# SIEMENS

## PROFINET with Industrial Ethernet in the TIA Portal (IK-TIAPN)

**Type**

Instructor-led Learning

**Duration and Continuing Education Units (CEU)**

3 Days
2 CEUs

**Target Group**

- Maintenance
- Programmer

**Short Description**

This course is for PLC users who will be responsible for the maintenance, configuration, planning, and/or commissioning of automation Ethernet networks with PROFIBUS. Siemens, a member of PROFIBUS International (PI), offers you the opportunity to gain experience about the future-oriented PROFINET, the open Industrial Ethernet standard for automation.

**Objectives**

- Identify many of the various network types used throughout a standard automation system
- Identify the OSI 7 layers of Ethernet
- Calculate Ethernet IP ranges and subnets
- Configure a PC Ethernet card
- Reset PROFINET devices back to factory default
- Use the Primary Setup Tool (PST)
- Identify the functionality of the PRONETA tool
- Wire an RJ45 connector
- Use the TIA Selection Tool
- Commission a PN system manually, with TIA Portal, using MMCs or C-Plugs
- Commission a PN-IO system
- Make use of LLDP for IO commissioning
- Configure/Detect PN Topology
- Read diagnostic/status information directly/from the program/HMI
- Configure web support
- View S7-1500/Scalance X208 web pages
- Configure Ring (MRP) architecture
- Diagnose MRP line defects
- Configure Module-by Module Shared devices
- Configure Submodule-by Submodule Shared devices
- Configure Module-internal Shared inputs and outputs
- Configure I-Device with/without Subordinate PN IO-System
- Configure Cross-Project I-Device.

**Content**

- Communication in the SIMATIC world
- Basics of Industrial Ethernet
- Basics of PROFINET
- Network Components
- PROFINET Configuration
- Topology Editor
- Diagnostics
- Web Service for PROFINET
- Ring Redundancy MRP
- Shared Device
- I-Device

## Mandatory Prerequisites

Introduction to TIA Portal: US-TIABADI

OR

SIMATIC Service 1 in the TIA Portal: TIA-SERV1

## Note

Through a deeper understanding of Ethernet and PROFIBUS mechanics along with SIMATIC NET components, you will learn how to parameterize, commission, and troubleshoot a PROFINET network quickly and effectively. Numerous practical exercises reinforce the acquired theoretical knowledge.

## Language

English