

SCADA in Action: From Architecture to Applications

Learn to configure Siemens WinCC SCADA systems, from architecture and data acquisition to alarms, logging, recipes and user administration.

5 Days

40 HOURS

7

MODULES

59

TOPICS

COURSE OVERVIEW

The “SCADA in Action: From Architecture to Applications” course is a comprehensive training program focused on the principles, architecture, and practical applications of SCADA (Supervisory Control and Data Acquisition) systems. The course is designed to provide learners with a solid understanding of how SCADA systems operate and how to configure and use them effectively within various industries. Starting with an introduction to SCADA, the course covers key concepts such as Data acquisition and communication, Presenting and visualizing data, and the differences between PLCs and PCs. It then progresses through hands-on exercises in Project creation, Basic configuration, Alarm management, Data logging, Trend configuration, Recipe management, and User administration, all using Siemens WinCC SCADA. By the end of the course, participants will have gained valuable WinCC SCADA training experience, enabling them to design, implement, and maintain SCADA systems, ensuring efficient industrial operations and data management.

Who Should Attend

The SCADA in Action course equips professionals with essential skills in SCADA system operations, covering topics from architecture to applications.



LEARNING OBJECTIVES

- Explain SCADA architecture and core functions
- Compare data acquisition methods and communication techniques
- Compare PLC and PC roles within SCADA systems
- Create a SCADA project and establish device communication
- Configure graphic views, text displays and lists
- Implement alarm classes and configure alarm views
- Configure data logging and trend views
- Configure user groups and access authorizations

7 Modules, 59 Topics

01

Introduction to SCADA

TOPICS

- SCADA Overview
- What is SCADA?
- Functions of SCADA
- Example of SCADA Architecture
- Data Acquisition and Communication
- Data Acquisition Methods
- Data Communication in SCADA Systems
- Data Presentation and Visualization
- Comparison of PLC and PC
- Examples of SCADA Applications

02

Project Creation & Basic Exercises

TOPICS

- Creating a SCADA Project
- Adding Devices to the Project
- Establishing Communication Connections
- Setting Ethernet Addresses
- Connecting to Non-Integrated PLCs
- Runtime Settings Configuration
- Configuring Buttons and Outputs
- Basic Exercises Related to Push Buttons and Displays

03

Basic Configuration

TOPICS

Configuring Graphic Views · Setting Up Text Displays · Alphanumeric Display for Inputs and Outputs · Configuring Text and Graphic Lists · Movement and Fill Properties

04

Alarm Configuration

TOPICS

Steps in Alarm Configuration · Message Blocks for Alarms · Alarm Classes · Discrete Alarm Trigger Settings · Displaying Alarms · Alarm View Properties · Practical Exercises on Alarm Configuration

05

Data Logging & Trend Configuration

TOPICS

- Types of Process Value Logging
- Configuring Data Logs
- Process Value Log Properties
- Editing Logging Tags
- Displaying Data Log Trend Views
- Properties of Trend Views
- Practical Exercises on Data Logging and Trend Configuration

06

Recipe Management

TOPICS

- Recipe Structure
- Communication with Controllers Using Tags
- Table Representation of WinCC Recipe View
- Sorting in the Recipe View
- Exporting Recipe Data
- Configuring Recipe Views
- Entering and Editing Recipe Data
- Recipe Editor Configuration
- Setting Recipe Properties
- Practical Exercises on Recipe Management

07

User Administration

TOPICS

- User Administration Structure
- Access Protection Mechanisms
- Configuring User Administration
- Structuring User Authorizations
- Creating Authorizations
- Assigning Authorizations to Objects
- Configuring User Groups
- Configuring Users
- User View Configuration
- Login Dialog Configuration
- Displaying Logged-On Usernames
- Practical Exercises on User Administration

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

FLEXIBLE DELIVERY

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Live Online Classes (ILO)

Fly-Me-A-Trainer (FMAT)

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1-on-1 Training

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