

## Advanced Switching and Routing in Industrial Networks with SCALANCE (IC-ASWIROS) (IC-ASWIROS)

### Kort beskrivelse

Today, Operational Technology (OT) is responsible to control and monitor industrial processes and equipment. In this regard, OT networks play a key role in industries such as manufacturing, power engineering, water management and others. It is important that these networks are not only efficient and reliable, but also secure, as vulnerabilities in OT networks can have serious impacts on production and operations. Availability is a critical factor in OT networks. Loss of availability can cause production downtime and loss of productivity. To ensure availability, it is essential to have appropriate network design, network health monitoring and the ability to respond quickly to unforeseen problems and failures. At the same time, security is one of the most important features of OT networks. Ensuring security includes network protection, segmentation and the monitoring of different events. Technology improvements are enabling new applications and businesses models where everything is connected - devices, machines, and applications. A deeper knowledge of networking technologies allows organizations to take advantage of them to scale and secure their network infrastructure. To capitalize on these opportunities, today's networking professionals need a broader range of skills and deeper focus in strategic technology areas.

### Målsætninger

The course Advanced Switching & Routing in Industrial Networks with SCALANCE gives you exactly the knowledge that is required for planning, configuring and operating network solutions in industrial environments. The training has been designed in a way to develop skills in the complicated landscape of OT networks technologies. The course covers core technologies and advanced features available on the SCALANCE product line in an industrial or industry-related environment. It includes ample time for hands-on practice, diagnosis and troubleshooting.

### Målgruppe

Plant Engineers  
Control Engineers  
System Engineers  
Commission Engineers  
Application Engineers  
Service and Maintenance Personnel  
Project Engineers  
OT and IT Network Engineers  
Technical Sales Personnel  
CIOs  
Network Planners and Administrators

### Indhold

Open Shortest Path First v2 (OSPF) – multi area implementation  
Fundamental network services (NTP, SYSLOG, TFTP)  
Sticky MAC  
Protocol Independent Multicast (PIM)  
802.1x & Radius  
Policy-based routing and Sink route  
Network Concept  
Multiple Spanning Tree Protocol (MSTP)  
Quality of Service (QoS)  
QinQ (L2 tunnels)  
Privat VLAN (PVLAN)

### Deltagerkrav

Knowledge in accordance with the course "Switching and Routing in Industrial Networks": Participants must be very familiar with topologies, transmission methods, addressing and transport of data in industrial networks, and ideally possess practical experience in the field of industrial networks.

If the course "Switching and Routing in Industrial Networks" was taken more than 1 year ago, you should refresh your knowledge by reading the relevant documentation from that course.

### Bemærk

Certification (Siemens CPIN-LEVEL)

After the training course, you have the opportunity to become certified as "Siemens Certified Expert for Industrial Networks – Routing and Switching ". The certification examination takes place at the end of this training. As an option, the exam can be taken later.

### Type

Face-to-face-uddannelse

### Varighed

4 dage

**Sprog**

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en

**Gebyr**

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12.800 DKK

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