zenon
by COPA-DATA

zenon manual

Remote Transport

v.8.20

Contents

1 Welcome to COPA-DATA help

ZENON VIDEO TUTORIALS

You can find practical examples for project configuration with zenon in our YouTube channel (https://www.copadata.com/tutorial_menu). The tutorials are grouped according to topics and give an initial insight into working with different zenon modules. All tutorials are available in English.

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.

PROJECT SUPPORT

You can receive support for any real project you may have from our customer service team, which 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 Remote Transport

The Remote Transport is used to transport Runtime files to a target system. Information about saving and reloading Editor files can be found in the chapter project backups.

GENERAL INFORMATION

If Runtime and the Editor are on the same PC, the Runtime files now are directly available to the Runtime. If Runtime is on a different computer, the Runtime files are transferred via Remote Transport to provide them locally there.

With Remote Transport:

- Only the respective necessary files are transferred in the network
- Other desired files can also be transported (ActiveX controls, fonts, etc.)
- Automatic upload to **Server 1** and **Server 2** can be instigated
- Many other functions can be used

Note: Note, with multi-project administration, the correct transfer of the individual projects.

Attention

PNG graphics files cannot be overwritten if they are currently being displayed in Runtime.

Background: The Runtime protects opened **.png** files. This prevents these being overwritten.

Solution: Before Remote Transport is instigated, it must be ensured that screens with ***.png** files:

- Are not called up in Runtime
- Are not being used by another program

This also applies for the reloading of amended Runtime files. The Runtime sync in the network does not work for a ***.png** screen if this is switched on a zenon computer that is involved in the process (standby server, client).

USE NETWORK TOPOLOGY

Use the **network topology** view in the Editor to transfer files to several target systems. Here you can configure the transport of the Runtime files for all target systems with a clear overview and multiple selection.

Particular benefit: All required Runtime files are created together and only then transferred to the individual target systems.

FUNCTIONALITIES

In addition to the pure copy function, Remote Transport also offers a range of other functionalities:

Parameter	Description
Incremental copy	The Editor automatically recognizes which files on the target system differs from the files which should be transferred and transfers only the changed files.

Parameter	Description
Set start project	With the Remote Transport the start project on the remote station can be set.
Starting and stopping Runtime	The Runtime can be started and closed in the remote computer.
Transfer system status	The current state of the remote PC (operating system, zenon version, existing drives etc.) can be found out.
PC reboot	A remote PC can be rebooted.
Online reload	Remote Runtime is updated online in the process
Copy back project data	An entire project can be copied back from the remote system.
Copy and register data	Files are not only copied, but also registered on the target system. Particularly interesting for fonts and ActiveX elements.
Copy and execute data	Executable files are copied and started.

Attention

Note the following when starting Runtime via Remote Transport:

- The 32-bit **zensyssrv.exe** starts the 32-bit Runtime
- The 64-bit **zensyssrv.exe** starts the 64-bit Runtime

Information

In theory, transfer via Windows Explorer or the approval of network drives is possible. We expressly advise against this procedure. Transfer via Remote Transport is more secure and systematic and reduces the load on the network connection. When connecting as a network device, whether Runtime works or not depends on the drive being available and that it offers sufficient performance.

RELOADING DELAYED BY THE SYSTEM

The reloading of Runtime is moved back to a later time by the system if:

- The user opens a context menu or a dialog
- A message box is shown

The reloading is only carried out in this case if these elements are closed again.

3 Toolbar Remote Transport

A development computer can set up remote connections to other stations. The **Remote transport** toolbar provides functions for the transfer and request of data.

Symbol	Description
Remote Transport:Connection settings	Opens the configuration dialog of the Remote Transport (on page 10) for setting the target system and the target folder.
Remote Transport:Establish connection	Establishes a Remote Transport connection (on page 28) to the remote system.
Remote:Transfer changed Runtime files	Transfers all Runtime files that were changed on the development computer to the target computer since the last change.
Remote:Copy back all Runtime files	Reads back all Runtime files from the engineered folders on the remote system into the local Runtime folder.
Remote:Set start project	Sets the active project as the start project on the remote system.
Remote:Start Runtime	Starts Runtime on the remote system.
Remote:Exit Runtime	Stops Runtime on the remote system.
Remote:Reload project	Executes the **reload** function on the remote system.
Options for toolbar	Clicking on the arrow opens the submenu: *Active*: Toolbar is displayed. If the toolbar is not displayed, it can be activated using the **Options -> Toolbar** menu. **Note:** For free placed toolbar (undocked from the Editor) options are not displayed. The toolbar can be closed by clicking on button X.

Further symbols can be added using the toolbar options.

Symbol	Description
Transfer all Runtime files	Transfers all Runtime files to the target system.
Restart operating system	Starts the operating system of the target computer after confirmation. Under Windows CE this option is not supported.
Get system status	Determines system status of the target computer and writes data to the output window. The following are determined: ▸ Computer name ▸ Operating system ▸ Runtime active/not active ▸ Start project ▸ Real memory ▸ Drives ▸ Remote serial number ▸ Remote zenon version
Change password and display licensing	Opens dialog for connection establishing (on page 28). Enables: ▸ Changing the password for the connection establishment ▸ Display and change to the licensing of the target computer (for versions older than 8.00) ▸ Configuration of the encryption at the target computer

Note: All commands for Remote Transport are available in the project's context menu (on page 8).

4 Context menu Remote Transport

You can reach the commands for the Remote Transport via the toolbar or the context menu of the project:

1. Right-click on the project in the project manager.
2. Select the **Remote Transport** node in the context menu.
3. Select the desired command from the drop-down list.

Command	Function
Establishing a connection	Sets up a connection (on page 28) with the target computer.
Connection settings	Opens dialog to configure the connection (on page 28).
Transfer changed Runtime files	Transports all Runtime files that were changed on the development computer to the target computer.
Transfer all Runtime files	Transports all Runtime files from the development computer to the target computer.
Read back all configured Runtime folders	Reads all files that can be edited in the Runtime (such as recipes or user administration) back to the development computer.
Set project as start project	Set start project for target station.
Start Runtime	Starts the Runtime on the target station
Exit Runtime	Stops the Runtime on the target station.
Reload project	Executes the function **reload** on the target computer.
Restart OS	Starts the operating system of the target computer after confirmation. Under Windows CE this option is not supported.
Get system status	Determines system status of the target computer and writes data to the output window. The following are determined: ▸ Computer name ▸ Operating system ▸ Runtime active/not active ▸ Start project ▸ Real memory ▸ Drives ▸ Remote serial number ▸ Remote zenon version
Change password and display	Opens dialog for connection establishing (on page 28).

Command	Function
licensing	Enables: ▸ Changing the password for the connection establishment ▸ Display and change to the licensing of the target computer (for versions older than 8.00) ▸ Configuration of the encryption at the target computer

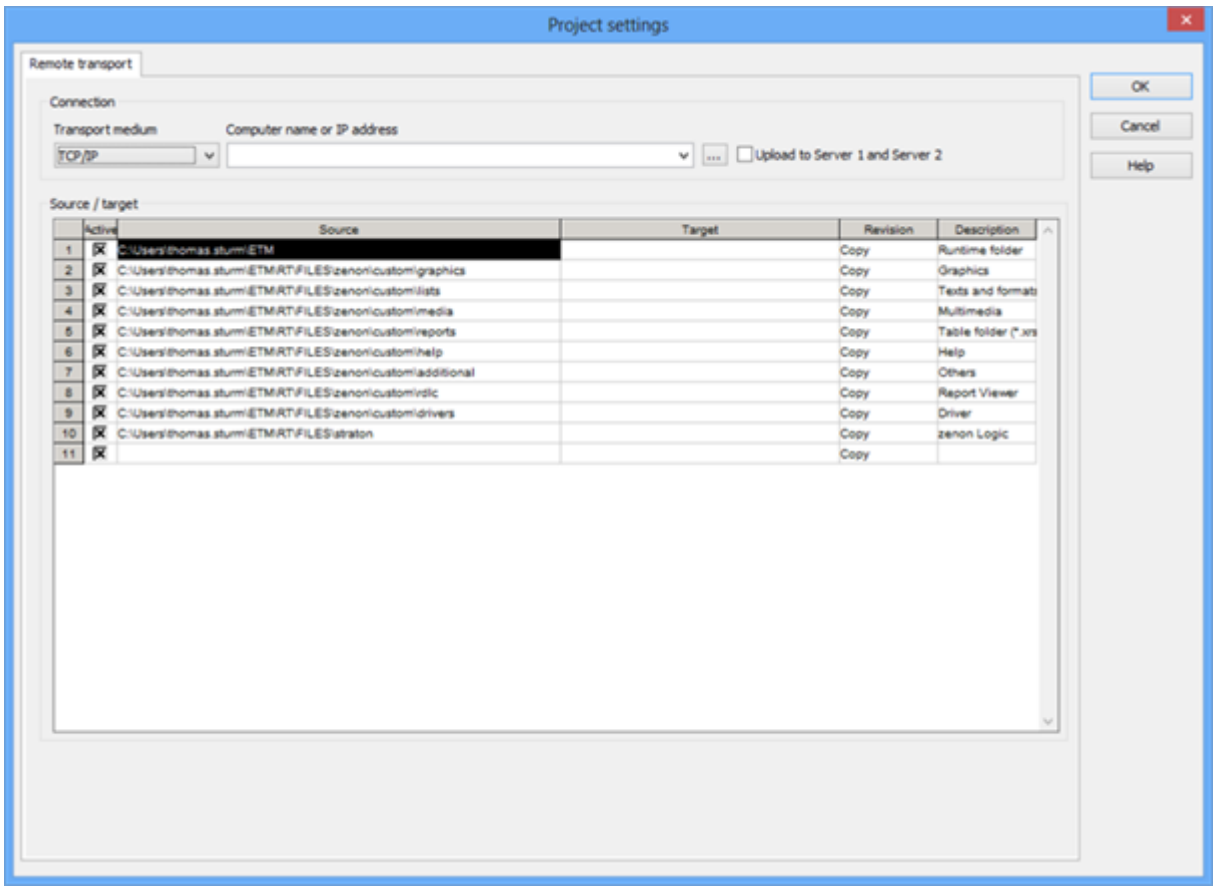
5 Engineering in the Editor

The Remote Transport is configured in the project properties under **General/Remote Transport** and controlled via the toolbar Remote Transport (on page 7).

To configure the Remote Transport:

1. navigate to the **General** node in properties
2. click on property **Remote Transport**

3. The dialog for the configuration of the connection properties and the files to be transferred is opened.
   Note: the screenshot shows the configuration for the **Transport Medium** *TCP/IP* with the network activated.



Parameter	Description
Transport medium	
Serial (on page 17)	Transfer via a serial connection, e.g. to a CE Terminal.
Port	Selecting the COM ports for the serial connection. **Note:** Only visible if *serial* has been selected as the **transport medium**.
TCP/IP (on page 16)	Transfer via TCP/IP in a network or via a modem.
Upload to Server 1 and Server 2	If the checkbox has been activated, the Runtime files are also transferred to the computers entered as **Server 1** and **Server 2** in the network in addition to the computer entered when a download takes place.

Parameter	Description
	Attention: Data is only transferred to **Server 2** if a computer name has been entered for **Server 2**. Default: *inactive* **Note:** Only visible if the network has been activated in the project settings and the transport medium TCP/IP has been selected.
Computer name or IP address	The computer name or the TCP/IP address is entered as target: ▸ Enter the computer name manually or via clicking button **...** ▸ Enter the IP address manually The IP address must have conform the defined IP version (IPv4 or IPv6).
Source/Target	List of connections. In the first line you can define a target for the top most folder of the structure. Right click in the cell in order to open a context menu for selection. The path can also be entered manually. In doing so, the following applies: ▸ Backslash in front (****): Path relative to the project. ▸ Drive letter in front: Absolute path. **Note for Windows CE:** With zenon, a drive letter can also be entered for Windows CE. This only signalizes that it is an absolute path, and is ignored during the transfer. ▸ **Attention:** This path must be permanently available on the target system. Do not configure an integrated network drive, USB device or removable media! **Note:** Note, with multi-project administration, the correct transfer of the individual projects. The column width in the list can be amended with the mouse.
active	Defines files which should be transferred optionally. Project base path cannot be deselected.

Parameter	Description
Source	Folder for files which should be transferred.
Objective	Target folder. Defines the root folder. New entries can be defined. Sub-folders cannot be changed. This ensures that all files are found on the target system in the Runtime. **Note:** The default folder is the Runtime folder defined in the project properties. If the target folder is entered manually, take care that it ends with the project name. This is important for the multi-user administration. **For example:** *C:\Users\Public\Documents\zenon_Projects\MY_PROJECT*
Revision	Type of transfer. Can be selected freely for the root folder and new entries. Clicking on the word (*Copy*) opens a drop-down list: ▸ **Copy**: Copies files (default) ▸ **Copy and register**: copies files and registerd them in the system. Helpful for ActiveX elements and for fonts (ttf files). ▸ **Copy and execute**: copies files and then executes them **Note:** The type of transfer is only available for freely-definable entries. Files necessary for the functionality of Runtime are automatically created in the list and the type of transfer cannot be changed.
Description	Optional text input for new entries for describing the files which should be transferred.

Attention

Applies for **Redundant zenon Network**:
If drivers are used that require a configuration file and this file should contain different settings for **Server 1** and **Server 2**, then \zenon*custom**drivers* must be deactivated. This will prevent the primary server configuration file from overwriting the configuration file on the standby server.

Example:

A controller has two **IP addresses** and the driver is primarily to use one of the IP addresses - which differs depending on whether the driver was started on **Server 1** or **Server 2**.

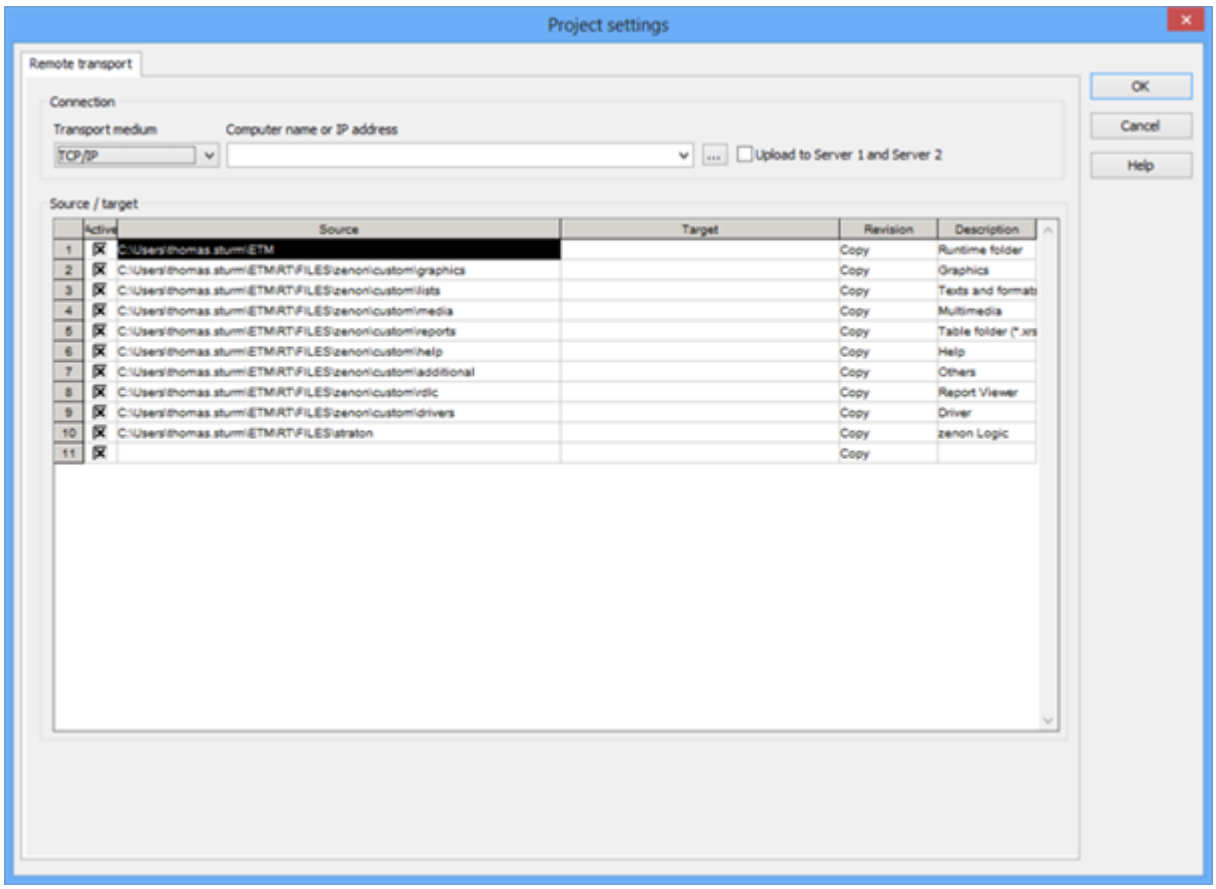
REMOTE CONTROL IN THE NETWORK

In the context menu of the project select **-> Remote Transport -> <Command>**:

Parameter	Description
Establish connection	With the service zenSysSvr a connection to the target device is established. On both devices the service zenSysSvr.exe or on the CE device the service *SysSrvCE.exe* has to be started. The versions have to be identical.
Transfer changed Runtime files	If this setting is selected, the Runtime files changed since the last transport are transported. If no Runtime files exist on the target device, all Runtime files are transported.
Transfer all Runtime files	If this entry is activated, all Runtime files are transported. The only exception are files like e.g. standard recipes or Message Control, which are defined in the setting: **Runtime changeable data**.
Copy back all Runtime files	If this setting is selected, all Runtime files of the modules Recipes, Recipegroup Manager, Message Control , User administration and Production & Facility Scheduler (PFS) are transported from the target system to the local Runtime directory. Then the changes in the Runtime can be read to the Editor with the option 'Import Runtime files'.
Set project as start project	The selected project is defined as the start project. This project is loaded on each Runtime start.
Start Runtime	Starts the Runtime.

Parameter	Description
Exit Runtime	The Runtime is closed.
Reload project	The project is reloaded. Changed Runtime files are read.
Restart operating system	The device with which the connection exists is restarted after a confirmation message. If necessary, it must be logged on to the operating system again. Under Windows CE this option is not supported.
Get system state	It is checked, if the Runtime is running on the target system and with which state. Also the installed zenon version is checked. The following are determined: ▸ Computer name ▸ Operating system ▸ Runtime active/not active ▸ Start project ▸ Real memory ▸ Drives ▸ Remote serial number ▸ Remote zenon version
Change password and display licensing	Opens dialog for connection establishing (on page 28). Enables: ▸ Changing of the password ▸ Display and change of the licensing ▸ Configuration of the encryption

5.1 TCP/IP



In the Remote Transport configuration the **name** of the target system or the **IP address** is entered. The IP address must conform to the defined IP version, i.e. IPv4 compliant when using IPv4 and IPv6 when using IPv6.

When using the name, the names used recently are saved and can be selected via the drop-down list. Using port number is only possible together with names.

Attention

As a default the Remote Transport always uses the TCP port 1101. This port must not be blocked by other applications.

5.1.1 Automatic setting in network projects

If the project to be transferred is configured as a network project, no other settings need to be made in the **Computer name or IP address** input field in the **Remote Transport connection setting**. In this case, Remote Transport always uses the computer entered in the network configuration as **Server 1** in

the properties field. It is therefore guaranteed that the changes are always transferred to the server, which then automatically transfers them to all clients!

If the checkbox **Upload to Server 1 and Server 2** has been activated, not only the computer to which there is a connection is updated. The servers that have been entered are also updated.

The requirements for this are:

- Checkbox active
- Network active
- **Server 1** entered

Data is only transferred to **Server 2** if a computer name has been entered for **Server 1**.

If the connected computer is one of the servers (regardless of whether it is connected via name or IP) no additional upload is carried out on this computer any more. This additional upload would be redundant in this case, because the update has already taken place via Remote Transport.

Information

You can find further information on the zenon network in the Network chapter.

5.2 Serial

As default the communication in the Remote Transport is carried out via TCP/IP. You can however change it to serial communication. So you can connect for example to Windows CE devices. The following must be the case for this:

- change the communication type of the transport service at the remote device via *zenon6.ini*
- configure the Remote Transport in the Editor

Attention

If the *zeno6.ini* is edited, the changes become effective after a restart of the transport service.

ZENON6.INI ENTRIES

If the transport service should be used for serial transport, the following entries have to be made in the **zenon6.ini** on the target system by hand:

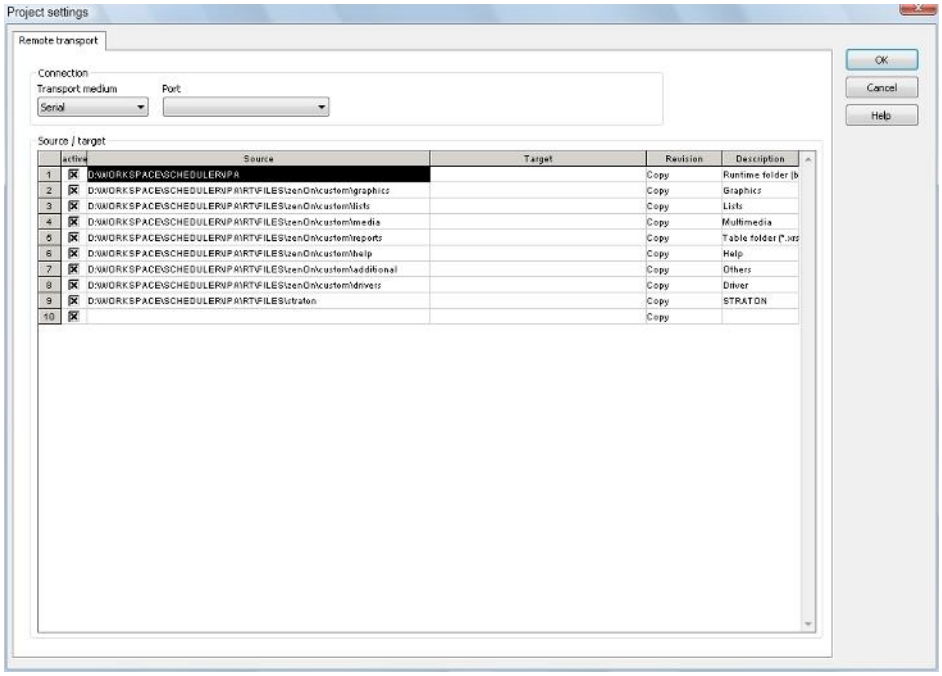
Note: Under Windows CE these entries are automatically generated in the **zenon6.ini** with the help of the user interface of the transport service.

```
[SYS_REMOTE]

CONFIG=DEVICE=COM;

PORT=COM2;
```

> **Attention**
>
> Do not forget the ; (semi-colon) at the end.

With this setting the Remote Transport works with the baudrate 115200 bits/second. As a default the Editor is also set to this baudrate.

SETTINGS EDITOR



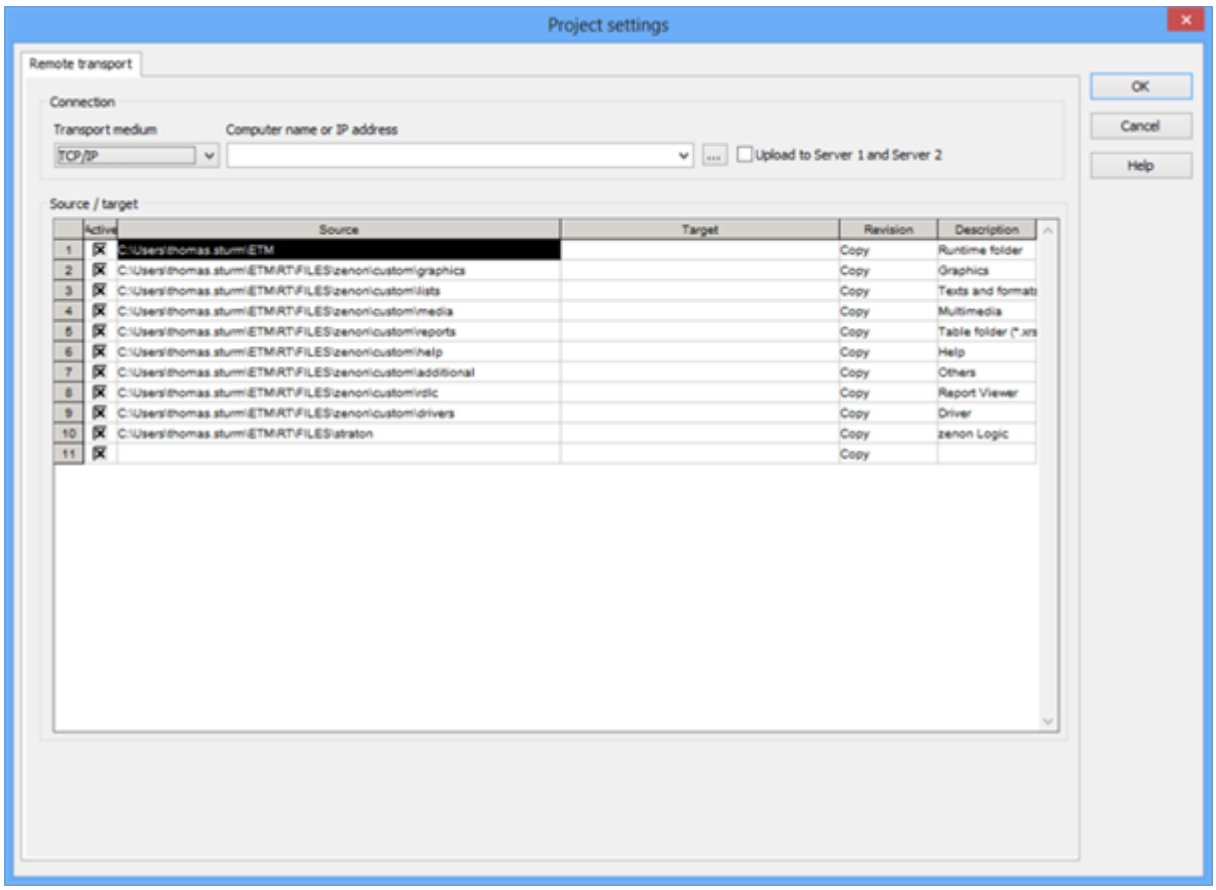
In the Editor select:

- *Serial* as **Transport medium**
- in the drop-down list the COM port of the source computer

5.3 Define files

You define which files are transferred in the configuration dialog via the check box in column **active**. The line with the project base path cannot be deactivated. The project files always are transported.

Note: Source paths are always created relative to the project base path.



Attention

Note the effects of settings if the project is used in the network.

For example:

Transport of graphics is deactivated, because these are already on the server. Then a client is started. The client finds out that the graphics should not be transported and thus does not transport them to itself. No graphics are then displayed on the client.

Or vice-versa, files are transferred to the client and the files there are overwritten.

FILES FOR TRANSFER

With Remote Transport, all files required for the project are transferred to the target system.

In doing so, all files are always transferred to the folder:

Standard

- All files that are in the project's Runtime folder (**...\RT\FILES\zenon\system**).
  These files determine the appearance and behavior of the project and are transferred as standard:

> **Info**
>
> Files with the following suffixes are not transferred by default:
>
> - **.hot**
> - **.ho**
> - **.ret**
> - **.re**

Optional

In addition, all files that are embedded into the project must be transferred. They are selected using the **Active** checkbox of the Remote Transport settings. These files are in the following subfolders of the project folder:

- *zenon**custom**graphics*: for graphics
- *zenon**custom**lists*: for language tables
- *zenon**custom**media*: for all media files
- *zenon**custom**reports*: for the reports of the Report Generator
- *zenon**custom**help*: for help files
- *zenon**custom**additional*: for additional files
- *zenon**custom**rdlc*: for Report Viewer files
- *zenon**custom**drivers:* for drivers
- *straton*: for zenon Logic

  Recommendation: Project basis path, graphics, language tables, report tables and media files are always transferred.
  The following are transferred from the basis path by default: The files **project.ini**, **Projekt.vba**, **monitor.mon** and the **Projekt** folder.

  As a default zenon always uses relative paths and not absolute paths, so that the files can easily be found on the target system.

  For the files that can be transferred optionally, the original paths should be used (empty field under target), so that zenon can find them on the target system.

GLOBAL PROJECT

If there is a global project in the workspace, this is automatically transferred. No additional settings need to be made. Always all files necessary for the global project will be transported.

SET START PROJECT

For Runtime, the start project must always be entered in *zenon6.ini*. To do this, click on the **Set remote Runtime start project** in the Remote Transport toolbar (on page 7). In doing so, the following entries are set:

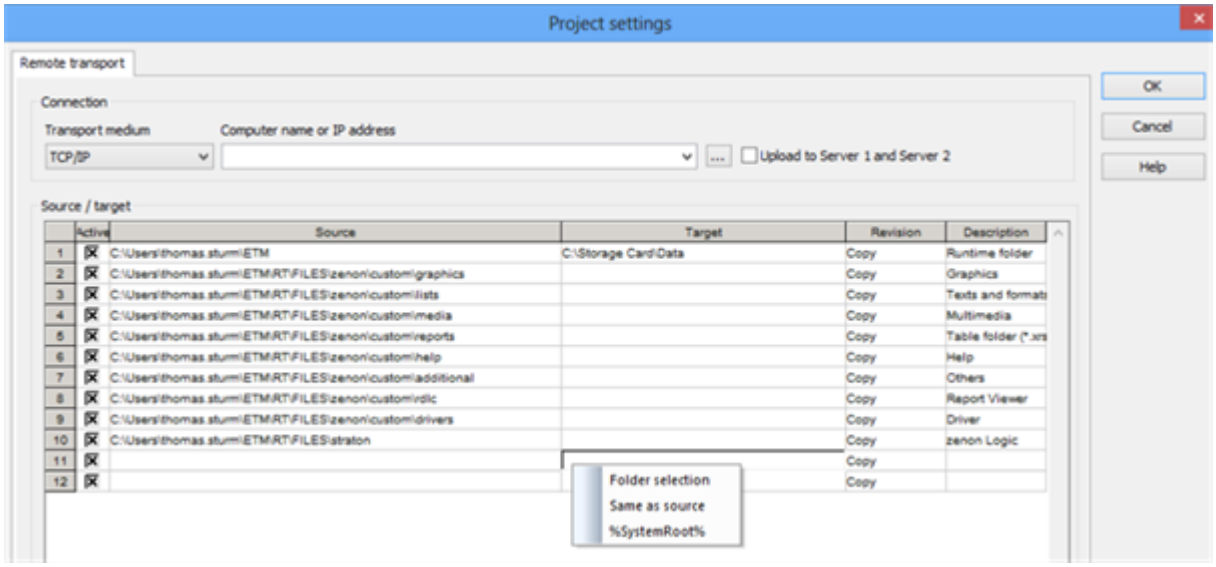
```
[PATH]

VBF30=project path

[DEFAULT]

DEFANWENDUNG30=project name
```

SELECTING INDIVIDUAL FILES

To transfer own individual files:

1. right click in the first empty cell in column **Source**
2. in the context menu select **File selection** or **Folder selection**
3. the explorer is opened for selection
4. select the desired file or the desired folder
5. activate the checkbox in column **active**
6. right click in the cell in column **Target**

7. define the target folder
   If the target remains empty the files are transferred in the same directory structure as defined under source.



Attention

Specify paths relatively!

Enter the paths for your individual files relative to the project base path. With this the target system also has the correct folder structure.
Example:

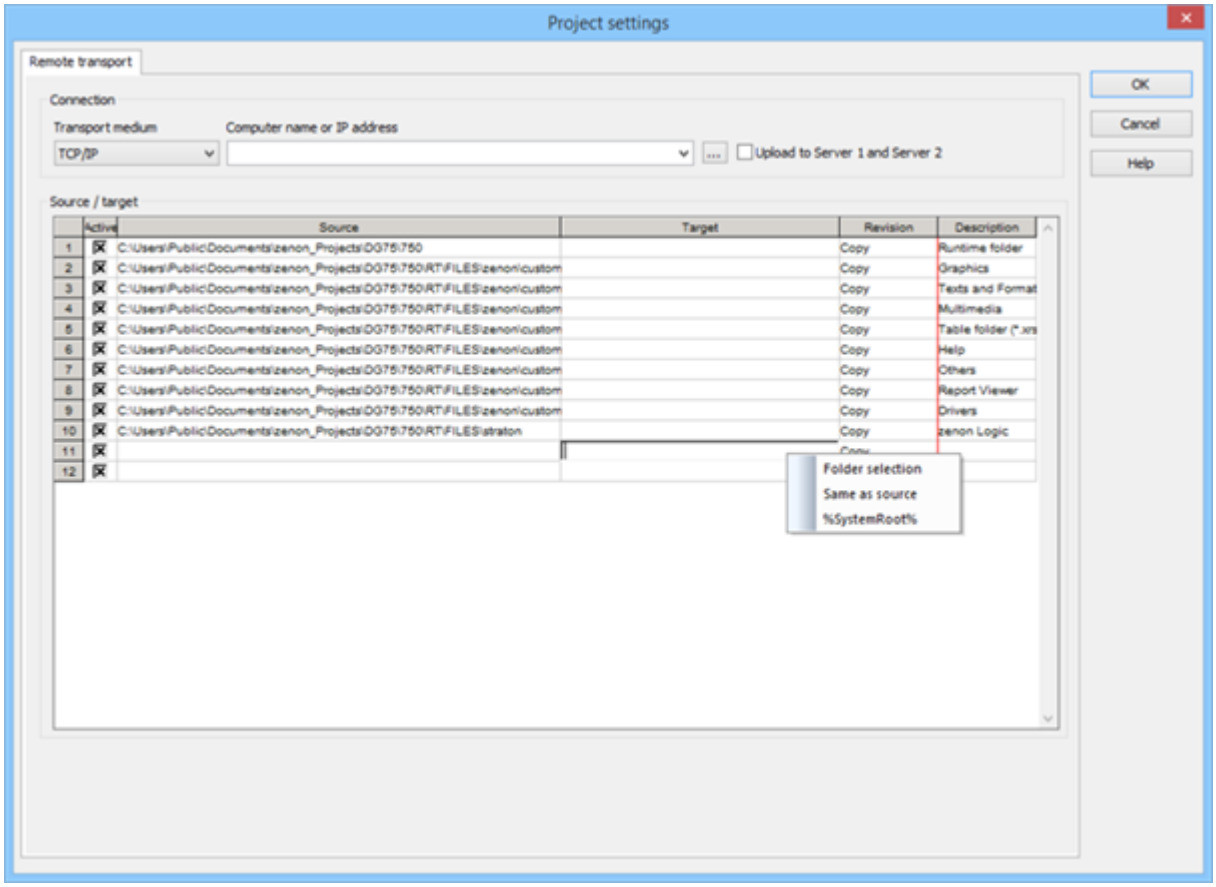
Specification at **Source:** enter */default.iso*.
The Remote Transport now automatically knows that the file is in the project basis path.
Folders are entered the same way.

WINDOWS CE:

If the target system is a Windows CE terminal and no explicit destination is entered for the project basis path, the destination **/Storage Card/Data** is used as a default.

ACTION AT TRANSFER

In newly added lines the entry of the column Revision defines, how to proceed with the according files during Remote Transport. Three possibilities are available here:



Revision	Description
Copy	The file is copied to the remote system.
Copy & register	The file is copied to the remote system and entered in the registry. **Hint:** Helpful for ActiveX elements and for fonts (ttf files).
Copy & execute	The file is copied to the remote system and executed there.

5.3.1 INI files

INI files are not transferred to the target computer by default via **Remote Transport**. As a result, it is possible that project configuration changes that are transferred from the starting computer via Remote Transport do not cause any change on the target computer, for example changes to the project configuration for the zenon **Message Control** module.

In this case, it is recommended that you amend the corresponding entries in the INI file manually on the target computer. You can find further information on the content of the zenon INI files in the Configuration files chapter.

The INI file to be transferred must be manually added in the **Define files** dialog.

Attention

It is expressly not recommended that an INI file is transferred via **Remote Transport**.

The License.ini file must not be transferred to the target computer via **Remote Transport** under any circumstances. The license will become invalid on the target computer as a result!

5.4 Files that can be changed in Runtime

There are different data which can be changed in the zenon Editor as well as in the Runtime. These are files for:

- Recipegroup Manager
- Standard Recipes
- User administration
- Scheduler

PROTECT RUNTIME FILES FROM OVERWRITING

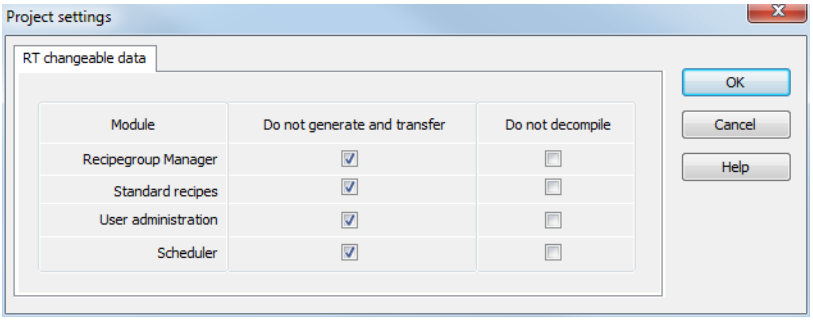
If Runtime files are transferred again, this process also overwrites the files amended in Runtime. To prevent the overwriting of content of the running Runtime, module content can be excluded from a transfer to Runtime. To do this, activate, in the dialog of the **Runtime changeable data** property (**General** project properties group) in the **Do not generate and transfer** the content of the configuration whose files have not been recreated or transferred to Runtime.

PROTECT EDITOR FILES FROM OVERWRITING

Data changed in the Runtime can be read back. In this case the corresponding Editor data are overwritten. In order to avoid unwanted overwriting the files, that should not be read beack, can be selected here in the section **Do not decompile**.

DIALOG OF FILES THAT CAN BE CHANGED IN RUNTIME

You can reach the dialog for configuring the Runtime changeable files via project settings **General/Runtime changeable data**:



The following file types can be selected:

Parameter	Description
Recipegroup Manager	Recipe groups and recipes of the Recipegroup Manager. At the transfer new files are transferred and new sub-folders are created, deleted files and sub-folders are also deleted on the target system.
Standard Recipes	Standard recipes.
User Administration	User administration for login and rights administration in the Runtime.
Scheduler	Changes in the time models and schedules of the PFS.

Attention

At the project conversion take care that Runtime changeable files are also converted. For this Runtime files must be imported to the Editor and after the Update copied back to the Runtime. For details see chapter Recommended procedure for converting Runtime files in manual project conversion.

TRANSFERRING THE FILES

IN THE RUNTIME

To transfer files to the Runtime:

1. all files can be transferred
2. only changed files can be transferred

Both possibilities consider the files defined in property **Runtime changeable data**.

Hint: Use the **Network Topology** view in Editor when transferring files. This way all of the required Runtime files for all target systems are created collectively and only then transferred to the target systems when selected by multiple selections.

FROM THE RUNTIME

To read files from the Runtime, there are two processes available:

1. Restore all Runtime files:
   a) reads back all Runtime files in the folder which was defined in property **Runtime folder**
   a) regardless of the settings of property **Runtime changeable data**
2. Import Runtime files:
   a) imports the files defined in property **Runtime changeable data** and
   b) replaces the engineering in the Editor by these Runtime files
   c) is suitable for taking over data from a remote system in the Editor

CONNECTION ERROR

During the transfer existing data are overwritten in accordance with the settings.

If errors occur at the transfer from or to the Runtime or if the connection fails, the files must be retransferred completely.

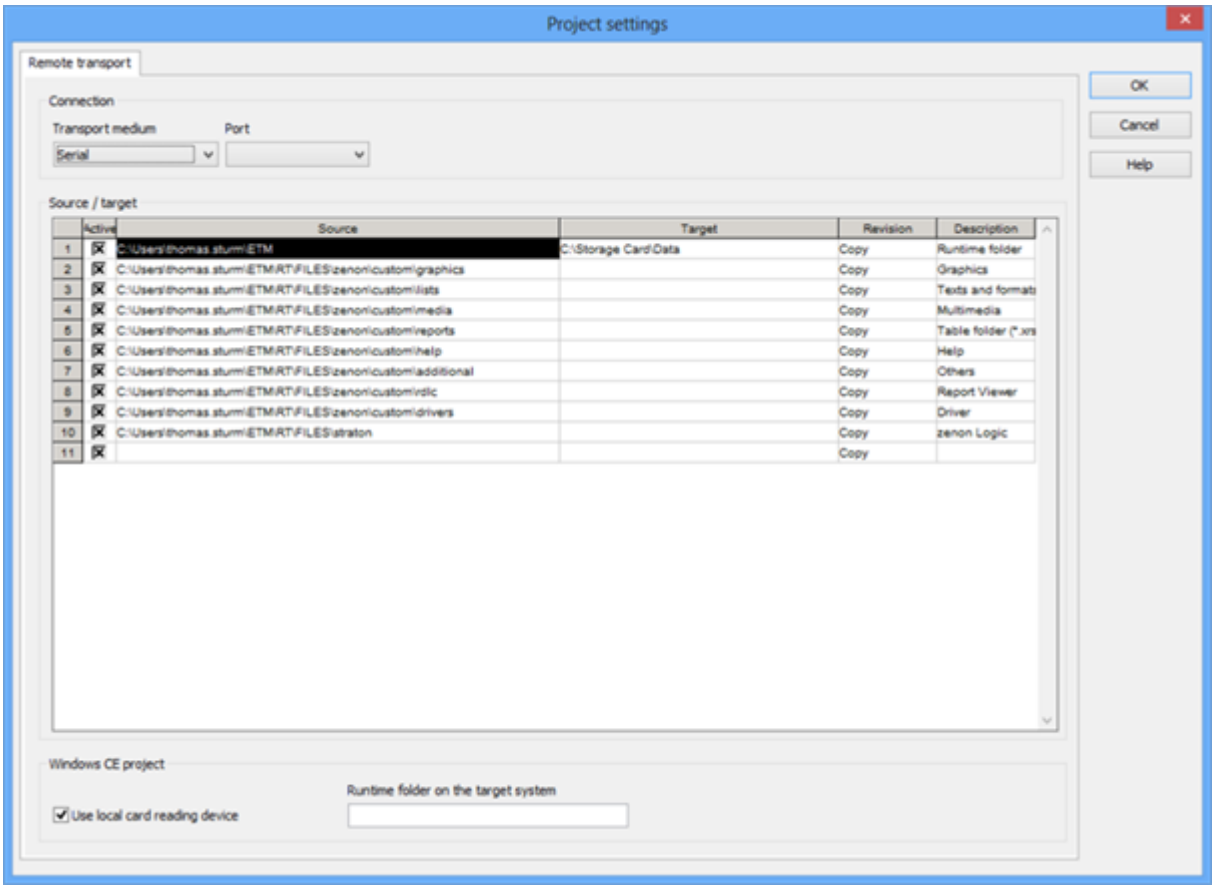
5.5 Windows CE

Transfer to Windows CE systems can be effected via a TCP connection, a serial connection or via memory cards.

CONFIGURATION

SERIAL OR TCP/IP

1. Ensure that in the project properties the **General** property in node **Windows CE project** is activated.
2. Select the connection type
   - TCP/IP
   - Serial
3. The configuration dialog now contains nine entries; *C:\Storage Card\Data* is pre-set as a target directory.
   The *C:* is automatically removed by Remote Transport, because communication with CE systems is carried out without drive letters.



MEMORY CARD

The Remote Transport supports a special transport type, where the project is transported directly to a storage card instead of using a serial or TCP/IP connection. To do this a computer which can directly access a memory card (PCMCIA, ATA card, Compact Flash, etc.) is necessary.

Attention

It has to be guaranteed that the CE Runtime and the *zenon6.ini* are in the root of the card!

Insert the card in the according slot and check which drive letter is assigned to the card by the operating system. (e.g.: D:, or E:, ...)

1. Activate check box **Use local card reading device**
2. Define the Runtime folder at the target device,.

   Example: if the memory card is listed as *\Storage Card* under CE, the **Runtime folder on the target system** must be *C:/Storage Card/project path*! *C:* will then automatically be removed by the Remote Transport!
3. Establish a connection to your own PC and transfer the files to the local memory card.
4. Write the Runtime folder at the target device with the help of function **Set remote start project** (Tool bar Remote Transport (on page 7)) in file *zenon6.ini* on the memory card.
5. Put the memory card in the CE terminal and start the Runtime.

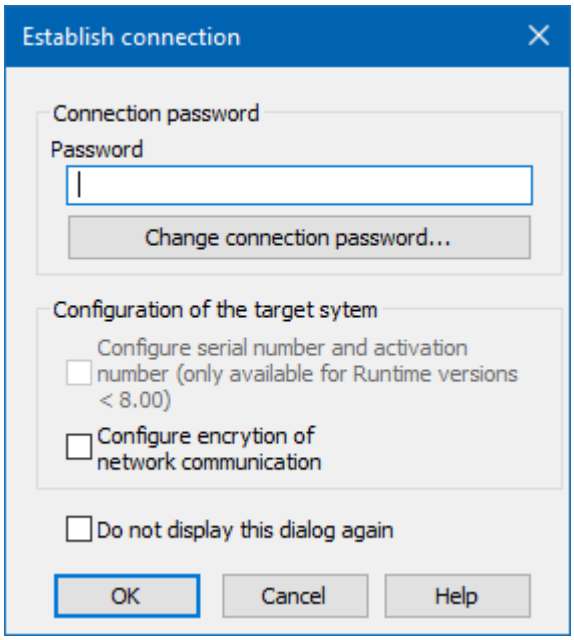
6 Establishing a connection

To establish a Remote connection:

1. Click on the corresponding button in the Remote Transport toolbar (on page 7)

   or select, in the project's context menu: **Set up Remote Transport> connection**

2. the dialog for setting up the connection is opened



Parameter	Description
Connection password	Setting for the password for the remote connection.
Password	Enter the password for the connection establishment (optional).
Change connection password (on page 33)	Opens the dialog for changing the password.
Configuration of the target sytem	Settings for the target system.
Configure serial number and activation number	Only available for versions before 8.00. For versions starting with 8.00, licensing is carried out via the **License Manager**. ▸ *Active*: The licensing of the remote computer is displayed after establishing the connection and can be changed. Default: *inactive*
Configure the encryption of the network communication (on page 34)	Setting for encryption. **Note:** For this the connection of the Remote Transport must be protected by a password. ▸ *Active:* After the connection has been established, network communication on the target system can be activated or

Parameter	Description
	deactivated. Default: *inactive*
Do not display this dialog	*Active*: This dialog is not opened at the establishing of the connection. **Note:** To display the dialog again, in the context menu of the project select **Remote Transport -> Change password and display license** Default: *inactive*
OK	Applies settings and establishes the connection.
Cancel	Discards changes and closes the dialog without establishing a connection.
Help	Opens online help.

6.1 Encryption

The Remote Transport connection can be encrypted via **SysSrv**. To do this, enter a password into Remote Transport. Form version 7.20, the password is saved in encrypted form:

- At the source (Editor) in **project.ini**, **TRANSPASS** section.
- At the destination (Runtime) in **zenon6.ini**, **TRANSPASS** section.

Remote Transport communication can also be encrypted. To do this, the encryption of the zenon network need only be activated in the Startup Tool.

STORE PASSWORD IN ENCRYPTED FORM

The password for the Remote Transport transfer is stored in encrypted form by default in the **project.ini** file in the **[TRANSPASS]** section in the **KEYCRYPT=** entry. The password can be saved as plain text in the **KEY=** entry. This method has been used up to and including version 7.11. With the conversion of a project to version 7.20, the value for the INI entry **KEY=** is deleted and the password is stored in encrypted form in the INI entry **KEYCRYPT=**.

The following is applicable for the transfer:

- If there is an entry for **KEY=**, the **SysSrv** uses the unencrypted password. This also applies if an encrypted password has been configured for the INI entry **KEYCRYPT=**.

- If no entry has been configured for **KEY=** and there is an entry for **KEYCRYPT=**, **SysSrv** uses the encrypted password.
- Entering or changing the password:
  If no password has been configured for the **KEY=** entry, this entry is updated. If no password has been configured and the zenon version is higher than 7.20, an entry is automatically created in **KEYCRYPT=**.
- Project conversion:
  If, in **project.ini**, there is an entry for **KEY=**, its value is deleted and a new entry for **KEYCRYPT=** is created and filled.

BEHAVIOR

Local editor	Remote PC	Remote password	Result	Condition
<7.20	**<7.20**	no	Connection OK	with empty password
<7.20	**<7.20**	Unencrypted	Connection OK	with correct password
<7.20	**<7.20**	Encrypted (no)	Connection OK	Remotely encrypted password is ignored.
>=7.20	**<7.20**	no	Connection OK	with empty password
>=7.20	**<7.20**	Unencrypted	Connection OK	with correct password
>=7.20	**<7.20**	Encrypted (no)	Connection OK	Remotely encrypted password is ignored.
>=7.20	**>=7.20**	no	Connection OK	with empty password
>=7.20	**>=7.20**	Unencrypted	Connection OK	with correct password
>=7.20	**>=7.20**	Encrypted	Connection OK	with correct password
>=7.20	**>=7.20**	Encrypted + unencrypted	Connection OK	with correct password
<7.20	**>=7.20**	no	Connection OK	with empty password
<7.20	**>=7.20**	Unencrypted	Connection OK	with correct password
<7.20	**>=7.20**	Encrypted	Connection OK	with correct password
<7.20	**>=7.20**	Encrypted + unencrypted	Connection OK	with correct password

CONVERSION

- In the Editor (source system), when converting the project from version X to 7.20, the **KEY=** entry is replaced by **KEYCRYPT=** and the password is saved in encrypted form here.
- On the target system, there is a query to see whether **KEY=** in the **zenon6.ini** has an entry. If this entry is configured, it has the highest priority. For conversion, the entry on the target system must be deleted manually.

ENCRYPTING ALL COMMUNICATION IN THE NETWORK

The complete communication can be encrypted by activating the encryption of the zenon network traffic.

BEHAVIOR

Source version (Editor)	Target version (Runtime)	Network Source encryption	Network Target encryption	Connection possible
<7.20	**<7.20**	*Any*	*Any*	Yes
<7.20	**>= 7.20**	*Any*	*Active*	No
<7.20	**>= 7.20**	*Any*	*Inactive*	Yes, unencrypted
>= 7.20	**<7.20**	*Inactive*	*Any*	Yes
>= 7.20	**<7.20**	*Active*	*Any*	No
>= 7.20	**>= 7.20**	*Inactive*	*Inactive*	Yes, unencrypted
>= 7.20	**>= 7.20**	*Inactive*	*Active*	No
>= 7.20	**>= 7.20**	*Active*	*Inactive*	No
>= 7.20	**>= 7.20**	*Active*, password "*abc*"	*Active*, password "*def*"	No
>= 7.20	**>= 7.20**	*Active*, password "*xyz*"	*Active*, password "*xyz*"	Yes, encrypted

ACTIVATION OF THE NETWORK ENCRYPTION VIA REMOTE TRANSPORT

If the network encryption is activated via Remote Transport, the following is applicable:

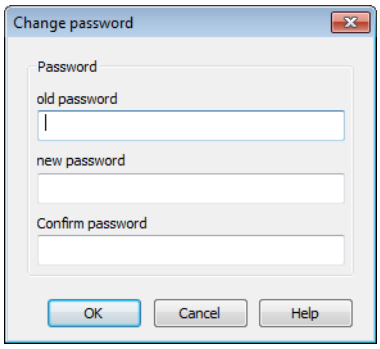
- Until a restart, Remote Transport also runs without encryption after a password has been set for network encryption.

- After restarting the target, it demands an encrypted connection with the correct password.

6.1.1 Change connection password

To change the connection password:

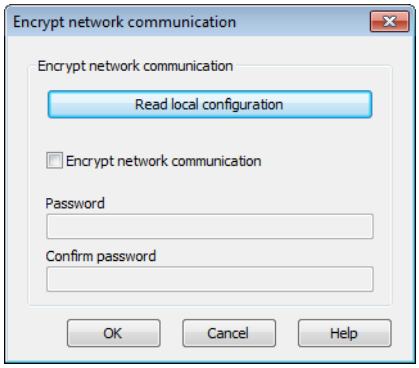
1. in the context menu of the project select **Remote Transport -> Establish connections** or **Change password and display license**
2. in the dialog click button **Change connection password**
3. the dialog for changing the password is opened



Parameters	Description
old password	Enter existing password.
New password	Enter new password.
Confirm password	Enter new password again and confirm it by doing so.

6.1.2 Configure the encryption of the network connection

The network communication can be protected by serious encryption. Encryption is either activated locally using the zenon **Startup Tool**, using a tool for the zenon Web Client or via Remote Transport in the Establish connection (on page 28) dialog:



Parameter	Description
Read local configuration	Reads in the encryption parameter of the local computer.
Encrypt network communication	*Active*: The encryption of the network is activated at the remote computer. Default: *inactive*
Password	Enter password. For the criteria, see the "**Network encryption password**" section in the **Strong encryption of network communication** chapter. The displayed length is always set at *20 characters*, in order to hide the actual length.
Confirm password	Enter the password for verification again.
OK	Saves changes and closes dialog.
Cancel	Discards changes and closes dialog.
Help	Opens online help

The password defined here is stored encrypted in the **zenon6.ini** of the remote computer.

Information

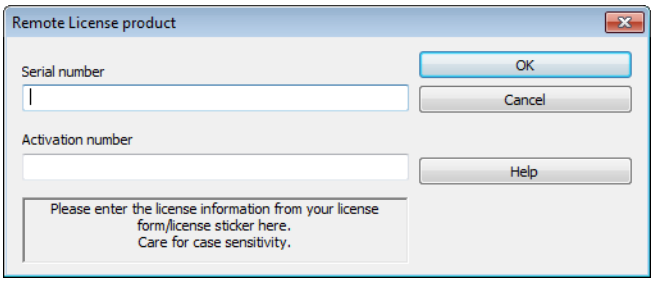
You can find notes on error messages from strong encryption in:

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

6.2 Remote licensing of Runtime versions earlier than 8.00

Runtime computers with zenon versions before 8.00 continue to be licensed with the method via remote connection that was usual up to and including version 7.60. To license Runtime with a version before 8.00:

1. In the context menu of the project, select **Remote Transport -> Change password and display licensing**.
2. Start Remote Transport (on page 4).
3. As soon as the connection is established, the licensing of the remote computer is displayed:



4. Enter the serial number and the activation number of your license certificate.
5. Confirm the entry by clicking on OK.

7 Batch processing Transfer to several computers at the same time

Several computers can be addressed at the same time with the help of status processing.

CONFIGURATION OF REMOTE TRANSPORT STATUS PROCESSING:

1. Create a file named **hosts.txt**.A-Z
2. Enter the IP address or the computer name of each computer on a separate line

   Example:

HOST=192.168.0.24;
HOST=192.168.0.15;

3. Add **hosts.txt** to the the *\zenon\custom\additional* folder.