

The Solace logo is written vertically in a large, teal, sans-serif font. The background of the entire page is a grayscale photograph of a person in a white lab coat looking at a computer monitor in a classroom or training environment.

Delivery Method: Instructor-led private on-site classroom

Course Duration: Two days of training

Target Audience: This course is designed for developers and engineering staff responsible for developing applications that leverage Solace messaging.

Prerequisites:

- Basic understanding of TCP/IP networking concepts
- Prior knowledge of Enterprise Integrations using messaging is helpful but not required

Pricing: Please contact us at services@solace.com

More Information: To learn more, contact your account executive or email services@solace.com.

INTRODUCTION TO SOLACE DEVELOPMENT

Course Overview

This two-day, instructor-led course provides students with the concepts needed to develop applications to leverage Solace messaging. The course begins with a general overview of Solace technology, including messaging concepts and terminology. It provides an overview of the Enterprise APIs and open protocols available to utilize Solace's messaging capabilities. This course will include hands-on labs where an example application is developed over the two-day time frame. To start the development of this example application, the course covers the basics of connecting to Solace, looking at the specific requirements for the language or protocol of interest. The example application is then developed to send and receive data through Solace in both a direct and guaranteed fashion. To enhance the application, we explore the different advanced messaging features available, including OBO subscription management, queue browsing, and structured data types. Further topics include monitoring & troubleshooting techniques, and best practices for having an efficient, clean application.

Course Objectives

Upon completion of this course, participants will be able to do the following:

- Understand at a high level the concepts and experience needed to work with Solace messaging
- Run and understand the starter applications provided on the Solace Training Github
- Develop applications using your language or protocol of choice
- Use Solace guaranteed messaging to avoid message loss
- Troubleshoot common application issues by enabling logs and implementing error handling
- Configure applications to operate in a high availability messaging environment
- Structure data in messages to exchange them across different platforms and APIs
- Troubleshoot and monitor health of Solace products

COURSE MODULES

Introduction

The Motivation for Solace

- Introduction to Messaging Concepts
- Introduction to Solace product line

Introductory Concepts

- Solace Administration Tools for Developers
- Exercise: Sign Up for Solace PubSub+ Cloud
- Solace Multi-Tenancy Overview
- Introduction to Solace Messaging: Enterprise APIs and Open Protocols
- Understanding the Solace Topic Structure and Hierarchies
- Exercise: Downloading & Compiling the Solace Training Starter from GitHub

Solace Messaging Fundamentals

Connecting to Solace

- Contexts
- Sessions and Properties
- Secure Sessions
- Compressed Connections
- Exercise: Connect Starter to Solace PubSub+ Cloud

Sending & Receiving

- Direct Messaging
- Exercise: Implement a Publish-subscribe Message Exchange Pattern
- Guaranteed Messaging
- Exercise : Implement a Point-to-point & Publish-subscribe Message Exchange Pattern

Multi-Protocol Support

- Solace's Multi-Protocol Support
- Protocol Translation
- Exercise: Implement a Request-reply Message Exchange Pattern

Enterprise Messaging

Enterprise APIs

- Introduction to Solace Enterprise APIs

Advanced Concepts

- Load Balancing Consumption (Deliver-to-One)
- OBO Subscription Management
- Transactions
- Queue Browsers and Selectors
- Publisher Window Sizes
- Subscriber Window Sizes

Handling Messages

- Message Types & Formats
- Structuring Data in Messages
- Exercise: Implement a Request-reply Message Exchange Pattern using SDT Containers

API Management

Monitoring & Troubleshooting

- Configuring Logging
- Session Statistics
- SEMP Over the Message Bus
- API Troubleshooting

Best Practices

- General Best Practices
- Robustness: Best Practices
- Exercise: Configuring API Properties to Handle Connection Failures
- API Threading
- Building Highly Available Applications

Protocol Specifics

- Requirements of Specific Protocols

