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15

# HIGHLIGHTS

## Welcoming the future in the Food & Beverage Industry

*True transformation in the industry is clearly underway, marked by a fundamental shift in manufacturing that involves evolving organizational structures, the emergence of new roles, and the cultivation of sustainability competencies. Innovation and digitalization, powered by the zenon Software Platform, are key enablers for the Food & Beverage Industry. With the latest version of zenon, we are honoured to support these sustainability pioneers on their journey of transformation.*

### Opening up new possibilities for modern digitalization

#### Drivers

Selected driver news and enhancements:

- ▶ stratonNG supports local buffering
  - Overcoming communication interruptions, up to 48 hours
  - Events and alarm creation after connection re-establishment
- ▶ TIA driver enhanced to support TIA20
  - Stay compatible with up-to-date Siemens PLCs
- ▶ OPC UA driver (Client)
  - Support for reading historical data into RDA archives
  - Support of 1.04 specification Data type definitions
- ▶ BACnet driver
  - BACnet Secure Connect to provide secure BACnet communication into another network

#### zenon Logic Soft PLC

- ▶ Python integration: Unified and integrated architecture for both, calculations/process automation (IEC 61131-3) and advanced data analytics (Python)
  - Utilize Python programming
  - Asynchronous execution of scripts, triggered by function block
  - Variable exchange via fieldbus configuration
- ▶ Support of IEC 61131-10 – a.k.a. PLCopen: Migrate PLC applications effortless from 3rd party systems to zenon Logic
  - XML-based exchange format for the export and import of IEC 61131-3 projects
  - A complete IEC 61131-3 project can be transferred between different vendor IDEs
  - Exchange of configuration elements, data types, and POUs written in the standard IEC 61131-3 languages
- ▶ Modular Logic Runtime
  - Optionally allow (incremental) adding and reloading of individual modules on-the-fly

- ▶ Buffered Events
  - Improved event-based communication
  - Offline buffering of configured variables (up to 48 hours)
  - Ensure data integrity of relevant data

#### zenon Service Engine on Linux

- ▶ zenon Network support
  - Linux Service Engine can act as process server for a Linux or Windows-based client
- ▶ Remote Transport support
  - Project download directly from zenon Engineering Studio
  - Service Engine start, stop, reload etc. from Engineering Studio
- ▶ User Management enhancements
  - Local User Management support
  - User Management via Identity Service
- ▶ zenon Logic Fieldbus Drivers
  - MQTT-Client
  - EtherNet/IP Adapter and EtherNet/IP Scanner

Linux and Windows Service Engine are compatible (i.e. Server/Client) and use the same engineering files – **no extra engineering effort when combining or switching between Linux and Windows!**

#### zenon IIoT Services

- ▶ Device Management: deploy zenon projects to your devices. Easily setup, run and maintain applications – e.g. on Linux Controllers
  - Service Engine within Docker
  - Selection of runtime changeable files on deployment
  - Start/Stop/Reload Service Engine
- ▶ Asset Modeling Service: Create and use custom defined models
  - Link Data Models to zenon meta data
- ▶ Identity Service: Better integrate existing Azure Active Directory with the zenon platform
  - EntraID: Automatic group mapping for users

## Continuous enhancement of user experience

### Dashboard Service

- ▶ Asset monitoring with IIoT Services
- ▶ Dashboard Service – with several different widget types available
  - Bargraph, Table, Gauge, Trend, “Website”, Multivalue, Sparkline, Simple Value
- ▶ Management of dashboards
  - Display list of dashboards with meta data
  - Update, delete (CRUD)

Simple and flexible configuration of dashboards

### Web Visualization Service (WVS)

Platform independent, mobile access to your processes

- ▶ Automatic Line Coloring
  - Basic coloring and advanced illustration of the state, e.g. multiple supply, etc.
- ▶ Network Operating Authorization
  - Safe allocation of assets within a multi-client architecture
- ▶ Extended Trend
  - Support Extended Curve List
- ▶ Combobox: screen element now supported
- ▶ Time filter (basic) for AML and CEL
- ▶ Batch Control
  - View and operate matrix recipes

### Batch Control

Enhanced overview and flexibility of recipe handling

- ▶ Continuous Batch Phase: runs until the phase done condition is met (no need of parallel branches)

### Extended Trend

Continuous improvement towards best user experience for your dynamic data analytics applications

- ▶ Common axis: Link axis of several curves
- ▶ Dynamic axis: Scale with minimum or maximum
- ▶ Highlight curves on selection

### Historian and data analytics

More efficient and flexible data archiving enabling performant and robust historian solutions – new ways of data historization

- ▶ Percentual values for Swinging Door Algorithm and archive hysteresis
- ▶ Read data from archives readback folder

Further possibilities with zenon Report Engine – retrieve data and extract information in the format you need

- ▶ GraphQL – statistical query functionalities (minimum, maximum, average, count, sum, variance, standard deviation)
- ▶ OT Data Integration based on Excel: Load archived data into your Excel Sheets
- ▶ RGM information in reports



## Improved engineering experience and platform security

### zenon User Management

Enables the flexible implementation of well-structured user management schemes

- ▶ Extension of authorization levels (65535 levels in total, former limit: 127)
- ▶ Authorization based on Equipment Model

### AML/CEL improvements

Extended information capabilities for critical situations

- ▶ Comments extended to up to 255 characters (former limit: 79)
- ▶ Summer/Wintertime and offset to UTC in time columns

### Cyber Security

IEC 62443-4-2 ("Technical security requirements for Industrial Automation and Control Systems components") Mapping Table in Online Help

- ▶ For quick and simple help for IEC 62443-4-2-related questions

### Effective handling of big Engineering Studio workspaces

- ▶ Dynamically load archives
  - For enhanced performance when engineering and maintaining data collection
- ▶ Login once within Engineering Studio
  - Access multiple protected projects with a single log-in

### Modular Automation and Orchestration

- ▶ Projects Ready for Report Studio integration
- ▶ Multiple P&ID screens
- ▶ MTP file based Excel import
  - For mass editing, to reduce engineering time
  - Create MTP files from third party tools
- ▶ Merge content on project generation
  - Keep manual changes in the project by not generating project from template
- ▶ IoT controller compatible project generation
  - Compatible with IIoT-Service Device Management

