

Automation - SIMATIC HMI with TIA Portal

TIA Portal WinCC Comfort / Advanced Panel Configuration

General Information

Course Code: SCT-PTWCMP1A
Length: 3 Days

Audience

This course is for automation control engineers or maintenance staff designing, configuring or maintaining a control system application configured with SIMATIC TIA Portal WinCC Advanced software. *NOTE: This TIA Portal course is for configuring Panels and/or Machine mounted HMI. For WinCC SCADA applications see Course TIA Portal WinCC Professional - Code: SCT-PTWCSP1A.

Prerequisites

- Basic knowledge of automation technology.

Profile

This course provides a comprehensive review of the features and capabilities of Siemens SIMATIC TIA Portal WinCC Advanced software. Students will perform a complete system configuration including project configuration, graphics design and system integration. Students will also build skills with the user management tools including security, access, alarms, and messaging. Advanced functionality such as recipe creation and scripting are briefly introduced through scenario applications.

Throughout this course lecture materials are complimented with hands-on exercises which build a working SIMATIC TIA Portal WinCC Advanced application.

Objectives

Upon completion of this course, the student shall be able to:

- Create and manage a WinCC Advanced project.
- Integrate components between WinCC Flex and STEP 7.
- Create tags from the STEP7 symbol table.
- Design graphic screens and tools.
- Configure internal and external tags.
- Define & administer user security.
- Set and test the Alarms and Messages.
- Configure, archive and display trends.
- Configure a basic recipe.

Topics

1. WinCC Advanced System Overview
 - a. Structure of Components
 - b. Scalability
 - c. Options Licensing
 - d. Migration from WinCC Flexible to WinCC Advanced
 - e. Options and features overview
2. Creating a Project
 - a. Structure of Graphical User Interface (GUI)
 - b. Editors and their uses
 - c. Project Components
 - d. Project Configuration
 - e. Communication
3. Project Transfer
 - a. Transfer Requirements
 - b. Transfer Settings
 - c. Project Transfer
 - d. Project Troubleshooting
4. Basic Graphics Design
 - a. The Screen Editor
 - b. Screen hierarchy
 - c. Screen templates
 - d. Objects
 - e. Importing & exporting graphics
 - f. Configuring I/O
 - g. Text lists
 - h. Buttons & switches
 - i. Animation
 - j. Configuration and use of Tags
5. Advanced Configuration Functions
 - a. Time Synchronization
 - b. HMI Device Wizard
 - c. Bit Replacement Options
 - d. Layering
 - e. Libraries
 - f. Faceplates
 - g. Configuration Tools
6. User Management
 - a. Access Protection - User Administration
 - b. Configure User Groups
 - c. Configure User Authorizations
 - d. User management
 - e. Log-in/out & passwords
 - f. Configuring Access Protection for Objects
7. The Message System
 - a. Structure of Alarm System

- b. Basic Settings
 - c. Message Configuration
 - d. Alarm Classes
 - e. Acknowledgments
 - f. Message archiving
8. Tag Logging (Archiving), Trends, and Trend Configuration
- a. Archiving Functions and Variants
 - b. Creating Process Value Archives
 - c. Configuring Trend Views
 - d. Configuring Trend Curves
9. Recipe Management
- a. Recipe structures
 - b. Recipe Editor
 - c. Recipe Configuration
 - d. Recipe Data Synchronization
 - e. Recipe Management
 - f. Transferring Recipe Data between Panel & Controller