COPA-DATA
do it your way

zenon Analyzer manual

Analyzer Wizards

v.3.20

Contents

1. Welcome to zenon Analyzer help

PROJECT SUPPORT

You can receive support for any real project you may have from our Support Team, who you can contact via email at support@copadata.com.

LICENSES AND MODULES

If you find that you need other modules or licenses, our staff will be happy to help you. Email sales@copadata.com.

2. Analyzer Wizards

The zenon Analyzer has wizards that support correct setting of parameters for the SCADA system and the export of data from the SCADA system. The zenon SCADA system is currently supported.

Wizards:

- **Export Wizard for Analyzer 2.10** (on page 9): Supports the export of metadata from zenon for the zenon Analyzer, version 2.10.
- **Export Wizard for Analyzer 2.20** (on page 36): Supports the export of metadata from zenon for the zenon Analyzer, version 2.20.
- **Export Wizard for Analyzer 3.00** (on page 66): Supports the export of metadata from zenon for the zenon Analyzer, version 3.00.
- **Export Wizard for Analyzer 3.10** (on page 99): Supports the export of metadata from zenon for the zenon Analyzer, version 3.10.
- **Meaning and Waterfall Chart Wizard** (on page 133): Helps you prepare a zenon project for the processing of variable information in zenon Analyzer.

- **Sankey Wizard** (on page 159): supports you when creating Sankey diagrams that you can see in the Runtime or which are used in zenon Analyzer.

The wizards for zenon Analyzer are automatically installed when installing zenon 7.20. The **Analyzer Export Wizard** has its own DLL. **Meaning and Waterfall Chart Wizard** and **Sankey Wizard** share a DLL. Installation and maintenance thus differ from other zenon wizards. Analyzer wizards are automatically kept up to date with the updates from zenon from version 7.20. The update can, if required, also be carried out manually via the build file contained in the zenon Analyzer installation medium for zenon from version 7.10. These wizards are not updated by means of the update mechanism of the zenon wizard. For details, see the **Installation and Update** chapter in the **zenon Analyzer** manual.

SYNTAX FOR INPUTS IN ZENON

Input in in zenon depends on the version of zenon that is used.

UP TO ZENON 7.11

Up to and including zenon version 7.11, the meaning and waterfall model is entered in the zenon **Resources label** property. These can contain meanings for several categories.

The following is applicable to entries in the resource label property:

- Categories are separated by a semicolon (**;**).
- Areas within a category are separated by a comma (,).
- Categories are marked by an index:
  - `ME=`: Identifies a (Meaning).
    Syntax: `ME=[main meaning as text],[additional meaning as text],[additional meaning as text],…;`
    Example: **ME=Station_1,Station_2;**
  - `WF=`: Identifies a variable for the waterfall display.
    Syntax: `WF=[model name text],[line index INT],[index in column INT],[color code as text #XXXXXX];`
  - Every other entry is also understood as a Meaning

Complete syntax for the **Resources label** property:
`ME=[meaning1],[meaning2],…,[meaningN];WF=[model name],[row index],[index in row],[color code];`

Attention: The **Resources label** property is limited to 256 characters in the zenon Editor.

FROM ZENON 7.20

From zenon 7.20, there are separate properties in zenon for the definition of Meaning and waterfall, as well as the input of a display name. These entries do not need an identification in front of them.

The following properties in the zenon **Analyzer** variable properties group provide information for reports in the zenon Analyzer:

- **Display name**: Entry of a display name of the variable in zenon Analyzer. This must be unique in the project. The check is not carried out when issued in zenon, but when imported into zenon Analyzer. If this property is changed after the first export to a zenon Analyzer, these changes are not applied in the zenon Analyzer.
- **Meaning**: Entry of the (Meaning) of a variable in the zenon Analyzer. Entry is manual or by means of the **Meaning and Waterfall Chart Wizard**. Several meanings are separated by a comma. Syntax: `[Meaning1],[Meaning2],…,[MeaningN]`
- **Parameters for waterfall diagram**: Parameters of a variable for a waterfall diagram in zenon Analyzer. Entry is manual or by means of the **Meaning and Waterfall Chart Wizard**. The individual parameters are separated by a comma. Several waterfalls are divided by a semicolon. Syntax: `[model name],[row index],[index in row],[color code];`

Attention: All these input fields are limited to 256 characters in the zenon Editor.

When exporting to zenon Analyzer, both the previous property and the new one are checked. If both are assigned, the entries of the new properties are taken on. Entries that are created using the **Meaning and Waterfall Chart Wizard** are always entered into the new properties.

3. Analyzer Wizards - Compatibility

The different wizards are available for the following versions of zenon.

Wizard \ zenon version	8.00	7.60	7.50	7.20	7.11	7.10	7.00
Meaning and Waterfall Chart Wizard	X	X	X	X	X	X	--
Sankey Wizard	X	X	X	X	X	X	--
Export Wizard for Analyzer 3.10 and 3.20	X	X	X	X	--	--	--
Export Wizard for Analyzer 3.00	X	X	X	X	X	--	--
Export Wizard for Analyzer 2.20	X	X	X	X	X	X	--
Export Wizard for Analyzer 2.10	X	X	X	X	X	X	X
Export Wizard for Analyzer 2.00	--	--	--	--	--	X	X

Key:

X: supported

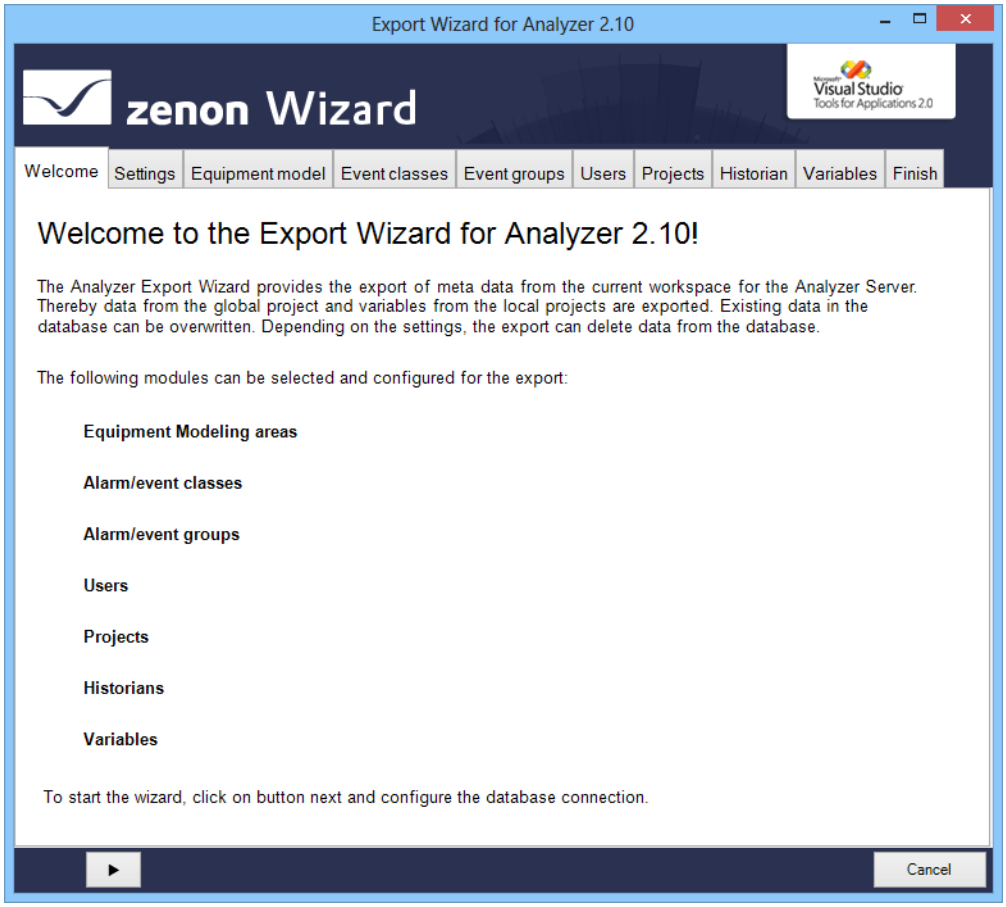
--: not supported

4. Export Wizard for Analyzer 2.10

The zenon Export Wizard for Analyzer 2.10 supports the export of metadata from zenon from version 7.10 SP0 for the zenon Analyzer 2.10.

The following can be exported:

- Data from the global project
  - Equipment models
  - Alarm/event classes
  - Alarm/event groups
  - User
- Data from selected projects:
  - Archives
  - Variables



Note: The wizard is only available in English.

COMPATIBILITY:

The Analyzer Export Wizard works, depending on the version, with different zenon Analyzer versions and different zenon versions. For details, read the **Analyzer wizard compatibility** (on page 8) chapter.

4.1 Install and call up wizard

The wizard is automatically installed with zenon for each supported version of zenon Analyzer.

STARTING THE WIZARD

For wizards to be displayed, the settings for VBA or VSTA must be set correctly in file ***zenon6.ini****:*

[VBA]

EIN=1

[VSTA]

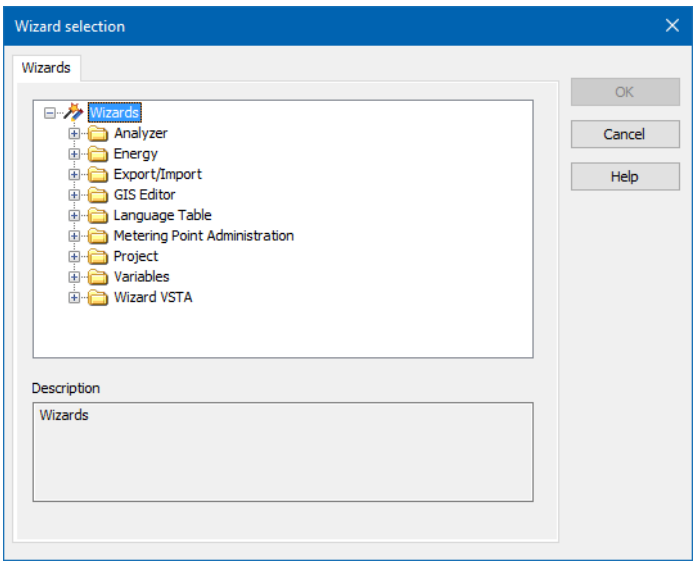
ON=1

If VSTA wizards are not displayed although the settings are correct, set entry **LOADED**= to 1 in area [VSTA].

To start the wizard:

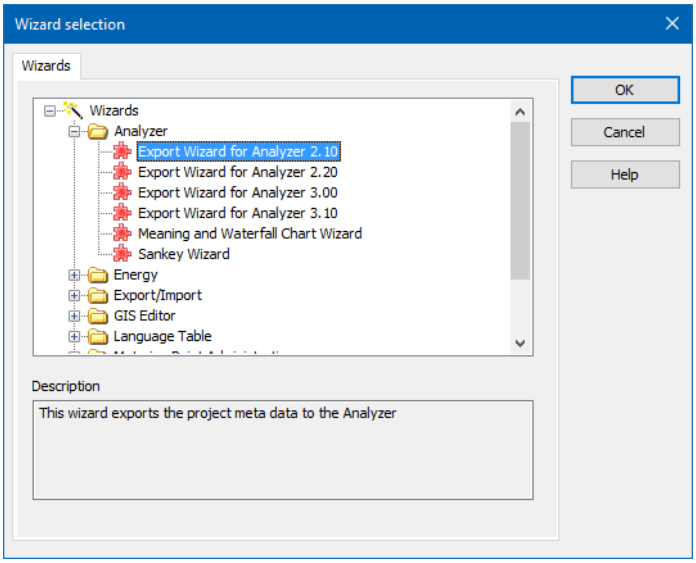
1. Click on *Tools -> Start Editor Wizards...*.
   Or: Press the short cut Alt+F12

   The selection window with the available wizards opens.



2. Navigate to the node **Analyzer**.

3. Select the **Export Wizard for Analyzer 2.10**.



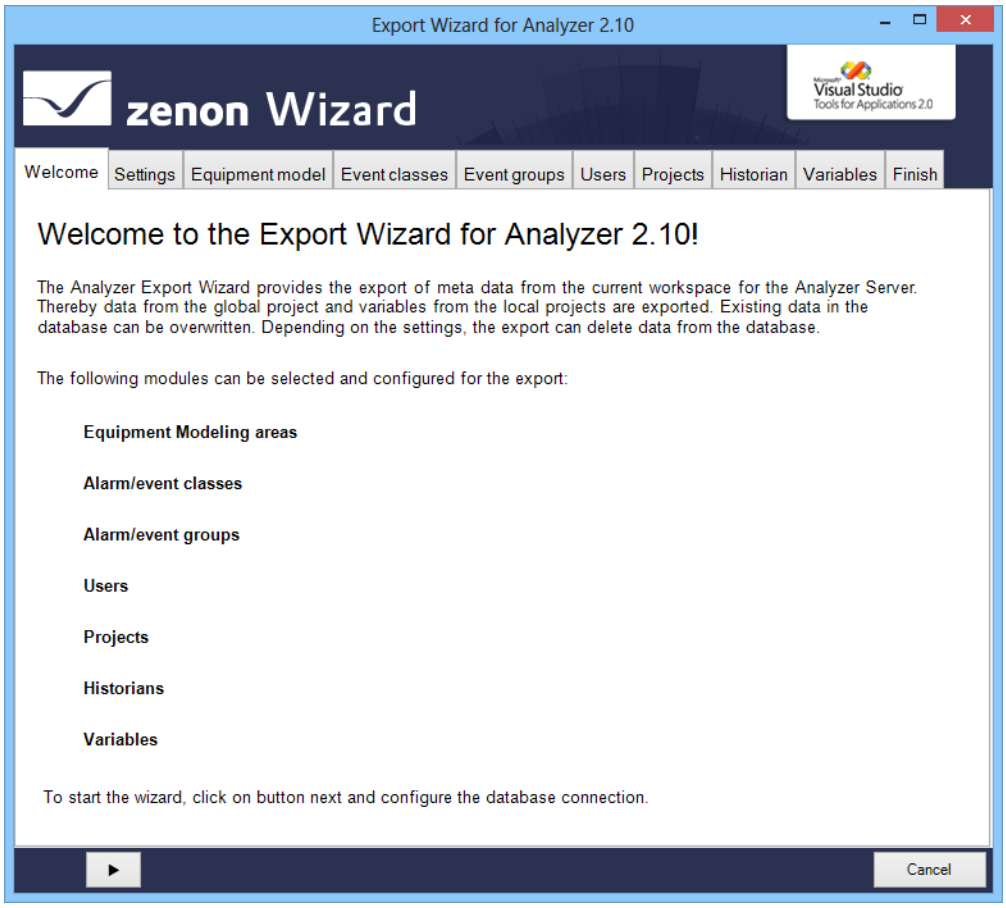
4. Click on **OK.**

   The wizard starts with the welcome page.

4.2 Start window

When the wizard is opened, you receive an overview page that lists all exportable objects.

The individual objects are configured for the export on individual tabs.



Click on the button with the **arrow** to navigate through the configuration (on page 40) of the export.

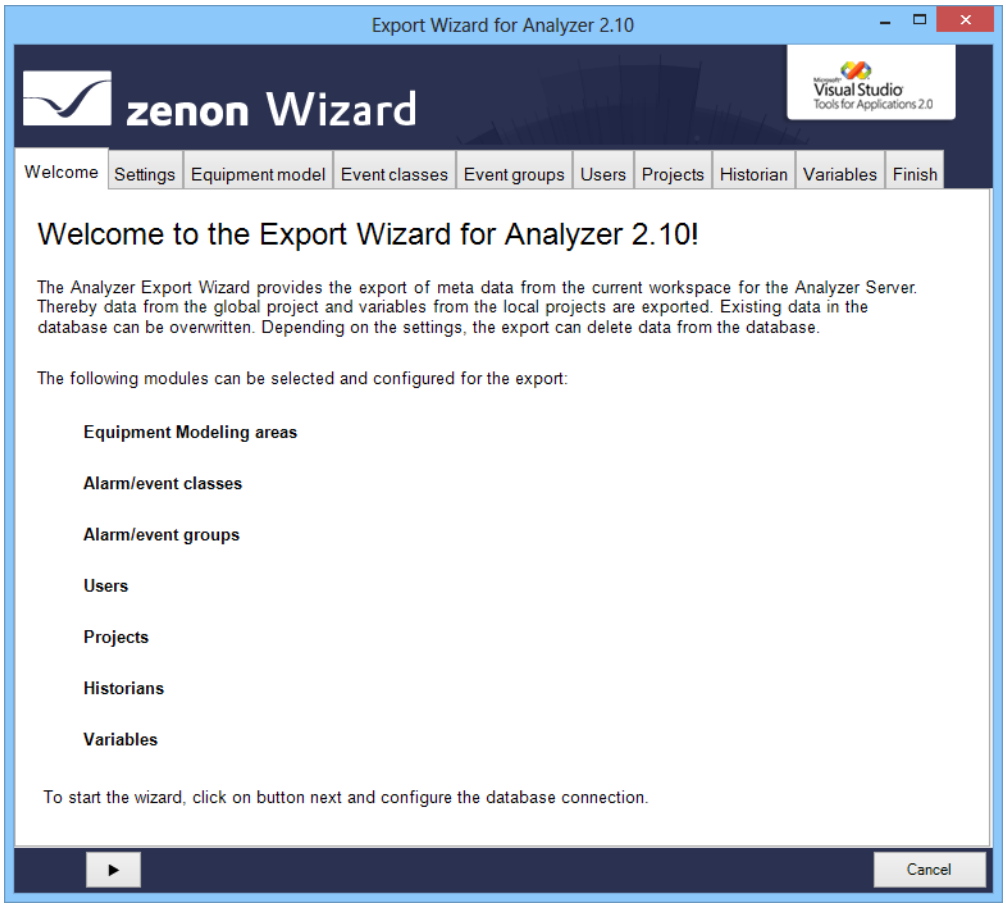
4.3 Configuration

When exporting with the **Analyzer Export Wizard**, all modules selected in the Settings (on page 42) tab are offered in sequence for detailed configuration. You get to the next level by clicking on the button with the **right arrow**. You can select individual tabs directly by clicking on the title of the tab.

The following tabs are available for configuration of the export:

- **Settings** (on page 42):
  Options for collection metadata
- **Equipment model**: (on page 46)
  Export of the model groups from the global project
- **Event classes** (on page 49):
  Alarm/Event classes from global project

- **Event Event groups** (on page 51):
  Alarm/event groups from global project
- **Users** (on page 53):
  User from global project
- **Projects** (on page 54):
  Projects from workspace
- **Historian** (on page 57):
  Archives of the selected projects
- **Variables** (on page 59):
  Variables of the selected projects
- **Finish** (on page 64):
  Start of the export and output of the result



Attention: Only one global project can be exported to the database! Workspaces with projects that are to be exported to the database must include this global project.

4.3.1 Navigation

Navigation through the tabs is carried out by means of the navigation bar in the lower area of the wizard window:

Button	Description
Arrow left	Goes back one tab in the wizard process.
Arrow right	Goes forward one tab in the wizard process.
Export	Exports the data to the Analyzer database. Is only active if the **Finish** tab is opened.
Cancel	Closes the wizard without exporting. When closing, a dialog asks if the configuration is to be saved ▸ **Yes:** writes the settings configured in the **Settings** (on page 42) tab to the registry and closes the wizard; the wizard is opened with these settings the next time it is restarted ▸ **No:** closes the wizard without saving the configuration The configuration is saved for each specific user.

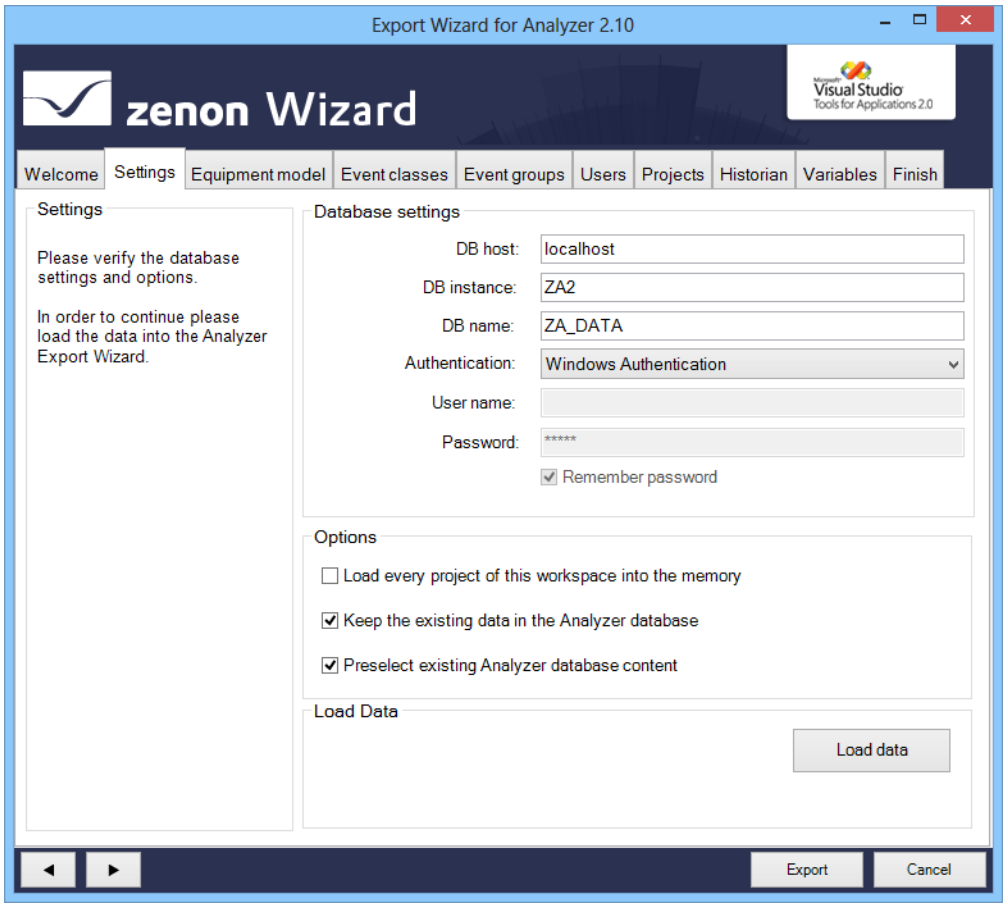
Individual tabs can also be selected by clicking directly on the title of the tab.

4.3.2 Settings

In this tab:

1. You define the database to which the wizard connects
2. You define general options for exporting

3. You start the data readout



Option	Description
Settings	Information and hints about current export processes.
Database settings	Connection settings to the Analyzer server.
DB host	Computer on which the database is located.
DB instance	Instance of the database.
DB name	Name of the database.
Authentication	Type of authentication: ▸ `Windows Authentication`: Windows login information is used. ▸ `SQL Server Authentication`: Login with data from an SQL server user.
User name	Entry of the user name. Only for login with `SQL Server Authentication`. Display only with `Windows Authentication`.
Password	Entry of the password. Only for login with `SQL Server Authentication`. No input possible with `Windows Authentication`.
Remember password	Password is saved for next connection. Only for login with `SQL Server Authentication`. Inactive for `Windows Authentication`.
Options	General options for the export.
Load every project of this workspace into the memory	`Active`: Loads all projects present in the workspace, even if they are not active and not set to **Keep project in memory**.

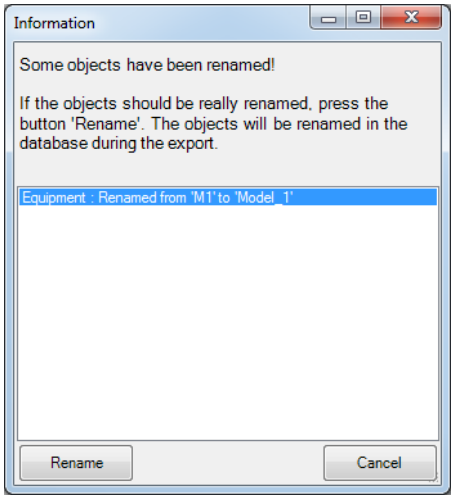
Keep the exisiting data in the Analyzer database	`Active`: Only entries from the workspace are written to the database. `Inactive`: Entries in the database are also updated or deleted. Exception: Projects are not deleted
Preselect existing Analyzer database content	`Active`: Entries already present in the database are preselected in the individual areas.
Load Data	
Load Data	Clicking on the button loads, depending on the **Load every project of this workspace into the memory** parameter - the data from the currently loaded project into the wizard. In doing so, a check is made to see if data is present in the Analyzer database. Pre-existing data is combined with the data from the workspace and loaded into the wizard. In the event of naming conflicts, a dialog to rectify the error is called up. If the loading of data has been successfully concluded, the export can be configured in the following tabs.

RENAME OBJECT

Objects must always be named the same in the Analyzer database and in zenon. If objects that are already present in the database are renamed in zenon, these changes can be accepted or rejected when the data is combined. Rejection of the changes leads to the wizard being closed, because only objects with identical names can be handled correctly.

DIALOG FOR RENAMING

In the event of conflicts in the naming of objects, a dialog for dealing with the error is opened:



Option	Description
List of amended objects	Contains all objects that were changed. Previous name and new name are displayed. The following renamed objects are displayed in the list: ▸ Name of the equipment models ▸ Names of the alarm/event classes ▸ Names of the alarm/event groups ▸ Project name ▸ Variable name Exceptions: ▸ Users are always recreated ▸ Archive names are only created once in the database as a **visual name** and can be overwritten in the zenon Analyzer
Rename	Renames all objects listed in the database, closes the dialog and stops reading in data.
Cancel	Leaves the previous name in the database, finishes reading in data and closes the wizard.

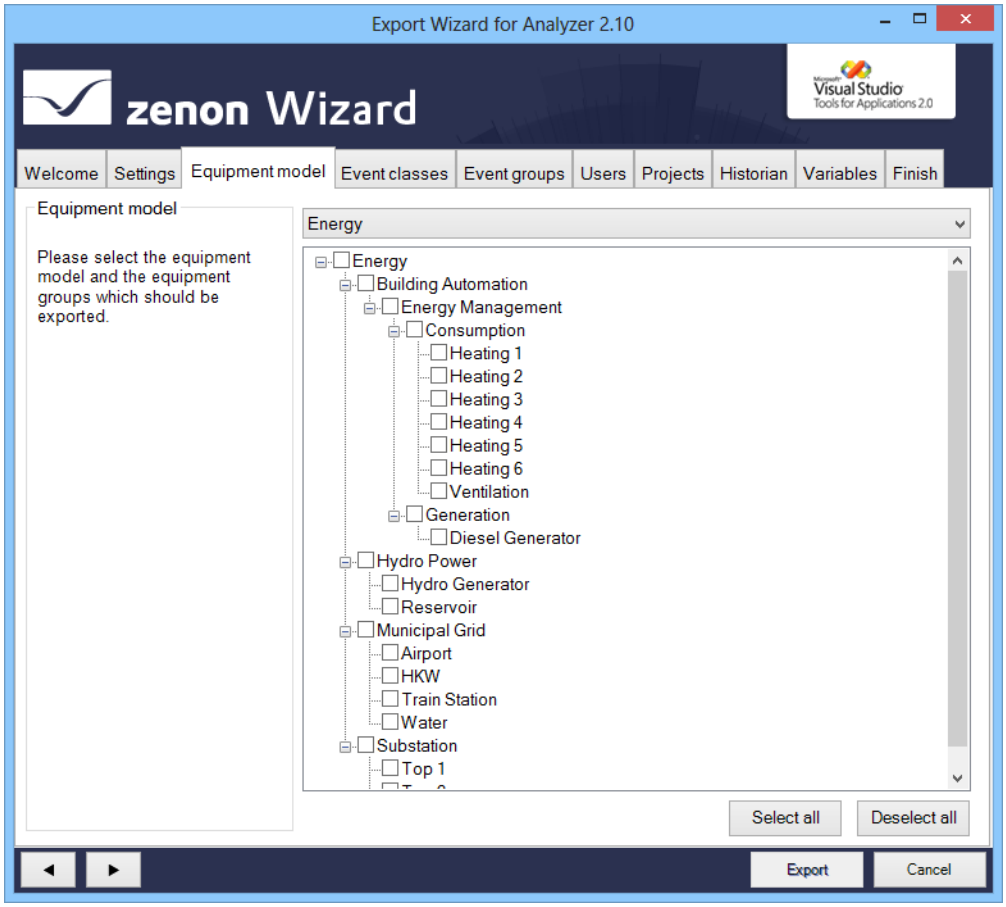
4.3.3 Equipment model

Configuration of the model group which should be exported from the global project.

Attention

Each equipment group in zenon may only be assigned to one individual time model.

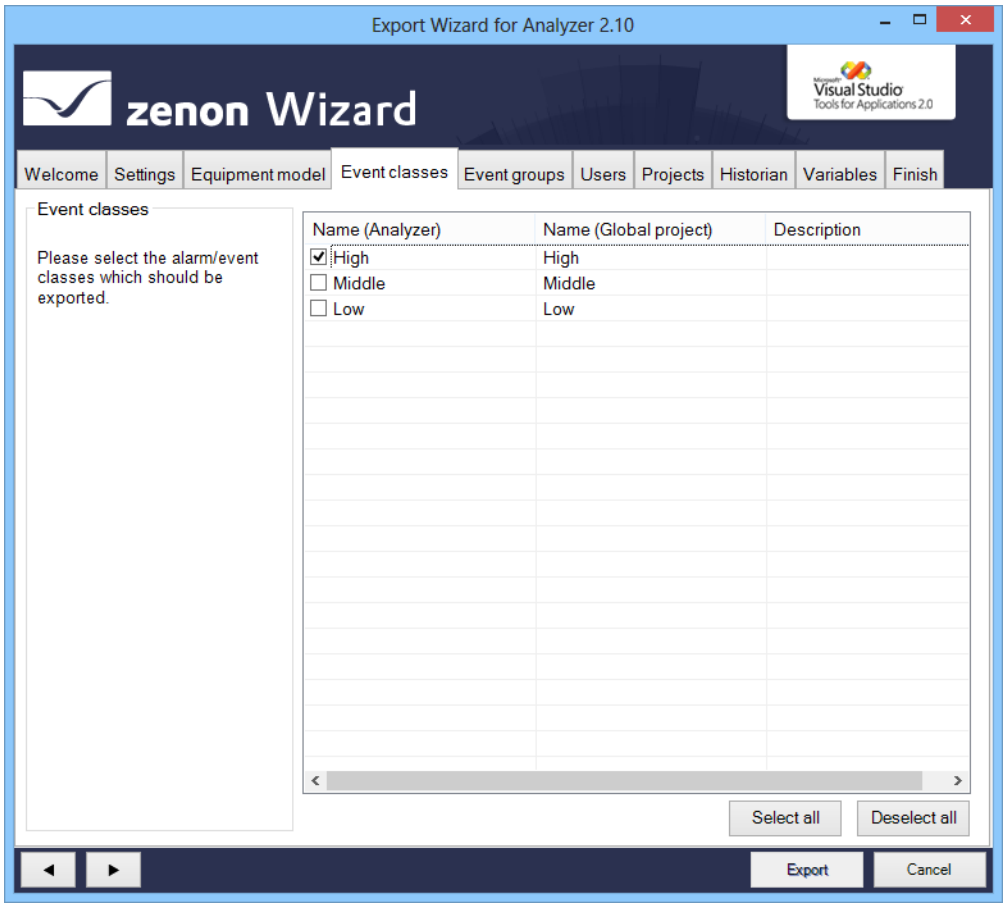
If several time model groups are assigned, the Analyzer Wizard Export uses the first that it finds and exports this to the metadata of the Analyzer. Other time model groups are ignored.



Option	Description
Equipment modeling	Information and notes on exporting.
Selection of equipment/medium	Drop-down list to select what is offered in **List of equipment models/media** for configuration: ▸ `Plant`: displays equipment models ▸ `Media`: displays media
List of equipment models/media	List field with the possibility to select equipment models and model groups or media. To select an entry, activate the check box in front of the entry. In the list field the name, as it is stored in the database, is always displayed in the individual nodes. If the name was changed, the original name from the zenon project is displayed in brackets. Equipment groups that were deleted in the global project are no longer displayed. If, in the **Settings** tab, the option **Keep the existing data in the Analyzer database** was selected, amended objects in the database are deleted or updated.
Select all	Clicking on the button selects all equipment groups
Deselect all	Clicking on the button deselects all equipment groups.

4.3.4 Alarm/event classes

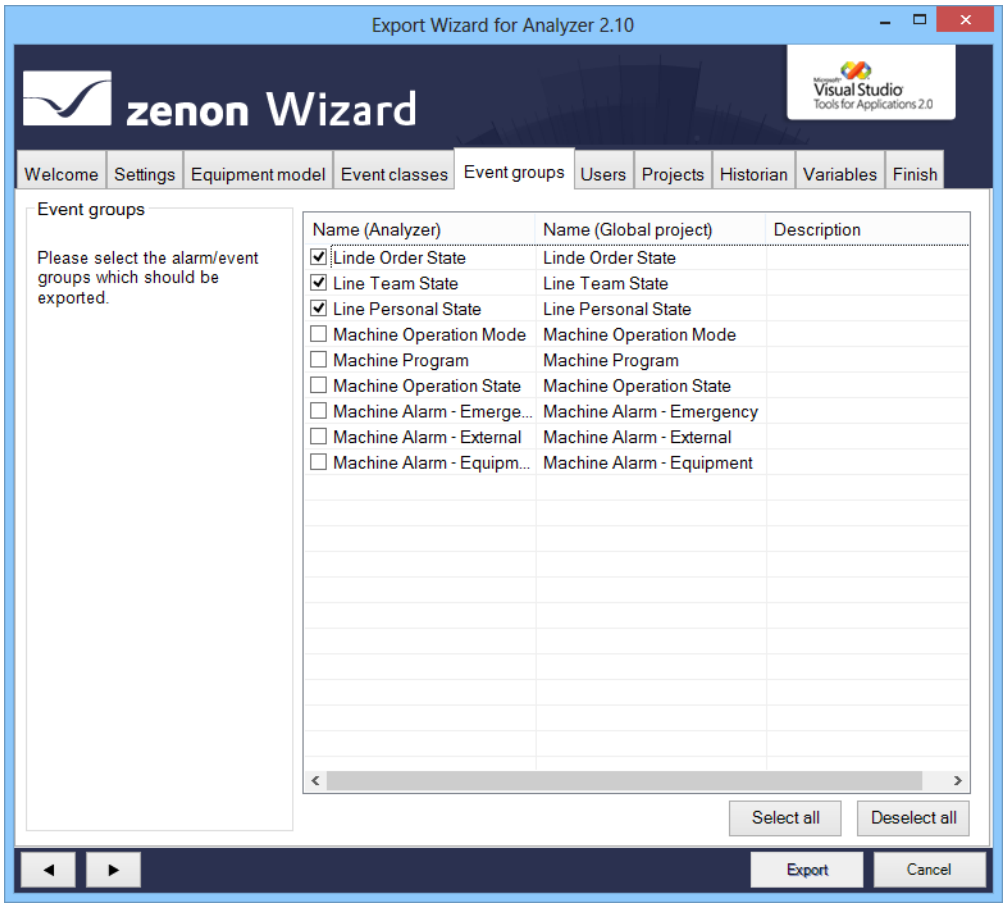
Configuration of the alarm/event classes which should be exported from the global project.



Option	Description
Alarm/event classes	Information and notes on exporting.
List of the alarm/event classes	List field with the possibility to select the alarm/event classes. To select an entry, activate the check box in front of the entry. **Sorting:** Clicking on the column identifier sorts the entries after this column upwards or downwards. **Multiple selection:** If several rows are highlighted, a click in the check box sets the options for all selected rows. Alarm/event classes that were deleted in the global project are no longer displayed here. If, in the **Settings** tab, the option **Keep the existing data in the Analyzer database** was selected, amended objects in the database are deleted or updated.
Select all	Selects all entries in the list and activates the checkboxes.
Deselect all	Selects all entries in the list and deactivates the check boxes.

4.3.5 Event groups

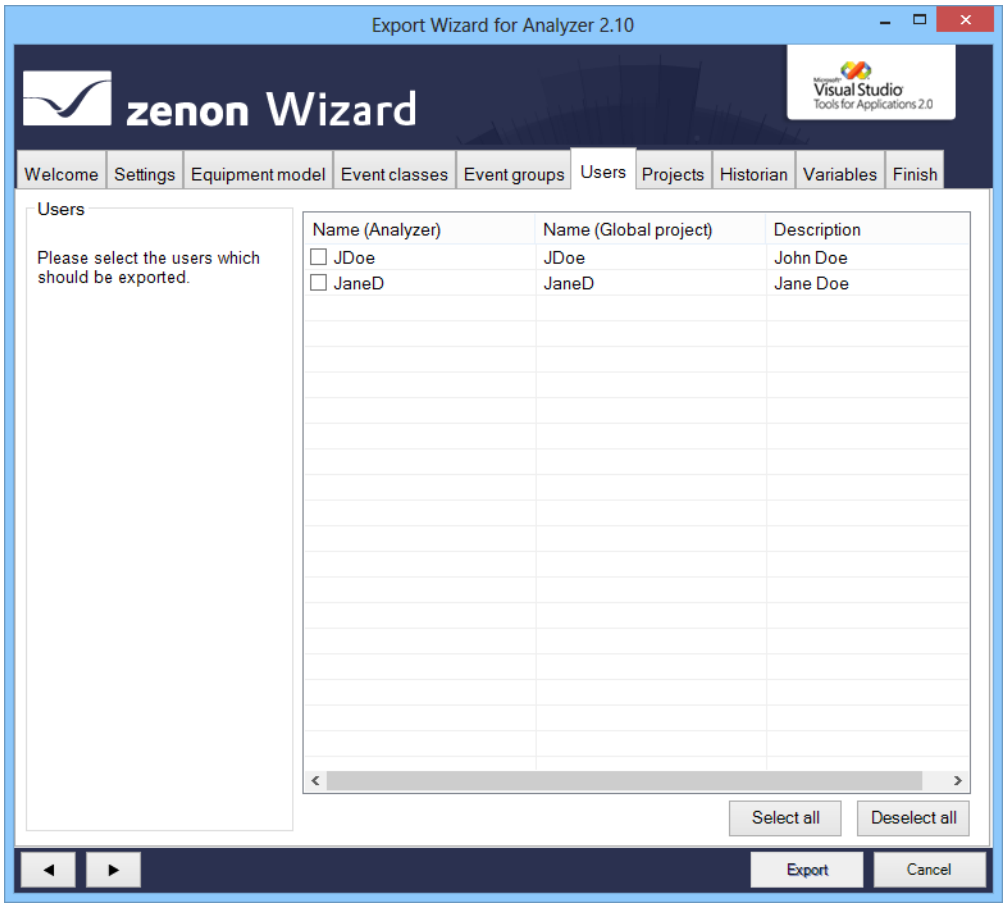
Configuration of the alarm/event groups which should be exported from the global project.



Option	Description
Alarm/event groups	Information and notes on exporting.
List of the alarm/event groups	List field in which you can select alarm/event groups. To select an entry, activate the check box in front of the entry. **Sorting:** Clicking on the column identifier sorts the entries after this column upwards or downwards. **Multiple selection:** If several rows are highlighted, a click in the check box sets the options for all selected rows. Alarm/event classes that were deleted in the global project are no longer displayed here. If, in the **Settings** tab, the option **Keep the existing data in the Analyzer database** was selected, amended objects in the database are deleted or updated.
Select all	Selects all entries in the list and activates the checkboxes.
Deselect all	Selects all entries in the list and deactivates the check boxes.

4.3.6 Users

Configuration of the user which should be exported from the global project.



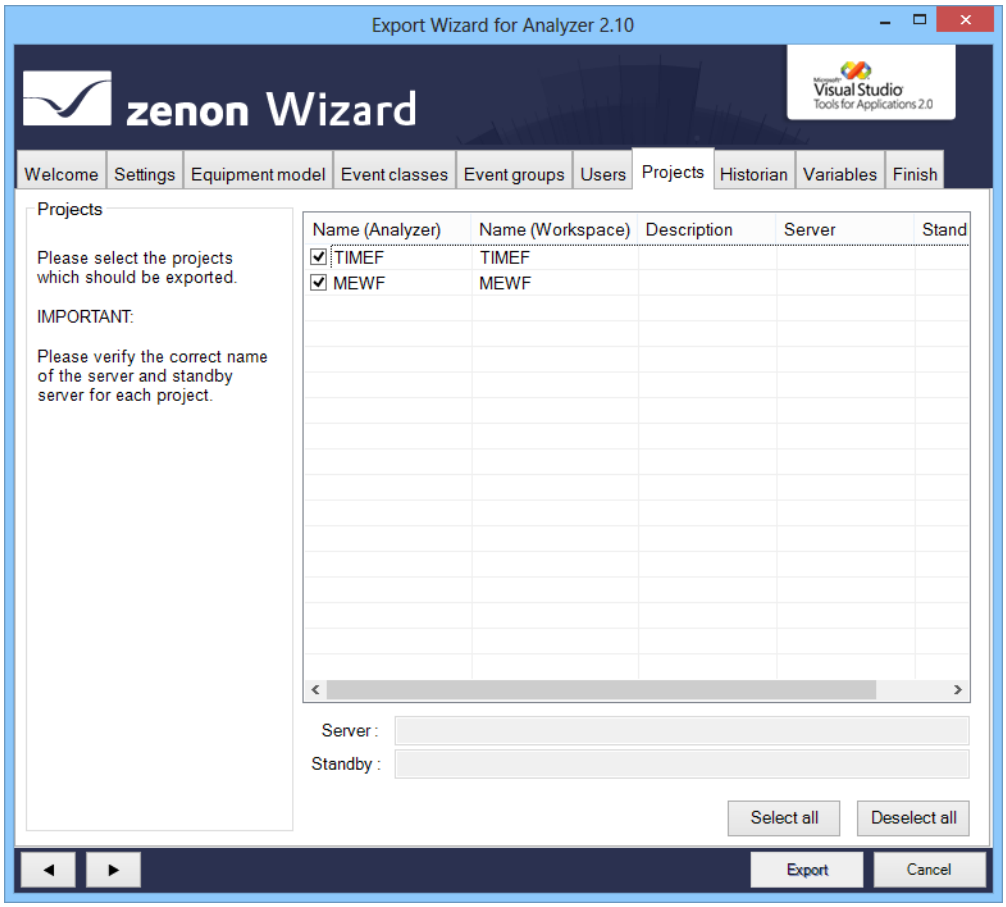
Option	Description
Users	Information and notes on exporting.
User List	List field with selection possibility for users. To select an entry, activate the check box in front of the entry. **Sorting:** Clicking on the column identifier sorts the entries after this column upwards or downwards. **Multiple selection:** If several rows are highlighted, a click in the check box sets the options for all selected rows. If, in the **Settings** tab, the option **Keep the existing data in the Analyzer database** was selected, amended objects in the database are deleted or updated. If a user was renamed in zenon they are considered new and recreated in the project. The previous user is deleted.
Select all	Selects all entries in the list and activates the checkboxes.
Deselect all	Selects all entries in the list and deactivates the check boxes.

4.3.7 Projects

Configuration of the local projects which should be exported. The names for the server and standby-server can be changed here. To do this:

1. Highlight the project in the list of projects
2. Enter the desired name for the server and standby-server

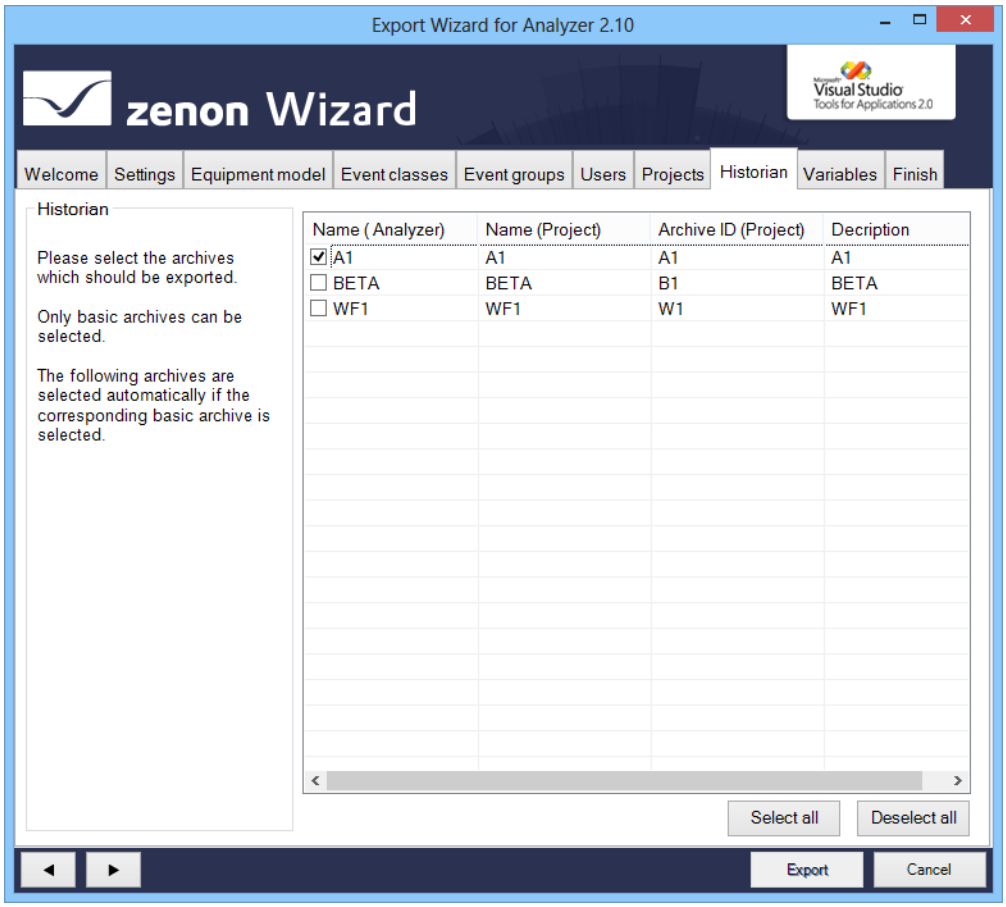
If the name of the Server or the Standby Server is changed in the zenon project, this is only updated in the Analyzer database if the **Network active** setting was activated in the project properties.



Option	Description
Projects	Information and notes on exporting.
Project list	List field with selection possibility for projects. To select an entry, activate the check box in front of the entry. **Sorting:** Clicking on the column identifier sorts the entries after this column upwards or downwards. **Multiple selection:** If several rows are highlighted, a click in the check box sets the options for all selected rows. If, in the **Settings** tab, the option **Keep the existing data in the Analyzer database** was selected, amended objects in the database are deleted or updated.
Server	Address of the server for the project selected in the list window.
Standby	Address of the server for the project selected in the list window.
Select all	Selects all entries in the list and activates the checkboxes.
Deselect all	Selects all entries in the list and deactivates the check boxes.

4.3.8 Historian

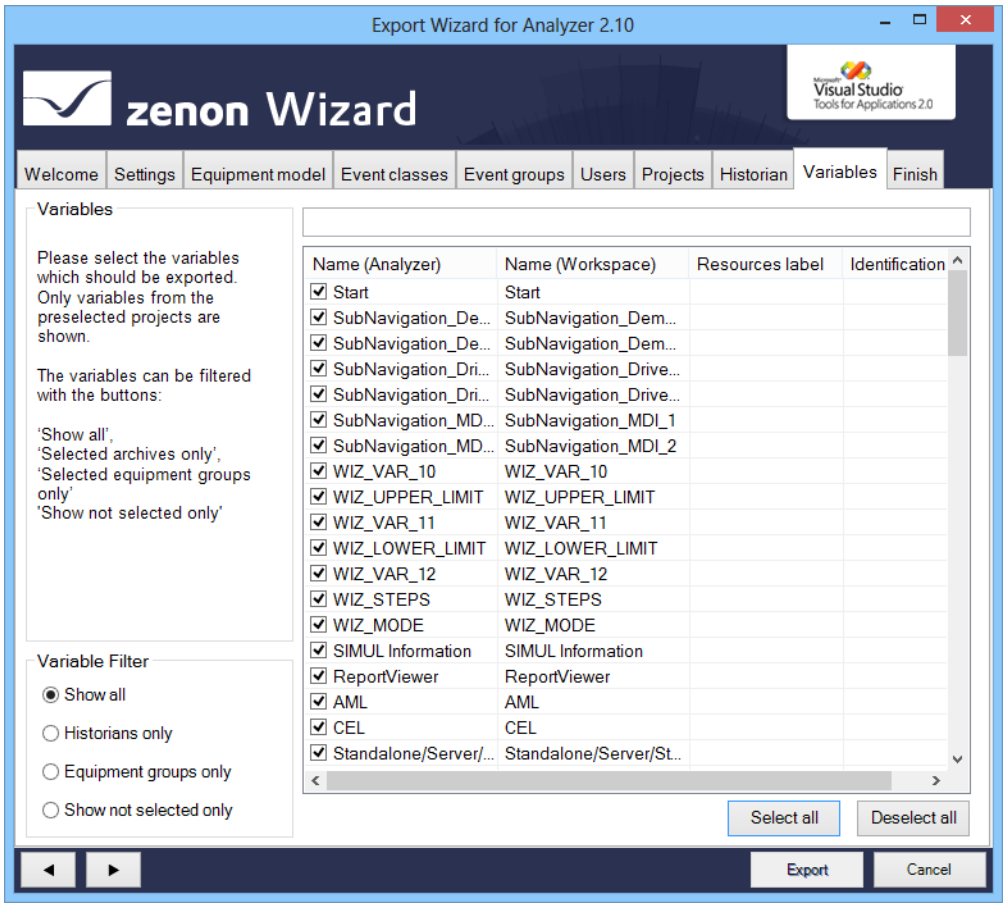
Selection of the archive from the selected projects (on page 54). Only base archives are displayed. Aggregated archives are not displayed in the list, but are also selected with the base archives and written to the database.



Option	Description
Historian	Information and notes on exporting.
Archive list	List field with possibility to select for archives. To select an entry, activate the check box in front of the entry. **Sorting:** Clicking on the column identifier sorts the entries after this column upwards or downwards. **Multiple selection:** If several rows are highlighted, a click in the check box sets the options for all selected rows. If, in the **Settings** tab, the option **Keep the existing data in the Analyzer database** was selected, amended objects in the database are deleted or updated.
Select all	Selects all entries in the list and activates the checkboxes.
Deselect all	Selects all entries in the list and deactivates the check boxes.

4.3.9 Variables

Configuration of the variables from the local project which should be exported. When selecting variables, the entries offered can be prefiltered.



Option	Description
Variables	Information and notes on exporting.
Variable Filter	Selection of the variable filter using the following option fields: ▸ **Show all**: All variables are displayed. ▸ **Historians only**: Only archive variables are displayed. ▸ **Equipment groups only**: Only variables are displayed which are part of the selected Equipment model (on page 46). ▸ **Show not selected only**: Only variables that were not selected are displayed.
Filter row	Input of alphanumerical characters according to which the **List of variables** is to be filtered.
List of variables	List field with possibility to select variables. To select an entry, activate the check box in front of the entry. **Sorting:** Clicking on the column identifier sorts the entries after this column upwards or downwards. **Multiple selection:** If several rows are highlighted, a click in the check box sets the options for all selected rows. If, in the **Settings** tab, the option **Keep the existing data in the Analyzer database** was selected, amended objects in the database are deleted or updated.
Select all	Selects all entries in the list and activates the checkboxes.
Deselect all	Selects all entries in the list and deactivates the check boxes.

RULES FOR THE EXPORT OF VARIABLES WITH REACTION MATRICES

If linked variables are exported with reaction matrices, the limit value text and the status value of the reaction matrix statuses are also exported to the **STATUSNAME** table in the metadata database of the Analyzer. Because only certain states can be evaluated in the reports, they must be pre-sorted using the wizard.

The following statuses of the reaction matrices can be exported or excluded:

Rema	Rules
Numeric	▸ The default status is ignored. ▸ If several statuses with the same status and limit value condition are set, then only the first status and its status text are exported. ▸ Only statuses with a value that is equal to a limit value are exported (limit value condition). ▸ The limit value conditions `greater than`, `less than`, `as desired` and `range` are ignored.
Multi numeric	▸ Correspond to the rules for **numeric**. ▸ Substatuses are also ignored.

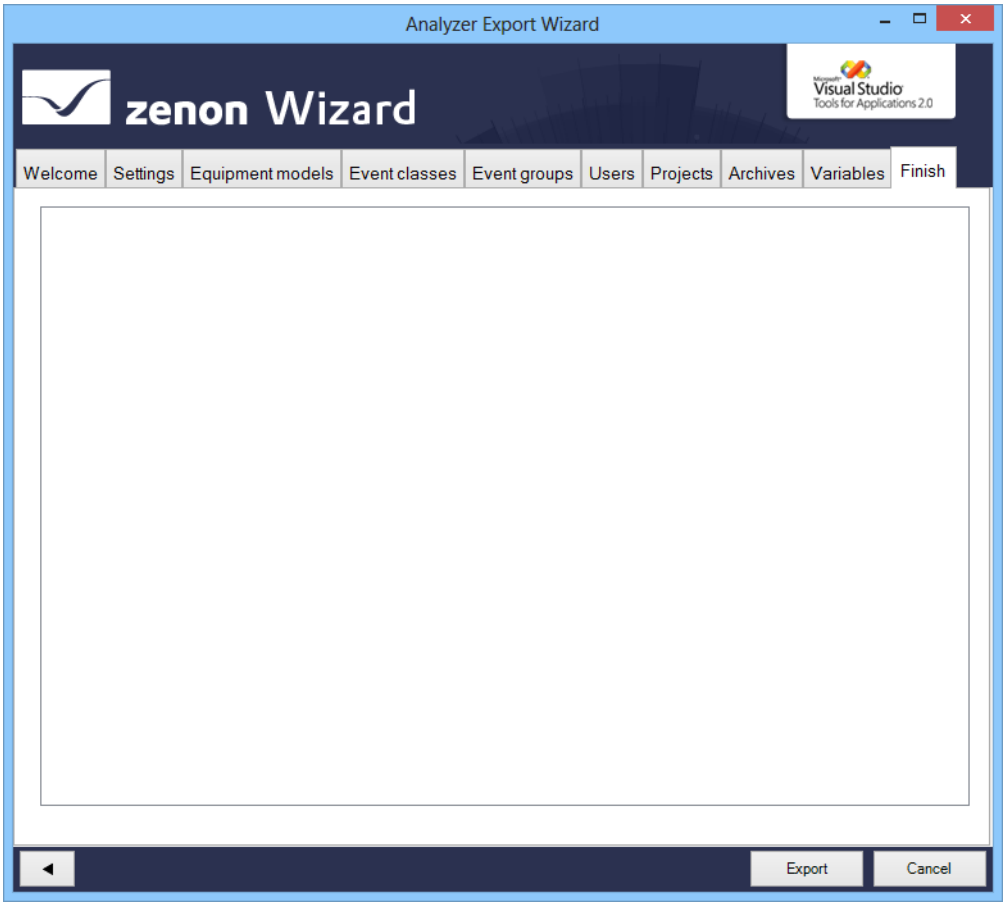
Binary	▸ Only statuses that have value bits set consistently from right to left in the bit mask (`0` or `1`) are set.
	For example:
	`........ ....10.. 1`
	`........ .....100 .`
	`........ .....100 1`
	The following are ignored, for example
	`........ ........ 1`
	`........ ......00 1`
	`........ .10..100 1`

Multi binary	▸ Correspond to the rules for **Binary**. ▸ In addition, substatuses and statuses are also ignored with edge definitions in the bit mask.
String	▸ Are completely ignored and not exported.

4.3.10 Finish

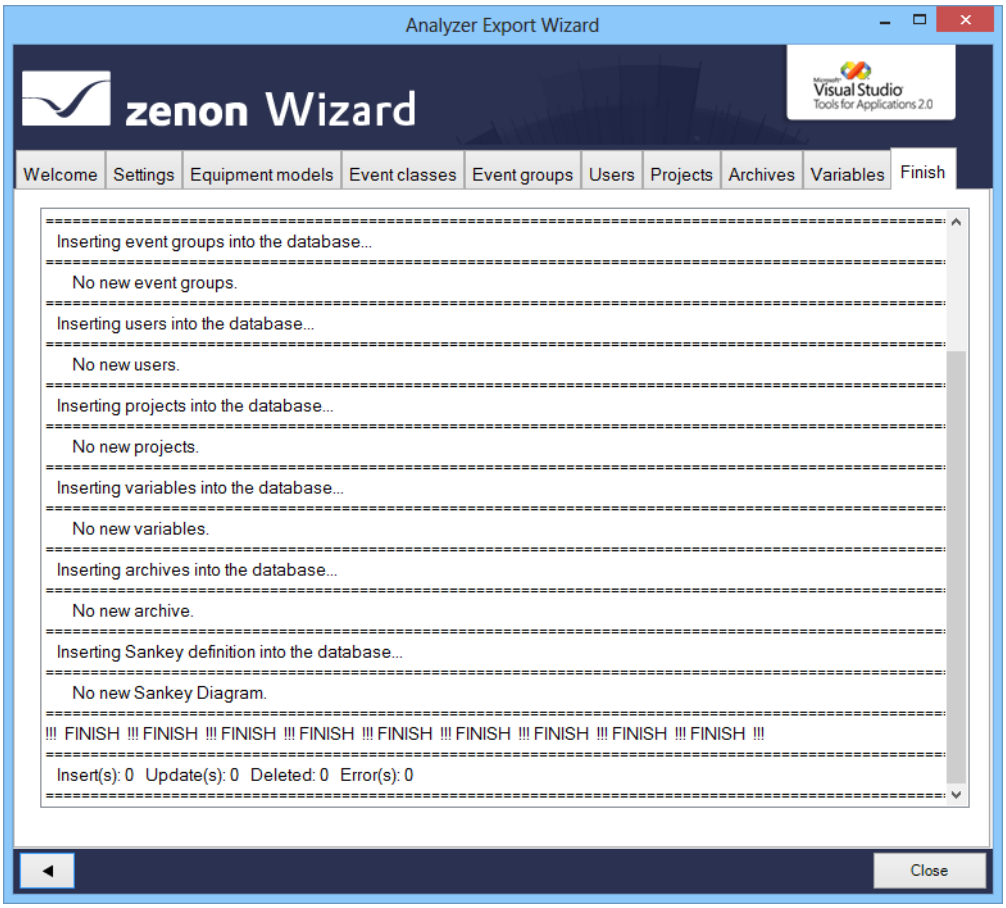
To export the configured data:

1. In the Finish tab, click on the **Export** button



2. the export is started

3. The exported elements are shown in the output window with the attendant success and error messages
   In addition, the number of objects that have been added, replaced or deleted, and the number of errors that occurred are shown.



4. Click on **Close** to close the wizard

RECONFIGURING THE WIZARD

To reconfigure the wizard:

1. Open the Settings (on page 42) tab
2. click on button **Load data**
3. Configure the tabs

4.4 Close wizard

To close the wizard:

- Click on the **Cancel** button
- a dialog prompts whether the configuration should be saved
  - Clicking on **Yes** writes the settings configured in the Settings (on page 42) tab to the registry and closes the wizard; the wizard is opened with this configuration next time it is started
  - Click on **No** closes the wizard and the configuration is not saved.

5. Export Wizard for Analyzer 2.20

The zenon Analyzer Export Wizard 2.20 supports the export of metadata from zenon from version 7.0 SP0 for the zenon Analyzer 2.20.

The following can be exported:

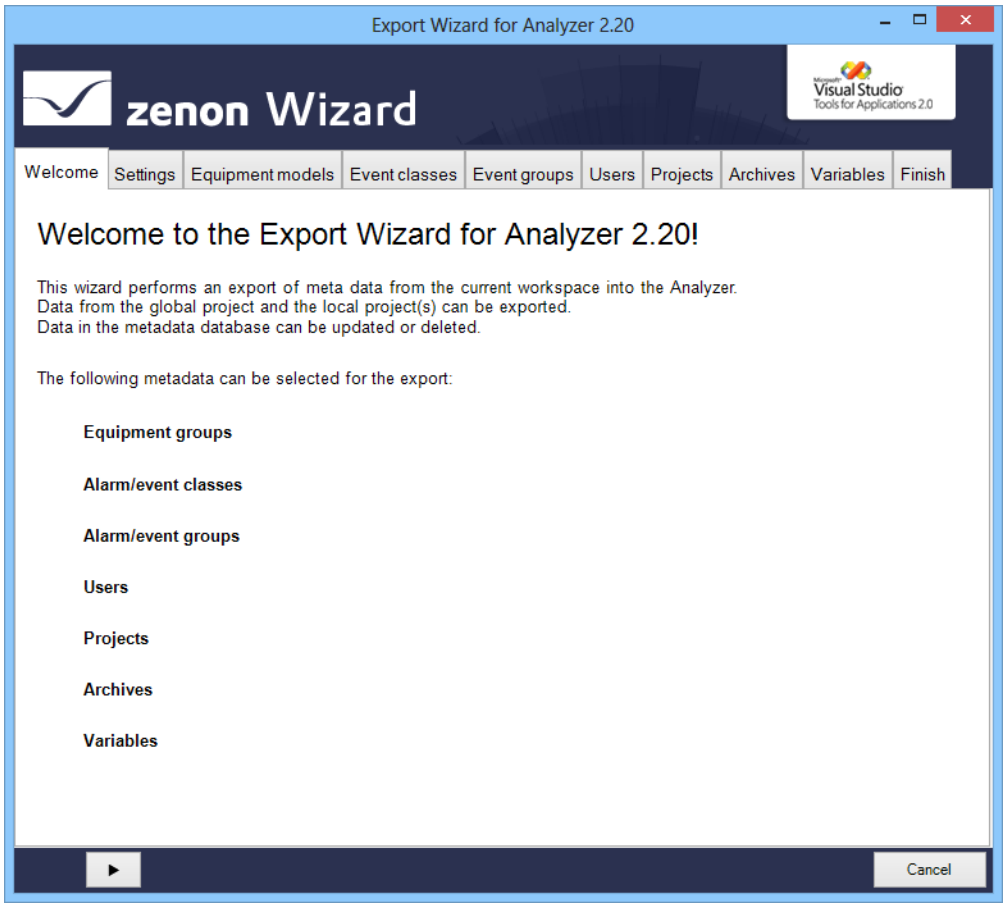
- Data from the global project
  - Equipment models
  - Alarm/event classes
  - Alarm/event groups
  - User
- Data from selected projects:
  - Archives
  - Variables, with:

    - **Display name** (see **visual names** (on page 63) section)

    - **Meaning** (see **meaning** (on page 63) section)

    - **Parameters for waterfall diagram** (see **parameter waterfall chart** (on page 63) section)

- Sankey diagrams (see **Sankey charts** (on page 37) section)



Note: The wizard is only available in English.

COMPATIBILITY:

The Analyzer Export Wizard works, depending on the version, with different zenon Analyzer versions and different zenon versions. For details, read the **Analyzer wizard compatibility** (on page 8) chapter.

5.1 Sankey diagrams

The wizard automatically reads the definition for Sankey diagrams from all activated projects (on page 42) and the global project. These are in the zenon project folder `\Files\Others`.
For this, the following applies:

- Only valid XML files that were created for the zenon Analyzer are taken into account. Diagrams that have the **Analyzer** and **Valid** attributes set to `True` in the **Sankey** XML file are valid. All other Sankey diagrams are ignored and not loaded.

- All Sankey diagram definitions are written to the zenon Analyzer metadata database in the **SANKEY_DIAGRAMM**, **SANKEY_OBJECT** and **SANKEY_VARIABLE** tables.
- Diagrams are added depending on the setting for the **Keep the existing data in the Analyzer database** option (on page 42):
  - `Active`: Only new diagrams are added to the Analyzer database.
  - `Inactive`: New diagrams are added and existing diagrams are updated.
- Diagrams deleted in zenon (XML files) are not deleted in the Analyzer. Diagrams can only be deleted in the database directly in zenon Analyzer.
- For the adding or updating of diagrams, the following must apply to all required zenon variables:
  - Be selected via the **Variables** (on page 59) tab
    or
  - already be in the database

  If variables that are required for the Sankey diagram are not selected for export, the Sankey diagram is not exported.
- If the Sankey diagram already exists, the metadata database tables are updated according to the changes.
- Clicking on the **Export** button in the **Finish** tab starts the export of the Sankey diagrams from zenon in to zenon Analyzer.
  The diagrams are only exported once all other data such as projects or variables have been exported. The success of the export is shown in the message list of the **Finish** tab.

> **Attention**
>
> *The import of Sankey diagrams is carried out automatically in the background. There are no user interface or configuration options available.*

5.2 Install and call up wizard

The wizard is automatically installed with zenon for each supported version of zenon Analyzer.

STARTING THE WIZARD

For wizards to be displayed, the settings for VBA or VSTA must be set correctly in file ***zenon6.ini****:*

[VBA]

EIN=1

[VSTA]

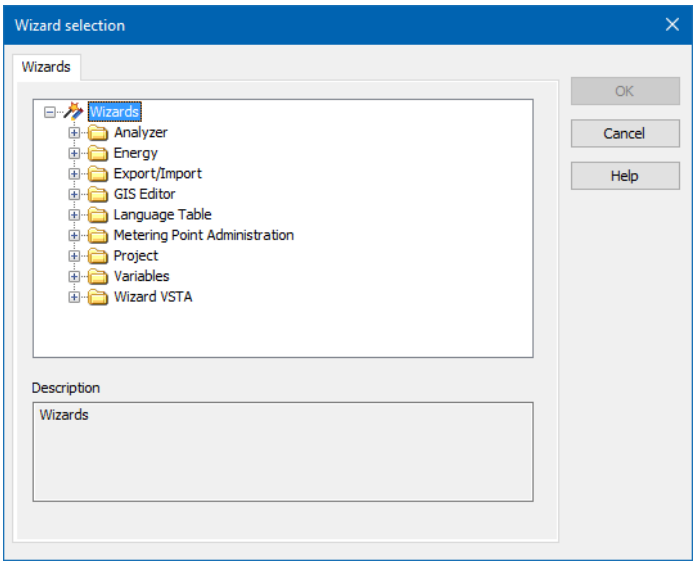
ON=1

If VSTA wizards are not displayed although the settings are correct, set entry **LOADED**= to 1 in area [VSTA].

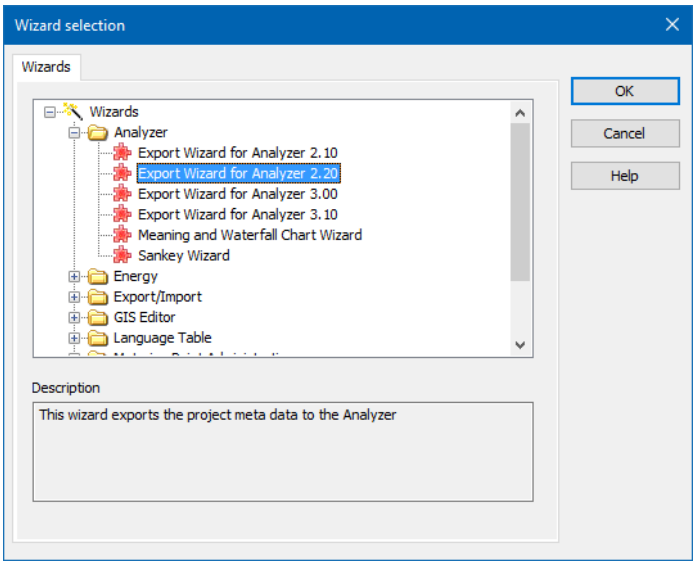
To start the wizard:

1. Click on *Tools -> Start Editor Wizards...*.
   Or: Press the short cut Alt+F12

   The selection window with the available wizards opens.



2. Navigate to the node **Analyzer**.
3. Select the **Export Wizard for Analyzer 2.20**.



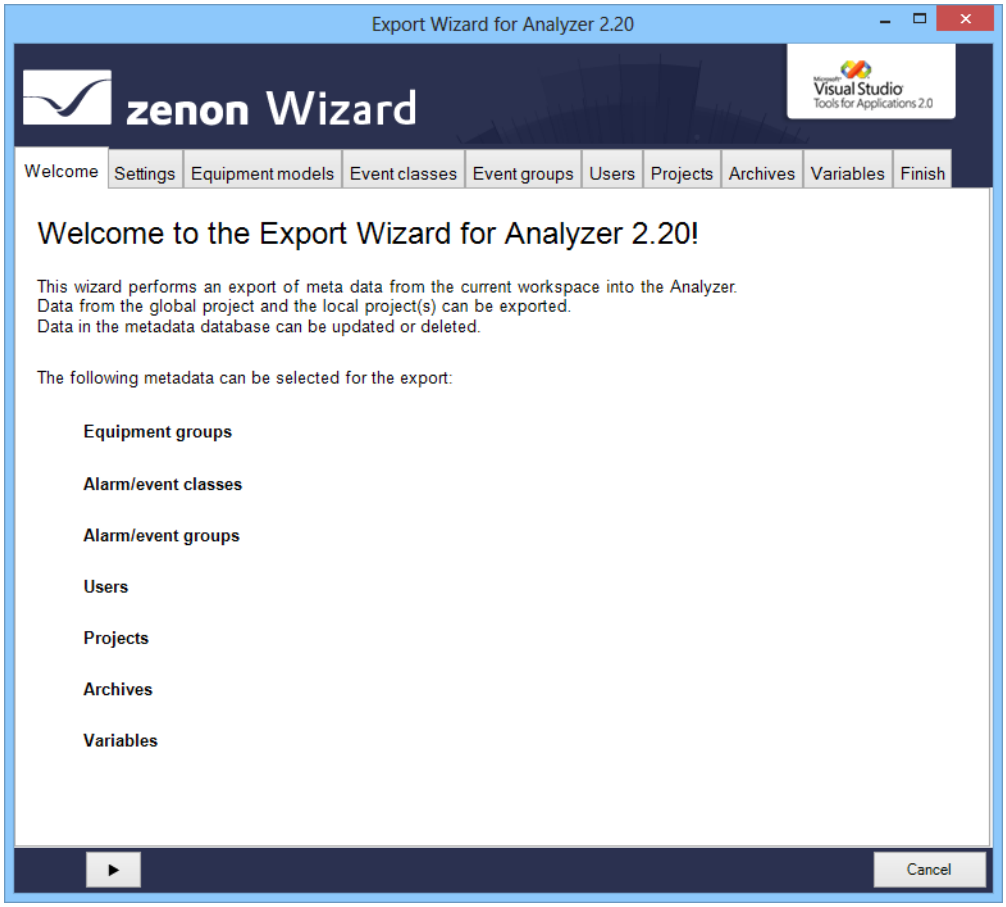
4. Click on **OK.**

   The wizard starts with the welcome page.

5.3 Start window

When the wizard is opened, you receive an overview page that lists all exportable objects.

The individual objects are configured for the export on individual tabs.



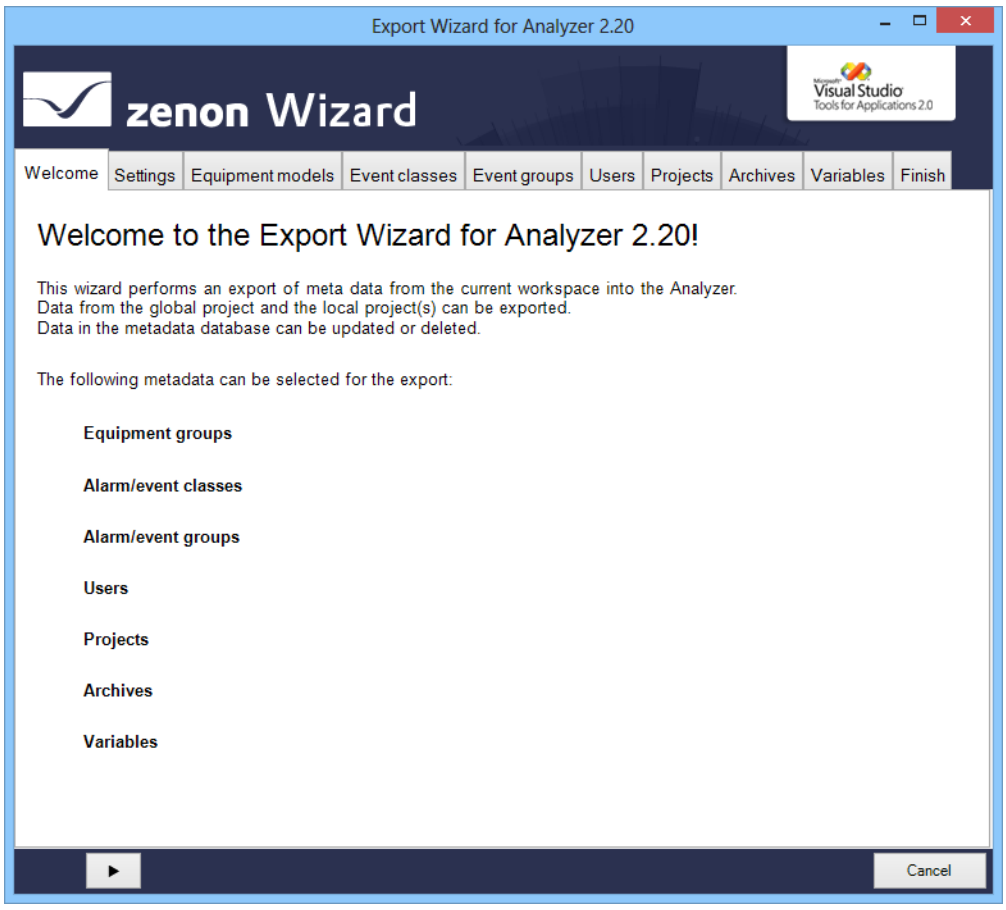
Click on the button with the **arrow** to navigate through the configuration (on page 40) of the export.

5.4 Configuration

When exporting with the Analyzer Export Wizard, all modules available for export are offered for detailed configuration. Only the selected data is exported. The export of Sankey diagrams (on page 37) is carried out in the background, without the possibility of configuration. You get to the next level by clicking on the button with the **right arrow**. You can also select individual tabs directly by clicking on the title of the tab.

The following tabs are available for configuration of the export:

- Settings (on page 42): Options for the export of metadata
- Equipment models: (on page 46) Export of the equipment groups from the global project
- Event classes (on page 49): Alarm/Event classes from global project
- Event groups (on page 51): Alarm/event groups from global project
- Users (on page 53): User from global project
- Projects (on page 54). Projects from workspace
- Archives (on page 57): Archives of the selected projects
- Variables (on page 59): Variables of the selected projects
- Finish (on page 64): Start of the export and output of the result



5.4.1 Navigation

Navigation through the tabs is carried out by means of the navigation bar in the lower area of the wizard window:

Button	Description
Arrow left	Goes back one tab in the wizard process.
Arrow right	Goes forward one tab in the wizard process.
Export	Exports the data to the Analyzer database. Is only active if the **Finish** tab is opened.
Cancel	Closes the wizard without exporting. When closing, a dialog asks if the configuration is to be saved ▸ **Yes:** Writes the settings set in the **Settings** (on page 42) tab to the registry and closes the wizard. The wizard is opened with this configuration the next time it is started. ▸ **No:** Closes the wizard without saving the configuration The configuration is saved for each specific user.

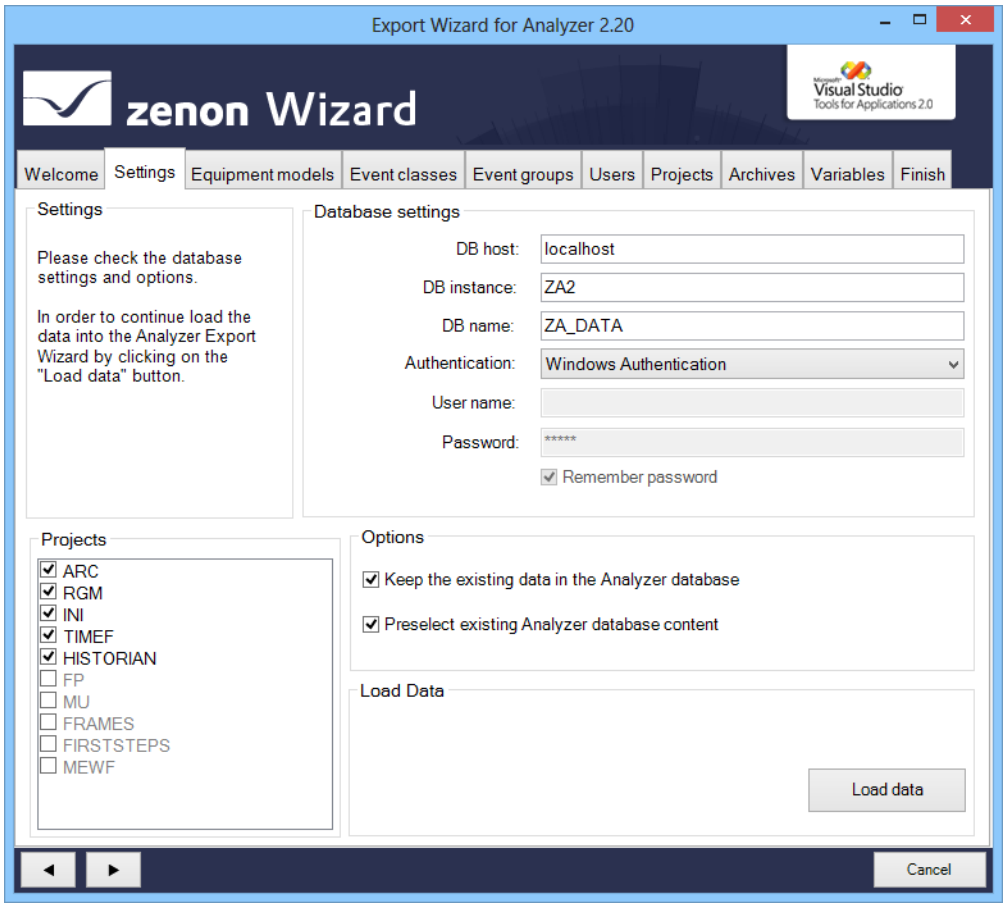
Individual tabs can also be selected by clicking directly on the title of the tab.

5.4.2 Settings

In this tab:

1. You define the database to which the wizard connects
2. You define general options for exporting

3. You start the data readout



SETTINGS

Option	Description
Settings	Information and hints about current export processes.

DATABASE SETTINGS

Parameter	Description
Database settings	Connection settings to the Analyzer server.
DB host	Computer on which the database is located.
DB instance	Instance of the database.
DB name	Name of the database.
Authentication	Type of authentication: ▸ `Windows Authentication`: Windows login information is used. ▸ `SQL Server Authentication`: Login with data from an SQL server user.
User name	Entry of the user name. Only for login with `SQL Server Authentication`. Display only for `Windows Authentication`.
Password	Entry of the password. Only for login with `SQL Server Authentication`. No input possible with `Windows Authentication`.
Remember password	Password is saved for next connection. Only for login with `SQL Server Authentication`. Inactive with `Windows Authentication`.

PROJECTS

Parameter	Description
Projects	List of the available projects in the current zenon workspace. The checkbox shows whether the data of the project is used:

	▸ `Active`: Project is used. Projects that are active in the memory are pre-selected. Inactive projects can be added by means of selection with a checkbox.

OPTIONS

Parameter	Description
Options	General options for the export.
Keep the existing data in the Analyzer database	▸ `Active`: Only completely new entries from the workspace are written to the database. **Note:** If linkings from variables, archives etc. are changed or new ones are created, these are not transferred. If these are also transferred, the checkbox must be set to `Inactive` ▸ `Inactive`: Entries in the database are also updated or deleted. New entries are created, amended entries are updated and deleted entries are removed. **Exception:** Projects and Sankey diagrams are not deleted.
Preselect existing Analyzer database content	▸ `Active`: Entries already present in the database are preselected in the individual areas.

LOAD DATA

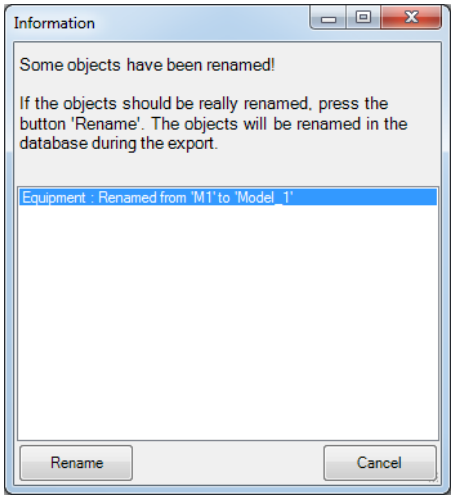
Load Data	Clicking on the button loads, depending on the **Load every project of this workspace into the memory** parameter - the data from the currently loaded project into the wizard. In doing so, a check is made to see if data is present in the Analyzer database. Pre-existing data is combined with the data from the workspace and loaded into the wizard. In the event of naming conflicts, a dialog to rectify the error is called up. If the loading of data has been successfully concluded, the export can be configured in the following tabs.

RENAME OBJECT

Objects must always be named the same in the Analyzer database and in zenon. If objects that are already present in the database are renamed in zenon, these changes can be accepted or rejected when the data is combined. Rejection of the changes leads to the wizard being closed, because only objects with identical names can be handled correctly.

DIALOG FOR RENAMING

In the event of conflicts in the naming of objects, a dialog for dealing with the error is opened:



Parameter	Description
List of amended objects	Contains all objects that were changed. Previous name and new name are displayed. The following renamed objects are displayed in the list: ▸ Name of the equipment models ▸ Names of the alarm/event classes ▸ Names of the alarm/event groups ▸ Project name ▸ Variable name Exceptions: ▸ Users are always recreated ▸ Archive names are only created once in the database as a **Visualname** and can be overwritten in the zenon Analyzer
Rename	Renames all objects listed in the database, closes the dialog and stops reading in data.
Cancel	Leaves the previous name in the database, finishes reading in data and closes the wizard.

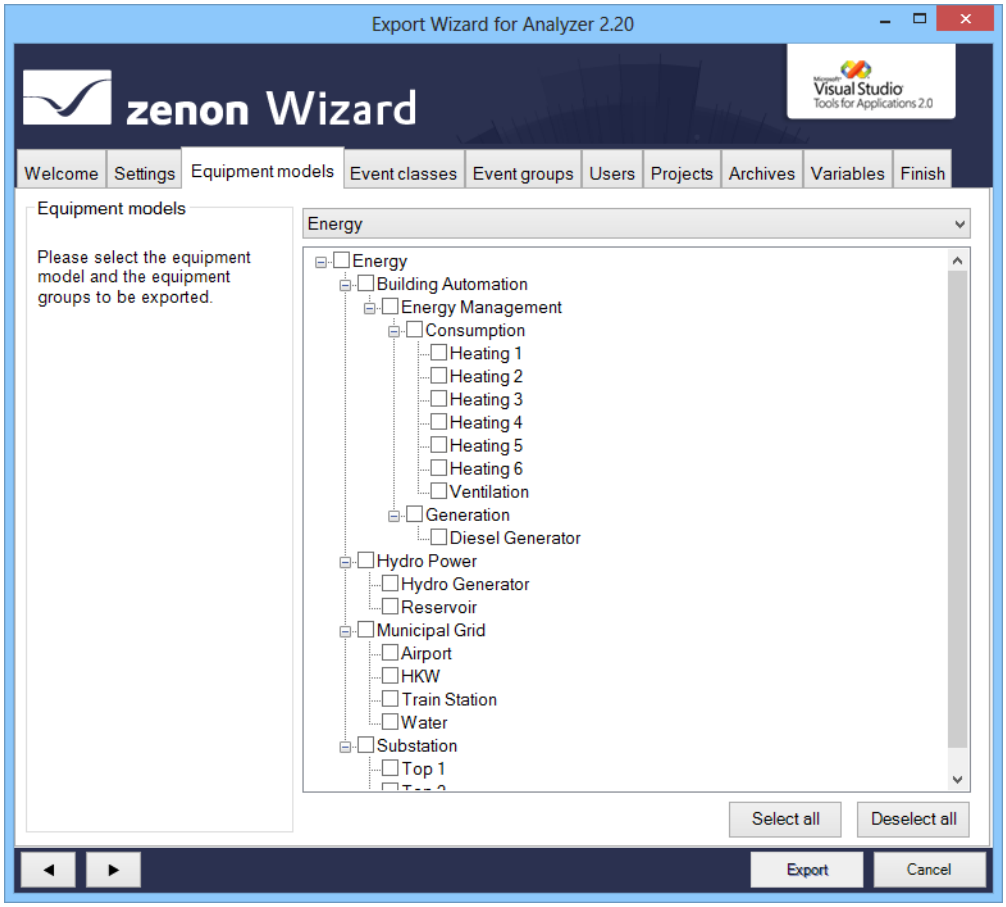
5.4.3 Equipment models

Configuration of the model group which should be exported from the global project.

Attention

Each equipment group in zenon may only be assigned to one individual time model.

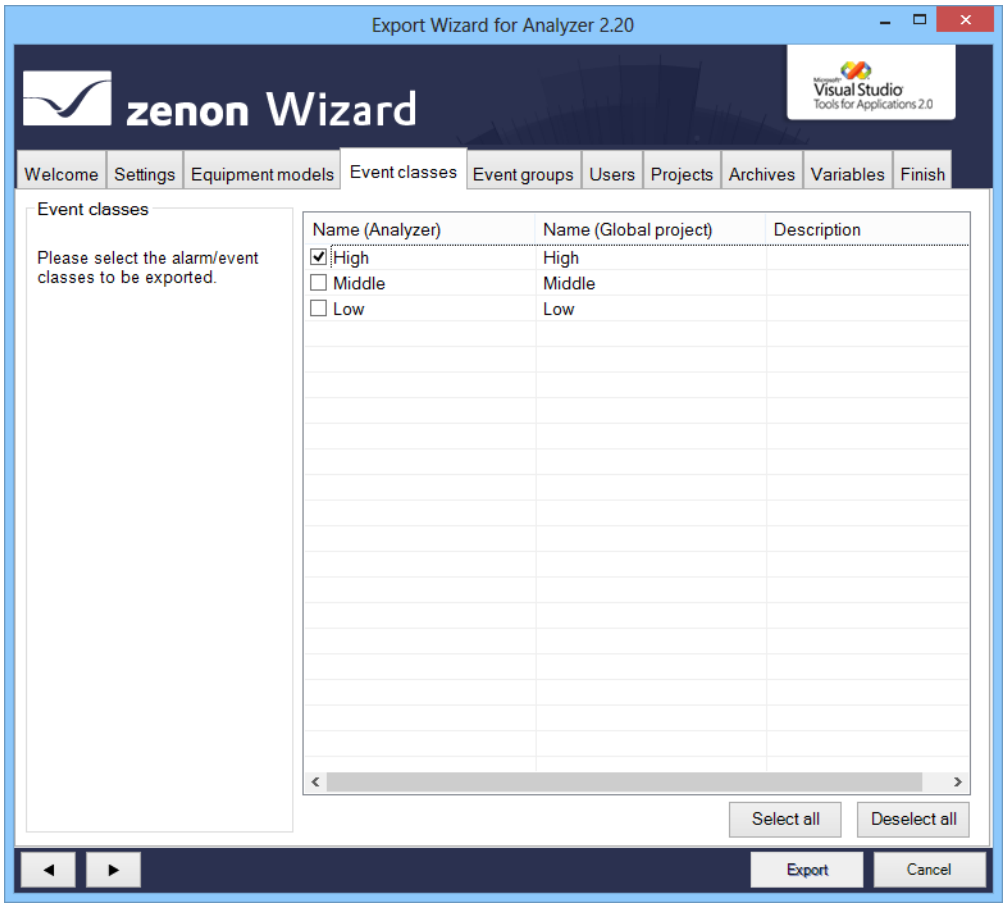
If several time model groups are assigned, the Analyzer Wizard Export uses the first that it finds and exports this to the metadata of the Analyzer. Other time model groups are ignored.



Option	Description
Equipment models	Information and notes on exporting.
Selection of equipment/medium	Drop-down list to select a model that is offered in the **Equipment models/media** list for configuration.
List of equipment models/media	List field with the possibility to select equipment models and model groups or media. To select an entry, activate the check box in front of the entry. In the list field the name, as it is stored in the database, is always displayed in the individual nodes. If the name was changed, the original name from the zenon project is displayed in brackets. Equipment groups that were deleted in the global project are no longer displayed. If, in the **Settings** tab, the **Don't modify existing data in the Analyzer metadata database** option is deselected, amended objects in the database are deleted or updated.
Select all	Clicking on the button selects all equipment groups
Deselect all	Clicking on the button deselects all equipment groups.

5.4.4 Alarm/event classes

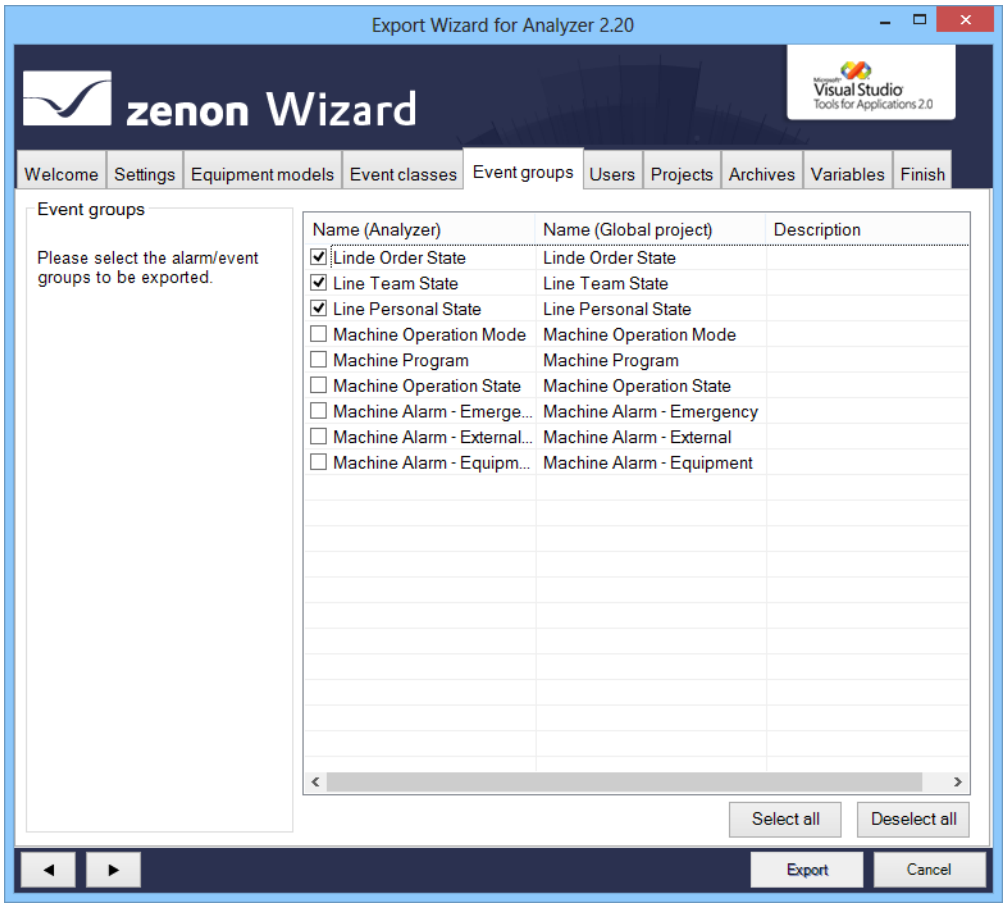
Configuration of the alarm/event classes which should be exported from the global project.



Option	Description
Event classes	Information and notes on exporting.
List of the alarm/event classes	List field with the possibility to select the alarm/event classes. To select an entry, activate the check box in front of the entry. **Sorting:** Clicking on the column identifier sorts the entries after this column upwards or downwards. **Multiple selection:** If several lines are highlighted, the selection applies for all selected lines. Alarm/event classes that were deleted in the global project are no longer displayed here. If, in the **Settings** tab, the **Don't modify existing data in the Analyzer metadata database** option is deselected, amended objects in the database are deleted or updated.
Select all	Selects all entries in the list and activates the checkboxes.
Deselect all	Selects all entries in the list and deactivates the check boxes.

5.4.5 Event groups

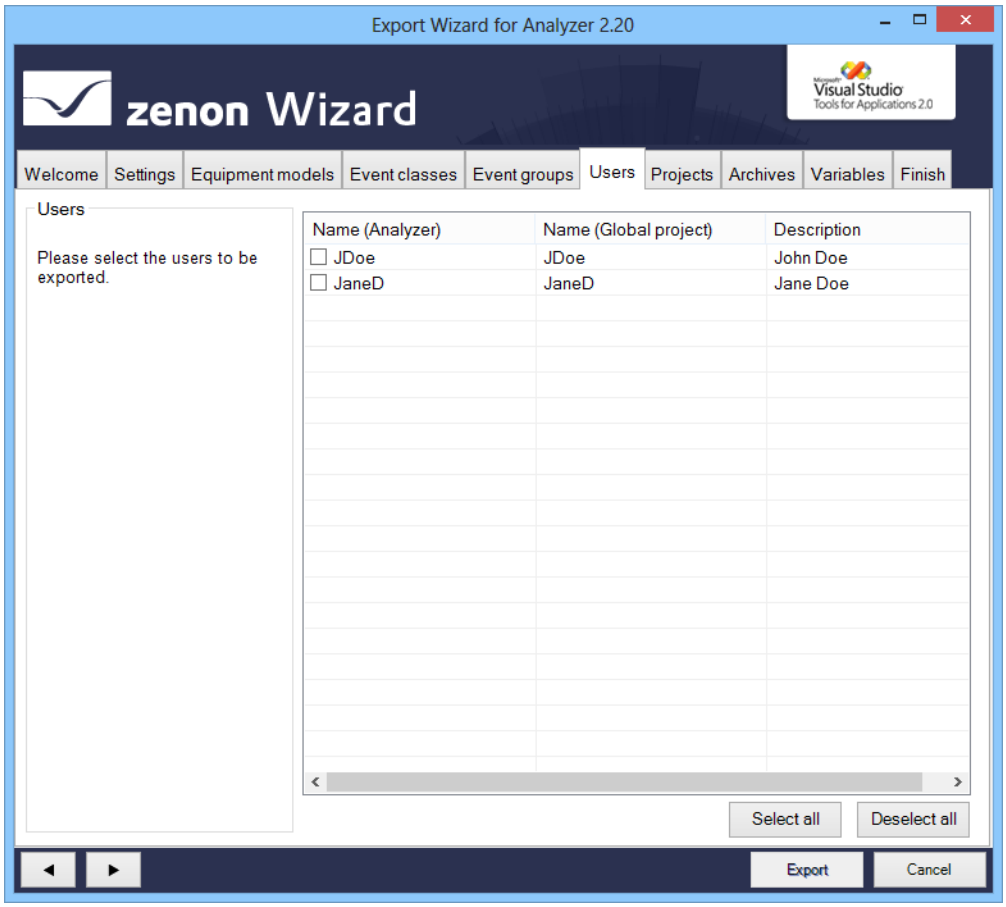
Configuration of the alarm/event groups which should be exported from the global project.



Option	Description
Event groups	Information and notes on exporting.
List of the alarm/event groups	List field in which you can select alarm/event groups. To select an entry, activate the check box in front of the entry. **Sorting:** Clicking on the column identifier sorts the entries after this column upwards or downwards. **Multiple selection:** If several lines are highlighted, the selection applies for all selected lines. Alarm/event classes that were deleted in the global project are no longer displayed here. If, in the **Settings** tab, the **Don't modify existing data in the Analyzer metadata database** option is deselected, amended objects in the database are deleted or updated.
Select all	Selects all entries in the list and activates the checkboxes.
Deselect all	Selects all entries in the list and deactivates the check boxes.

5.4.6 Users

Configuration of the user which should be exported from the global project.



Option	Description
Users	Information and notes on exporting.
User List	List field with selection possibility for users. To select an entry, activate the check box in front of the entry. **Sorting:** Clicking on the column identifier sorts the entries after this column upwards or downwards. **Multiple selection:** If several lines are highlighted, the selection applies for all selected lines. If, in the **Settings** tab, the **Don't modify existing data in the Analyzer metadata database** option is deselected, amended objects in the database are deleted or updated. If a user was renamed in zenon they are considered new and recreated in the project. The previous user is deleted.
Select all	Selects all entries in the list and activates the checkboxes.
Deselect all	Selects all entries in the list and deactivates the check boxes.

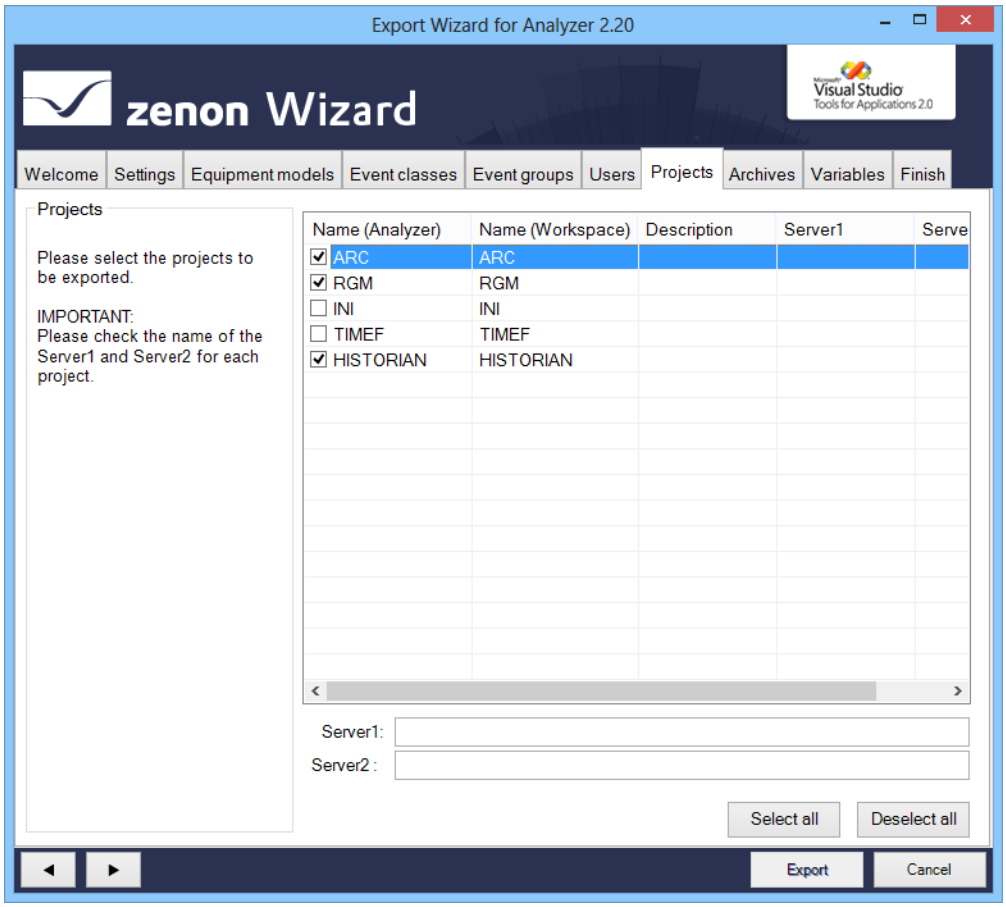
5.4.7 Projects

Configuration of the local projects which should be exported. The names for **Server 1** and **Server 2** can be changed here.

To change the name of a Server or Standby Server:

1. Highlight the project in the list of projects.
2. Enter the desired name for **Server 1** and **Server 2**.

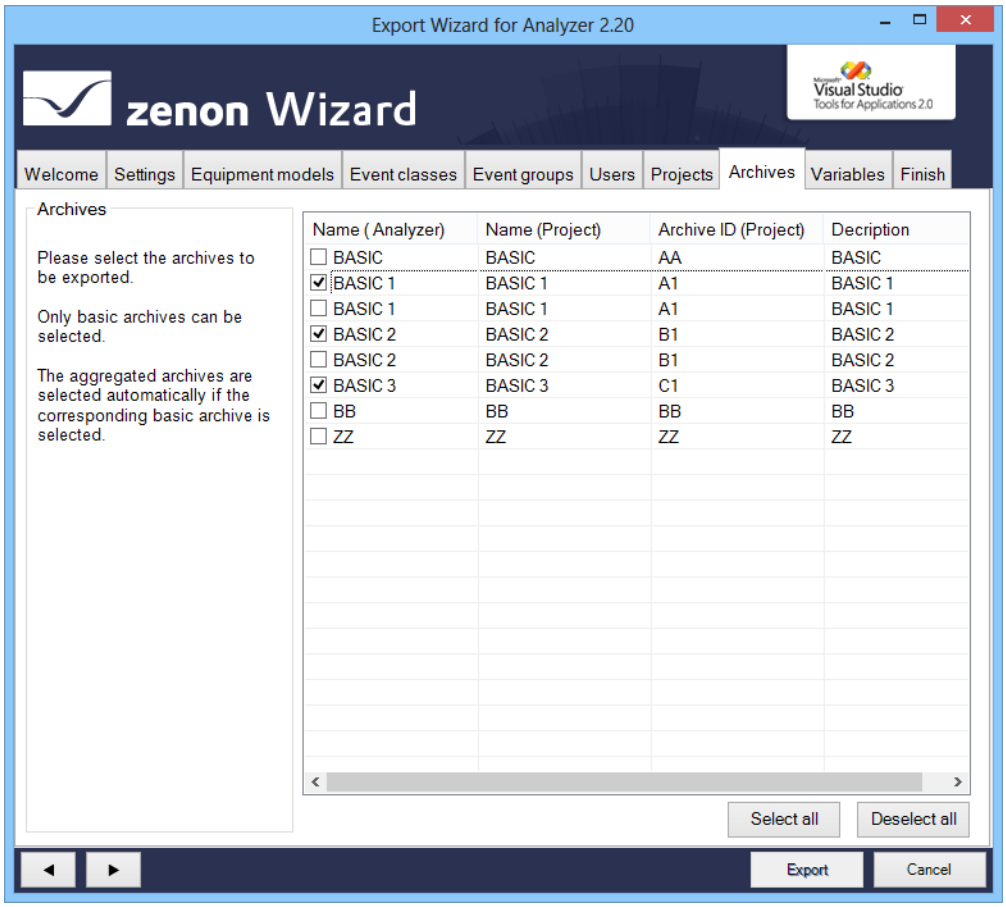
If the name of **Server 1** or **Server 2** is changed in the zenon project, then this is only updated in th analyzer database if the **Network active** setting was activated in the project properties.



Option	Description
Projects	Information and notes on exporting.
Project list	List field with selection possibility for projects. To select an entry, activate the check box in front of the entry. **Sorting:** Clicking on the column identifier sorts the entries after this column upwards or downwards. **Multiple selection:** If several lines are highlighted, the selection applies for all selected lines. If, in the **Settings** tab, the **Don't modify existing data in the Analyzer metadata database** option is deselected, amended objects in the database are deleted or updated.
Server 1	Address of the **Server 1** for the project selected in the list window.
Server 2	Address of the **Server 2** for the project selected in the list window.
Select all	Selects all entries in the list and activates the checkboxes.
Deselect all	Selects all entries in the list and deactivates the check boxes.

5.4.8 Archives

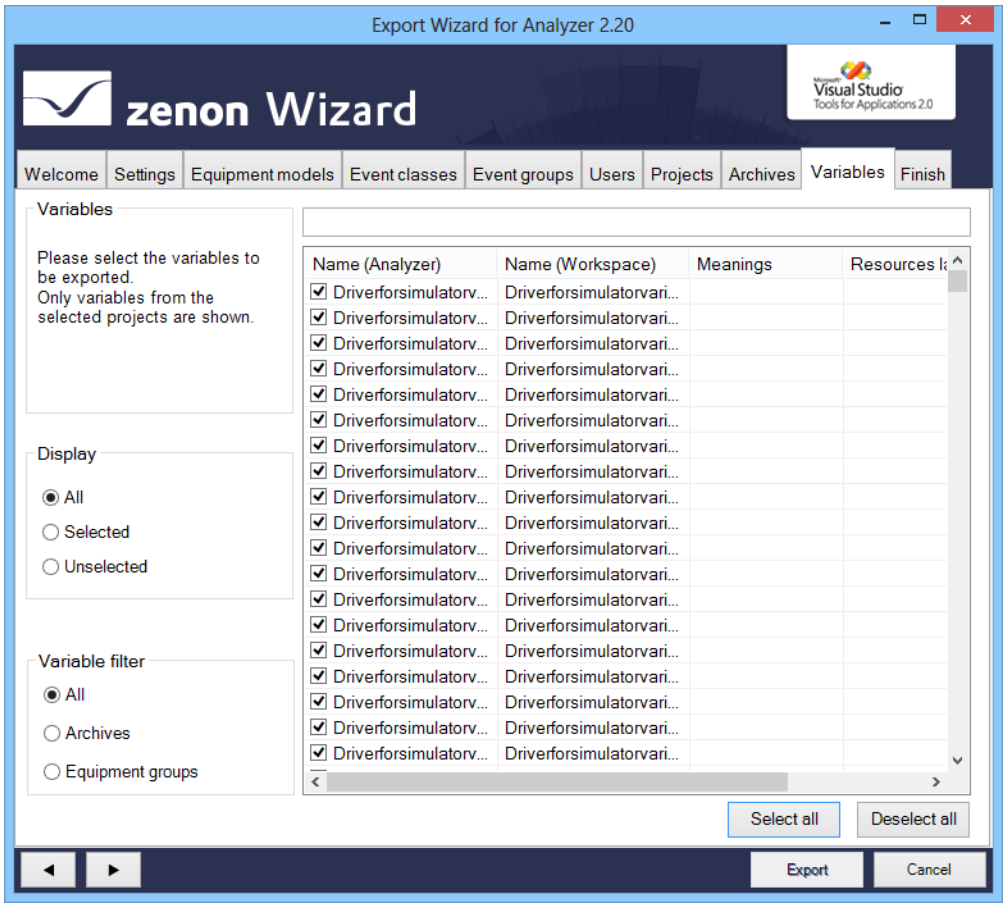
Selection of the archive from the selected projects (on page 54). Only base archives are displayed. Aggregated archives are not displayed in the list, but are also selected with the base archives and written to the database.



Option	Description
Archives	Information and notes on exporting.
Archive list	List field with possibility to select for archives. To select an entry, activate the check box in front of the entry. **Sorting:** Clicking on the column identifier sorts the entries after this column upwards or downwards. **Multiple selection:** If several lines are highlighted, the selection applies for all selected lines. If, in the **Settings** tab, the **Don't modify existing data in the Analyzer metadata database** option is deselected, amended objects in the database are deleted or updated.
Select all	Selects all entries in the list and activates the checkboxes.
Deselect all	Selects all entries in the list and deactivates the check boxes.

5.4.9 Variables

Configuration of the variables to be exported from the selected local projects (on page 54). When selecting variables, the entries offered can be prefiltered.



Option	Description
Variables	Information and notes on exporting.
Display	Selection of which variables are displayed, via the following option fields: ▸ **All**: All variables are displayed. ▸ **Selected**: Only variables that have already been selected are displayed. ▸ **Unselected**: Only variables that have not yet been selected are displayed.
Variable filter	Selection of the variable filter using the following option fields: ▸ **All**: All variables are displayed. ▸ **Archives**: Only archive variables are displayed. ▸ **Equipment groups**: Only variables are displayed which are part of the selected Equipment model (on page 46).
Filter row	Input of alphanumerical characters according to which the **List of variables** is to be filtered.
List of variables	List field with possibility to select variables. To select an entry, activate the check box in front of the entry. The following are displayed: ▸ **Name (Analyzer)**: Name in zenon Analyzer. ▸ **Name (Workspace)**: Can be issued from zenon 7.20 in the Editor by means of the **Display name** property. Must be unique in the project. See also chapter **Visual name** (on page 63) ▸ **Meaning**: Can be issued from zenon 7.20 in the Editor by means of the **Meaning** property. See also chapter **Meaning** (on page 63) ▸ **Ressource label**: corresponds to the **Resources label** property in zenon. Is used for zenon up to and including version 7.11 for **meaning** (on page 63) and **parameter waterfall diagram** (on page 63). From version 7.20, there are separate properties available for this in zenon. ▸ **Identification**: It corresponds to the **Identification** property in zenon. **Sorting:** Clicking on the column identifier sorts the entries after this column upwards or downwards. **Multiple selection:** If several lines are highlighted, the selection applies for all selected lines.

	If, in the **Settings** tab, the **Don't modify existing data in the Analyzer metadata database** option is deselected, amended objects in the database are deleted or updated.
Select all	Selects all entries in the list and activates the checkboxes.
Deselect all	Selects all entries in the list and deactivates the check boxes.

RULES FOR THE EXPORT OF VARIABLES WITH REACTION MATRICES

If linked variables are exported with reaction matrices, the limit value text, the limit value color and the status value of the reaction matrix statuses are also exported to the **STATUSNAME** table in the metadata database of the Analyzer. Because only certain states can be evaluated in the reports, they must be pre-sorted using the wizard.

The following statuses of the reaction matrices can be exported or excluded:

Rema	Rules
Numeric	▸ The default status is ignored. ▸ If several statuses with the same status and limit value condition are set, then only the first status and its status text are exported. ▸ Only statuses with a value that is equal to a limit value are exported (limit value condition). ▸ The limit value conditions `greater than`, `less than`, `as desired` and `range` are ignored.
Multi numeric	▸ Correspond to the rules for **numeric**. ▸ Substatuses are also ignored.

Binary	▸ Only statuses that have value bits set consistently from right to left in the bit mask (`0` or `1`) are set.
	For example:
	`........ ....10.. 1`
	`........ .....100 .`
	`........ .....100 1`
	The following are ignored, for example
	`........ ........ 1`
	`........ ......00 1`
	`........ .10..100 1`

Multi binary	▸ Correspond to the rules for **Binary**. ▸ In addition, substatuses and statuses are also ignored with edge definitions in the bit mask.
String	▸ Are completely ignored and not exported.

IMPORT OF VARIABLE INFORMATION FROM ZENON

The following properties in the zenon **Analyzer** variable properties group provide information for reports in the zenon Analyzer:

- **Display name**: Entry of a display name of the variable in zenon Analyzer. This must be unique in the project. The check is not carried out when issued in zenon, but when imported into zenon Analyzer. If this property is changed after the first export to a zenon Analyzer, these changes are not applied in the zenon Analyzer.
- **Meaning**: Entry of the (Meaning) of a variable in the zenon Analyzer. Entry is manual or by means of the **Meaning and Waterfall Chart Wizard**. Several meanings are separated by a comma.
  Syntax: `[Meaning1],[Meaning2],…,[MeaningN]`
- **Parameters for waterfall diagram**: Parameters of a variable for a waterfall diagram in zenon Analyzer. Entry is manual or by means of the **Meaning and Waterfall Chart Wizard**. The

individual parameters are separated by a comma. Several waterfalls are divided by a semicolon.
Syntax: `[model name],[row index],[index in row],[color code];`

Visual name

The wizard reads the **Analyzer/Display name** property when loading the zenon workspace from zenon 7.20 and displays this for each variable in the **Variables** (on page 59) tab. The following applies for visual names:

- The name must be unique for each project.
- Names in a project that appear several tines are highlighted in red.
- The **Display name** are entered when writing the data to the metadata database.
- In the event of duplicated name within a project, the **Display name** is only entered for the first variable found. For the second variable, the **Name** of the variables is entered in zenon.
- The **Display name** is only set when the variable is exported for the first time. If this is subsequently changed in the Editor, this change is no longer applied in the metadata database. Changes are of course applied to a new metadata database when exporting to a new database.
- With a version of zenon before 7.20, the visual name is always taken from the zenon **Identification** property.

Meaning

From zenon 7.20, the wizard reads the **Analyzer/Meaning** property and displays this for each variable in the **Variables** (on page 59) tab.
The following applies for meanings:

- If there are entries for **Meaning**, the corresponding entries in the **Resources label** are ignored.
- If there are no entries, corresponding entries from the **Resources label** are accepted.
- The identification **ME**= is no longer necessary but can continue to be used. If a variable is assigned several meanings, a comma is used as a separator.
- With a version of zenon before 7.20, the meaning is always taken from the zenon **Resources label** property.

Parameter waterfall diagram

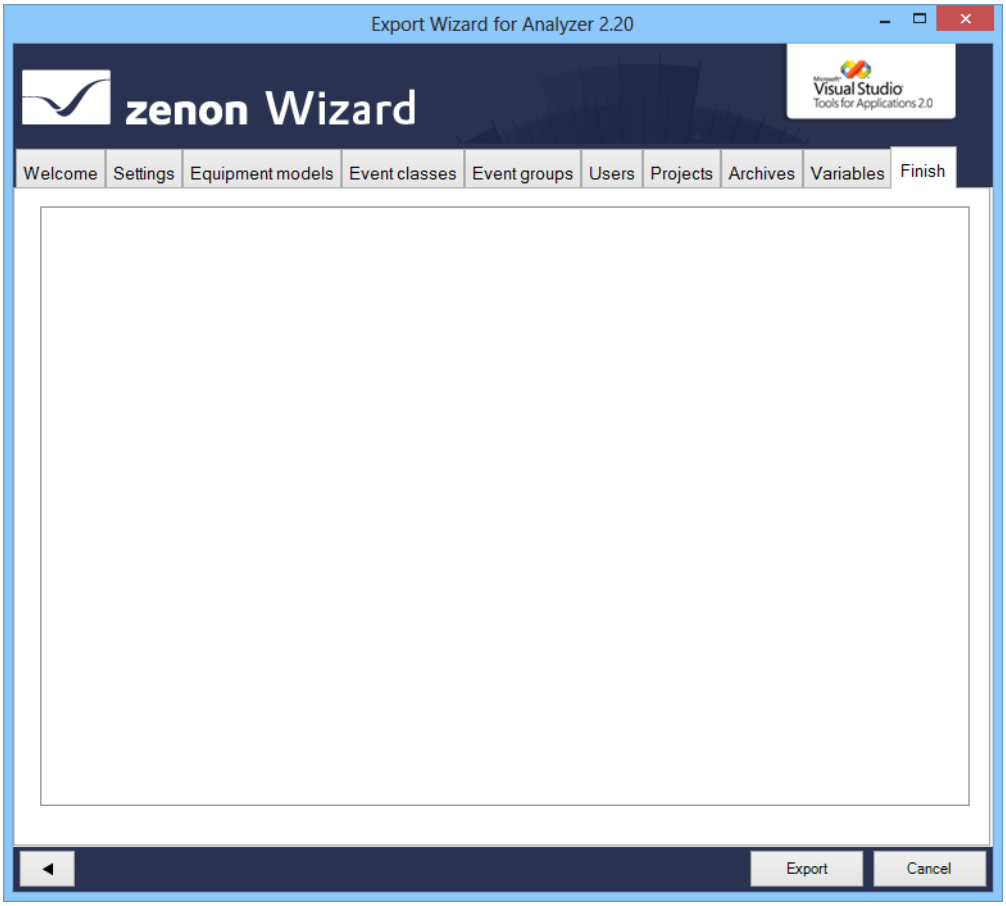
The wizard reads the **Analyzer/Parameters for waterfall diagram** property when loading the zenon workspace from zenon 7.20 and displays this for each variable in the **Variables** (on page 59) tab. The following applies for waterfall:

- If there are entries for **Parameters for waterfall diagram**, the corresponding entries in the **Resources label** are ignored.
- If there are no entries, corresponding entries from the **Resources label** are accepted.
- The identification **WF**= is no longer necessary but can continue to be used. The individual elements of a model are separated by a comma. If several waterfall models are assigned to a variable, a semicolon is used as a separator.
- With versions of zenon before 7.20, the waterfall parameters are always taken from the zenon **Resources label** property.

5.4.10 Finish

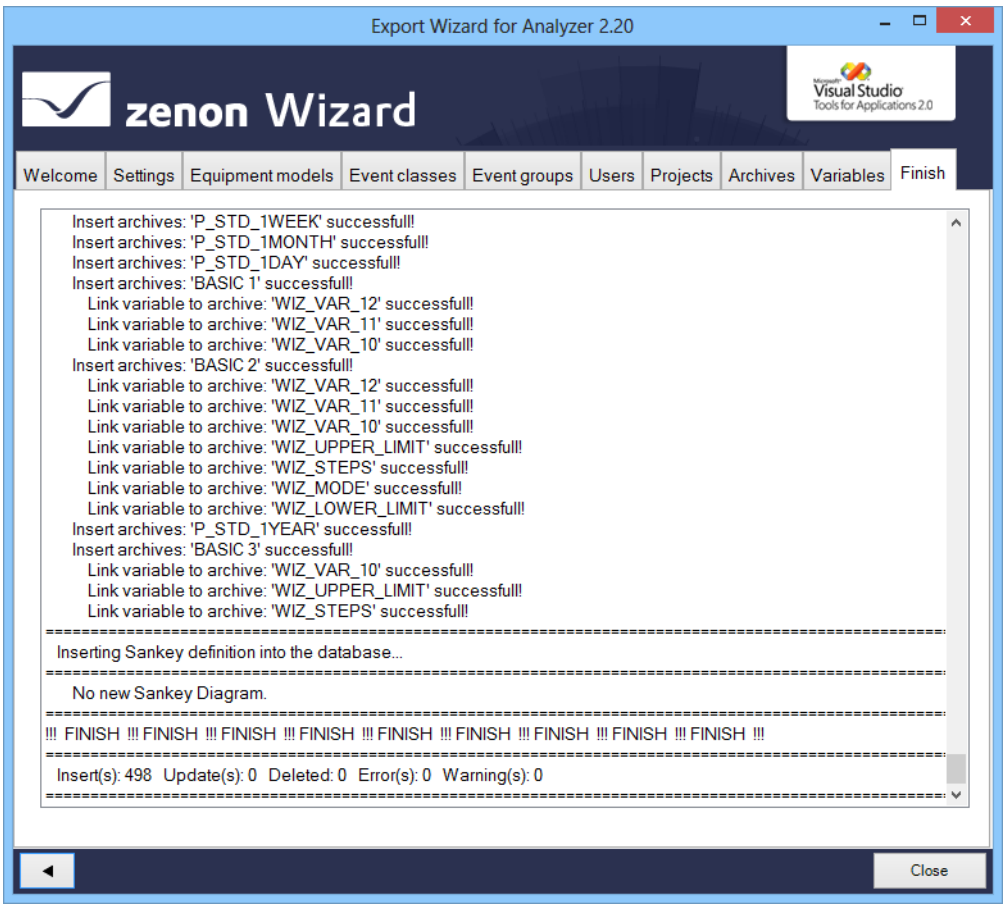
To export the configured data:

1. In the Finish tab, click on the **Export** button**.**



2. the export is started
3. The exported elements are shown in the output window with the attendant success and error messages

In addition, the number of objects that have been added, replaced or deleted, and the number of errors that occurred are shown.



4. Click the **Close** button to close the wizard

RECONFIGURING THE WIZARD

To reconfigure the wizard:

1. Open the **Settings** (on page 42) tab.
2. Click on the **Load data** button.
3. Configure the tabs.

5.5 Close wizard

To close the wizard:

- Click on the **Cancel** button **.**

- A dialog prompts whether the configuration should be saved.
  - **Yes: W**rites the settings set in the **Settings** (on page 42) tab to the registry and closes the wizard. The wizard is opened with this configuration the next time it is started. The configuration is saved for each specific user.
  - **No:** Closes the wizard without saving the configuration

6. Export Wizard for Analyzer 3.00

The zenon **Export Wizard for Analyzer 3.00** supports the export of metadata from zenon from version 7.11 SP0 for the zenon Analyzer 3.00.

The following can be exported:

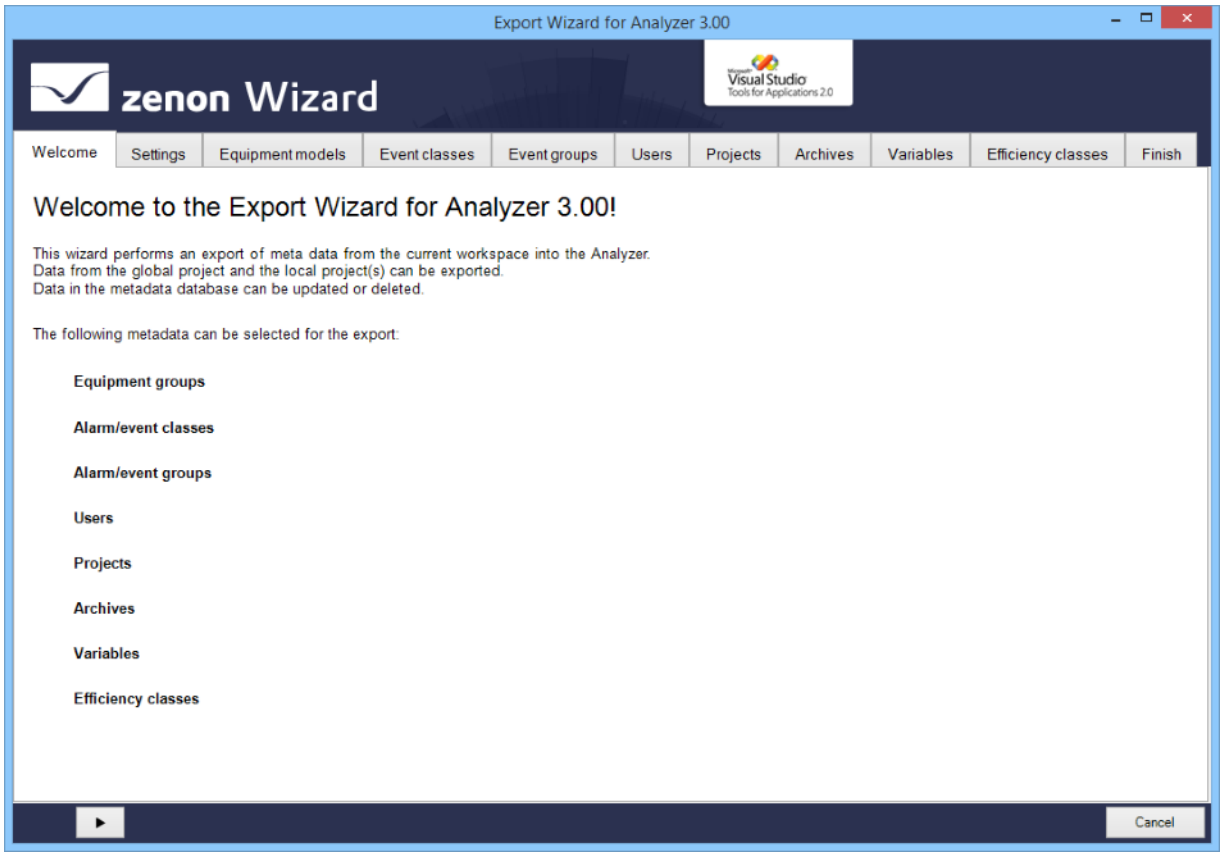
- Data from the global project
  - Equipment models
  - Alarm/event classes
  - Alarm/event groups
  - User
- Data from selected projects:
  - Archives
  - Variables, with:

    - **Display name** (see **visual names** (on page 94) section)

    - **Meaning** (see **meaning** (on page 94) section)

    - **Parameters for waterfall diagram** (see **parameter waterfall chart** (on page 68) section)
- Sankeydiagrams (see Sankey **diagrams** (on page 67) section)

- Efficiency classes (on page 94)



Note: The wizard is only available in English.

COMPATIBILITY:

The Analyzer Export Wizard works, depending on the version, with different zenon Analyzer versions and different zenon versions. For details, read the **Analyzer wizard compatibility** (on page 8) chapter.

6.1 Sankey diagrams

The wizard automatically reads the definition for Sankey diagrams from all activated projects (on page 73) and the global project. These are in the zenon project folder `\Files\Others`.
For this, the following applies:

- Only valid XML files that were created for the zenon Analyzer are taken into account. Diagrams that have the **Analyzer** and **Valid** attributes set to `True` in the **Sankey** XML file are valid. All other Sankey diagrams are ignored and not loaded.
- All Sankey diagram definitions are written to the zenon Analyzer metadata database in the **SANKEY_DIAGRAMM**, **SANKEY_OBJECT** and **SANKEY_VARIABLE** tables.

- Diagrams deleted in zenon (XML files) are not deleted in the Analyzer. Diagrams can only be deleted in the database directly in zenon Analyzer.
- For the adding or updating of diagrams, the following must apply to all required zenon variables:
  - Be selected via the **Variables** (on page 90) tab
    or
  - already be in the database

  If variables that are required for the Sankey diagram are not selected for export, the Sankey diagram is not exported.
- If the Sankey diagram already exists, the metadata database tables are updated according to the changes.
- Clicking on the **Export** button in the **Finish** tab starts the export of the Sankey diagrams from zenon in to zenon Analyzer.
  The diagrams are only exported once all other data such as projects or variables have been exported. The success of the export is shown in the message list of the **Finish** tab.

> **Attention**
>
> *The import of Sankey diagrams is carried out automatically in the background. There are no user interface or configuration options available.*

6.2 Waterfall chart

A waterfall diagram can be used for either **line-based reports** or for **machine-based reports**. The parameters for the diagram are stored in the **Analyzer/Parameters for waterfall diagram** variable property from zenon 7.20. These can be entered manually or created with the **Meaning and Waterfall Chart Wizard** (on page 133).

EXPORT

The wizard reads the **Parameters for waterfall diagram** property when loading the zenon workspace. If there are correct entries, these these are exported in the background and written to the database of the zenon Analyzer.

STRUCTURE OF THE ENTRIES

Depending on the structure of the entries, a decision is made on whether it is entries for machine-based or line-based diagrams.

- Machine based: Structure with 4 digits, separated by a comma; ended with a semicolon.

Syntax: **[model name],[line index],[column index],[color code code];**
Example: **MyWaterfall,4,2,#80FF00;**

- Line-based: Structure with 7 digits, separated by a comma; ended with a semicolon.

  Syntax: **[model name],[line index],[column index],[color code],[loss of auxiliary machine],[add loss of auxiliary machine],[subtract loss of auxiliary machine];**
  Example: **MyLineAnlaysis,4,2, #80FF00,0,0,0;**

RULES FOR READING:

The following is applicable for reading:

- If there are entries for **Parameters for waterfall diagram**, corresponding entries in the **Resources label** field are ignored.
  The structure decides whether the entry can be evaluated as machine-based or line-based.
- The identification **WF**= is not necessary but can to be used. The individual elements of a model are separated by a comma. If several waterfall models are assigned to a variable, a semicolon is used as a separator.
- If there are no entries, corresponding entries from the **Resources label** are accepted. The identification **WF**= must be prefixed here.
- With versions of zenon before 7.20, the waterfall parameters are taken from the zenon **Resources label** property.

6.3 Install and call up wizard

The wizard is automatically installed with zenon for each supported version of zenon Analyzer.

STARTING THE WIZARD

For wizards to be displayed, the settings for VBA or VSTA must be set correctly in file ***zenon6.ini****:*

[VBA]

EIN=1

[VSTA]

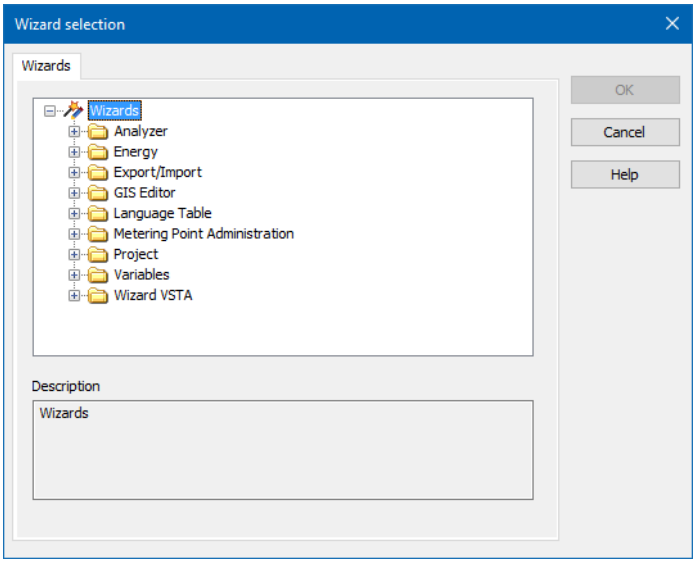
ON=1

If VSTA wizards are not displayed although the settings are correct, set entry **LOADED**= to `1` in area `[VSTA]`.

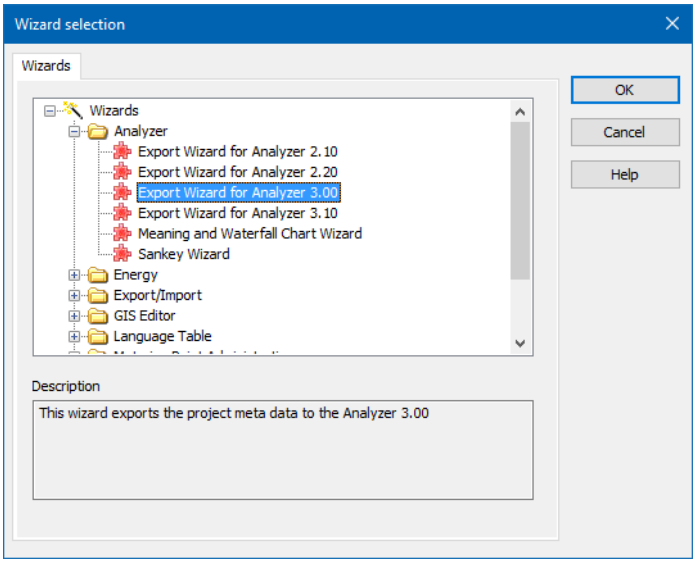
To start the wizard:

1. Click on *Tools -> Start Editor Wizards...*.
   Or: Press the short cut `Alt+F12`

The selection window with the available wizards opens.



2. Navigate to the node **Analyzer**.
3. Select the **Export Wizard for Analyzer 3.00**.



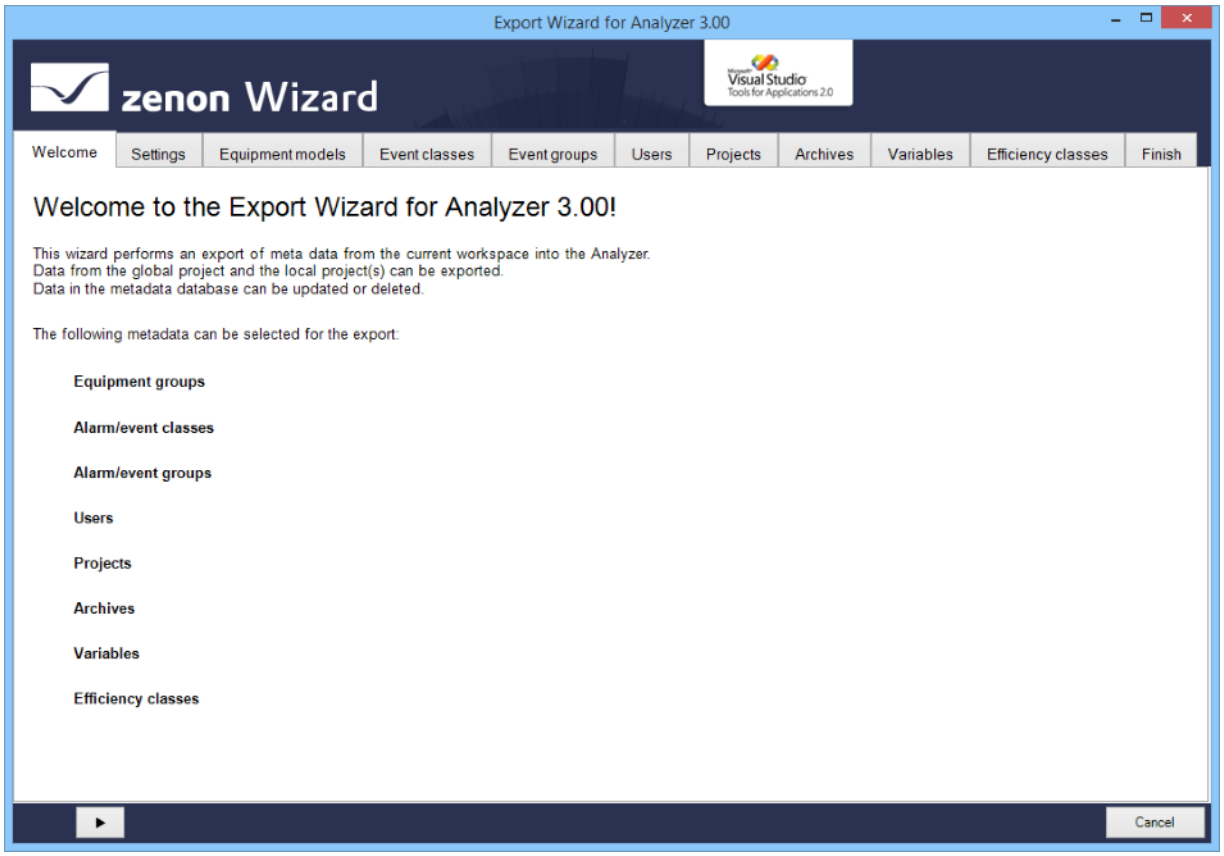
4. Click on **OK.**

   The wizard starts with the welcome page.

6.4 Start window

When the wizard is opened, you receive an overview page that lists all exportable objects.

The individual objects are configured for the export on individual tabs.



Click on the button with the **arrow** to navigate through the configuration (on page 71) of the export.

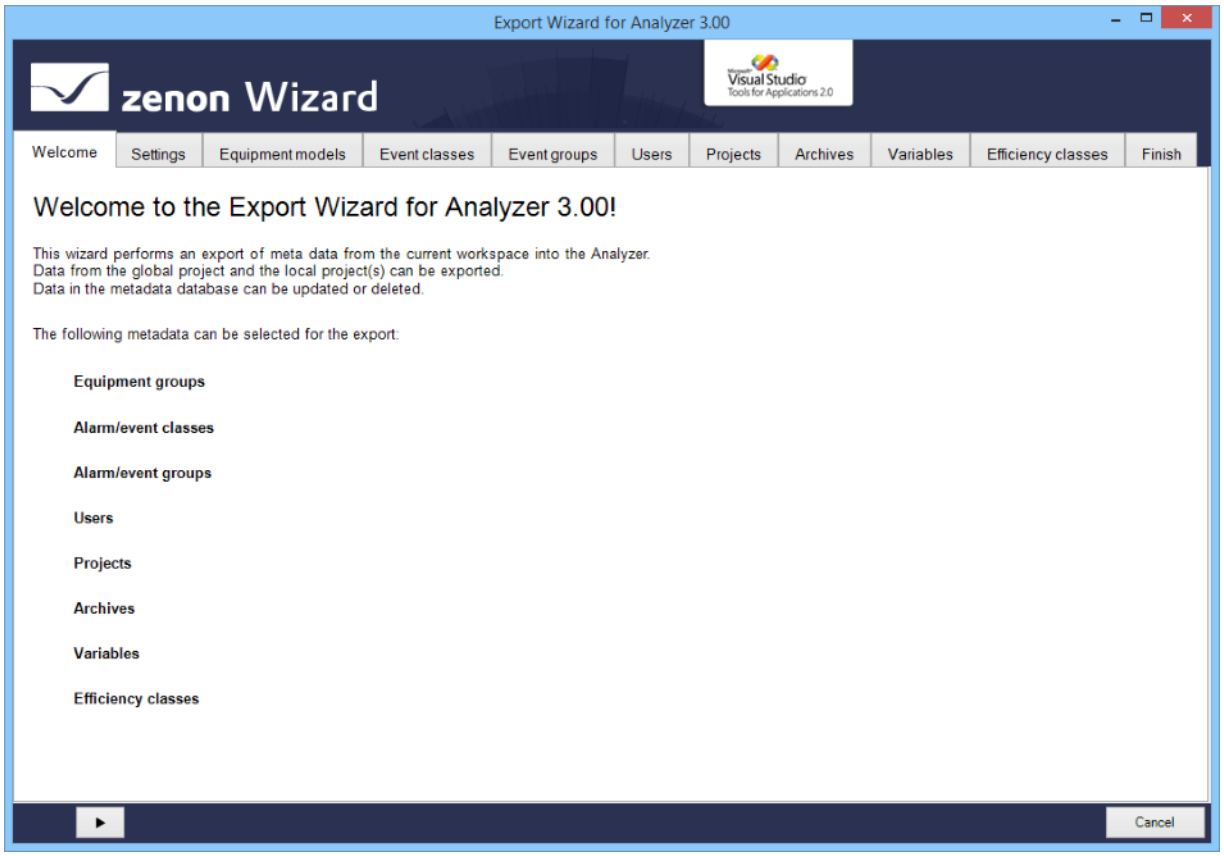
6.5 Configuration

When exporting with the Analyzer Export Wizard, all modules available for export are offered for detailed configuration. Only the selected data is exported. The export of Sankey diagrams (on page 67) is carried out in the background, without the possibility of configuration. You get to the next level by clicking on the button with the **right arrow**. You can also select individual tabs directly by clicking on the title of the tab. Entries already present in the database are preselected in the individual areas.

The following tabs are available for configuration of the export:

- **Settings** (on page 73): Options for the export of metadata
- **Equipment models** (on page **78**): (on page 46)Export of the equipment groups from the global project
- **Event classes** (on page 80): Alarm/Event classes from global project
- **Event groups** (on page 82): Alarm/event groups from global project

- **Users** (on page 84): User from global project
- **Projects** (on page 85): Projects from workspace
- **Archives** (on page 88): Archives of the selected projects
- **Variables** (on page 90): Variables of the selected projects
- **Efficiency classes** (on page 94): Display of the efficiency classes to be exported.
- **Finish** (on page 97): Start of the export and output of the result



6.5.1 Navigation

Navigation through the tabs is carried out by means of the navigation bar in the lower area of the wizard window:

Button	Description
Arrow left	Goes back one tab in the wizard process.
Arrow right	Goes forward one tab in the wizard process.
Export	Exports the data to the Analyzer database. Is only active if the **Finish** tab is opened.
Cancel	Closes the wizard without exporting. When closing, a dialog asks if the configuration is to be saved ▸ **Yes:** Writes the settings set in the **Settings** (on page 42) tab to the registry and closes the wizard. The wizard is opened with this configuration the next time it is started. ▸ **No:** Closes the wizard without saving the configuration The configuration is saved for each specific user.

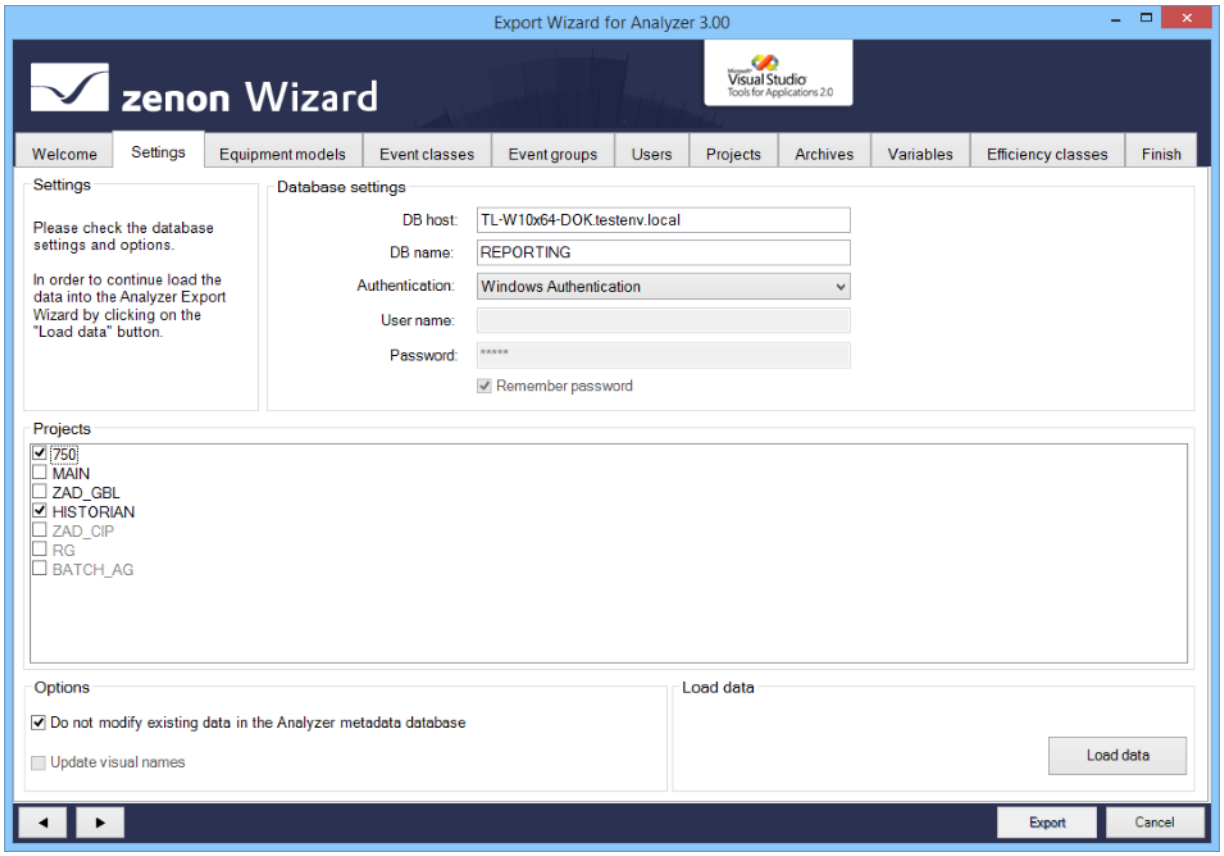
Individual tabs can also be selected by clicking directly on the title of the tab.

6.5.2 Settings

In this tab:

1. You define the database to which the wizard connects
2. You define general options for exporting

3. You start the data readout



SETTINGS

Parameter	Description
Settings	Information and hints about current export processes.

DATABASE SETTINGS

Parameter	Description
Database settings	Connection settings to the Analyzer server.
DB host	Computer on which the database is located.
DB name	Name of the database.
Authentication	Type of authentication: ▸ `Windows Authentication`: Windows login information is used. ▸ `SQL Server Authentication`: Login with data from an SQL server user.
User name	Entry of the user name. Only for login with `SQL Server Authentication`. Display only for `Windows Authentication`.
Password	Entry of the password. Only for login with `SQL Server Authentication`. No input possible with `Windows Authentication`.
Remember password	Password is saved for next connection. Only for login with `SQL Server Authentication`. Inactive with `Windows Authentication`.

PROJECTS

Parameter	Description
Projects	List of the available projects in the current zenon workspace. The checkbox shows whether the data of the project is used: ▸ `Active`: Project is used.

	Projects that are active in the memory are pre-selected. Inactive projects can be added by means of selection with a checkbox.

OPTIONS

Parameter	Description
Options	General options for the export.
Don't modify existing data in the Analyzer metadata database	▸ `Active`: Only completely new entries from the workspace are written to the database. Note: If linkings from variables, archives etc. are changed or new ones are created, these are not transferred. If these are also transferred, the checkbox must be set to `Inactive` ▸ `Inactive`: Entries in the database are also updated or deleted. New entries are created, amended entries are updated and deleted entries are removed. Exception: Projects and Sankey diagrams are not deleted.
Update Visual names	Only available if the **Don't modify existing data in the Analyzer metadata database** option has been deactivated. ▸ `Active`: In zenon, amended display names are overwritten when exporting to the metadata database of zenon Analyzer. ▸ `Inactive`: Amended display names are not changed in zenon Analyzer. Default: `Inactive` The setting is not saved. The checkbox is set to deactivated each time the wizard is started. Behavior: If the checkbox is activated, display names amended in zenon are also amended in zenon Analyzer for: ▸ **Equipment models** ▸ **Event classes** ▸ **Event groups** ▸ **Projects** ▸ **Archives** ▸ **Variables** The visual names for **Users** cannot be changed. These are recreated in the event of changes. Changes to display names are displayed in the individual lists. Example: Initial situation:

	▸ Display name in the zenon project: **Z** ▸ Display name in the zenon Analyzer: **A** Action: ▸ **A = Z**: nothing happens. ▸ **A <> Z**: **Z** is applied if the name has not yet been issued in the metadata table. If **Z** is already present in the table, **A** remains unchanged and an error message is given.

LOAD DATA

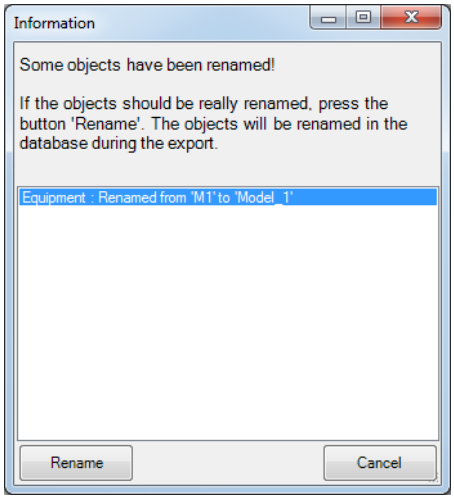
Load Data	Clicking on the button loads, depending on the **Load every project of this workspace into the memory** parameter - the data from the currently loaded project into the wizard. In doing so, a check is made to see if data is present in the Analyzer database. Pre-existing data is combined with the data from the workspace and loaded into the wizard. In the event of naming conflicts, a dialog to rectify the error is called up. If the loading of data has been successfully concluded, the export can be configured in the following tabs.

RENAME OBJECT

Objects must always be named the same in the Analyzer database and in zenon. If objects that are already present in the database are renamed in zenon, these changes can be accepted or rejected when the data is combined. Rejection of the changes leads to the wizard being closed, because only objects with identical names can be handled correctly.

DIALOG FOR RENAMING

In the event of conflicts in the naming of objects, a dialog for dealing with the error is opened:

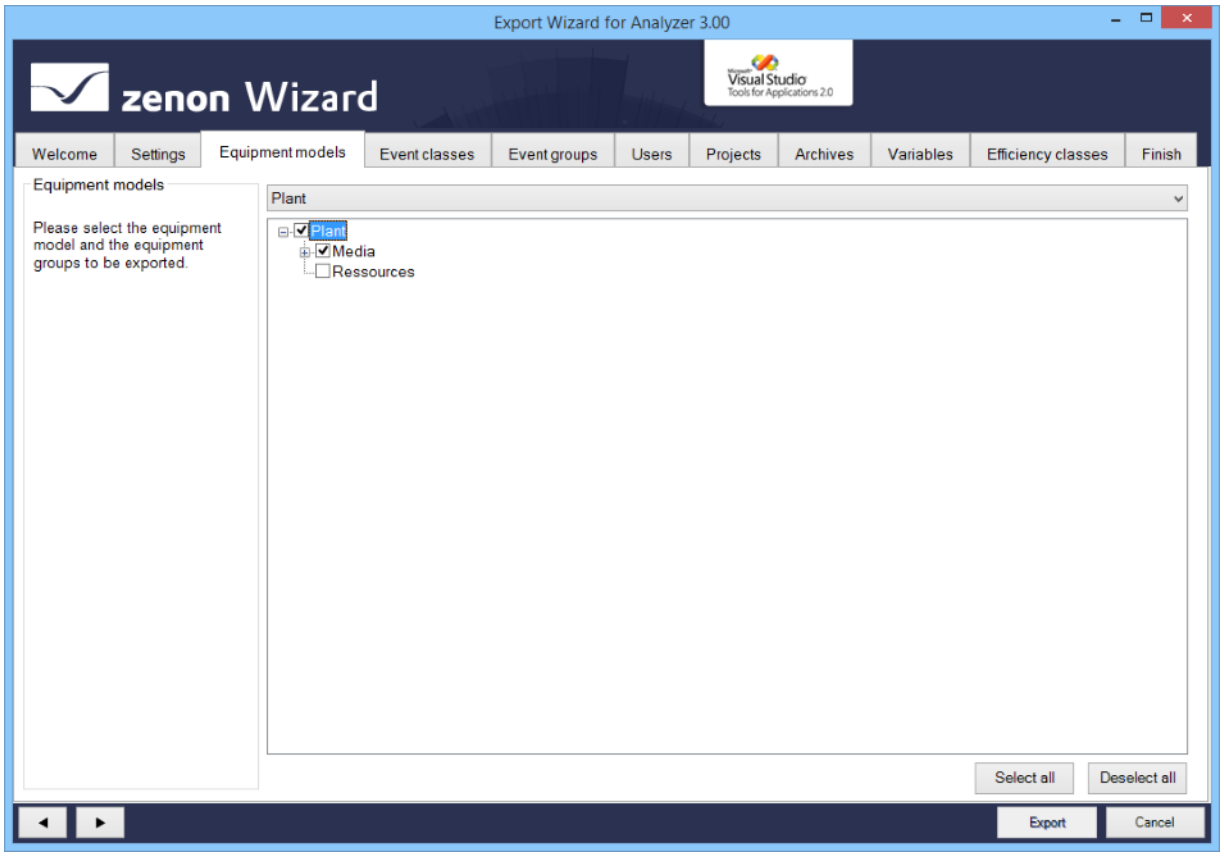


Parameter	Description
List of amended objects	Contains all objects that were changed. Previous name and new name are displayed. Exception: Users are always recreated.
Rename	Renames all objects listed in the database, closes the dialog and stops reading in data.
Cancel	Leaves the previous name in the database, finishes reading in data and closes the wizard.

6.5.3 Equipment models

Configuration of the model group which should be exported from the global project.

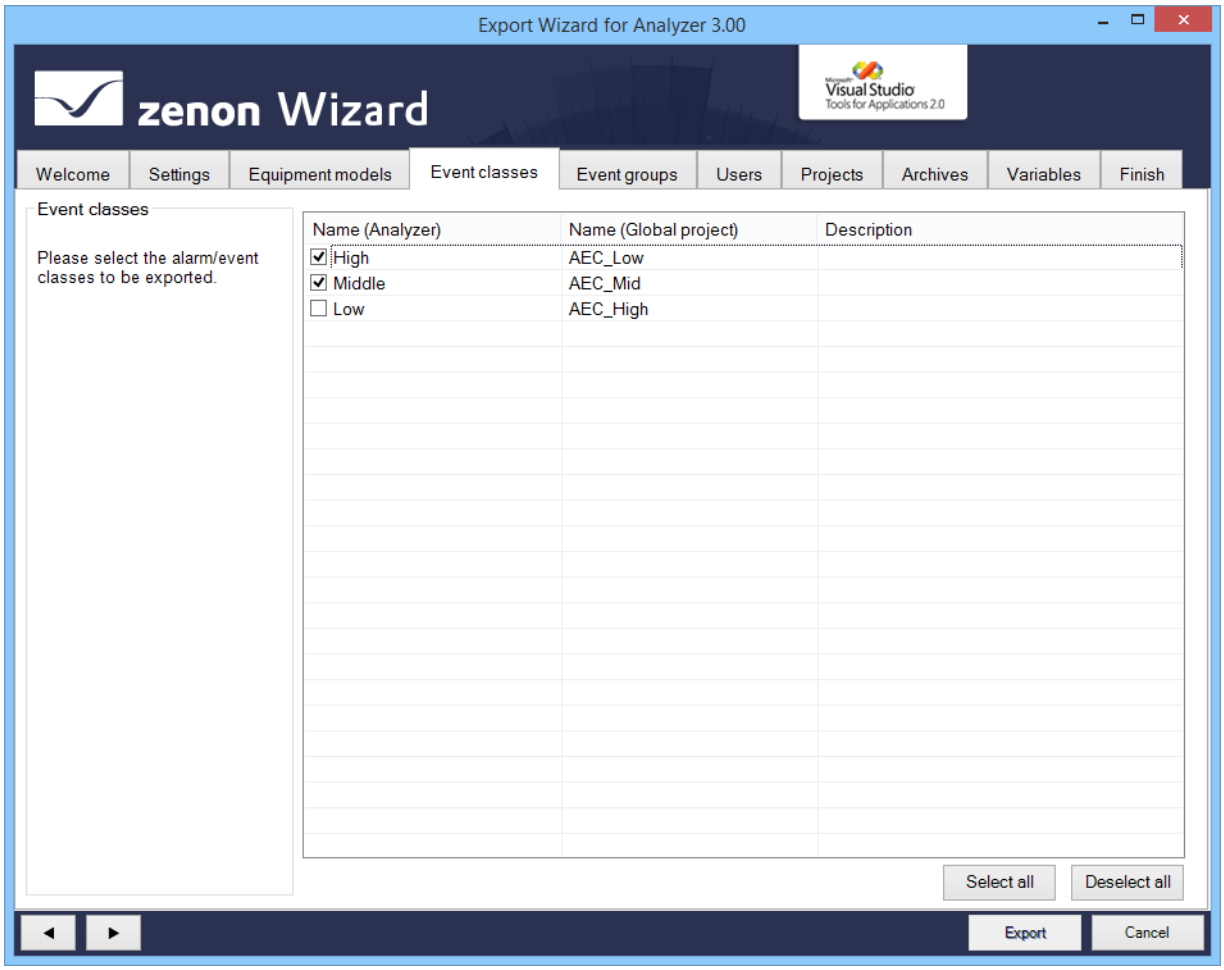
> **Attention**
>
> *Each equipment group in zenon may only be assigned to one individual time model.*
>
> *If several time model groups are assigned, the Analyzer Wizard Export uses the first that it finds and exports this to the metadata of the Analyzer. Other time model groups are ignored.*



Parameter	Description
Equipment models	Information and notes on exporting.
Selection of equipment/medium	Drop-down list to select a model that is offered in the **Equipment models/media** list for configuration.
List of equipment models/media	List field with the possibility to select equipment models and model groups or media. To select an entry, activate the check box in front of the entry. In the list field the name, as it is stored in the database, is always displayed in the individual nodes. If the name was changed, the original name from the zenon project is displayed in brackets. Equipment groups that were deleted in the global project are no longer displayed. If, in the **Settings** tab, the **Don't modify existing data in the Analyzer metadata database** option is deselected, amended objects in the database are deleted or updated.
Select all	Clicking on the button selects all equipment groups
Deselect all	Clicking on the button deselects all equipment groups.

6.5.4 Event classes

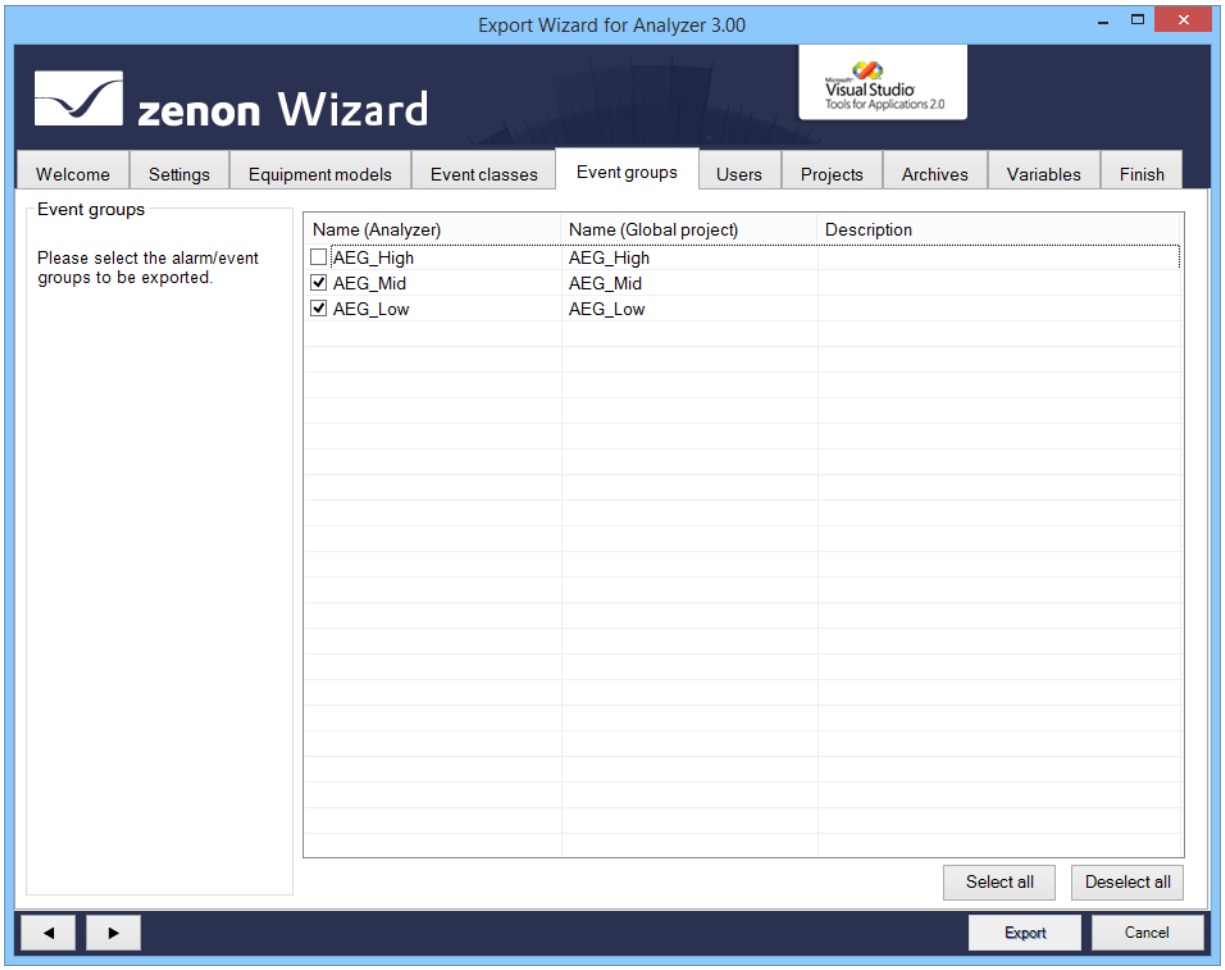
Configuration of the alarm/event classes which should be exported from the global project.



Parameter	Description
Event classes	Information and notes on exporting.
List of the alarm/event classes	List field with the possibility to select the alarm/event classes. To select an entry, activate the check box in front of the entry. **Sorting:** Clicking on the column identifier sorts the entries after this column upwards or downwards. **Multiple selection:** If several lines are highlighted, the selection applies for all selected lines. Alarm/event classes that were deleted in the global project are no longer displayed here. If, in the **Settings** tab, the **Don't modify existing data in the Analyzer metadata database** option is deselected, amended objects in the database are deleted or updated.
Select all	Selects all entries in the list and activates the checkboxes.
Deselect all	Selects all entries in the list and deactivates the check boxes.

6.5.5 Event groups

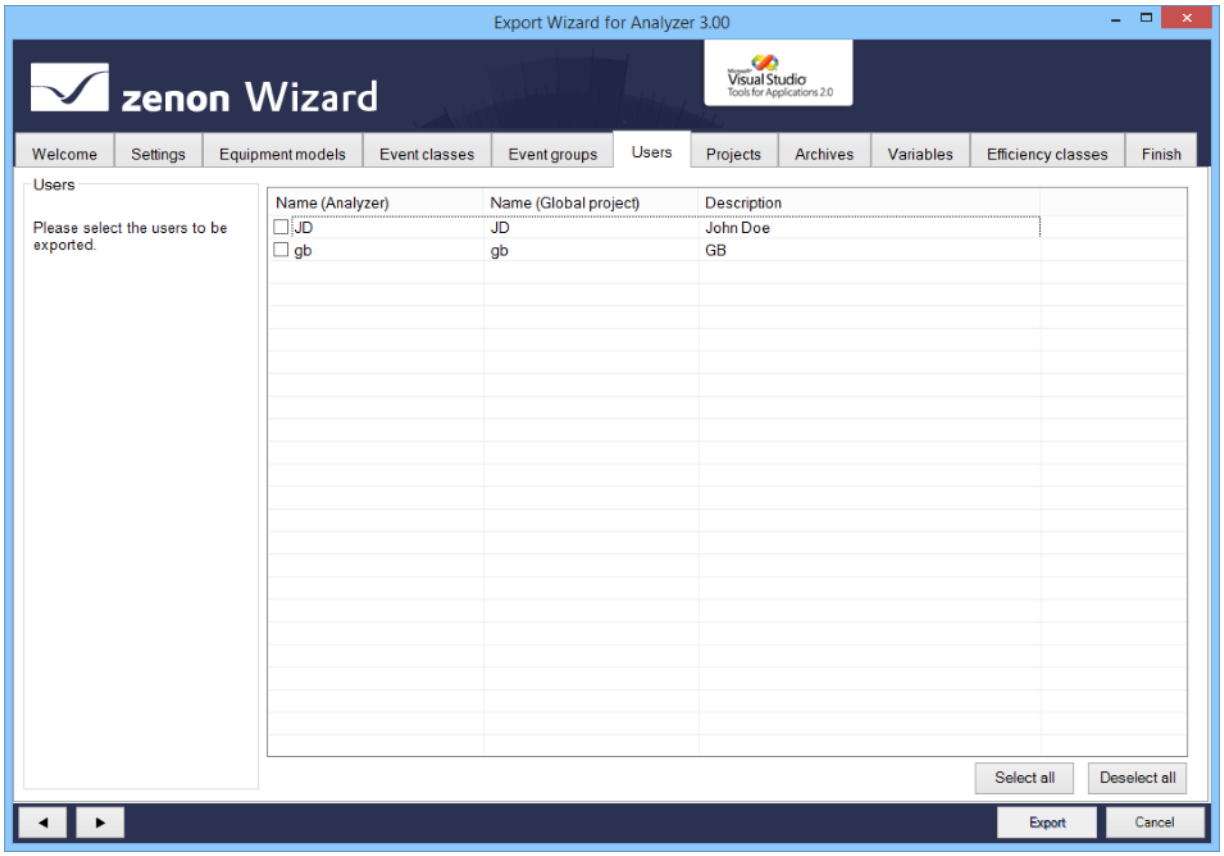
Configuration of the alarm/event groups which should be exported from the global project.



Parameter	Description
Event groups	Information and notes on exporting.
List of the alarm/event groups	List field in which you can select alarm/event groups. To select an entry, activate the check box in front of the entry. **Sorting:** Clicking on the column identifier sorts the entries after this column upwards or downwards. **Multiple selection:** If several lines are highlighted, the selection applies for all selected lines. Alarm/event classes that were deleted in the global project are no longer displayed here. If, in the **Settings** tab, the **Don't modify existing data in the Analyzer metadata database** option is deselected, amended objects in the database are deleted or updated.
Select all	Selects all entries in the list and activates the checkboxes.
Deselect all	Selects all entries in the list and deactivates the check boxes.

6.5.6 Users

Configuration of the user which should be exported from the global project.



Parameter	Description
Users	Information and notes on exporting.
User List	List field with selection possibility for users. To select an entry, activate the check box in front of the entry. **Sorting:** Clicking on the column identifier sorts the entries after this column upwards or downwards. **Multiple selection:** If several lines are highlighted, the selection applies for all selected lines. If, in the **Settings** tab, the **Don't modify existing data in the Analyzer metadata database** option is deselected, amended objects in the database are deleted or updated. If a user was renamed in zenon they are considered new and recreated in the project. The previous user is deleted.
Select all	Selects all entries in the list and activates the checkboxes.
Deselect all	Selects all entries in the list and deactivates the check boxes.

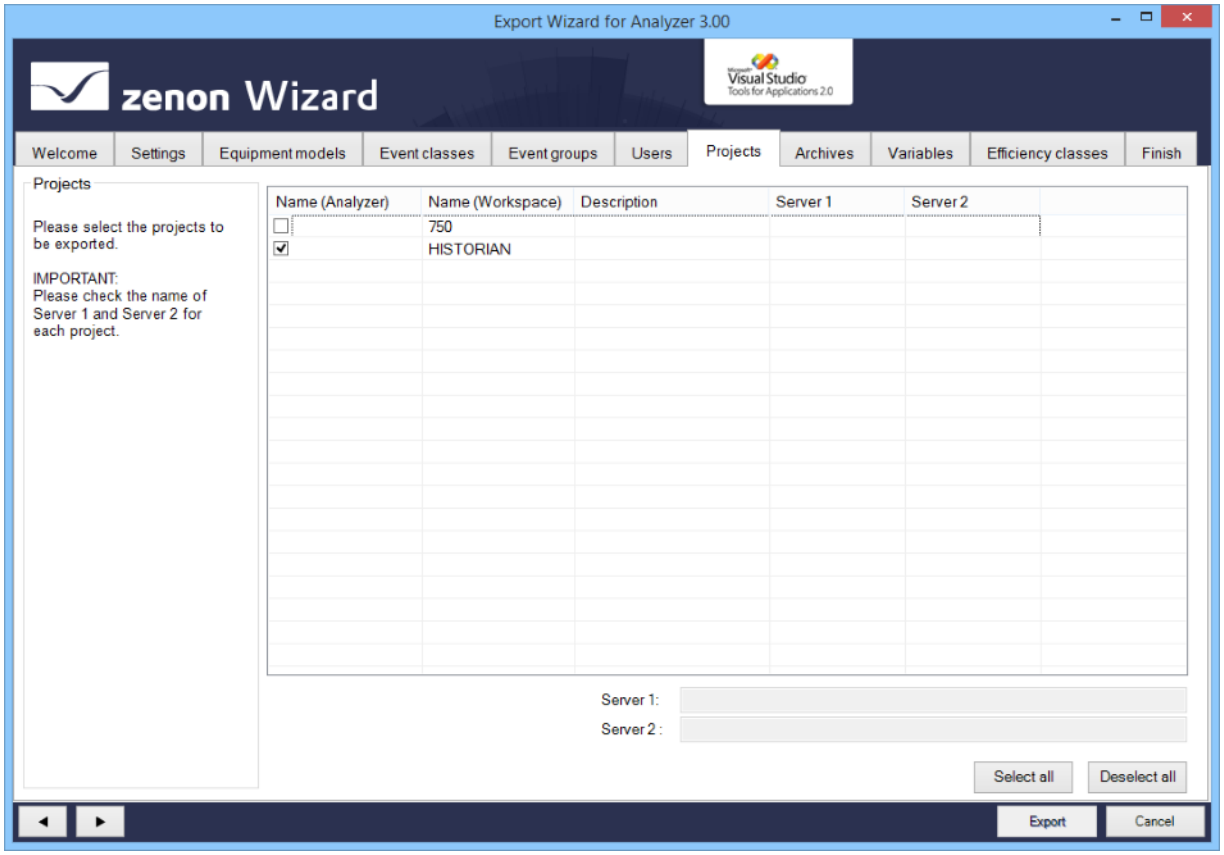
6.5.7 Projects

Configuration of the local projects which should be exported. The names for **Server 1** and **Server 2** can be changed here.

To change the name of a Server or Standby Server:

1. Highlight the project in the list of projects.
2. Enter the desired name for **Server 1** and **Server 2**.

Note: Changes here are only possible if, in the **Settings** tab, the **Don't modify existing data in the Analyzer metadata database** option has been deactivated. The information that is displayed for the server depends on the settings in the project and the database. For details, see the **Display of server settings** section.



Parameter	Description
Projects	Information and notes on exporting.
Project list	List field with selection possibility for projects. To select an entry, activate the check box in front of the entry. **Sorting:** Clicking on the column identifier sorts the entries after this column upwards or downwards. **Multiple selection:** If several lines are highlighted, the selection applies for all selected lines. If, in the **Settings** tab, the **Don't modify existing data in the Analyzer metadata database** option is deselected, amended objects in the database are deleted or updated.
Server 1	Address of the **Server 1** for the project selected in the list window. Source (project or database) depending on configuration.
Server 2	Adress of the **Server 2** for the project selected in the list window. Source (project or database) depending on configuration.
Select all	Selects all entries in the list and activates the checkboxes.
Deselect all	Selects all entries in the list and deactivates the check boxes.

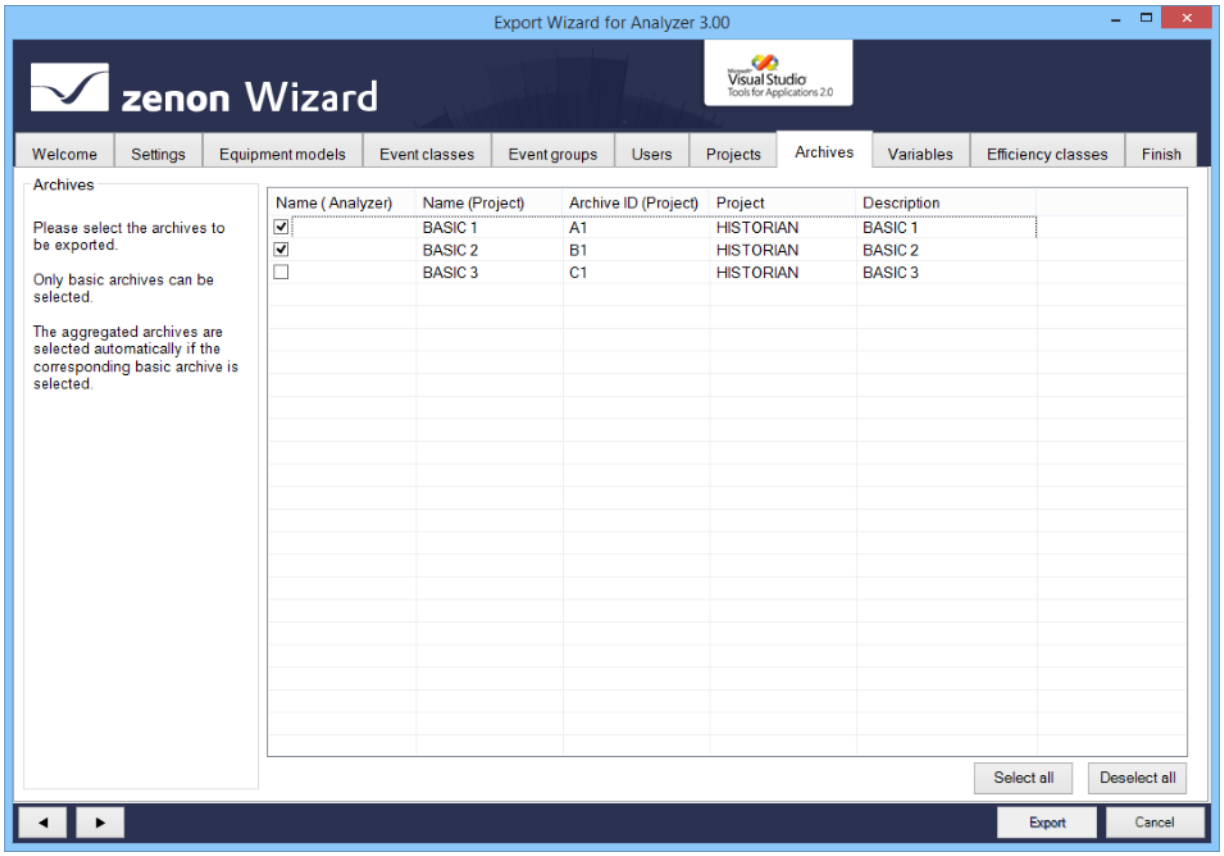
DISPLAY OF SERVER SETTINGS

The following is applicable for the display and configuration of the server in this tab:

- In the zenon project, the **Network active** property is activated:
  Server 1 and **Server 2** from the project are displayed.
- In the zenon project, the **Network active** property is deactivated:
  Server 1 and **Server 2** from the database are displayed.
- In the zenon project, the **Network active** property is deactivated and there are no entries present for the server in the database:
  Empty entries are displayed for **Server 1** and **Server 2**.

6.5.8 Archives

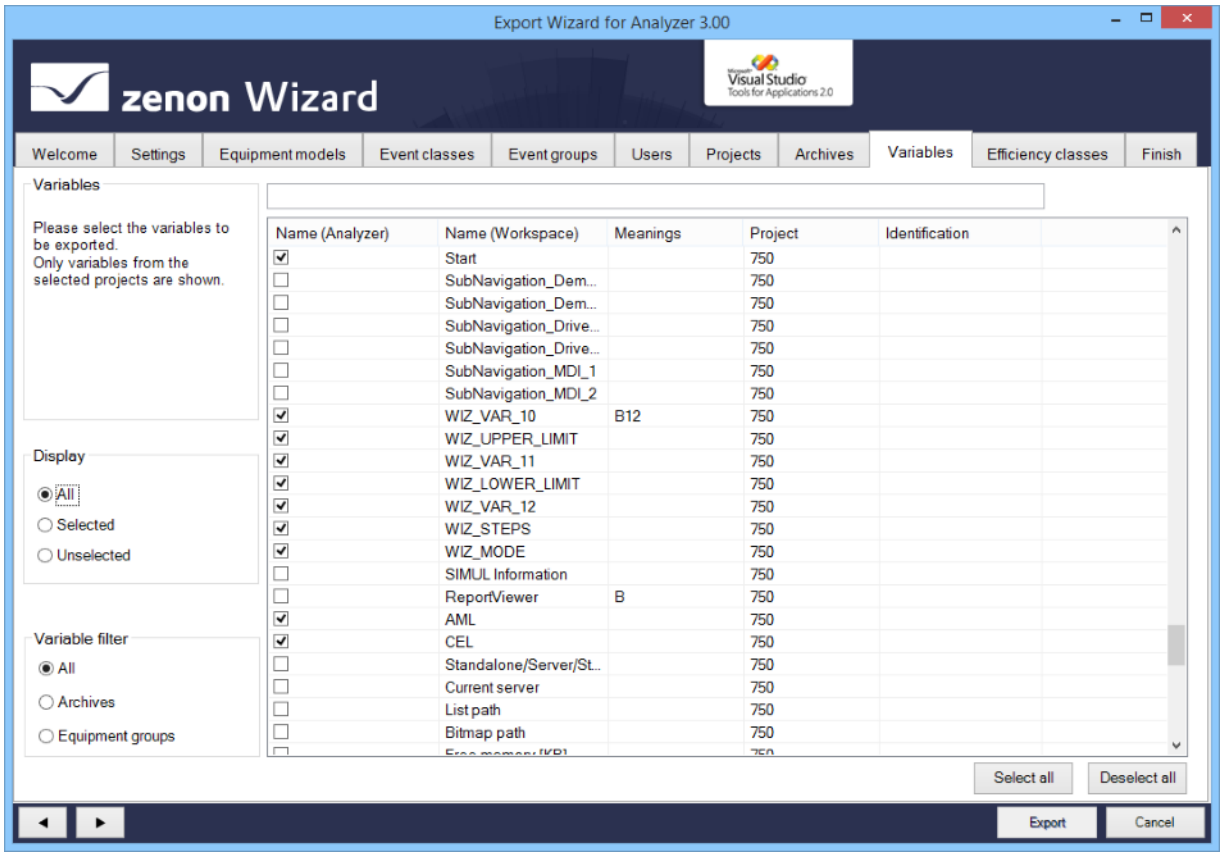
Selection of the archive from the selected projects (on page 85). Only base archives are displayed. Aggregated archives are not displayed in the list, but are also selected with the base archives and written to the database.



Parameter	Description
Archives	Information and notes on exporting.
Archive list	List field with possibility to select for archives. To select an entry, activate the check box in front of the entry. ▸ **Name (Analyzer)**: Name of the archive in zenon Analyzer. ▸ **Name (Project)**: Name of the archive in the project. ▸ **Archive ID (Project)**: ID of the archive in the project. ▸ **Project**: Project from which the archive comes. ▸ **Description**: Individual description of the project. **Sorting:** Clicking on the column identifier sorts the entries after this column upwards or downwards. **Multiple selection:** If several lines are highlighted, the selection applies for all selected lines. If, in the **Settings** tab, the **Don't modify existing data in the Analyzer metadata database** option is deselected, amended objects in the database are deleted or updated.
Select all	Selects all entries in the list and activates the checkboxes.
Deselect all	Selects all entries in the list and deactivates the check boxes.

6.5.9 Variables

Configuration of the variables to be exported from the selected local projects (on page 85). When selecting variables, the entries offered can be prefiltered.



Parameter	Description
Variables	Information and notes on exporting.
Display	Selection of which variables are displayed, via the following option fields: ▸ **All**: All variables are displayed. ▸ **Selected**: Only variables that have already been selected are displayed. ▸ **Unselected**: Only variables that have not yet been selected are displayed.
Variable filter	Selection of the variable filter using the following option fields: ▸ **All**: All variables are displayed. ▸ **Archives**: Only archive variables are displayed. ▸ **Equipment groups**: Only variables are displayed which are part of the selected Equipment model (on page 78).
Filter row	Input of alphanumerical characters according to which the **List of variables** is to be filtered. Attention: The filter makes a distinction between upper-case and lower-case letters (it is case sensitive).
List of variables	List field with possibility to select variables. To select an entry, activate the check box in front of the entry. The following are displayed: ▸ **Name (Analyzer)**: Name in zenon Analyzer. ▸ **Name (Workspace)**: Can be issued from zenon 7.20 in the Editor by means of the **Display name** property. Must be unique in the project. See also chapter **Visual name** (on page 94) ▸ **Meanings**: Can be issued from zenon 7.20 in the Editor by means of the **Meaning** property. See also chapter **Meaning** (on page 94) ▸ **Project**: Project from which the variable comes. ▸ **Identification**: It corresponds to the **Identification** property in zenon. **Sorting:** Clicking on the column identifier sorts the entries after this column upwards or downwards. **Multiple selection:** If several lines are highlighted, the selection applies for all selected lines. If, in the **Settings** tab, the **Don't modify existing data in the Analyzer metadata database** option is deselected, amended

	objects in the database are deleted or updated.
Select all	Selects all entries in the list and activates the checkboxes.
Deselect all	Selects all entries in the list and deactivates the check boxes.

RULES FOR THE EXPORT OF VARIABLES WITH REACTION MATRICES

If linked variables are exported with reaction matrices, the limit value text, the limit value color and the status value of the reaction matrix statuses are also exported to the **STATUSNAME** table in the metadata database of the Analyzer. Because only certain states can be evaluated in the reports, they must be pre-sorted using the wizard.

The following statuses of the reaction matrices can be exported or excluded:

Rema	Rules
Numeric	▸ The default status is ignored. ▸ If several statuses with the same status and limit value condition are set, then only the first status and its status text are exported. ▸ Only statuses with a value that is equal to a limit value are exported (limit value condition). ▸ The limit value conditions `greater than`, `less than`, `as desired` and `range` are ignored.
Multi numeric	▸ Correspond to the rules for **numeric**. ▸ Substatuses are also ignored.

Binary	▸ Only statuses that have value bits set consistently from right to left in the bit mask (`0` or `1`) are set.
	For example:
	`........ ....10.. 1`
	`........ .....100 .`
	`........ .....100 1`
	The following are ignored, for example
	`........ ........ 1`
	`........ ......00 1`
	`........ .10..100 1`

Multi binary	▸ Correspond to the rules for **Binary**. ▸ In addition, substatuses and statuses are also ignored with edge definitions in the bit mask.
String	▸ Are completely ignored and not exported.

IMPORT OF VARIABLE INFORMATION FROM ZENON

The following properties in the zenon **Analyzer** variable properties group provide information for reports in the zenon Analyzer:

- **Display name**: Entry of a display name of the variable in zenon Analyzer. This must be unique in the project. The check is not carried out when issued in zenon, but when imported into zenon Analyzer. If this property is changed after the first export to a zenon Analyzer, these changes are not applied in the zenon Analyzer.
- **Meaning**: Entry of the (Meaning) of a variable in the zenon Analyzer. Entry is manual or by means of the **Meaning and Waterfall Chart Wizard**. Several meanings are separated by a comma.
  Syntax: `[Meaning1],[Meaning2],…,[MeaningN]`
- **Parameters for waterfall diagram**: Parameters of a variable for a waterfall diagram in zenon Analyzer. Entry is manual or by means of the **Meaning and Waterfall Chart Wizard**. The individual parameters are separated by a comma. Several waterfalls are divided by a semicolon.
  Syntax: `[model name],[row index],[index in row],[color code];`

Visual name

The wizard reads the **Analyzer/Display name** property when loading the zenon workspace from zenon 7.20 and displays this for each variable in the **Variables** (on page 59) tab. The following applies for visual names:

- The name must be unique for each project.
- Names in a project that appear several tines are highlighted in red.
- The **Display name** are entered when writing the data to the metadata database.
- In the event of duplicated name within a project, the **Display name** is only entered for the first variable found. For the second variable, the **Name** of the variables is entered in zenon.
- The **Display name** is only set when the variable is exported for the first time. If this is subsequently changed in the Editor, this change is no longer applied in the metadata database. Changes are of course applied to a new metadata database when exporting to a new database.
- With a version of zenon before 7.20, the visual name is always taken from the zenon **Identification** property.

Meaning

From zenon 7.20, the wizard reads the **Analyzer/Meaning** property and displays this for each variable in the **Variables** (on page 59) tab.
The following applies for meanings:

- If there are entries for **Meaning**, the corresponding entries in the **Resources label** are ignored.
- If there are no entries, corresponding entries from the **Resources label** are accepted.
- The identification **ME=** is no longer necessary but can continue to be used. If a variable is assigned several meanings, a comma is used as a separator.
- With a version of zenon before 7.20, the meaning is always taken from the zenon **Resources label** property.

6.5.10 Efficiency classes

Selection and configuration of the efficiency classes to be exported. In doing so, zenon reaction matrices (REMAs) are displayed, the status of which correspond to the rules of the efficiency class structure. Only reaction matrices that meet certain conditions are read.

ZENON REACTION MATRIX REQUIREMENTS

In order for a reaction matrix to be read as an efficiency class, it must meet the following conditions:

- `Numeric` or `multi-numeric` type
- Status configured correctly
- Limit value text present

STATUS CONFIGURATION

The statuses to be configured must meet the following conditions:

- The first status is less than a defined value. The area is open downwards.

  Status n1: `<x`
- The last status is greater than the last value defined beforehand. This area is open upwards.

  Status n4: `>z`
- Fixed ranges are defined between the first and last value. These areas must follow one another exactly.

  Status n2: `x-y`

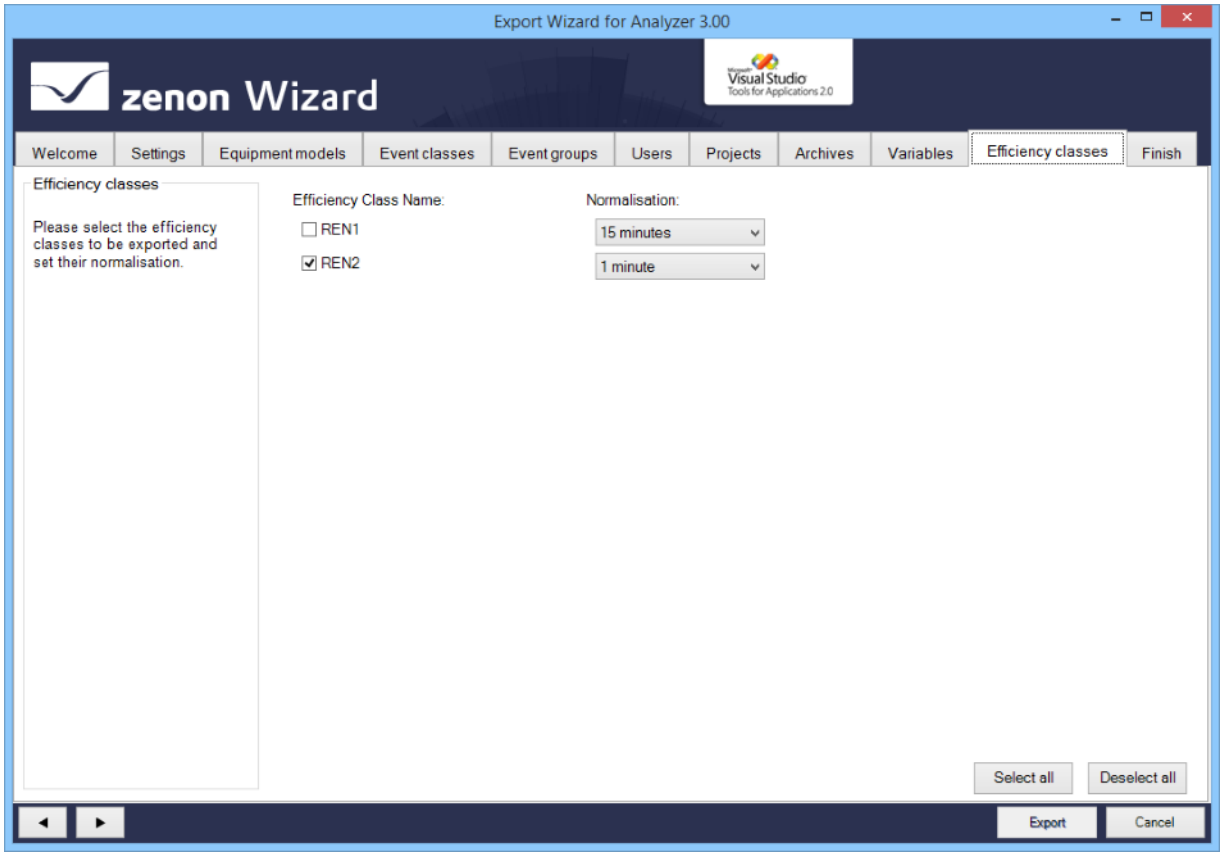
  Status n3: `y-z`

CONFIGURATION IN THE WIZARD

To select efficiency classes for export:

1. Select the desired efficiency classes.
2. Configure the normalization.
   Attention: The `None` value is reserved for a subsequent expansion stage and must not be selected.

All pre-existing efficiency classes in the metadata database are deleted during export if they have been created by the wizard. However, efficiency classes that come from the **Metadata Editor** are retained. All selected efficiency classes are then written to the metadata database.



Parameter	Description
Efficiency Class Name	Selection of the efficiency class to be exported by means of Activation of checkbox in front of the name.
Normalisation	Selection of the normalization from a drop-down list. ▸ Minimum: `1 minute` ▸ Maximum: `1 year` Default: `15 minutes` **Attention:** `None` must not be selected. This value is reserved for a subsequent expansion level and leads to invalid configurations.

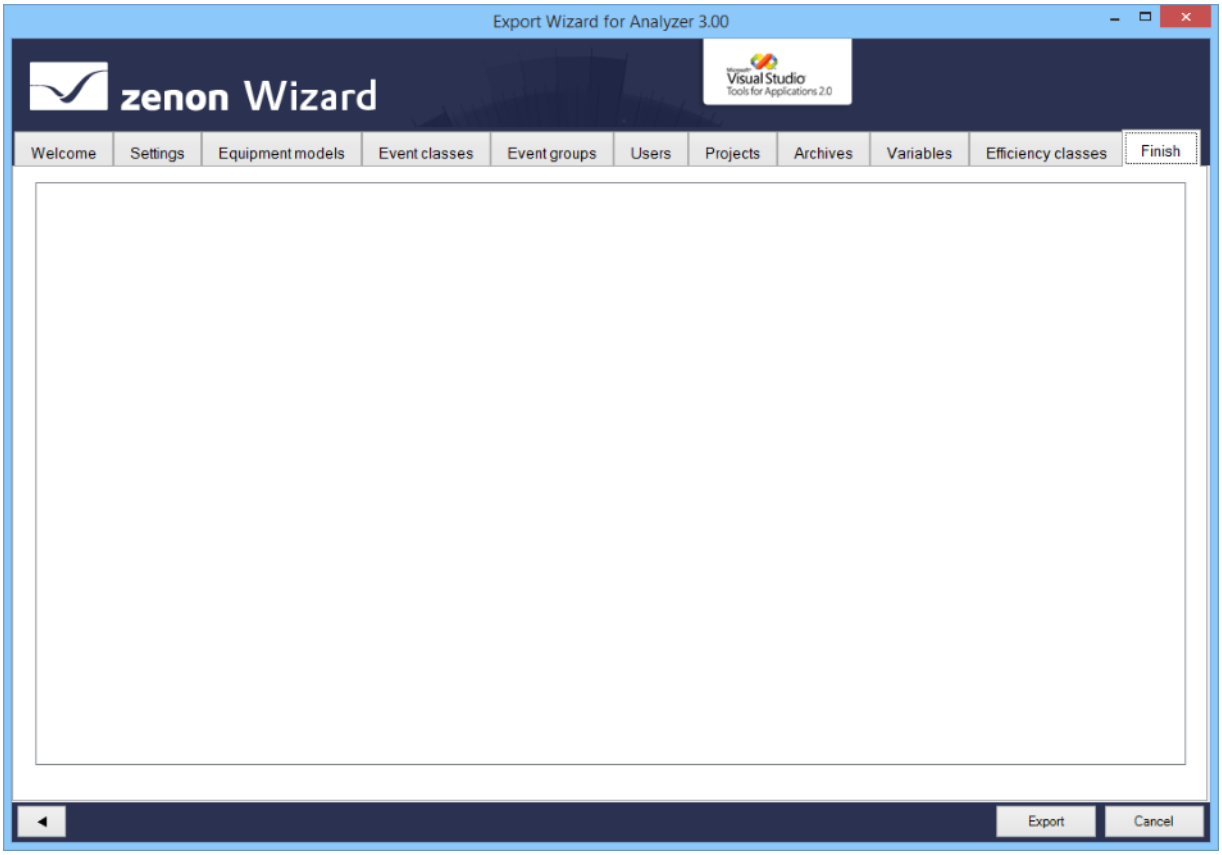
Attention

Reaction matrices are identified in zenon by means of their name. If the name of a reaction matrix is amended in zenon, the attendant efficiency class is recreated during export and the previous efficiency class is deleted.

6.5.11 Finish

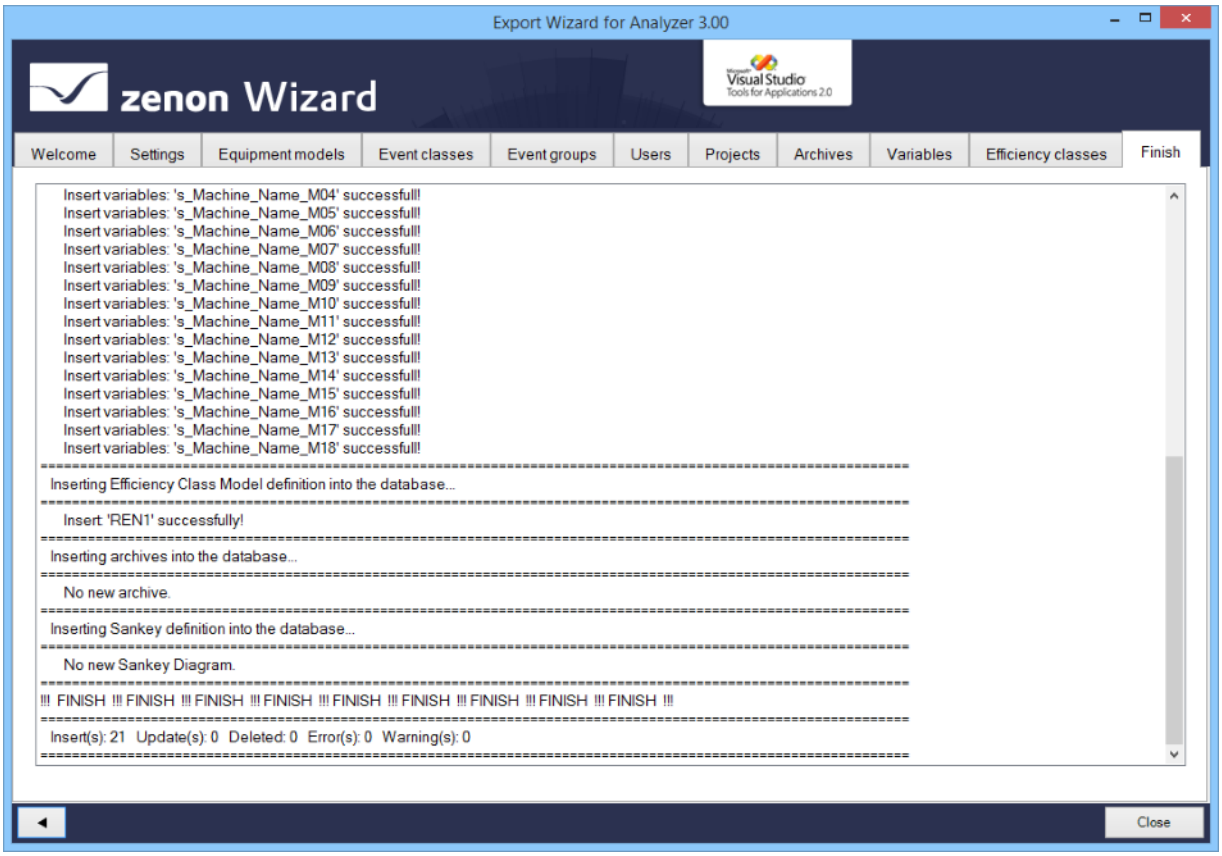
To export the configured data:

1. In the Finish tab, click on the **Export** button**.**



2. the export is started

3. The exported elements are shown in the output window with the attendant success and error messages
   In addition, the number of objects that have been added, replaced or deleted, and the number of errors that occurred are shown.



4. Click the **Close** button to close the wizard

RECONFIGURING THE WIZARD

To reconfigure the wizard:

1. Open the **Settings** (on page 73) tab.
2. Click on the **Load data** button.
3. Configure the tabs.

6.6 Close wizard

To close the wizard:

- Click on the **Cancel** button **.**

- A dialog prompts whether the configuration should be saved.
  - **Yes: W**rites the settings set in the **Settings** (on page 73) tab to the registry and closes the wizard. The wizard is opened with this configuration the next time it is started. The configuration is saved for each specific user.
  - **No:** Closes the wizard without saving the configuration

7. Export Wizard for Analyzer 3.10 and 3.20

The zenon **Export Wizard for Analyzer 3.10 and 3.20** supports the export of metadata from zenon from version 7.20 SP0 for the zenon Analyzer 3.10 and 3.20.

The following can be exported:

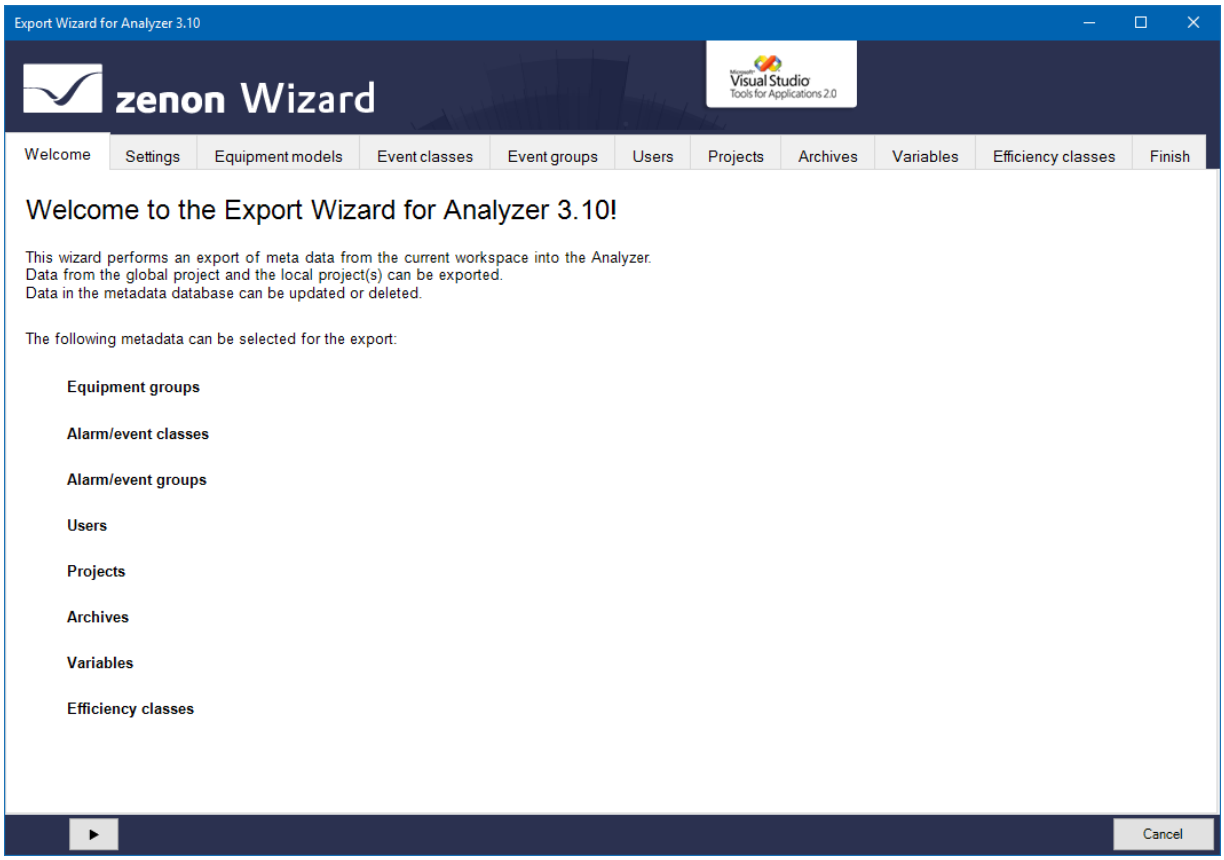
- Data from the global project
  - Equipment models
  - Alarm/event classes
  - Alarm/event groups
  - Users
- Data from selected projects:
  - Archives
  - Variables, with:

    - **Display name** (see **visual names** (on page 128) section)

    - **Meaning** (see **meaning** (on page 128) section)

    - **Parameters for waterfall diagram** (see **Waterfall chart** (on page 101) section)
- Sankeydiagrams (see Sankey **diagrams** (on page 100) section)
- Efficiency classes (on page 128)

- Shift calendar (on page 102)



Note: The wizard is only available in English.

COMPATIBILITY:

The Analyzer Export Wizard works, depending on the version, with different zenon Analyzer versions and different zenon versions. For details, read the **Analyzer wizard compatibility** (on page 8) chapter.

7.1 Sankey diagrams

The wizard automatically reads the definition for Sankey diagrams from all activated projects (on page 107) and the global project. These are in the zenon project folder `\Files\Others`.
For this, the following applies:

- Only valid XML files that were created for the zenon Analyzer are taken into account. Diagrams that have the **Analyzer** and **Valid** attributes set to `True` in the **Sankey** XML file are valid. All other Sankey diagrams are ignored and not loaded.

- All Sankey diagram definitions are written to the zenon Analyzer metadata database in the **SANKEY_DIAGRAMM**, **SANKEY_OBJECT** and **SANKEY_VARIABLE** tables.
- Diagrams deleted in zenon (XML files) are not deleted in the Analyzer. Diagrams can only be deleted in the database directly in zenon Analyzer.
- For the adding or updating of diagrams, the following must apply to all required zenon variables:
  - Be selected via the **Variables** (on page 124) tab
    or
  - already be in the database

  If variables that are required for the Sankey diagram are not selected for export, the Sankey diagram is not exported.
- If the Sankey diagram already exists, the metadata database tables are updated according to the changes.
- Clicking on the **Export** button in the **Finish** tab starts the export of the Sankey diagrams from zenon in to zenon Analyzer.
  The diagrams are only exported once all other data such as projects or variables have been exported. The success of the export is shown in the message list of the **Finish** tab.

> **Attention**
>
> *The import of Sankey diagrams is carried out automatically in the background. There are no user interface or configuration options available.*

7.2 Waterfall chart

A waterfall diagram can be used for either **line-based reports** or for **machine-based reports**. The parameters for the diagram are stored in the **Analyzer/Parameters for waterfall diagram** variable property from zenon 7.20. These can be entered manually or created with the **Meaning and Waterfall Chart Wizard** (on page 133).

EXPORT

The wizard reads the **Parameters for waterfall diagram** property when loading the zenon workspace. If there are correct entries, these these are exported in the background and written to the database of the zenon Analyzer.

STRUCTURE OF THE ENTRIES

Depending on the structure of the entries, a decision is made on whether it is entries for machine-based or line-based diagrams.

- Machine based: Structure with 4 digits, separated by a comma; ended with a semicolon.

  Syntax: **[model name],[line index],[column index],[color code code];**
  Example: **MyWaterfall,4,2,#80FF00;**

- Line-based: Structure with 7 digits, separated by a comma; ended with a semicolon.

  Syntax: **[model name],[line index],[column index],[color code],[loss of auxiliary machine],[add loss of auxiliary machine],[subtract loss of auxiliary machine];**
  Example: **MyLineAnlaysis,4,2, #80FF00,0,0,0;**

RULES FOR READING:

The following is applicable for reading:

- If there are entries for **Parameters for waterfall diagram**, corresponding entries in the **Resources label** field are ignored.
  The structure decides whether the entry can be evaluated as machine-based or line-based.
- The identification **WF**= is not necessary but can to be used. The individual elements of a model are separated by a comma. If several waterfall models are assigned to a variable, a semicolon is used as a separator.
- If there are no entries, corresponding entries from the **Resources label** are accepted. The identification **WF**= must be prefixed here.
- With versions of zenon before 7.20, the waterfall parameters are taken from the zenon **Resources label** property.

7.3 Export shift calendar

The wizard automatically searches in all activated projects (on page 73) for **SQL export shift calendar** functions and reads out information to linked equipment groups.
In doing so, the following applies:

- A search is carried out in all available zenon projects.
- Assigned equipment groups are created in the **EquipmentShift** table.
- If the function has not been assigned to an equipment group, all equipment groups are created.
- Only data from projects and equipment groups that have been selected in the wizard settings are exported.

Reading and exporting is carried out in the background.

7.4 Install and call up wizard

The wizard is automatically installed with zenon for each supported version of zenon Analyzer.

STARTING THE WIZARD

For wizards to be displayed, the settings for VBA or VSTA must be set correctly in file ***zenon6.ini****:*

[VBA]

EIN=1

[VSTA]

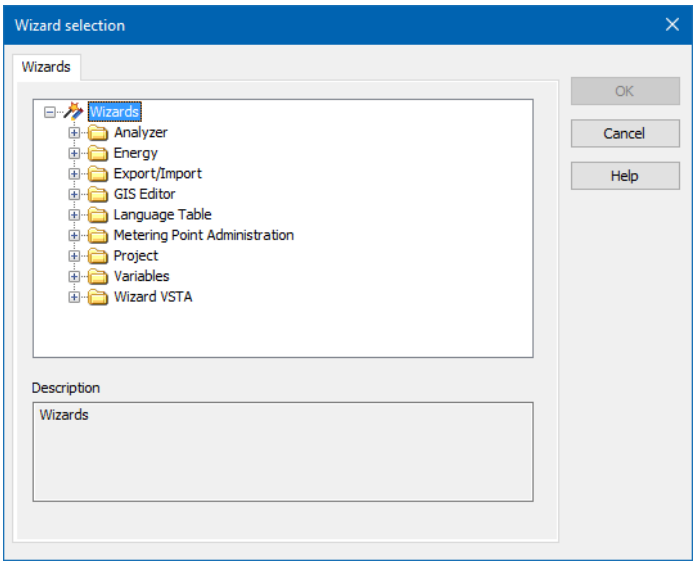
ON=1

If VSTA wizards are not displayed although the settings are correct, set entry **LOADED**= to 1 in area [VSTA].

To start the wizard:

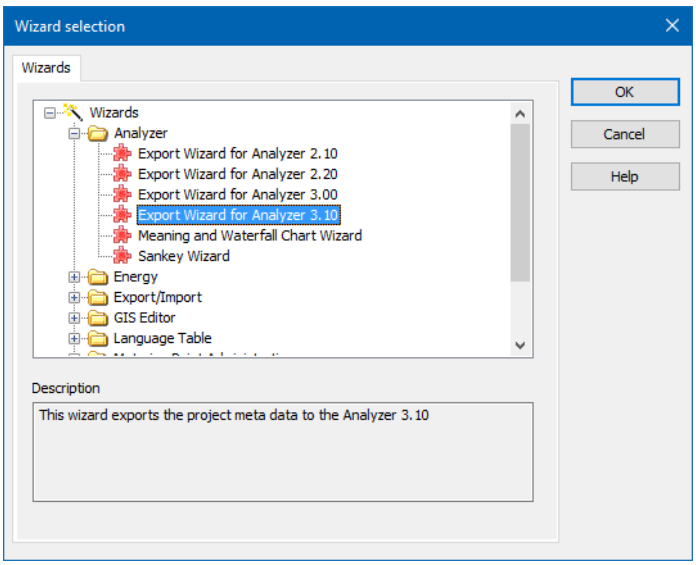
1. Click on *Tools -> Start Editor Wizards...*.
   Or: Press the short cut Alt+F12

   The selection window with the available wizards opens.



2. Navigate to the node **Analyzer**.

3. Select the **Export Wizard for Analyzer 3.10 and 3.20**.



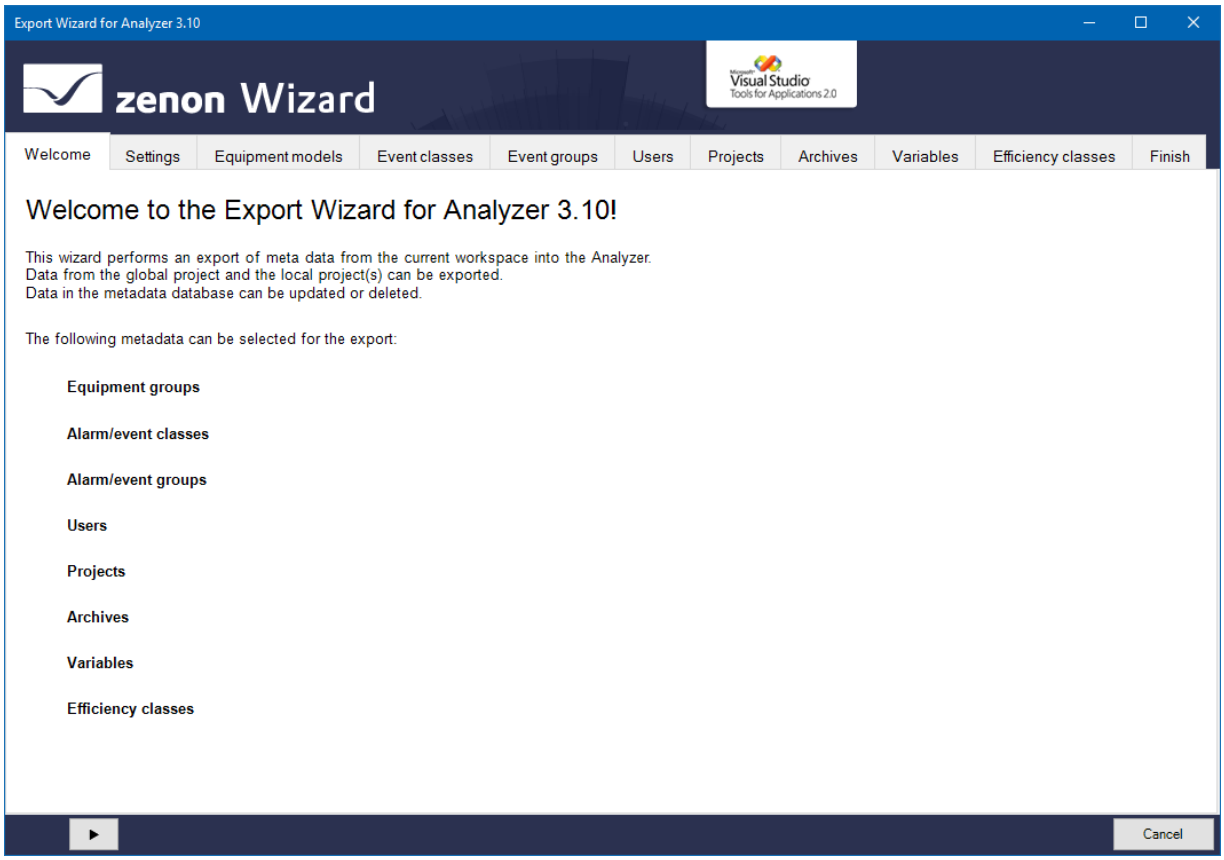
4. Click on **OK.**

   The wizard starts with the welcome page.

7.5 Start window

When the wizard is opened, you receive an overview page that lists all exportable objects.

The individual objects are configured for the export on individual tabs.



Click on the button with the **arrow** to navigate through the configuration (on page 105) of the export.

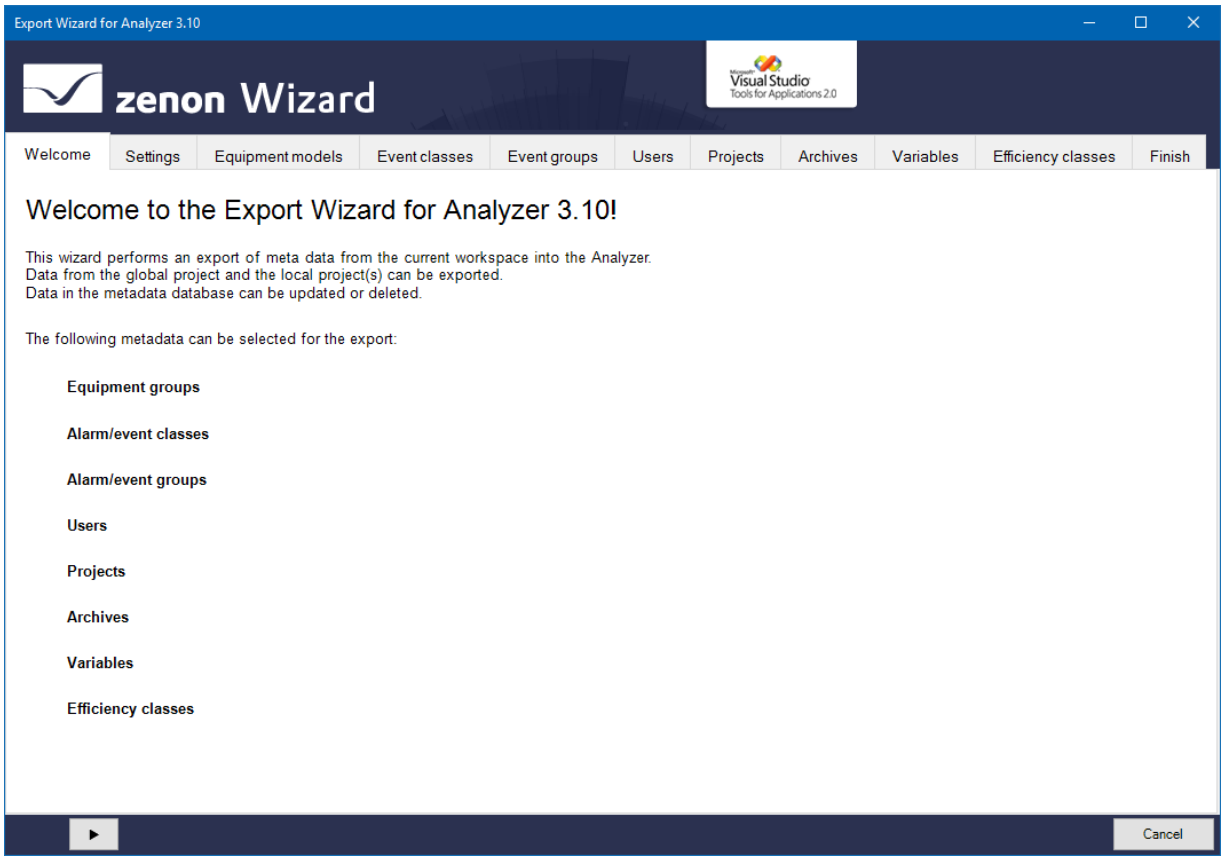
7.6 Configuration

When exporting with the Analyzer Export Wizard, all modules available for export are offered for detailed configuration. Only the selected data is exported. Sankey diagrams (on page 100) and equipment models for the shift calendar (on page 102) are exported without a configuration possibility in the background. You get to the next level by clicking on the button with the **right arrow**. You can also select individual tabs directly by clicking on the title of the tab. Entries already present in the database are preselected in the individual areas.

The following tabs are available for configuration of the export:

- **Settings** (on page 107): Options for the export of metadata
- **Equipment models** (on page **112**): (on page 46)Export of the equipment groups from the global project
- **Event classes** (on page 114): Alarm/Event classes from global project
- **Event groups** (on page 116): Alarm/event groups from global project

- **Users** (on page 118): User from global project
- **Projects** (on page 119): Projects from workspace
- **Archives** (on page 122): Archives of the selected projects
- **Variables** (on page 124): Variables of the selected projects
- **Efficiency classes** (on page 128): Display of the efficiency classes to be exported.
- **Finish** (on page 131): Start of the export and output of the result



7.6.1 Navigation

Navigation through the tabs is carried out by means of the navigation bar in the lower area of the wizard window:

Button	Description
Arrow left	Goes back one tab in the wizard process.
Arrow right	Goes forward one tab in the wizard process.
Export	Exports the data to the Analyzer database. Is only active if the **Finish** tab is opened.
Cancel	Closes the wizard without exporting. When closing, a dialog asks if the configuration is to be saved ▸ **Yes:** Writes the settings set in the **Settings** (on page 42) tab to the registry and closes the wizard. The wizard is opened with this configuration the next time it is started. ▸ **No:** Closes the wizard without saving the configuration The configuration is saved for each specific user.

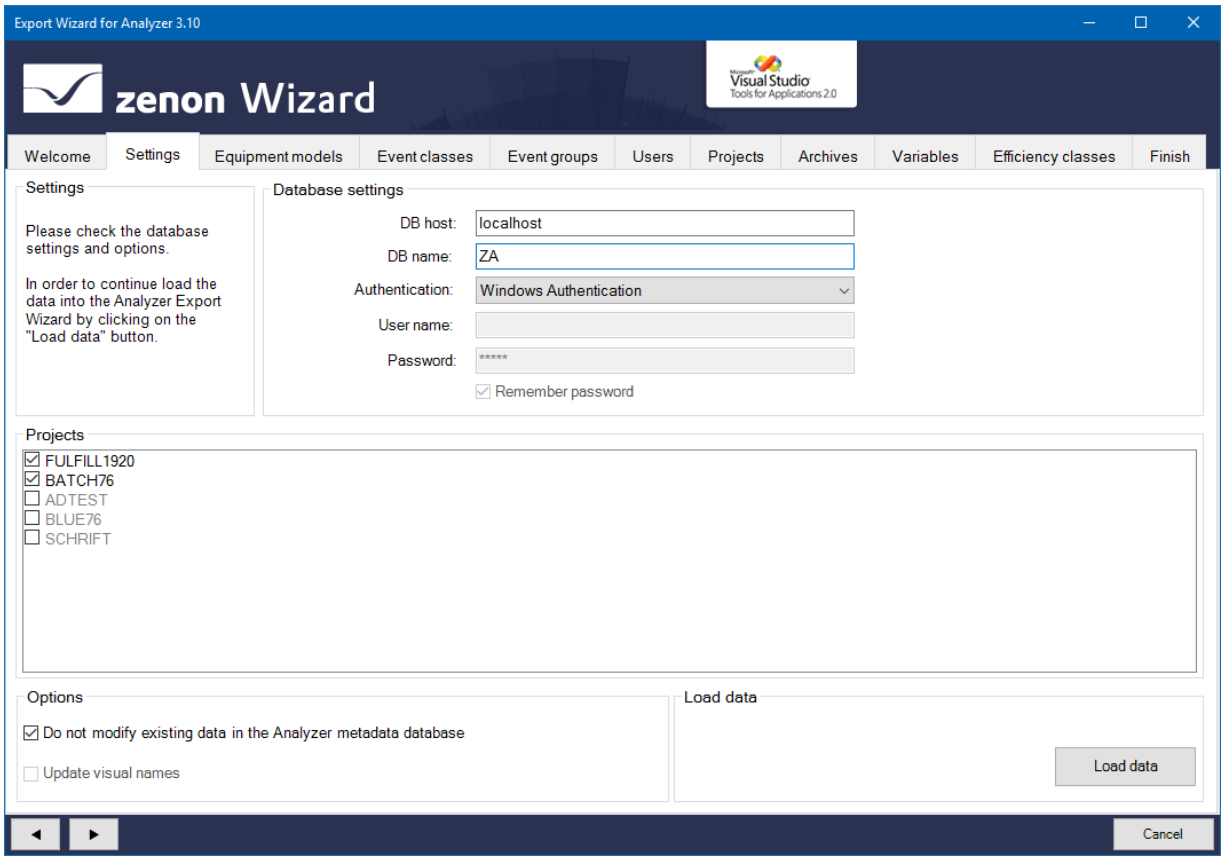
Individual tabs can also be selected by clicking directly on the title of the tab.

7.6.2 Settings

In this tab:

- You define the database to which the wizard connects
- You define general options for exporting

- You start the data readout



SETTINGS

Option	Description
Settings	Information and hints about current export processes.

DATABASE SETTINGS

Option	Description
Database settings	Connection settings to the Analyzer server.
DB host	Computer on which the database is located.
DB name	Name of the database.
Authentication	Type of authentication: ▸ `Windows Authentication`: Windows login information is used. ▸ `SQL Server Authentication`: Login with data from an SQL server user.
User name	Entry of the user name. Only for login with `SQL Server Authentication`. Display only for `Windows Authentication`.
Password	Entry of the password. Only for login with `SQL Server Authentication`. No input possible with `Windows Authentication`.
Remember password	Password is saved for next connection. Only for login with `SQL Server Authentication`. Inactive with `Windows Authentication`.

PROJECTS

Option	Description
Projects	List of the available projects in the current zenon workspace. The checkbox shows whether the data of the project is used: ▸ `Active`: Project is used.

	Projects that are active in the memory are pre-selected. Inactive projects can be added by means of selection with a checkbox.

OPTIONS

Option	Description
Options	General options for the export.
Don't modify existing data in the Analyzer metadata database	▸ `Active`: Only completely new entries from the workspace are written to the database. Note: If linkings from variables, archives etc. are changed or new ones are created, these are not transferred. If these are also transferred, the checkbox must be set to `Inactive` ▸ `Inactive`: Entries in the database are also updated or deleted. New entries are created, amended entries are updated and deleted entries are removed. Exception: Projects and Sankey diagrams are not deleted.
Update Visual names	Only available if the **Don't modify existing data in the Analyzer metadata database** option has been deactivated. ▸ `Active`: In zenon, amended display names are overwritten when exporting to the metadata database of zenon Analyzer. ▸ `Inactive`: Amended display names are not changed in zenon Analyzer. Default: `Inactive` The setting is not saved. The checkbox is set to deactivated each time the wizard is started. Behavior: If the checkbox is activated, display names amended in zenon are also amended in zenon Analyzer for: ▸ **Equipment models** ▸ **Event classes** ▸ **Event groups** ▸ **Projects** ▸ **Archives** ▸ **Variables** The visual names for **Users** cannot be changed. These are recreated in the event of changes. Changes to display names are displayed in the individual lists. Example: Initial situation:

	▸ Display name in the zenon project: **Z** ▸ Display name in the zenon Analyzer: **A** Action: ▸ **A = Z**: nothing happens. ▸ **A <> Z**: **Z** is applied if the name has not yet been issued in the metadata table. If **Z** is already present in the table, **A** remains unchanged and an error message is given.

LOAD DATA

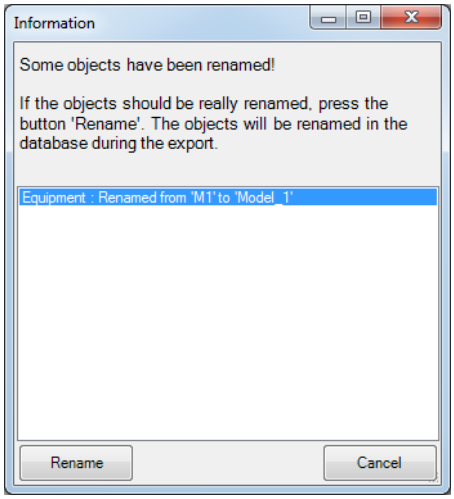
Option	Description
Load Data	Clicking on the button loads, depending on the **Load every project of this workspace into the memory** parameter - the data from the currently loaded project into the wizard. In doing so, a check is made to see if data is present in the Analyzer database. Pre-existing data is combined with the data from the workspace and loaded into the wizard. In the event of naming conflicts, a dialog to rectify the error is called up. If the loading of data has been successfully concluded, the export can be configured in the following tabs.

RENAME OBJECT

Objects must always be named the same in the Analyzer database and in zenon. If objects that are already present in the database are renamed in zenon, these changes can be accepted or rejected when the data is combined. Rejection of the changes leads to the wizard being closed, because only objects with identical names can be handled correctly.

DIALOG FOR RENAMING

In the event of conflicts in the naming of objects, a dialog for dealing with the error is opened:



Option	Description
List of amended objects	Contains all objects that were changed. Previous name and new name are displayed. Exception: Users are always recreated.
Rename	Renames all objects listed in the database, closes the dialog and stops reading in data.
Cancel	Leaves the previous name in the database, finishes reading in data and closes the wizard.

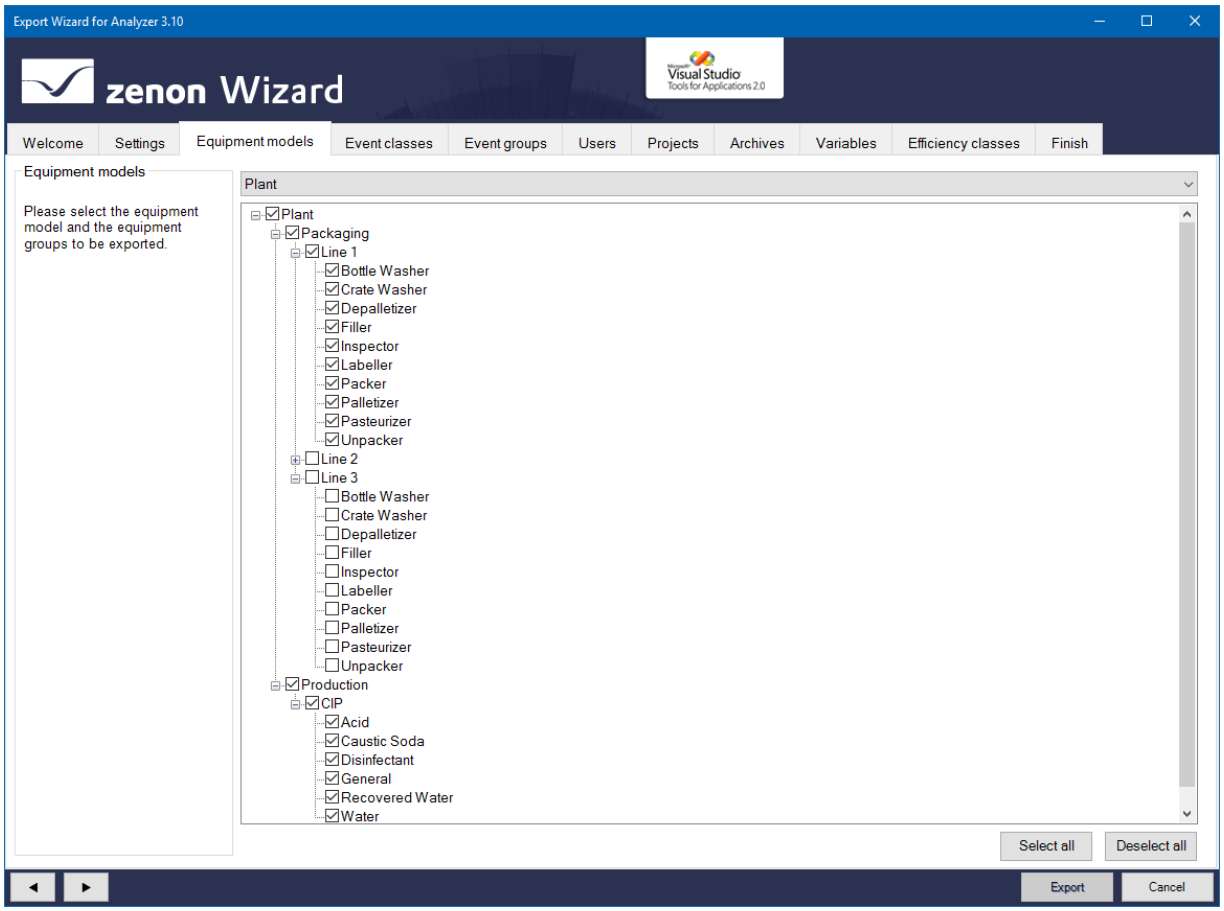
7.6.3 Equipment models

Configuration of the model group which should be exported from the global project.

Attention

Each equipment group in zenon may only be assigned to one individual time model.

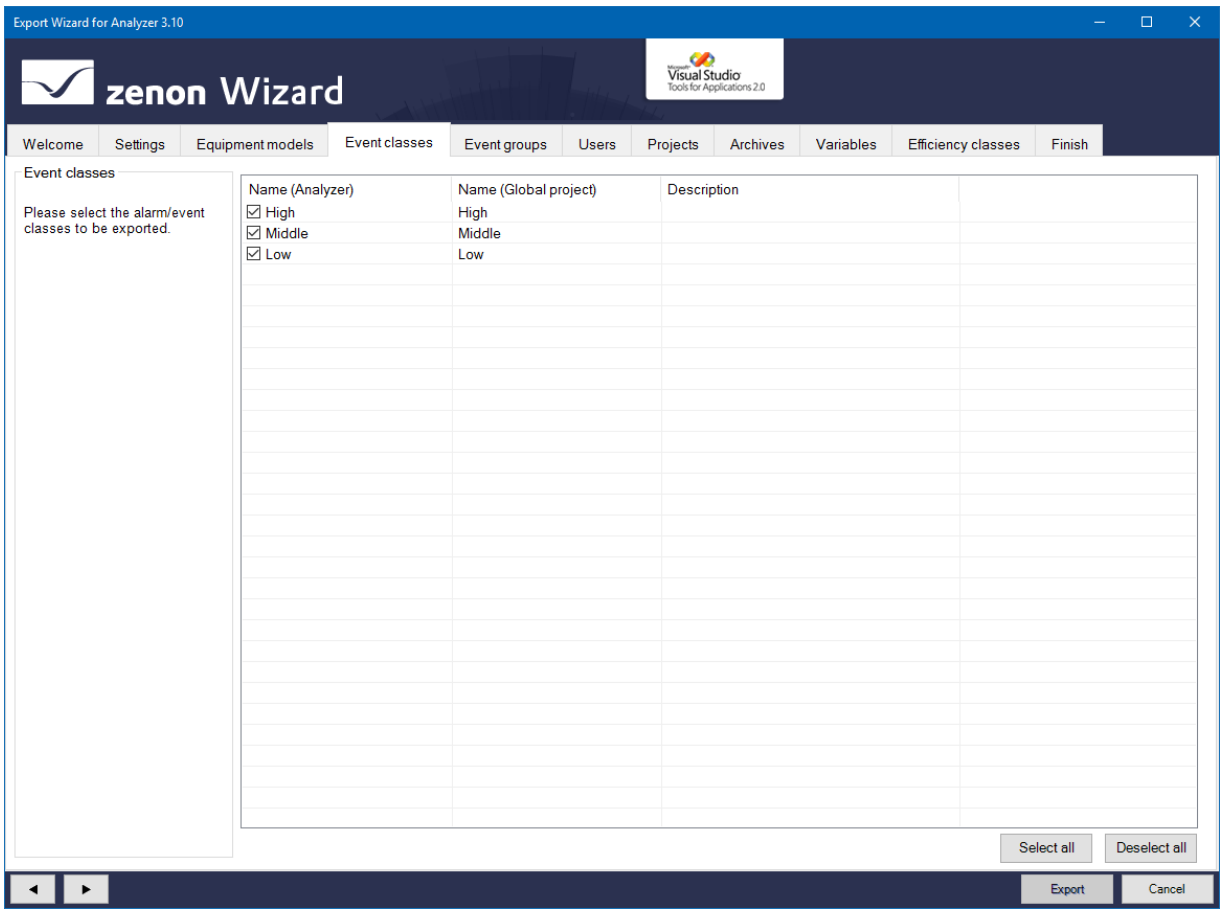
If several time model groups are assigned, the Analyzer Wizard Export uses the first that it finds and exports this to the metadata of the Analyzer. Other time model groups are ignored.



Option	Description
Equipment models	Information and notes on exporting.
Selection of equipment/medium	Drop-down list to select a model that is offered in the **Equipment models/media** list for configuration.
List of equipment models/media	List field with the possibility to select equipment models and model groups or media. To select an entry, activate the check box in front of the entry. In the list field the name, as it is stored in the database, is always displayed in the individual nodes. If the name was changed, the original name from the zenon project is displayed in brackets. Equipment groups that were deleted in the global project are no longer displayed. If, in the **Settings** tab, the **Don't modify existing data in the Analyzer metadata database** option is deselected, amended objects in the database are deleted or updated.
Select all	Clicking on the button selects all equipment groups
Deselect all	Clicking on the button deselects all equipment groups.

7.6.4 Event classes

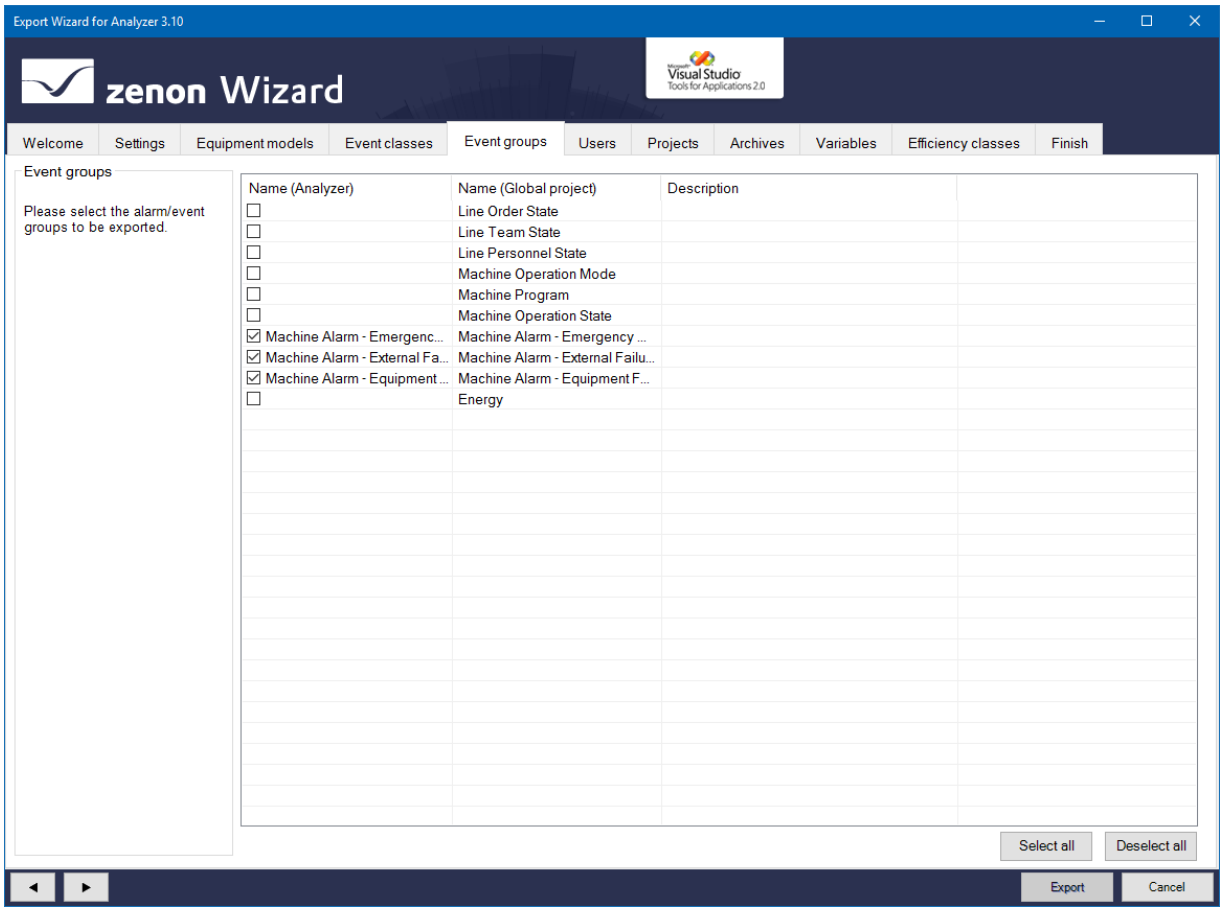
Configuration of the alarm/event classes which should be exported from the global project.



Option	Description
Event classes	Information and notes on exporting.
List of the alarm/event classes	List field with the possibility to select the alarm/event classes. To select an entry, activate the check box in front of the entry. **Sorting:** Clicking on the column identifier sorts the entries after this column upwards or downwards. **Multiple selection:** If several lines are highlighted, the selection applies for all selected lines. Alarm/event classes that were deleted in the global project are no longer displayed here. If, in the **Settings** tab, the **Don't modify existing data in the Analyzer metadata database** option is deselected, amended objects in the database are deleted or updated.
Select all	Selects all entries in the list and activates the checkboxes.
Deselect all	Selects all entries in the list and deactivates the check boxes.

7.6.5 Event groups

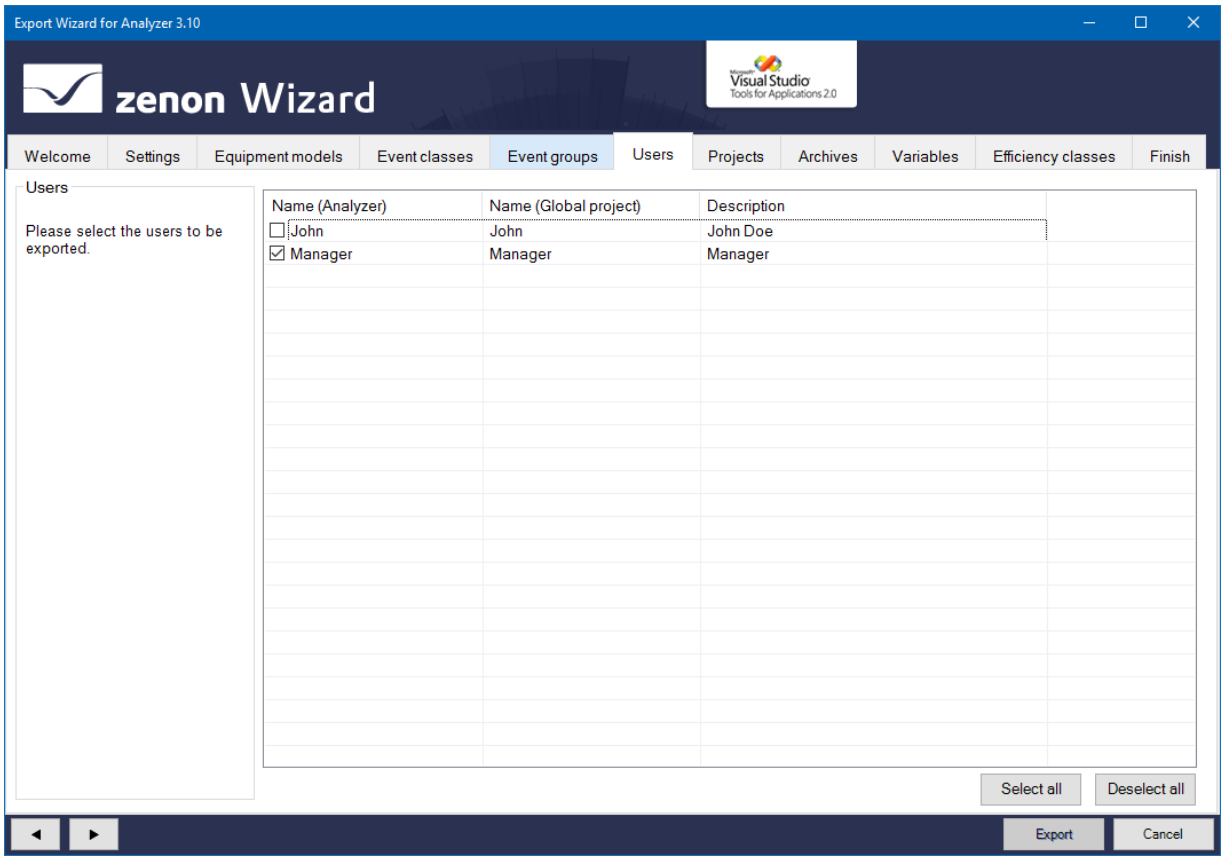
Configuration of the alarm/event groups which should be exported from the global project.



Option	Description
Event groups	Information and notes on exporting.
List of the alarm/event groups	List field in which you can select alarm/event groups. To select an entry, activate the check box in front of the entry. **Sorting:** Clicking on the column identifier sorts the entries after this column upwards or downwards. **Multiple selection:** If several lines are highlighted, the selection applies for all selected lines. Alarm/event classes that were deleted in the global project are no longer displayed here. If, in the **Settings** tab, the **Don't modify existing data in the Analyzer metadata database** option is deselected, amended objects in the database are deleted or updated.
Select all	Selects all entries in the list and activates the checkboxes.
Deselect all	Selects all entries in the list and deactivates the check boxes.

7.6.6 Users

Configuration of the user which should be exported from the global project.



Option	Description
Users	Information and notes on exporting.
User List	List field with selection possibility for users. To select an entry, activate the check box in front of the entry. **Sorting:** Clicking on the column identifier sorts the entries after this column upwards or downwards. **Multiple selection:** If several lines are highlighted, the selection applies for all selected lines. If, in the **Settings** tab, the **Don't modify existing data in the Analyzer metadata database** option is deselected, amended objects in the database are deleted or updated. If a user was renamed in zenon they are considered new and recreated in the project. The previous user is deleted.
Select all	Selects all entries in the list and activates the checkboxes.
Deselect all	Selects all entries in the list and deactivates the check boxes.

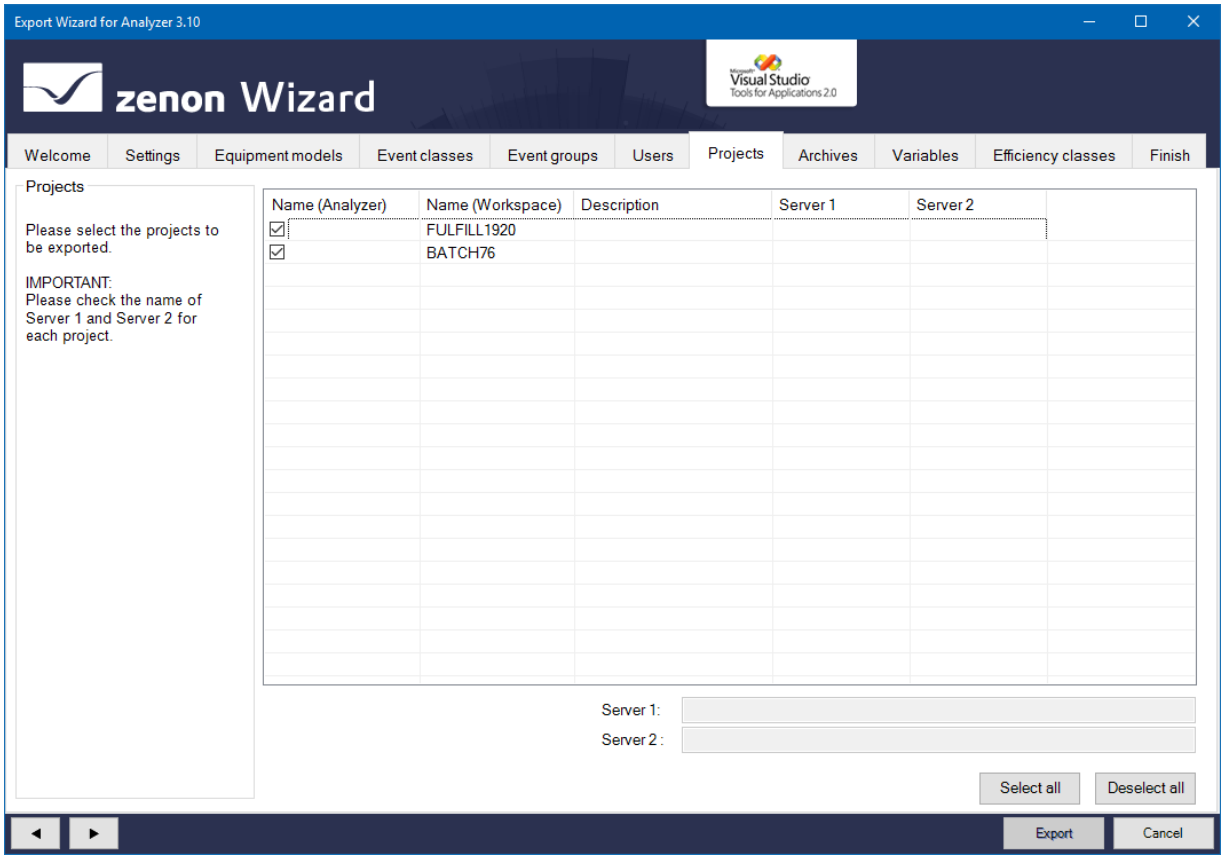
7.6.7 Projects

Configuration of the local projects which should be exported. The names for **Server 1** and **Server 2** can be changed here.

To change the name of a Server or Standby Server:

1. Highlight the project in the list of projects.
2. Enter the desired name for **Server 1** and **Server 2**.

Note: Changes here are only possible if, in the **Settings** tab, the **Don't modify existing data in the Analyzer metadata database** option has been deactivated. The information that is displayed for the server depends on the settings in the project and the database. For details, see the **Display of server settings** section.



Option	Description
Projects	Information and notes on exporting.
Project list	List field with selection possibility for projects. To select an entry, activate the check box in front of the entry. **Sorting:** Clicking on the column identifier sorts the entries after this column upwards or downwards. **Multiple selection:** If several lines are highlighted, the selection applies for all selected lines. If, in the **Settings** tab, the **Don't modify existing data in the Analyzer metadata database** option is deselected, amended objects in the database are deleted or updated.
Server 1	Address of the **Server 1** for the project selected in the list window. Source (project or database) depending on configuration.
Server 2	Adress of the **Server 2** for the project selected in the list window. Source (project or database) depending on configuration.
Select all	Selects all entries in the list and activates the checkboxes.
Deselect all	Selects all entries in the list and deactivates the check boxes.

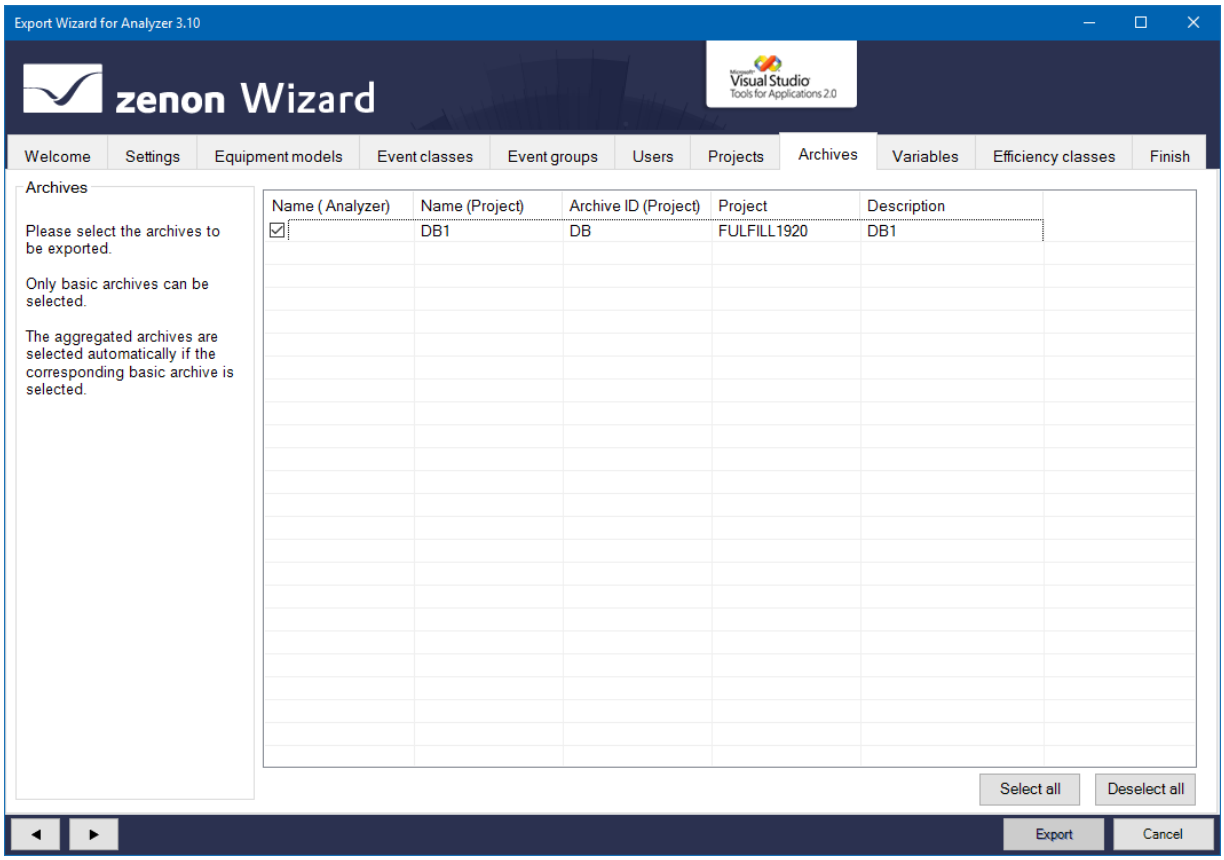
DISPLAY OF SERVER SETTINGS

The following is applicable for the display and configuration of the server in this tab:

- In the zenon project, the **Network active** property is activated:
  Server 1 and **Server 2** from the project are displayed.
- In the zenon project, the **Network active** property is deactivated:
  Server 1 and **Server 2** from the database are displayed.
- In the zenon project, the **Network active** property is deactivated and there are no entries present for the server in the database:
  Empty entries are displayed for **Server 1** and **Server 2**.

7.6.8 Archives

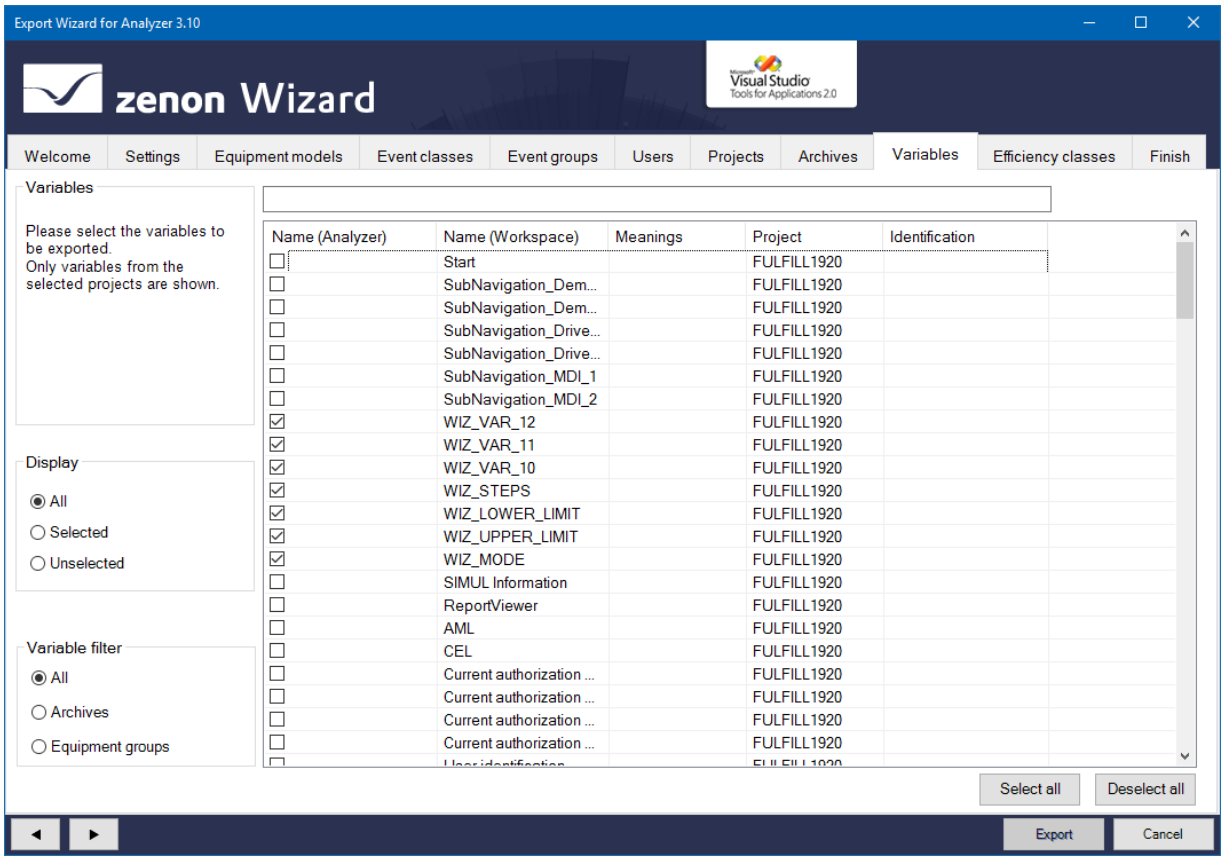
Selection of the archive from the selected projects (on page 119). Only base archives are displayed. Aggregated archives are not displayed in the list, but are also selected with the base archives and written to the database.



Option	Description
Archives	Information and notes on exporting.
Archive list	List field with possibility to select for archives. To select an entry, activate the check box in front of the entry. ▸ **Name (Analyzer)**: Name of the archive in zenon Analyzer. ▸ **Name (Project)**: Name of the archive in the project. ▸ **Archive ID (Project)**: ID of the archive in the project. ▸ **Project**: Project from which the archive comes. ▸ **Description**: Individual description of the project. **Sorting:** Clicking on the column identifier sorts the entries after this column upwards or downwards. **Multiple selection:** If several lines are highlighted, the selection applies for all selected lines. If, in the **Settings** tab, the **Don't modify existing data in the Analyzer metadata database** option is deselected, amended objects in the database are deleted or updated.
Select all	Selects all entries in the list and activates the checkboxes.
Deselect all	Selects all entries in the list and deactivates the check boxes.

7.6.9 Variables

Configuration of the variables to be exported from the selected local projects (on page 119). When selecting variables, the entries offered can be prefiltered.



Option	Description
Variables	Information and notes on exporting.
Display	Selection of which variables are displayed, via the following option fields: ▸ **All**: All variables are displayed. ▸ **Selected**: Only variables that have already been selected are displayed. ▸ **Unselected**: Only variables that have not yet been selected are displayed.
Variable filter	Selection of the variable filter using the following option fields: ▸ **All**: All variables are displayed. ▸ **Archives**: Only archive variables are displayed. ▸ **Equipment groups**: Only variables are displayed which are part of the selected Equipment model (on page 112).
Filter row	Input of alphanumerical characters according to which the **List of variables** is to be filtered. Attention: The filter makes a distinction between upper-case and lower-case letters (it is case sensitive).
List of variables	List field with possibility to select variables. To select an entry, activate the check box in front of the entry. The following are displayed: ▸ **Name (Analyzer)**: Name in zenon Analyzer. ▸ **Name (Workspace)**: Can be issued from zenon 7.20 in the Editor by means of the **Display name** property. Must be unique in the project. See also chapter **Visual name** (on page 128) ▸ **Meanings**: Can be issued from zenon 7.20 in the Editor by means of the **Meaning** property. See also chapter **Meaning** (on page 128) ▸ **Project**: Project from which the variable comes. ▸ **Identification**: It corresponds to the **Identification** property in zenon. **Sorting:** Clicking on the column identifier sorts the entries after this column upwards or downwards. **Multiple selection:** If several lines are highlighted, the selection applies for all selected lines. If, in the **Settings** tab, the **Don't modify existing data in the Analyzer metadata database** option is deselected, amended

	objects in the database are deleted or updated.
Select all	Selects all entries in the list and activates the checkboxes.
Deselect all	Selects all entries in the list and deactivates the check boxes.

RULES FOR THE EXPORT OF VARIABLES WITH REACTION MATRICES

If linked variables are exported with reaction matrices, the limit value text, the limit value color and the status value of the reaction matrix statuses are also exported to the **STATUSNAME** table in the metadata database of the Analyzer. Because only certain states can be evaluated in the reports, they must be pre-sorted using the wizard.

The following statuses of the reaction matrices can be exported or excluded:

Rema	Rules
Numeric	▸ The default status is ignored. ▸ If several statuses with the same status and limit value condition are set, then only the first status and its status text are exported. ▸ Only statuses with a value that is equal to a limit value are exported (limit value condition). ▸ The limit value conditions `greater than`, `less than`, `as desired` and `range` are ignored.
Multi numeric	▸ Correspond to the rules for **numeric**. ▸ Substatuses are also ignored.

Binary	▸ Only statuses that have value bits set consistently from right to left in the bit mask (`0` or `1`) are set.
	For example:
	`........ ....10.. 1`
	`........ .....100 .`
	`........ .....100 1`
	The following are ignored, for example
	`........ ........ 1`
	`........ ......00 1`
	`........ .10..100 1`

Multi binary	▸ Correspond to the rules for **Binary**. ▸ In addition, substatuses and statuses are also ignored with edge definitions in the bit mask.
String	▸ Are completely ignored and not exported.

IMPORT OF VARIABLE INFORMATION FROM ZENON

The following properties in the zenon **Analyzer** variable properties group provide information for reports in the zenon Analyzer:

- **Display name**: Entry of a display name of the variable in zenon Analyzer. This must be unique in the project. The check is not carried out when issued in zenon, but when imported into zenon Analyzer. If this property is changed after the first export to a zenon Analyzer, these changes are not applied in the zenon Analyzer.
- **Meaning**: Entry of the (Meaning) of a variable in the zenon Analyzer. Entry is manual or by means of the **Meaning and Waterfall Chart Wizard**. Several meanings are separated by a comma.
  Syntax: `[Meaning1],[Meaning2],…,[MeaningN]`
- **Parameters for waterfall diagram**: Parameters of a variable for a waterfall diagram in zenon Analyzer. Entry is manual or by means of the **Meaning and Waterfall Chart Wizard**. The individual parameters are separated by a comma. Several waterfalls are divided by a semicolon.
  Syntax: `[model name],[row index],[index in row],[color code];`

Visual name

The wizard reads the **Analyzer/Display name** property when loading the zenon workspace from zenon 7.20 and displays this for each variable in the **Variables** (on page 124) tab. The following applies for visual names:

- The name must be unique for each project.
- Names in a project that appear several tines are highlighted in red.
- The **Display name** are entered when writing the data to the metadata database.
- In the event of duplicated name within a project, the **Display name** is only entered for the first variable found. For the second variable, the **Name** of the variables is entered in zenon.
- The **Display name** is only set when the variable is exported for the first time. If this is subsequently changed in the Editor, this change is no longer applied in the metadata database. Changes are of course applied to a new metadata database when exporting to a new database.
- With a version of zenon before 7.20, the visual name is always taken from the zenon **Identification** property.

Meaning

From zenon 7.20, the wizard reads the **Analyzer/Meaning** property and displays this for each variable in the **Variables** (on page 124) tab.
The following applies for meanings:

- If there are entries for **Meaning**, the corresponding entries in the **Resources label** are ignored.
- If there are no entries, corresponding entries from the **Resources label** are accepted.
- The identification **ME=** is no longer necessary but can continue to be used. If a variable is assigned several meanings, a comma is used as a separator.
- With a version of zenon before 7.20, the meaning is always taken from the zenon **Resources label** property.

7.6.10 Efficiency classes

Selection and configuration of the efficiency classes to be exported. In doing so, zenon reaction matrices (REMAs) are displayed, the status of which correspond to the rules of the efficiency class structure. Only reaction matrices that meet certain conditions are read.

ZENON REACTION MATRIX REQUIREMENTS

In order for a reaction matrix to be read as an efficiency class, it must meet the following conditions:

- `Numeric` or `multi-numeric` type
- Status configured correctly
- Limit value text present

STATUS CONFIGURATION

The statuses to be configured must meet the following conditions:

- The first status is less than a defined value. The area is open downwards.

  Status n1: `<x`
- The last status is greater than the last value defined beforehand. This area is open upwards.

  Status n4: `>z`
- Fixed ranges are defined between the first and last value. These areas must follow one another exactly.

  Status n2: `x-y`

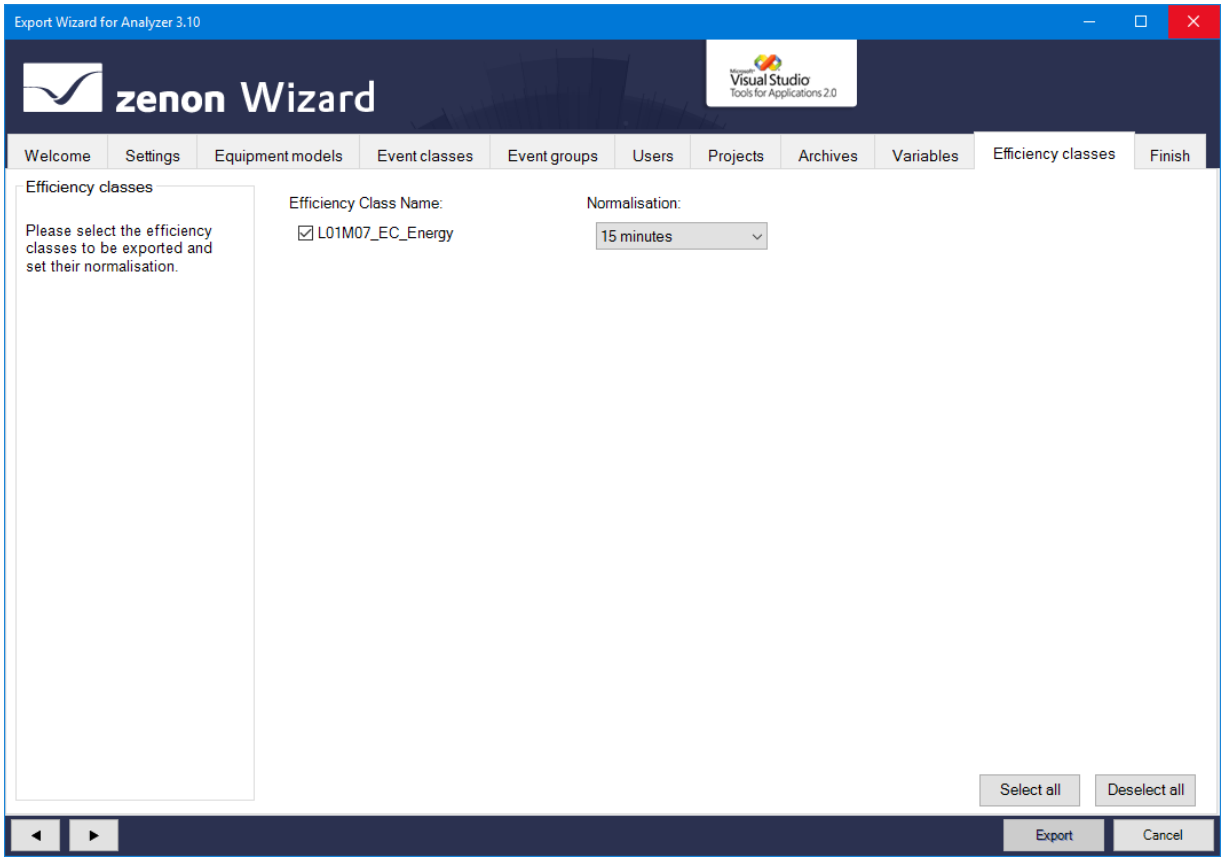
  Status n3: `y-z`

CONFIGURATION IN THE WIZARD

To select efficiency classes for export:

1. Select the desired efficiency classes.
2. Configure the normalization.
   Attention: The `None` value is reserved for a subsequent expansion stage and must not be selected.

All pre-existing efficiency classes in the metadata database are deleted during export if they have been created by the wizard. However, efficiency classes that come from the **Metadata Editor** are retained. All selected efficiency classes are then written to the metadata database.



Option	Description
Efficiency Class Name	Selection of the efficiency class to be exported by means of Activation of checkbox in front of the name.
Normalisation	Selection of the normalization from a drop-down list. ▸ Minimum: `1 minute` ▸ Maximum: `1 year` Default: `15 minutes` **Attention:** `None` must not be selected. This value is reserved for a subsequent expansion level and leads to invalid configurations.

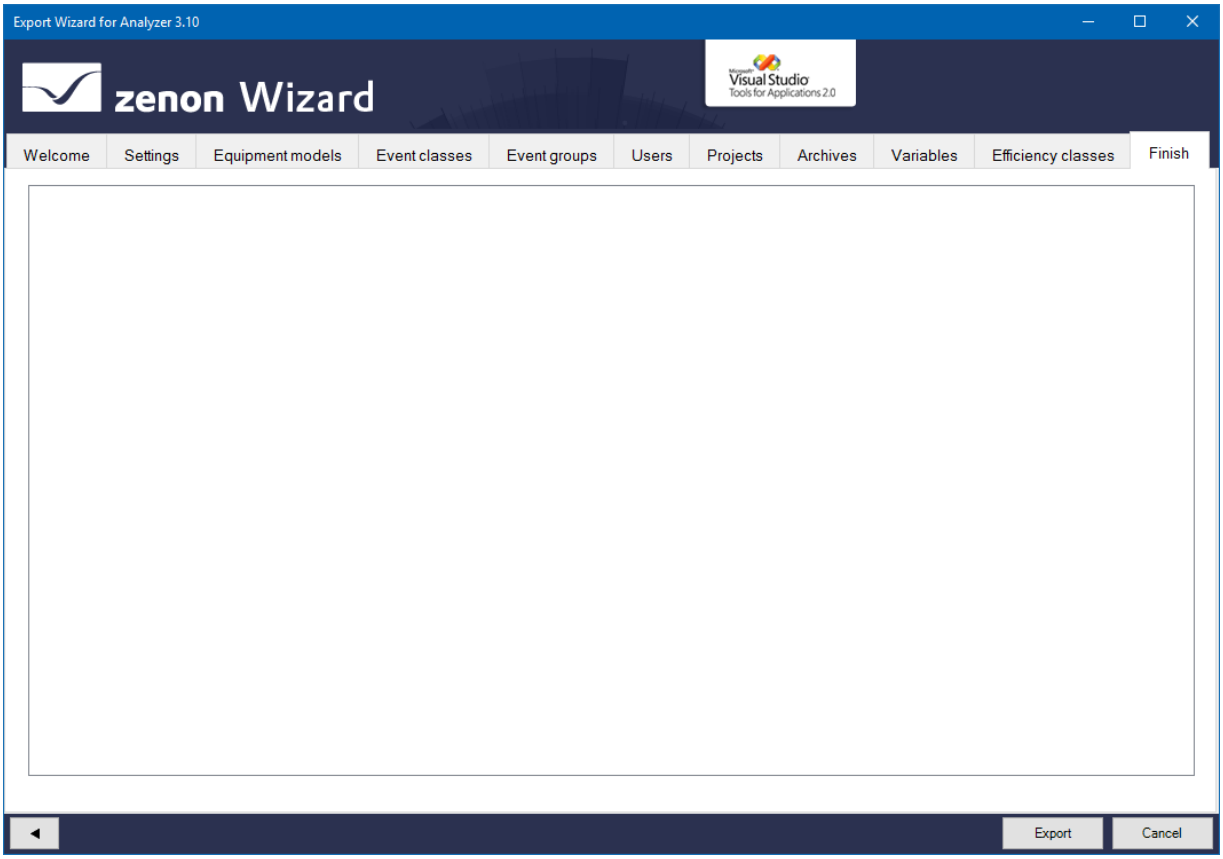
Attention

Reaction matrices are identified in zenon by means of their name. If the name of a reaction matrix is amended in zenon, the attendant efficiency class is recreated during export and the previous efficiency class is deleted.

7.6.11 Finish

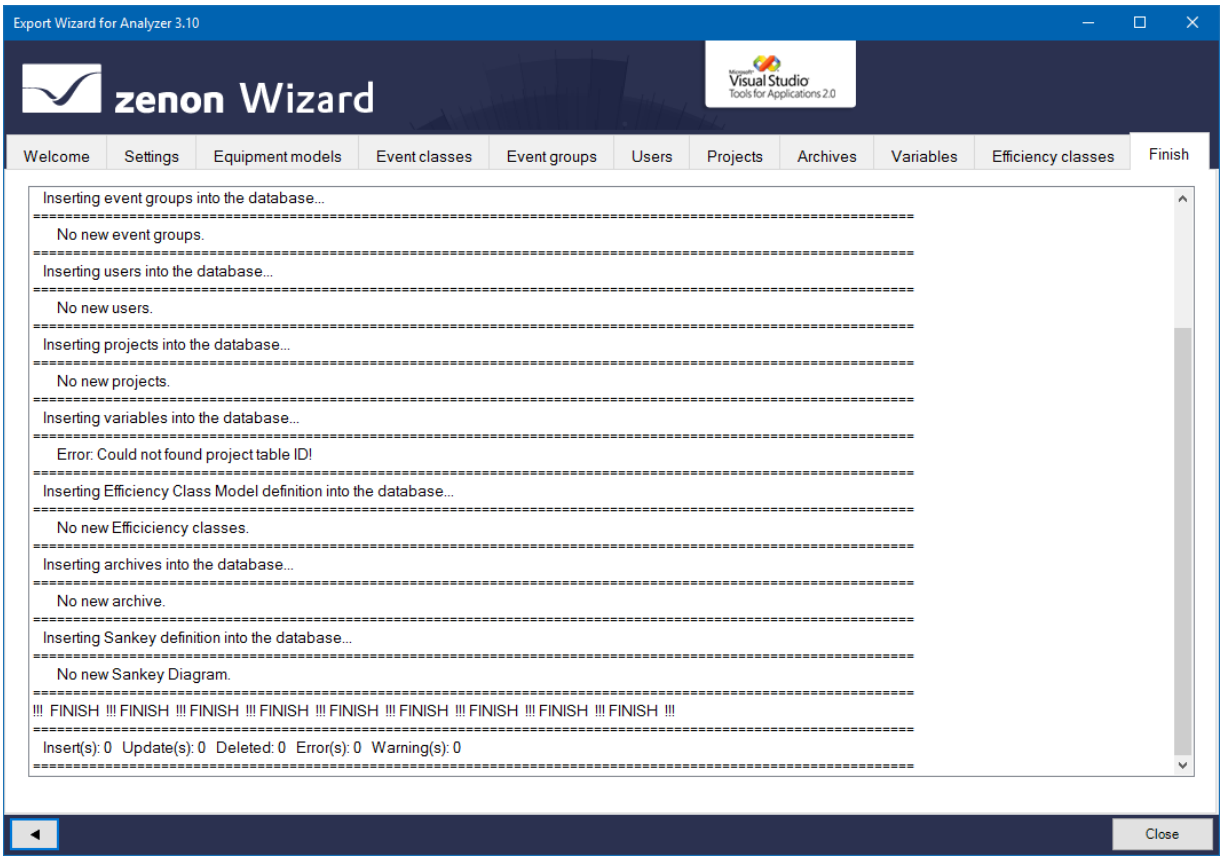
To export the configured data:

1. In the Finish tab, click on the **Export** button**.**



2. the export is started

3. The exported elements are shown in the output window with the attendant success and error messages
   In addition, the number of objects that have been added, replaced or deleted, and the number of errors that occurred are shown.



4. Click the **Close** button to close the wizard

RECONFIGURING THE WIZARD

To reconfigure the wizard:

1. Open the **Settings** (on page 107) tab.
2. Click on the **Load data** button.
3. Configure the tabs.

7.7 Close wizard

To close the wizard:

- Click on the **Cancel** button **.**

- A dialog prompts whether the configuration should be saved.
  - **Yes: W**rites the settings set in the **Settings** (on page 107) tab to the registry and closes the wizard. The wizard is opened with this configuration the next time it is started. The configuration is saved for each specific user.
  - **No:** Closes the wizard without saving the configuration

8. Meaning and Waterfall Chart Wizard

The **Meaning and Waterfall Chart Wizard** helps you prepare a zenon project for the processing of variable information in the zenon Analyzer.

Note: The wizard is only available in English.

> **Attention**
>
> If the **Meaning and Waterfall Chart Wizard** is used with a project with distributed engineering (Multi-User), then **Enable changes** must be activated in the zenon Editor for:
>
> - The project (context menu of the project)
> - The variables (context menu of the variables or the **Variables** module)
>
> Otherwise the changes made by the **Meaning and Waterfall Chart Wizard** cannot be applied. These are then discarded.

The Meaning and Waterfall Chart Wizard helps you, when engineering projects in zenon, to configure:

- Meanings (Meaning)
- Waterfall Charts charts for **machine-based reports** and **line-based reports**.

The wizard writes the configuration in the corresponding properties of the variables selected in the wizard. The target properties depend on the version of zenon that is used.

> **Attention**
>
> *Only equipment models from the global project are available.*

FROM ZENON 7.20

- Meanings:

  The Meanings are written in the **Analyzer/Meaning** property. Several entries are separated by a comma (**,**).

- Waterfall:

  The parameters for waterfall diagrams are written in the **Analyzer/Parameters for waterfall diagram** property. The parameters for a diagram are separated by a comma (**,**). Several diagrams are separated by a semi colon (**;**)

  - Syntax machine-based: **[model name],[line index],[column index],[color code code];**
  - Syntax line-based: **[model name],[line index],[column index],[color code],[loss of auxiliary machine],[add loss of auxiliary machine],[subtract loss of auxiliary machine];**

The following applies for both properties: If there are still entries in the **General/Resources label** property from previous versions of zenon, these are deleted and entered in the corresponding properties for zenon 7.20.

UP TO ZENON 7.11:

Meanings and parameters for waterfall diagrams are written to the **Resources label** variable property. In doing so, the prefix WF= is added for meanings and the prefix `WF=` is added for waterfall parameters.

For further information, see the **Analyzer Wizards** (on page 6) chapter.

8.1 Install and call up wizard

The wizard is automatically installed together with zenon.

STARTING THE WIZARD

For wizards to be displayed, the settings for VBA or VSTA must be set correctly in file ***zenon6.ini****:*

[VBA]

EIN=`1`

[VSTA]

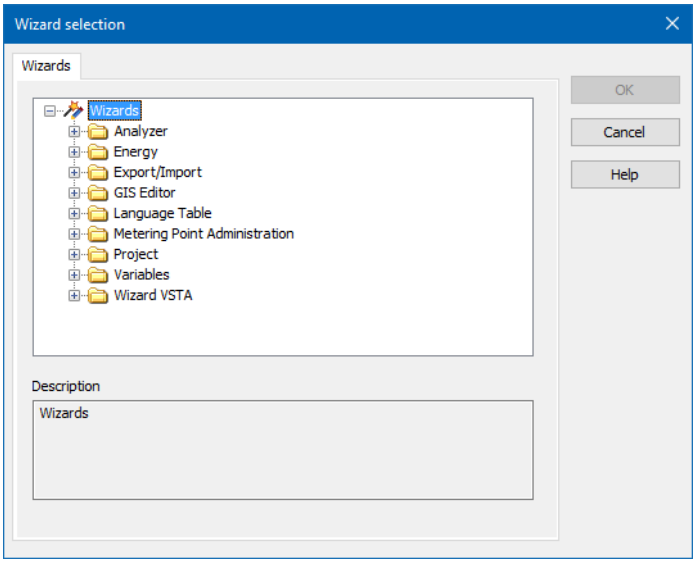
ON=`1`

If VSTA wizards are not displayed although the settings are correct, set entry **LOADED**= to `1` in area `[VSTA]`.

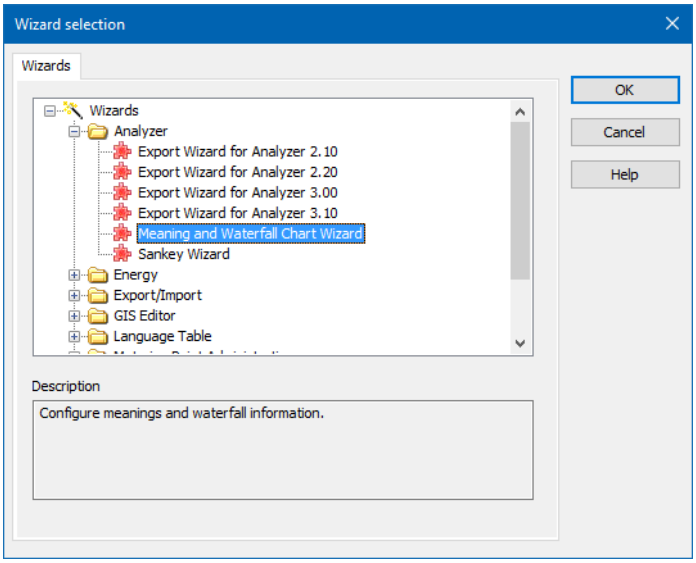
To start the wizard:

1. Click on *Tools -> Start Editor Wizards...*.
   Or: Press the short cut `Alt+F12`

The selection window with the available wizards opens.



2. Navigate to the node **Analyzer**.
3. Select the **Meaning and Waterfall Chart Wizard**.

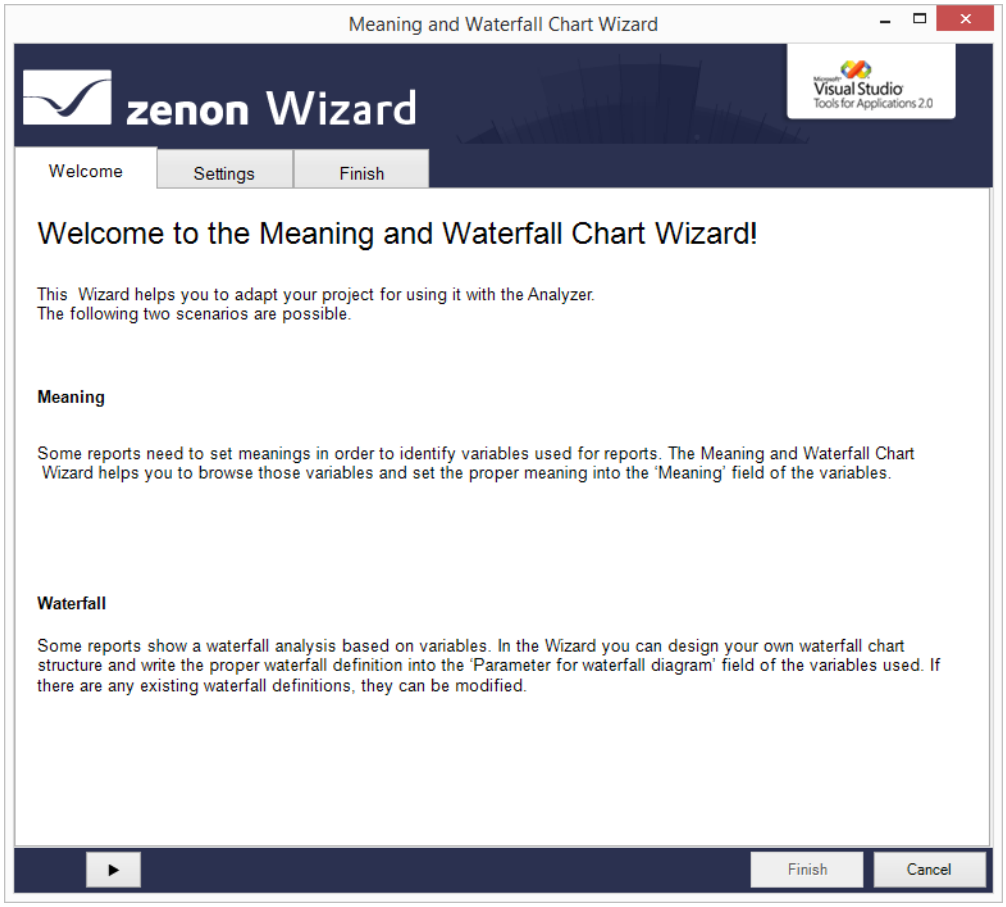


4. Click on **OK.**

The wizard starts with the welcome page.

8.2 Start window

When opening the wizard, you receive an overview that lists and explains all objects that can be configured. Configuration starts with the **Settings** (on page 139) tab.



MEANING

zenon variables often receive technically-orientated names in the project. This naming is often not meaningful enough for display in a zenon Analyzer report. The variables can be given an unique name for display in the zenon Analyzer report. This name is saved to the corresponding variable property depending on the zenon version. Target property and entry are automatically selected by the wizard.

After import into zenon Analyzer, this name is used for reports without the existing variable name needing to be changed. For details, see the Analyzer Wizards (on page 6) chapter in the online help.

WATERFALL CHART

Some zenon Analyzer reports can display a waterfall diagram using zenon variables. To do this, information on the appearance of the diagram must already be present in the resource label of the

selected variable. The structure and appearance of a waterfall diagram for machine-based reports or line-based reports can be defined with a wizard. The waterfall information is saved to the corresponding variable property depending on the zenon version. Target property and entry are automatically selected by the wizard. For details, see the Analyzer Wizards (on page 6) chapter in the online help.

NAVIGATION

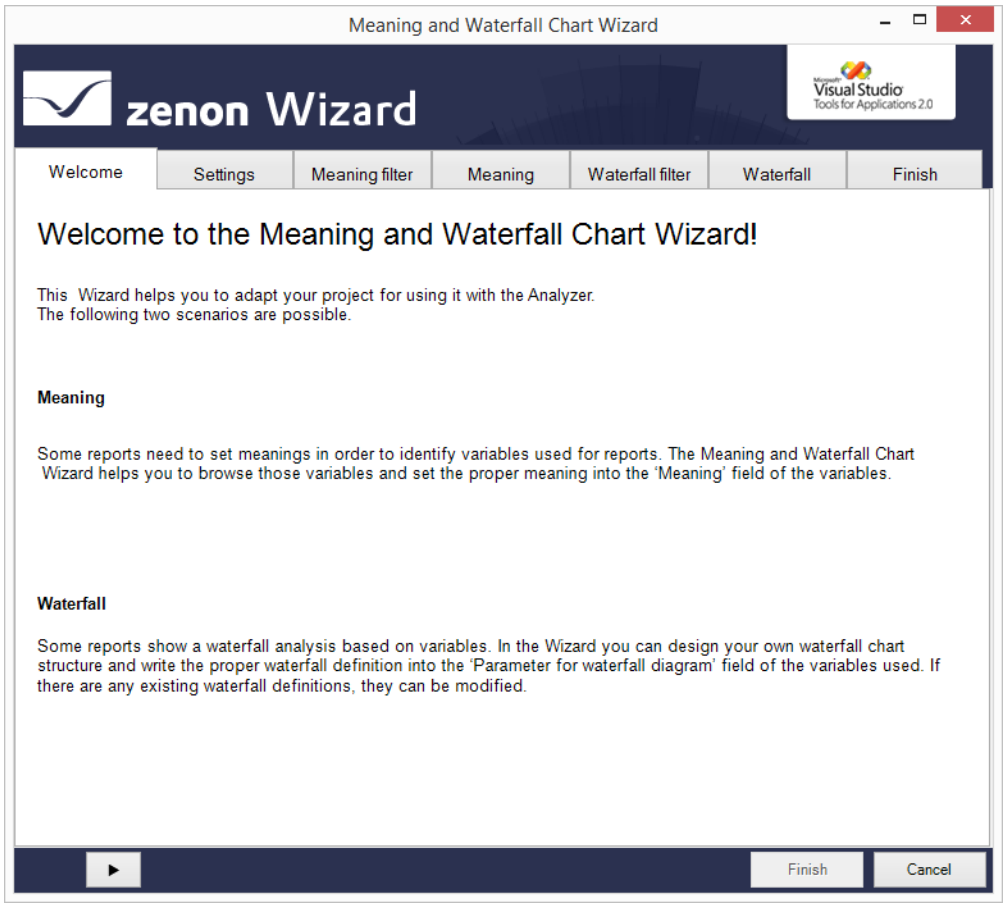
Click on the button with the **arrow** to navigate (on page 138) through the configuration (on page 137) of the export.

8.3 Configuration

The **Meaning and Waterfall Chart Wizard** is configured with the following tabs:

- **Settings** (on page 139): Loading the data from the projects.
  Only once the data to be loaded is selected are other tabs available for meanings or waterfall diagrams.
- **Meaning filter** (on page 141): Filter settings for meanings.
- **Meaning** (on page 143): Selection and assignment of the meanings.
- **Waterfall filter**: Filter settings for machine-based waterfall diagram (on page 147) or line-based waterfall diagram (on page 151).
- **Waterfall charts**: Selection of variables and configuration of machine-based waterfall diagram (on page 149) or line-based waterfall diagram (on page 153).
- **Finish** (on page 158): Acceptance of configuration and configuration by the wizard.

The tabs that can be shown depend on the configuration of the **Settings** (on page 139) tab.



8.3.1 Navigation

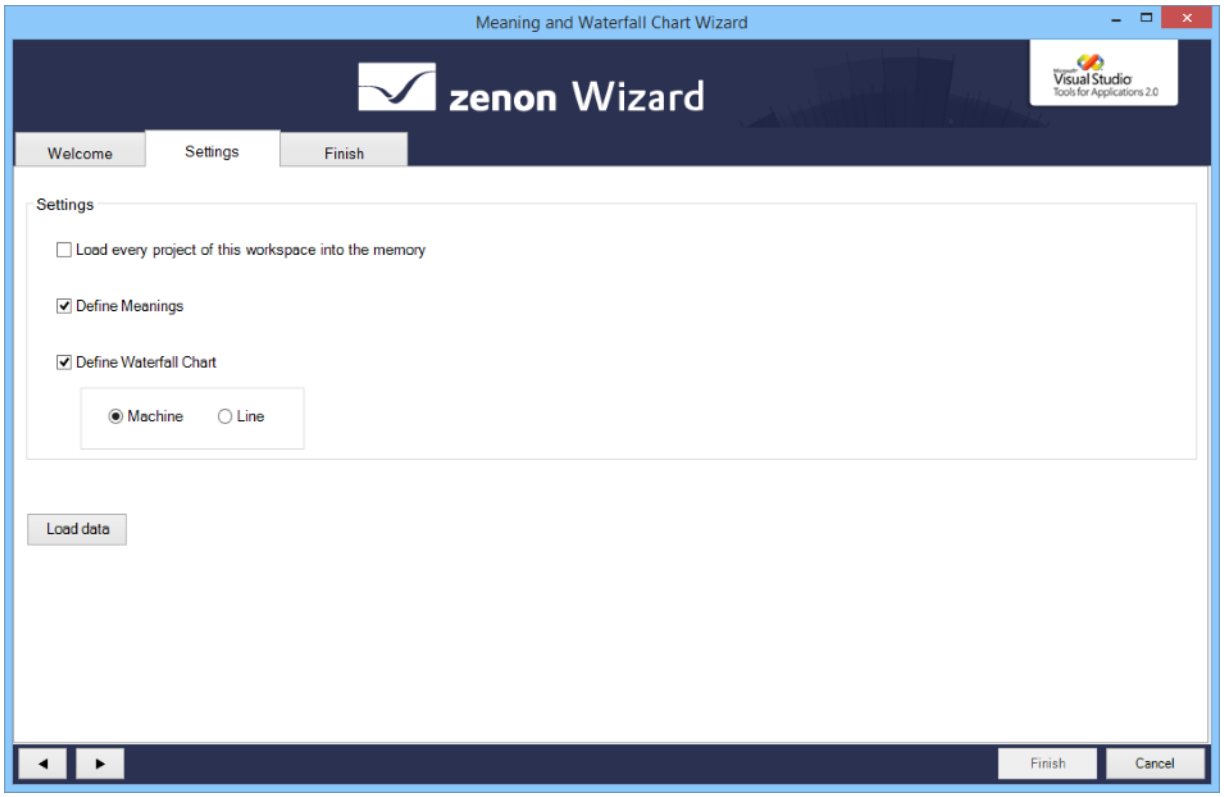
Navigation through the tabs is carried out by means of the navigation bar in the lower area of the wizard window:

Button	Description
Arrow left	Goes back one tab in the wizard process.
Arrow right	Goes forward one tab in the wizard process.
Finish	Writes all changes to the zenon variable in the Editor and closes the wizard.
Cancel	Ends the wizard without making changes.

Individual tabs can also be selected by clicking directly on the title of the tab.

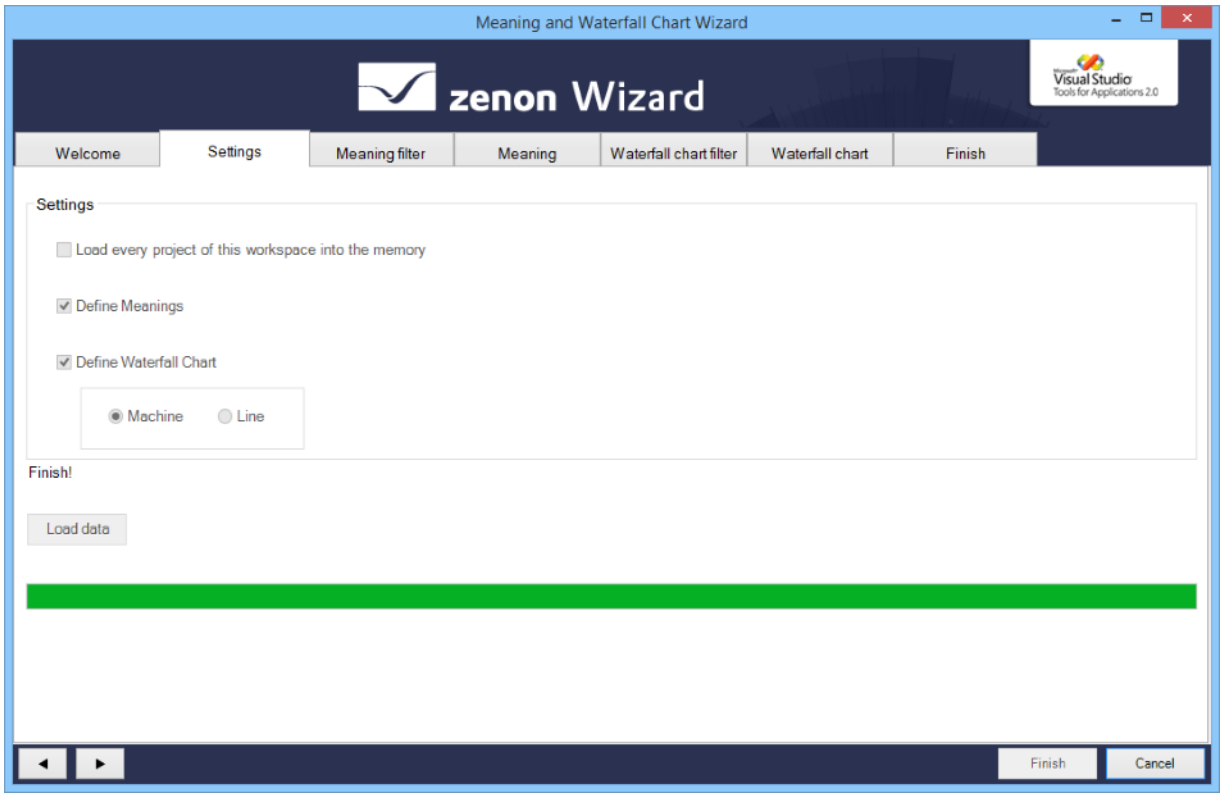
8.3.2 Settings

Selection and loading of the tabs to be configured.



Option	Description
Settings	Setting for which tabs are to be loaded.
Load every project of this workspace into the memory	▸ `Active`: When loading, projects from the workspaces that are not in the memory are also taken into account. Once the wizard has been ended or once the **Finish** action has been executed, these are removed.
Define Meanings	▸ `Active`: The **Meaning filter** (on page 141) and **Meaning** (on page 143) tabs are loaded.
Define Waterfall Chart	Selection of waterfall chart: ▸ `Active`: A waterfall chart is created. Selection of the waterfall type by means of the radio button: ▸ **Machine**: A machine-based waterfall chart is created. The **Waterfall filter** (on page 147) und **Waterfall** (on page 149) tabs are loaded. ▸ **Line**: A line-based waterfall chart is created. The **Line Analysis filter** (on page 151) and **Line Analysis** (on page 153) tabs are loaded.
Load data	Clicking on the button searches through the variables of all projects loaded in the workspace and loads the required information for the filter and editing the variables. The corresponding tabs are displayed in the wizard. A progress bar is displayed during the loading process.

After loading, the tabs are available for the selected data, for configuration.



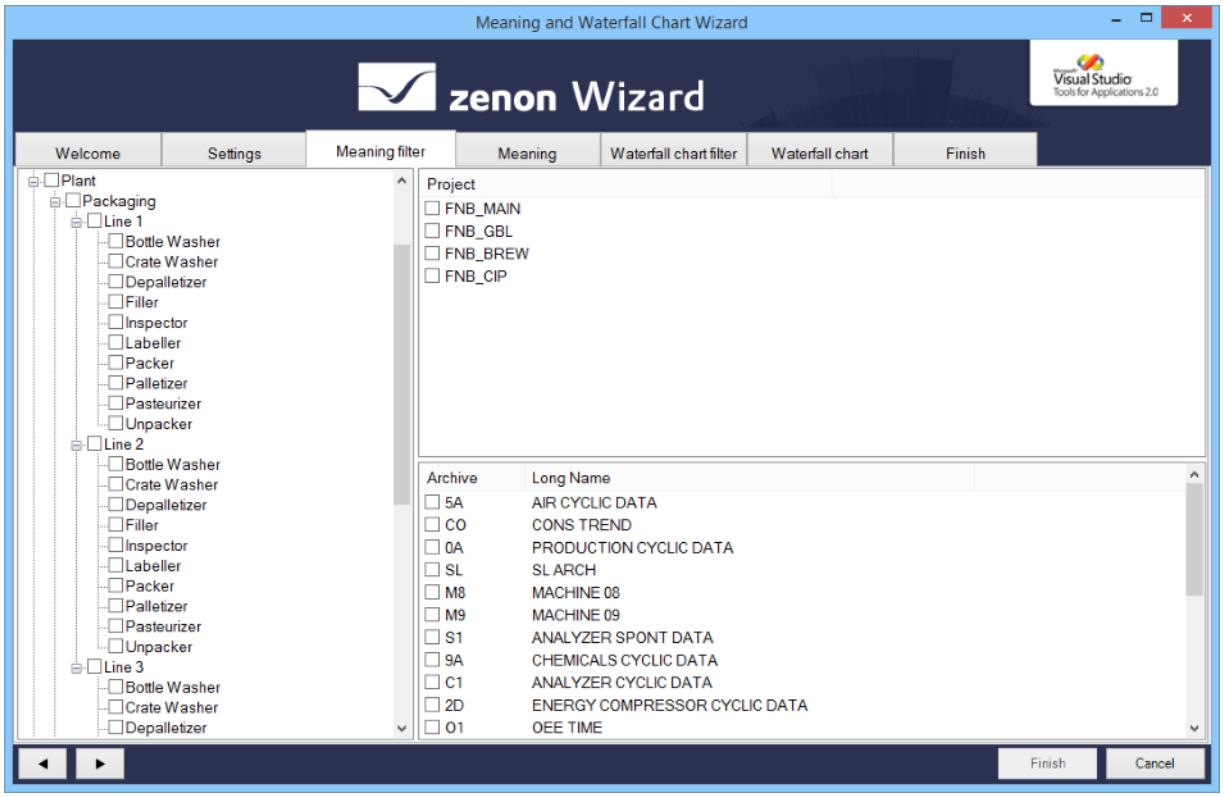
8.3.3 Meanings

Configuration of the meanings using the **Meaning filter** and **Meaning** tabs.

Meaning filter

The variables to be edited are pre-filtered with this tab. If an object is not selected in any group, all variables are available in the **Meaning (on page 143)** tab.

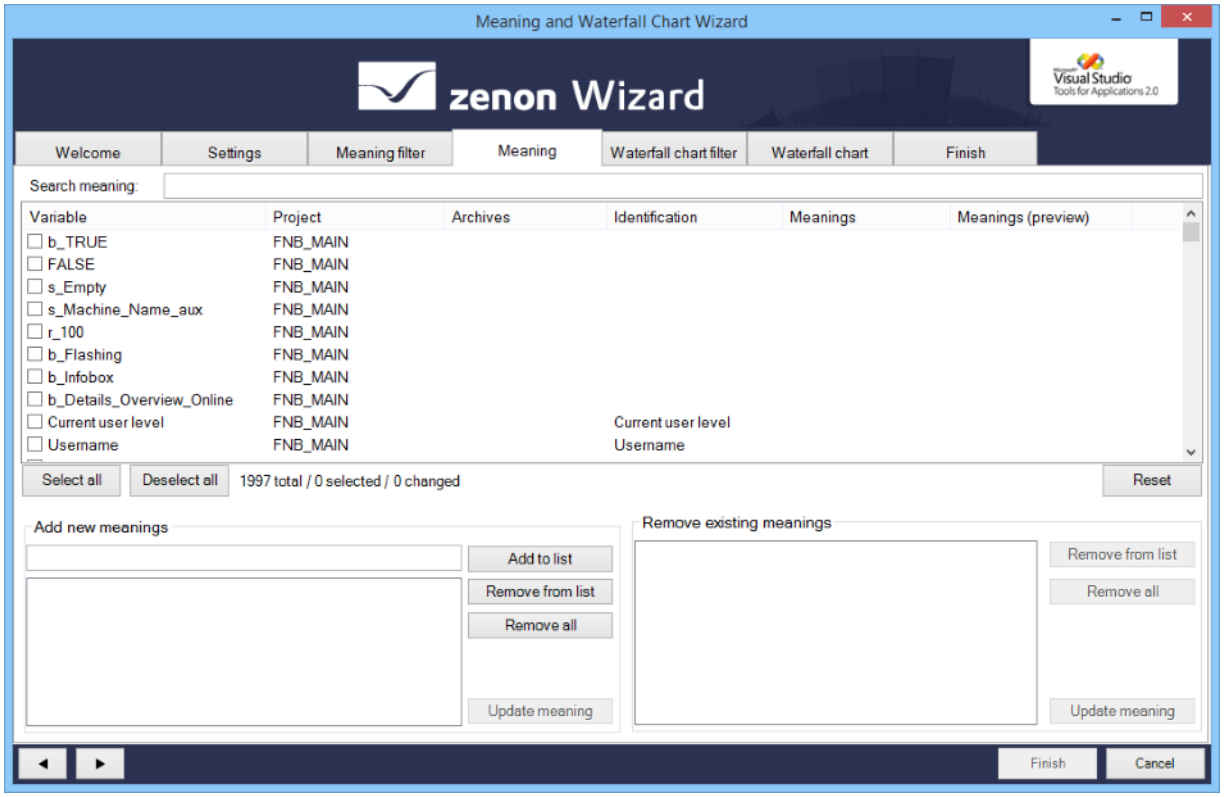
> **Attention**
>
> *Only equipment models from the global project are available.*



Option	Description
List of equipment groups	Filtering for individual models by activating the respective checkboxes. `No selection`: Variables of all equipment models are selected.
List of projects	Filtering for individual checkboxes by activating the respective checkboxes. `No selection`: Variables of all projects are selected.
List of archives	Filtering for individual archives by activating the respective checkboxes. `No selection`: Variables of all archives are selected.

Meaning

The meanings of the variables are edited in this tab. Variables can be selected and given new meanings, and existing meanings can be removed.



VARIABLE SELECTION

Option	Description
Search meaning	Input of a search term lists all variables with their corresponding meanings. The list is immediately updated with the entry of a character. Placeholders cannot be used.
List Variablen	List of the variables available after filtering. Selection of variables for editing: Activation of the checkbox before the variables. Existing meanings of the variables are shown in the **Meanings** column. In doing so, only meanings are displayed. Other entries or entries for the waterfall chart are hidden or ignored when editing. The variables can be sorted by clicking on a column label.
Select all	Clicking this selects all variables for editing.
Deselect all	Clicking this deselects all variables.
Display statistics	Display how many variables: ▸ Are present in the list ▸ Have been selected ▸ Have been changed
Reset	Resets all changes that have been made by clicking on **Update meaning**. Note: Changes are only accepted finally after clicking on **Finish**.

ADD MEANINGS

Option	Description
Add new meanings	Allows meanings to be added to variables. New meanings are entered in the input field, added to the list and assigned to the selected variables using the **Update meaning** button.
Eingabefeld	Entry of a new meaning. Maximum length: `50 characters`
Liste Meanings	Lists all meanings that have been created.
Add to list	Adds entry from text field to the list of meanings.
Remove from list	Deletes selected entry from the **list of Meanings**.
Remove all	Deletes all entries from the **list of Meanings**.

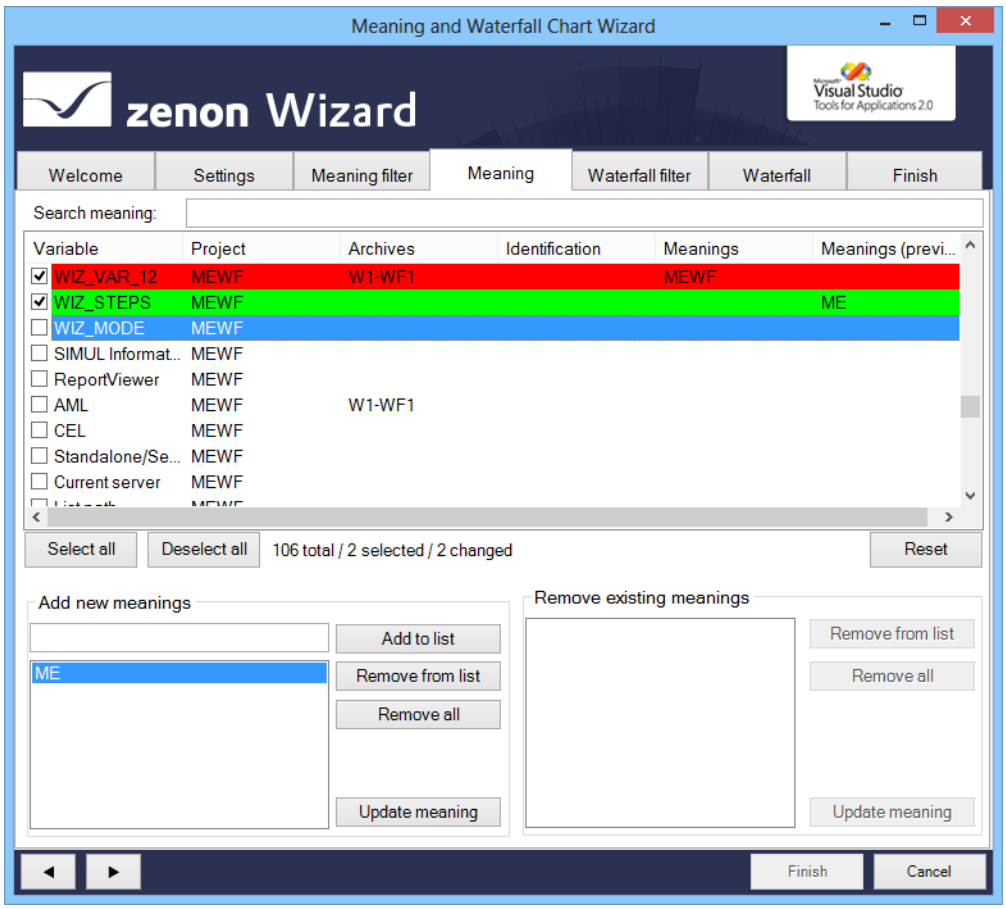
Update meaning	Clicking this assigns a new meaning to all entries in the **list ofMeanings**. The meanings to be added are displayed in the **Meanings (preview)** column; the row with the variables has a green background.

REMOVE MEANINGS

Option	Description
Remove existing meanings	Allows meanings to be removed from variables. If a variable is selected, all assigned meanings are displayed in the **list of Meanings**. Meanings that are to be retained are deleted from the list by clicking on the **Remove from list** button. Clicking on the **Update meaning** button removes the meanings from the selected variables.
List Meanings	Lists all of the meanings assigned to the selected variables.
Remove from list	Deletes selected entry from the **list of Meanings**.
Remove all	Deletes all entries from the **list of Meanings**.
Update meaning	Clicking this removes all entries in the **list of Meanings** from the selected variables. The row with the variables has a red background.

Attention: Changes and new entries are only written to the zenon variable once the **Finish** action in the **Finish** tab has been executed.

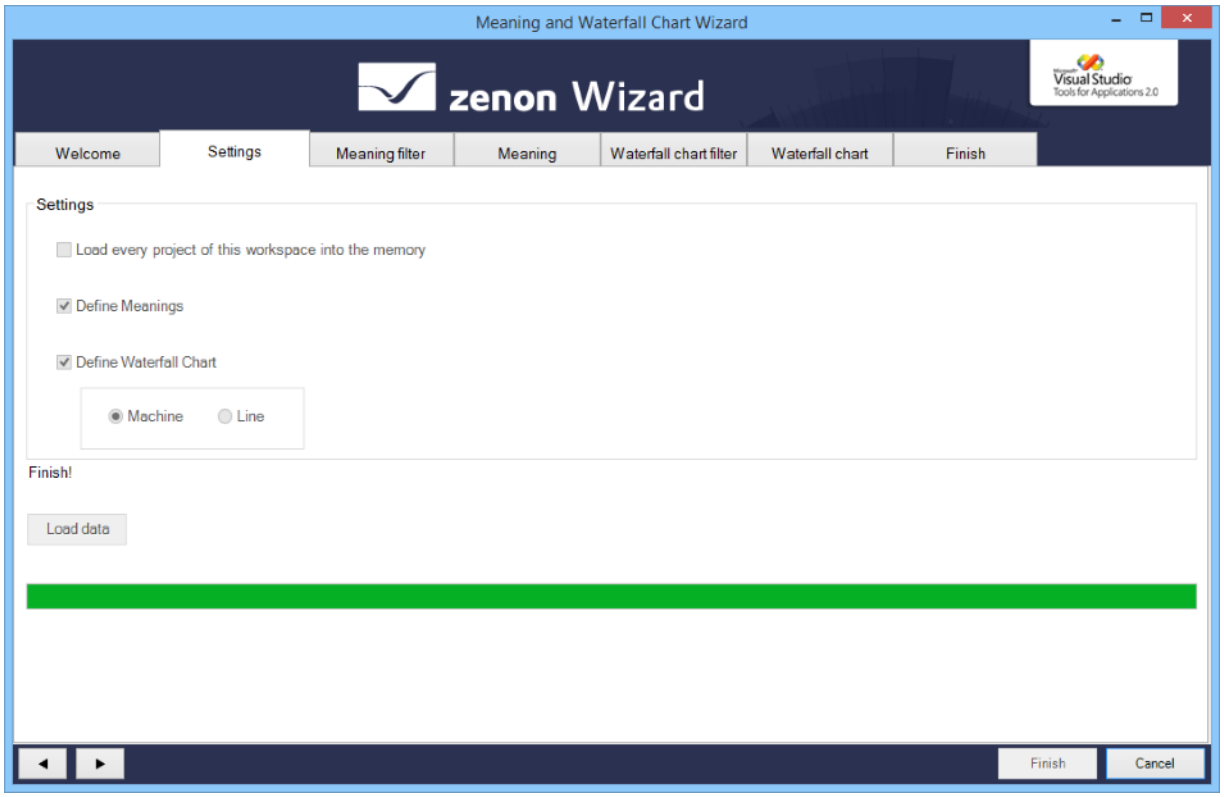
EXAMPLE OF COLOR IDENTIFICATION



- Red: All Meanings of the variable have been deleted.
- Green: Variable has received a new Meaning.

8.3.4 Machine

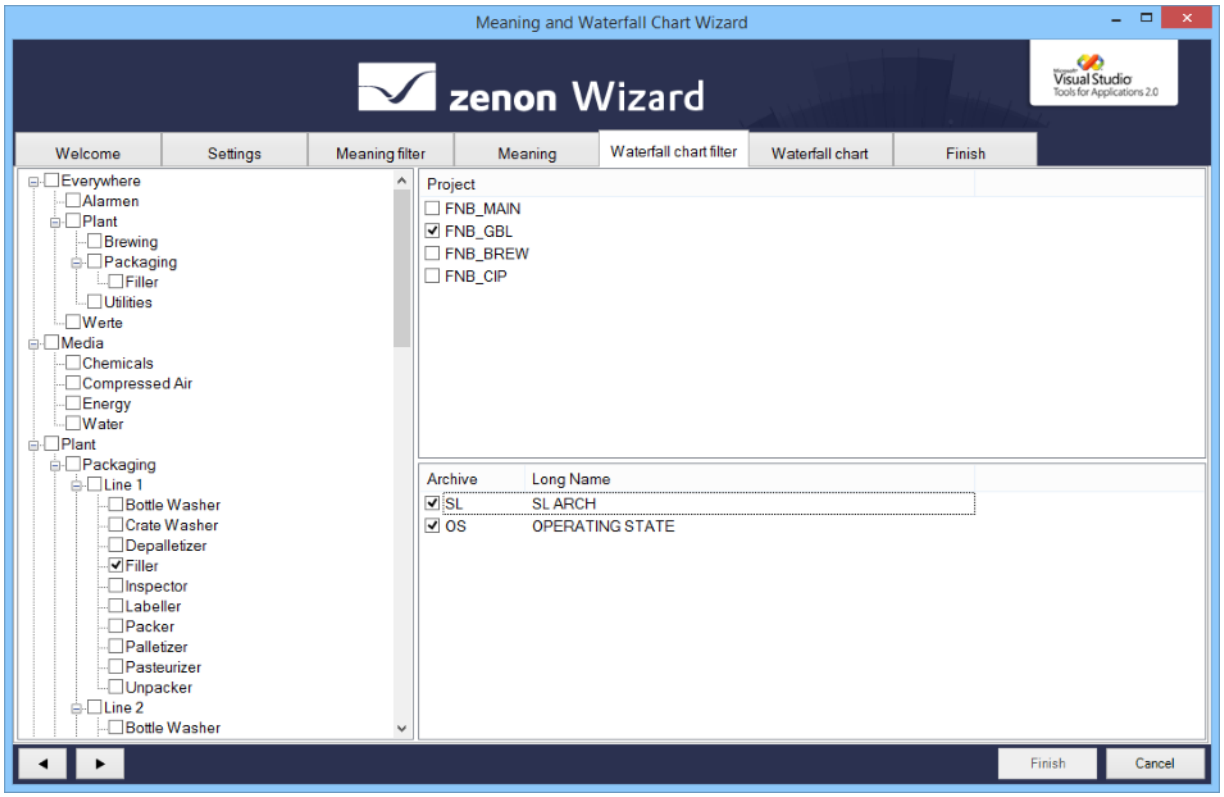
Configuration of a waterfall model for **machine-based reports** using the **Waterfall chart filter** and **Waterfall chart** tabs.



Waterfall chart filter

You define the machine-based waterfall diagram in this tab. To do this, all variables must be assigned to the same equipment group. If variables from an archive are used, the archive and the variables must be assigned to the same equipment group.

> **Attention**
>
> *Only equipment models from the global project are available.*



Option	Description
List of equipment groups	Selection of an equipment group.
List of projects	Selection of a project.
List of archives	Select an archive.

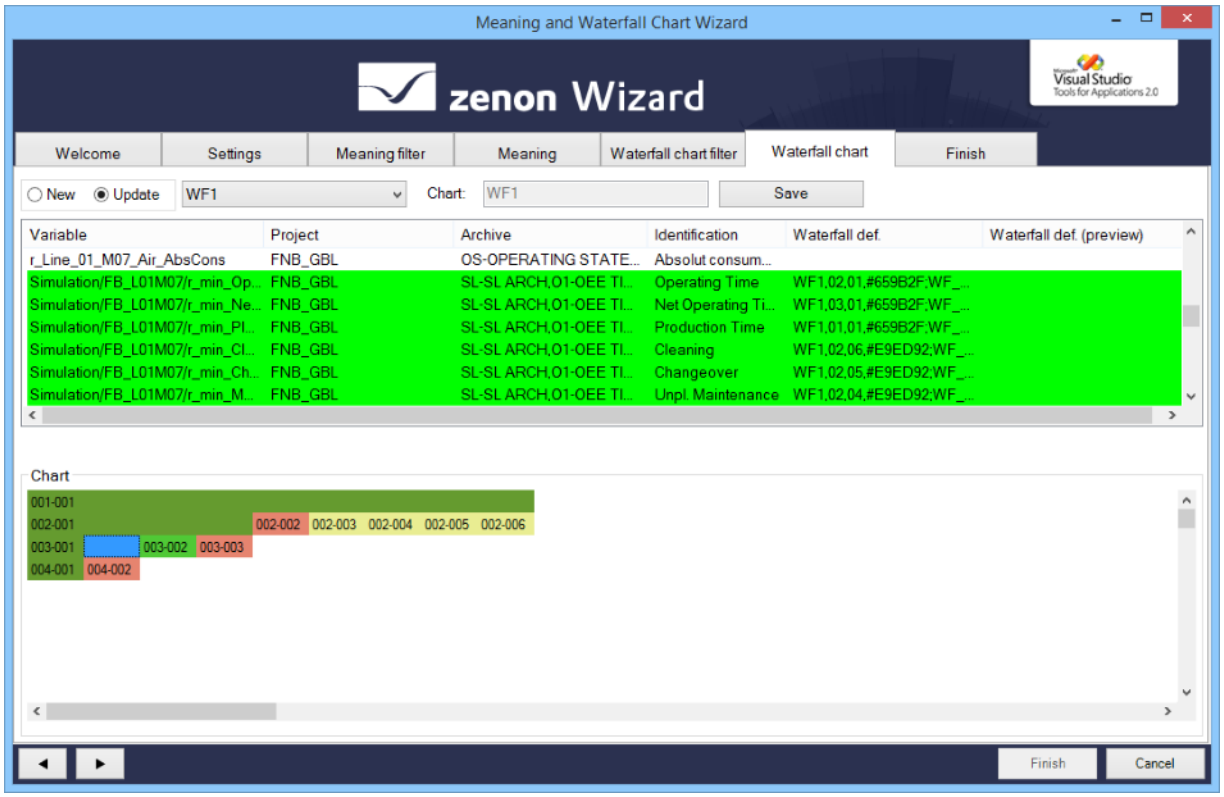
An equipment group and a project must be selected. As a option, it is also possible to select an archive from the appropriate equipment group.

No variables can be displayed in the **Waterfall** (on page 149) tab:

- No project was selected
- No equipment group was selected
- Objects were selected that are not assigned to the same equipment group

Waterfall chart

Waterfall definitions can be created and edited on this tab:



Option	Description
New	`Active`: A new waterfall definition is created.
Update	`Active`: An existing waterfall definition is edited. Select from drop-down list.
Chart	Entry of a name for a new waterfall definition.
Save	Clicking on the button saves the entries. Note: All changes are only written to the zenon variable once the **Finish** action in the **Finish** tab has been executed.
Variablenliste	Lists all variables that correspond to the configuration on the Waterfall filter (on page 147) tab. `Bool` and `String` variables are not displayed. The list can also be sorted by clicking on the column heading. Existing waterfall definitions are displayed in the **Waterfalls** column. New or amended waterfall definitions are displayed in the **Waterfalls (preview)** column.
Chart	Waterfall definitions can be created or amended here by dragging & dropping.

Note: All changes are only written to the zenon variable once the **Finish** action in the **Finish** tab has been executed.

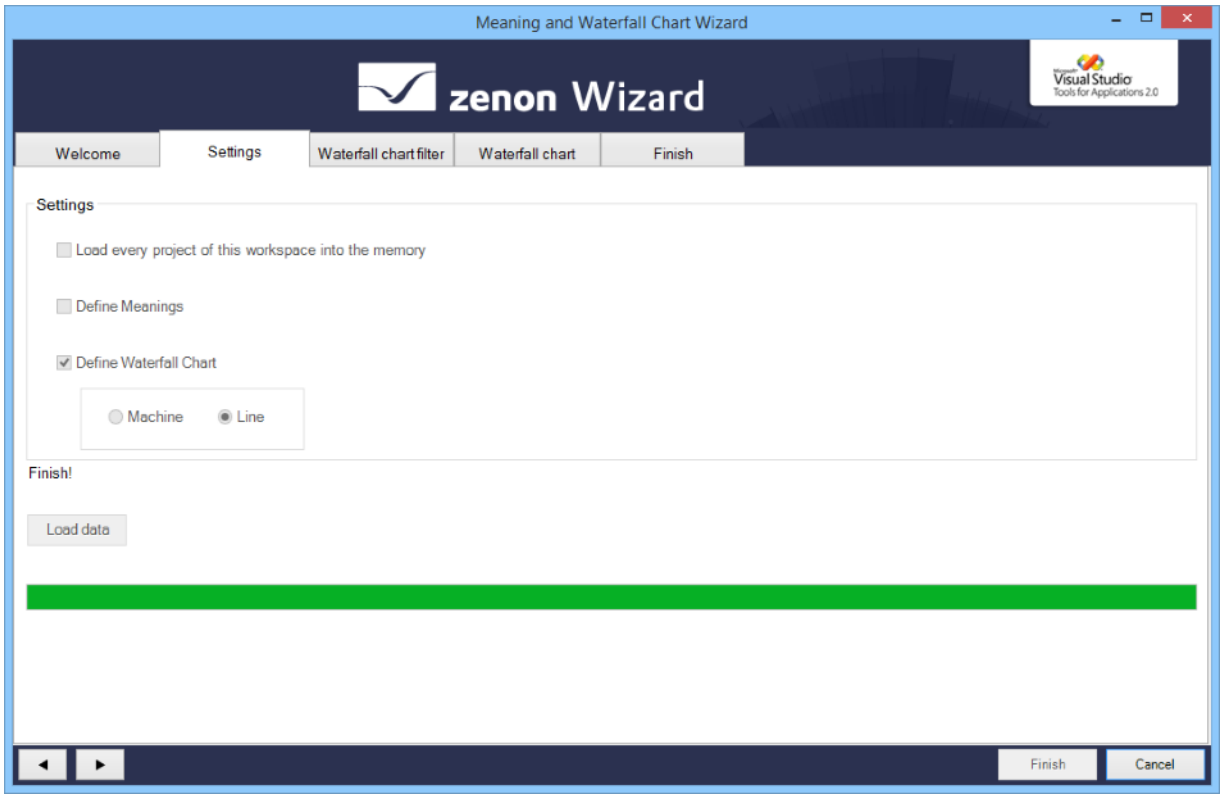
CREATING A WATERFALL DEFINITION

To create a new waterfall definition:

1. Select **New**.
2. Move the desired variable by drag&drop in sequence in the **Chart** area
3. Arrange the bar according to the rules
4. Enter a name in the **Chart** input field
5. Click on **Save**.
6. The configuration is saved in the **Waterfalls (preview)** column
7. Switch to tab **Finish**.
8. Click on **Finish**.

8.3.5 Line

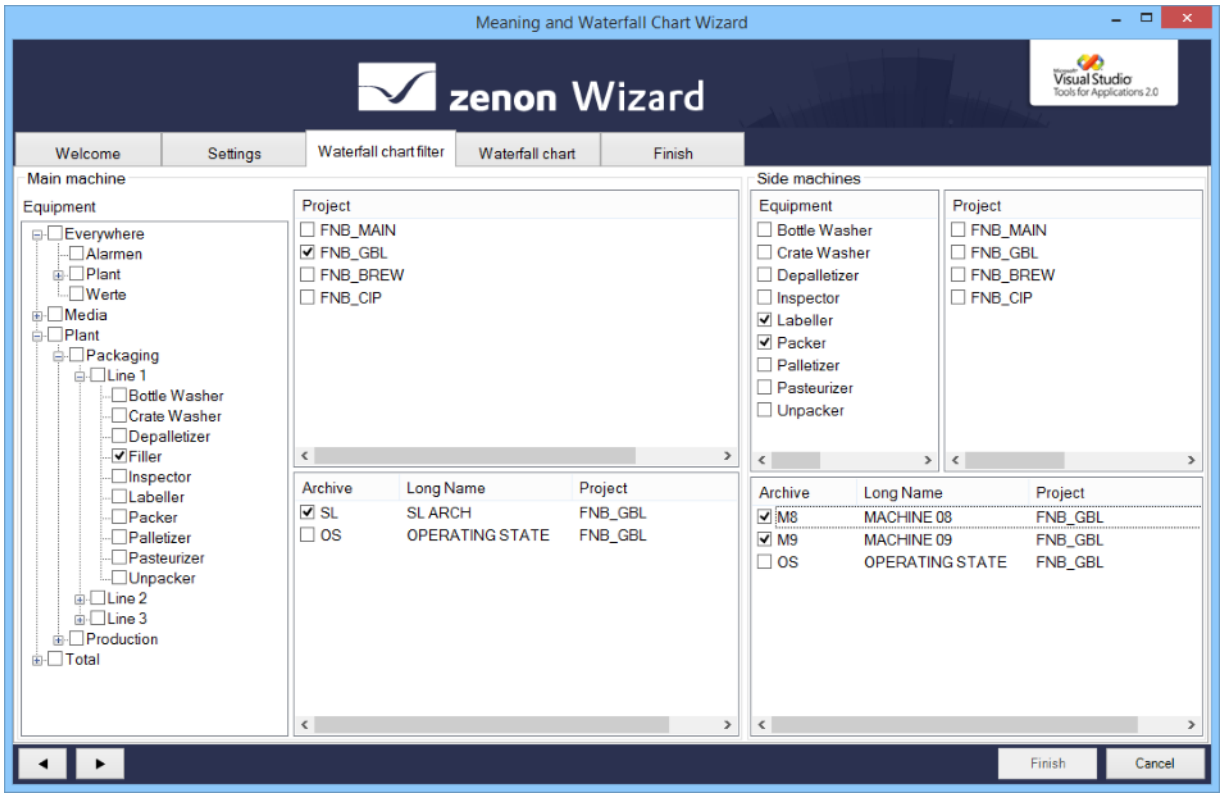
Configuration of a waterfall model for **line-based reports** using the **Waterfall chart filter** and **Waterfall chart** tabs.



Waterfall chart filter

You define the line-based waterfall diagram in this tab. To do this, all variables and archives must be assigned to the same equipment group.

> **Attention**
>
> *Only equipment models from the global project are available.*



Parameter	Description
Main machine	Configuration of the main machine.
Equipment	List of the existing equipment models. Selection of a model by activating the checkbox. The selection defines the archives that can be used. Only one model can be selected.
Project	Existing projects. The list of archives can be filtered using the selection of projects. The selection is optional.
Archive	List of existing archives. Selection of an archive by activating the checkbox. Only one archive can be selected.
Side machines	Configuration of the auxiliary machines
Equipment	List of the existing equipment models. Selection of a model by activating the checkbox. The selection defines the archives that can be used. As many models as desired can be selected.
Project	Existing projects. The list of archives can be filtered using the selection of projects. The selection is optional.
Archive	List of existing archives. Selection of an archive by activating the checkbox. As many archives as you want can be selected.

RULES

The following is applicable for the selection of the main machine:

- Precisely one equipment group must be selected.
- The archive selection can be prefiltered using the **Project** filter.
  Only one project can be selected.
- Precisely one archive can be selected.

The following is applicable for the selection of the auxiliary machines:

- Several equipment groups can be selected. However these must be from the same level as the main machine.
- If an equipment group has been selected for the main machine, only equipment groups at the same level as the main machine can be selected for the auxiliary machines. The equipment group of the main machine is precluded in the process.

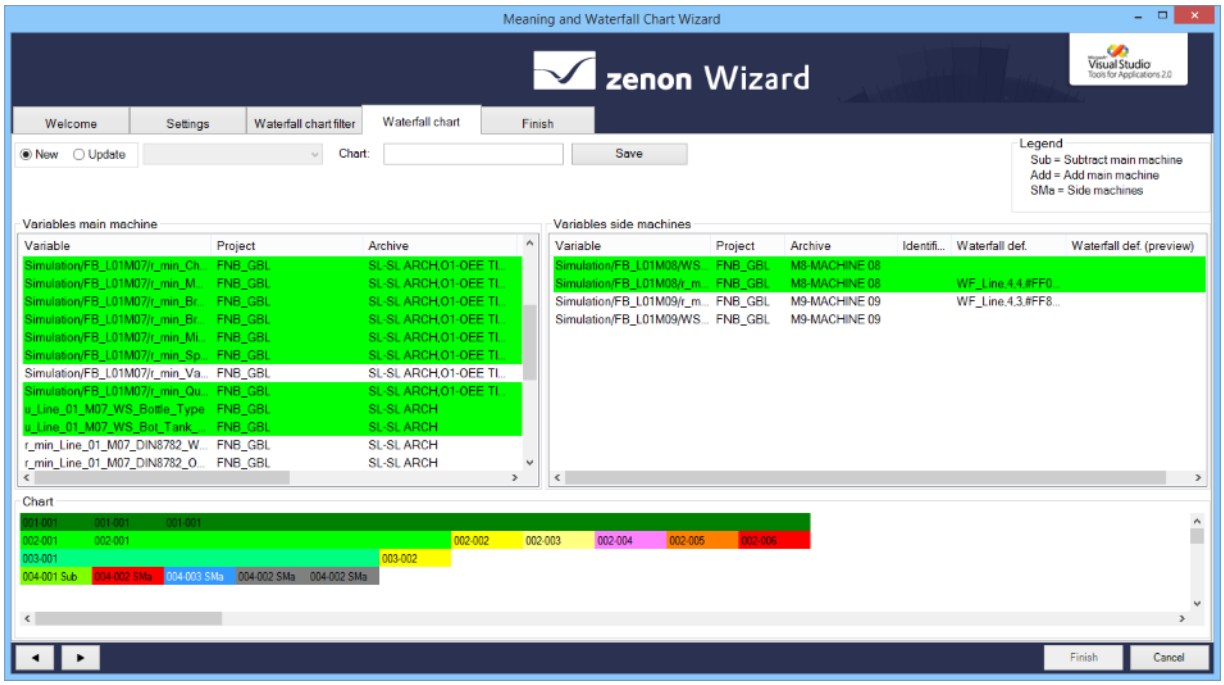
- The archive selection can be prefiltered using the **Project** filter.
  Several projects can be selected.
- At least one archive must be selected. If a variable is already used in the archive of the main machine, it is not available for the auxiliary machine.

> **Attention**
>
> In order for variables to be available for the diagram, they must always be linked to the same equipment group as the archive in which the variables are located. This applies to main machines and auxiliary machines.

Waterfall chart

Waterfall definitions can be created and edited on this tab:

Note the rules for filtering on the **Line Analysis filter** tab: Precisely the same variable filter settings must be set for main and auxiliary machines.



Option	Description
New	`Active`: A new waterfall definition is created.
Update	`Active`: An existing waterfall definition is edited. Select from drop-down list.
Chart	Entry of a name for a new waterfall definition.
Save	Clicking on the button saves the entries. Note: All changes are only written to the zenon variable once the **Finish** action in the **Finish** tab has been executed.
Legend	Key for the assignment of the variables: ▸ **Sub**: Losses of auxiliary machines are subtracted from the main machine. ▸ **Add**: Losses of auxiliary machines are added to the main machine. ▸ **SMa**: Auxiliary machines .
Variables main machine	Lists all variables available for the main machine. The list can also be sorted by clicking on the column heading.
Variables side machine	Lists all the variables available for the auxiliary machines. The list can also be sorted by clicking on the column heading.
Chart	Waterfall definitions can be created or amended here by dragging & dropping.

Note: All changes are only written to the zenon variable once the **Finish** action in the **Finish** tab has been executed.

CREATING A WATERFALL DEFINITION

To create a new waterfall definition:

1. Select **New**.
2. Move the desired variable by drag&drop in sequence in the **Chart** area
3. Arrange the bar according to the rules
4. Enter a name in the **Chart** input field
5. Click on **Save**.

   The configuration is displayed in the list in the **Waterfall def. preview (preview)** column.
6. Switch to tab **Finish**.
7. Click on **Finish**.

EDITING A WATERFALL DEFINITION

To edit an existing waterfall definition:

1. Select **Update**.
2. Select the desired definition from the drop-down list.

   The existing definition is displayed in the diagram field.
3. Edit the definition.
4. Click on **Save**.
5. The configuration is displayed in the list in the **Waterfall def. preview (preview)** column.
6. Switch to tab **Finish**.
7. Click on **Finish**.

RULES WHEN DRAWING THE DIAGRAM:

When drawing, the following rules are applicable, in contrast to a machine-based diagram:

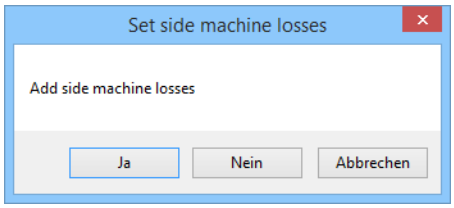
Position	Rule	Definition	Code
Last line, first column	Entries for main machines only.	**SUBTRACT_SIDE_MACHINE_LOSSES**	**Sub**
n-column, last line and not 1st column.	Main machine entries.	Default: **ADD_SIDE_MACHINE_LOSSES = 0**	(none)
		Alternative: Clicking on the cell with the right mouse button opens, after the dialog, a further dialog to select colors. Confirmation with **Yes** changes the definition to: **ADD_SIDE_MACHINE_LOSSES = 1**	**Add**
n-column, last line and not 1st column.	Auxiliary machine entries.	**LOSS_FROM_SIDE_MACHINE = 1**	**SMa**

DIALOG: ADD AUXILIARY MACHINE LOSSES

Under the following conditions, after the color selection dialog has been closed, an additional dialog to add losses from auxiliary machines is displayed:

- Click on the right mouse button in the diagram
- On a variable of the main machine
- In the last line

- From the second column



Option	Description
Add side machine losses	Query of whether losses from auxiliary machines are to be added.
Yes	The value for **DD_SIDE_MACHINE_LOSSES** is set to `1`. The losses of the auxiliary machine are added.
No	The value for **DD_SIDE_MACHINE_LOSSES** is set to `0`. The losses of the auxiliary machine are subtracted.
Cancel	The status remains as it was before the dialog was called up.

8.3.6 General rules for waterfall diagrams

The following rules apply when creating and editing waterfall definitions:

1. For the first bar, the variable in the upper left corner of the character area must be dragged.
2. The second bar can only be inserted below the first bar.
3. All other bars can be inserted either below the existing bar or to the right of an existing bar.
   - The first row can only contain one bar.
   - If a bar is inserted to the right of an existing bar, the bar above this is extended.
4. The selected variable is displayed in green.
5. Each variable can only be used once.
6. The bar contains an index:
   - First number: Row index
   - Second number: Column index
7. The name of the selected variable is displayed in the tooltip of the bar.
8. For line-based diagrams only: Variables of auxiliary machines can only be entered in the last line.

Note: Note the rules for filtering (on page 151) and diagram design (on page 153) for line-based diagrams.

SAVING A WATERFALL DEFINITION

To save a waterfall definition:

1. Enter a name in the **Chart** input field
2. Click on the **Save** button.
3. The definition is saved in the variable list and the new entry is displayed in the **Waterfall def. preview (preview)** column
4. The new waterfall definition is only written to the zenon variable after clicking on the **Finish** button in the **Finish** tab.

EDITING A WATERFALL DEFINITION

To edit a new waterfall definition:

1. Select **Update**.
2. Select the desired waterfall definition from the drop-down list.

   Attention: Only definitions that correspond to the configuration in the **Waterfall filter** (on page 147) tab are offered
3. The waterfall definition is displayed in the **Chart** area
4. Change the definition in accordance with the rules:
   - Adding a bar: Move the variable to the desired position: The variable is colored green.
   - Deleting a bar: Drag the bar to the deletion area. The variable is displayed again without a highlighting color.
   - Moving a bar: Move the bar to the desired location.
   - Changing the color: Assign the bar the desired color with a right-click.
5. Click on **Save**.
6. All changes are displayed in the list in the **Waterfall def. preview (preview)** column
7. Switch to tab **Finish**.
8. Click on **Finish.**

DELETING A BAR

Bars can be deleted if:

- It is a short bar
- There is no other bar below or to the right

To delete a bar, drag & drop it to a free location outside the Chart field (but not in the variable list).

THE BAR IS DELETED. ALL OTHER BARS ARE MOVED ACCORDINGLY. MOVING THE BAR

Bars can be moved if:

- It is a short bar
- The movement is within a row

To move a bar, drag & drop it to the new position. All other bars between the old and the new position are moved by one place.

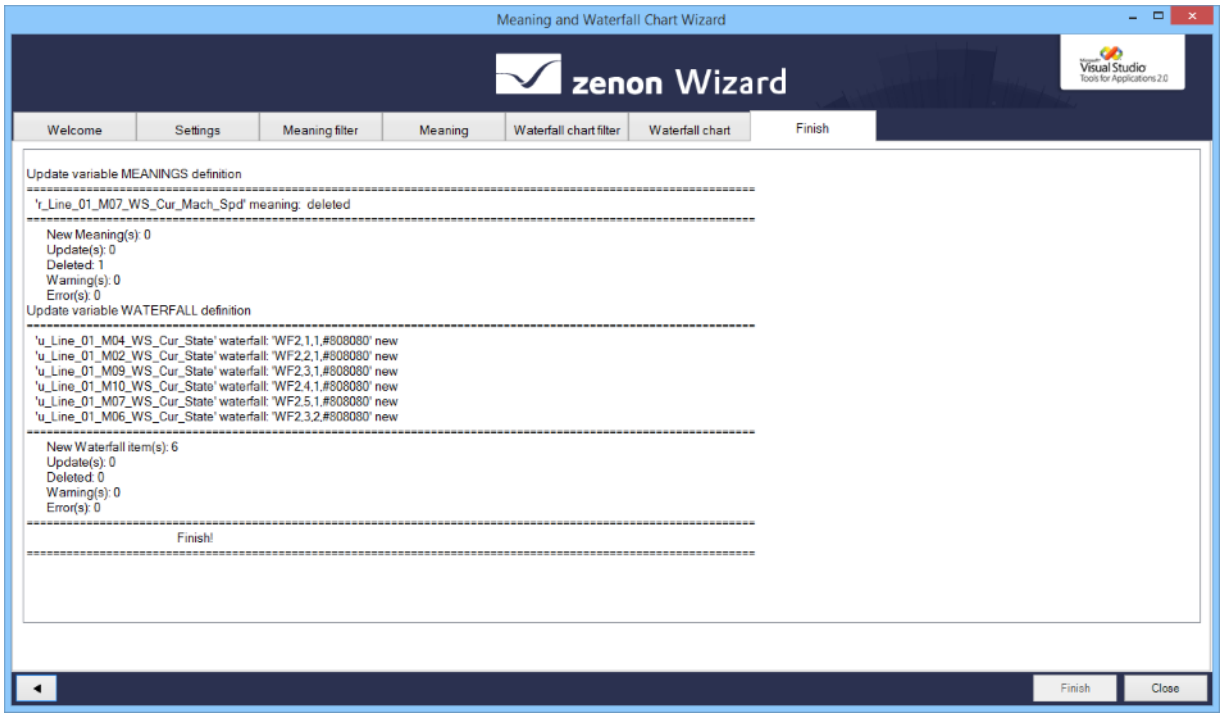
CHANGING THE COLOR OF A BAR

To change the color of a bar:

1. Right-click on the bar
2. The dialog to select the color opened:
3. select the desired color
4. Click on **OK.**

8.3.7 Finish

In this tab, the changes are written to the variables in zenon and the result is displayed in the output field.



Clicking on the 'Finish' button writes the changes to the zenon variable in the Editor.

The changes made are displayed in the output field:

- Update MEANINGS definition variable: Changes to the variables that are carried out and that concern the meanings.
- Update WATERFALL definition variable: Changes to the variables that have been carried out and that concern the waterfall definition
- Notes on new and deleted entries, warnings and error messages.

  When importing into zenon, the length of the entry is checked for the corresponding properties. This must not consist of more than 250 characters If the entry is longer, the sequence is cut off after the 250th character and an error message is written in the output field of the 'Finish' tab.

9. Sankey Wizard

A Sankey diagram is a graphic display of quantity flows. The quantities are displayed by arrows with a thickness proportional to the quantity. Sankey diagrams are important aids for the visualization of energy and material flows, as well as inefficiencies and potential for saving when using resources.

The **Sankey Wizard** supports you when creating Sankey diagrams that you can see in zenon Runtime and in zenon Analyzer.

The following scenarios are possible:

- Create a new Sankey diagram.
- Use a pre-existing Sankey diagram as a template.
- Edit an existing Sankey diagram.
- Delete an existing Sankey diagram.

The Sankey diagram is saved in an XML file.

Note: The wizard is only available in English.

9.1 Installing the Sankey wizard

The wizard is automatically installed together with zenon.

9.2 Starting the Sankey Wizard

For wizards to be displayed, the settings for VBA or VSTA must be set correctly in file ***zenon6.ini****:*

[VBA]

EIN=1

[VSTA]

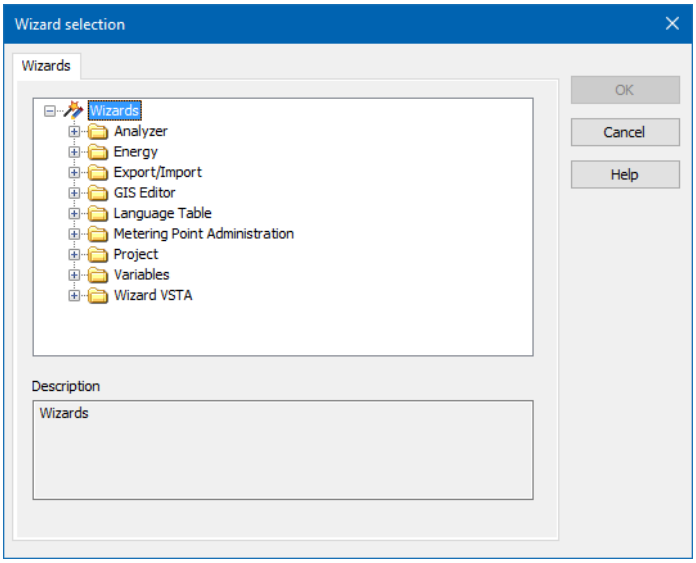
ON=1

If VSTA wizards are not displayed although the settings are correct, set entry **LOADED**= to 1 in area [VSTA].

To start the wizard:

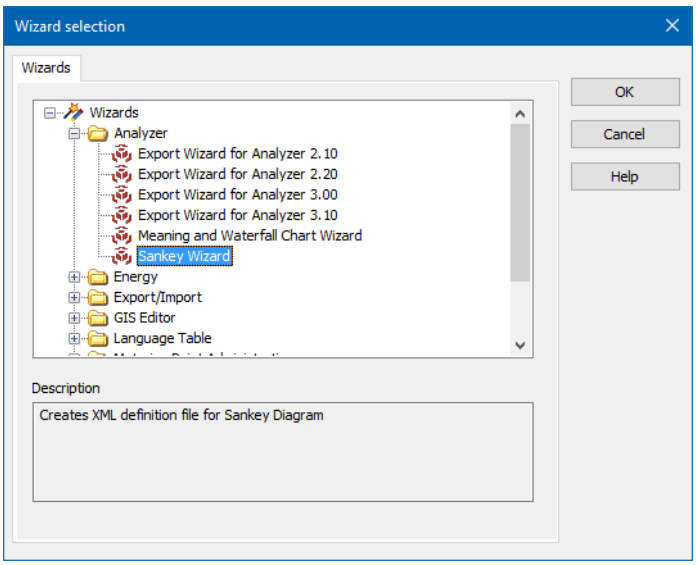
1. Click on *Tools -> Start Editor Wizards...*.
   Or: Press the short cut Alt+F12

   The selection window with the available wizards opens.



2. Navigate to the node **Analyzer**.

3. Select the **Sankey Wizard**.

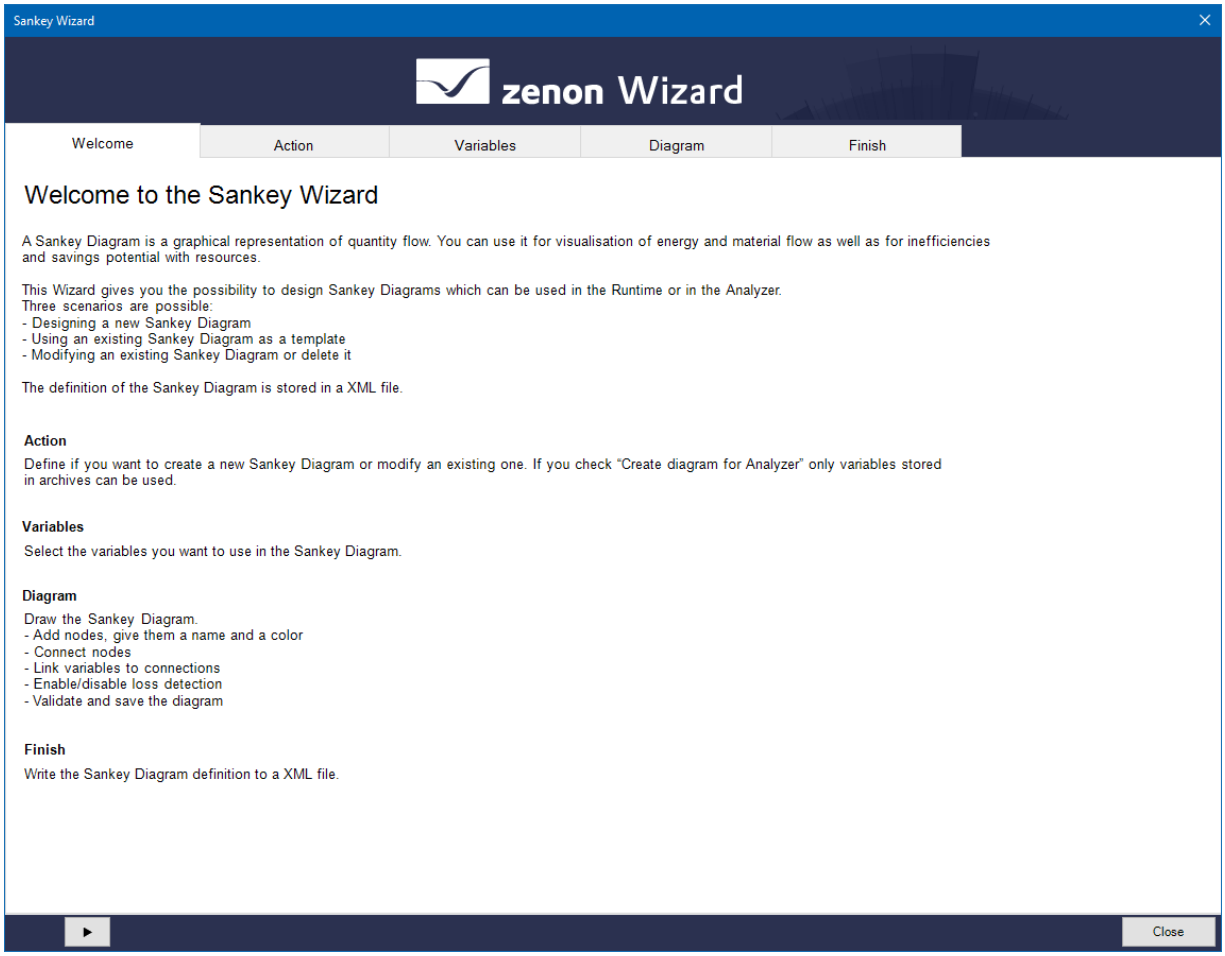


4. Click on **OK.**

   The wizard starts with the welcome page.

9.3 Start window

When opening the wizard, you receive an overview that lists and explains all objects that can be configured. Configuration starts with the **Action** tab.



Click on the button with the **arrow** or on the title of the tab to navigate through the configuration of the export.

9.4 Sorting and filtering lists

SORTING OF LISTS

All lists in the **Action** and **Variables** tabs can be sorted.

The sorting is alphabetical by default, which can however be inverted.

To sort:

1. Click on the corresponding header of the column according to which sorting is to take place.

   The list is displayed sorted according to this column.

2. A further click inverts the sorting.

FILTERING OF LISTS

You can filter all lists in the **Action** and **Variables** tab according to certain criteria. Several filters can also be combined with one another.

Note: To reset a filter, delete the filter text from the header.

Engineering:

1. Click in the desired list, with the left mouse button, in the input field for the corresponding filter symbol.
2. Enter the term according to which filtering is to take place.
3. Click on the corresponding filter symbol in the desired list with the left mouse button.

   The context menu is opened.

4. Make your choice by clicking on the desired filter possibility with the left mouse button.

   The choices are:

   - **No filter**: no filter set
   - **Contains**: contains
   - **Does not contain**: does not contain
   - **Starts with**: starts with
   - **Equals**: is equal to
   - **Not equal to**: is not equal to

   The list is filtered according to your selection.

Note: The filter is set to "**Contains**" by default.

9.5 Navigation

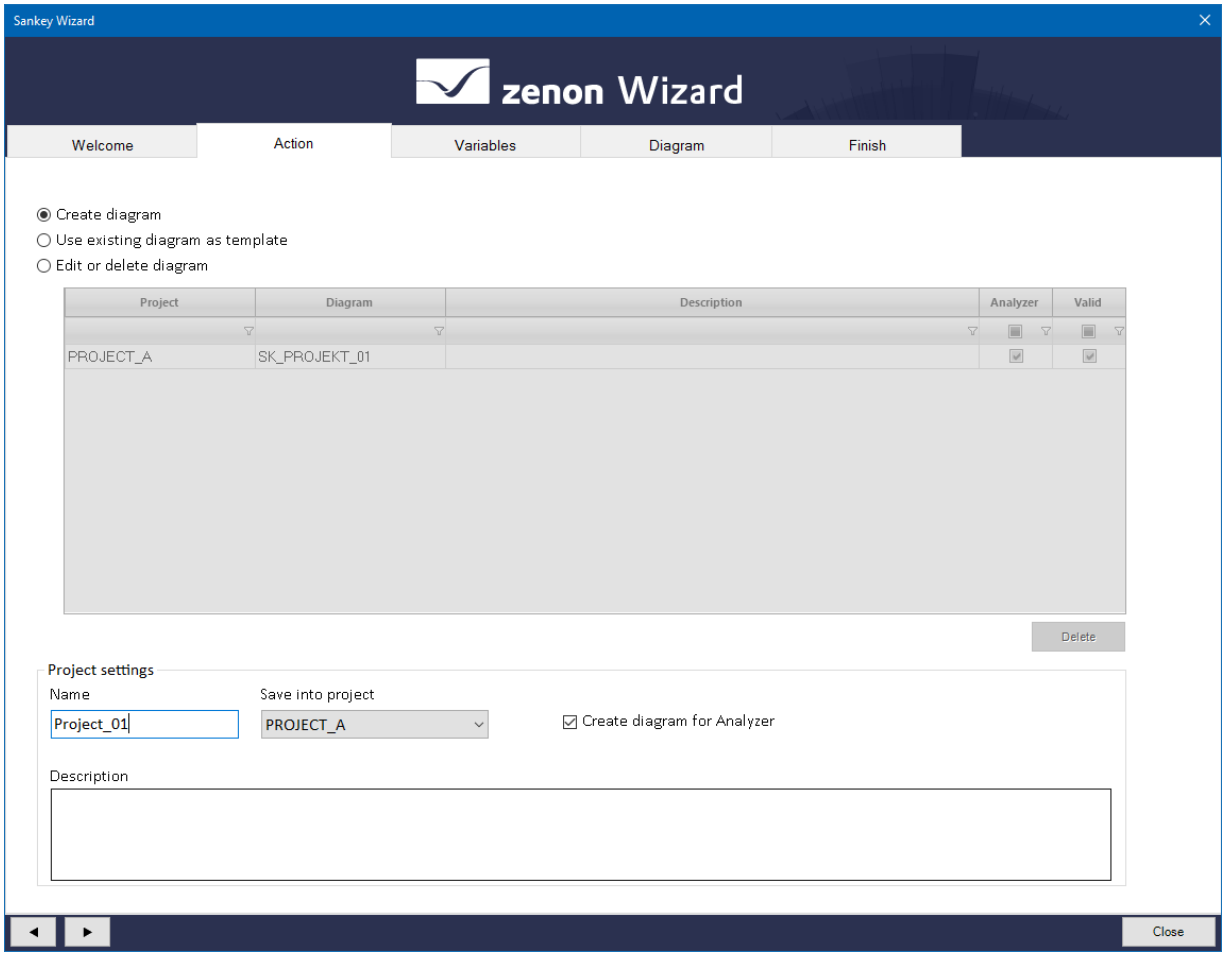
Navigation through the tabs is carried out by means of the navigation bar in the lower area of the wizard window:

Button	Description
Arrow left	Goes back one tab in the wizard process.
Arrow right	Goes forward one tab in the wizard process.
Finish	Writes all changes to the zenon variable in the Editor and closes the wizard.
Cancel	Ends the wizard without making changes.

Individual tabs can also be selected by clicking directly on the title of the tab.

9.6 Action - select action

Select, in the **Action** tab, the desired action by activating it.



There are the following three possibilities:

Option	Description
Create diagram	Creates a new diagram.
Use existing diagram as template	Uses an existing diagram as a template. Note: In this case, variables must be linked to node connections again. The variable linkings of existing diagrams are not shown in the template.
Edit or delete diagram	Allows the editing or deletion of an existing diagram. The diagram to be edited or deleted can be selected from the list of the created diagrams.

SORTING AND FILTER POSSIBILITIES

You can sort the list in the **Action** tab and filter according to certain criteria. You can find details on this in the Sort and filter lists (on page 162) chapter.

LIST OF THE DIAGRAMS THAT HAVE BEEN CREATED

The window in the middle shows a list with the diagrams that have already been created. The entries are grayed out if **Create_Diagram** has been selected. The following information for this is visible:

Option	Description
Project	Name of the project in which the diagram is saved
Diagram	Shows the name of the diagram.
Description	Shows the description of the diagram.
Analyzer	`Active`: The diagram can be used in the Analyzer and in Runtime. `Inactive`: The diagram can only be used in Runtime.
Valid	`Active`: The diagram is valid. `Inactive`: The diagram is not valid. You cannot use the diagram in either the Analyzer or in Runtime. Note: In this case, edit the diagram and amend it until it is valid.

Delete	Deletes the selected diagram. A dialog requesting confirmation is called up before the selected diagram is deleted.

PROJECT SETTINGS

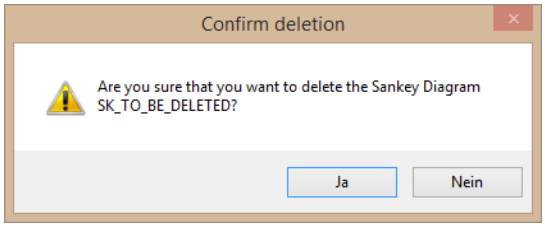
You can change the following settings for the project in this area:

Option	Description
Name	Enter a name for the project here. Note: The name must be unique. Otherwise a warning dialog will make you aware of this. A newly-created program with a name that already exists would replace the existing one if the warning dialog is confirmed. However if you click on **No** in the warning dialog, `_1` is automatically added to the name.
Save into project	Here you select the project in which your diagram is to be saved.
Description	Enter a description here. Note: This is optional.
Create diagram for Analyzer	`Active`: Only variables that are in archives are shown. Note: The variables that you want to use must first be exported with the Analyzer Export Wizard. `Inactive`: Selection of the variables is possible without limitations, however the diagram cannot be used in zenon Analyzer, only in zenon Runtime.

Note: Once this tab is left, it is no longer possible to edit the settings that have been made.

DIALOG: DELETE DIAGRAM

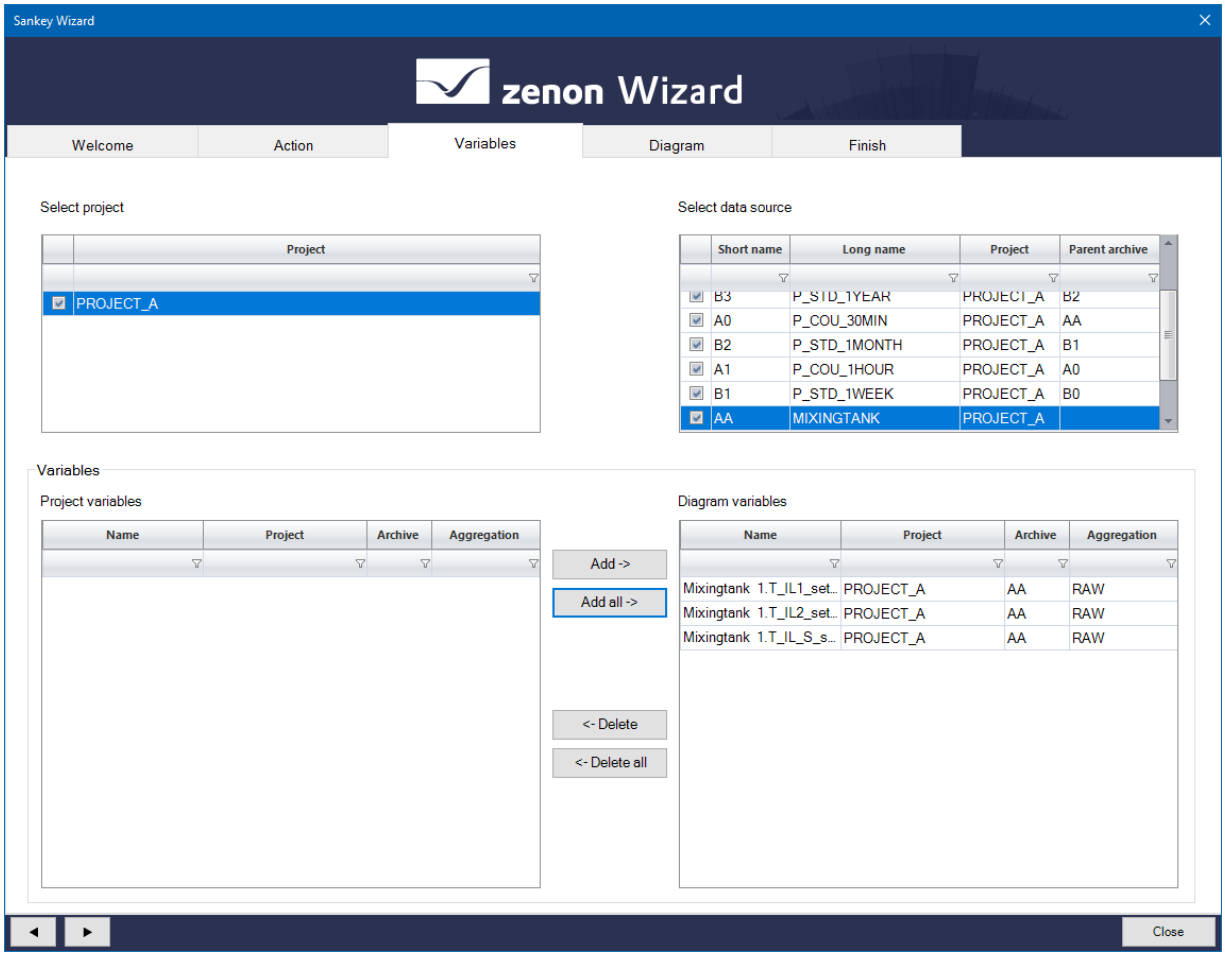
A dialog requesting confirmation is called up before the selected diagram is deleted.



Option	Description
Ja	Deletes the selected diagram.
Nein	The deletion process is canceled. The dialog is closed and the selected diagram is not deleted

9.7 Variables - select variables

You can select variables for your project in this tab.



SORTING AND FILTER POSSIBILITIES

You can sort the lists in the **Variables** tab and filter according to certain criteria. You can find details on this in the Sort and filter lists (on page 162) chapter.

SELECT PROJECT

Option	Description
Select project	List of all active zenon projects. Select the project(s) from which you want to select variables for your diagram here. Note: Multiple selection is possible.

SELECT DATA SOURCE

Option	Description
Select data source	Select the data source here (archives). Note: The **Online Data** option is available for all other variables that do not come from archives. This option can only be selected if you have not activated the **create for Analyzer** option in the **Action** tab. Live values, i.e. online values, are used for Runtime. Historical values are used for zenon Analyzer. ▶ `Short name` Short identification of the archive ▶ `Long name` Full name of the archive ▶ `Project` Project name of the archive ▶ `Parent archive` Version of the archive used

VARIABLES

Option	Description
Project variables	Select the variables that you want to link to your diagram here. Multiple selection is possible. Possibilities for this: ▶ Double-click on the desired variable. ▶ Highlight the desired variable and then click on **Add->**. ▶ Hold down the `Ctrl key`, highlight several variables, click on **Add->**. ▶ Click on **Add all->** to select all variables.

	Variable list: ▸ `Name` Variable name ▸ `Project` Name of the project of the variable ▸ `Archive:` Short identification of the archive ▸ `Aggregation:` Aggregation type of the archive • `AVG` (Average) • `Max` (Maximum value) • `Min` (Minimum value) • `Sum` (Sum) • `RAW` (Raw data format - without aggregation)
Button **Add ->**	Adds selected variable(s) to the list of **Diagram variables**.
Button **Add all ->**	Adds all variables to the list of **Diagram variables**.
Button **<- Delete**	Removes selected variable(s) from the list of the **Diagram variables**.
Button **<- Delete all**	Removes all variables form the list of **Diagram variables.**

DIAGRAM VARIABLES

Option	Description
Diagram variables	You can see all selected variables here. These are relevant for the next tab when creating the diagram. To delete variables again: ▸ Highlight the variable that you want to delete and click on **<-Delete**. ▸ Hold down the `Ctrl` key, highlight several variables that you want to delete at the same time and click on **<-Delete**. ▸ Click on **<-Delete all** to delete all selected variables again. **Variable list:** ▸ `Name` Variable name

	▸ `Project` Name of the project of the variable ▸ `Archive:` Short identification of the archive ▸ `Aggregation:` Aggregation type of the archive • `AVG` (Average) • `Max` (Maximum value) • `Min` (Minimum value) • `Sum` (Sum) • `RAW` (Raw data format - without aggregation)

Note: Once you have left this tab, changes to the settings that have been made here are possible.

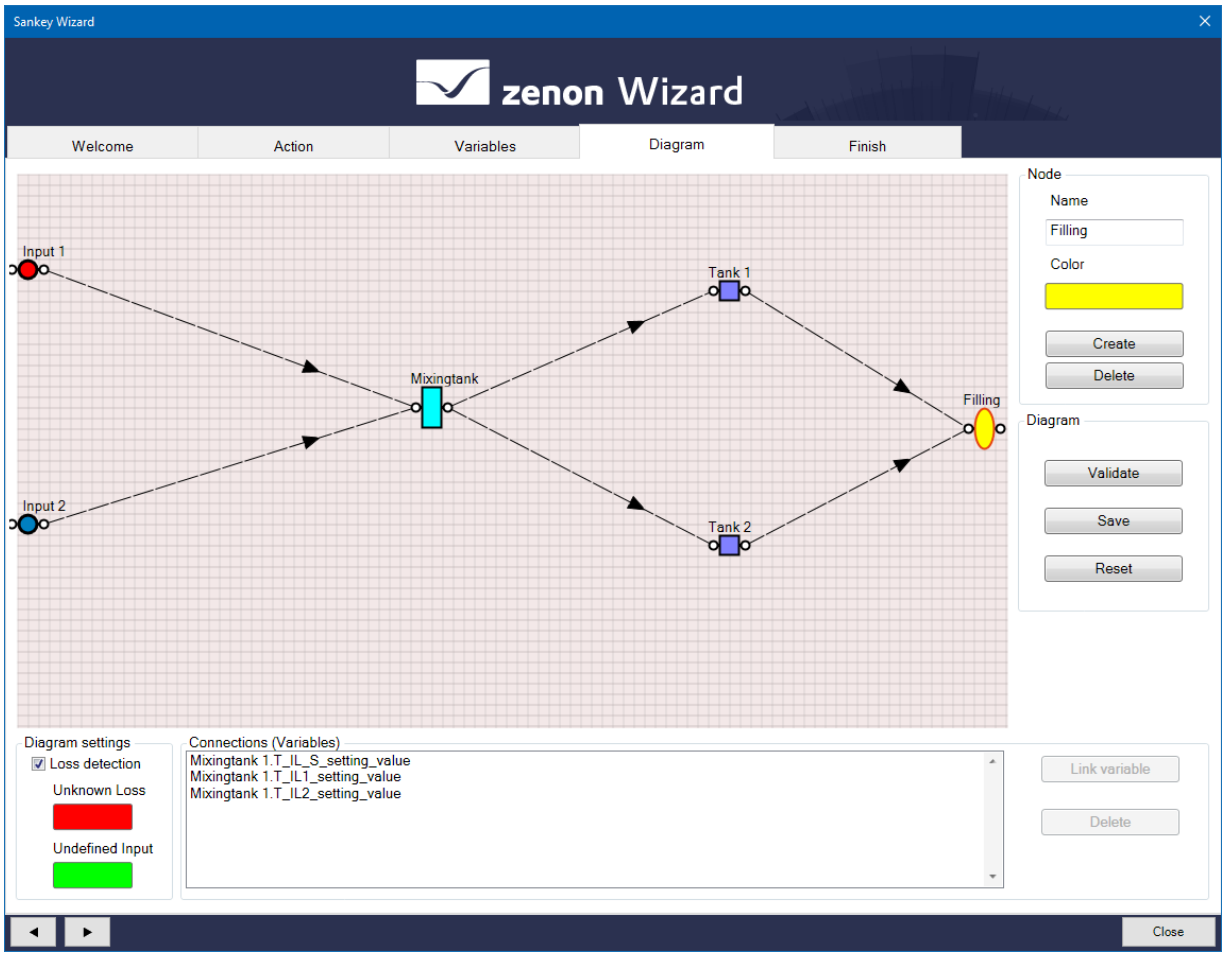
9.8 Diagram - create diagram

You are able to draw a diagram in this tab.

Note that:

- You can create a maximum of 26 start or end nodes.
- The start nodes cannot overlap.

- The end nodes cannot overlap.



DRAWING AREA

You position your nodes and connections in the drawing area.

NODE

Option	Description
Name	Node name
Color	Color of the node. Displays the last selected color. Clicking on the button opens the color selection dialog.
Create	Creates nodes and positions these on the drawing area.
Delete	Deletes selected nodes from the drawing area. Only active if at least one node in th drawing area has been selected.

DIAGRAM

Option	Description
Validate	Checks whether all nodes have been linked and/or whether the links are occupied with a variable. The result of the validation is displayed in a dialog. ▸ `Node xx is not connected!` The node is not connected to another node. ▸ `A connection of node xx has no variable linked!` The linking of the node does not have an assigned variable.
Save	Saves the current project configuration. A check is also carried out before saving.
Reset	Deletes all nodes and previously-configured connections.

DIAGRAM SETTINGS

Option	Description
Loss detection	Automatic loss detection with an additional connection that visualizes the differential flow. ▸ `activated`: The automatic loss detection is calculated. ▸ `deactivated`: No automatic loss detection is calculated. Default: `deactivated`
Unknown Loss	If, for a node, the quantity of inflows exceeds the quantity of outflows, a differential flow in the selected color is displayed.

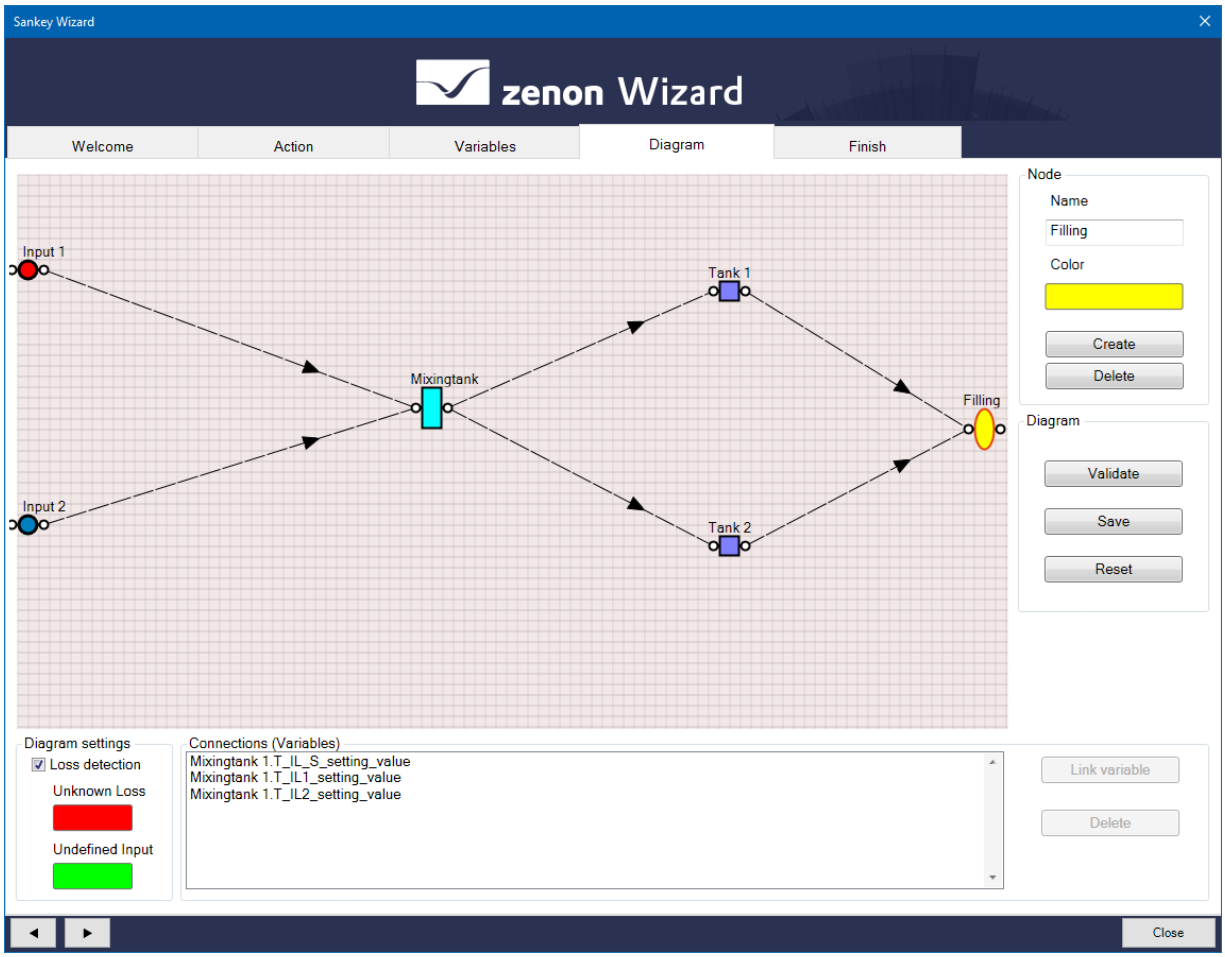
	Only active if **Loss detection** is active. Note: This differential flow is only displayed in zenon Runtime or in zenon Analyzer.
Undefined Input	If, for a node, the quantity of outflows exceeds the quantity of inflows, a differential flow is displayed in the selected color. Only active if **Loss detection** is active. Note: This differential flow is only displayed in zenon Runtime or in zenon Analyzer.

CONNECTIONS (VARIABLES)

Option	Description
Connections (Variables)	List of all the variables available for linking. If a variable is already linked to a connection, this variable is shown in green in the selection list. Note: These variables are provided in the **Variables** tab.
Link variable	Links the selected variable to the selected connection. Not active if no connection is selected. Note: If a second node and a variable is selected, the connection is also drawn in addition to the linking.
Delete	Deletes selected connection. Multiple selection of connections is possible. Not active if no connection is selected.

9.8.1 Create diagram

This is how you create a Sankey diagram with the Sankey wizard:

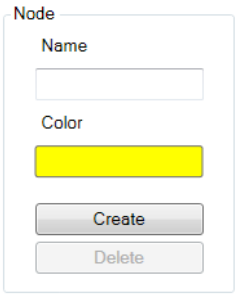


CREATING NODES AND CONNECTIONS:

Note that:

- You can create a maximum of 26 start or end nodes.
- The start nodes cannot overlap.

- The end nodes cannot overlap.



Engineering:

1. Enter, in the **Node** window, under the **Name** field, a name for the node to be created.
2. Select a color for the node by clicking on the **Color** field.
3. Then click on **Create**.
4. Create the required nodes and arrange these as you wish.
5. Connect the nodes by dragging a node output (to the right of the node) to a node input (to the left of the node).

Note: A node can have connections to several nodes or several nodes can have connections to one node. The size of the output node changes depending on how many connections there are. Nodes that are only connected on one side are displayed as round or oval. Nodes that have connections on both sides are shown as angular.

There are the following possibilities with regard to node connections:

Back-coupling: Establish a connection from the output of a node to its input

To do this:

- Double-click on the node on which you want to create the back-coupling.

or

- Drag the connection from the output of the node to its input.

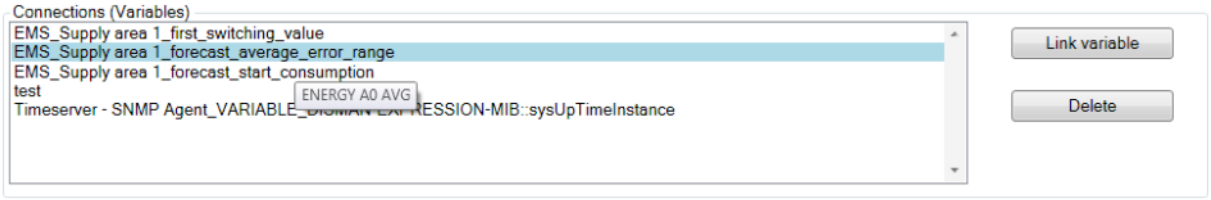
Establish a connection between 2 nodes and link a variable to it at the same time:

To do this:

1. Highlight both nodes that you want to connect and the variable that you want to link to it.
2. Click **Link Variable**.

LINKING VARIABLES TO CONNECTIONS:

There are several possibilities for linking variables to connections:



Drag&Drop

- Drag the desired variable from the **Connections (Variables)** window to the desired node connection.

Note: Provided that you have already established the connection between the nodes.

Button **Link Variable**

1. Highlight the desired node connection
2. Highlight the variable that you want to link to the connection.
3. Click on the **Link Variable** button.

Note: You can only link one variable to each connection.

Linking a variable to several node connections:

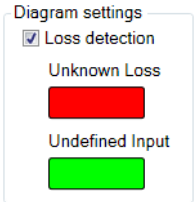
1. Hold down the `Ctrl` key and highlight several node connections.
2. Highlight the desired variable
3. Click on **Link Variable**

   or

4. Drag the variable to the highlighted node connections.

Note: In order to see the name of the variable that is linked to the connection, move the mouse to above the connection.

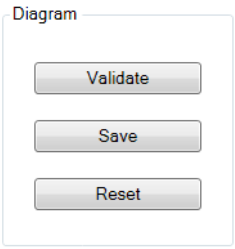
DIAGRAM SETTINGS:



If you activate the **Loss Detection** option, loss detection is calculated automatically. An additional connection then visualizes the differential flow.

You can select the colors that are to be used for the display of the differential flows in the **Unknown Loss** and **Undefined Input** fields. To select a color, click in the field. The color palette for selecting a color is opened

CONCLUDING THE DRAWING OF THE DIAGRAM:



Once you have finished drawing your diagram,

- Click on the button **Validate**:

If all your connections are correct, a dialog appears informing you that the diagram is valid. Otherwise a dialog appears informing you that there are still nodes that are not connected or that variables are not linked to the connections.
In order for a diagram to be valid:

- All nodes must be connected
- All connections must be occupied with a variable
- No nodes can overlap if they are moved towards inputs (left) or outputs (right)

To save your diagram,

- Click on the **Save** button.

The diagram you have created is validated. The diagram is saved and marked as valid or invalid. You are shown the project in which it is saved.

To redraw the diagram,

- Click on the **Reset** button.

All the nodes you have drawn and your connections are thus deleted.

Information

*Clicking on the **Validate** or **Save** buttons orientates the nodes to the right and left side of the drawing area.*

Note: Nodes must not overlap in the process.

EDITING NODES:

Once you have created some nodes, you can

Issue several nodes with the same name:

1. Hold down the `Ctrl` key.
2. Highlight the nodes that you want to name.
3. Enter a name.

Select the same color for several nodes:

1. Hold down the `Ctrl` key.
2. Highlight the nodes that you want to color.
3. Then select a color.

Moving several nodes at the same time:

1. Hold down the `Ctrl` key.
2. Select the node that you want to move.
3. Move the nodes. Your connections are also moved.

Note: You can also edit a node individually by highlighting it and make the desired change.

DELETING NODES:

1. Highlight the node that you want to delete.
2. Click, in the **Node** window, on **Delete** or use the `Del`key.

Deleting several nodes at the same time:

1. Hold down the `Ctrl` key and highlight the node that you want to delete.
2. Click, in the **Node** window, on **Delete** or use the `Del`key.

Note: When the node is deleted, its connections are also deleted.

DELETING CONNECTIONS:

1. Highlight the connection that you want to delete.

2. Click, in the **Connections (Variables)** window, on **Delete** or use the `Del`key.

Deleting several connections at the same time:

1. Hold down the `Ctrl` key and highlight the connections that you want to delete.
2. Click, in the **Connections (Variables)** window, on **Delete** or use the `Del`key.

9.8.2 Display of Sankey diagram in zenon Analyzer

The nodes are always rearranged in zenon Analyzer and do not follow the exact positioning in the wizard in the process. The display of the Sankey diagram is automatically optimized in zenon Analyzer for legibility and clarity.

The width of the connection is taken into account specially for this arrangement. This width is dependent on the respective values shown (the more there are, the thicker it is).

HORIZONTAL ARRANGEMENT

Nodes are distributed horizontally over the whole width in proportion to their number.

Example: With three nodes, the display of the first connection will end in the middle of the display.

VERTICAL ARRANGEMENT

The vertical arrangement of the nodes is always carried out in a vertical line in zenon Analyzer. This means that the first level is always arranged in a vertical line, regardless of the project configuration in the wizard.

The end nodes are automatically arranged from top to bottom at equal distances.

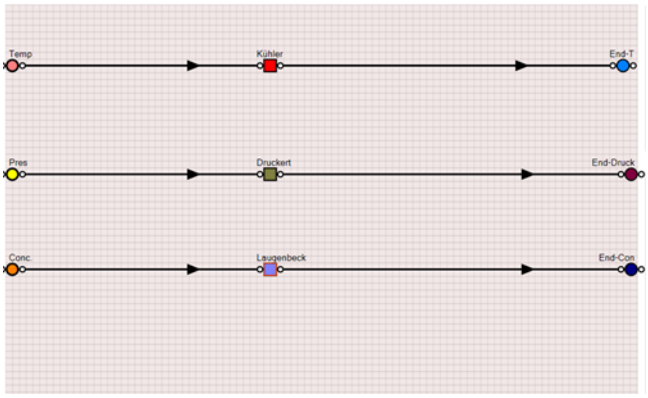
Information

Note the following examples of views.

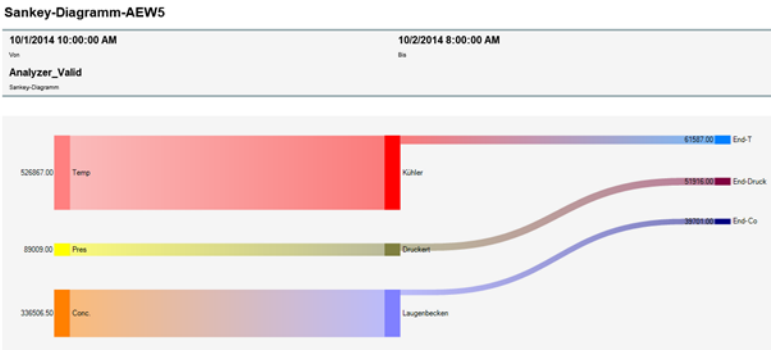
9.8.3 Examples of views: Wizard - zenon Analyzer

EXAMPLE OF HORIZONTAL ARRANGEMENT

SANKEY WIZARD CONFIGURATION

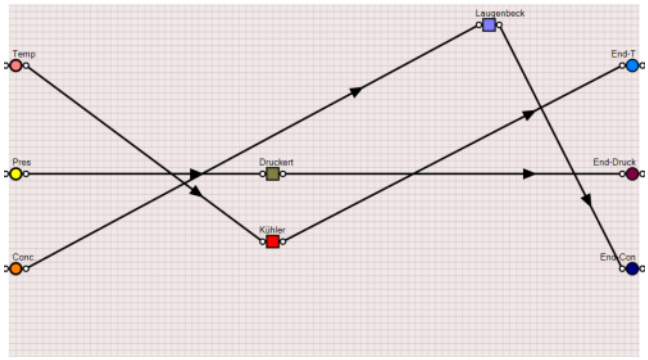


VIEW ZENON ANALYZER

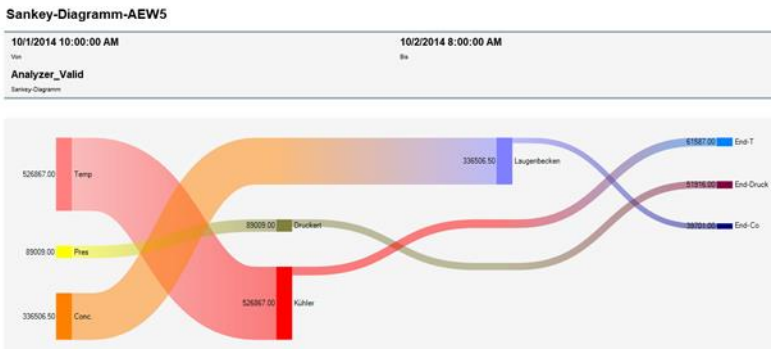


EXAMPLE OF VERTICAL ARRANGEMENT

SANKEY WIZARD CONFIGURATION

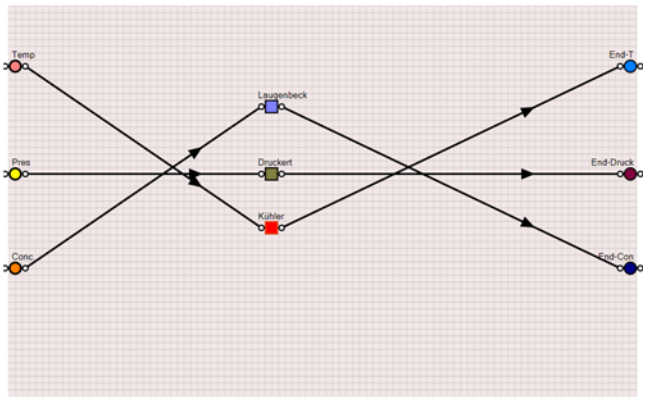


VIEW ZENON ANALYZER

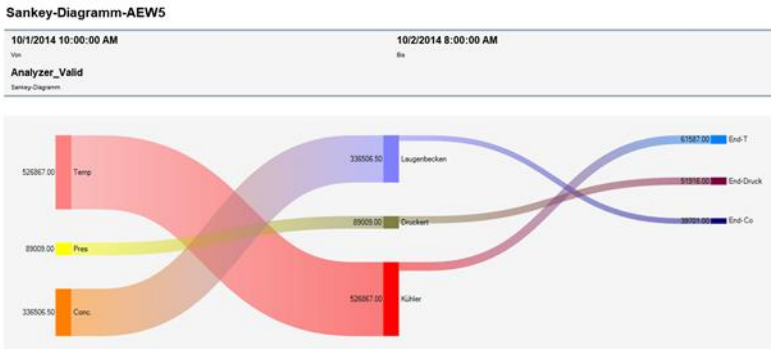


EXAMPLE OF MIXED ARRANGEMENT

SANKEY WIZARD CONFIGURATION



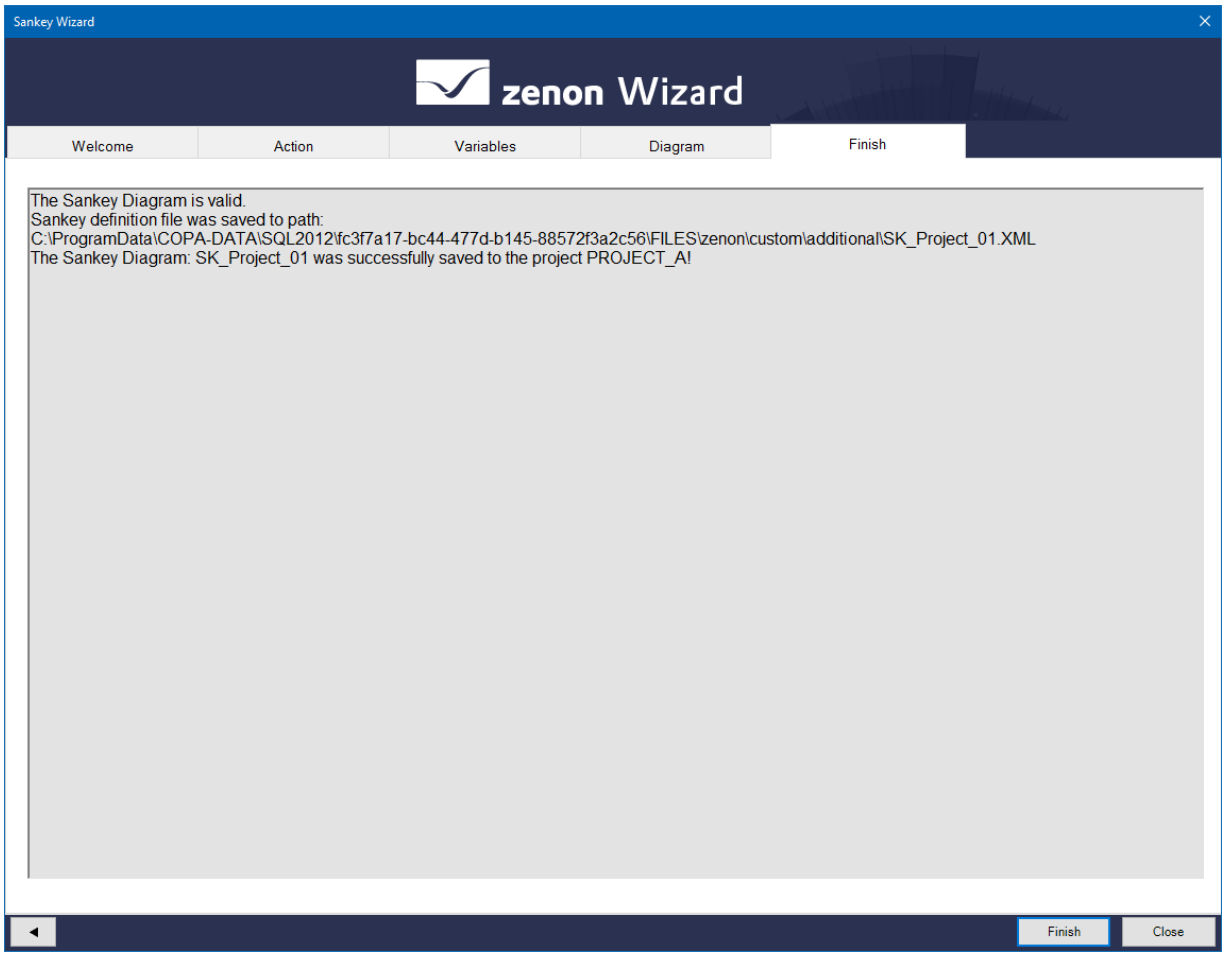
VIEW ZENON ANALYZER



9.9 Finish - complete

In the **Finish** tab, you can see whether the diagram you have created is valid and the location where the diagram you have created has been saved.

- Click on the **Finish** button.



To close the Sankey wizard:

- Click on the **Close** button.

> **Information**
>
> *The configuration of your Sankey diagram is saved in an XML file.*
>
> *This is in the **project manager** of the selected project in the **Files** node in the **Other** folder.*
>
> *With the Analyzer Export Wizard, you can accept the modeled Sankey diagram for use in zenon Analyzer.*
>
> *You can read details of this export in the Analyzer Export Wizard. (on page 37) manual*