

## SIMATIC Service 2 in TIA Portal. Transizione 5.0 con attestazione finale superamento esame. (IT5P-TIA-SERV2)

### Short Description

The Totally Integrated Automation Portal (TIA Portal) forms the work environment for integrated engineering with SIMATIC STEP 7 and SIMATIC WinCC. The second part of the SIMATIC S7-1500 service training is based on the knowledge of the TIA Portal gained in the SIMATIC S7-1500 Service 1 course, including SIMATIC STEP 7, SIMATIC HMI, connection of drives and PROFINET IO. You will expand your troubleshooting and error correction knowledge using the TIA Portal diagnostic tool in the commissioning and productive phase. Alarms are displayed on an operator control and monitoring system. You will learn about the included test functions for controlling programs in Structured Control Language (SCL). You will implement a sequence control in SIMATIC S7-GRAPH and integrate the analog value processing. You will thus be able to adapt your plant to new demands and to reduce downtime. The course requires a final examination, which is deemed passed if a minimum of 8 out of 10 points is achieved. Only in this case will a pass certificate be issued with the final result.

### Objectives

After attending the course, you can do the following:

- Understand the interaction of TIA components
- Understand, adapt, and expand given STEP 7 (TIA Portal) programs, including with step sequences and analog value processing
- Systematically diagnose and correct hardware and software errors in the SIMATIC S7 automation system with the diagnostic tools of the TIA Portal engineering portal
- Use the test functions in Structured Control Language (SCL)
- Perform specific commissioning of TIA components
- Adapt your SIMATIC WinCC configuration to new requirements through small modifications or extensions

### Target Group

Maintenance personnel  
Service personnel  
Operators

### Content

- Hardware diagnostic functions of the TIA Portal in the SIMATIC S7 automation system
  - Organization blocks (OB) and error handling
  - Data blocks (DB)
  - Possible applications of functions (FC) and function blocks (FB)
  - Debugging and testing functions
  - Trace
  - Principles of analog value processing
  - Commissioning of distributed I/O on PROFINET IO
  - Hints on alarm configuration in WinCC
  - Introduction in Structured Control Language (SCL)
- Deeper understanding of contents through practical exercises on the SIMATIC S7-1500 system model.

In addition, the following content is available in your personal training documents

- Introduction to GRAPH
- Technology object with the G120

### Prerequisites

TIA-SERV1 course or equivalent basic knowledge of automation systems.

### Note

This course is also available in Virtual Classroom mode.

This course is also available as an evening course: S71500S2/S.

At the end of the course you can deepen the topics covered through our **SIE-learning 4.0**: SIE-GRAPHCS, SIE-PNBA, SIE-PNADV, SIE-PNDIAG.

In this course, the SIMATIC S7-1500 automation system and the SIMATIC STEP 7 (TIA Portal) software are used; MICRO1 and MICRO2 courses are available for the SIMATIC S7-1200 automation system.

IMPLEMENTING DECREE AUGUST 2024:

Transition 5.0: Trained Expenditure  
Energy transition A .5

### Type

Face-to-face training

### Duration

5 days

**Language**

---

it