NewLinesConfiguration [page 35]
- PaGridConfiguration [page 36]
- PlanningConfiguration [page 37]
- SelectorConfiguration [page 39]
- TaskPaneConfiguration [page 41]
- UiCommonConfiguration [page 42]
- UsageConfiguration [page 45]
- UtilitiesConfiguration [page 45]
- VariableConfiguration [page 51]
- WaterfallChartConfiguration [page 53]
- WorkbookConversionConfiguration [page 54]
- WorkspaceConfiguration [page 56]

For more information about maintaining file system settings, see Maintaining settings in the file system [page 11]

4.4.1 BoeConfiguration

In the configuration section (configSection) *BoeConfiguration*, you can find the following settings (section name).

BOESystems

Setting and Setting Values	Setting Description
`BOESystems`	This setting contains the configuration to the Business Intelligence Platform. For more information, see .

DefaultLauncherScheme

Setting and Setting Values	Setting Description
`DefaultLauncherScheme=""` (default value) or `https`	This setting contains the configuration to the Business Intelligence Platform. For more information, see .

RetrieveMultilingualTexts

Setting and Setting Values	Setting Description
`RetrieveMultilingualTexts` = `true` (default value) or `false`	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.

TwoFactorAuthenticationCertificate

Setting and Setting Values	Setting Description
`TwoFactorAuthenticationCertificate = <certificate>`	After the first usage of the two-factor authentication, you can see here the selected certificate.

TwoFactorAuthenticationDisabled

Setting and Setting Values	Setting Description
`TwoFactorAuthenticationDisabled = true` or `false` (default value)	You can use this setting to disable the two factor authentication.. The default value is `False`. This means that the two-factor authentication is enabled as soon as a URL is available in setting `TwoFactorAuthenticationUrl`. If you set the value to `True`, the two-factor authentication is disabled and you can log on to another BI platform. You have to enter the BI platform and your credentials in the log on dialog.

TwoFactorAuthenticationUrl

Setting and Setting Values	Setting Description
`TwoFactorAuthenticationUrl = <URL>`	You can enter the URL of the BI platform that should be used for two-factor authentication (single-sign on). If you enter a URL of a BI platform, two-factor authentication is used for logon and no logon dialog is displayed after the first usage. For the first usage, the user has to select a client certificate. If you need to log on to another BI platform, you can disable the two-factor authentication with setting `TwoFactorAuthenticationDisabled`.

4.4.2 DataSourceConfiguration

In the configuration section (configSection) *DataSourceConfiguration*, you can find the following settings (section name).

AllowChangingAccessMode

Setting and Setting Values	Setting Description
`AllowChangingAccessMode=` `true` or `false` (default value)	You use this setting to specify whether the access mode for member display should be enabled. After installation, the default value is `False`. This means that the access mode is not enabled for the member display definition in the crosstab and for the *Filter by Member* dialog box. If you change the parameter value to `True`, the access mode option is displayed in the menu.

DefaultBWQueryDesigner

Setting and Setting Values	Setting Description
`DefaultBWQueryDesigner=` `0` (default value) or `1`	You can access the BEx Query Designer or the BW Modeling Tools directly from Analysis with the ribbon option *Call Query Designer*. If both designers are available, you can open a drop down list to select one. You use this setting to specify which designer is opened if the *Call Query Designer* option is selected in the ribbon without opening the drop down list. After installation, the default value is `0`. This means that the BW Modeling Tools will be opened if the ribbon option *Call Query Designer* is selected directly. If you change the parameter value to `1`, the BEx Query Designer will be opened if you select *Call Query Designer* directly.

EnablePreferrredPlatform

Setting and Setting Values	Setting Description
`EnablePreferredPlatform= 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.

EnableResetDataSource

Setting and Setting Values	Setting Description
`EnableResetDataSource=true` (default value) or `false`	This setting is used in Analysis with minor versions ≤ 3 to specify whether the *Call Query Designer* icon should be displayed in the ribbon. As of release 2.4, you customize the ribbon with the *Customize User Interface* dialog. Therefore, we recommend to use the *Customize User Interface* dialog to define the options displayed in the ribbon. **i Note** When switching to a version greater than 3, for example Analysis 2.4, Analysis takes your definition from this setting. If the parameter value for this setting was `True`, the*Call Query Designer* icon is displayed in the standard profile for the ribbon. If it was `False`, it is not displayed.

IgnoreQueryDesignerVersionCheck

Setting and Setting Values	Setting Description
`IgnoreQueryDesignerVersionCheck=true` or `false` (default value)	You use this setting to define if the designer version on the machine should be checked. The default value for this setting is `False`. This means that the designer version will be checked. The Setting *Show 'Launch Designer' in Tools Group* in the user settings is only selectable if the correct designer version is installed. If you change the parameter value to `True`, the designer version will not be checked and the setting *Show 'Launch Designer' in Tools Group* is always selectable.

MaxNumberOfParallelThreads

Setting and Setting Values	Setting Description
`MaxNumberOfParallelThreads= 10` (default value) or any integer value	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.

NoSystemMessages

Setting and Setting Values	Setting Description
`NoSystemMessages=true` or `false` (default value)	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.

PreferredPlatform

Setting and Setting Values	Setting Description
`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 BW 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.

PromptForCertificate

Setting and Setting Values	Setting Description
`PromptForCertificate=true` or `false` (default value)	You use this setting to specify whether the certificate should be searched for automatically or entered manually. The default value for this setting is `False`. This means that the certificate will be searched fo automatically. If no certificate can be found, you have to enter a user ID and a password. If you change the parameter value to `True`, you have to enter the certificate manually.

RecentListSize

Setting and Setting Values	Setting Description
`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.

RemoveDataBeforeSaving

Setting and Setting Values	Setting Description
`RemoveDataBeforeSaving=true` or `false` (default value)	You use this setting to define whether the check box *Remove Data Before Saving* on the Components tab in the design panel is selected as default for new workbooks. If the check box is selected, it is saved without data. When you reopen the workbook, no data is displayed. To display the data, you have to refresh the data sources manually by choosing *Refresh All* in the menu. The default value is `False`. This means that the check box on the Components tab is not selected as default. If you change the parameter value to `True`, the check box is selected as default when you open a new workbook.

ResultSetSizeLimit

Setting and Setting Values	Setting Description
`ResultSetSizeLimit` = `-1`, `n` or empty (default)	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`.

RfcBundling

Setting and Setting Values	Setting Description
`RfcBundling`= `true` (default value) or `false`	This setting is recommended when working in an WAN environment to reduce network traffic. After installation, the default value is `True`.

SaveAs1xByDefault

Setting and Setting Values	Setting Description
`SaveAs1xByDefault=true` or `false` (default value)	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.

SubsequentRefreshDefault

Setting and Setting Values	Setting Description
`SubsequentRefreshDefault=TransactionDataOnly` (default value) or `LogOffReconnect`	You use this setting to specify the default behavior for executing *Refresh All*. After the installation, the default value is `TransactionDataOnly`. This means that for all data sources that are online in a workbook, the transactional data is updated when *Refresh All* is executed. If you change the parameter value to `LogOffReconnect`, executing *Refresh All* loggs off an reconnects all data sources that are online.

SupportsSaveAs1x

Setting and Setting Values	Setting Description
`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.

TransferFilterValuesWhileAssigningHierarchy

Setting and Setting Values	Setting Description
`TransferFilterValuesWhileAssigningHierarchy=true` or `false` (default value)	You use this setting to define whether filter values of a dimension are transferred when a different hierarchy or a flat presentation is assigned to the dimension. The default value is `False`. This means that filter values will not be transferred. If you change the parameter value to `True`, the filter values will be transferred as far as possible when flat presentation or a different hierarchy is assigned to a dimension.

UseDataSourceDeltaUpdate

Setting and Setting Values	Setting Description
`UseDataSourceDeltaUpdate=true` (default value) or `false`	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. If you change the parameter value to `False`, the complete data of the data source is reloaded to Analysis.

4.4.3 DateTimeConfiguration

In the configuration section (configSection) *DateTimeConfiguration*, you can find the following settings (section name).

EnableNativeFormatting

Setting and Setting Values	Setting Description
`EnableNativeFormatting=true` or `false` (default value)	Analysis renders date, date time and time span values with format *Text*. It does not use the native Microsoft Excel fomats *Date* and *Time*. You use this setting to enable native Microsoft Excel formats for rendering in Analysis. The default value is `False`. This means that native Excel formats are not used for rendering.. If you change the value to `True`, Analysis renders date, date time and time span values as native Microsoft Exel *Date* and *Time* formats.

ShowUtcTimeStampsInDataCells

Setting and Setting Values	Setting Description
`ShowUtcTimeStampsInDataCells=true` or `false` (default value)	You use this setting to specify whether the UTC timestamps or localized timestamps are displayed in the data cells. The default value is `False`. This means that localized timestamps are displayed in the data cells. If you change the value to `True`, the UTC timestamps are displayed.

4.4.4 DocumentConfiguration

In the configuration section (configSection) *DocumentConfiguration*, you can find the following settings (section name).

DefaultWorkbookPath

Setting and Setting Values	Setting Description
`DefaultWorkbookPath`= path to default workbook in directory.	Use this setting to define the path to the default workbook in the directory.

DocumentCacheFolderPath

Setting and Setting Values	Setting Description
`DocumentCacheFolderPath=` **""** (default value)	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.

EnablePreferredDocumentStorage

Setting and Setting Values	Setting Description
`EnablePreferredDocumentStorage=` `true` (default value) or `false`	You use this setting to specify whether a user should be enabled to select a preferred comments storage in the platform options dialog box. After installation, the default value is `True`. This means that the Comments Storage section is visible in the platform options 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 options dialog box, and the user cannot change the preferred comments storage. The user is therefore unable to change the comments storage defined in setting `PreferredDocumentStorage`.

IsCachingDocuments

Setting and Setting Values	Setting Description
`IsCachingDocuments`= `true` (default value) or `false`	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.

PreferredDocumentStorage

Setting and Setting Values	Setting Description
`PreferredDocumentStorage`= 0, 1 or `2` (default value)	You use this setting to define the preferred document storage for comments in Analysis. After installation of Analysis, the default value of this parameter is set to 2. This means that the preferred document storage is SAP Business Warehouse. If you set the parameter value to 1, the SAP BusinessObjects Business Intelligence Platform is used as document storage for comments. If you set the value to 0, comments are not stored on platform.

StylesCountPerformanceTreshold

Setting and Setting Values	Setting Description
`StylesCountPerformanceTreshold`= `2000` (default value) or any integer value.	The number of cell styles used in a workbook can decrease the performance in Analysis. You use this setting to specify the number of styles that can be used in workbook before a warning message is displayed. The default value is `2000`. This means that a warning message will appear if more than 2000 celll styles are used in a workbook. You can enter any integer value for this setting. With value `0`, the warning is disabled and no message will be displayed.

4.4.5 FormulaConfiguration

In the configuration section (configSection) *FormulaConfiguration*, you can find the following settings (section name).

SetFilterComponentApplyToAllDataSources

Setting and Setting Values	Setting Description
`SetFilterComponentApplyToAllDataSources=true`(default value) or `false`	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.

4.4.6 FormulaEditorConfiguration

In the configuration section (configSection) *FormulaEditorConfiguration*, you can find the following settings (section name).

FormulaExpressionValidationInterval

Setting and Setting Values	Setting Description
`FormulaExpressionValidationInterval= 2` (default value)	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.

4.4.7 GridConfiguration

In the configuration section (configSection) *GridConfiguration*, you can find the following settings (section name).

EnableDoubleClick

Setting and Setting Values	Setting Description
`EnableDoubleClick=` `true` (default value) or `false`	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.

NrOfSingleCellsInContext

Setting and Setting Values	Setting Description
`NrOfSingleCellsInContext=` greater or equal `1`, default value = `100`	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`.

4.4.8 HanaConfiguration

In the configuration section (configSection) *HanaConfiguration*, you can find the following settings (section name).

HanaHttpConnectionTimeout

Setting and Setting Values	Setting Description
`HanaHttpConnectionTimeout=-1` (default value) or any integer value.	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.

4.4.9 NavPaneConfiguration

In the configuration section (configSection) *NavPaneConfiguration*, you can find the following settings (section name).

ShowAllHierarchies

Setting and Setting Values	Setting Description
`ShowAllHierarchies=true`(default value) or `false`	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.

4.4.10 NewLinesConfiguration

In the configuration section (configSection) *NewLinesConfiguration*, you can find the following settings (section name).

UseNewLinesLegacyMode

Setting and Setting Values	Setting Description
`UseNewLinesLegacyMode=true` or `false (default value)`	You use this setting to specify which mode for entering planning data in new lines is used. After installation, the default value is `False`. This means that current mode will be used for entering planning data in new lines. This mode is valid for BW systems of type SAP BW/4HANA SP8 or higher and SAP BW 7.50 SP12 or higher. For former BW versions, the legacy mode will be applied automatically. If you change the parameter value to `True`, the legacy mode will be used for data sources of all BW systems.

4.4.11 PaGridConfiguration

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

ColumnsOfData

Setting and Setting Values	Setting Description
`ColumnsOfData=12` (default value)	You use this setting to define the default number of columns. After installation, the default value is `12`.

LinesOfData

Setting and Setting Values	Setting Description
`LinesOfData=12` (default value)	You use this setting to define the default number of rows. After installation, the default value is `12`.

4.4.12 PlanningConfiguration

In the configuration section (configSection) *PlanningConfiguration*, you can find the following settings (section name).

ActivateFormulaRecognitionOnExistingCells

Setting and Setting Values	Setting Description
`ActivateFormulaRecognitionOnExistingCells=` `true` (default value) or `false`	You use this setting to specify whether formulas in input-enabled cells are saved as table design formulas. The default value is `True`. This means that the formulas added to input-enabled cells are saved as table design formulas. They are added to the formula section on the design rules tab in the design panel and can be changed there. If you change the value to `False`, the formulas are not saved in the design panel.

BicsNewLineFillInitial

Setting and Setting Values	Setting Description
`BicsNewLineFillInitial=` `true` (default value) or `false`	You use settings to define how Analysis handles empty cells in new linesthat are used for planning with new member combinations. The default value is `True`. This means that Analysis tries to derive missing member values. If a member value cannot be derived, Analysis fills in Not Assigned (Key: #). If you change the value to `False`, this behavior is stopped and Analysis does not try to derive missing member values. For more information on related SAP BW parameters, see SAP Note2508938.

InputReadyCellsValueHelpMemberAccessMode

Setting and Setting Values	Setting Description
`InputReadyCellsValueHelpMemberAccessMode = P`	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 2180059.

NumberOfNewLines

Setting and Setting Values	Setting Description
`NumberOfNewLines= 5` (default value)	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.

SetEmptiedDoubleDataCellsToValue0

Setting and Setting Values	Setting Description
`SetEmptiedDoubleDataCellsToValue0= true` (default value) or `false`	**i Note** This setting is deprecated and is planned to be removed with next minor Analysis release > 2.5 as `True` seems to be the only relevant value. Please contact the Analysis team, if you need this setting in future. 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 `True`. This means that empty planning data cells are saved as 0. If you change the value to `False`, the empty planning data cells are not saved as 0. The old value remains.

ShowNewLinesOnTop

Setting and Setting Values	Setting Description
`ShowNewLinesOnTop= true` or `false` (default value)	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.

4.4.13 SelectorConfiguration

In the configuration section (configSection) *SelectorConfiguration*, you can find the following settings (section name).

DoSelectorHierarchyExplicitSelection

Setting and Setting Values	Setting Description
`DoSelectorHierarchyExplicitSelection= true` or `false` (default value)	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. If new children are available in the hierarchy, they are not selected automatically as long as the node is not selected.

EnableMassDataSelector

Setting and Setting Values	Setting Description
`EnableMassDataSelector=true` (default value) or `false`	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.

EnforceDatePickerForCalendarDayVariable

Setting and Setting Values	Setting Description
`EnforceDatePickerForCalendarDayVariable=true` or `false` (default value)	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.

FetchMemberLimit

Setting and Setting Values	Setting Description
`FetchMemberLimit=1000` (default value) or any integer value	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.

PropagateSelectionInStructures

Setting and Setting Values	Setting Description
`PropagateSelectionInStructures=true` or `false` (default value)	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.

4.4.14 TaskPaneConfiguration

In the configuration section (configSection) *TaskPaneConfiguration*, you can find the following settings (section name).

TaskPaneDockPosition

Setting and Setting Values	Setting Description
`TaskPaneDockPosition=1` (default value)	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.

TaskPaneHeight

Setting and Setting Values	Setting Description
`TaskPaneHeight=975` (default value)	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.

TaskPaneWidth

Setting and Setting Values	Setting Description
`TaskPaneWidth=498` (default value)	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.

4.4.15 UiCommonConfiguration

In the configuration section (configSection) *UiCommonConfiguration*, you can find the following settings (section name).

CheckInfoAreasAuthorization

Setting and Setting Values	Setting Description
`CheckInfoAreasAuthorization=true` or `false` (default value)	In BW systems, you can define with authorization object S_RS_FOLD if InfoAreas should be displayed in dialogs of the BEx tools. If it is defined in a BW system that the InfoAreas are not displayed, they are still displayed in the Analysis Open Data Source dialog. You use this setting to specify whether the areas should be displayed in Analysis. The default value is `False`. This means that the areas are displayed in Analysis. If you change the parameter value to `True`, the areas are no longer displayed in the Analysis Open Data Source dialog.

ForceRefreshConnectionInfo

Setting and Setting Values	Setting Description
`ForceRefreshConnectionInfo=true` or `false` (default value)	You use this setting to specify whether the SNC (Secure Network Communications) information is read from the launcher file or from the local SAPUILandscape.xml 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 SAPUILandscape.xml is used. Therefore we do not recommend changing this setting to value `True`.

MessagePopupSeverity

Setting and Setting Values	Setting Description
`MessagePopupSeverity=""` (default value), `Error`, `Warning` or `Success`	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 `""`. 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.

ShowSuppressedMessages

Setting and Setting Values	Setting Description
`ShowSuppressedMessages=true` or `false` (default value)	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.

TextKeyDisplay

Setting and Setting Values	Setting Description
`TextKeyDisplay=Default` (default value), `TextKey`, `KeyText`, `Key` or `Text`	You use this setting to define the member display in the design panel. 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`.

4.4.16 UsageConfiguration

In the configuration section (configSection) *UsageConfiguration*, you can find the following settings (section name).

TrackUsage

Setting and Setting Values	Setting Description
`TrackUsage=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.

You will see more settings in this configuration section in the Ao_app.config file. These settings should not be changed.

4.4.17 UtilitiesConfiguration

In the configuration section (configSection) *UtilitiesConfiguration*, you can find the following settings (section name).

AbapTrace

Setting and Setting Values	Setting Description
`AbapTrace=1` or `0` (default value)	You use this setting to activate the trace tool environment of SAP 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 *Enable BW Server Tracing*. For more information, see Troubleshooting in Analysis [page 74].

AlwaysDoApplicationSteps

Setting and Setting Values	Setting Description
`AlwaysDoApplicationSteps=true` or `false` (default value)	You use this setting to specify when the statistics are written in table RSDDSTAT_OLAP. The default value is `False`. This means that the statistics are written when Analysis closed. If Analysis is terminated unexpectedly, e.g. by time out on a citrix server, the entries are never written to RSDDSTAT_OLAP. If you change the parameter value to `True`, the entries are written after each action executed in Analysis without the need to close Analysis. Note that this might have a negative impact on the performance.

BexAdvancedMode

Setting and Setting Values	Setting Description
`BexAdvancedMode=true` or `false` (default value)	You use this setting to specify whether the 'Use Currency Translation from Query Definition' checkbox should be available in the currency translation dialog for measures. After installation, the default value is `False`. This means that the checkbox is not available. If you change the parameter value to `True`, the checkbox is displayed in the dialog..

CancelPopupDelay

Setting and Setting Values	Setting Description
`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.

Profiling

Setting and Setting Values	Setting Description
`Profiling=` `true` or `false` (default value)	You use this setting to activate the query runtime statistics of SAP BW. For more information, see . You can also activate the setting in the Support Settings dialog with setting *Enable Workbook Profiling*. For more information, see Troubleshooting in Analysis [page 74].

ShowConvertToForumulaInToolsGroup

Setting and Setting Values	Setting Description
`ShowConvertToForumulaInToolsGroup= true` (default value) or `false`	This setting is used in Analysis with minor versions ≤ 3 to specify whether the *Convert To Formula* icon should be displayed in the ribbon. As of release 2.4, you customize the ribbon with the *Customize User Interface* dialog. Therefore, we recommend to use the *Customize User Interface* dialog to define the options displayed in the ribbon. **i Note** When switching to a version greater than 3, for example Analysis 2.4, Analysis takes your definition from this setting. If the parameter value for this setting was `True`, the *Convert To Formula* icon is displayed in the standard profile for the ribbon. If it was `False`, it is not displayed.

ShowCreateWebApplicationInToolsGroup

Setting and Setting Values	Setting Description
`ShowCreateWebApplicationInToolsGroup= true` or `false` (default value)	This setting is used in Analysis with minor versions ≤ 3 to specify whether the *Create Web Application* icon should be displayed in the ribbon. As of release 2.4, you customize the ribbon with the *Customize User Interface* dialog. Therefore, we recommend to use the *Customize User Interface* dialog to define the options displayed in the ribbon. **i Note** When switching to a version greater than 3, for example Analysis 2.4, Analysis takes your definition from this setting. If the parameter value for this setting was `True`, the *Create Web Application* icon is displayed in the standard profile for the ribbon. If it was `False`, it is not displayed.

ShowPlanningToolbar

Setting and Setting Values	Setting Description
`ShowPlanningToolbar= true` or `false` (default value)	This setting is used in Analysis with minor versions ≤ 3 to specify whether the planning group should be displayed in the ribbon. As of release 2.4, you customize the ribbon with the *Customize User Interface* dialog. Therefore, we recommend to use the *Customize User Interface* dialog to define the options displayed in the ribbon. **i Note** When switching to a version greater than 3, for example Analysis 2.4, Analysis takes your definition from this setting. If the parameter value for this setting was `True`, the planning group is displayed in the standard profile for the ribbon. If it was `False`, it is not displayed.

ShowSsoLogonDialog

Setting and Setting Values	Setting Description
`ShowSsoLogonDialog= true` or `false` (default value)	You use this setting to specify whether the *Logon* dialog box should be displayed when using SSO with the SAP BW 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.

ShowSsoLogonDialogBip

Setting and Setting Values	Setting Description
`ShowSsoLogonDialogBip= true` or `false` (default value)	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.

SupportAutomatedOffice

Setting and Setting Values	Setting Description
`SupportAutomatedOffice= true` or `false` (default value)	You use this setting to specify whether the Analysis Plug-in shoud 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`.

UndoStackSize

Setting and Setting Values	Setting Description
`UndoStackSize= 10` (default value)	You use this setting to specify the number of steps that can be undone or redone with the Analysis *Undo/Redo* function. The default value is `10`.

4.4.18 VariableConfiguration

In the configuration section (configSection) *VariableConfiguration*, you can find the following settings (section name).

DisplayCompoundAsKeys

Setting and Setting Values	Setting Description
`DisplayCompoundAsKeys=` `true` or `false` (default value)	You use this setting to define the display of variables in the summary view of the prompting dialog box. The default value is `False`. 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 `True`.

MergeVariables

Setting and Setting Values	Setting Description
`MergeVariables=` `true` or `false` (default value)	You use this setting to specify whether or not the *Merge Variables* check box in the *Components* tab in the design panel is selected when you create a new workbook After installation, the default value is `False`. 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 `True`. The check box is then always selected when you create a new workbook.

OperatorContainsPattern

Setting and Setting Values	Setting Description
`OperatorContainsPattern= true` or `false (default)`	You use this setting to define whether the operators Contains Pattern (CP) and Excludes Pattern (!CP) should be enabled for prompting. The default value is `False`. This means that the contains pattern operators cannot be used for prompting. To enable the contains pattern operators for prompting, you can set the parameter value to `True`.

PreferLeavesOverNodesInInputString

Setting and Setting Values	Setting Description
`PreferLeavesOverNodesInInputString= true` (default value) 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.

PromptWhenInsertingDataSource

Setting and Setting Values	Setting Description
`PromptWhenInsertingDataSource= true` (default value) or `false`	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 `True`. This means that the prompting dialog box always appears automatically when you insert a data source containing variables. If you set this parameter to `False`, the prompts dialog only appears when the data source contains mandatory variables.

ShowDSVariantsForWorkbooksWithOneDS

Setting and Setting Values	Setting Description
`ShowDSVariantsForWorkbooksWithOneDS=true` or `false` (default value)	You use this setting to specify the mode for the prompting dialog when you open a document from the BW 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..

4.4.19 WaterfallChartConfiguration

In the configuration section (configSection) *WaterfallChartConfiguration*, you can find the following settings (section name).

RGBValueColumns

Setting and Setting Values	Setting Description
`RGBValueColumns=#808080` (default value)	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.

RGBValueNegative

Setting and Setting Values	Setting Description
`RGBValueNegative=#FF000C` (default value)	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.

RGBValuePositive

Setting and Setting Values	Setting Description
`RGBValuePositive=#90CE00` (default value)	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.

4.4.20 WorkbookConversionConfiguration

In the configuration section (configSection) *WorkbookConversionConfiguration*, you can find the following settings (section name).

ConversionType

Setting and Setting Values	Setting Description
`ConversionType=0` (default value), `1` or `2`	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 crosstabs are converted. If you set the value to `2`, only data sources are converted.

EnableAnalysisViewConversion

Setting and Setting Values	Setting Description
`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`. Nethertheless, 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`.

EnableWorkbookConversion

Setting and Setting Values	Setting Description
`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.

LogType

Setting and Setting Values	Setting Description
`LogType=` `0` (default value), `1` or `2`	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.

RefreshType

Setting and Setting Values	Setting Description
`RefreshType=` `0` (default value), `1` or `2`	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.

ShowSaveDialog

Setting and Setting Values	Setting Description
`ShowSaveDialog=` `true` or `false` (default value)	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.

4.4.21 WorkspaceConfiguration

In the configuration section (configSection) *WorkspaceConfiguration*, you can find the following settings (section name).

EnableWorkspace

Setting and Setting Values	Setting Description
`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.

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 upated files.

5 Administration for Analysis

5.1 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.

> **i** 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.

   > **i** Note
   >
   > 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:

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

For more information on enabling and disabling the Add-In in Microsoft Excel and Microsoft PowerPoint, see the *User Guide: Analysis for Microsoft Office* at http://help.sap.com.

Results

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

5.1.1 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 /AOonly` 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 Analysis for Microsoft Excel: HKEY_CLASSES_ROOT\SAP.AO.XI.Launch\shell\Open\command.
   For Analysis 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"`.

5.2 Defining system connections to SAP Analytics Cloud

In Analysis, you can create local connections to SAP Analytics Cloud. A local SAP Analytics Cloud connection is created in the *Select Data Source* dialog.

1. Select a 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 SAC Connection...* in the context menu in the Description area.
   The *New SAC Connection* dialog box appears.
5. Enter a description for the new local SAP Analytics Cloud connection.
6. Enter the logon URL for the new local SAP Analytics Cloud connection.
   This is the URL of your SAP Analytics Cloud tenant.
7. Select *OK* to create the connection.

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

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

5.3 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 availabe 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 availabe after the installation of the Add-In, but you can create them in the *Styles* group on the *Home* tab of Microsoft Excel.

For more information on creating and sharing styles, see the *User Guide: Analysis for Microsoft Office* at http://help.sap.com.

5.4 Security

5.4.1 User management and authentication

Usage with SAP Analytics Cloud

Using Analysis with SAP Analytics Cloud data sources, you have to configure user accounts on the connected SAP Analytic Cloud servers. These user acounts are used for the local usage of Analysis.

For more information about user management in SAP Analytics Cloud, see the Users section in the SAP Analytics Cloud documentation on the SAP Help Portal.

5.4.2 Authorizations

In Analysis, edition for SAP Analytics Cloud, users can store documents (workbooks and presentations) 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.

5.4.3 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.

In some scenarios Analysis is enabled to work with HTTP. It is strongly recommended to only use this for temporary testing. In any scenario in which authentication data of real users is involved it is strongly recommended to use encrypted communication only (e.g. HTTPS)

Usage with SAP Analytics Cloud

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 a file share.
    - The user starts Analysis and inserts a data source from the SAP Analytics Cloud into a new workbook or PowerPoint file. S/he has to log on to the SAP Analytics Cloud. Analysis receives the defined connections and the system information for the cloud server.
2. The user logs on to the SAP Analytics Cloud to get the data.
3. The user navigates in the data.
4. The user saves the Analysis workbook or PowerPoint file on a local file share.

In steps 1 Analysis on the client PC communicates with the SAP Analytics Cloud server for requesting system information. 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 theSAP Analytics Cloud 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.

In steps 2 and 3, Analysis on the client PC requests data from the SAP Analytics Cloud.

5.4.4 Data storage security

If you use Analysis locally, users store the Analysis workbooks and PowerPoint files with the 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.

Locally stored Analysis documents are not protected by SAP Analysis. Protection needs to be provided by the respective device management (access control or encryption, for example).

5.4.5 VBA

Workbooks can contain VBA code. VBA is a powerful programming language. VBA should only be used if additional technical and organizational measures are in place. You could use trusted location or workbook and macro signatures, for example.

For more information, see the Microsoft Office documentation:

- Description of digital signatures and code signing in workbooks in Excel
- Digitally sign your macro project

5.4.6 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

As data sources, Analysis takes the data from SAP Business Warehouse and SAP Analytics Cloud.

For more information on security aspects for SAP BW, see SAP Help Portal at http://help.sap.com ▶ *SAP NetWeaver* ▶ *SAP NetWeaver Library* ▶ *Administrator's Guide* ▶ *SAP NetWeaver Security Guide* ▶ *Security Guides for SAP NetWeaver According to Usage Types* ▶ *Security Guide for Usage Type BI* ▶.

For more information on security aspects for SAP Analytics Cloud, see the Security section in the SAP Analytics Cloud documentation on the SAP Help Portal.

If you use the business intelligence platform for Analysis, see "Security Concepts" in the *BusinessObjects Business Intelligence / BusinessObjects Enterprise Administrator's Guide* at http://help.sap.com.

5.4.7 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

> **i 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 BW instead.

Related Information

Settings for the Analysis Plug-in [page 19]
Troubleshooting in Analysis [page 74]

5.5 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

Troubleshooting in Analysis [page 74]

5.6 Language Recognition and Processing

In SAP Analysis 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.

> **i** Note
>
> If the Microsoft Office display language is not supported by Analysis, the user interface texts are displayed in English.

> Example
>
> The followingMicrosoft 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

5.6.1 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.

Microsoft Office Language Value	Analysis Language Value	Description
1033, 2057, 3081, 10249, 4105, 9225, 15369, 16393, 14345, 6153, 8201, 17417, 5129, 13321, 18441, 7177, 11273, 12297	LANGUAGE_ENGLISH	English
1031, 3079, 5127, 4103, 2055	LANGUAGE_GERMAN	German
1036, 2060, 11276, 3084, 9228, 12300, 15372, 5132, 13324, 6156, 14348, 58380, 8204, 10252, 4108, 7180	LANGUAGE_FRENCH	French
1041	LANGUAGE_JAPANESE	Japanese
3082, 1034, 11274, 16394, 13322, 9226, 5130, 7178, 12298, 17418, 4106, 18442, 58378, 2058, 19466, 6154, 15370, 10250, 20490, 21514, 14346, 8202	LANGUAGE_SPANISH	Spanish
2052, 4100	LANGUAGE_SIMPLIFIED_CHINESE	Simplified Chinese
1028, 3076, 5124	LANGUAGE_TRADITIONAL_CHINESE	Traditional Chinese
1040, 2064	LANGUAGE_ITALIAN	Italian
1049, 2073	LANGUAGE_RUSSIAN	Russian
1043, 2067	LANGUAGE_DUTCH	Dutch
1042	LANGUAGE_KOREAN	Korean
1046, 2070	LANGUAGE_PORTUGUESE	Portuguese
1053	LANGUAGE_SWEDISH	Swedish
1045	LANGUAGE_POLISH	Polish
1030	LANGUAGE_DANISH	Danish
1044, 2068	LANGUAGE_NORWEGIAN	Norwegian
1035	LANGUAGE_FINNISH	Finnish
1054	LANGUAGE_THAI	Thai
1029	LANGUAGE_CZECH	Czech
1038	LANGUAGE_HUNGARIAN	Hungarian
1051	LANGUAGE_SLOVAK	Slovak
1055	LANGUAGE_TURKISH	Turkish

5.7 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.

SAP Analysis for Microsoft Office, edition for SAP Analytics Cloud, uses SAP Analytics Cloud models as data sources. The workbooks can be saved locally or on a fileshare.

5.8 Usage Tracking

The usage of the Analysis plug-in is tracked using SAP Web Analytics. The goal is to get a better and more profound knowledge about which features of Analysis are used by end users and in which environment it is executed (e.g. SAP Analysis version, Microsoft Excel version, Windows version, screen resolution).

The tracking has a clear focus on the product and not on the user. Therefore the tracked data is completely anonymous and does not contain any user or company related information.

You can switch off tracking completely using the file system setting `TrackUsage`.

Related Information

Settings for the Analysis Plug-in [page 19]

6 Data Protection and Privacy

6.1 Introduction

Data protection is associated with numerous legal requirements and privacy concerns. In addition to compliance with applicable data privacy regulations, it is necessary to consider compliance with industry-specific legislation in different countries. SAP provides specific features and functions to support compliance with regards to relevant legal requirements, including data protection. SAP does not give any advice on whether these features and functions are the best method to support company, industry, regional, or country-specific requirements. Furthermore, this information does not give any advice or recommendation in regards to additional features that would be required in particular IT environments; decisions related to data protection must be made on a case-by-case basis, under consideration of the given system landscape and the applicable legal requirements.

> **i** Note
>
> In the majority of cases, compliance with applicable data protection and privacy laws will not be covered by a product feature. SAP software supports data protection compliance by providing security features and specific data protection-relevant functions, such as simplified blocking and deletion of personal data. SAP does not provide legal advice in any form. Definitions and other terms used in this document are not taken from any given legal source.

Data displayed in Analysis workbooks coming from the backend data sources is handled by the respective backend system. For more information about data protection and privacy in SAP Analytics Cloud data sources, see the SAP Analytics Cloud Data Protection and Privacy Guide on the SAP Help Portal.

6.2 Glossary

Term	Definition
Personal data	Any information relating to an identified or identifiable natural person ("data subject"). An identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural, or social identity of that natural person.

Term	Definition
Purpose	A legal, contractual, or in other form justified reason for the processing of **personal data**. The assumption is that any purpose has an end that is usually already defined when the purpose starts.
Blocking	A method of restricting access to data for which the primary **business purpose** has ended.
Deletion	The irreversible destruction of **personal data**.
Retention period	The period of time between the end of purpose (EoP) for a data set and when this data set is deleted subject to applicable laws. It is a combination of the residence period and the blocking period.
End of purpose (EoP)	A method of identifying the point in time for a data set when the processing of **personal data** is no longer required for the primary **business purpose**. After the **EoP** has been reached, the data is **blocked** and can only be accessed by users with special authorization (e.g. tax auditors).
Sensitive personal data	A category of personal data that usually includes the following type of information: • Special categories of personal data such as data revealing racial or ethnic origin, political opinions, religious or philosophical beliefs, or trade union membership and the processing of genetic data, biometric data, data concerning health or sex life or sexual orientation • Personal data subject to professional secrecy • Personal data relating to criminal or administrative offenses • Personal data concerning insurances and bank or credit card accounts
Residence period	The period of time after the end of purpose (EoP) for a data set during which the data remains in the database and can be used in case of subsequent processes related to the original purpose. At the end of the longest configured residence period, the data is blocked or deleted. The residence period is part of the overall retention period.

Term	Definition
Where-used check (WUC)	A process designed to ensure data integrity in the case of potential blocking of business partner data. An application's where-used check (WUC) determines if there is any dependent data for a certain business partner in the database. If dependent data exists, this means the data is still required for business activities. Therefore, the blocking of business partners referenced in the data is prevented.
Consent	The action of the data subject confirming that the usage of his or her personal data shall be allowed for a given purpose. A consent functionality allows the storage of a consent record in relation to a specific purpose and shows if a data subject has granted, withdrawn, or denied consent.

6.3 Read Access Logging

Definition

Read Access Logging (RAL) is used to monitor and log read access to sensitive data. This data may be categorized as sensitive by law, by external company policy, or by internal company policy. These common questions might be of interest for an application that uses Read Access Logging:

- Who accessed the data of a given business entity, for example a bank account?
- Who accessed personal data, for example of a business partner?
- Which employee accessed personal information, for example religion?
- Which accounts or business partners were accessed by which users?

These questions can be answered using information about who accessed particular data within a specified time frame. Technically, this means that all remote API and UI infostructures (that access the data) must be enabled for logging.

Use

In SAP Analysis, Read Access Logging (RAL) for data coming from the backend is done on read access on the respective system.

6.4 Information Report

Definition

Each person has the right to obtain confirmation as to whether or not personal data concerning him or her are being processed.

Use

Data displayed in Analysis workbooks that are coming from the backend data sources is handled by the respective backend system:

In addition,workbooks may contain personal data in an unstructured way when entered by the workbook designer directly. It is up to the workboook designer to classify and manage such workbooks to provide an information report, if required.

6.5 Deletion of Personal Data

Definition

- *Simplified Blocking and Deletion*: In addition to compliance with the general data protection regulation, it is necessary to consider compliance with industry-specific legislation in different countries. A typical potential scenario in certain countries is that personal data shall be deleted after the specified, explicit, and legitimate purpose for the processing of personal data has ended, but only as long as no other retention periods are defined in legislation, for example, retention periods for financial documents. Legal requirements in certain scenarios or countries also often require blocking of data in cases where the specified, explicit, and legitimate purposes for the processing of this data has ended, but the data has to be retained in the database due to other legally defined retention periods. In some scenarios, personal data also includes referenced data. Therefore, the challenge for deletion and blocking is to first handle referenced data and finally other data, such as business partner data.
- *Deletion of personal data*: The handling of personal data is subject to applicable laws related to the deletion of such data at the end of purpose (EoP). If there is no longer a legitimate purpose that requires the use of personal data, it must be deleted. When deleting data in a data set, all referenced objects related to that data set must be deleted as well. It is also necessary to consider industry-specific legislation in different countries in addition to general data protection laws. After the expiration of the longest retention period, the data must be deleted.

Use

Data displayed in Analysis workbooks that are coming from the backend data sources is handled by the respective backend system. For example, deleting personal data on the backend system means the data will no longer be exposed to clients such as SAP Analysis.

In addition, workbooks may contain personal data in an unstructured way when entered by the workbook designer directly. It is up to the workbook designer to either handle these workbooks according to the regulations or not to enter any personal data.

6.6 Change Log

Definition

If any changes are made to sensitive business data or personal data, the system should log details per change request, such as the following:

- User who has changed data
- Data and time of the change
- The change type (update, insert, deletion, single field documentation)

Use

In Analysis, logging of data modifications in the backend system is done by the respective backend system.

7 Troubleshooting

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

7.1 Troubleshooting in Analysis

You can run Analysis in different troubleshooting modes. After the first Analysis installation, no troubleshooting mode is active.

You can specify the troubleshooting options in the Analysis backstage area: Select *File* > *Analysis* > *Troubleshoot* > *<troubleshooting mode>*.

The following troubleshooting modes are available:

- *Support Mode*
  In the Support Mode, the system stores exceptions, error messages and traces. BW Server Tracing for the Analysis plug-in is also active.
- *Profiling Mode*
  In the Profiling Mode, the client profiling is active. BW Server Tracing and Workbook Profiling for the Analysis plug-in are active. The system also stores exceptions and error messages.
- *Advanced Mode*
  You can specify the options for troubleshooting in the *Advanced Support and Profiling Mode* dialog. There are three tabs in the dialog: *General* (for all plug-ins), *Analysis* (for the Analysis plug-in) and *EPM* (for the EPM plug-in).
  The options on the three tabs are described later in this chapter.

The Support Mode and the Profiling Mode can be active at the same time.

You can check the statistics under *File* > *Analysis* > *Troubleshoot* > *Show Profiling Statistics* or *Show Workbook Profiling Statistics*.

Note that writing profiling statistics may have an influence on the performance. You can select *Deactivate* in the Troubleshoot area to deactivate all troubleshooting modes if they are no longer needed.

Advanced Mode: General Tab

Log Severity

The Log Severity defines the amount of log and trace information that is stored. In this area, you can select:

- *Support*
  By default, the system stores exceptions and error messages. If the check box *Support* is selected, the system stores exceptions, error messages and traces.
  The information is stored as .glf files under `C:\Users\<user>\AppData\Local\Temp\Sap\Cof`.

The system can also store 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.

- *Profiling*
  To activate the Analysis client profiling, select the *Profiling* check box. If the setting is activated, Analysis will capture every interaction.
  You can choose between *Standard Profiling* and *Modified Profiling*. With Modified Profiling, EPM performance traces will not be written.
  You can also activate the client profiling with the file system setting *clientProfiling*.
  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).

Advanced Mode: Analysis Tab

Enable BW Server Tracing

To activate the SAP 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 the SAP BW documentation on the SAP Help Portal.

Enable Workbook Profiling

To activate the SAP BW query runtime statistics, select the *Enable Workbook 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).

For more information about the query runtime statistics, see section *Query runtime statistics* in the Analysis Administrator guide.

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.

Enable CPIC Tracing

This setting may be used for SAP error handling. Common Programming Interface - Communication (CPIC) is the communication layer under JRFC (or JCo).

You can activate the tracing by selecting *Enable CPIC Tracing* and choosing the desired level. You can choose a trace level from 1 to 3, where 3 is the highest and most detailed level of tracing.

If you now work with Analysis, log files will be created in the %temp% folder of windows. There you can find a nco_cpic_XXX.trc file that you can attach to the message.

Show Suppressed Messages

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

Advanced Mode: EPM Tab

Display MDX Queries in Trace File for ODBO connections

Select this check box to display MDX queries in the trace file for ODBO connections.

7.1.1 Evaluating Client Profiling Results

After running Analysis in a client profiling mode, you can access the results in the *Show Profiling Statistics* dialog under *File* > *Analysis* > *Troubleshoot*.

In the *Show Profiling Statistics* dialog, the steps are listed per step with numbering, for example *Step 4:* followed by the results of the fourth step. At the bottom of the dialog, you have the following options to copy or export the results:

- *Copy to a New Workbook*
  To copy the results to a new workbook, select *Copy to a New Workbook* in the list and then click the text field *Copy to a New Workbook*. The results are copied in a new workbook started as separated MS Excel process.
- *Copy to Clipboard*
  To copy the results to clipboard, select *Copy to Clipboard* in the list and then click the text field *Copy to Clipboard*.
  The results are copied to clipboard in HTML format and can be pasted directly in an Excel sheet. Alternatively, you can paste them to Notepad, save the file as .html format and open it in a Browser, for example MS Internet Explorer.
- *Export to a File (XML)*
  To export the result to a file, select *Export to a File (XML)* in the list and then click the text field *Export to a File (XML)*.

Evaluating the results in a table

The results that are copied to a new workbook or a browser, are displayed in a table view. The table can make it easier to analyze the results. Above the table, you can find information about the Analysis version, the creation time of the profiling and latency estimations.

RFC Latency estimation is the minimum time value (duration) of an RFC call in milliseconds within the given results set. This value increases if the network connection between the Analysis and the BW system is slow or the distance is greater. This number multiplied by the number of RFC calls will roughly give the time spent only for network communication. You can use it to compare cases that have a significant difference in this number.

RFC Metadata fully cached has the value TRUE if RFC metadata for queries is cached locally. The number of RFC calls while refreshing the workbook might be reduced due to cached metadata. By default, the metadata cache is available in the local folder %appdata%\SAP AG\SAP BusinessObjects Advanced Analysis\cache folder where each *.cache file represents a BW system that has been cached (by its name).

The steps are grouped with Microsoft Excel grouping functionality according to the step levels. You can use the grouping to collapse and expand the steps to a certain level. The table consists of the following sections:

- *Level*
  All execution steps have their own hierarchy. The topmost level (0) might come from a user interaction like *Refresh All*, the subsequent steps that are triggered by the top level are listed as children and have a higher number, e.g. 1, 2, 3, 4...
- *Description*
  The description names the exact action of a step. Steps can have the same step type but each step has a different description. The step type *Rendering* can have the steps *Redisplay Workbook*, *Request Refresh Formula* and *Request result sets*, for example.
- *StepType*
  The step types of each execution step are displayed, including asynchronous or rendering tasks. You can use MS Excel data filtering to get only the steps of a particular type.
- *Step Times*
  The step times are in milliseconds.
  The time for a step is the accumulation of the timings of its children and its own execution time.
  The *Gross Time* is the actual step time as it is calculated as the difference between Step End-to-End and dialog idling times within the step. Therefore it could be used for performance analysis.
  The *Client Time* is the processing time inside the Analysis client.
- *BW Remote Calls*
  For BW Remote Calls, you get information about *RFC Count*, *RFC Time (Sum)*, *RFC Bytes Sent*, *RFC Bytes Received* and *System ID*.
  RFC is an SAP protocol used for the communication between Analysis and a BW system. There different categories of RFC calls that can be observed in the profiling results. For more information, see table *RFC Step Descriptions*.
- *HANA or BOC Remote Calls*
  For HANA or BOC Remote Calls, you get information about *HTTP Count* and *HTTP Time (Sum)*.

RFC Step Descriptions

RFC Call / Step Description	Description
RFC_PING / RFCPING	This call is related to the logon to the BW system. There could be up to 3 of these 'Ping' calls.
RSAO_BICS_SESSION_INITIALIZE	This call initializes the session by checking the capabilities of the BW system and the compatibility with Analysis, e.g. is it possible to save a workbook to the BW system.
BICS_CONS_SET_GET_SESSION_PROP	This call checks the properties of the session for a data source or a set of data sources.
BICS_CONS_CREATE_DATA_AREA	This call creates a data area. The data area is the (initially) empty container where the data for all subsequent operations of/from the session is stored.
BICS_PROV_OPEN / BICS_PROV_MASS_OPEN	This call adds the data source to the data area created above.
BICS_PROV_GET_INITIAL_STATE / BICS_PROV_MASS_GET_INIT_STATE	This call gets the initial status/definition of the data source to be executed.
BICS_PROV_GET_VARIABLES	This call gets the information about the variables that are required to be set for data source execution.
BICS_PROV_GET_RESULT_SET	This call fetches the data from the data source to be displayed in the workbook.
RFC_FUNCTION_SEARCH	This call can be avoided if proper meta data is available in Analysis. For more information, see SAP Note 1944912

7.2 To enable the Analysis Add-In after system crash

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.
3. In Microsoft Excel, press *Excel Options*. In Microsoft PowerPoint, press *PowerPoint Options*.
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.

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