

## SIMATIC TIA Portal Service 1 (N-TIASERV1)

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### Objectives

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The Totally Integrated Automation Portal (TIA Portal) forms the work environment for integrated engineering with SIMATIC STEP 7 and SIMATIC WinCC. In this first part of the SIMATIC TIA Portal service training, we teach you the handling of the TIA Portal, basic knowledge about the structure of the SIMATIC S7 automation system, configuration and parameterization of hardware, and the basics of programming. You also receive an overview of HMI, PROFINET IO, and connecting drives. You will learn to diagnose and clear simple hardware faults and software errors. You will thus be capable of reducing downtimes in your plant. You can deepen your theoretical knowledge with numerous practical exercises on a TIA system model. This consists of a SIMATIC S7 automation system, ET200 distributed I/O, Touchpanel, drive, and a belt model.

After attending the course, you can do the following:

- Understand the fundamentals of interaction of the TIA components
- Reliably operate the "TIA Portal" engineering platform
- Understand, change, and expand small STEP 7 programs
- Configure, parameterize, and exchange SIMATIC S7 modules
- Diagnose and fix simple hardware faults using the wiring test
- Diagnose and fix simple program errors using the status block
- Perform simple commissioning of TIA components

### Target Group

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Service personnel  
Operators, users  
Maintenance personnel

### Content

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Overview and significant performance characteristics of the SIMATIC S7 system family  
The components of the TIA Portal: STEP 7, WinCC, communication  
Program execution in automation systems  
Binary and digital operations in the function block diagram (FBD)  
Setup and assembly of the automation system  
Addressing and wiring the signal modules  
Hardware and software commissioning of the SIMATIC S7 automation system with the TIA Portal  
SIMATIC S7 hardware configuration and parameterization  
Presentation of a Touchpanel  
Presentation of the drive  
Setup and parameterization of PROFINET IO  
Saving and documentation of the implemented program changes with the TIA Portal  
Deeper understanding of contents through practical exercises on TIA system model

### Prerequisites

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Basiskennis automatiseringstechniek

U kan de online instaptest gebruiken om vast te stellen dat u de vereiste voorkennis beheerst. ([http://sitrain.automation.siemens.com/sitrain/test/st\\_serv1/index.html](http://sitrain.automation.siemens.com/sitrain/test/st_serv1/index.html))

### Note

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Course documentation: English

Trainer: Dutch

Dit is de eerste van drie cursussen die u op een afsluitexamen "Automation Technician Service, based on the TIA Portal" voorbereiden. Deze test maakt deel uit van het "SITRAIN Certification Program".

### Type

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Face-to-face training

### Duration

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5 days

### Language

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nl

