



COPADATA
do it your way

zenon manual

Startup Tool

v.7.00



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1. Welcome to COPA-DATA help

GENERAL HELP

If you miss any information in this help chapter or have any suggestions for additions, please feel free to contact us via e-mail: documentation@copadata.com (<mailto:documentation@copadata.com>).

PROJECT SUPPORT

If you have concrete questions relating to your project, please feel free to contact the support team via e-mail: support@copadata.com (<mailto:support@copadata.com>)

LICENSES AND MODULES

If you realize that you need additional licenses or modules, please feel free to contact the sales team via e-mail: sales@copadata.com (<mailto:sales@copadata.com>)

2. Startup Tool

The Startup Tool makes it possible:

- ▶ to start Editor and Runtime with certain parameters
- ▶ to run different zenon versions on one computer in parallel
(already installed zenon versions are automatically created in the Startup Tool)
- ▶ to administrate different SQL instances for the same zenon version

- ▶ to administrate the settings for different versions
- ▶ to define the language of the Editor and the Runtime before the start

License information

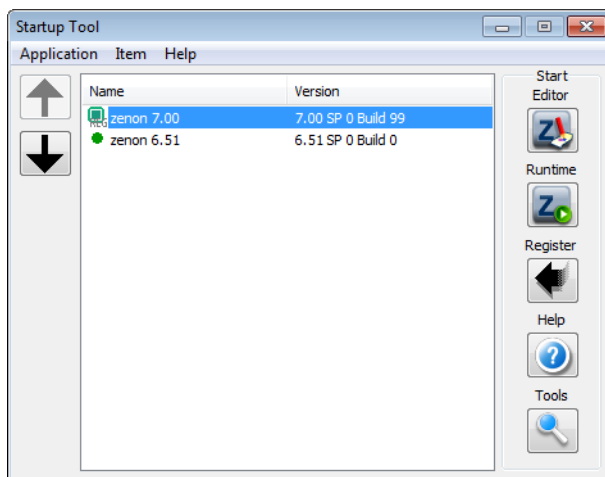
Part of the standard license of the Editor and Runtime.

Attention

*The Startup Tool does not start when the service `zenAdminSrv` is not running. If it is not active, you can start it manually in the Windows **Control Panel** under **Administrative tools/Services**.*

3. Start dialog

You administrate the currently installed zenon versions in the start dialog.



Button	Function
Editor	starts the Editor of the selected zenon version
Runtime	starts the Runtime of the selected zenon version
Register	registers all services of the selected zenon version
Help	Opens the zenon help.
Tools	opens a dialog for starting additional applications of the selected zenon version

PROCESSES DURING STARTING

During starting the Editor or the Runtime data from the start settings are written to file `zenon6.ini`. Existing settings in the INI file are overwritten.

Since version 5 the network communication is handled with two services (`zenNetSrv.exe` and `zenSysSrv.exe`). Both files must exist in the zenon folder. As these services are version dependent, they must be registered for the appropriate version.



Attention

After converting a project to a higher zenon version, you cannot edit or execute it with a lower version. With network projects the same zenon versions must be started.

3.1 Application

Entry	Function
Options	Opens the dialog for configuring the settings.
Exit	Closes the Startup Tool.

OPTIONS

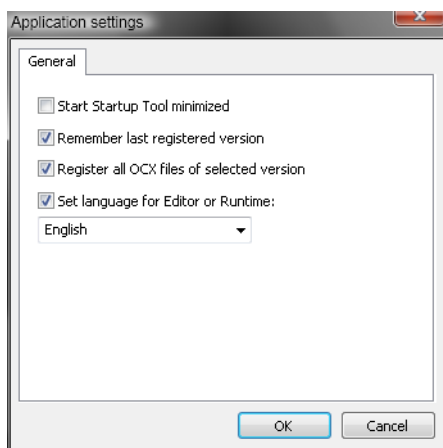
Entry options in menu application opens the settings for the Startup Tool.

- General (on page 7): general settings

- Encrypt network communication (on page 8): Configuration of the strong encryption of the network communication

3.1.1 General

General settings:



Parameters	active	inactive
Start Startup Tool mimimized	<p>Starts the Startup Tool minimized. You can reach the tool with the help of its icon in the task bar.</p> <p>The context menu offers all possible actions from the Start dialog (on page 5) for the active <CD_PRODUCTNAME>.</p>	Opens the tool on the desktop (default).
Remember last registered version	Sets the chosen version as standard and selects it automatically at the next start. Then the version is not registered again (default).	Offers the first version in the list when starting the Startup Tool. When the Editor or the Runtime are started, the respective version is always registered again.
Register all OCX files of selected version	<p>registers all OCX files (ActiveX controls) which exist in the program folder.</p> <p>This option makes sure that there are always appropriate ActiveX controls for each version (default).</p> <p>Attention: It has no influence on the registration of ActiveX controls and COM servers which are listed in the individual settings (on page 20) of the respective version.</p>	<p>registers only the pre-set components.</p> <p>This option accelerates the registration process and is appropriate for all projects which do not use ActiveX.</p>
Set Language for Editor or Runtime	<p>Starts Editor or Runtime with the language selected in the selection list.</p> <p>Makes sure that zenon always uses the defined language when started from the Startup Tool. This does not influence the direct start of >CD_PRODUCTNAME<.exe.</p>	<p>Starts Editor or Runtime with the language defined in zenon6.ini. There the set language is the language which has lastly been used in zenon or defined there under Options -> Settings -> Editor and Runtime selected language (default).</p>

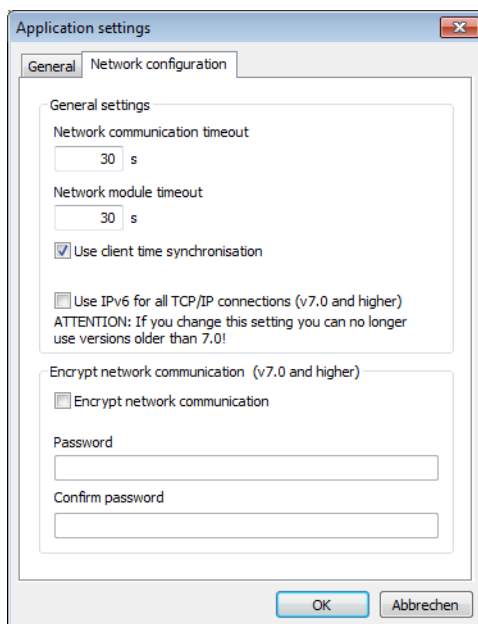
3.1.2 Network configuration

The following applies for zenon from version 7 onwards:

- ▶ you can use IPv6
- ▶ you can encrypt the transfer in the network.

This dialog configures:

- ▶ Time-outs
- ▶ the use of TCP/IP via IPv4 or IPv6
- ▶ the serious encryption of the network communication at the local computer



Parameters	Description
General settings	<p>General settings.</p> <p>Changes of these settings are written to the registry in files zenon6.ini or zenon.ini and overwrite possibly varying manual configuration.</p> <p>Changed settings must be carried out for all Runtime computers or all connected stations. At changes of the IPv6 settings, the computer must be restarted.</p> <p>Changes are carried out after leaving the dialog only after the confirmation of a warning message with click on button Yes.</p>
Network communication time-out	<p>Time-out for network communication in seconds. Default = 30</p> <p>Equals entry NET_TIMEOUT_MSEC= in file zenon6.ini.</p>
Network module time-out	<p>Time-out for module communication in seconds. Default = 30</p> <p>Equals entry NET_NETMODULE_TIMEOUT_MSEC= in file zenon6.ini.</p>
Time synchronisation with server project	<p>Active: Time is compared with a server project (default).</p> <p>Inactive: Time is not compared (for circular redundancy, for example)</p> <p>Equals entry TIMESYNCH in file zenon6.ini.</p>
Use IPv6 for all TCP/IP connections	<p>Active: All TCP connections are only established via IPv6.</p> <p>Inactive: All TCP connections are only established via IPv4.</p> <p>Dual operation is not possible.</p> <p>Equals entry USEIPV6= in file zenon6.ini.</p> <p>Note: If this option is changed, the computer must be rebooted. The change must also be carried out on all connected stations.</p> <p>The following components are not affected by the setting:</p> <ul style="list-style-type: none"> ► Driver communication with the PLCs

	<ul style="list-style-type: none"> ▸ Protocol communication in the Process Gateway plug-ins ▸ Workbench and Runtime communication in zenon Logic <p>Attention: Only works with version 7 onwards. No versions prior to version 7 can be started if this is active.</p>
Encrypt network communication	Settings for serious encryption in the network
Encrypt network communication	Active: Communication in the network is encrypted.
Password	<p>Enter password.</p> <p>For the criteria, see the "Network encryption password" section in the Strong encryption of network communication chapter.</p> <p>The displayed length is always set at 20 characters, in order to hide the actual length.</p> <p>The password defined here is stored encrypted in the zenon6.ini.</p>
Verify password	Enter the password for verification again.



Attention

If entries were changed manually in the local **zenon6.ini**, they are overwritten as soon as the confirmation message is answered with "**Yes**" at the registration.

MESSAGES

For explanations about system messages and error messages see chapter Message at registration (on page 22).



Info

You can find notes on error messages from strong encryption in:

Network handbook -> Strong encryption of network communication chapter -> Error messages section.

3.2 Item

The menu **Item** has the following entries:

Entry	Function
New	Creates a new entry in the list and opens dialog Properties (on page 12) .
Delete	Deletes the selected entry after confirming a confirmation message.
Properties	Opens dialog Properties (on page 12) for the selected entry.

3.3 Help

In menu help the following entries exist:

- ▶ Help: opens the online help
- ▶ Info about: shows version information.

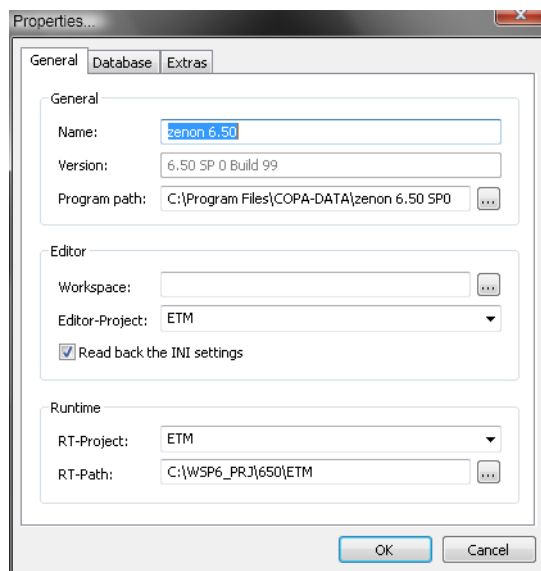
4. Properties

In dialog **Properties** the parameters for each entry are defined:

Entry	Function
General	General settings
Database	Settings for the database connection
Extras	Settings for registering ActiveX controls (OCX) and COM servers (DLL) and for starting additional programs or batch files.

4.1 General

In this part details about the zenon versions are entered.



The following properties are available for a selected entry:

GENERAL

Parameters	Description
Name	Distinct name as it should be displayed in the list. This entry is absolutely essential.
Version	Startup Tool automatically enters the version number of zenon. For this you must first select the program path under Path .
Program path	Program path in which zenon was installed.

EDITOR

Parameters	Description
Workspace	The desired workspace when the Editor is started. As soon as this is entered all projects which are in this workspace are displayed automatically in the drop-down list under Editor project .
Editor-Project	Select the project which should be active after the Editor started.
Read back the INI settings	<p>Active: All changed settings are read automatically after the Editor is closed. These settings are used for the next start of the Editor. (This affects Workspace, Editor-Project, RT-Project and RT-Path).</p> <p>Inactive: The settings of this dialog are always used when the Editor is started. Changes made while working with the Editor are discarded.</p>

RUNTIME

Parameters	Description
RT-Project	Project which is set as start project for the Runtime.
RT-Path	Path of the project. If the Runtime project is part of the workspace, the path is entered automatically.



Info

UNKNOWN PARAMETERS?

If the settings for the workspace are unknown, use the following approach.

1. Enter **Name**, **Path** and **Workspace**
2. Leave **Editor-Project**, **RT-Project** and **RT-Path** empty
3. Activate **Read back the INI settings**
4. Leave dialog by clicking **OK**.

After the Editor has been started and closed once, the start settings are automatically taken from the INI file.

4.2 Database

Define the database properties. It is possible to use different SQL instances for the different entries (zenon versions).



Attention

As of version 6.51 the SQL instance can be defined and the password is saved in an encrypted form. New entries have a higher priority than existing entries.

Compatibility: *If nothing is changed, the existing entries remain valid. If you change an entry for version 6.51 or higher, the new entries are valid. Older versions must be maintained separately. You can find the settings for version previous to 6.51 in chapter Database previous version 6.51 (on page 18).*

Display dialog: *The display of the dialog is automatically adopted to the selected version (previous 6.51 (on page 18), as of 6.51).*

Properties...

General Database Extras

Read from zenDB.ini

Clear all fields

SQL Instance: localhost\ZENON_DEV

DB Path: C:\ProgramData\COPA-DATA\SQL\

User: zenOnSrv

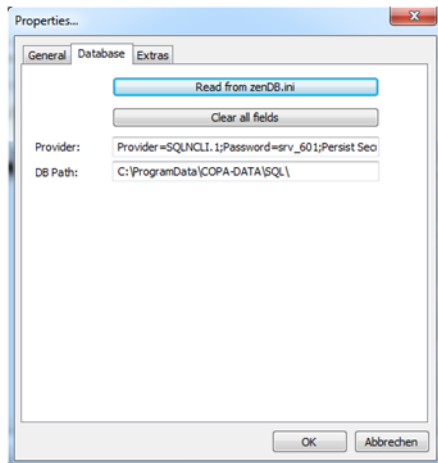
Password:

OK Abbrechen

Entry	Function
Read from zenDB.ini	After a click on the button, the settings from file zenDB.ini are read and the fields SQL instance, DB Path, User and Password are filled automatically.
Clear all fields	All input field are cleared. Empty entries are not written to zenDB.ini at registering.
SQL instance	Name of the SQL server instance which should be used. The name can be entered directly in the input field or can be selected from the drop-down list. Note: By clicking on the drop-down list the local computer is searched for instances which are then listed. The search may take some time.
DB Path	Path for the SQL database of the zenon projects. For example: C:\ProgramData\COPA-DATA\SQL\ Attention: It is necessary that SQL Server 2005 and SQL Server 2008 R2 use different folders. Background: When converting projects the GUID stays the same. If the same folders are used, both instances overwrite each others database files.
User	User name for the database. Necessary rights In the SQL Server the user must have the following Server roles: <ul style="list-style-type: none">▶ public▶ sysadmin
Password	Password of the user. It is stored encrypted. The entry length is always displayed with 20 characters regardless of the actual length. Attention: The encryption is done via the Startup Tool. Therefore you must carry out the database setting via the Startup Tool.

4.2.1 Database after version 6.51

Setting of the database property before zenon 6.51:



Entry	Function
Read from zenDB.ini	After a click on the button, the settings from file zenDB.ini are read and the fields Provider, DB Path are filled automatically.
Clear all fields	All input field are cleared. Empty entries are not written to zenDB.ini at registering.
Provider	<p>Connection to the SQL instance. Important information:</p> <ul style="list-style-type: none"> ▶ Instance name ▶ Used provider ▶ User name ▶ User password <p>For example: Provider=SQLNCLI.1; Password=srv_000; Persist Security Info=False; User ID=zenOnSrv; Initial Catalog=%s; Data Source=localhost\ZENON_DEV;</p>
DB Path	<p>Path for the SQL database of the zenon projects. For example: C:\ProgramData\COPA-DATA\SQL\</p> <p>Attention: It is necessary that SQL Server 2005 and SQL Server 2008 R2 use different folders.</p> <p>Background: When converting projects the GUID stays the same. If the same folders are used, both instances overwrite each others database files.</p>



Attention

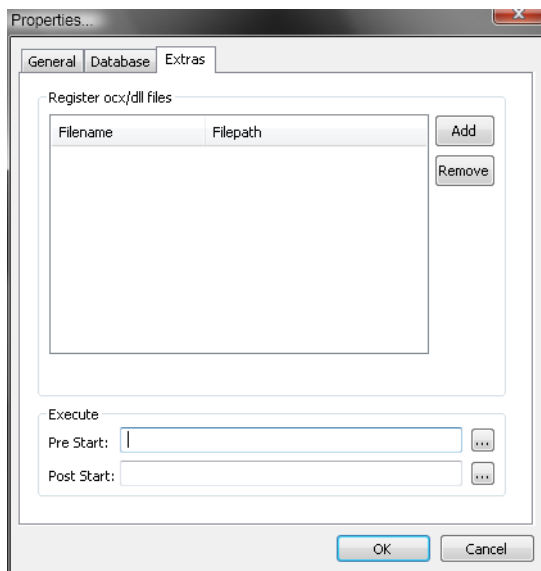
The entry for Provider differs in this dialog from the entry in the zenDB.ini.

*Dialog: String starts with **Provider=...***

*zenDB.ini: String starts with **Provider=Provider=...***

4.3 Extras

Define ActiveX controls (*.ocx) or COM servers (*.dll) which should be registered together with the respective zenon version. The OSX and DLL can originate from any sources, i.e. they can be written by yourself or by other manufacturers. Additionally you can define programs which are carried out before the starting or after the closing the Editor or the Runtime.



REGISTRATION ACTIVEX CONTROLS - COM SERVER

All files listed here are automatically registered together with the respective zenon version - independent of the central setting (on page 5) **register**.

Parameters	Description
Filename/Filepath	List of all files to be registered
Add	opens the Windows dialog for selecting a file to be registered. There you can select OCX or DLL files individually and add them to the list. First select the wanted file type (OCX or DLL). All files are saved with path information. If the path changes, remove the link with Remove and create a new one.
Remove	Removes all selected entries from the selection list of the files to be registered.

PRE-START AND POST-START PROGRAMS

With Pre Start and Post Start you can define programs and batch files which should be carried out before starting or after closing zenon.

Parameters	Description
Pre Start	External program that should be started, before the Editor or Runtime is started.
Post Start	External program that should be started, after the Editor or Runtime is closed. Attention: Post Start is only executed if option Read back the INI settings (<i>Item->Properties->General</i>) was activated.

5. Message at registering

POP-UP AT REGISTERING

Message	Meaning
<p>You have changed the IPv6 setting. All internal TCP/IP connections will be switched to IPv6/IPv4.</p> <p>To ensure that all affected components are properly switched you have to restart the computer! You will also have to change this setting on all connected station!</p> <p>Do you really want to apply the change?</p>	<p>You change the settings for the IP protocol from IPv4 to IPv6 or vice versa.</p> <p>After the changes you must restart the computer for all services to be adapted accordingly. The change must also be carried out on all connected stations.</p> <p>These changes are written to zenon6.ini or zenon.ini together with the registration and overwrite any manual configurations.</p>
<p>General network configuration settings will be changed.</p> <p>You have to restart the runtime to apply the changes!</p> <p>Attention: Do not forget to adapt the settings on other stations as well.</p> <p>Apply settings.</p> <p>Are you sure this is your intent?</p>	<p>You change general settings (on page 8) in the same ways as time outs.</p> <p>These changes are written to zenon6.ini or zenon.ini together with the registration and overwrite any manual configurations.</p> <p>You must adapt changed settings for all Runtimes.</p>

MESSAGE AT REGISTERING

At registering the service all steps are displayed in an own window which closes after 4 seconds automatically. When an error occurs, an warning message informs you about the cause. After confirming the message the procedure is canceled. zenon is not started. Possible error messages:

Message	Reason	Hint
Couldn't find zenNetSrv Service!	File zenNetSrv.exe is missing from the zenon program folder or a wrong version is available.	Most of the time the fastest and safest solution is a new installation of zenon.
zenNetSrv.exe still running!	The service zenNetSrv.exe could not be stopped.	It is possible that a security tool is running on the computer which prevents the access.
Couldn't find zenNetSrv Service!	File zenNetSrv.exe is missing from the zenon program folder or a wrong version is available.	Most of the time the fastest and safest solution is a new installation of zenon.
zenNetSrv.exe still running!	The service zenSysSrv.exe could not be stopped.	It is possible that a security tool is running on the computer which prevents the access.

6. Command line

You can also operate the Startup Tool using the command line. For this file zenon_Startup.exe must be present in the system path. You can find the file

- ▶ under Vista/7 in folder C:\Program Files\Common Files\COPA-DATA\STARTUP
- ▶ under XP in folder C:\Program Files\Common Files\COPA-DATA\STARTUP

In the command line you can:

- ▶ create new entries (on page 24)
- ▶ reorganize (on page 27) existing entries (e.g. after older versions have been deleted)
- ▶ register (on page 27) entries

6.1 Parameters

The input is started with `zenon_Startup.exe` followed by a Parameter and possible field names.

Parameter:

Parameter s	Function	Field name	Return value
-new	creates a new entry.	yes, list see also new (on page 24)	0 or 1
-reorg	checks and reorganizes existing entries	not available	None
-reg	registers services	Name of the entry	None

USING SEVERAL PARAMETERS AT ONCE:

It is possible to use several parameters at once. If several **-new** parameters are used at once, the return value cannot be evaluated unambiguously.

In general when several parameters are used, it is proceeded in the following order:

1. **-new**: Create new entries.
2. **-reg**: Register the stated entry.
3. **-reorg**: Remove all invalid entries for deleted zenon versions.

6.1.1 new - Creating new entries

Parameter **-new** is used for creating new entries. It needs at least two field names:

- ▶ **NAME** as unique name for the entry

If the name of the entry is already available, no entry is created.

- ▶ **PATH** as path in which zenon is stored.

SYNTAX

The syntax is constructed as follows: *zenon_Startup.exe -> Parameter > Field name="TEXT"*

1. **zenon_Startup.exe**
2. Space
3. Parameter

4. Space
5. Field name
6. = character
7. opening quotation marks
8. Text
9. closing quotation marks



Example

```
zenon_Startup.exe -new NAME="New entry" PATH="C:\Example Directory\zenon"
```

FIELD NAME

The following field names can be used:

Field name	Mandatory field	Description
NAME	X	Unique name of the entry. e.g.: NAME="Test"
PATH	X	The user path in which zenon is saved. e.g.: PATH="C:\Program Files\COPA-DATA\zenon 6.50 SP0"
PROJECT_RT	-	Name of the Runtime project which should be started. e.g.: PROJECT_RT="Test project"
PROJECT_RT_PATH	-	The Runtime directory of the project (see also PROJECT_RT). e.g.: PROJECT_RT_PATH="C:\Users\Public\Documents\zenon_projects\test projekt"
PROJECT_ED	-	The project which should be activated in the Editor. e.g.: PROJECT_ED="Test project"
WSP	-	The workspace with which the Editor should be loaded. e.g.: WSP="C:\Users\Public\Documents\zenon_projects\DEMO622.WSP6"
SQLSRV	-	Name of the SQL Server which should be used by the Editor. e.g.: SQLSRV="MSSQL\$ZENON_DEV"
PROVIDER	-	Provider string for the initialization of the SQL connection. e.g.: PROVIDER="Provider=SQLNCLI.1;Password=000;Persist Security Info=False;UserID=zenOnSrv;Initial Catalog=%s;DataSource=localhost\ZENON_DEV;"
DBPATH	-	Path for the SQL database which should be used e.g.: DBPATH="C:\ProgramData\COPA-DATA\SQL\"
PRESTART	-	Program call which is executed before the start of the Editor or the Runtime or the registering of this version. e.g.: PRESTART="C:\zenon versions\zenon 6.50\Dlls\zenVNCCLI.exe"

POSTSTART	-	<p>Program call which is executed after the Editor is closed.</p> <p>e.g.: POSTSTART="C:\zenon versions\zenon 6.50\Dlls\zenVNCCLI.exe"</p> <p>Attention: Post Start is only executed when in the Startup Tool or in Startup.ini option Read back the INI settings (<i>Item -> Properties -> General</i>) is activated.</p>
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The field names are separated by spaces.



Info

Paths with spaces must always be put between parentheses.

RETURN VALUES

0 - execution faultless

1 - entry could not be created

6.1.2 reorg - reorganizing of entries

Parameter **-reorg** checks all entries whether the linked zenon version is still available in the file system. If the application files are no longer found, the entry is finally deleted from the Startup Tool.

The command does not provide a return value. After execution the Startup Tool is started.

Example: `zenon_Startup.exe -reorg`


6.1.3 reg - register entries

The parameter **-reg** registers all necessary services in the folder of the stated entry. The cue takes place via:

► **-reg** "Name of the entry"

If the Startup Tool has already been started, nothing is registered but the Startup Tool is moved to the foreground.

The command does not supply a return value.

An icon representing a document or example, with a blue square and a green arrow pointing right.

Example

```
zenon_Startup.exe -reg "Version 6.50"
```

registers version 6.50.

Requirement: there is an entry with this name in the Startup Tool.