

## **OPC515:**

### **Advanced Industrial OPC Software for Communications & Control**

<b>Duration:</b>	<b>1 Days Classroom or 8 hours Online</b>
<b>Audience:</b>	<b>Process Control Engineers, Application Engineers, Analyzer Technicians, DCS technicians, Instrument Engineers and Supervisors.</b>
<b>Prerequisites:</b>	<b>OPC500 course or equivalent OPC software knowledge</b>
<b>Course Material:</b>	<b>OPC training slides, various OPC software products – PiOPC Server, PiBridge, PiLogger, PiConect and PiLims.</b>

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#### **Course Description and Objectives:**

This course is an advanced course and continues the OPC500 course. The OPC500 is a must prerequisite for this course.

This course OPC515 is very hands-on. You install various real OPC servers and real OPC clients. You run the OPC servers and OPC clients in full real-time mode. You will witness real-time data transfer and two-ways data communications.

You will get complete real industrial hands-on experience since you are installing and configuring real industrial grade software products.

OPC-related software includes the following:

- PiOPC server (complete industrial grade real-time OPC server with built-in PID control loop simulator, giving a real-plant feel in the training room).
- PiBridge is a dual OPC client capable of connecting to two OPC servers.
- PiLogger is a fast data monitoring, trending and logging OPC client.
- PiConect is an OPC client connecting to MS Excel, collecting real-time data.
- PiLIMS is an OPC client based laboratory information management system.

You will not only see these products during the online session but you will install these products yourself on your own computer for training, learning and hands-on practice. The experience is full industrial grade and the same principles you learn will be applicable in a real industrial plant environment.

#### **Learning Outcomes:**

At the end of this course, you will be able to install, configure and activate real industrial grade OPC servers and clients. You will be familiar with both COM and DCOM configuration. You will be configuring both COM and DCOM on your own computer(s).

You will understand how to connect two different devices or OPC clients together. You will install and activate both fast data logging and historizing OPC client and also a LIMS OPC client. You could use the concepts for connecting online analyzers to any DCS/PLC using OPC. You could connect online vibration monitoring sensors to another device. The number of applications and opportunities are diverse and wide-spectrum.

With this knowledge, you will be able to select the right OPC tools (servers and clients) for any industrial

application. The following topics are covered in this course:

- PiBridge OPC Client Connector Connecting different OPC servers together PiConect Human-to-Excel/DCS Interface
- Building powerful custom process applications using OPC
- Converting any Excel spreadsheet from office/control room and make it online using OPC
- Online Analyzer Signals in Chemical Processes
- Using validated signals for closed-loop advanced process control Laboratory Information Management Systems (LIMS)
- Using OPC as a modern, new method for implementing LIMS Overview of PiLIMS Laboratory Data Information Management System
- Fast Data Monitoring for Debugging Process Problems and Equipment Shutdowns OPC Product PiLogger for Fast Data Monitoring
- Expert-System Rule-Based Advisory using OPC Additional Industrial Applications using OPC Online process optimization using OPC Fieldbus, Ethernet, OPC comparisons
- Practical industrial communications case studies