



PubSub+ Development & Administration

EDU-DEVADMN-101

Learn everything you need to know to get started with administrating, managing PubSub+ Event Brokers & developing apps using PubSub+ APIs

Course Overview

This intensive, four-day, instructor-led on-site classroom course provides a hands-on deep-dive into operational management of Solace products, and how to configure & administer various features for applications which leverage Solace Messaging. In this course, you will also learn how to develop applications using one of Solace Enterprise Messaging APIs.

Course Objectives

A combination of lecture content and lab work helps attendees to achieve the following:

- Understand at a high level the various features and capabilities provided by the Solace product line, and how to administer them
- Configure Solace Event Brokers for role-based administration
- Setup, secure, and monitor messaging environments for applications
- Configure guaranteed delivery, and implement exchange patterns for applications that are not tolerant to data loss
- Troubleshoot and monitor health of Solace products
- Understand how to deploy Solace Messaging for High Availability, and Disaster Recover
- Develop applications using Solace Enterprise Messaging APIs
- Implement various messaging patterns using the Solace APIs

Certification/Badges

- Solace Certified Event Broker Administrator – Associate Digital Badge
- PubSub+ Development & Administrator - ILT Completion Digital Badge

Delivery Method

Instructor-led private on-site or virtual classroom.

Course Duration

Four days of training.

Target Audience

This course is designed for administrators & developers.

Prerequisites

Prior knowledge in enterprise integration and messaging is helpful but not required.

Contact

If you have any questions, contact your account executive or email services@solace.com.

Course Modules

Day 1 Agenda	
Module	Objective
Introduction & Logistics (INT 1000)	Meet, greet, introductions. Set agenda for the day & Course.
Introduction to Solace (INT 1001)	Understand at a high level the various features and capabilities provided by the Solace product line.
Introduction to Messaging Concepts (INT 1005)	Understand the basic messaging concepts, terminology & standards, and a high-level overview of PubSub+ Event Brokers.
	Hands-On (Connecting to your Event Broker)
Solace Multi-Tenancy (INT 1020)	Understanding of Solace Multi-Tenancy, administration, data & resource scoping, and roles-based access.
	Hands-On (Setting up your VPN & Testing Your Connection)
Topic Structures and Hierarchies (INT 1015)	Understand how applications exchange data using Solace Topics. Covers Topic structure, hierarchies, design examples, and use cases.
Client Authentication (ADM 1010)	Become familiar with the different authentication features that can be used to authenticate client applications on the PubSub+ Event Brokers.
Client Management Overview (ADM 1015)	Understand the options available for administrators to manage client authentication and authorization rules.
	Hands-On (Client Management & Configure Client Exceptions)

Day 2 Agenda	
Module	Objective
Direct Messaging: Overview & Features (ADM 1055)	Understanding of Solace's Direct Messaging and features like Shared Subscription and Message Eliding.
	Hands-On (Shared Subscription)
Guaranteed Messaging (ADM 1100)	Understand how Solace provides persistence to applications that cannot tolerate message loss.
Guaranteed Messaging Patterns (ADM 1105)	Understand the various message exchange patterns that administration can manage & configure for applications that use persistence.
	Hands-On (Guaranteed Messaging, Time-To-Live, Dead Message Queues)
Guaranteed Messaging Management (ADM 1110)	Become familiar with the options available to administrators to manage resources and control access to Queues.
Message Promotion and Demotion (INT 1035)	Administer and implement Guaranteed Messaging patterns using Solace Topics & Queues and understand message promotion & demotion.
Overview of Network Interfaces (INT 1040)	Understand the models and features for connecting the Solace Appliances into an underlying network – layer 2 and IP.
Monitoring (ADM 1150)	Describes the remote monitoring and management capabilities of PubSub+ Event Brokers via the SEMP and Syslog protocols.
	Hands-On (Monitoring & Subscribing to Message Bus Events)

Day 3 Agenda	
Module	Objective
High Availability (ADM 1250 or ADM 1255)	Understand how PubSub+ Appliance & Software can be configured to provide high availability to applications.
Data Center Replication (ADM 1260)	Become familiar with features provided by Solace for disaster recovery and data replication across different data centers or clouds.
SolOS CLI Overview (INT 1010)	Become familiar with features and navigation of the SolOS CLI for configuring and monitoring the event broker <hr/> Hands-On (SolOS CLI)
Operational Management (ADM 1200)	Become familiar with how to manage Solace Appliance backups and upgrades, and how to migrate Solace Message VPN configuration between different environments. <hr/> Hands-On (Operational Management)
VPN Bridging (ADM 1305)	Understand how share data across messaging environments using Solace's VPN Bridges. <hr/> Hands-On (Static Bridging)
Dynamic Message Routing (ADM 1310)	Understand how to connect PubSub+ Event Broker instances over Hybrid Cloud or for Horizontal Scaling.

Day 4 Agenda	
Module	Objective
Solace Messaging (DEV 1000)	Become familiar with the different Solace Enterprise APIs, and the Open Protocols Solace supports.
Connecting to Solace (DEV 1050)	Understand what objects are required to connect to Solace and connect the sample code to your Solace Cloud environment. <hr/> Hands-On (Create New Project & Connecting to your Broker)
Sending & Receiving Direct Messages (DEV 1150)	Overview of the concepts to send messages to and receive messages from Solace in a direct fashion. <hr/> Hands-On (Direct Messaging)
Sending & Receiving Guaranteed Messages (DEV 1155)	Overview of the concepts to send messages to and receive messages from Solace in a guaranteed fashion. <hr/> Hands-On (Guaranteed Messaging & Request/Reply)
Advanced Guaranteed Messaging Concepts (DEV 1260)	Explore and understand API window sizes for sending & receiving messages, transactions, queue browsers, and selectors.
Monitoring & Troubleshooting (DEV 1350)	Configuring logging in API for troubleshooting & diagnostics and exploring statistics available from the API for monitoring. <hr/> Hands-On (Monitoring)
Best Practices (DEV 1400)	A high-level overview of API usage best practices, and threading & performance considerations.

Optional Modules	
Module	Objective
Messages & Structured Data Types (DEV 1300)	Exploring different parts of a message, various message types and message interoperability between APIs. Structuring application data in messages using Solace's Structured Data Types.
REST (ADM 1400)	Understand how applications can use RESTful APIs to exchange messages on Solace and how to administer REST features.
MQTT (ADM 1405)	Understand the MQTT protocol at a high-level, and how to leverage Solace to do MQTT messaging.
JMS (ADM 1410)	Understand the JMS protocol at a high-level, and how to extend JMS messaging to Solace.
AMQP (ADM 1415)	Understand the AMQP protocol at a high-level, and how the protocol maps to Solace.
SolGeneos Agent (ADM 1180)	Overview of the agent which monitor Solace Routers in an ITRS Geneos environment
PubSub+ Cache (ADM 1060)	Overview of PubSub+ Cache software daemon, its role as a Last Value Cache, and how to deploy and manage it.

