Red Hat Training and Certification

DO328
Building Resilient Microservices with Istio and Red Hat OpenShift Service Mesh

Control, manage, trace, monitor, and test your microservices with Red Hat OpenShift Service Mesh

Building Resilient Microservices with Istio and Red Hat OpenShift Service Mesh (DO328) is an introduction to Red Hat OpenShift Service Mesh that teaches students installation, service monitoring, service resilience, and service security with Red Hat OpenShift Service Mesh.

Red Hat OpenShift created an enterprise-ready, multitenant platform that made deploying and scaling microservice applications efficient and repeatable. But as these architectures become larger and more complex, defining how these services interact with each other is increasingly difficult. Red Hat OpenShift Service Mesh comprises three products: Istio, Jaeger, and Kiali, facilitating a zero-trust network for managing secure service interactions, providing service tracing, and creating a visual representation of communication pathways.

This course is based on Red Hat OpenShift® Container Platform 4.6 and Red Hat OpenShift Service Mesh 2.0..

Course content summary

- Install Red Hat OpenShift Service Mesh on a Red Hat OpenShift cluster.
- Apply release strategies by controlling service traffic.
- Build service resilience with load balancing and failovers.
- Test service resilience with chaos testing.
- Enforce service security.
- Observe, measure, and trace network traffic with OpenShift Service Mesh.

Audience for this course

This course is designed for developers who want to deploy, manage, and secure microservices applications on Red Hat OpenShift.

Recommended training

- Attending Red Hat Cloud-native Microservices Development with Quarkus (DO378) or demonstrating equivalent experience in creating microservice applications is recommended, but not required

- Attending Red Hat OpenShift Administration I: Operating a Production Cluster (DO180) and Red Hat OpenShift Development II: Containerizing Applications (DO288), and passing the Red Hat Certified Specialist in OpenShift Application Development exam (EX288), or possessing basic OpenShift experience, is strongly recommended.

Outline for this course

- **Introduction to Red Hat OpenShift Service Mesh**
  Describe the basic concepts of microservice architecture and OpenShift Service Mesh.

- **Install Red Hat OpenShift Service Mesh**
  Deploy Red Hat OpenShift Service Mesh on Red Hat OpenShift Container Platform.

- **Observe a service mesh**
  Trace and visualize an OpenShift Service Mesh with Jaeger and Kiali.

- **Control service traffic**
  Manage and route traffic with OpenShift Service Mesh.

- **Release applications with service mesh**
  Release applications with canary and mirroring release strategies.

- **Test service resilience with chaos testing**
  Gauge the resiliency of Red Hat OpenShift Service Mesh with chaos testing.

- **Build resilient services**
  Use OpenShift Service Mesh strategies to create resilient services.

- **Secure services with OpenShift Service Mesh**
  Secure and encrypt services in your application with Red Hat OpenShift Service Mesh.

As a result of attending this course, you will be able to use the concepts in this course to simplify and more efficiently manage their service interactions. You will learn how to install and configure Red Hat OpenShift Service Mesh to define, monitor, manage, and secure service interaction within their microservice architecture. This course is intended to illustrate the ease of Red Hat OpenShift Service Mesh's "sidecar" approach and to highlight the benefits of service resilience and monitoring that the product provides.

Course reference: https://www.redhat.com/en/services/training/do328-building-resilient-microservices-with-istio-and-red-hat-openshift-service-mesh