

Tunneling and Secure Data Transfer via OPC UA Clients and Servers

- **KEPServerEX OPC UA Server**
Free with KEPServerEX

- **KEPServerEX OPC UA Client:**
\$995.00

Application Connectivity Support:

- **Native Interfaces:**
FastDDE & Suitelink for Wonderware, NIO for iFIX
Oracle MES/MOC

- **Database Interfaces**
ODBC

Support:

1 (207) 775-1660
1-888-Kepware extension 211
support@kepware.com

Sales:

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1-888-Kepware extension 208
sales@kepware.com



In 2009, the OPC Foundation released its next generation interoperability standard, named OPC UA (Unified Architecture). This technology delivers the latest capabilities in Automation Data Transfer and addresses the need for highly secure, cross platform communications, the transmission of Information = Data + Context, and unifies the earlier specifications of OPC into one interface for all forms of information, Data Access, Alarms and Events and Historic Data Access.

KEPServerEX version 5.2 and greater delivers OPC UA server capability in addition to the existing OPC DA, OPC AE and Native interfaces it has delivered in the past. In addition, KEPServerEX 5.2 and greater delivers an Optional OPC UA Client (delivered in the form of a driver). The Combination of an OPC UA Client and UA Server within KEPServerEX enables a host of new capabilities previously unavailable in the automation marketplace.



The Features and Benefits of OPC UA

Initially started in 2004, by the OPC Foundation and a group of its members, OPC UA was developed to address the current and future needs for information transfer in the automation world. Its goals were to:

- Deliver a technology portable to a wide range of operating systems and technology platforms
- Adopting a security standard familiar to IT professionals
- Support the Intelligent transfer of Information, not just data
- Enable communications in the broadest possible scenarios – not just between computers in an automation facility, but across the Internet, even in Business to Business (B2B) scenarios
- Firewall Friendly and Easy to Manage

These benefits are core to the capabilities described in the OPC UA specifications and Kepware has delivered them in KEPServerEX version 5.2 and above.

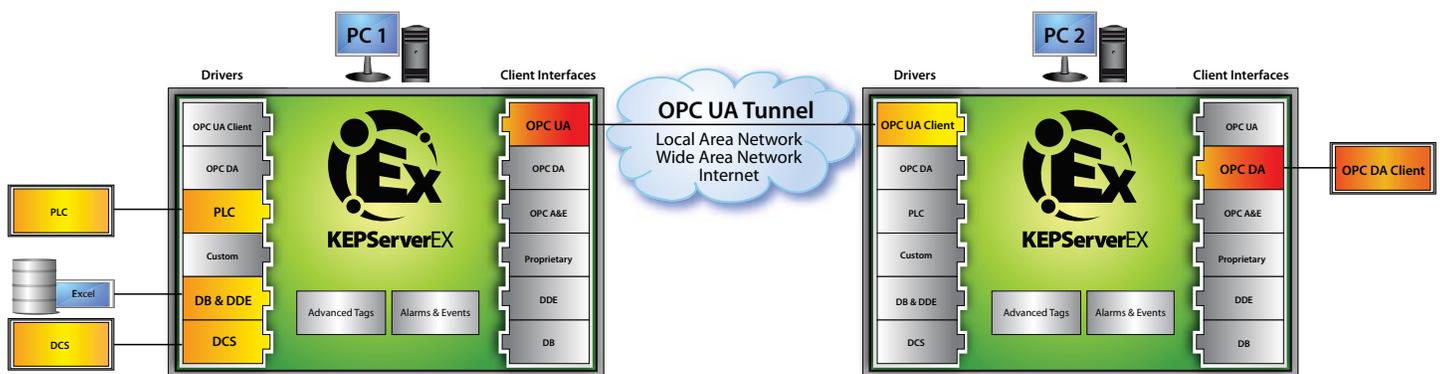
OPC UA Tunneling for Reliable and Secure Remote OPC Server Connectivity

Since the introduction of OPC back in 1996, Automation professionals have been relying on DCOM technology for use in distributed automation applications. While technology in OPC leveraged the best available Microsoft Technology of the day, COM (Component Object Model), its networking counterpart – DCOM (Distributed COM) was not designed with the rigors of industrial automation in mind, nor the distributed operation common in our Internet connected world. As a result, “Tunnel” products have been developed as a replacement to DCOM for distributed applications. Tunnel products have typically delivered proprietary technology - a vendor specific solution enabling the departure from DCOM reliance.

OPC UA communications, by pairing an OPC UA Client with a Remote OPC UA Server, is the ideal solution for connectivity between distributed OPC Classic Clients and Servers. KEPServerEX, with its variety of connectivity options has become the ideal “Gateway” between automation products that support OPC DA.

An OPC UA Based Tunneling Solution delivers the following Benefits:

- Two KEPServerEX Installations working together as a Secure Tunnel
- High Performance
- Communication Encryption and Endpoint Authentication based on current accepted industry standards of RSA and x509, using technology familiar to the IT community.
- Keep Alive and Watchdog features to ensure reliable connectivity
- Tunneling for OPC DA 1.0, 2.05a and 3.0
- The ability to Tunnel to remote Kepware or Third Party OPC Servers
- The ability to integrate Third Party Tags with Data from over 140 KEPServerEX Drivers
- A solution based on an open standard – OPC UA
- Works within the corporate network, through wide area networks and firewalls



Two KEPServerEX Installations working together as a Secure Tunnel

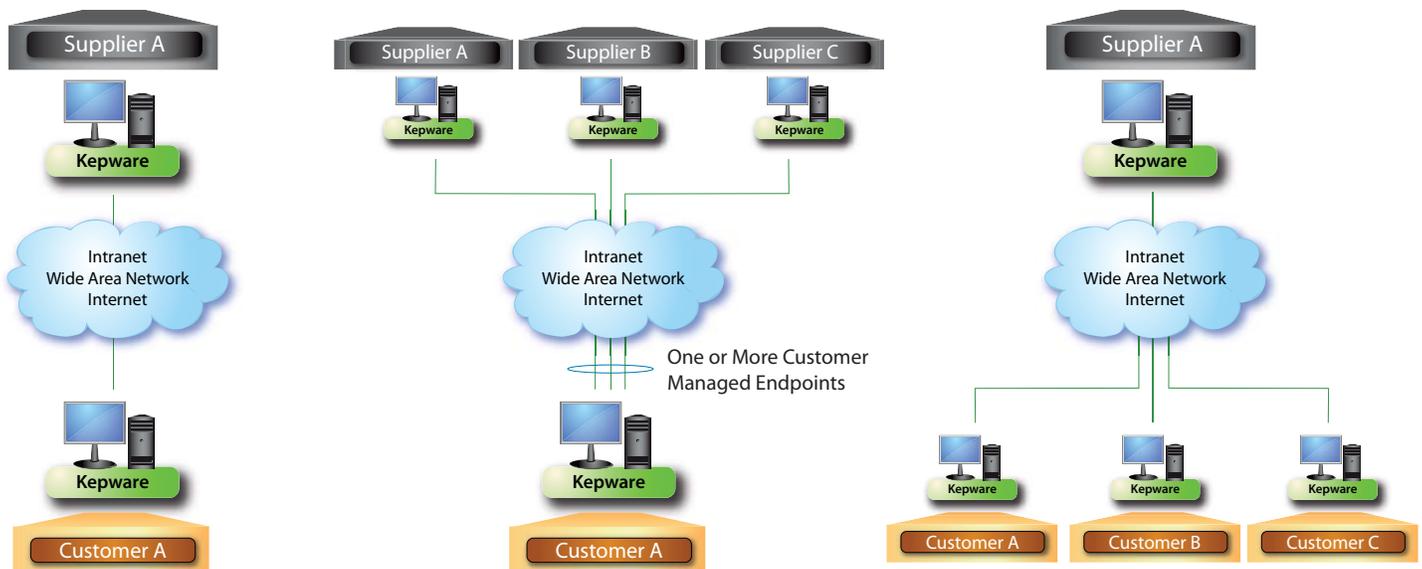
Reliably Sharing Real-Time Information in Business to Business (B2B) Applications

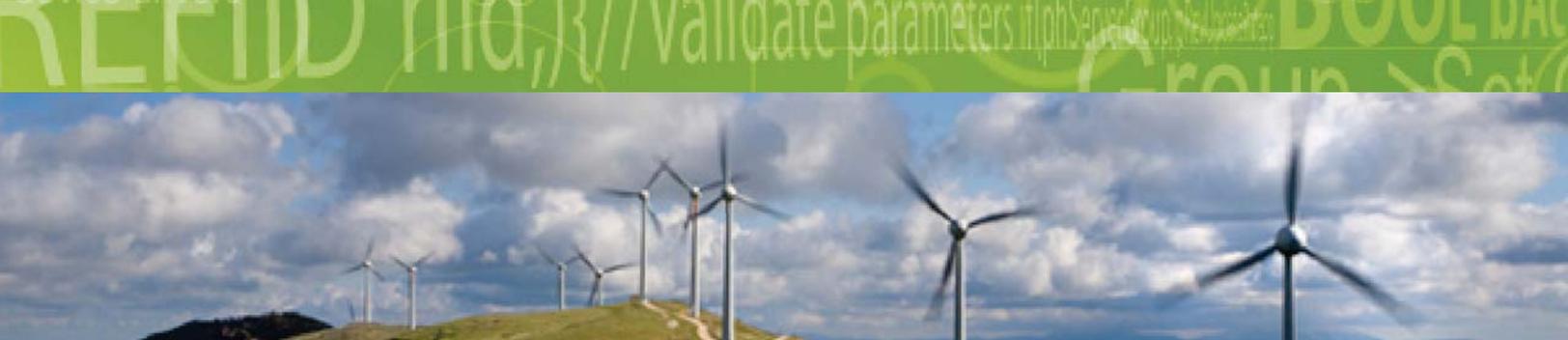
Sharing real-time Production, Inventory and Status information between organizations has always been an area of concern. How to do it reliably. How to do it securely. How to make the solution IT Friendly and easy to administer for your IT Professionals. KEPServerEX, with OPC UA Clients and Servers, is now the ideal "Information Gateway", enabling you to select and share exactly the information you want with your suppliers or customers. You decide what information you want to make available, the frequency with which it is updated and control Read/Write access. Connectivity to remote companies can be done through one Gateway interface or managed separately through "Paired" endpoint configurations, enabling independent control over communications ports on a per user basis.

Applications for OPC UA B2B Applications

- Share JIT (Just In Time) production information with your suppliers
- Enable your Suppliers to manage Remote Inventories
- Share Maintenance Information with Equipment Manufacturers
- Deliver Corporate Metric information throughout the Enterprise
- Enable Smarter Operation of Distributed Systems (SmartGrid Communications)
- Manage all these applications through the benefits of a Robust Tunnel solution

Secure OPC UA Connectivity



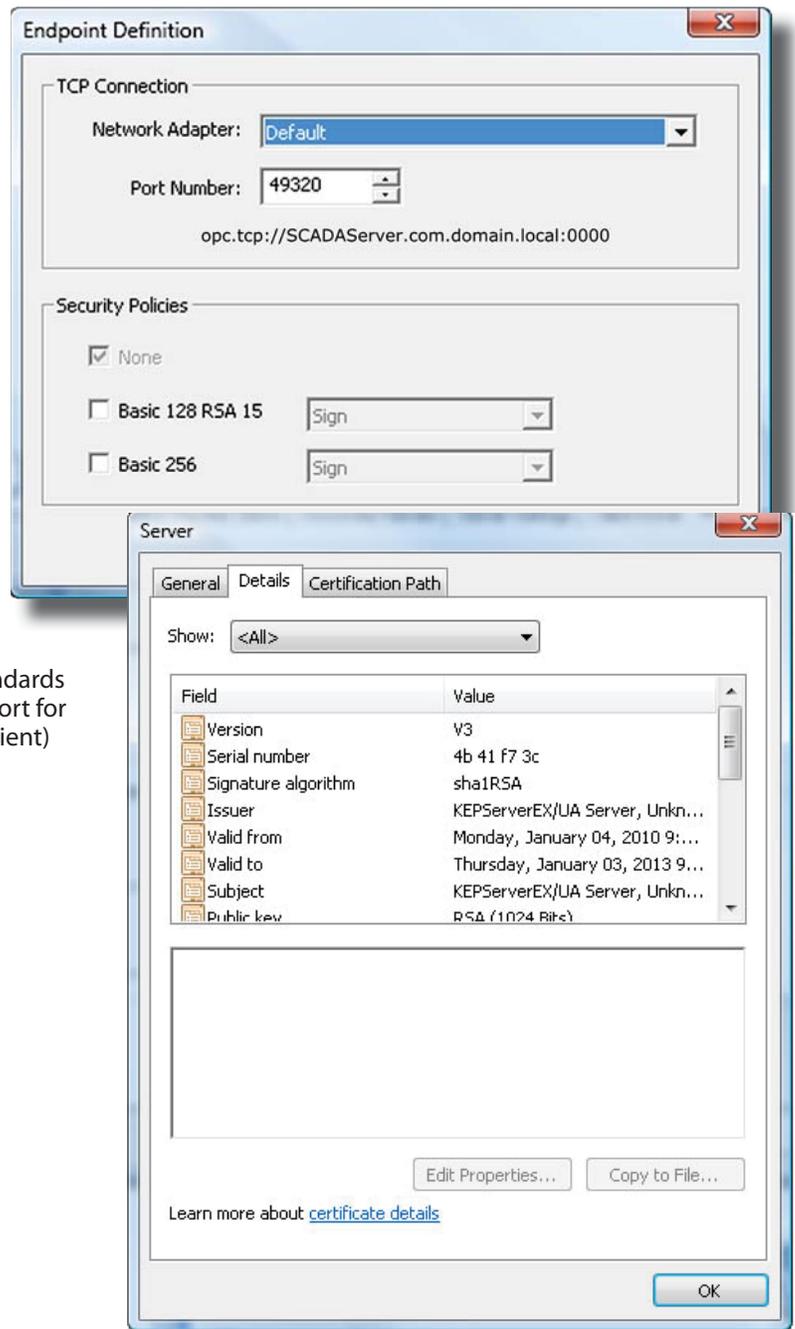


KEPServerEX's OPC UA Server

Delivered as an additional interface to KEPServerEX, the OPC UA Server enables communications to OPC UA Clients. The OPC UA Server is a free interface to KEPServerEX and can be used in parallel with all KEPServerEX server interfaces including OPC DA, OPC AE, GE NIO, Wonderware SuiteLink, DDE, and Oracle interfaces for connectivity to third party clients.

The OPC UA Server supports the following capabilities:

- Serve OPC UA data to Kepware or Third Party OPC UA Clients
- Use KEPServerEX as a Gateway between any Third Party product through Kepware protocols or OPC DA and OPC UA
- Supports Server Discovery Services
- Support for Binary TCP connectivity for the highest level of performance
- Ability to define multiple endpoints with different levels of security and encryption.
- Encryption based on RSA Standards (none, 128 and 256 Bit Encryption)
- Identity Certificates based on x509 standards (Valid From and To Date Support, Support for multiple Certificates – Certificate per Client)
- Max Connections Control
- Session Timeout Control
- Certificate Manager Application



Security Certificate Details Dialog

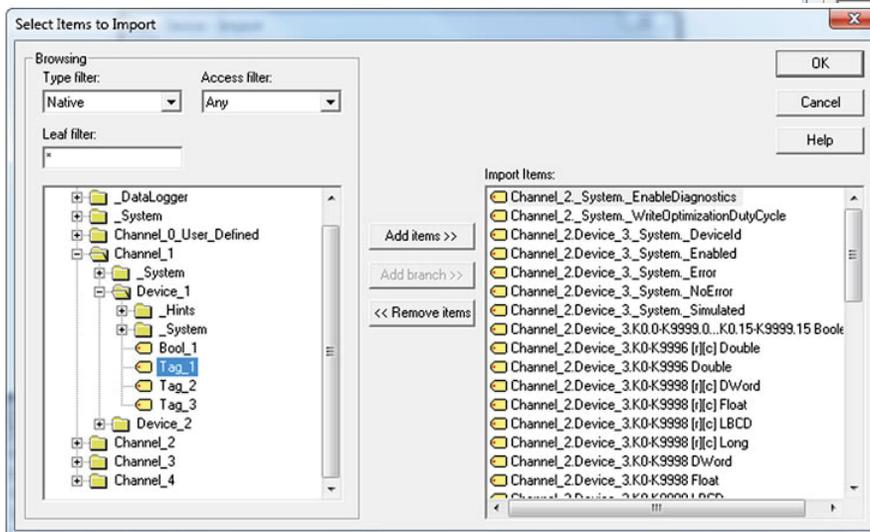
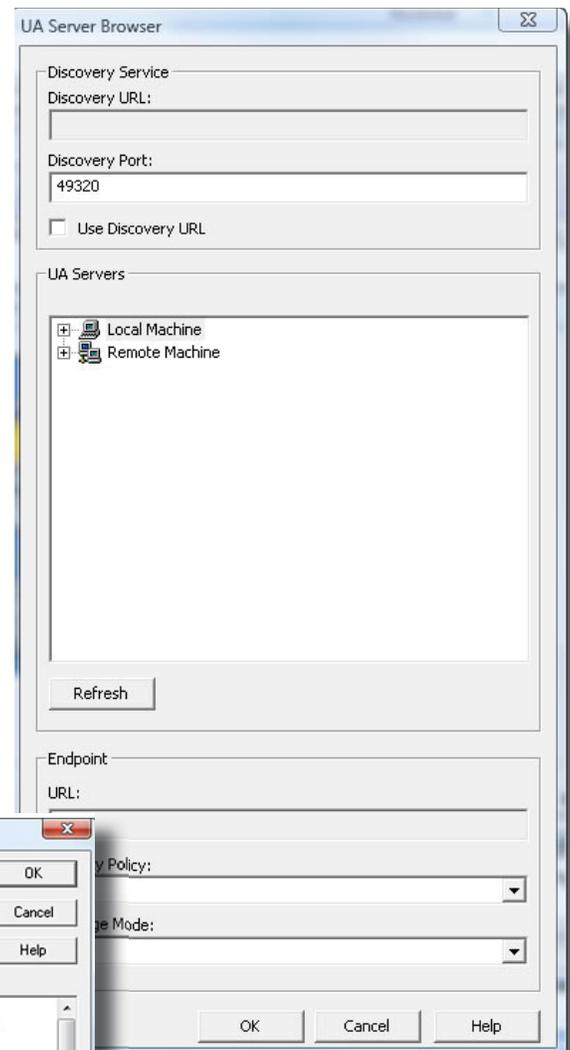


KEPServerEX OPC UA Client Option

Delivered as an optional driver solution, the KEPServerEX OPC UA Client Driver enables connectivity to local or remote OPC UA Servers by Kepware or by third parties. The OPC UA Client Driver has the ability to aggregate information collected from multiple OPC UA servers. When coupled with the KEPServerEX OPC UA Server, customers will enjoy additional benefits of ease of use through the KEPServerEX Certificate Management application and tools to enable quick and easy installation and configuration.

OPC UA Client Driver Features include:

- Connect to Kepware or Third Party OPC UA Servers
- Integrate OPC UA Server information within the KEPServerEX Namespace
- Translate OPC UA Server Data to any KEPServerEX Client Interface
- Remote Server Discovery
- Endpoint Authorization through Security Certificates
- User and Password Endpoint Authorization
- Remote Server Tag Browsing
- Heartbeat and Keep Alive Settings
- Publish Rate control and Exception vs. Poll updates
- Deadband (Percent vs. Absolute) Controls



OPC UA Endpoint Browsing

OPC UA Client Tag Import from an OPC UA Server Dialog



Kepware is the world leader in communication software for automation and offers unique experience in both OPC and embedded device communications. Since 1995, Kepware has focused on the development of communication drivers to automation controllers, I/O and field devices. Operating system support includes; Microsoft Windows Desktop, Server and Embedded (Windows CE and Windows NT/XP Embedded). Today, with over 140 communication protocols, and through the efforts of our direct sales, distribution and embedded partners, Kepware is the leading provider of communications with annual shipments exceeding 100,000 units.

Also – Interoperability between Standards

Let KEPServerEX be your interoperability solution between industry standards such as OPC DA, OPC UA, DDE, ODBC and Native Interfaces for Wonderware, GE Intelligent Platforms, Oracle and others. KEPServerEX, with over 140 protocols, client interfaces and server interfaces is the ideal solution to bridge your various automation solutions for M2M (Machine to Machine) or P2E (Plant to Enterprise) applications.

- A Purpose Built solution for Automation Interoperability
- Directly address today's interoperability challenges
- SmartGrid
H2G - Home to Grid, B2G - Business to Grid, I2G - Industry to Grid
- SmartGrid Demand Response Controls
- SmartGrid Price Controls
- M2M - Machine to Machine Communications
- B2B - Business to Business Communications
- P2E – Plant to Enterprise Communications
- OMAC PackML



Let Kepware be your supplier for field proven and reliable interoperability. For more information, Contact Kepware www.kepware.com

Delivered with KEPServerEX as a standard interface.

www.kepware.com