

OPC UA (Unified Architecture) with zenon

Universal Connector as an OPC UA client/ Universal Gateway as an OPC UA server



Over 300 supported communication protocols already provide for a large range of options for connecting devices. In addition the OPC UA client driver provides a universal connection to devices from many different vendors that implement an OPC UA server for true interoperability.

The OPC UA server provides 3rd party OPC UA clients access to the collective information available in the zenon Service Engine. Raw data retrieved from legacy devices, often through proprietary protocols can be processed in the zenon Service Engine and provided with context in an object-oriented model as live data, historical data or real-time and historical alarm and CEL events (Chronological Event List) through the OPC UA server as a gateway.

OPC UA (Unified Architecture), is the successor of the classic OPC standards that have provided interoperability in industrial automation for many years. Developed as a multi-part specification by members of the OPC foundation, OPC UA has also been published as the international standard IEC 62541. The zenon OPC UA client driver opens a wide range of options for communicating with devices from different vendors that implement OPC UA server. Using OPC UA binary over TCP overcomes many of the issues that exist with OPC classic server over DCOM. Additional security options provide protection against a range of attacks, including message tampering, eavesdropping, capture replay and spoofing and add options for message signing and encryption as well as authentication of a client to a server.

The zenon OPC UA server in the process gateway provides for secure access to selective parts of information available in the zenon Service Engine. This makes a powerful gateway to

provide third party OPC UA clients access to processed data that may otherwise remain inaccessible behind legacy or proprietary protocols.

HIGH QUALITY SOFTWARE

In our headquarters in Salzburg, Austria, expert developers and quality assurance professionals ensure that product development and quality assurance meet the highest standards in reliability and security. This is also true for all our drivers and supported protocols. The zenon OPC UA server, certified by the OPC foundation, is proof of our quality standards.

With our extensive experience in driver development, any additional desired functionality can be quickly developed and integrated into zenon to meet your specific requirements. For the OPC UA server and the OPC UA client, COPA-DATA has developed its own stack based on the OPC Foundation Ansi C communication stack, for superior performance, flexible portability and optimal integration in the zenon Product Family.

SUPPORT AND CONSULTING

Local support, training and consulting, and the back-up of a global network of experts and partners, ensures you'll always have a superior experience in serving your customers. With over 100,000 installations, zenon is firmly established. Participation in OPC Interoperability Workshops and Working groups organized by the OPC foundation further establishes expertise and builds relationships that in turn support our customers.

FAST FACTS

- ▶ OPC UA client driver in zenon
- ▶ OPC UA Server in the Process Gateway module for the zenon Service Engine
- ▶ OPC UA Server for zenon Logic and straton
- ▶ COPA-DATA offers ergonomic process solutions in automation with more than 30 years of experience
- ▶ Over 300 supported communication protocols

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OPCUA32 Client

- ▶ Standard zenon driver
- ▶ Multiple connections per driver
- ▶ Multiple drivers per project
- ▶ OPC UA Binary over TCP
- ▶ Browse OPC UA server address space online in the background and import of tags from local cache
- ▶ Default generated or custom application instance certificate
- ▶ Compatibility options old certificates
- ▶ Option for OPC UA Server behind a NAT Firewall
- ▶ User/Password for Authentication
- ▶ Communication through subscriptions and reporting
- ▶ Configurable Publishing Interval, Lifetime Count and Max. Keepalive Count
- ▶ Persistent NodeIds or use of TranslateBrowsePathRequests
- ▶ Single / multiple subscriptions per session (driver connection)
- ▶ Configurable AbsoluteDeadband
- ▶ Configurable OperationLimits and consideration of Server OperationLimits
- ▶ Configurable DataChange TriggerOptions and Sampling Interval
- ▶ Configurable handling for reading and writing of arrays
- ▶ Optimized reading and writing of extension objects
- ▶ UA Secure Conversation options, None, Sign or Sign&Encrypt
- ▶ Detailed logging in Diagnosis Server
- ▶ Take over external timestamp
- ▶ Status Mapping of external status
- ▶ Handling of NAN, NULL, +INF, -INF

Process Gateway OPC UA Server

- ▶ Certified OPC UA Server: Standard UA Server profile
- ▶ OPC UA server integrated in the Process Gateway
- ▶ Multiple instances with different configurations and data models link to one zenon Service Engine
- ▶ Writing of variable values
- ▶ Read-only access possible
- ▶ OPC UA Binary over TCP
- ▶ Data Access, Historical Access, Alarms & Conditions
- ▶ History Read for alarm and CEL events
- ▶ Configurable address space with selected tags from the zenon Service Engine
- ▶ Configurable access to zenon Historian for base archive values and aggregated archive values
- ▶ Support for Subscriptions and Monitored Items
- ▶ Support for Read and ReadRegistered
- ▶ Default generated or custom Application Instance Certificate
- ▶ Self-signed certificates or CA certificates with Certificate Chain of Trust and Revocation lists checking
- ▶ Compatibility options for older client certificates
- ▶ UA Secure Conversation options, None, Sign or Sign&Encrypt
- ▶ Integration with zenon user administration or Active Directory/AD-LDS for authentication