

## Security in Industrial Networks with SCALANCE (IK-SECI-S)

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### Short Description

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It is difficult to imagine day-to-day industrial operations without Ethernet connections. From large-scale production systems to the smallest Industrial Ethernet communication networks, nearly everything has come to depend on their reliability and security. The opportunities on the one hand are countered by risks on the other hand. Access by outsiders or manipulation in the network always has catastrophic consequences for production or in-house expertise. Therefore, functioning security systems are an absolute must.

In this course you will learn the potential dangers and risks in industrial networks and how to assess them. You will be shown numerous ways to improve the protection of know-how and process sequences from attacks, espionage, and manipulations. During the course you will become familiar with knowledge necessary to apply concepts mandated by common security standards. Because the course does not just cover theoretical security concepts, there is also ample opportunity to implement them in practical exercises.

### Objectives

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At the end of this course, you will know the requirements and fundamentals needed to plan, implement, and provide support for industrial security measures.

### Target Group

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- 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

### Content

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- Current trends and security risks
- Defense-in-depth with Siemens - a holistic security concept
- Update and replacement of security components
- Potential threats in a network
- Basic security measures (ports, passwords, protocols, etc.)
- Cell protection concept
- Access restriction
- Connection of standard machines to networks
- Remote access via VPN
- Comprehensive exercises using the SIMATIC NET product portfolio

### Prerequisites

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

Participant shall have basic knowledge of Ethernet and should be familiar with network topologies, transfer processes, addressing, data transport, and associated technical vocabulary. It is also helpful if you are familiar with the principles of operation of switches, hubs and the OSI reference model.

Participants are encouraged to attend the Switching and Routing in Industrial Networks SCALANCE training course

[IK-ETHBAS](#)

To prepare for the training, please work through the WBT [Data communication with Industrial Ethernet](#).

### Note

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Certification (Siemens CPIN-LEVEL)

After the training course, you have the opportunity to become certified as "Siemens Certified Professional for Industrial Networks - Industrial Security". The certification examination takes place at the end of this 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.

### Type

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Face-to-face training

**Duration**

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3 days

**Language**

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