SIEMENS

TIA Portal Service 2 (SCT-PTTIAS2A)

Global Reference

SIMATIC Service 2 in the TIA Portal (TIA-SERV2)

Type

Face-to-Face Learning

Duration and Continuing Education Units (CEU)

29.25 Hours over 4.5 Days
2.9 CEUs

Target Group

- Maintenance
- Commissioning

Short Description

This course is designed for S7-1500 and S7-1200 PLC users with basic SIMATIC control system knowledge, who install or maintain automation systems and their application programs on the TIA Portal Platform.

This course consists of instructor led training and hands-on exercises to continue skill development in troubleshooting, diagnostics, and modifying hardware and software components of a SIMATIC control system. Control System Hardware consists of an S7-1500 rack with ET200SP remote IO, Comfort Panel HMI, G120 Drive and a moving conveyor system. Participants will use SIMATIC TIA Portal software tools to build new features, diagnostics and communications into the application project. Program development using organization blocks, system functions and instruction libraries build software troubleshooting efficiency. Analog signal processing and alarming are included in this application. Configuration and integration of an HMI and Drive system into the student project, give experience managing a Totally Integrated Automation (TIA) project. An introduction to Structured Control Language (SCL) and sequence control in SIMATIC S7-GRAPH are included.

Objectives

- Perform basic maintenance on the Maxum Hardware
- Commission S7-1500 rack, ET200SP station, Comfort Panel HMI, G120 Drive and a conveyor system
- Use advanced STEP 7 tools and methods for Testing, Diagnosing, and Correcting hardware & software problems in a running program
- Utilize block types: FC, FB, OB, and DB
- Eliminate logical and CPU Stop software errors
- Utilize principles of analog value processing
- Monitor an SCL and S7 GRAPH Block
- Backup and document executed program changes

Content

- TIA Portal Review
- Training Devices and Addressing
- Commissioning the Hardware and Software

- Data Blocks (DB)
- Functions (FC) and Function Blocks (FB)
- Debugging and Testing Functions
- Organization Blocks (OB) and Error Handling
- Analog Value Processing
- HMI Life Bit and CPU Time Sync
- HMI Alarm System
- TRACE Analyzer Function
- Web Based Diagnostics for CPU and HMI
- CPU and HMI System Diagnostics
- Introduction to SCL
- Data Communication with G120 Drive

Mandatory Prerequisites

TIA Portal Service 1: SCT-PTTIAS1A

OR

TIA Portal Service 1 - Virtual: SCT-PTOILTIAS1A

Language

English