



COPADATA
do it your way

zenon manual

Scripts

v.7.10





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1. Welcome to COPA-DATA help

GENERAL HELP

If you cannot find any information you require in this help chapter or can think of anything that you would like added, please send an email to documentation@copadata.com (<mailto:documentation@copadata.com>).

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 (<mailto: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 (<mailto:sales@copadata.com>).

2. Scripts

If several user defined functions should be connected in a sequence, they must be combined into a script.

Several scripts are defined in the system, which are automatically worked through:



License information

Part of the standard license of the Editor and Runtime.

PROJECT MANAGER CONTEXT MENU

Menu item	Action
Script new	Creates a new script.
Export XML all...	Exports all entries as an XML file.
Import XML...	Imports entries from an XML file.
Help	Opens the online help.

SCRIPTS

Script	Description
AUTOSTART	script will be executed automatically at start of online operation (individual workplace or server) and after activation of start display (at individual workplace or server), if the project is the Runtime start project The script is not executed, if the project is not defined as the start project or if it is a sub-project in a multi-hierarchical network.
AUTOEND	<p>Script will be executed automatically at end of online operation (individual workplace or server), if the project is the Runtime start project The script is not executed, if the project is not defined as the start project or if it is a sub-project in a multi-hierarchical network.</p> <p>Attention:</p> <ul style="list-style-type: none"> ▶ The VBA Event project inactive is carried out by script AUTO_END_xxx. Therefore the zenon function Execute VBA macro is no longer executed in scripts as VBA is not running at this time. VBA macros which should be carried out in "AUTO_END" must be called via Project.Inactive. ▶ Cyclical archives must not be given in the AUTOEND script.
AUTOSTART_CLIENT	Script will be executed automatically at start of online operation on a client and before activation of start display on a client, if the project is the Runtime start project
AUTOEND_CLIENT	Script will be executed automatically at end of online operation on a client, if the project is the Runtime start project
AUTOSTART_SRVPRJ	Script will be executed automatically at start of online operation on the PC, which is the server for the project, before opening the start screen, no matter, whether the project is defined as the start project or whether it is a sub-project in a multi-hierarchical network.

AUTOEND_SRVPRJ	Script will be executed automatically at end of online operation on the PC, which is the server for the project, no matter, whether the project is defined as the start project or whether it is a sub-project in a multi-hierarchical network.
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These scripts are available for the simulation mode; they are executed automatically:

Script	Description
AUTOSTART_SIMUL	If Runtime is started in simulation mode, the script with the name AUTOSTART_SIMUL is executed automatically if it is available.
AUTOEND_SIMUL	If Runtime is ended in simulation mode, the script with the name AUTOEND_SIMUL is executed automatically if it is available.

2.1 Engineering in the Editor

The list of defined scripts in the active project is displayed in the detailview after selecting the folder **Functions/Scripts** in the treeview of the Project Manager.

The following commands are available in the context menu of the detailview of the Project Manager, depending whether a script is selected or not.

Context menu node **Scripts**

Parameters	Description
Script new	Creates a new script.
Export XML all	Exports all scripts as an XML file.
Import XML	Imports scripts from an XML file.
Paste	After copying or cutting the copied or cut script from the Windows Clipboard can be pasted to the same project or to another.
Help	Opens online help

Attention

Input limitation: The script name is limited to 31 characters.



Info

When you change the script name, the parameters of the linked functions are changed accordingly. With multi-user projects functions are changed automatically after a check for Make changes possible. After the name has been changed successfully, the script is changed.

TOOLBAR SCRIPTS



Parameters	Description
Script new	Adds a new script to the list.
Add functions	Opens the dialog for adding functions.
Copy	Copies the script to the Windows Clipboard.
Paste	Adds a script which was copied to the Windows clipboard.
Delete	Deletes the selected script
Export selected XML	Exports selected entries as an XML file.
Import XML	Imports XML files.
Rename	Renames the script. It is also possible by left-clicking the field with the mouse or by pressing F2 .
Properties	Opens the property window for the selected script.
Help	Opens online help

CONTEXT MENU SELECTED SCRIPT

Parameters	Description
Add functions	Opens the dialog for adding functions.
Script new	Adds a new script to the list.
Rename script	Renames the script. It is also possible by left-clicking the field with the mouse or by pressing F2 .
Export selected XML	Exports selected entries as an XML file.
Import XML	Imports XML files.
Create standard function	Created a new function Execute script .
Copy	Copies the script to the Windows Clipboard.
Paste	Adds a script which was copied to the Windows clipboard.

Delete	Deletes the selected script
Properties	Opens the property window for the selected script.
Help	Opens online help

After creating a new script a name has to be entered and the new script appears in the structure in the detailview.

CONTEXT MENU FUNCTION

Parameters	Description
Move upwards	Moves the selected function upwards.
Move downwards	Moves the selected function downwards.
Remove function	Deletes the selected function from the script.
Help	Opens online help

PRE-DEFINED SCRIPTS

AUTO START

In the scripts `AUTOSTART` or `AUTOSTART_CLIENT` the start details (e.g. open headings and status lines, reset alarm outputs etc.) are configured.

Attention: The start screen must not be executed in the `AUTOSTART` script because it is defined via the project property `Start screen`.

To open a subscreen which always belongs to a main screen (screen-specific menu lines etc.) a screen script (e.g. `B_Screenname`) is to be defined (Screen creation). This ensures that on selection of the screen via the `Screen switch` function, selection from the screen catalog or the `Return to last screen` function, all detail screens are always opened with it.

AUTOEND:

In the scripts `AUTOEND` or `AUTOEND_CLIENT` the defined termination functions are configured (reset PIO-8 output process variables etc.).

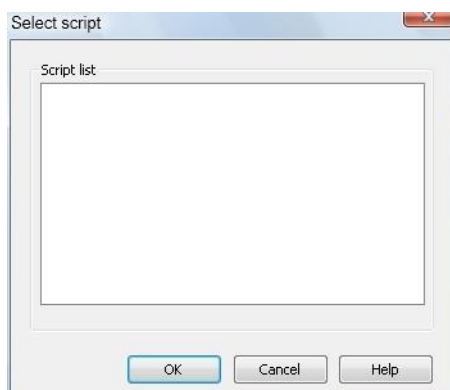
Attention:

- ▶ Cyclical archives must not be given in the `AUTOEND` script.
- ▶ The VBA Event `project inactive` is carried out by script `AUTO_END_***`. Therefore zenon function `Execute VBA macro` is no longer executed in scripts as VBA is not running at this time. VBA macros which should be carried out in "AUTO_END" must be called via `Project.Inactive`.

2.2 Functions for scripts

Via functions scripts are started in the Runtime:

1. Select the `New function...` command in the `Functions` node
2. navigate to `Scripts`
3. select
 - a) `Execute script` in order to execute an already existing script in node scripts in the Runtime
 - b) `Scripts with online selection` in order to make it possible to select a script which should be started in the Runtime.



FUNCTION "EXECUTE SCRIPT"

The function `Execute script` executes a script, which was pre-defined in the Editor, in the Runtime.

FUNCTION "SCRIPT WITH ONLINE SELECTION"

This function is used to select a script before executing it from the script administration during online administration.

When engineering, you must indicate a pre-defined script. This script is used as the default selection in the selection mask in the Runtime.

SCRIPTS IN THE NETWORK

At active network you can define via property node `Execution` for scripts on which computer the script should be executed.



Info

Take care of the priorities of the script execution in the network (on page 12)

2.2.1 Priorities in the network

At active network you define via property node `Execution` for scripts where the script is executed:

- ▶ `Current computer`
- ▶ `Client`
- ▶ `Server`
- ▶ `Standby`

This execution location is true for functions contained in the script. Function which had a different execution location assigned, take over the execution location defined here.

EXAMPLE 1: CURRENT COMPUTER

- ▶ Function 1 was defined with execution location `Server`.
- ▶ Function 2 was defined with execution location `Client`.
- ▶ For function `Execute script` the `current computer` was defined.

- ▶ Consequence: Both functions are carried out on the same computer; the computer in which function `Execute scripts` is executed. This can be a Client, a Server or a Standby.

EXAMPLE 2: CLIENT VERSUS SERVER

- ▶ The script contains 2 functions with execution location `Client`.
- ▶ For function `Execute script Server` was defined.
- ▶ Consequence: Both scripts are executed on the Server no matter on which computer `Execute script` was started.

EXAMPLE 3: DRIVER COMMANDS:

Driver commands are executed on the Server and the Standby per default. If a script with driver commands is started on the Client, then:


- ▶ the function driver command is started on the Client
- ▶ the driver is stopped after the execution of the script on the Server

2.3 Operating during Runtime

In the online operation, the following functions are available for script use:

Parameters	Description
Script: Execute (on page 11)	Direct execution of the activated script
Script: select online (on page 11)	Select a script before it is executed

By using the function `Script: Select online` the script administration is opened.

The user can select a script during online operation. After pressing the button  the selected script is executed.