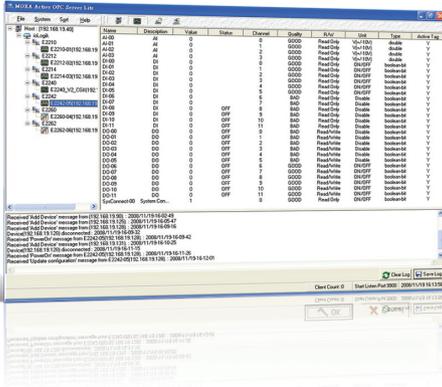


Active OPC Server Lite

Seamlessly connect ioLogik / ioPAC to your SCADA system



- Patented event-driven tag update
 - I/O response that's 7 times faster
 - Save 80% on network bandwidth
- Firewall-friendly connection from remote ioLogik/ioPAC devices
 - Allows remote ioLogik/ioPAC units to use dynamic IPs
 - Allows remote ioLogik/ioPAC units to use private IPs
- Download free from Moxa's website
- OPC DA 3.0 supported

Introduction

Active OPC Server Lite is a software package provided by Moxa that operates as an OPC driver for an HMI or SCADA system. It offers seamless connection from Moxa's ioLogik/ioPAC series products to

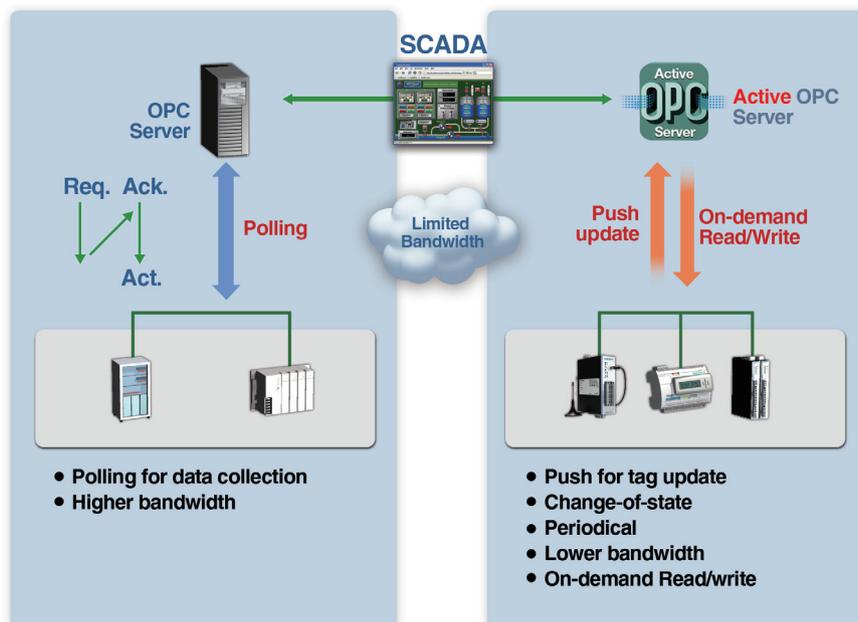
popular SCADA systems, such as Wonderware, Citect, and iFix. Active OPC Server Lite meets the latest standard of OPC DA 3.0, which allows connections to various kinds of devices and host OPC machines.

Patented, Active Remote Data Acquisition

General OPC servers typically use the "poll/response," or so-called "pull" architecture, to connect to controllers or data acquisition devices, which involves an HMI/SCADA system continuously sending out commands to collect relevant data. Moxa's Active OPC Server, with its non-polling architecture, supports the standard OPC protocol, but also offers active (or "push") communication with Moxa's ioLogik/ioPAC series of RTU controller and remote I/O to HMI/SCADA systems, providing instant I/O status reports. This "active" technology makes data acquisition more efficient, especially when bandwidth is not that high (e.g., land lines, cellular, or via satellite) and the devices and sensors are located at the remote site.

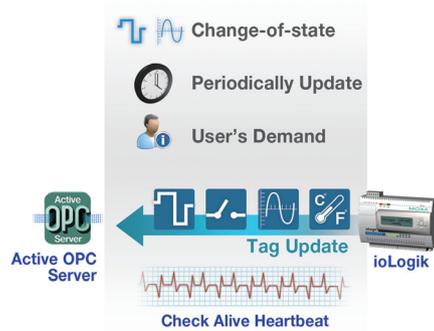
OPC to Device Connection

	Active Technology	Traditional Polling
Response Time	Event-triggered, faster response	Need to wait for polling and timeout, slower
Bandwidth Usage	Lower	Higher
Internet Friendship	Support Dynamic, and Private IP Address for DAQ device	Requires fixed IP and Public IP Address



I/O Response that's 7 Times Faster and Provides 80% off Bandwidth Usage with Event-driven Tag Updates

Adding additional I/O channels will tend to bog down an HMI/SCADA system's operation, resulting in a longer response time and high network bandwidth occupation, all because of the traditional "pull" architecture. Active tags created by Active OPC Server Lite and ioLogik/ioPAC series products report the I/O status only by event, which means that the I/O status will be updated to the Active OPC Server when there is an I/O status change, a pre-configured interval is reached, or when requested by the user. The heartbeat design also checks if the connection is alive or not, preventing from no updates from the remote ioLogik/ioPAC devices.



This type of event-driven tag status update results in an I/O response time that is 7 times faster than other OPC Server packages (using a testing environment with 2,560 I/O channels). In a different test of network bandwidth usage, Active OPC Server Lite and the ioLogik/ioPAC caused an apparent 80% reduction in network traffic. The end result is that I/O access is more precise, and the cost of

communicating with remote I/O devices is substantially lower, especially when the remote site has limited bandwidth (e.g., satellite, microwave, and cellular communication). At the same time, the CPU usage of the SCADA/HMI system is also reduced by 35% with this innovative push-based architecture, so that less maintenance effort and lower level hardware devices can be implemented.

Test I: Network Traffic Comparison

This test used 32 ioLogik E2210 units with 640 DI/O points. As shown in the figure, ioLogik/ioPAC series products can save 80% on bandwidth consumption compared to passive I/O or controllers.



Test II: Response Time for I/O Status

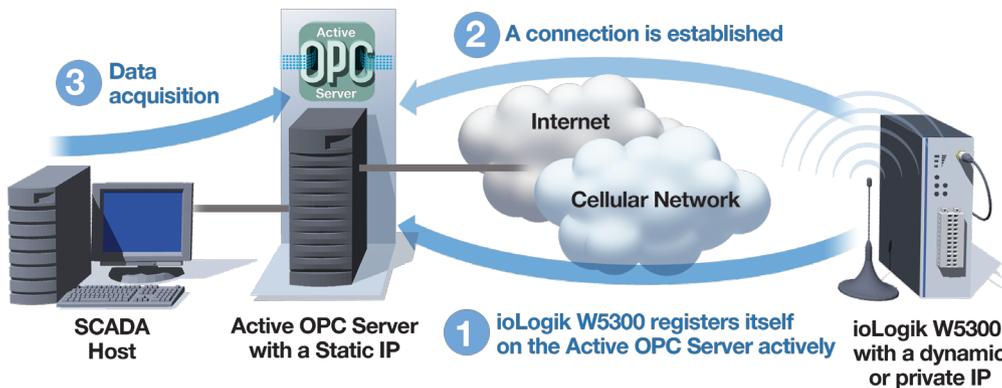
This test used 128 ioLogik E2210 units with 2,560 I/O points. As shown in the figure, the active architecture is 7 times faster than the passive architecture in response time when the I/O or controllers statuses change.



Solving the Dynamic/Private IP Issue on a Mobile Device or with Cellular Networking

Dynamic/private IP addresses are usually used for remote data acquisition devices, especially when connecting via cellular networks. Active OPC Server Lite and ioLogik/ioPAC products provide the flexibility of configuring the ioLogik/ioPAC to use dynamic IP addresses. The ioLogik/ioPAC connects directly to the Active

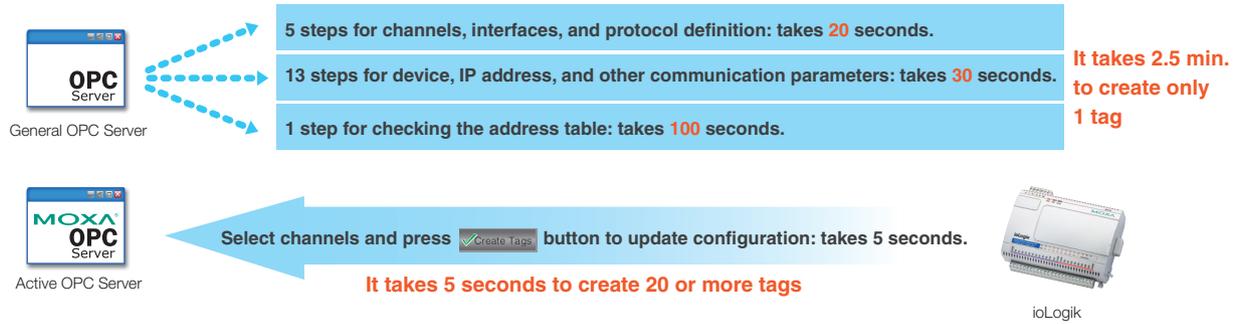
OPC Server Lite instead of being polled, which makes dynamic IP addressing and WAN Access to the RTU and remote I/O device possible, and adds even greater flexibility by allowing connections across firewalls. I/O devices for traditional data acquisition applications are not capable of using this approach.



Automatic Tag Generation

Active OPC Server Lite and ioLogik/ioPAC series products support “Auto Tag Generation,” which eliminates the headache of specifying target IP addresses, I/O channels, and data formats one by one, or editing and importing configuration text files, since Active OPC Server Lite creates the tags for the target ioLogik/ioPAC automatically. Simply

select the channels that you need to update, and the tags are generated and configured automatically. Generally speaking, tag generation is 50 times faster with Active OPC Server Lite than with traditional OPC server packages. One of the biggest payoffs is that users will no longer need to be trained to install and configure your OPC.



Specifications

Hardware Requirements

CPU: Intel Pentium (Pentium 4 or above)
RAM: 512 MB (1024 MB recommended)
Network Interface: 10/100M Ethernet

Software Requirements

Operating System: Microsoft Windows 2000/XP/2003
Editor (optional): Microsoft Office 2003 (Access 2003) or above

OPC Server Specifications

OPC Data Access: 1.0a, 2.0, 2.05a, 3.0
Max. No. of Tags: 1200 (V1.7 and above)

Ordering Information

Available Models

Active OPC Server Lite: Free software package for integrating with SCADA/HMI systems

Can be used with the following products

ioLogik E1200 Series: Ethernet remote I/O
ioLogik E2200 Series: Ethernet micro RTU controller
ioLogik E4200: Modular Ethernet remote I/O
ioLogik W5300 Series: Cellular micro RTU controller
ioPAC 8000 Series: Modular RTU controller (C and ISaGRAF Models)