

TIA Portal Service 3 Course (TIA-SERV3)

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 e.g. Motion Control Functions. The basis for this is to also interpret and expand existing programs in the programming languages Ladder Diagram (LAD) / Function Block Diagram (FBD), Structured Control Language (SCL) and Structured 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

After attending the course, you can do the following:

Understand the interaction of TIA components

Interpret, adapt, and expand specified, complex STEP 7 programs including data administration and system function blocks

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

You can deepen your theoretical knowledge with numerous practical exercises on a TIA system model. This consists of a SIMATIC S7 automation system, distributed I/O ET200, a Touchpanel, a drive, and a belt model.

Target Group

Maintenance personnel

Service personnel

Content

Commissioning a TIA system with software troubleshooting and debugging

Error analysis and handling per SIMATIC STEP 7 program:

Possible uses for error organization blocks

Reading out, evaluating, and display of diagnostic messages

Diagnosis of errors in a PROFINET IO system with an HMI device

Diagnosis of SIMATIC S7 system errors with an HMI device

Configuration of CPU – CPU communication via Industrial Ethernet

Working with Ladder Diagram (LAD) / Function Block Diagram (FBD), Structured Control Language (SCL) and Structur Text Language (STL).

Working with Technology Objects

Deeper understanding of contents through practical exercises on SIMATIC S7-1500 system model

Included in the course price: Free access to the digital learning platform [SITRAIN access](#) – starting one week before the start of the course until two weeks after the end of the course. Here you will find many web-based trainings. With the Learning Membership, you can deepen or repeat the content of this Learning Event as well as continue your education on other interesting topics.

Prerequisites

SIMATIC S7 knowledge corresponding to TIA-SERV2 or TIA-SYSUP and practical experience in using the knowledge.

You can use the online tests below to find out whether you have sufficient prior knowledge to participate effectively in the course you wish to attend. If you answer more than 70 % of the questions correctly you are well prepared to take part in the course.

[Test TIA-SERV3](#)

Note

This course is not a Programming Course (although programming elements exist within), for Programming, please consider the 'TIA Portal Programming Courses'.

This course is also suitable for those using S7-1200 based systems. This training course is not appropriate for trainees using S7-200, S7-300 or S7-400 based systems. For more information concerning details of S7-300, and S7-400 please see the section called Simatic S7 PLC

The Learning Membership starts 7 days before the start of the course and ends 14 days after the end of the course. During this period, you have access to all of the more than 480 web-based trainings available.

Type

Face-to-face training

Duration

5 days

Language

en

Fee

2,930 GBP

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