SIEMENS

Switching & Routing in Industrial Networks with SCALANCE X (Siemens CPIN) (IK-SWIROS)

Short Description

This training prepares you for the certification "Siemens Certified Engineer for Industrial Networks – Switching & Routing". A voluntary certification examination will take place within the training. As an option, the examination may be taken at a later time.

Objectives

An industrial or industry-related environment without Ethernet is no longer conceivable. Even simple networks have to be adapted to the conditions on-site. Connecting network-capable machines and to the company network should be a seamless process. This often also involves harsh conditions and high demands with regard to integration. With Industrial Ethernet/PROFINET networks from Siemens, such solutions are not a problem if you are familiar with the basic of such networks.
This is exactly the sort of knowledge you will gain from this training module of the Industrial Networks Education Center.
You will learn Switched and Routed Network solutions and how they connect to real-time-capable systems in theory and in practice.
You not only gain an insight into industrial switching and Routing concepts, you also implement them in ample practical exercises. You will become familiar with the special requirements of switching and routing solutions in industry and be able to independently plan and implement such solutions.

Target Group

Decision makers, sales personnel
Industry: COOs, planners, commissioning engineers, project engineers, maintenance and service personnel
IT: CIOs, network planners and administrators

Content

Comparison of Ethernet and Industrial Ethernet
Typical topologies
Redundancy mechanisms (MRP, HRP, Standby Redundancy Protocol, RSTP, Passive Listening, HSR, PRP)
Network segmentation with VLANs
Special industrial functions
Diagnostics and troubleshooting
IPv4 and IPv6 basics (addressing, data exchange, important protocols)
Static routing
Router redundancy (VRRP)
Dynamic routing (RIP, OSPF)
Diagnostics and troubleshooting
Practical exercises using the SCALANCE X product line

Prerequisites

They should have basic knowledge of the topic "Ethernet". They should be familiar with topologies, transfer processes, addressing, data transport, and understand the associated technical vocabulary. It is also helpful if you are familiar with the principles of operation of routers, switches, hubs, and an OSI reference module.

Type

Face-to-face training

Duration

5 days

Language

en