



zenon 14

HIGHLIGHTS

Accelerate access to life-changing medications

Life sciences and the pharmaceutical process industry are tightly regulated fields, often involving many steps, clean environments, and expensive equipment. Government rules make it tough to develop, produce, drugs means lots of testing. Government legislation and regulation around drug development and production add complexity and increase the burden of testing and compliance activities. zenon makes things simpler with easy workflows and compliant automation.

Open and modular process orchestration

Module Type Package (MTP) Standard

The MTP Standard is still in progress – newly released parts will be implemented when available. Parts 1 to 6 are included in zenon 14.

VDI/VDE/NAMUR 2658	SUPPORTED
1. Basic Concept (draft)	✓ v1.1
2. HMI Concept (draft)	✓ v1.0
3. HMI Interfaces	✓ v1.0
4. Process Control	✓ v1.0
5. Runtime Concept (draft)	✓ v0.1
5.1 Runtime Concept – OPC UA (draft)	✓ v0.1
6. Alarming Basic + Standard (former 7 and 7.1 are merged into 6) (draft)	✓ v0.1

Figure 1: MTP Standard

What's new in the Orchestration Studio

General improvements

- ▶ User Interface cleanup
- ▶ Performance optimization on project generation
- ▶ Harmonize zooming and scrolling
- ▶ Enhanced default settings for Historian and Trend
- ▶ Configurable default decimals
- ▶ Connect ValueOut and ValueIn of same device
- ▶ Service Operator interaction

Import/Export of POL projects

- ▶ Import/Export of orchestration projects now possible with new file format* **.cdpol**
- ▶ The import page allows the user to import full orchestration projects or only parts of the *.cdpol file that is opened

Importing MTPs from custom marketplaces

- ▶ Option to write a custom Orchestration Studio Add-In to connect to third party Marketplaces
- ▶ Import templates and devices from Marketplace

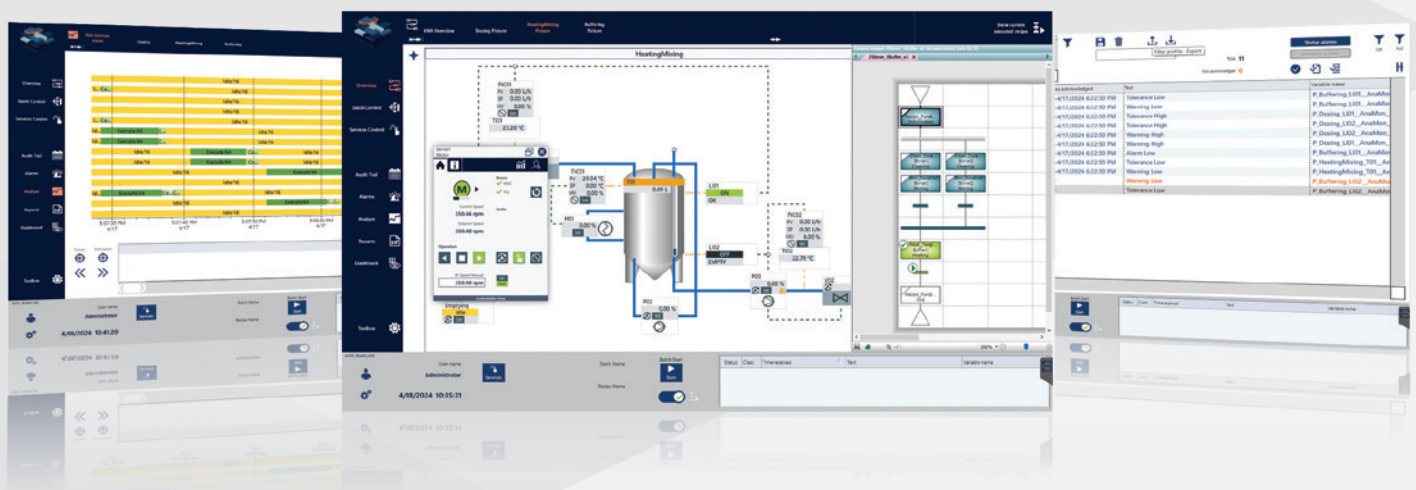


Figure 2: Pharma HMI Demo supporting Web Visualization Service



MTP – Device Management

- ▶ Use devices in **multiple orchestration projects**
- ▶ Apply settings for a **device** as well as **project-specific** settings
- ▶ **Allow substitution of devices** while maintaining configuration per orchestration project
- ▶ Each device gets a Status: indicating the current state of a device
- ▶ Each device has a Location: where to find the device

Internal modules

- ▶ Modules used at the orchestration layer to manipulate signals and value forwarding
- ▶ Basic math blocks are part of zenon
- ▶ User can create their own modules

Project Management

- ▶ Engineering of an orchestration project without an active zenon project
- ▶ Target project can be selected if loaded in workspace
- ▶ Binding of an orchestration project to a zenon project, no “fire and forget”
- ▶ Export and Import of orchestration projects including zenon backup and Service Engine data files (alarms, events, archives, ...)

Apply default device symbols

- ▶ The user can define a default device image for all kinds of motors and valves types

Rework of P&ID symbols

- ▶ **Decluttering** was implemented showing the value respective state of the device only when zoomed out
- ▶ **Autosize:** If the symbol size is scaled up then the button element (icon) is scaled up accordingly, respecting the symbol borders, even if the icon is rotated
- ▶ All zenon device symbols have been reworked

Details screen for devices

- ▶ For **each device** a **separate detail screen** is available, showing all relevant information for this device only

Device-agnostic access to process information with the Web Visualization Service (WVS)

zenon World View

- ▶ Zooming, scrolling and decluttering for showing large processes
- ▶ “Screen: move center” function

Faceplates Improvements

Batch Control

- ▶ Execute Master and Control Recipes

Level up your Engineering

Direct online filters on AML and CEL lists

- ▶ Direct online filters for AML and CEL lists

Automatic chronological sorting of new alarms in the alarm list (AML)

- ▶ The operator sees an instant display of the actual chronology, even if the AML screen is constantly open

Direct online filtering in alarm and event message lists

- ▶ The Audit Trail review is simplified due direct column filtering mechanism
- ▶ Column filters on AML and CEL lists

Smart Objects

- ▶ Support of Distributed Engineering (Multi-User)
 - Working smoothly in a team with Smart Objects
- ▶ Variable mapping
 - Use wildcards (*.*) to filter and apply mapping rules to multiple datapoints
 - Applying variable mapping configuration to all related Smart Objects in the project



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Connectivity News

Process Gateway (PG) watchdog and status variable

- ▶ For integrated PG (Windows and Linux)
- ▶ Monitoring of the execution of the Process Gateway

SNMP Gateway supports SNMPv3

- ▶ Secured communication

Modern, platform independent gateway that supports SNMPv1, SNMPv2 and SNMPv3

OpenSSL: support for OpenSSL 3

- ▶ OpenSSL version 1.1.1 is no longer maintained

OPC UA Process Gateway – Certified again through OPC Foundation

OPC UA Process Gateway for Linux

- ▶ Supports providing data from the zenon Historian to OPC UA Clients

Linux Service Engine

Enhanced zenon drivers in version 14:

- ▶ MODBUS_ENERGY
- ▶ stratonNG
- ▶ OPCUA32

Enhanced Process Gateway in zenon 14:

- ▶ Access OPCUA Supporting:
 - Historical Data

Flexible process automation, control and data processing with zenon Logic

Extended Unicode-character set (UTF8) support in Logic Studio

- ▶ Unicode Characters for symbol names of variable
- ▶ String literals in the PLC code can contain Unicode characters

More flexibility for coding in modern automation and IoT environments

StratonNG: Support for WSTRING via stratonNG driver

- ▶ Up to 32,000 characters via WSTRING type datapoint

StratonNG: Secure TLS communication

- ▶ TLS with mutual authentication
- ▶ Supported on Windows and Linux

Enhanced JSON FB library

- ▶ Parsing and editing of JSON files

“TimingStatistics” function block

- ▶ Monitoring runtime execution of zenon Logic

