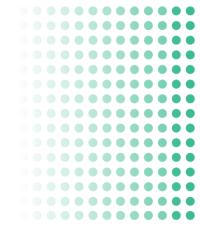# solace.

PubSub+ Cloud Development & Administration

EDU-CLOUD-DEVADMN-101

Learn everything you need to know to get started with administrating Event Streaming Services in PubSub+ Cloud & building apps to leverage those service.

Course Overview

This instructor-led 4-day course provides a deep-dive into administrating PubSub+ Cloud Event Brokers and developing applications to leverage Solace messaging. The course begins with foundational concepts required for PubSub+ Cloud Event Broker and delves into more advance topics including security, guranteed messaging, high-availability, dynamic routing, and operational management. In this course, you will also learn how to develop applications using one of PubSub+ APIs (C/.NET/Java).

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
- Understand at a high level the concepts and experience needed to work with Solace messaging
- Configure guaranteed delivery, and implement exchange patterns for applications that are not tolerant to data loss
- 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
- Troubleshoot and monitor health of Solace products
- Understand at a high level how to design, describe and discover events on the Event Portal

Certification/Badges

- This course does not offer a certification currently.
- PubSub+ Cloud 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)
Topic Structures and Hierarchies (INT 1015)	Understand how applications exchange data using Solace Topics. Covers Topic structure, hierarchies, design examples, and use cases.
Event Portal (CLOUD 1350)	Understand at a high level how to design, describe and discover events on the Event Portal
	Hands-On (Event Portal)
PubSub+ Cloud Fundamentals (CLOUD 1000)	Become familiar with the cloud console interface and all its various features. Understand the different options available for VPC deployment, service configuration, user management and client authentication.
	Hands-On (Create PubSub+ Cloud Service & Manage API Token & Trying Out Your Service & Testing your Connection)

Day 2 Agenda	
Module	**Objective**
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)
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.

Day 3 Agenda	
Module	**Objective**
High Availability (ADM 1250 or ADM 1255)	Understand how PubSub+ Cloud 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.
VPN Bridging (ADM 1305)	Understand how share data across messaging environments using Solace's VPN Bridges.
	Hands-On (Static Bridging)
Dynamic Message Routing (ADM 1310)	Understand how to connect PubSub+ Event Broker instances over Hybrid Cloud or for Horizontal Scaling.
Monitoring (ADM 1150)	Describes the remote monitoring and management capabilities of PubSub+ Event Brokers via the SEMP and Syslog protocols. Introduction to PubSub+ Insights.
	Hands-On (Monitoring & Subscribing to Message Bus Events)
Pipeline Automation (ADM 2055)	Overview of Continuous Integration and Development and how to accomplish the automation of provisioning Solace objects
Deployment Considerations (CLOUD 1040)	Overview of deployment considerations and what the Solace Production Engineering team is monitoring and what needs to be monitored and managed by PubSub+ Cloud users
Support (CLOUD 1030)	Become familiar with opening tickets with Solace Support and different method of interaction with Support Team.

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.
	Hands-On (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.
	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.
	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.
Best Practices (DEV 1400)	A high-level overview of API usage best practices, and threading & performance considerations.

Optional Modules	
Module	**Objective**
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.