![COPADATA - do it your way]

zenon manual

Remote Desktop

v.7.11
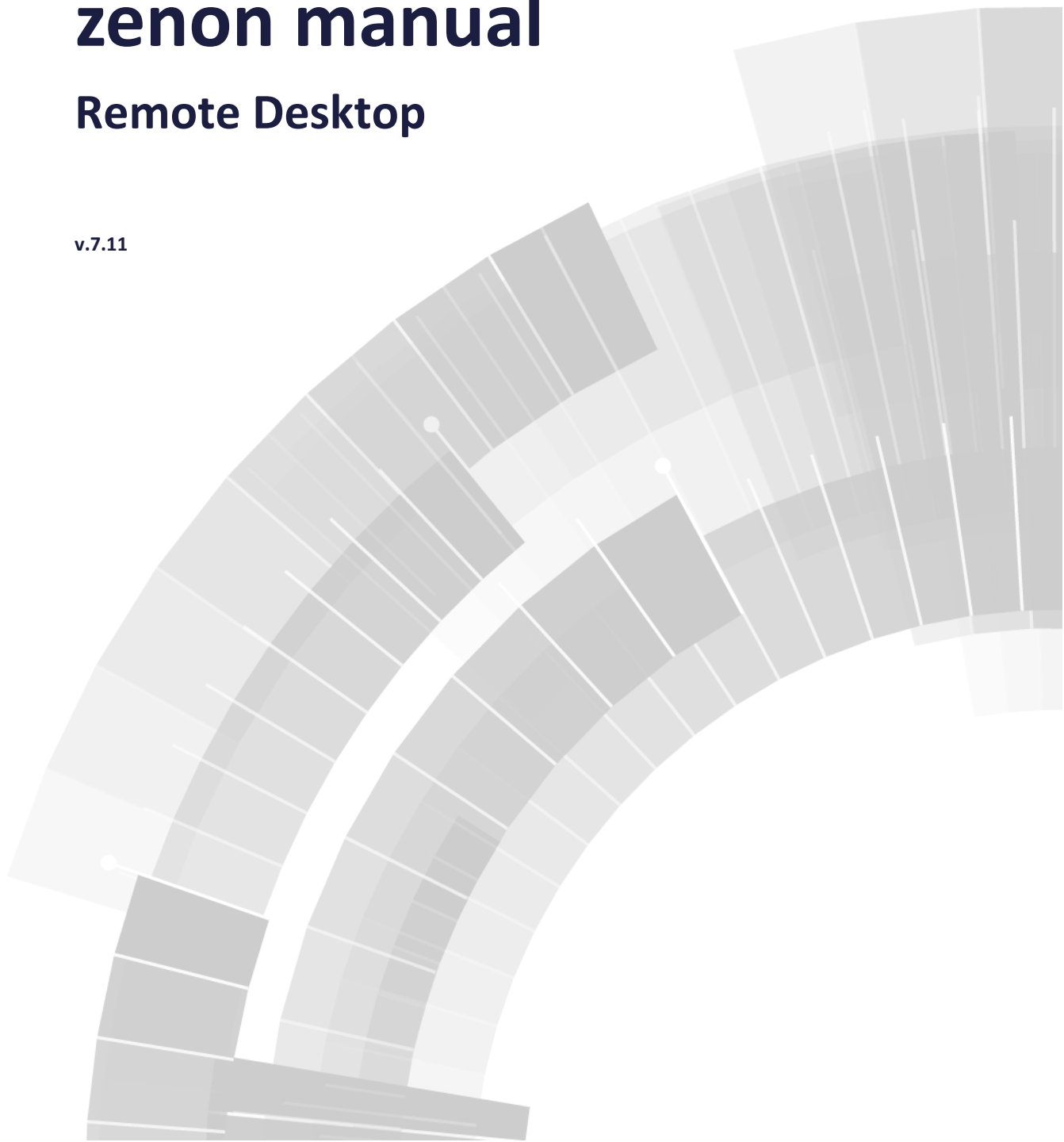
COPA·DATA
do it your way

Contents

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. Remote Desktop

The Remote Desktop allows you to establish a Remote Desktop connection to a remote target system and administrate a remote computer easily. This means that you can establish a visual connection from your PC to another PC or CE device. You will see the desktop as it looks like on the target system.

The Remote Desktop offers two connection types: one for watching only and one for operating the remote system.

> ▸🗐 **License information**
>
> *Part of the standard license of the Editor and Runtime.*

IN CONTRAST TO NETWORK AND WINDOWS REMOTE DESKTOP

The Remote Desktop is no substitute for a zenon network. It is nothing more than a simple transmission of screen data. This means that all connected computers will show the same screen. With the zenon network you can show different screens on every client.

The advantage of the Remote Desktop over the Windows Remote Desktop is that several computers can connect to the target system at the same time. At the same time, the control system stays fully operable, even if a remote connection is active. With the Windows Remote Desktop, you can only work at either the Remote PC or the target system at any time.

ACTIVATION

For security reasons, the Remote Desktop is deactivated when the control system is installed on a PC. In order to use it you must activate it (see Configuration). In Windows CE, you have to start the Remote Desktop service `zenVNCSrvCE.exe` manually or via the Windows CE startup mechanisms.

When zenon is uninstalled, the setup program does not uninstall the Remote Desktop. It remains on the PC. See chapter Uninstall (on page 19) for instructions on how to remove it.

> ⚠ **Attention**
>
> *The Remote Desktop is shipped with standard passwords. We recommend to change these passwords with the configuration software! See chapter Configuration.*
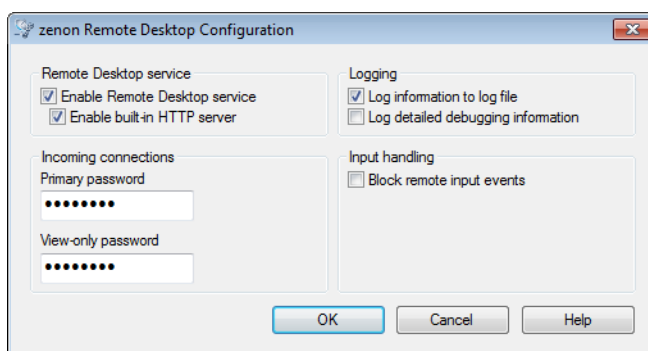
3. Structure

The Remote Desktop consists of three components:

Parameters	Description
Remote Desktop service	The Remote Desktop service transfers the desktop information via the network to the viewing software. The service does not have a user interface on the PC. It runs in the background as an invisible Windows program. It is not started as a Windows service. In Windows CE, the service can be seen as a tray icon. The Remote Desktop service also has an integrated HTTP web server. This web server serves as a connection point for any kind of web browser. You can start a visual Remote Desktop connection directly in your browser.
Remote Desktop configuration	The configuration software allows you to change the behavior of the service.
Remote Desktop viewing software	The viewing software allows you to view the Remote Desktop from your PC. There are two different types of this software: A standard Windows viewing software that you can start from the Remote Transport in the Editor or via the Windows start menu. Direct connection with a standard web browser without any third-party software. In this case, the Remote Desktop will be displayed directly in the web browser.

4. Configuration

The Remote Desktop configuration software allows you to adjust the Remote Desktop connection to your requirements.

Setting	Description
`Enable Remote Desktop service`	Activates the Remote Desktop service.

If the service is deactivated, it is completely unregistered and no longer available. You can only reactivate it with this configuration software.

Consider that with an active HTTP server you should change the password before the deactivation. |
| `Enable built-in HTTP Server` | Activates the built-in HTTP Server. The displayed start page is fixed and cannot be changed.

Attention: If you have deactivated the HTTP Server, you can still reach the login page via a browser refresh.
The page will then be routed from the normal HTTP port (5600) to the Remote Desktop port (5610). This way you can still login and have full access. To avoid access, change the password or block the Remote Desktop port 5610. |
| `Primary password` | Enables operating access to the computer.

Password treatment:

▸ The standard password after the first installation is **SCADA-ALL**.
We recommend to change the standard password to avoid unauthorized access.

▸ The length of the password in limited to 8 characters.
You can howeverenter the standard password SCADA-ALL.

▸ The password can be changed at anytime without having to know the current password.

▸ If you don not enter a password, a warning message will be displayed as soon as you click outside the field. |
| `View-only password` | When establishing a connection, you have to enter this password to get view-only access to the Desktop.

Password treatment:

▸ The standard password after the first installation is **SCADA**.
We recommend to change the standard password to avoid unauthorized access.

▸ The size of the password is limited to 8 characters.

▸ The password can be changed at anytime without having to know the current password.

▸ If you don not enter a password, a warning message will be displayed as soon as |

	you click outside the field.
`Log information to zenVNC.log`	The Remote Desktop service writes analysis information to file zenVNC.log. The file is located in user temp folder. `C:\Users\Default\AppData\Local\Temp` You can only see these folders if you have activated the option **show hidden files and folders** in the folder properties of the Windows Explorer.
`Log detailed debugging information`	The Remote Desktop service writes detailed error and debugging information to file zenVNC.log. This option is only used for extensive error analysis.
`Block remote input events`	If you do not want full access from the outside, even if the primary password is known, you can set this option. Operating access from remote PCs are blocked. Only view-only access is possible.
`Block remote input on local activity`	If there is local activity on the computer (with keyboard or mouse), it cannot be operated from a remote PC. Remote operation is enabled again after the configured time.

⚠ **Attention**

If you do not change the passwords, everbody will be able to access your PC!!

Empty passwords are possible but not recommended. Empty passwords allow full access to your PC for everybody.

💡 **Information**

All changes are applied only after pressing OK. This always leads to a restart of the Remote Desktop service. Connected computers are disconnected.

5. Establishing a connection

You can establish a Remote Desktop connection in one of the following ways:
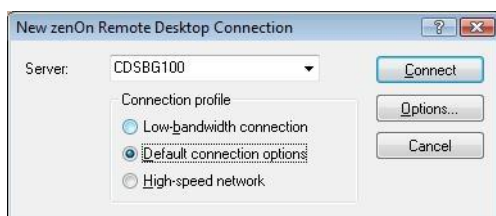
INTEGRATED INTO REMOTE TRANSPORT:

The Remote Desktop is directly integrated inzenon. You can establish a connection via the icon `Start Remote Desktop connection` in the tool bar of the Remote Transport. The target system configured in the Remote Transport will be used automatically. If no computer has been entered there, the server configured in the network configuration will be used.

Please consider that TCP/IP must be configured as the transport medium in the Remote Transport.

The connection is established in the same way as if you would use the start menu. However, you do not have to enter the remote computer name.

VIA THE START MENU:

If you want to establish a Remote Desktop connection to another target system, you can use the link " *Start - COPA-DATA - ToolsXX - Start Remote Desktop connection*" in the start menu.

Parameters	Description
Server	Enter the computer name or the IP address of the target system here.
Connection profile	The connection profiles determine the required network bandwidth. The lower the configured available bandwidth, the higher the screen data compression and the lower the screen quality. This option can only be configured at the beginning of the connection and can not be changed afterwards. If you want to change it, you have to disconnect first.
Options	Opens the `Connection Options` dialog. You can also change the connection options while the connection is active. You can find a description of the options in the chapter Connection options (on page 14).

After clicking on `Connect`, the connection is established.

VIA THE WEB BROWSER:

You can also establish a connection via a standard web browser. This requires the Java Runtime on your computer. You can get the current version from the Java website: http://www.java.com (http://www.java.com).

Start the web browser and enter the computer name or the IP address of the target system in the address line, followed by the port number `5600`
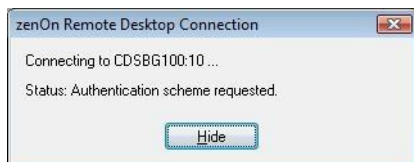
Example: `http://MyRemotePCName:5600`.

💡 **Information**

For all connections the following is true: A connection to the local PC is not possible!

If you experience connection problems, please check the requirements (on page 18).

5.1 Authentification

STANDARD VIEWING SOFTWARE

While the connection is being established, you will see a dialog that allows you to make sure you are connecting to the right target system.

You will only need to enter the connection password in this dialog. A username is not required.

WEB INTERFACE:

You have to enter the connection password in this dialog. In the title bar, you can see the remote desktop that you are connected to.

PASSWORDS

You will need to know the connection passwords to be able to establish a connection. The `Primary` password gives you full access to the remote desktop. The `View-only` password only allows the viewing mode. According to the password you enter, one of the two modes will be started. The size of the password is limited to 8 characters. (for details see chapter Configuration)

⚠ Attention

If the option 'Block remote Input Events' is set in the configuration software of the remote desktop, you will not be able to operate the remote system, even if you use the primary password.
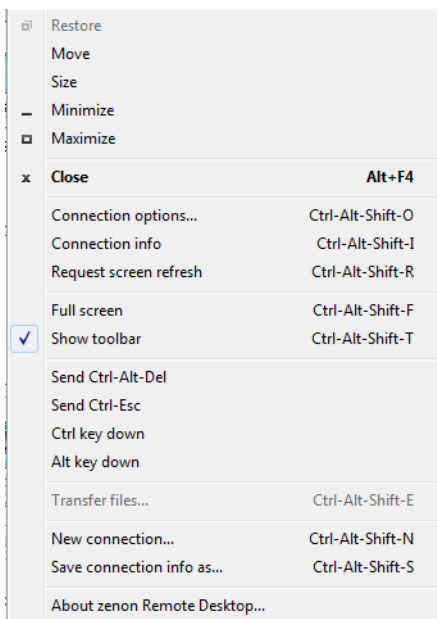
💡 **Information**

By default the `Primary` password is SCADA-ALL and the `View-only` password is SCADA. You can change the passwords at any time with the configuration software on the remote system (see chapter Configuration).

5.2 Standard viewing software

After establishing a connection, the viewing software will show the screen of the remote desktop.

Further settings can be made via the toolbar, the context menu or the drop-down list. Even if the toolbar is not visible, you can use the context menu by right-clicking on the title bar of the viewing software or on the symbol in the taskbar. If you are in full screen mode, you have to deactivate it first by using the keyboard shortcut <Ctrl><Alt><Shift><F>.


The toolbar and the context menu offer the following options:

Parameters	Description
`Close`	Closes the connection and quits the program.
`Connection options...`	Opens the dialog for editing the connection options. See chapter Connection options (on page 14)
`Connection info`	Opens a dialog that shows information about the current connection.
`Request screen refresh`	Brings about a refresh and redraw of the remote desktop.
`Full Screen`	switches to full screen mode ▸ If the remote computer and the local computer use the same screen resolution, the remote screen will fill the local screen. ▸ If the remote computer uses a lower screen resolution, the remote desktop will be centered and surrounded with a black border. ▸ If the remote computer uses a higher screen resolution than the local computer, you will only see a part of the remote desktop. You can then scroll with the mouse to move the screen to the area outside of the visible area. You can use the keyboard shortcut <Alt><Tab> to switch between the remote computer and the local computer. You can end the full screen mode with the keyboard shortcut `Ctrl+Alt+Shift+F`.
`Show Tool bar`	`Active`: Tool bar is displayed
`Send Ctrl-Alt-Del`	This action has no effect.
`Send Ctrl-Esc`	Opens the start menu of the remote desktop.
`Ctrl key down`	Presses the Ctrl key of the remote desktop. Click again to release the key.
`Alt key down`	Presses the Alt key of the remote desktop. Click again to release the key.
`New connection...`	Opens the dialog for a new Remote Desktop connection. See Establishing a connection (on page 8). The existing connection will be closed.
`Save connection info as...`	Saves a link to this connection as an RDC file (Remote Desktop Communication file) You can put this link on your desktop, for example. When saving, you will be asked if you want to store the password in the file. Note: Storing the password in the file constitutes a security risk. By double-clicking on the link, you will start the connection software and establish a connection to the configured remote desktop without having to enter a computer name (and password, if you have chosen to store it in the

|	file).

Note: The `Transfer files` option to transfer data is only available up to version 6.22SP1 build 7.

5.2.1   Connection options
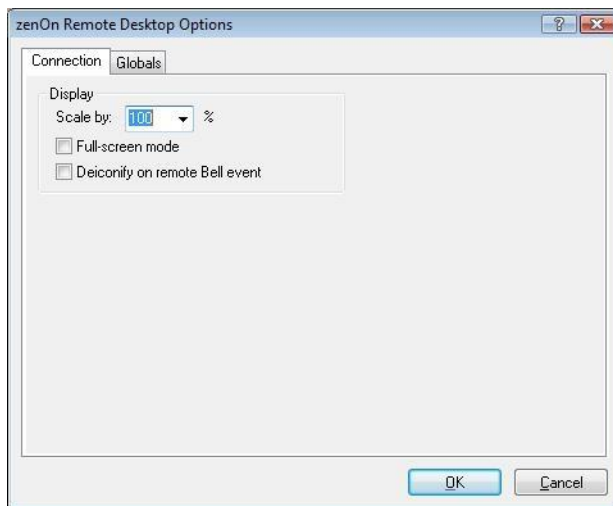
You can configure the following options on tab `Connection`:

Parameters	Description
Scale by	Scales the display of the remote desktop to the configured size. This option is useful if the remote desktop has a higher screen resolution than the local computer.
Full-screen mode	Switches to fullscreen mode. You can end the full screen mode with the keyboard shortcut <Ctrl><Alt>Shift<F.
Deiconify on remote Bell event	This setting has no effect.
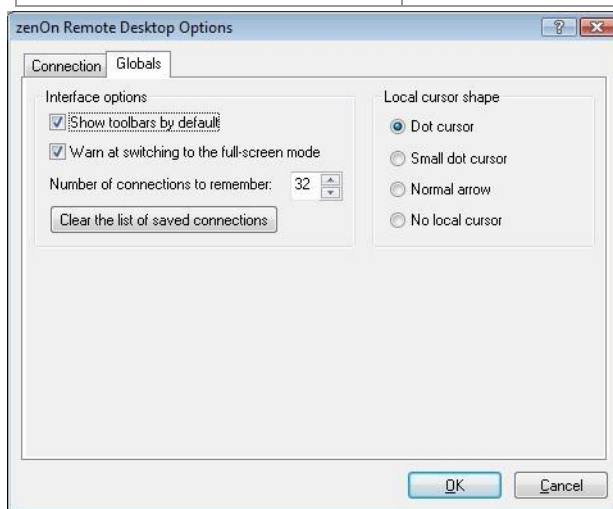
You can configure the following options on tab **Globals**:

Parameters	Description
`Show toolbars by default`	Shows the toolbar. If you have deactivated the toolbar, you can reactivate it via the context menu.
`Warn at switching to the full-screen mode`	If you change to full screen mode, you will receive a message explaining how you can leave full screen mode.
`Number of connections to remember`	The viewing software remembers recent connections. When you establish a connection you can choose from a list of recent connections. Here you can configure the number of connections to be remembered.
`Clear the list of saved connections`	Deletes the list of saved connections.
`Dot cursor`	The local mouse cursor is displayed as a black dot right above the remote mouse cursor.
`Small dot cursor`	The local mouse cursor is displayed as a small black dot right above the remote mouse cursor.
`Normal arrow`	The local mouse cursor is displayed as a standard Windows mouse arrow right above the remote mouse cursor.
`No local cursor`	Only the remote mouse cursor is displayed.

5.3   Web viewing software

You can use the following options in the browser interface:

Parameters	Description
`Disconnect`	Closes the connection. The web browser remains open.
`Options`	Here you can configure several connection options. These options are not documented. We recommend to keep the original settings. Changes are not saved. If you make any changes, the original settings will be restored for the next connection attempt.
`Clipboard`	Allows to read out text saved in the clipboard of the remote desktop or to send text to the clipboard. The dialog shows you the clipboard of the remote desktop. If you change the text, it will be sent to the clipboard of the remote desktop after clicking on `Close`.
`Send Ctrl-Alt-Del`	This option is not supported.
`Refresh`	Refreshes the screen contents.

6. Limitations

The Remote Desktop runs in the user context. It is started when the user logs in to Windows.

This means that a remote connection can only be established if a user is logged in. Remote login with Ctrl-Alt-Del is not possible. If the user logs out, the Remote Desktop service will also stop. Any connected viewers will be disconnected.

If the remote computer is locked, you will also not be able to establish a connection. The computer is also locked if a screen saver with the option `On resume, password protect` is running.

If several users are logged in at the remote computer at the same time (fast user switching), the Remote Desktop service will also be started several times. However, the viewing software will only be able to connect to the service that was started first. If this first user is not active, the connection will be established, but after entering the password, it will be closed immediately.

The connection will also be closed if the user that logged in first clicks on `Switch user` as he becomes inactive.

7. Preconditions / troubleshooting

In order to establish a connection to a remote system, the following preconditions must be fulfilled:

▶ zenon (at least version 6.22 or higher) must be installed.

▶ The Remote Desktop service (`zenVNCSrv.exe`) must be activated at the PC. You can activate the service using the Remote Desktop configuration software (see also Konfiguration). You can check if the service is running by using the Windows task manager.

▶ A user must be logged in at the remote PC and the PC must not be locked. See chapter Limitations (on page 17).

▶ In Windows CE, you must start the Remote Desktop service `zenVNCSrvCE.exe`, either manually or via the Windows CE startup options. Please look up the documentation of the device to find out how you can activate these startup options. You can check if the service is running by using the Windows CE task manager (if available).

▶ The service must be registered in the Windows Firewall and in all other firewalls. The ports 5600 (http port) and 5610 (Remote Desktop port) must be registered. You can check if these ports are registered and activated by establishing a Telnet connection from another PC to port 5600 and 5610. For that, start the command prompt (`cmd.exe`) and enter the following command:
`telnet RemotePCName 5610.`
If the connection is successful, a black window appears.
In Windows Vista, Telnet is not installed by default. You can install the program by performing the following steps:
Click on Start > Control Panel > Programs and then on 'Turn Windows features on and off'.
Activate the check box 'Telnet client' in the Windows features list and click on 'OK'.

▶ The ports 5600 and 5610 should not be used by other programs. If they are used by other programs, the system will randomly select other ports. You can check the port assignment with the Windows command `netstat -n -a -o` in the command prompt. You can find out the process ID of the Remote Desktop service zenVNCSrv.exe in the tab "`Processes`" of the task manager. If the ID is not visible, you can activate the column "`PID (Process ID)`" in the menu "`View - Select columns...`".

▶ If you establish the connection via the Editor, make sure that TCP/IP is set as the transport medium in the Remote Transport. You also have to enter a computer as the target system, either for Remote Transport or as project server.

▸ Windows Vista's fast user switching is not supported. It leads to disconnection. See chapter Limitations (on page 17)

💡 **Information**

Deactivated HTTP server:

If you have deactivated the HTTP Server, you can still reach the login page via a browser refresh.
The page will then be routed from the normal HTTP port (5600) to the Remote Desktop port (5610). This way you can still login and have full access. To avoid access, change the password or block the Remote Desktop port 5610.

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8. Uninstallation

The Remote Desktop is not uninstalled with zenon because it is used across versions. The setup program cannot check which zenon versions are used.

In order to remove the Remote Desktop, you must perform the following steps:

Start the configuration software, uncheck the option `Enable Remote Desktop service` and click on ᴏᴋ. This stops and unregisters the Remote Desktop service.

Now you can delete the files `zenVNCSrv.exe`, `zenVNCcfg.exe` and `oem.dll` in folder `C:\Program Files\Common Files\COPA-DATA\zenVNCSrv.`