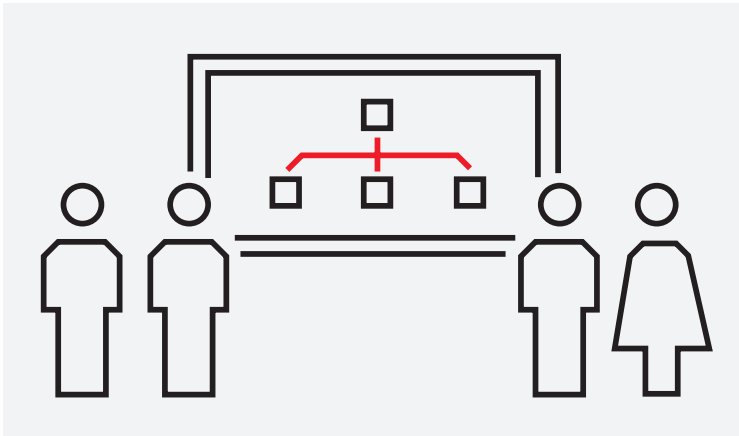# S301H
SD Series and HR Series system overview

The goal of this course is to provide an introduction to the main hardware and software components of the Symphony Plus SD Series or HR Series control based systems.

Learning objectives
Upon completion of this course, students will be able to:
• Explain the SD Series and HR Series control based system architectures
• Identify the SD Series and HR Series controller and I/O hardware components
• Describe the S+ Operations features and functions
• Apply basic S+ Operations system sizing criteria
• Use S+ Engineering's system configuration tools
• Use S+ Engineering Composer Operations
• Use S+ Engineering for Harmony to configure SD Series and HR Series control programs
• Use S+ Engineering to configure field devices
• Explore the operator workplace using the S+ Operations navigation tools
• Acknowledge and manage S+ Operations alarm and events
• Monitor and configure S+ Operations trends
• Operate using graphic faceplates and symbols
• Execute backup and restore of system configuration data

Participant profile
The training is targeted to department managers, sales and proposal engineers, and in general to users who need to learn the Symphony Plus fundamentals.

Prerequisites
Trainees should have a general understanding of process automation and basic knowledge of control systems. Experience in dealing with and handling of current Microsoft operating system is an advantage.

Topics
• System architecture, network, types of nodes
• Communications among nodes and with external devices
• Basic system sizing criteria
• Introduction to S+ Engineering tool
• S+ Operations server redundancy
• SD Series and HR Series control and I/O hardware components
• S+ Engineering control programming tools
• S+ Engineering field device programming tools
• S+ Operations nodes configuration
• Control faceplates, alarm and events, trend displays
• User security
• Backup and restore

Course type and methods
This is an instructor led course with interactive classroom discussions and associated lab exercises. Approximately 20% of the course entails hands-on lab activities.

Duration
4 1/2 days

Agenda

Day 1	Day 2	Day 3	Day 4	Day 5
Course overview	S+ Engineering overview	S+ Engineering control project	S+ Operations environment	S+ Operations faceplates
System architecture, communication network, types of nodes, redundancy	SD Series and HR Series Controllers	S+ Engineering control configuration	S+ Operations nodes configuration	S+ Operations graphic displays
System sizing	SD Series and HR Series I/O modules	Function code and programming task	S+ Operations database configuration	S+ Operations history overview
S+ Operations server redundancy	Hands-on lab: exercises	Time synchronization	S+ Operations client connection	S+ Operations diagnostic utilities
Operator workplace navigation		Hands-on lab: exercises	S+ Operations communications	System backup/restore
			S+ Operations alarms and events	Hands-on lab: exercises
			S+ Operations trend displays	Questions and answers

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