# Networks

## EtherNet/IP Configuration and Troubleshooting

Rockwell Automation

Allen-Bradley
by ROCKWELL AUTOMATION

## Course Number

CCP183

## Course Purpose

This course should prepare you to effectively:

- Configure a Stratix® switch (5700, 8000, and/or 8300) to meet a variety of network requirements
- Assign IP addresses to devices on an EtherNet/IP network using rotary switches and a variety of software
- Monitor switch performance and status
- Diagnose and resolve issues with switches and devices on a network

During switch configuration, you will have an opportunity to:

- Configure a switch using both the Device Manager Web Interface and Studio 5000 Logix Designer® software
- Set up one-to-one IP address translation (NAT) for segmenting machine-level network devices from the plant network
- Secure and limit access to a switch

Once the EtherNet/IP network is up and running, you will monitor diagnostic information using web-based technologies and modify a web server module's data views and tag values.

You will resolve issues with communication between devices on a network. You will troubleshoot an EtherNet/IP network's media and components (including the Stratix 5700 switch); run diagnostic tests to resolve system and port issues; and perform common functions such as resetting the switch.

## COURSE AGENDA

### DAY 1

- Assigning a Computer's IP Address
- Pinging a Device's IP Address
- Assigning IP Addresses Using RSLinx Classic Software and Rotary Switches
- Assigning IP Addresses Using BOOTP/DHCP Server Software
- Configuring Stratix 5700 Switch Settings Using the Express Setup
- Creating and Assigning VLANs

### DAY 2

- Configuring DHCP Persistence
- Configuring Network Address Translation (NAT)
- Configuring Port Security and Traffic Monitoring
- Monitoring Stratix 5700 Switch Status and Performance
- Managing a Stratix 5700 Switch Using a Studio 5000 Logix Designer Project

### DAY 3

- Isolating EtherNet/IP Network Problems
- Diagnosing Problems with EtherNet/IP Modules
- Diagnosing Problems with EtherNet/IP Network Components
- Monitoring an EtherNet/IP Network Using Web-Enabled Technologies
- Troubleshooting a Stratix 5700 Switch
- Updating Stratix 5700 Switch Firmware

## WHO SHOULD ATTEND

Technicians and engineers who must deploy and maintain Industrial Automation and Control System (IACS) networks should attend this course.

## PREREQUISITES

To successfully complete this course, the following prerequisites are required:

- Completion of the *Studio 5000 Logix Designer Level 1: ControlLogix System Fundamentals* course (CCP146) or equivalent experience, such as downloading project files to a ControlLogix controller

## STUDENT MATERIALS

To enhance and facilitate the students' learning experiences, the following materials are provided as part of the course package:

- Student Manual
  - Includes the key concepts, definitions, examples, and activities presented in this course
- Lab Book
  - Provides learning activities and hands-on practice. Solutions are included after each exercise for immediate feedback
- EtherNet/IP Procedures Guide:
  - Provides the steps required to complete tasks common to configuring Stratix® switches and other devices for communication over an EtherNet/IP network

## HANDS-ON PRACTICE

Throughout this course, you will have the opportunity to practice the skills you have learned through a variety of hands-on exercises using an ABT-TDENET5700 EtherNet/IP workstation and Stratix 8000 switch. Exercises focus on the skills introduced in each lesson.

## COURSE LENGTH

This is a three-day course.

## IACET CEUS

Rockwell Automation is authorized by IACET to offer 2.1 CEUs for this program.

### TO REGISTER

To register for this or any other Rockwell Automation training course, contact your local authorized Allen-Bradley® Distributor or your local Sales/Support office for a complete listing of courses, descriptions, prices, and schedules.

You can also access course information via the Web at **http://www.rockwellautomation.com/training**

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Rockwell Automation is accredited by the International Association for Continuing Education and Training (IACET) and is authorized to issue the IACET CEU. **Click here** to view the Rockwell Automation Certificate of Accreditation.

To be respectful of the environment, Rockwell Automation is transitioning some of its training courses to a paperless format. Students are asked to complete downloads and bring personal devices to these classes. A full list of digital/paperless courses is currently available through your local distributor.

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