DO379

Red Hat Cloud-native Microservices Development with Quarkus and Exam

Course Description

Enterprises are moving to cloud-native microservices architectures. Quarkus is an exciting new technology that brings the reliability, familiarity, and maturity of Java Enterprise with a container-ready lightning fast deployment time. Red Hat Cloud-native Microservices Development with Quarkus (DO378) emphasizes learning architectural principles and implementing microservices based on the Red Hat Build of Quarkus and Red Hat OpenShift. You will build on application development fundamentals and focus on how to develop, monitor, test, and deploy modern microservices applications. Red Hat Certified Cloud-native Developer exam included in this offering. The Red Hat Certified Cloud-native Developer exam is included in this offering.

This course is based on OpenShift 4.14, and Red Hat Build of Quarkus 3.8.

Recommended training

- Experience with Java application development or Red Hat Application Development I: Programming in Java EE (AD183)
- Be proficient in using an IDE such as Visual Studio Code
- Recommended, but not required: experience with Maven and version control.
- Recommended, but not required: experience with OpenShift or Introduction to OpenShift Applications (DO101)
- Take our free assessment to gauge whether this offering is the best fit for your skills.

Course Outline

Introducing the Red Hat Build of Quarkus
    Describe the components and patterns of microservice-based application architectures and the features of the Red Hat Build of Quarkus.

Developing Cloud-native Microservices with Quarkus
Implement microservices based applications by using the Red Hat
Build of Quarkus runtime and associated developer tooling.

Testing Quarkus Microservices
Implement unit and integration tests for microservices.

Developing Reactive and Asynchronous Microservices
Describe the features of reactive architectures and implement
reactive services by using Quarkus.

Securing Quarkus Microservices
Secure microservice communications by applying origin validation,
requests authentication and authorization.

Implementing Quarkus Microservices on the Red Hat OpenShift Container
Platform
Develop and deploy cloud-native applications on the Red Hat
OpenShift Container Platform.

Implementing Fault Tolerance in Microservices
Implement fault tolerance in a microservice architecture.

Monitoring Quarkus Microservices
Monitor the operation of a microservice by using logging, metrics and
distributed tracing.