

TIA University Merge & Accelerate your Engineering Efficiencies

General Information

Course Code: STR-TIOILUNI2P
Length: 1 Day

Audience

This workshop is intended for intermediate or advanced Studio5000 programmers who would like to learn the similarities between the Rockwell Software Studio5000 programming environment and the Siemens TIA Portal programming environment.

Profile

This workshop is intended to lead Studio5000 users to want to learn more about TIA Portal through traditional Siemens training courses. Studio5000 topics will be shown briefly by the instructor to remind the participants of the functionality. It is prerequisite that participants be at an intermediate or advanced level of programming Studio5000.

Learning Objectives

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

- Compare and Contrast Siemens Software & Hardware components to alternative manufactures.
- Learn key software navigational skills to develop a TIA Portal Project, Configure Hardware devices & I/O network configurations
- Define I/O Tags, Tag Structures, UDTs, I/O Addressing, Tag definitions
- Upload Download Projects, Online monitoring, Simulation, Use Search Functions & use Library Elements
- Correlate Tasks, Programs, Routines to Program Block groups, Functions, Function Blocks & Organization Blocks, & Data Blocks
- HMI Hardware Selection Visualization software tools

Study Guide & Exercise Topics

1. Software component comparison
2. TIA Environment Layout
 - a. RSLogix5000 Layout Navigation
 - b. TIA Portal Layout Navigation
3. Working with Projects Archive, Folder Structure
 - a. Studio 5000
 - b. TIA Portal
4. Hardware Configuration
 - a. Studio 5000 Controller Properties, I/O, E/IP
 - b. TIA Portal Controller Properties, I/O, Profinet
 - c. Remote I/O configuration
5. I/O Addressing
 - a. Studio 5000 DI, DO, AI, AO, Aliasing /Buffering
 - b. TIA Portal DI, DQ, AI, AQ PLC Tags
6. Emulation/Simulation
 - a. Studio 5000 Emulate
 - b. PLC SIM / PLC SIM Advanced
7. Uploading/Downloading/Going Online
 - a. Studio 5000 RS LINX/ FT LINX Setup
 - b. TIA Portal Accessible Devices, Compile,
 - c. Upload /Download/Go Online
8. IEC 61131-3
 - a. Studio 5000 Data Types, Languages, Addressing
 - b. TIA Portal Data Types, Languages, Addressing
9. Tags
 - a. Studio 5000 Naming rules
 - b. TIA Portal PLC Tags Naming Rules
10. User Defined Types
 - a. Studio 5000 Online modification
 - b. TIA Portal Online modification
11. Logic Layout
 - a. Studio 5000 Tasks Programs, Routines, Tags
 - b. TIA Portal Blocks, Groups, DB, IDB,OB FB,FC
12. Monitoring Tags
 - a. Studio 5000 Controller/Local Tags Watch Tables
 - b. TIA Portal PLC/ Global DB Tags, Watch Tables
13. Search Functions
 - a. Studio 5000 Search, Cross Reference
 - b. TIA Portal Local/Project Search Cross Reference
14. Libraries
 - a. RS Logic 5000 ACM Architect
 - b. TIA Portal Project/Global Types Master Copies
15. HMI
 - a. Studio 5000 FT View, ME/SE, View Designer
 - b. TIA Portal WinCC Comfort, Tag Converter
16. Online Monitoring / Diagnostics/Troubleshooting
 - a. RS Logic 5000 Processor, I/O, Networks, Trends
 - b. TIA Portal Processor, I/O Networks, Traces
17. FT Alarms and Events versus ProDiag