SIEMENS

Switching and Routing in Industrial Networks with SCALANCE (IC-SWIROS)

Краткое описание

An industrial or industry-related environment without Ethernet is no longer conceivable. A high degree of reliability and sufficient capacities are demanded from hard-wired industrial networks. At the same time, a secure connection of these Ethernet networks to an existing network structure as well as the seamless integration into a corporate network is highly required.

In the Switching part of the course you will learn Switched Network solutions and how they connect to real-time-capable systems in theory and in practice.
The Routing section will teach you the fundamentals and knowledge required for planning, configuring, and operating network solutions in industrial environments, which are structured by routing, and their connection to company networks. You will become familiar with the special requirements of routing solutions in industry and the required fundamentals of IP communication, static routing, routing protocols, and redundancy mechanisms.

The course includes ample time for practical exercises, diagnostics, and troubleshooting.

Цели

At the end of the course, you are familiar with the special requirements of industrial network solutions and will have the knowledge to plan, implement, and provide support for plain networks in an industrial or industry-related environment.

Целевая группа

- Decision makers
- Planners
- Sales personnel
- Configuring engineers
- Commissioning engineers
- Engineering personnel
- Project engineers
- Maintenance personnel
- Service personnel
- Industry: COOs
- IT: CIOs, network planners and administrators

Содержание

Switching:
- 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

Routing:
- IPv4 basics (addressing, data exchange, important protocols)
- Static routing
- Router redundancy (VRRP)
- Dynamic routing (RIP, OSPF)
- Diagnostics and troubleshooting

Practical exercises using the SCALANCE products

Требования к участнику

Knowledge according to course "Ethernet Fundamentals in Industrial Networks" (IK-ETHBAS):

You should have basic knowledge of the topic "Ethernet" and 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 the OSI reference model.

IK-ETHBAS

To prepare for the training, please work through the WBT Data communication with Industrial Ethernet.

Примечания

Included in the course price: Free access to the digital learning platform SITRAIN access — starting one week before the start of the course until two weeks after the end of the course.
With the Learning Membership, you can deepen or repeat the content of this Learning Event as well as continue your education on other interesting topics.

Certification (Siemens CPIN-LEVEL)

This training prepares for the certification "Siemens Certified Professional for Industrial Networks - Switching & Routing". A voluntary certification examination which consists of two sections will take place at the end of the training. As an option, the examination may be taken at a later time.

Please note that before the examination you have to identify yourself by showing a valid photo identification.

Тип

Очный тренинг

Продолжительность

5 Дн.

Язык

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