

## Online-Training Corso base TIA Portal per integratori e personale di service (TIA-INT1)

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### Short Description

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Specialized Technical Training Activity aimed at system integrators and maintenance technicians working on complex industrial plants controlled by SIMATIC S7-1500 automation systems. The training program focuses on understanding and managing automation systems characterized by distributed architectures with PROFINET networks, HMI/SCADA control and monitoring systems, drives, and advanced digital technologies, with the goal of developing skills in integration, testing, maintenance, and optimization of automated solutions.

### Objectives

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- Commission a SIMATIC S7-1500 PLC and the PROFINET network
- Implement basic programming logic
- Create a simple visualization and commission a SIMATIC HMI Unified panel
- Parameterize a SINAMICS G120 drive and implement data exchange with a controller using a standard telegram
- Use the most important diagnostic tools integrated in TIA Portal
- Perform backup and restore of your TIA automation system

### Target Group

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- System integrators
- Commissioning personnel
- Service personnel
- After-sales staff

### Content

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- SIMATIC S7-1500 hardware overview
- TIA Portal development environment
- Commissioning of a SIMATIC S7-1500 PLC with distributed I/O over PROFINET
- PLC programming: symbolic addressing, data blocks, binary instructions, digital instructions (counters, timers)
- Creation of graphical pages with SIMATIC WinCC Unified for plant control and monitoring
- Diagnostics using integrated tools: code monitoring, watch and force tables, cross-references
- Basic commissioning concepts for SINAMICS: parameterization and control panel via SINAMICS Startdrive, communication using standard telegram
- Backup and restore of a SIMATIC S7 PLC, an operator control and monitoring system SIMATIC HMI, and a SINAMICS drive

Theoretical knowledge will be reinforced through numerous practical exercises on a TIA system model. This includes a SIMATIC S7-1500 automation system, a SIMATIC ET 200SP decentralized I/O system, a SIMATIC WinCC Unified operator control and monitoring system, a SINAMICS G120 drive, and a conveyor belt model.

### Prerequisites

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No prerequisites required.

### Type

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Online-Training

### Duration

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24 hours

### Language

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