

THE MEASURABLE DIFFERENCE.



DEWETRON

▼

OXYGEN TRAINING > XCP





DEWETRON

ENABLING XCP IN OXYGEN

- 1 Go to Remote Control in System Settings
- 2 Enable Remote Control
- 3 Enable XCP over Ethernet

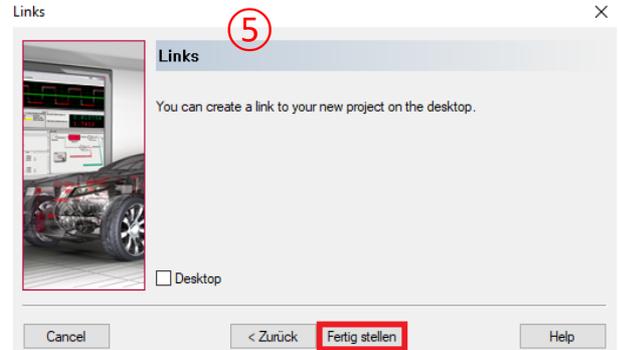
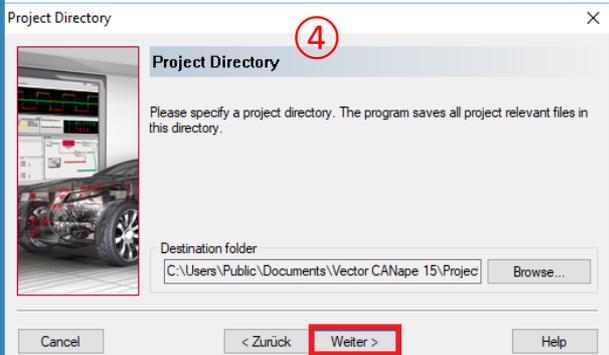
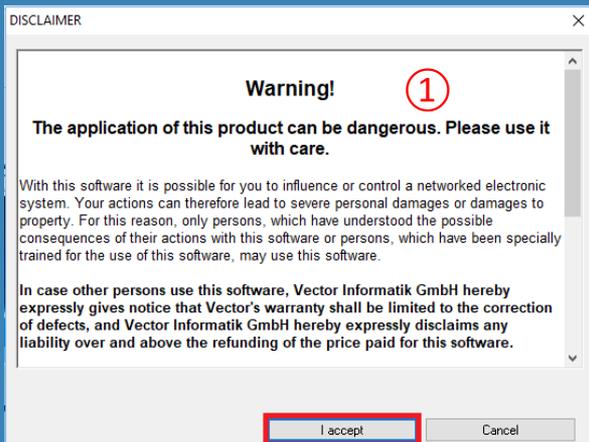
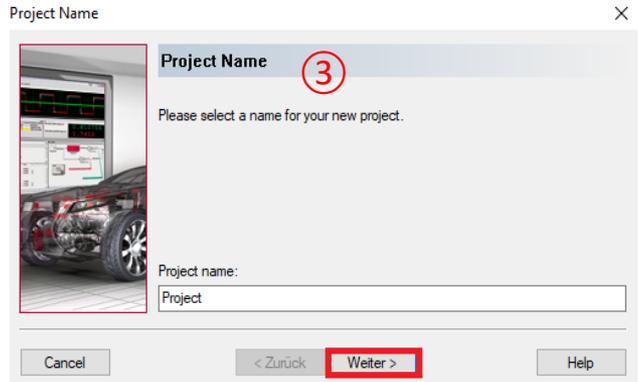
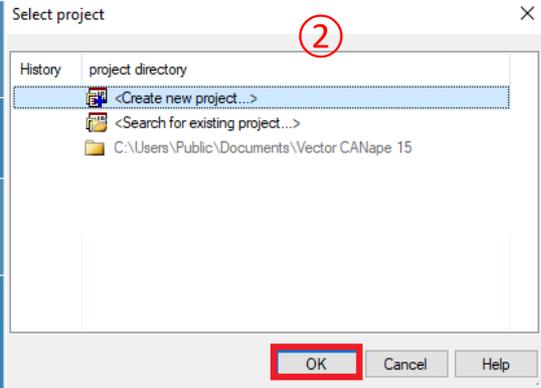
The screenshot displays the 'System Settings' window with the 'Remote Control' tab selected. The left sidebar shows a list of settings categories: Measurement Setup, Header Data, Advanced Setup, Hardware (Sync Setup, DAQ Hardware, Sensors), and Extensions and Plugins (Overview, Remote Control). The 'Remote Control' option is highlighted with a red circle '1'. In the main content area, the 'Remote Control' section is expanded, showing a toggle switch for 'Enable remote control' which is turned on, marked with a red circle '2'. Below this, the 'ACTIVE PROTOCOLS' section lists two options: 'SCPI over Ethernet' (disabled) and 'XCP over Ethernet' (enabled). The 'XCP over Ethernet' option is highlighted with a red circle '3'. The 'XCP over Ethernet' configuration details include: Vendor: Dewetron, Version: 1.6. To the right, the 'CONFIGURATION' section for 'XCP OVER ETHERNET' shows fields for: Communication type (TCP Server), IP address (127.0.0.1), Port number (55555), Sample output format (Double (64Bit)), Path for A2L file (C:\TEMP\oxygen.a2l), and Path for channel XML file (C:\TEMP\oxygen_channels.xml).



DEWETRON

CREATING A NEW PROJECT IN CANAPE

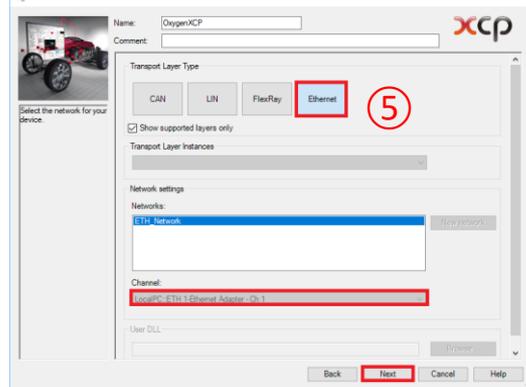
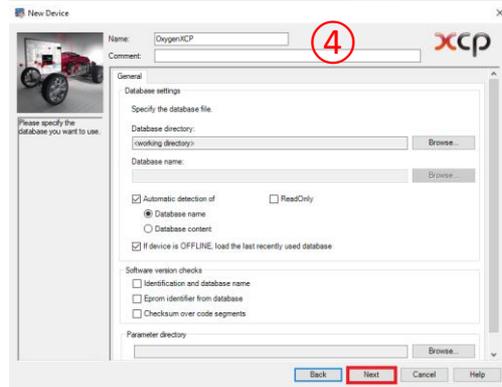
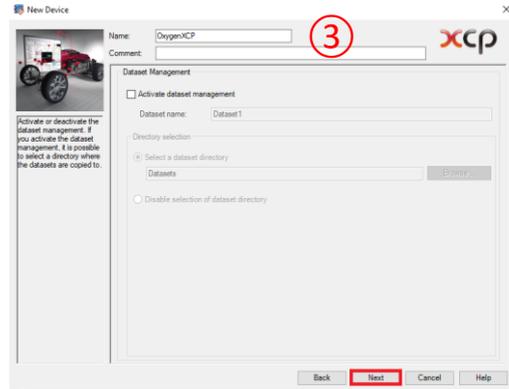
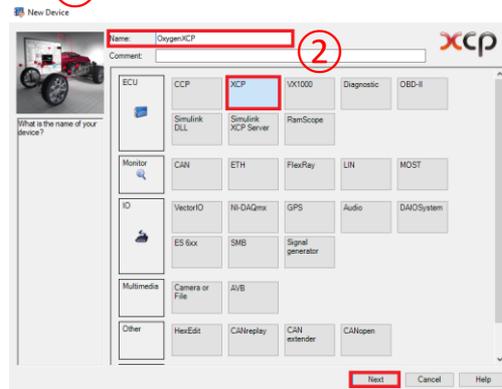
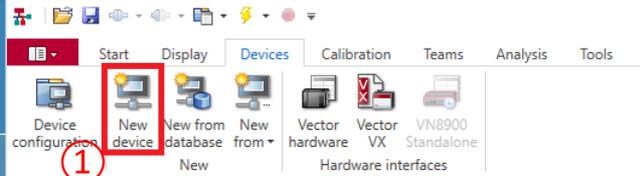
- 1 Start CANape and accept the disclaimer
- 2 Select *Create new project...* and click on *OK*
- 3 Enter a *Project Name* and click on *Next*:
- 4 Select the *Project Directory* and click on *Next*
- 5 If desired, you can create a link to your new project on the desktop and click on *Finish*





CREATING A NEW XCP DEVICE IN CANAPE

- 1 After creating or opening a project in CANape, go to the Devices ribbon and click on New device
- 2 Enter a device Name, select ECU XCP and click on Next
- 3 The Dataset Management settings can remain untouched:
- 4 The Database settings can remain untouched as well
- 5 Select Transport Layer Type: Ethernet, select the Channel: LocalPC: ETH 1- Ethernet Adapter – Ch 1 and click on Next



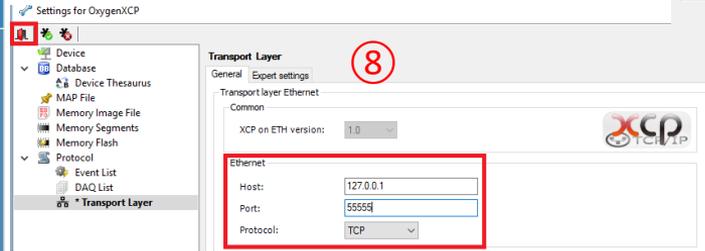
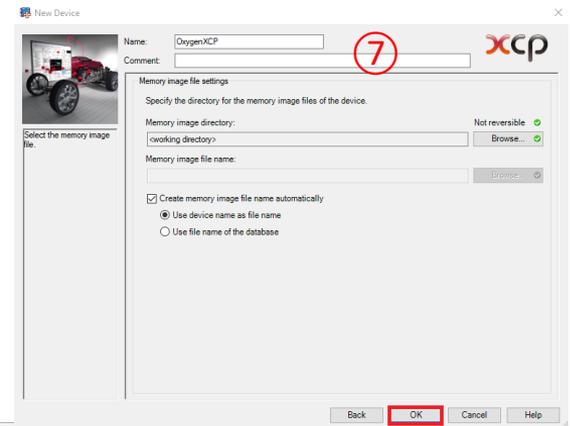
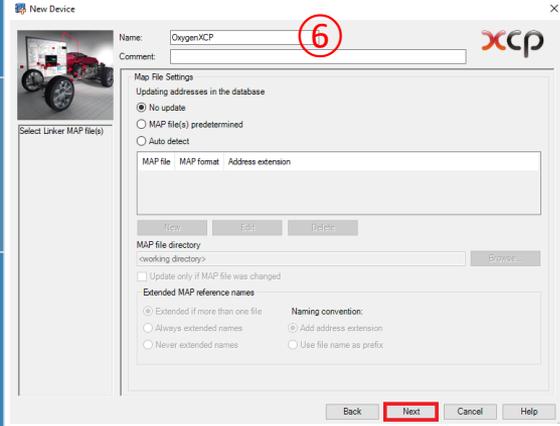


DEWETRON

© DEWETRON GmbH | January 23

CREATING A NEW XCP DEVICE IN CANAPE CONT'D

- ⑥ The *Map File Settings* can remain untouched
- ⑦ The *Memory image file settings* can remain untouched as well
After clicking on *OK*, the *Device Settings* will open.
- ⑧ Go to the *Transport Layer* menu and enter the ethernet settings
 - > *Host*: IP address of the OXYGEN PC
 - > *Port*: Port for data transmission
 - > *Protocol*: TCP or UDP
- ⑨ Swap to OXYGEN and enter the same settings in the *Configuration for XCP over Ethernet* settings
 - > *Communication Type*: TCP or UDP
 - > *IP address*: LAN port IP address of the OXYGEN PC (not IP address of the CANape PC)
 - > *Port*: Port for data transmission



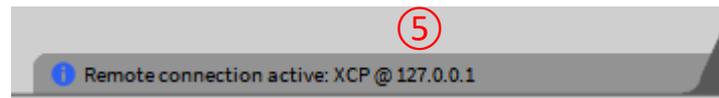
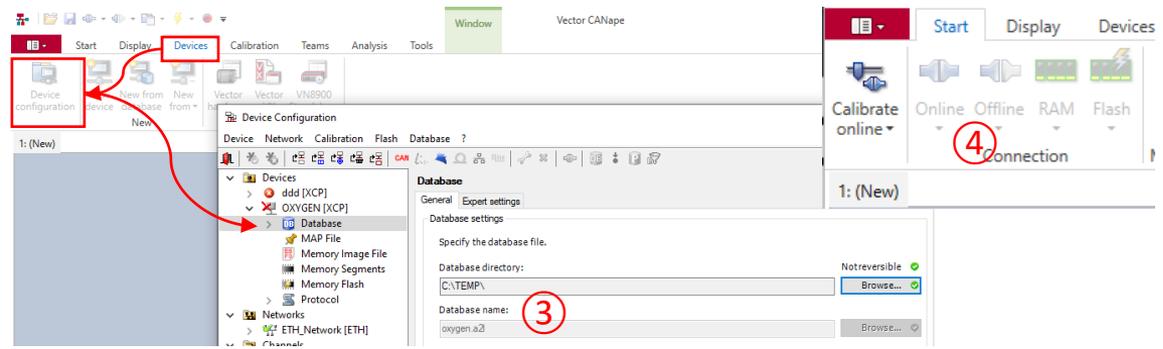
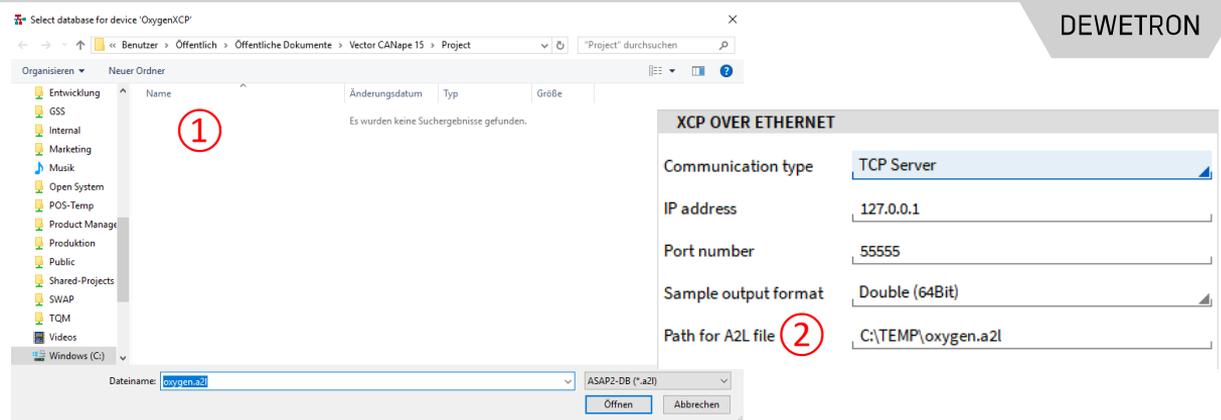
CONFIGURATION FOR XCP OVER ETHERNET	
Communication Type	TCP Server
IP Address	127.0.0.1
Port Number	55555
Output Format	Double (64Bit)
A2L File Path	C:/TEMP/oxygen.a2l
XML File Path	C:/TEMP/oxygen_channels.xml



DEWETRON

OXYGENS A2L-FILE

- ① After finishing the device configuration, the proper a2l-file has to be selected
- ② The path the a2l-file is stored can be edited in OXYGEN
- ③ The a2l-file can be selected in the menu Devices → Device Configuration → Database as well
- ④ The connection to OXYGEN is established automatically after selecting the proper a2l-file and can be manually enabled/disabled in the Canape Start menu
- ⑤ When the remote connection is active, a hint will be displayed in OXYGEN and the screen is locked



The a2l-file is a description file and includes information about all available channels in an OXYGEN setup
 It is created automatically when enabling XCP and during acquisition restart (i.e. software startup or setup load)

TRANSFERRING DATA FROM OXYGEN TO CANAPE



DEWETRON

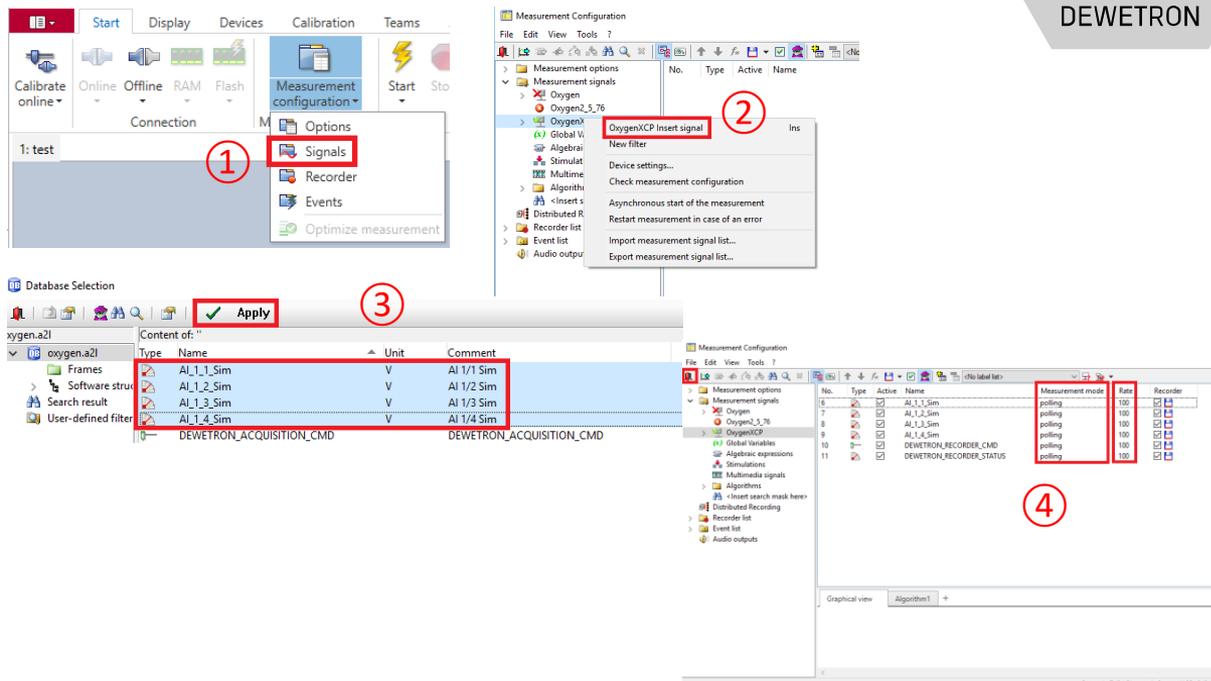
© DEWETRON GmbH | January 23

① Go to the *Start* ribbon and click on *Signals* in the *Measurement configuration*

② Select your device, perform a right click and click on *Insert signal*

③ The *Database Selection* will open and list all available signals from the device. Select your desired analog signals and click on *Apply*. The *Database Selection* menu can be left again by clicking on the *Door* button.

④ Select a *Measurement mode*, i.e. polling (Program sends a cyclic request for the current value) close the *Measurement Configuration* with the *Door* button.



The following *Measurement Modes* are currently supported:

- *Polling*: Program sends a cyclic request for the current value
- 1s (average): Value will be measured by an ECU event
- 100ms (average): Value will be measured by an ECU event
- 10ms (average): Value will be measured by an ECU event
- 1ms (average): Value will be measured by an ECU event
- 100µs (average): Value will be measured by an ECU event

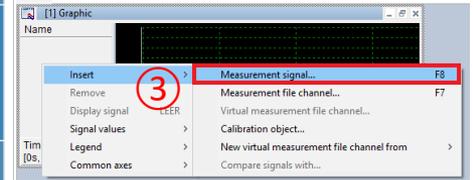
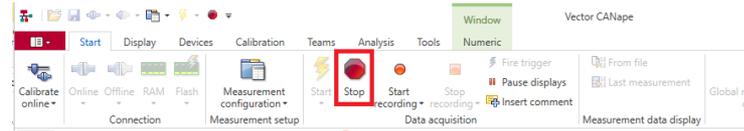
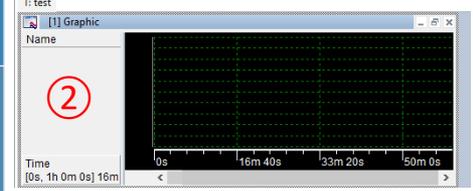
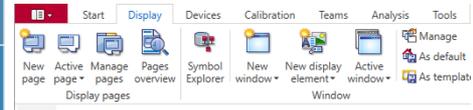
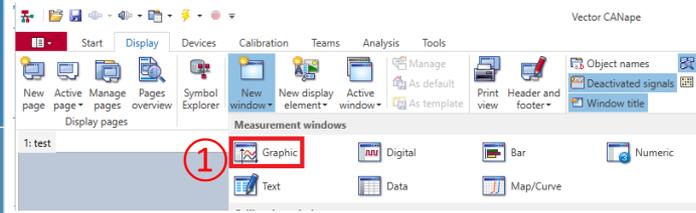


DEWETRON

© DEWETRON GmbH | January 23

DISPLAYING DATA IN CANAPE

- Go to the *Display* ribbon, select *New window* and select a *Measurement window*, i.e. *Graphic*
- The *Graphic* window is added to the display which will show the time dependent signal trend
- To assign channel(s) to the window, right click into the grey space, select *Insert* and click on *Measurement signal...*
- Select the desired signals from the list, click on *Apply* and leave the selection menu by clicking on the *Door* button
- Go to the *Start* ribbon go to the select the data acquisition section and click on *Start without recording*
- Data is now transferred from OXYGEN to CANape until the *Stop* button is pressed



Selection of Measurement Signals

No.	Type	Active	Name	Measurement...	Rate	Recorded on input
0						
1	Oxygen	<input checked="" type="checkbox"/>	AL_1_Sim	polling	100	<input checked="" type="checkbox"/>
2	Oxygen2_5_76	<input checked="" type="checkbox"/>	AL_1_2_Sim	polling	100	<input checked="" type="checkbox"/>
3	OxygenXCP	<input checked="" type="checkbox"/>	AL_1_3_Sim	polling	100	<input checked="" type="checkbox"/>
4	Global Variables	<input checked="" type="checkbox"/>	AL_1_4_Sim	polling	100	<input checked="" type="checkbox"/>
5	Algebraic expressions	<input checked="" type="checkbox"/>	DEWETRON_RECORDER_CMD	polling	100	<input checked="" type="checkbox"/>
	Stimulations	<input checked="" type="checkbox"/>	DEWETRON_RECORDER_STATUS	polling	100	<input checked="" type="checkbox"/>
	Multimedia signals					



EDITING OXYGEN RECORDING STATE VIA CANAPE

- ① Go to the *Start* ribbon and click on *Signals* in the *Measurement configuration*
- ② Select your device, perform a right click and click on *Insert Signal*
- ③ The *Database Selection* will open and list all available signals from the device
Select *DEWETRON_RECORDER_CMD* for editing the recording state in of *OXYGEN*
The *Database Selection* menu can be left again by clicking on the *Door* button
- ④ Go to the *Display* ribbon, click on the *New window* section and select *Parameter*
- ⑤ Select the signal *DEWETRON_RECORDER_CMD* from the list, click on *Apply* and leave the setup with the *Door* button
- ⑥ *OXYGEN*'s recording state can be controlled by the signal *DEWETRON_RECORDER_CMD* via the *Parameter* window

The screenshots illustrate the following steps:

- Step 1:** The **Start** ribbon is active, and the **Signals** button in the **Measurement configuration** group is highlighted.
- Step 2:** A right-click context menu is open over the device list, with **OxygenVCP Insert signal** selected.
- Step 3:** The **Database Selection** dialog is open, showing a list of signals. **DEWETRON_RECORDER_CMD** is highlighted in the list.
- Step 4:** The **Display** ribbon is active, and the **Parameter** button in the **New window** section is highlighted.
- Step 5:** The **Database Selection** dialog is open, and the **Apply** button is highlighted.
- Step 6:** The **Parameter** window is open, showing the **DEWETRON_RECORDER_CMD** signal selected, with its value set to **0**.

The following recording commands are available:

- 0 ... Default value
- 1 ... Start Recording
- 2 ... Pause Recording
- 3 ... Stop Recording
- 4 ... Resume Recording