SIEMENS

PCS7 System Engineering 2

General Information

| Course Code | SCT-PCSYSE2D |
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| Global Code | ST-PCS7SYS |
| Length | 4 Days |
| CEUs | 2.6 |
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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 v8.1

Profile

This is an advanced process control course for engineers. The goals of this course are to aggressively 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 will use "best practice" project design and management techniques to configure a typical 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 will be explored providing an opportunity for a comprehensive experience in engineering, troubleshooting and system integration.

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 model's 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. Life beat 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
 - Locking functions and operating modes
 - a. Interlock

3.

- 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

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