Industrial Communication

Australian Training Catalogue

Contents

Training Timetable

January 2019 - December 2019
Last updated: 30.07.2019

WE DO ON-SITE TRAINING COURSES EVERYWHERE IN AUSTRALIA & NZ

SIEMENS - INDUSTRIAL COMMUNICATION training

(Course starts on the date provided)

Course	Course Code	Days	Melbourne	Sydney	Brisbane	Tasmania	Adelaide	Perth	New Zealand
Switch and Routing in Industrial Networks with RUGGEDCOM	RC-SWR1	5	On request	On request	28.10.2019 - 01.11.2019	On request	On request	On request	On request
Security in Industrial Networks with RUGGEDCOM	RC-SEC1	3	On request	On request	04.11.2019 – 06.11.2019	On request	On request	On request	On request
RUGGEDCOM First-Line Maintenance	RC-FLM1	1	On request	On request	On request	On request	On request	On request	On request
RUGGEDCOM Second-Line Maintenance	RC-SLM1	1	On request	On request	On request	On request	On request	On request	On request

Booking details: To make a booking please email: ruggedcom.au@siemens.com or phone Daniel at 9721-7559

ON-SITE TRAINING COURSES:

In addition to our scheduled training courses, we also regularly conduct ON-SITE standard courses across Australia.
These are provided at your premises ... with the same high standard of equipment and delivery as our office based courses.
To request a quotation for an on-site course, please contact us directly:
Ruggedcom.au@siemens.com
Siemens Service - Training 1300 369 515

RC-SWR1

Switching and Routing in Industrial Networks Training

Siemens Certified Professional for Industrial Networks (CPIN) certification training

Description

Ethernet has found its way into the industrial and the industry-related environment. A high degree of reliability and throughput rates are demanded form industrial networks. At the same time, a reliable connection of these networks to an existing network infrastructure as well as the seamless integration into a corporate network is essential.

In this training course - "Switching and Routing in Industrial Networks of the Industrial Networks Education – Certification Program - you will acquire the knowledge required to plan, implement, operate and maintain such networks.

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

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

Switching

You will learn how to set up so-called switched network solutions as well as redundancy mechanisms for increasing failure tolerance – including many practical exercises which allow you to gain the theoretical and practical knowledge required for the real world implementation of industrial networks.

Routing

You will learn the fundamentals of routing communication gaining theoretical and practical knowledge of what IP communications, routing protocols, redundancy, LAN/WAN concepts that help facilitate communications between multiple network locations.

Prerequisites

Requirements for attendance:

- Basic knowledge of the topic "Ethernet"
- Familiarization with network topologies, Media Access Control (MAC), Internet protocol, data transport and associated technical vocabulary.
- Familiar with the principles of switching operations hubs and the OSI reference model.

- Recommended: Participants are encouraged to attend the Industrial Ethernet Fundamentals course or pass a written exam however this is **NOT** mandatory.

- Communication Engineers
- Control Engineers
- Operations or IT Network Engineers
- Project Engineers
- Substation and System Engineers

Course contents

This course covers the following topics:

Switching

- Industrial Ethernet Overview
- Layer 2 - Data Link Layer
- Commissioning (ROS Platform)
- Switching in Industrial Ethernet Networks
- Ethernet Port Configuration
- Redundancy in Switched Networks
- Increasing Bandwidth Availability
- Integrating Serial Protocols
- Monitoring (ROS Platform)
- Maintenance/Troubleshooting (ROS Platform)

Routing

- Layer 3 – Network Layer
- Commissioning (ROXII Platform)
- LAN and IP Interfaces
- Internet Protocol Services
- First Hop Redundancy Protocol
- Moving packets across IP Networks
- Automation Path Determination
- Automatic Path Determination with standard-based protocols
- Monitoring (ROX platform)
- Maintenance/Troubleshooting (ROX platform)

> ## Course Details
>
> **Duration:** 5 days
>
> **Location:** Siemens Training Offices (Australia/ New Zealand)
>
> **Dates:** Refer to training course schedule
>
> **Size:** Min 4 participants
>
> **Language:** English

> **Contact:**
>
> **To enquire or book email:**
>
> **Ruggedcom.au@siemens.com**
>
> **For any further information call:**
>
> **+61 (0) 437 911 594**

Assessment and Certification

This training prepares for the certification "Siemens Certified Professional for Industrial Networks – Switching and Routing"

A voluntary certification examination which consists of two sections will take place at the end of the training.

Please note: This examination is **NOT** compulsory

Is this course right for you?

This course is for users who are involved with developing or sustaining networks in rugged environments – such as Electric Power, Transportation, Rail and Defence markets, where RUGGEDCOM equipment is required. This includes, but is not limited to the following:

- Application Engineers
- Automation Engineers

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RC-SEC1

Security in Industrial Networks with RUGGEDCOM

Siemens Certified Professional for Industrial Networks (CPIN) certification training

Description

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

In this training course "Security in Industrial Networks" of the Industrial Networks Education – Certification Program, you will learn the potential dangers in industrial networks and how-to safe guard against them.

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

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

In this course you will learn course you will have knowledge in protection concepts and be able to apply them in specific, practical exercises and be able to correctly assess threats and initiate countermeasures.

Key Topics:

1. Protecting Industrial Networks
2. Hardening the Switch
3. Control Networks Protection
4. Concealing Internal IP network identity
5. Building Virtual Private Networks
6. Appendix – Commissioning (ROXII Platform)

Prerequisites

Requirements for attendance:

*   Basic knowledge of the topic "Ethernet"
*   Familiarisation with network topologies, Media Access Control (MAC), Internet protocol, data transport and associated technical vocabulary
*   Familiar with the principles of switching operations, hubs and the OSI reference model
*   Recommended: Participants are encouraged to attend the Industrial Fundamentals training course or pass a written examination however this is **NOT** mandatory.

Course contents

This course covers the following topics:

- Security in Industrial Ethernet Networks
- Security Defence-in depth approach
- Security measure and guidelines (best practises, industry driven)
- Protecting Control Networks (firewall, address translation (NAT))
- Site to Site and Remote access via VPN (IPSec)
- Hardening the RUGGEDCOM ROX Security
- Practical exercises using the RUGGEDCOM ROX product line

Course Details

Duration: 3 days

Location of course: Siemens Training Offices

(Australia/New Zealand)

Dates: Refer to training course schedule

Size: Min 4 participants

Contact:

To enquire or book email:

Ruggedcom.au@siemens.com

For any further information call:

+61 (0) 437 911 594

Assessment

After the training course you have the opportunity to become certified as "Siemens Certified Professional for Industrial Networks – Security"

A voluntary examination takes place at the end of the training however this is **NOT** compulsory

Participants are required to complete an examination which consists of two sections that will take place at the end of training. Alternativly the examination can be taken at a later time.

Is this course right for you?

This course is for users who are involved with developing or sustaining networks in rugged environments - such as Electric Power, Transportation, Rail and Defence markets where RUGGEDCOM equipment is required. This includes, but is not limited to the following:

- Application Engineers
- Automation Engineers
- Communication Engineers
- Operations or IT Network Engineers
- Project Engineers
- Substation Engineers
- System Engineers

RC-FLM1

RUGGEDCOM First-Line Maintenance Training

RUGGEDCOM - Industrial Networks Education

Description

This course comprises of instructor-led training and hands-on lab time. All participants will receive training material which includes a student guide and lab guide to assist them with their training.

Objectives

In this course you will learn about RUGGEDCOM hardware, particularly **ROS Ethernet switches** and **ROX II Multi-Service Platform devices.**

Key Topics:

1. Siemens RUGGEDCOM Portfolio
2. Device Administration [ROS and ROX II]
3. Port Configuration [ROS and ROX II]
4. Device Maintenance [ROS and ROX II]
5. Device Diagnostic and Troubleshooting Tools [ROS and ROX II]

Prerequisites

Basic computer literacy is the only requirement for attendance.

Course contents

This course covers several modules covering the following topics:

- How to access RUGGEDCOMM devices directly and remotely, configure basic device settings.
- Configuring Ethernet ports, check port status and view/clear its statistics
- Restoring devices to factory default settings
- Upgrade/downgrade firmware directly and remotely
- Upload/download files directly and remotely using XMODEM and SFTP
- View/clear system logs and check device connectivity
- View Link Layer Discovery Protocol (LLDP) neighbours
- Display device information and understand what device LEDs indicate
- View/clear device alarms and manage ROS devices using RUGGEDCOM EXPLORER

Is this course right for you?

This course is for people who maintain RUGGEDCOM equipment.

Upon completion of this course participants will receive a certificate of completion.

Lunch, snacks and beverages are provided on the day

Course Details

Duration: 1 day (09:00-17:00)

Location: Siemens Training Offices

(Australia/New Zealand)

Dates: Refer to training course schedule

Language: English

Contact:

To enquire or book email:

Ruggedcom.au@siemens.com

For any further information call:

+61 (0) 437 911 594

RC-SLM1

RUGGEDCOM Second-Line Maintenance Training

RUGGEDCOM - Industrial Networks Education

Description

This course comprises of instructor-led training and hands-on lab time. All participants will receive training material which includes a student guide and lab guide to assist them with their training.

Objectives

In this course you will learn about RUGGEDCOM hardware, particularly **ROS Ethernet switches and ROXII Multi-Service Platform devices**

Key Topics:

1. Advanced Device Management [ROS and ROX II]
2. Device Management [ROS and ROX II]
3. Advanced Device Diagnostic and Troubleshooting Tools [ROS and ROX II]

Prerequisites

Requirements for attendance:

- Basic familiarity with **RUGGEDCOM ROS and ROX II devices** is the only requirement for this course.

Course contents

This course covers several modules covering the following topics:

- How to reset device passwords and configure port mirroring
- Capture network traffic using Wireshark
- Back up files directly (USB flash drive/ microSD card) and remotely (FTP/HTTP server)
- Create and upload partial device configuration files
- Comparing files using ExamDiff
- Configure and verify Network Time Protocol (NTP), Simple Network Management Protocol (SNMP) v2c and v3 and Syslog
- Check network connectivity and measure network reconvergence time using RUGGEDCOM PING
- Trace events (ROS) and capture packets using tcdump (ROX II)

Is this course right for you?

This course is for people who maintain and manage RUGGEDCOMM equipment.

After the successful completion of the course participants will receive certification.

Lunch, cofee break snacks and beverages are provided on the day.

Course Details

Duration: 1 day (9:00-17:00)

Location: Siemens Training Offices

(Australia/New Zealand)

Dates: Refer to training course schedule

Language: English

Contact:

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