zenon 11 Highlights

What´s new for the Energy Industry in 2022?

zenon 11

CONNECTIVITY

▶ **Connectivity General**

▪ **Various improvements in energy protocols:**

- Improved interoperability

- Improved configuration of protocol behavior and additional application functions

- Improvement of engineering ergonomics

- Cyber security advancements

▶ **Device Level Protocols**

▪ **IEC850 Client: configuration option for report control block attribute write**
Option for compatibility with specific devices that are not 100% compliant

▪ **IEC 61850 server: support for Simulation Mode**
IEC 61850 Server - Support for simulation mode according to part 7.8 of IEC 61850-7-1 ed2.0

▪ **DNP3_TG: additional double point value mapping option**

▪ **PRP driver: support of Gigabit Ethernet**

▶ **Control Center Connectivity**

▪ **DNP3 Process Gateway – local / remote mode**
Variable controlled local / remote mode selection

▪ **DNP3 Process Gateway – inverting binary inputs**
Accommodate master requirements, no need for additional variables and mapping in logic

▪ **DNP3 Process Gateway: configurable operate response**
The DNP3 process gateway allows configuration for sending a positive operate response in command routing

CONNECTIVITY

▶ **Control Center Connectivity**

▪ **DNP3 Process Gateway: scaling for Analog Inputs**
The Process Gateway DNP3 Outstation has been enhanced with a configuration option for a scaling factor for analog inputs

▪ **Process Gateway DNP3: use specific qualifier only**
The Process Gateway DNP3 Outstation and the Logic DNP3 outstation now uses preferred / subset level compatible qualifier codes

▪ **IEC 60870 Process Gateway – variable controlled gateway activation**
Internal T00 variable determines if the gateway is active and accepts master connections / requests

▪ **IEC 60870 Process Gateway: redundancy**
Support for redundant links according to IEC 60870-5-104 ed. 2

▪ **IEC 60870 Process Gateway – support for UTC time**

▪ **IEC 60870 slave stack and Logic Service driver: support for IPv6**
The IEC 60870 slave stack and the Logic Service IEC 60870 slave driver, have been enhanced to also support IPv6 based communication for IEC 60870-5-104

▪ **Process Gateway ICCP: support for secure communication**
TLS and MMS security according to IEC TS 62351-4:2007 / compatibility mode in IEC 62351-4:2018

▪ **Process Gateway ICCP: Optional custom configuration of datasets in the ICCP Client role**

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▶ Alarm Management

▪ Alarm Shelving

In case of a disaster, a flood of alarms is generated. To systematically analyze and fix the situation, the operator must be given the chance to temporarily „mute/suppress" certain alarms. So, for an instance high priority alarms are taken care if immediately whereas lower priority alarms are shelved.

zenon alarm shelving:

- New shelving command in the zenon alarm list

- Selected alarms can be shelved for a specific period, a shelving reason must be stated. Shelved alarms disappear from the alarm list. All associated audio-visual indications are muted

- After expiration of the shelving period, alarms are reactivated

Variable Diagnosis

▪ IImproved ergonomics of the Variable Diagnosis screen by additional columns and apply equipment group selection from equipment model screen

▪ Filtering based on Equipment Model (screen)

▪ Additional columns: Equippment Group, Project Name, Resources Label

▶ Web Visualization Service

▪ New Web Visualization Version

- Integrated engineering and compilation and zenon multi-project support

- Further energy process control features planned

▶ Historian

▪ Swinging Door Trending Compression for historic data in zenon archive files (ARX)

▪ Higher compression rate leads to better utilization of storage space

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▶ Efficient Engineering (Connectivity)

Engineering and configuration of gateway protocols is fully integrated in the zenon Engineering Studio:

- DNP3 / IEEE 1815 Outstation
- IEC 60870-5-101/104 Slave
- ICCP / TASE.2
- MODBUS Server
- OPC UA Server
- SNMP Agent
- Syslog
- MS Azure Services
- SQL Online Interface

▶ Efficient Engineering

▪ Smart Object Engineering:

- Support of mapping rules

- Automatic Engineering for Sos, including specialization of released properties and mapping rules

- Up to 70% faster processing of SO updates

▪ ALC properties for lines supported in styles

ALC line properties can be centrally defined in styles and applied to the lines of a single line diagram

▪ New end-of-line-types

Support of line end types which are often required in SLDs

▶ Configuration of energy protocol security

TLS and MMS certificate authentication configuration dialogs IEC 62351-3 and IEC 62351-4 settings for energy protocols can be configured in the user interface

▶ Security for additional protocols

▪ Message Control now supports TLS 1.3 for SMTP

Default behavior is auto-negotiation of the newest supported TLS version between client and server

▪ TLS v1.3 encryption in zenon Network

zenon Network can be encrypted with TLS v1.3 certificates

▶ Provide status information to load-dispatch centers

Support optimization and congestion avoidance (re-dispatch)

▶ Detailed topologic information through zenon CGMES interface

Equipment inventory

Current asset states (switches open/closed etc.)

Overall current topology

▶ Fully integrated generation of CGMES data in zenon

Equipment model (EQ.xml) generated during project compilation

Asset states (SSH.xml) and topology (TP.xml) generated on demand during runtime