

Program A.3 – Survalent SCADA Track

Distance Education

SCADA only Training		Team Member
Program Topics	Topic Contents	
Topic 1.0: Introduction (5 hours)		
Subtopic 1.1: Software loading and software orientation	Software Loading/Installation, SCADA Software & Hardware Architecture, Settings	Survalent
Subtopic 1.2: Editing the Database using SCADA Explorer	Creating Stations, Pseudo points, RTUs, Modeling Points, Cloning Stations	Survalent
Subtopic 1.3: Visually Representing the Database with SmartVU	Getting started with SmartVU (Colors, Color Tables, Fonts)	Survalent
Topic 2.0: Adding Wizards and Control Panels (5 hours)		Survalent
Subtopic 2.1: Representing Database with SmartVU (cont.)	CAD Files, Drawing Basic Symbols, Status PMacros Creating a Single Line Diagram	Survalent
Subtopic 2.2: IED Wizards and Control Panels	Using IED Wizard, Downloading Control Panels, Configuring Downloaded Control Panels	Survalent
Subtopic 2.3: STC Explorer Automation Folder	Calculations, Templates (in Control Panels), Basic Command Sequences	Survalent
Topic 3.0: History, Reports, Alarms (5 hours)		Survalent
Subtopic 3.1: Representing Database with SmartVU (cont.)	Historical Datasets, Trend Graphs, Reports, SCADA Add-In	Survalent
Subtopic 3.2: Alarm Management	Alarm Viewer and Operator Summary, Parameters, Priorities, and Formats, Remote Alarm	Survalent
Topic 4.0: Shorter Topics and Review (5 hours)		Survalent
Subtopic 4.1: Shorter Topics	Reservations, Tag Configuration/Options, Maintenance Mode, ScanMon, Backing Up Database	Survalent
Subtopic 4.2: Optional Components	Quick overview of Topology Processing, Review Exercise (fix the map and database)	Survalent
Topic 5.0: System Administration (5 hours)		Survalent
Subtopic 5.1: Introduction	Software loading, Standard v. Custom Setup Types, LDAP, Ports, Router Ports, Server Setup	Survalent
Subtopic 5.2: Administrative Tasks	Back-Up, Restoration, Failover, Enumeration, Owner Tags, Setting Up Switch Orders, Data Exchange	Survalent
Topic 6.0: Security and Advanced Templates (5 hours)		Survalent
Subtopic 6.1: Security	SCADAFirewall.bat, SCADAAdvFirewall.bat, Lockdown, System Logs, 2 Factor Authentication	Survalent
Subtopic 6.2: Advanced IED Templates and Control Panels	Creating IED Templates customized for your equipment, Creating customized Control Panels	Survalent
Topic 7.0: Reservations, Sub Maps, More PMacros (5 hours)		Survalent
Subtopic 7.1: Reservations and Sub Maps	Reservations, How Sub Maps work with Reservations, Converting a view into a sub map.	Survalent
Subtopic 7.2: More Pmacros	Analog bars, gauges, and history PMacros	Survalent
Topic 8.0: Shorter Topics and Review (5 hours)		Survalent
Subtopic 8.1: Shorter Topics	Reservations, Tag Configuration/Options, Maintenance Mode, ScanMon, Backing Up Database	Survalent
Subtopic 8.2: Optional Components	Quick overview of Topology Processing, Review Exercise (fix the map and database)	Survalent

* At the end of each topic, assignments/tests will be conducted to check the learning outcomes

In-person Labs

Cyber-Physical Security Training		Team Member
LabTopics*	Topic Contents	
Topic 1.0: Cybersecurity and SCADA (8 hours)	Practical Intro on Arduino hands-on and cybersecurity lab	SPC
Topic 2.1: Cyber-physical training at Building 540 (8 hours) [#]	Natural-Hazard scenarios and live recovery training from Hazards using Distributed Energy Resources	GNIRE
Topic 2.2: Cyber-physical training at Building 250 (8 hours) [#]	SCADA and Cybersecurity training on digital twins	TTU, Survalent, WTAMU

* At the end of each lab, students will perform assigned tasks up to satisfactory levels to complete the lab sessions

[#] Option to choose between two lab topics on second day