SIEMENS

Online Instructor-led Training
PCS7 System Engineering 2 - Virtual

General Information

Course Code: SCT-PCOILSYSE2D
Length: 5 Days - 5 hours per day

Audience

This course is intended for controls engineers using PCS7 to develop a process system solution and need an advanced level system configuration and integration skills.

Prerequisites

- PCS7 System Engineering 1

Profile

2.5 CEUs (Continuing Education Credits)

This is an advanced process control course for engineers. The goals of this virtual course are to help the student learn advanced level system configuration and project engineering. This course begins with the project configured in the System Engineering-1 course and elevates the functionality through advanced Engineering Station programming, Operator Station graphics development and Automation Station hardware integration. Students use "best practice" project design and management techniques to configure a process application. Bulk engineering tools and advanced editing skills are introduced. Custom graphics and library blocks using Structured Control Language (SCL) will be introduced providing skills to customize a system to meet customer specific requirements. Advanced level system administrative tasks are explored providing an opportunity for a comprehensive experience in engineering, troubleshooting and system integration. Access to fully functional software, virtual tools, and exercises are provided through a cloud-based application.

Objectives

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

- Perform a typical process system configuration.
- Configure a fully functioning PCS7 project.
- Perform fast bulk engineering using bulk engineering tools.
- Configure custom blocks using SCL.
- Configure custom graphics.
- Set up user administration for Operator Stations.
- Replicate Plant Hierarchy using the models tool.

- Create and configure alarm and tag archives.
- Configure Ethernet communications to exchange data between two Automation systems.

Topics

1. Customizing the OS
   a. User administration
   b. Picture navigation
   c. OS Project Editor
   d. Time synchronization
   e. Lifebeat Monitoring
   f. WinCC Basic Objects and special additional for PCS 7
   g. Group display
   h. Alarms
   i. Read Back
   j. Smart Alarm hiding
   k. Status Displays
2. Archiving System
   a. Introduction
   b. Archive configuration
   c. Configuration of WinCC Controls
3. Locking functions and operating modes
   a. Interlock
   b. Local/Remote control and other operating modes
4. Mass data engineering
   a. Chart Reference Data
   b. The Import Export Assistant (IEA)
   c. New Type Model
5. Final steps of configuration
   a. AS-AS Communication
   b. Configuration in Run
   c. Simulation
   d. Forcing block I/Os
6. User blocks: Attributes and Visualization
   a. Overview
   b. SCL Basics
   c. Structure of a user block
   d. Example
   e. Block structured by templates
   f. Attributes
   g. Settings to the compiler
   h. Symbolic Name
   i. Handling of block types
   j. TCiR - Type Change in Run
   k. Visualization
7. Demonstration Server-Client System
   a. System architecture
   b. Configuration Steps
8. Syntax Rules
   a. Special Characters
   b. Maximum Length for Names
   c. Rules for Naming in the PH