

Networks

ControlNet and RSNetWorx Configuration and Troubleshooting



Course Number

CCP173

Course Purpose

This course provides you with the skills necessary to efficiently design and configure a ControlNet network. You will gain these skills from the ground up, practicing each step in the design and configure process from choosing the correct cable to configuring the connections that will transmit data from ControlLogix® (Logix5000™) controllers and other devices across that cable.

This course also provides you with the skills needed to safely and efficiently return a malfunctioning network to normal operation, including:

- Implementing a logical process for troubleshooting ControlNet and RSNetWorx™ components
- Identifying problems with communications cards, cabling, and other network hardware
- Applying best practices and network troubleshooting tools

You will practice each step in the network troubleshooting process from verifying the media system to correcting connection configuration errors.

After completing this course, you will have designed a ControlNet and RSNetWorx media system that will serve as the backbone of your network and will have configured ControlNet and RSNetWorx-capable hardware to behave as a deterministic and repeatable control network. You will also have hands-on experience troubleshooting a ControlNet and RSNetWorx network that can immediately be applied to your job responsibilities.

COURSE AGENDA

DAY 1

- Designing and Troubleshooting a ControlNet Media System
- Going Online to a ControlNet Network
- Entering Scheduled ControlNet I/O Data Connections for Logix5000 Controllers

DAY 2

- Entering ControlNet Messages for Logix5000 Controllers
- Getting Started with Troubleshooting a ControlNet and RSNetWorx Network
- Isolating Faulty ControlNet and RSNetWorx Media Using Signal Measurement Equipment
- Isolating ControlNet and RSNetWorx Network Malfunctions
- Isolating ControlNet and RSNetWorx Network Malfunctions Using LEDs and Mnemonic Displays

DAY 3

- Identifying a ControlNet and RSNetWorx Network Malfunction Using RSLinx Software
- Troubleshooting a ControlNet and RSNetWorx Network Using RSNetWorx for ControlNet Software
- Troubleshooting a Scheduled ControlNet and RSNetWorx Data Connection for Logix5000 Controllers

PREREQUISITES

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

- An ability to perform basic Microsoft Windows tasks
- Experience with Windows-based programming software (Studio 5000® software) is desirable, but not essential.

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, and examples presented in the course and includes the hands-on exercises.
- ControlNet and RSNetWorx Procedures Guide
 - Contains clear and concise step-by-step procedures for performing the tasks addressed in class, as well as other tasks associated with the configuration and management of a ControlNet network using a variety of software tools.
- ControlNet and RSNetWorx Troubleshooting Guide
 - Contains easy-to-use flowcharts and graphics to help students complete the troubleshooting tasks presented in class. The guide covers troubleshooting ControlNet devices using hardware status indicators, software diagnostics, and signal measurement equipment and also covers most troubleshooting situations in the plant environment
- ControlNet Coax Tool Kit

PROVIDED TOOLS

Students attending this course will receive hands-on practice terminating coaxial cable. To practice these skills and perform them effectively on the job, each student will receive a ControlNet Coax Cable Tool Kit as part of the Student Package. Each kit contains the following tools:

- Cable strip tool
- Crimp tool
- Utility knife
- Wire cutters
- Calibration/flare tool
- Terminators and connectors

HANDS-ON PRACTICE

Hands-on practice is an integral part of learning and this course offers extensive hands-on opportunities. Using network software and a workstation containing real and simulated hardware components, students will practice isolating network malfunctions, reading diagnostics, and correcting configuration errors. This experience can then be directly applied to the students' ControlNet applications.

COURSE LENGTH

This is a three-day course.

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>

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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AMERICAS: Rockwell Automation, 1201 South Second Street, Milwaukee, WI 53204-2496 USA, Tel: (1) 414.382.2000, Fax: (1) 414.382.4444

EUROPE/MIDDLE EAST/AFRICA: Rockwell Automation NV, Pegasus Park, De Kleetlaan 12a, 1831 Diegem, Belgium, Tel: (32) 2 663 0600, Fax: (32) 2 663 0640

ASIA PACIFIC: Rockwell Automation, Level 14, Core F, Cyberport 3, 100 Cyberport Road, Hong Kong, Tel: (852) 2887 4788, Fax: (852) 2508 1846

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