T568 Freelance System Engineering

Course description

Course goal
The goal of this course is to engineer a Freelance system and to become familiar with configuration and commissioning tasks.

Learning objectives
Upon completion of this course, the participants will be able to:

- Describe the network structure in the Freelance architecture
- Describe the functionality of the major system components
- Describe the structure of application programs i.e. variables, programs, tasks
- Configure and maintain objects in Control Builder F
- Configure the AC 700F controller with local I/O’s
- Configure the AC 800F controller and establish fieldbus connectivity to corresponding Remote I/O’s
- Create and maintain standard and user specific function blocks
- Load the controller and work in online mode
- Create and modify standard displays
- Manage and configure alarm and events
- Setup trends and configure historical data collection

Prerequisites
Students shall know the fundamentals of working with Distributed Control Systems and have basic knowledge of IEC 61131-3 programming and of working with Windows® operating systems.

Topics
- Plant modelling
- Graphic displays
- Graphic elements
- Faceplates
- Alarm and events
- Historical data collection
- Trend displays
- Operator Workplace
- User security
- Backup and restore
- Import and export
- Simple reports
- Document manager
- National Language Support (NLS)
- Bulk data handling

Participant profile
This training is targeted to Freelance 800F users and system integrators who need to get a comprehensive overview about the Freelance 800F system capabilities.

Course type and methods
This is an instructor led course with interactive classroom discussions and associated lab exercises. Approximately 50% of the course is hands-on lab activities.

Course duration
The duration is 5 days.
ABB University

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Course outline

Day 1
- Course Overview
- Freelance 800F System Architecture
- CBF Workplace
- CBF Engineering
- CBF Base
- Commissioning

Day 2
- Advanced Configuration
- Advanced Commissioning
- Introduction in FBD programming
- Introduction in Structured Text programming

Day 3
- Standard displays
- Trends
- Alarms and Events
- Logs
- Free graphics

Day 4
- Sequential Function Charts (SFC)
- User Function Blocks

Day 5
- OPC Connectivity
- Bulk Data Manager
- Project Import and Export
- System Documentation