

# Virtual Classroom Course Description



## Segmenting an Industrial Ethernet Network



### Course Agenda

- Define cell/area zones
- Identify level 3 site operations
- Identify switch requirements
- Decide whether to use NAT
- Decide between physical or VLAN segmentation
- Assign VLANs and subnets to each cell/area zone

### Course Number

VC-SEGNET-A

### Course Purpose

This course will teach you how to start the transition from industrial Ethernet network designs that use a flat and open infrastructure to ones that are structured, hardened, modular, and future-ready. You will be introduced to the concept of organizing a network as smaller, modular, building blocks that:

- Minimize network sprawl
- Give you a scalable, robust, and future-ready network infrastructure

Once you have defined the building blocks of a network, you will then look at options to segment and manage the required traffic flows of the network. Segmentation techniques will include physical segmentation, VLANs, and Network Address Translation (NAT). Finally, you will make decisions around organizing the IP subnets for the network.

LISTEN.  
THINK.  
SOLVE.

## Who Should Attend

Control or network engineers who have to design industrial Ethernet networks should attend this course.

## Prerequisites

To attend this course, you should already have these prerequisite skills and knowledge:

- Familiarity with the concepts of IP addresses and subnets
- Working knowledge of common components of an industrial automation system: controllers, drives, I/O, & HMI

## Technology Requirements

- A computer and phone are required. For minimum computer requirements for the virtual classroom tool, please visit:  
<http://support.webex.com/support/system-requirements.html>

## Student Materials

You will receive the following course materials:

- Segmenting an Industrial Ethernet Network Workbook (in electronic format to print on your own)
- Segmenting an Industrial Ethernet Network Job Aid (in electronic format to print on your own)
- Converged Plantwide Ethernet (CPwE) Design and Implementation Guide (in electronic format to print on your own)

## Hands-On Practice

Your instructor will demonstrate the decisions involved in segmenting an industrial Ethernet network. You will then be given scenarios that require you to make those same decisions.

## Next Learning Level

For instructor-led training related to network specification, configuration, and troubleshooting tasks, consider the following courses:

- *Essentials of Industrial Ethernet Networks for an OT Professional* (Course Number CCP182)
- *Managing Industrial Networks with Cisco Network Technologies* (Course Number IMINS)

## Course Length

180 minutes

## Virtual Classroom Learning Activities and Features

Rockwell Automation Virtual Classroom training is delivered by a live instructor using a blended learning style, which includes a combination of PowerPoint presentations, video, and/or animations, as well as interactive practice. Courses can include various learning activities and features:

- Polls/surveys
- Group and private chat
- White board
- Desktop sharing
- Passing control to students
- Break out rooms for small group discussion
- Check knowledge through testing

## IACET CEUs

Rockwell Automation is authorized by IACET to offer 0.3 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.

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.

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