DO378

# Red Hat Cloud-native Microservices Development with Quarkus

## Duration: 5 Days

## Course description

**Develop microservice-based applications with Quarkus and OpenShift.**

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.

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

## Outline for this course

**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.