

## Advanced Switching & Routing in Industrial Networks with RUGGEDCOM - Virtual (IEN-RCOILADVSR)

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### Global Reference

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Advanced Switching and Routing in Industrial Networks with RUGGEDCOM ( IK-ASWIROR)

### Type

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Virtual Instructor-led Learning

### Duration and Continuing Education Units (CEU)

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31.5 Hours (Schedule varies)  
0 CEUs

### Target Group

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- Engineer
- Operator

### Short Description

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This course prepares for the certification “Siemens Certified Expert for Industrial Networks – Switching & Routing”. A voluntary certification examination which consists of two sections will take place at the end of the training. Throughout the course, students will have ample time for practical exercises, diagnostics, and troubleshooting. The course uses a hands-on model for realistic demonstrations. At the end of the course, students are equipped with the knowledge to plan, configure, operate and provide support for networks in their specific market.

### Objectives

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- Theoretical and practical knowledge for real-world implementation of high-availability Industrial Layer 2 networks and the applicable methods to operate and maintain these networks
- Seamless redundancy mechanisms, time synchronization methods and technologies
- Theoretical and practical knowledge of routing protocols and concepts which help facilitate communication inside and between multiple network locations using Layer 3 network, as well as service provider backbones
- Redundant network architectures based on the IEC 62439-3 (PRP/HSR) standard
- How to plan, implement and provide support for Layer 3 networks in an industrial or industry-related environment

### Content

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- Parallel Redundancy Protocol (PRP)
- High-Availability Seamless Redundancy Protocol (HSR)
- Coupling Redundancy Protocols using RNA
- Time Synchronization
- Advanced routing techniques using OSPF
- Multi-case filtering and routing
- Bridging Ethernet/L2 using Tunneling Mechanisms
- Border Gateway Protocol (BGP)

## Language

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English

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