COPA-DATA
do it your way

zenon manual

zenon Demo Project

v.7.10

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1. Welcome to COPA-DATA help

GENERAL HELP

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

PROJECT SUPPORT

You can receive support for any real project you may have from our Support Team, who you can contact via email at support@copadata.com (mailto:support@copadata.com).

LICENSES AND MODULES

If you find that you need other modules or licenses, our staff will be happy to help you. Email sales@copadata.com (mailto:sales@copadata.com).

2. zenon Demo Project

A demo project is installed with zenon as standard. This project (on page 5) contains several subprojects that demonstrate the use of zenon in different sectors:

- Automotive (on page 9)
- Energy (on page 11)
- Infrastructure (on page 13)

- Building Automation (on page 14)
- Food and Beverage (on page 15)
- Pharmaceutical industry (on page 18)

The demo project is automatically loaded when you start zenon Editor for the first time. The project **DEMO_INTEGRATION** is already preset as a start project. To start the project in Runtime, press the F5 key in the editor. The integration project (on page 5) is opened in Runtime.

2.1 Integration project

The integration project contains a range of subprojects that you can start from this screen. The projects support language switching. The project is started in the language of the Editor. To switch the language, click on the **System** button and select the desired language.

OVERVIEW AND OPERATION

The start screen offers navigation elements and an overview of the sectors:

- Automotive (on page 9)
- Energy (on page 11)
- Infrastructure (on page 13)
- Building Automation (on page 14)
- Food and Beverage (on page 15)
- Pharmaceutical industry (on page 18)

Note: In this integration project, energy, infrastructure and building automation are combined in the navigation.

Parameters	Description
Logo	In this case, the logo of the product **zenon Supervisor**. Can be replaced by any desired logo. The logo was assigned a function, which loads the project when it is clicked on. When reloading, changes that have been made in the Editor since Runtime was started are transferred to the project that is running.
Welcome User	**User** is the name of the user who is logged on. To login with a different name and different authorizations, click on the **Log on/off** button at the bottom right.
Subprojects	The subprojects are displayed in the six areas. You can start subprojects by: ▸ Clicking on a detail link or ▸ Clicking on one of the navigation buttons underneath this.
Navigation bar	Enables you to switch to other projects, to switch system information and the logon screen, as well as to end Runtime: ▸ Home: Switches to the start screen of the respective subproject. ▸ [Project]: Opens the respective project. Assigned to screens of a project within the project. ▸ System: Opens a screen with system information (on page 7) and language switching. ▸ Log on/off: Opens the dialog for a user to log on (on page 8). ▸ Exit: Ends Runtime.

2.1.1 System

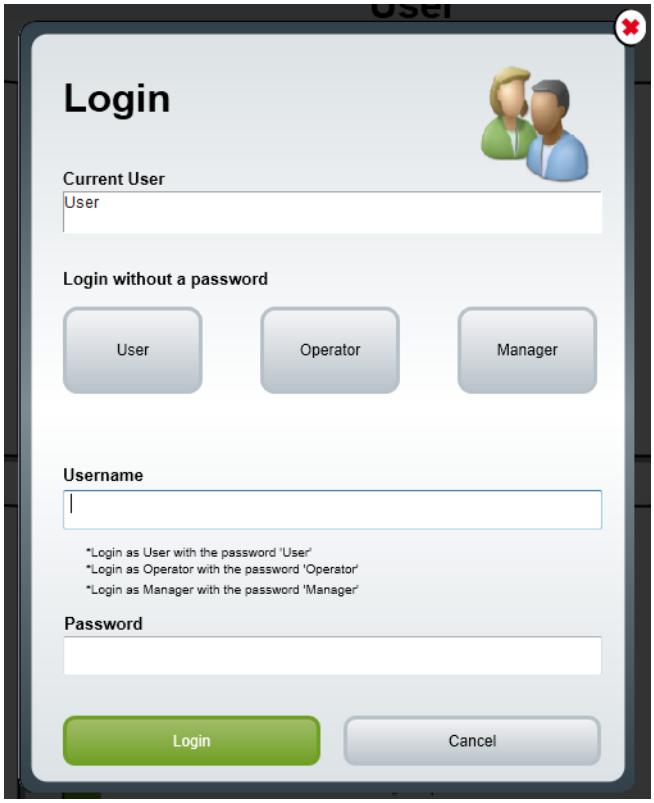
By clicking on the **System** button, you open a dialog in which you:

- Receive general information on system driver variables (Main.chm::/Sysdrv.chm::/Sysdrv.htm):
  - Computer name
  - Version of the Runtime files
  - Version of the project
  - Time idle
  - Memory capacity used
- Can switch the color scheme with Chameleon technology
- Can select the language

2.1.2 User logon

By clicking on the **Log on/off** button, you open a dialog in which you can log on as a user. The user called **User** is automatically logged on when Runtime is started.

You also receive information on other user names and passwords in the dialog, to enable you to try out Runtime in different roles with different authorizations.



Access data for demo project:

Note capitalization.

User name	Password
User	User
Operator	Operator
Manager	Manager

2.2 Automotive

In this project, you see a typical automotive project with screens for:

- Alarms

- Events
- Trends
- Reports
- Key figures
- Equipments

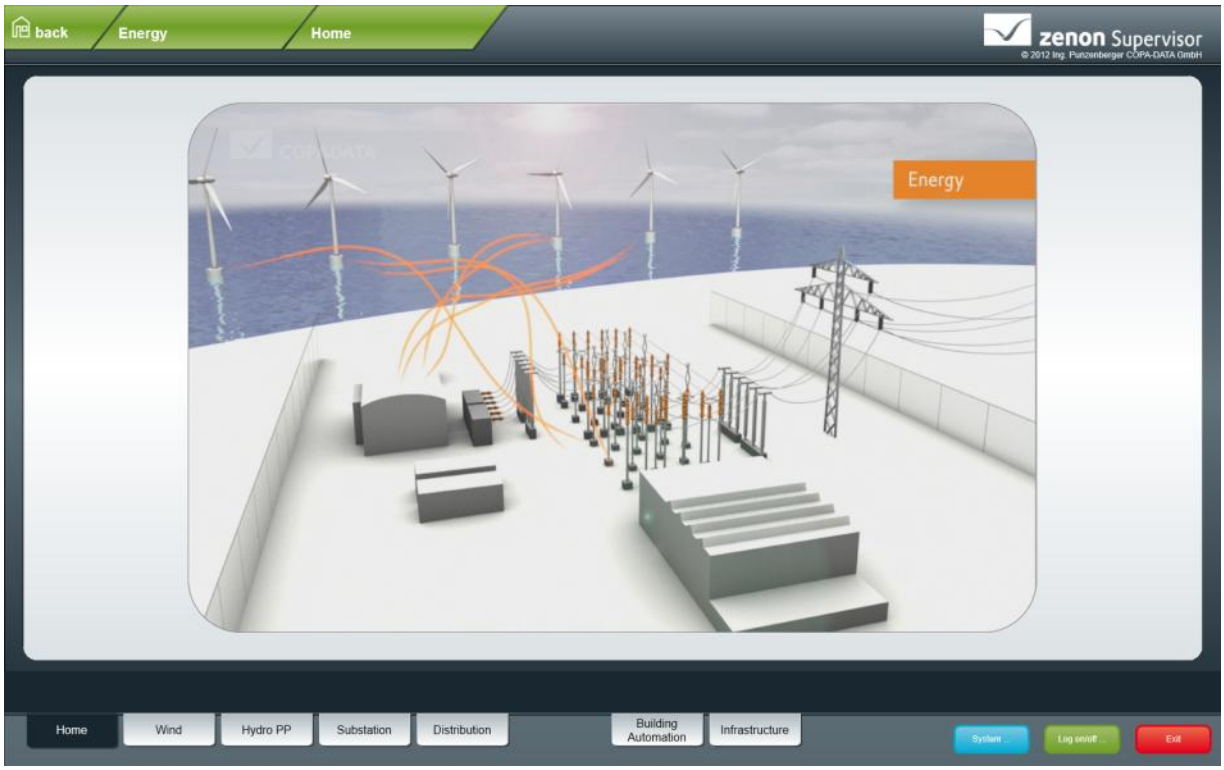
The green bar on the top left shows you where you are and allows you to easily navigate to the starting point.

Button	Description
Alarm Message List:	Displays the current alarms. These can be filtered to provide a better overview. Some filtered views have already been predefined in a submenu. Alarms can also be acknowledged here. The Alarm Statistics button opens a screen with the Industrial Performance Analyzer.
Event list:	Displays entries in the Chronological Event List. Some have already been defined in a submenu.
Trend:	Provides different evaluations. Some have already been defined in a submenu.
Report:	Provides reports that can be displayed with the Report Viewer in RDL format. Some have already been defined in a submenu.
Key figures:	Display of the performance meters (mathematics driver) and S7 implementation. Some have already been defined in a submenu.
Attachments:	Provides an overview of the whole facility. With integrated World View functionality and zooming and scrolling for Multi-Touch.

2.3 Energy

In this project, you can see models of applications from the energy sector.

The green bar on the top left shows you where you are and allows you to easily navigate to the starting point.

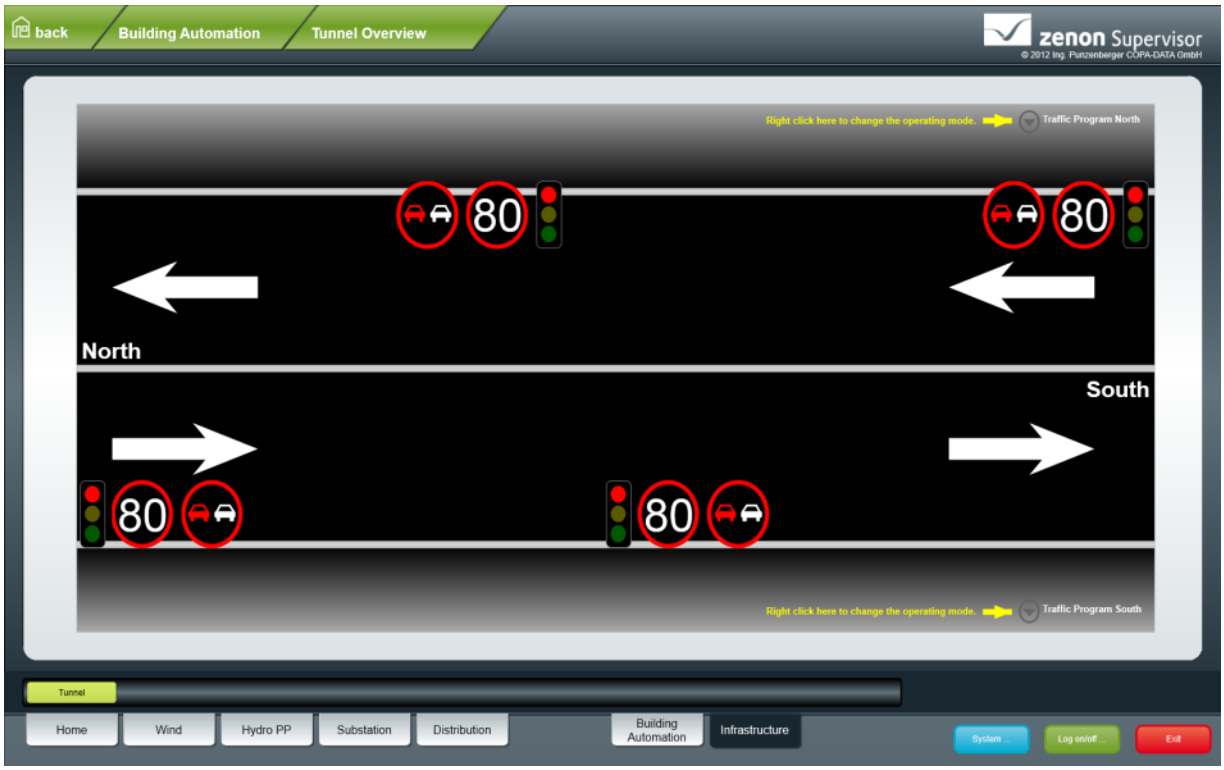


Button	Description
Wind	Display of a wind park. ▸ Wind Turbine: Dynamic rotation of static elements with various values displayed. ▸ Wind Park: World screen with decluttering mechanism; wind turbines are displayed if you zoom in. ▸ Turbine Report: Report that, using the Report Viewer, shows the output of turbines as a gar graph and the energy generated as a trend. ▸ Wind Park Report: Reports from the Report Generator, and utilization displays as bar graphs.
Hydro PP	Display of a hydro-electric power station. ▸ HPP_M1: Simulation of different energy modes such as network mode or turbine mode and their frequency/output diagram. ▸ Hydro PP: Overview screen of a hydro-electric power plant with water levels. Uses zenon ALC technology. ▸ Putting into operation. Summarizes all important data in one screen.
Substation	Visualization of a substation with World View and different details.
Distribution	Visualization of the energy distribution.

2.4 Infrastructure

Infrastructure project that shows the traffic routing in a tunnel.

The green bar on the top left shows you where you are and allows you to easily navigate to the starting point.



By right clicking on the **`Traffic Program North`** button or the **`Traffic Program South`** button, you get a context menu in which you can switch between `Stop`, `Slow` and `Normal` modes.

2.5 Building Automation

The project for building automation uses the EMS (Energy Management System). It:

- Displays the current and expected energy use
- Allows interventions to be made to control energy use
- Control the air conditioning system

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Button	Description
EMS view:	Provides an overview of energy consumption and an outlook of the expected consumption.
EMS devices:	Control of devices in order to influence energy consumption. Two different consuming device groups and a diesel generator can be switched separately. You can see the effects of the switching actions in the **EMS view** screen.
Building automation:	Controlling the air conditioning and consumption display WPF is used for the pie chart.

2.6 Food and Beverage

Foodstuffs production with batch processing, filling, packaging and pasteurization.

The green bar on the top left shows you where you are and allows you to easily navigate to the starting point.

You can find out more about batch control in the Batch Control section.

Button	Description
Batch production	Batch production with recipe administration. ▶ Start of the batch by selecting a master recipe. This can be executed as a test and approved. After approval, a control recipe can be created and started. ▶ Depending on the recipe, ingredients need to be added to both tanks. For this a pop-up screen is opened: ▶ The product is automatically filled after the PH value is checked. Submenu: ▸ Process control: Control of batch production. ▶ Recipe management: Create and edit master recipes and control recipes. Different recipes with different ingredients can be created. Two editors are available for this. ▸ Event list: Displays important CEL entries during the batch process. ▸ Batch trend: A trend screen set up for the batch process, which shows the complete batch process using charts and Gant. ▸ Batch report: Reports on batch production.
Packaging line:	Display of a packaging line with dynamic process status color changing and display of attendant OEE key figures and simulation control. The simulation includes: ▸ Startup ▸ Production ▸ Rundown The simulation starts together with Runtime; in doing so, an initial start-up phase is carried out first. The production phase is repeated until the simulation is ended with "**Rundown PLMS**". The simulation starts again

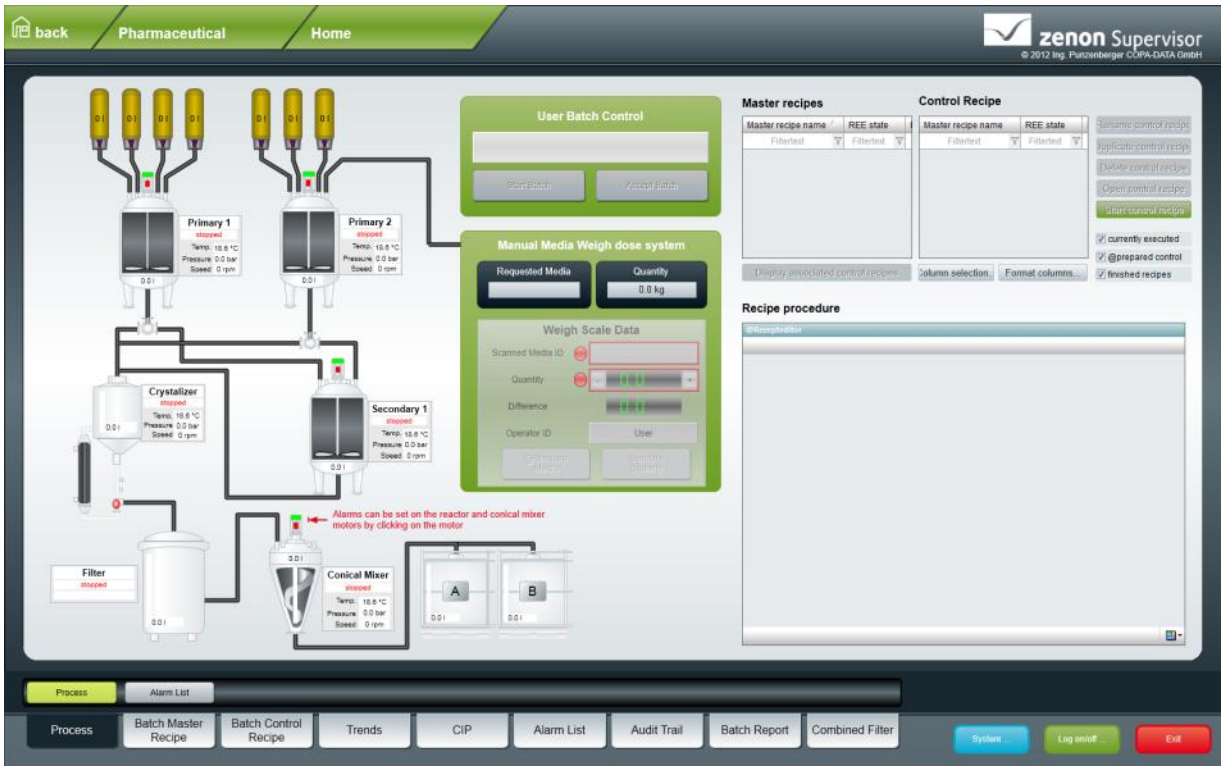
	automatically with a new batch. ▸ **Trends**, **Alarms** and **OEE** display the most important values during the production process on the production line. ▸ The **Alarm Report** shows a graphical evaluation of the alarms that have occurred during the whole production phase.
Filling machine	The status information offers a detailed insight into the simulation values based on the filling machine. ▸ The status model is derived from the Weihenstephan status model. It represents the current operation status of the filling machine. ▸ In the **Recipe Group Manager**, recipes with shadow variables and recipe checking can be managed. ▸ The **CEL** displays events filtered for the filling machine, **Consumption Report** provides reports on production and consumption of resources.
Pasteurizer	▸ WPF display of temperatures. If the simulation system is switched off, it is possible to switch between three modes (OFF, CIP and Pasteurization) manually. ▸ It is possible to switch between Celsius and Fahrenheit with the unit switching implemented. ▸ **Trend**, **CEL** and **Alarm Message List** display online data and historical data for monitoring machine process values. ▸ The **Report Generator** summarizes all important data from the machine.

2.7 Pharmaceutical industry

Pharmaceutical production with batch process.

The green bar on the top left shows you where you are and allows you to easily navigate to the starting point.

You can find out more about batch control in the Batch Control section.



Button	Description
Process	▶ Start of the batch process by selecting the desired batch recipe. ▶ Start of a batch and input of a signature in accordance with FDA. (for the user called **User**, the password is **User**. For other users, see user logon (on page 8).) ▶ The user must add ingredients for **Primary Reactor 2** manually during the batch process. To do this, the ingredient and the amount thereof must be added manually using the dosing system. ▶ Manual alarms can be created by clicking on the motor of the reactor or the cone mixer. ▶ Temperatures, pressures and stirring speed can be displayed and analyzed using the trend screens.

	▶ The batch is automatically concluded after the batch is accepted. ▶ The report shows the complete batch process of the selected recipe.
CIP – CIP RGM	▶ Select the desired recipe group to display a list of the recipes contained therein. ▶ The recipe list displays the status and the version of all recipes of this recipe group. Recipes can be sorted and filtered for quick and easy selection. ▶ As soon as a recipe has been selected, it can depending on authorization level, be loaded or modified ▶ The recipe value list displays the recipe-dependent variables and the attendant variable values of the recipe. ▶ The values of the selected recipe can be displayed directly in the process in the process window. The **Read from recipe** button displays the value in the process. The **Write to recipe** button modifies the selected recipe with the amended values. ▶ Load the recipe and click on **Start CIP** in the **CIP** screen.
Combined filter	▶ Global filter possibility for **Alarm Message List**, **Chronological Event List** and **Trend screen**.