Istio Service Mesh

Duration: 2 Days

Hands-On Format: This hands-on class is approximately 80/20 lab to lecture ratio, combining engaging lecture, demos, group activities and discussions with comprehensive machine-based practical programming labs and project work.

Prerequisites: Kubernetes Knowledge is Required

Module 1 – Introduction

Monoliths and Micoservices
Service Mesh
Istio
Installing Istio – Introduction
Installing Istioctl
Installing Istio on Your Cluster
Deploying Our First Application on Istio
Visualizing Service Mesh with Kiali
Installing Kiali
Create Traffic Into Your Mesh

Module 2 – Pre-requisites

Kubernetes Services
Sidecars
Envoy

Module 3 – Traffic Management

Gateways
Virtual Services
Destination Rules
Demo: Gateways
Demo: Virtual Services
Demo: Destination Rules
Fault Injections
Timeouts
Demo: Timeouts
Retries
Circuit Breaking
Demo: Circuit Breaking
A/B Testing

Module 4 – Istio Security

Security in Istio
Istio Security Architecture
Authentication
Demo: Authentication
Authorization
Demo: Authorization
Certification Management
Demo: Certificate Management

Module 5 – Observability

Visualizing Metrics with Prometheus and Grafana
Demo: Visualizing Metrics with Prometheus and Grafana
Distributed Tracing with Jaeger
Demo: Distributed Tracing with Jaeger
Demo: Kiali in Detail