

EtherNet Network Communication

Course Description

After completing this course, you should be able to:

Demonstrate understanding of basic Ethernet networking skills, terminology, and concepts. Apply these skills when performing advanced network specification, configuration, and troubleshooting tasks.

This course prepares you to successfully design and configure an efficient EtherNet/IP network and RSNetWorx-capable hardware and software into an effective control network. This course also prepares you to effectively resolve the breakdown in communications between a controller and the devices it is controlling. You will troubleshoot an EtherNet/IP network's media components and use web-based technologies imbedded within multiple EtherNet/IP devices to monitor the health and status of the EtherNet/IP network hardware and software .

Trainees gain these skills from the ground up, practicing each step in the design; configure process from choosing the correct cable to configuring the connections that will transmit data across that cable, and by using troubleshooting best practices and network troubleshooting tools in order to safely and efficiently return a network to operation .

Trainees will have hands-on experience troubleshooting a EtherNet network that they can immediately apply to their job responsibilities.

Target Audience:

Operations technology (OT) professionals (such as control engineers) and others responsible for installing, configuring, and/or maintaining industrial devices on an Ethernet network should attend this course.

Pre-requisites:

To successfully complete this course, the ability to perform basic Windows operating system tasks is required.

Course Duration:

2 days, 7hours/day (from 9:00am to 4:00 pm).

Technical Contents:

- EtherNet/IP Overview
- Understand the OSI Model
- IP Address Overview
- Designing an EtherNet/IP Cable System
- Optimizing an EtherNet/IP Network
- Pinging a Module's EtherNet/IP Address
- Configuring and Modifying EtherNet/IP Addresses Using RSLinx® Software
- Configuring and Modifying EtherNet/IP Addresses Using RSLogix™ 5000 Software
- Configuring and Modifying EtherNet/IP Addresses Using BOOTP-DHCP Server© Software
- Establishing EtherNet/IP Connections to Remote Devices
- Producing and Consuming Data over an Ethernet/IP Network
- Communicating between Multiple Controllers on an Ethernet/IP Network Using a Message Instruction
- Configuring the Stratix 6000 Ethernet Switch
- Troubleshooting an EtherNet/IP Network's Media Components
- Monitoring an EtherNet/IP Network Using Web-Enabled Technologies