SIEMENS

TIA Portal Service 1 (SCT-PTTIAS1A)

Global Reference

SIMATIC Service 1 in the TIA Portal (TIA-SERV1)

Type

Face-to-Face Learning

Duration and Continuing Education Units (CEU)

4 Days
2.6 CEUs

Target Group

- Maintenance

Short Description

TIA Portal Service 1 teaches the basic S7 system concept, hardware configuration, parameterization, S7 software (SIMATIC TIA Portal) basics, and an overview of programming fundamentals. Human Machine Interface (HMI) and PROFINET IO basics are also included. Numerous hands-on exercises using a Totally Integrated Automation (TIA) plant model to reinforce practical experience and theoretical knowledge. The TIA plant model consists of an S7-1500 automation system, ET200SP distributed I/O, SIMATIC Comfort Panel, and a conveyor model. Students experience and learn TIA Portal concepts and gain an understanding of the relationships between key industrial automation components. Upon completion of the course, students are able to utilize STEP 7 tools and techniques to accurately recognize, diagnose, and remedy control system faults; reducing costly downtimes. Modular in design, this course is fully customizable for those interested in on-site training. Topics are designed for adjustments to meet plant specific needs. Call 1.800.241.4453 for more details. After the course, students seeking extended TIA Portal service skills sets should attend TIA Portal Service 2 course.

Objectives

- Use standard STEP 7 tools and methods for Testing, Diagnosing, and Correcting hardware & software problems in a running program
- Operate, Monitor, & Maintain components of a typical SIMATIC TIA system
- Perform basic hardware assembly, cabling, wiring and testing
- Establish PLC communication with multiple technologies
- Retrieve, Archive, and Download S7 programs
- Address and wire signal modules
- Perform startup procedures for S7 automation system hardware and software
- Configure and parameterize S7-1500 Hardware utilizing S7 Software tools
- Configure and parameterize PROFINET IO
- Backup and document executed program changes

Content

- System Overview
- Introduction: Engineering Software "TIA Portal"
- PLC Installation & Maintenance

- Device and Network
- Tag Table
- Hardware Commissioning
- Program Blocks
- Binary Operations
- Digital Operations
- Introduction to Distributed I/O
- Introduction to HMI

Recommended Prerequisites

[Introduction to TIA Portal and Diagnostics - Virtual: SCT-PTOILBADIA](#)

OR

[Introduction to TIA Portal and Diagnostics: SCT-PTBADIA](#)

Note

Students needing additional skills in S7 system sustaining to include basic program modifications and advanced systems diagnostics should consider the SIMATIC TIA Portal Service 2 course.

Language

English