



**AUTOMATION**

**COURSE CCP182**

# Essentials of Industrial Ethernet Networks for an OT Professional

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

In this course, you will learn how to verify communications between devices, recognize data transmission types, and differentiate between OSI Model Layer 2 and Layer 3 switching functions.

You will also identify the routing process, monitor a switch using Device Manager and CLI commands, and work with IOS configuration files.

This course prepares you to more clearly understand key IT terms and concepts for communicating with other professionals on Connected Enterprise projects.

**Tuesday, December 1 -  
Wednesday, December 2  
8 AM - 5 PM**

**SMC Springfield  
509 N Washington Ave  
Springfield, MO 65806**

**Cost: \$2,625  
Includes Lunch**



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Service Provider**

A ROCKWELL AUTOMATION PARTNER

To register, please contact Tyler Perry at [tperry@smcelectric.com](mailto:tperry@smcelectric.com)

# Course Agenda

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## DAY 1

- Interpreting an Ethernet Network Hardware Layout
- Verifying Communications between Two Ethernet Devices
- Interpreting Basic Data Flow of Host-to-Host Ethernet Communications
- Recognizing Ethernet Data Transmission Types
- Recognizing Layer 2 Switching Functions on an Ethernet Network

## DAY 2

- Recognizing Ethernet Network Loop Avoidance Protocols
- Interpreting the Network Address Translation (NAT) Scheme for an Ethernet Network
- Accessing Ethernet Switch Information Using CLI Commands
- Recognizing Layer 3 Switching Functions on an Ethernet Network
- Copying and Removing IOS Configuration Files on an Ethernet Switch



## PREREQUISITES

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

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