

## PROFINET and H-Systems in the Process Automation (ST-PCS7PNH)

### Short Description

Learn from Siemens how you can implement process automation at the field level with the future-oriented PROFINET as open Industrial Ethernet standard.

### Objectives

Using new SIMATIC PCS 7 components, you will learn how to quickly and effectively plan the fieldbus with PROFINET, assign parameters to it, commission it and eliminate faults.

Discover how you can make existing I/O future-proof using the PROFINET blueprints.

In addition, learn about handling, configuration, commissioning, diagnostics and troubleshooting of the high availability SIMATIC S7-400H system in the process automation environment with SIMATIC PCS 7.

You will reinforce the theoretical knowledge gained with many practical exercises.

### Target Group

- Project managers
- Project workers
- Programmers
- Configuration engineers

### Content

Fundamentals of Industrial Ethernet, PROFIBUS and PROFINET

Redundant PROFIBUS

Introduction to PROFINET

Design and planning of fieldbus systems based on PROFINET IO blueprints

PROFINET IO with configuration and topology

Diagnostic options and use of PRONETA

Commissioning ring redundancy with MRP

Configuration of SCALANCE switches for the PROFINET fieldbus

Plant-wide engineering & diagnostics using the Service Bridge Switch

Configuration and integration of the ET 200SP HA with DI/DQ module

Configuration of high-precision time stamping with the ET 200SP HA

Use of new PROFINET functions: System redundancy R1, CiR for Profinet

Redundancy theory: Explanation of terms, calculation of availability and common cause errors

CPU410-5H / S7400H: Synchronization, operating modes, operating systems

Hardware settings: H-parameters, self-test, DBs, H-CiR

### Prerequisites

Attendance of course ST-PCS7SYS is recommended

Basic knowledge of process control engineering

Practical experience in SIMATIC PCS 7 configuration

Basic knowledge of APL, as communicated in the system course

### Note

Only the "high availability" aspect of S7-400H systems is covered in this course. The configuration/programming of fail-safe SIMATIC S7-400H systems with the "F-systems" software package is a component of the course ST-PCS7SAF.

### Type

Face-to-face training

### Duration

5 days

### Language

en