SIEMENS

SITRAIN: Private 5G in Industrial Networks (Face-to-face Training) (IC-IND5GBAS)

Short Description

Industrial 5G is a new technology which has been announced to change the way we make decisions, manufacture products, and maintain factories. 5G overall and Industrial 5G in specific are complex systems consisting of different elements and features.

Industrial 5G networks provide a great deal of flexibility for companies in the implementation of complex applications indoors and outdoors. At the same time, such networks are exposed to more extreme conditions, such as temperature fluctuations, humidity, dust, etc. in industrial environments.

Objectives

In this course you learn how to plan, configure, and operate a simple Industrial 5G network. You gain an insight into the 5G technology overall and the key elements of Industrial 5G in specific. Participants will also learn the physical concepts of wireless communication. At the end of the course, you will know the requirements for such networks in OT systems and you will have an understanding about the necessary steps to implement an Industrial 5G network.

You can also deepen your theoretical knowledge with numerous practical exercises on the Industrial 5G solution from Siemens.

Target Group

- Commission Engineers
- Service and Maintenance Personnel
- Project Engineers
- OT and IT
- Network Engineers
- Technical Sales Personnel
- Network Planners and Administrators
- Industrial 5G Consultants

Content

- Evolution of mobile networks
- Difference between Public and Private (Industrial) 5G networks
- Typical Industrial 5G network architectures and corresponding components
- Propagation of electromagnetic waves
- Basics of Spectrum Analysis
- 5G RAN & UE including corresponding procedures
- 5G Core including corresponding procedures and Network functions
- IP addressing scheme in Industrial 5G
- Configuration of Industrial 5G Core & RAN
- Configuration of Industrial 5G UEs
- Basics and configuration of VXLAN and Firewalls
- Acceptance test and network verification

Prerequisites

Participants shall have a basic understanding of switching, routing and NAT. You should have basic knowledge of the topic "Ethernet" and be familiar with topologies, transfer processes, addressing, data transport, and understand the associated technical vocabulary. You should be familiar with the principles of operation of routers, switches, hubs and the OSI reference model. You shall have a basic understanding of typical industrial applications and automation concepts including devices like PLCs, SCADA, and wording like determinism, PROFINET etc. including Industrial Security.
It is helpful if you know the basics of wireless networks like WLAN or 4G. Participants are encouraged to attend the training course "Security in Industrial Networks with SCALANCE" and the course "Switching & Routing in Industrial Networks with SCALANCE"" .

Note

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)

After the training course, you can become certified as "Siemens Certified Professional for Industrial Networks – Private 5G in Industrial Networks". The certification examination takes place at the end of this training. As an option, the examination may be taken later.

Type

Face-to-face training

Duration

3 days

Language

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