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

Kód kurzu: DO329

Openshift created an enterprise-ready, multi-tenant 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 becomes increasingly difficult. Red Hat OpenShift Service Mesh comprises three products, Istio, Jaeger, and Kiali that facilitate managing service interaction, provide service tracing, and create a visual representation of communication pathways. This offering is an introduction to Red Hat OpenShift Service Mesh that teaches students installation, service monitoring, service management, and service resilience with Red Hat OpenShift Service Mesh.The Red Hat Certified Specialist in Building Resilient Microservices exam (EX328) is included in this offering.

Pre koho je kurz určený

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

Čo Vás naučíme

- Install Red Hat OpenShift Service Mesh on an 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.

Požadované vstupné znalosti

- 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 I: Containers &Kubernetes (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.

Osnova kurzu

- Introduction to Red Hat OpenShift Service Mesh
- Describe the basic concepts of microservice architecture and Red Hat Service Mesh.
- Install Red Hat Service Mesh
- Deploy Red Hat Service Mesh on 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 Red Hat Service Mesh.
- Release Applications with Service Mesh
- Releasing applications with canary and mirroring release strategies.
- Test Service Resilience with Chaos Testing
- Test the resiliency of an OpenShift Service Mesh with Chaos Testing.
- Build Resilient Services
- Leverage OpenShift Service Mesh strategies for creating resilient services.
- Secure an OpenShift Service Mesh
- Secure and encrypt services in your application with Red Hat OpenShift Service Mesh.

Čo musíte vedieť

Impact on the organization

Microservice architectures with OpenShift and Service Mesh enable Organizations to improve application resilience and

scalability, while decreasing developer overhead. This leads organizations to improved time to market as well as improved insight into their microservice architecture by being able to visualize and trace data flow throughout their applications. These insights can dictate better resource allocation for applications as well as more quickly identifying defects in specific microservices.

Impact on the individual

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

Technology Considerations

- Internet access required.