SIEMENS

SIMATIC Service 3 in the TIA Portal (TIA-SERV3)

Type

Instructor-led Learning

Duration and Continuing Education Units (CEU)

4.5 Days
3 CEUs

Target Group

- Maintenance
- Engineer

Short Description

The Totally Integrated Automation Portal (TIA Portal) forms the work environment for integrated engineering with SIMATIC STEP 7 and SIMATIC WinCC. The third part of the SIMATIC TIA Portal service training is based on the knowledge of the TIA Portal gained in the SIMATIC S7 TIA Portal service courses 1 and 2, including SIMATIC STEP 7, HMI and PROFINET IO. You will expand your knowledge in terms of program troubleshooting and error handling and learn how to display these errors in an operator control and monitoring system. A HMI will be connected to the real time process communication. You will set up communication between SIMATIC CPUs (based on Industrial Ethernet) to send process data and status information. You will work with Technology Objects such as Motion Control Functions. The basis for this is to also interpret and expand existing programs in the programming languages Ladder Diagram(LAD) / Function BlockDiargram (FBD), Structured Control Language (SCL) and Structure Text Language (STL). Thanks to this comprehensive understanding, you gain new impetus and ideas to optimize your plant and can thus reduce or eliminate downtime in your entire plant.

Objectives

- Understand the interaction of TIA components.
- Interpret, adapt, and expand specified, complex STEP 7 programs including data administration and system function block.
- Systematically diagnose and fix hardware and software errors in a complex TIA system consisting of SIMATIC S7, HMI, PROFINET IO and drive by means of the diagnostic tools of the TIA Portal engineering platform.
- Read out SIMATIC S7 system diagnostic information using a STEP 7 program and display it on an HMI unit.
- Establish CPU – CPU communication via Industrial Ethernet.
- Deeper understanding of contents through practical exercises on the SIMATIC S7-1500 and SIMATIC S7-1200 system model.

Content

- Team Engineering
- Training Devices
- Tapology
- Commissioning Hardware/Software
- Error Handling in User Program
- Direct Key Operator Panel
- Direction in STL
- Date Storage in Data Blocks
- Program Alarms

- Process Diagnostics
- Communications
- Technology Objects

Note

In this course you will work with the SIMATIC STEP 7 software based on TIA Portal. This is the third of three courses to prepare you for certification as a "Siemens Certified Service Technician Level 2, based on the TIA Portal". Both tests are modules of the "SITRAIN Certification Program".

Language

English