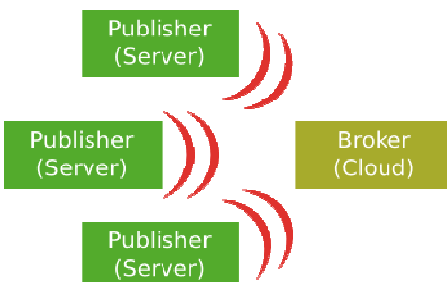
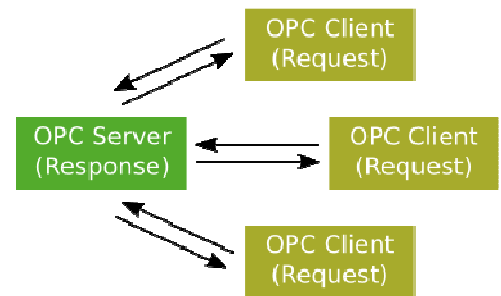


For immediate publication

OPC UA is enhanced for Publish-Subscribe (Pub/Sub)

The enhanced communication mechanism in OPC UA is the foundation for planned real time capabilities of the OPC Standard. The SDKs of Unified Automation are used for prototyping within the OPC UA working group.

In its OPC UA working group the OPC Foundation concentrates on enhancing the OPC Unified Architecture (UA) standard. Besides the existing Request/Response mechanism, which requires a "standing" connection between an OPC Client (data consumer) and an OPC Server (data provider), OPC UA will be enhanced with an additional communication schema following the principals of Publish-Subscribe. Thereby, the OPC UA Standard will be able to emerge into new fields of application. For instance in sensor networks and cloud applications, typically many devices will send their data to just one receiver (many-to-one). In the Publish-Subscribe mechanism, a Publisher (OPC Server) sends its data connectionless to the network and Subscribers (OPC Clients) can use this data without the need for a resource consuming connection.



In the Industrial Internet of Things (IIoT) as well as in applications within the scope of Industrie 4.0 the communication can use a Broker that is located in the cloud. Thereby, many hundreds or even thousands of devices can push their information to the cloud and Subscribers will receive messages from the Broker. Therefore standard protocols like e.g. AMQP will be used.

Besides the sensor or cloud connectivity in a many-to-one scenario, the new connectionless Pub/Sub communication reveals additional use cases. A local communication, between well-known participants like PLCs, often requires very frequent transmissions of small amounts of data. However, this communication needs guaranteed response times, known as deterministic real time. Therefore, the Pub/Sub communication will be combined with the new Ethernet extensions for Time Sensitive Networks (TSN). Using TSN network components (switches) will enable real-time communication between controllers from different vendors.

"We are pleased to play an active role in the UA working group. As many members of the working group are our customers, it was a logic step to support the prototyping work for the new Pub/Sub enhancements", says Jürgen Boxberger, Executive Director at Unified Automation GmbH. "After the prototyping phase, the specification enhancements will be released by the OPC Foundation. As soon as the specification is stable and released, we will timely offer upgrades for our SDKs. . , In particular, we plan generic SDK interfaces for real-time kernels to allow implementations based on Time Sensitive Network (TSN)."

The Pub/Sub working group of the OPC Foundation consists of manufacturers of automation components and industrial controllers as well as machine builders and robot manufacturers. By taking the leading role in the prototyping working group, Unified Automation has firsthand access and provides in depth know-how about the new communication model. As technology provider and market leader in the field of UA software frameworks, Unified Automation is fully aware of its responsibility. Whoever uses OPC UA SDKs/Toolkits from Unified Automation decides for leading-edge technology and will get state-of-the-art software products.

About Unified Automation

As a leading OPC UA software provider, Unified Automation offers OPC UA products, cross platform toolkits and development frameworks in different programming languages. The targeted market of OPC UA enabled products ranges from embedded device manufacturers up to enterprise application developers. Unified Automation sees itself as technology enabler whose Software Development Kits (SDK) are most frequently used worldwide and form the base of OPC UA products of nearly all large and countless midsize and small automation vendors.

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