

Process Automation - PCS7

PCS 7 OS Advanced Engineering

General Information

Course Code: SCT-PCOSCP2B

Length: 4½ Days

Audience

This course is intended for PCS 7 users already proficient at engineering PCS 7 AS/OS projects.

Prerequisites

- PCS7 System Engineering 1

Profile

This is an advanced OS engineering course designed for experienced PCS 7 users, engineers and Solution Partners. The goals of this course are to enhance the student's skill-set by exploring advanced OS configuration topics and solutions to common application problems. This course begins with an existing AS project and a brief but thorough introduction to it. Using this "base" project and advanced programming techniques, various OS architectures will be added. OS graphic development will include "best practice" methods as well as advanced topics such as C-script, VB script, Faceplate functionality and custom solutions. Students will use recommended project design and management techniques to build a typical OS solution. In addition students will employ advanced Multi-project and Multi-engineering techniques. Advanced OS architectures such as OS redundancy, Web Server/Client and PH will be examined in a clear concise manor. Advanced AS integration will also be addressed throughout this course to provide solutions to common interface challenges. Archive strategy, configuration and implementation will be thoroughly explored. Various diagnostic aids and troubleshooting methods will be employed throughout the presentation of this course.

Objectives

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

- Perform a typical process system configuration
- Configure a fully functioning PCS7 OS project
- Configure and use SIMATIC Logon
- Configure Autostart for all OS stations
- Create and configure custom graphics as well as custom faceplates

- Create and configure various PCS 7 architectures including Server/Client, Redundant Server, Web Server/Client and Multi-project set up.
- Setup and use OS Simulation

Topics

1. Introduction to training
 - a. Road map of this course
 - b. Training equipment
 - c. Simulated model plant in this workshop
 - d. Simulation tools
2. PCS 7 Documentation and Online Support
 - a. Documents available by PCS 7 Installation
 - b. Additional sources of information
 - c. Industry Online Support Internet Portal
 - d. Working with "mySupport"
 - e. Support Request
 - f. Forum - the communication platform for Siemens Industry products
3. Basics of OS configuration
 - a. The OS architecture
 - b. Configuring the PC stations
 - c. The importance of the plant hierarchy
 - d. The OS-relevant AS properties
 - e. The settings in SIMATIC Manager
 - f. Compiling the OS
 - g. The OS project
4. The Client/Server Configuration
 - a. Preparations
 - b. The configuring of the ES
 - c. Configuring the OS server
 - d. Configuring the OS client
5. The Server Redundancy
 - a. Overview
 - b. The requirements
 - c. Configuring in SIMATIC Manager
 - d. Configuring in WinCC Explorer
 - e. Downloading and starting redundancy
 - f. Redundancy/synchronization tags
 - g. Status of client/server connections in OS Runtime of the client
6. Extended Configuration of Multi-user Projects
 - a. Lifebeat monitoring
 - b. Time synchronization
 - c. User Administration
 - d. SIMATIC Logon option
 - e. WinCC Autostart
 - f. Running PCS 7 OS as a service
7. The Web Option
 - a. PCS 7 Web Option, Overview
 - b. Web Option, technical specifications
 - c. Overview of the configuring steps

- d. Configuring the Web server
- e. Configuring the Web client
- f. Installation of Web client plug-ins
- g. Starting the Web client
- 8. Long-term Archiving
 - a. Overview
 - b. The Process Historian
 - c. The Information Server
- 9. Graphic Configuration
 - a. Settings and properties
 - b. Dynamics
 - c. Selected graphic objects
 - d. Modification of block icons
 - e. Expansion of faceplates
- 10. The Graphic Object Update Wizard
 - a. The basics
 - b. The configuration
 - c. The wizard for picture objects
- 11. Syntax Rules
 - a. Special Characters
 - b. Maximum Length for Names
 - c. Rules for Naming in the PH