ControlLogix/Studio 5000

Studio 5000 Logix Designer Level 2:
ControlLogix Maintenance
and Troubleshooting

Rockwell Automation

Allen-Bradley by ROCKWELL AUTOMATION

Course Number

CCP153

Course Purpose

Upon completion of this course, you will be able to troubleshoot a previously operational ControlLogix® system and restore normal operation.

This course adds to your skill set by introducing new tasks such as connecting to a network, interpreting project execution, editing ladder logic online, and more.

You will then be presented with a systematic strategy for diagnosing and troubleshooting a variety of common system errors:

- Controller, I/O, and other hardware problems
- Noise-related problems
- Software configuration problems

COURSE AGENDA

DAY 1

- Optional Locating: ControlLogix System Components
- Connecting a Computer to a Network
- Interpreting Project Organization and Execution
- Locating and Editing Tag Values
- Interpreting Frequently Used Instructions

DAY 2

- Interpreting Arrays
- Interpreting Tags of User-Defined Data Types
- Searching for Project Components
- Integrated Practice-Interpreting a Basic Project
- Forcing I/O and Toggling Bits
- Troubleshooting Digital I/O Module Problems

DAY 3

- Troubleshooting Analog I/O Module Problems
- Troubleshooting Remote I/O Problems
- Updating Logix5000 Firmware
- Troubleshooting Controller Problems
- Troubleshooting Power Supply Problems
- Analyzing and Troubleshooting a System Using a Trend Chart

DAY 4

- Integrated Practice-Troubleshooting Basic Projects
- Editing Ladder Logic Online
- Optional: Editing FBDs Online
- Managing Project Files
- Documenting and Printing Project Components
- Troubleshooting Noise-Related Problems

WHO SHOULD ATTEND

Individuals who need to maintain and troubleshoot a ControlLogix or other Logix5000™ system should attend this course.

PREREQUISITES

To successfully complete this course, completion of the Studio 5000 Logix Designer Level 1: ControlLogix System Fundamentals course (Course No. CCP146) or equivalent experience is required.

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.
- Studio 5000 Logix Designer and Logix5000 Procedures Guide
  - Provides the steps required to complete basic software tasks that are common to all Logix5000 hardware platforms
- ControlLogix Troubleshooting Guide
  - Contains a systematic approach to diagnosing and troubleshooting common ControlLogix system problems

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. Exercises focus on the skills introduced in each lesson and are performed on an ABT-TDCLX3-B ControlLogix workstation.

Integrated practices combine and practice several key skills at once.

The basic skills taught in this course apply to all Logix5000 platforms; you can apply what you have learned to the specific platform used in your plant

NEXT LEARNING LEVEL

Once you have mastered the maintenance and troubleshooting skills covered in this course, you may be interested in one or more of the following courses:

- Studio 5000 Logix Designer Level 3: Basic Ladder Logic Interpretation (Course No. CCCL21)
- DeviceNet and RSNetWorx Configuration and Troubleshooting (Course No. CCP164)
- ControlNet and RSNetWorx Maintenance and Troubleshooting (Course No. CCP173)

COURSE LENGTH

This is a four-day course.

IACET CEUS

Rockwell Automation is authorized by IACET to offer 2.8 CEUs for this program.

ACCREDITED IACET PROVIDER

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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