Red Hat Cloud-native Microservices Development with Quarkus

Duration: 4 Days Course Code: DO378 Delivery Method: Virtual Learning

Overview:

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.
Following course completion, you will receive a 45-day extended access to hands-on labs for any course that includes a virtual environment.
Note: This course is offered as a five day virtual class or self-paced. Durations may vary based on the delivery. For full course details, scheduling, and pricing, select your location then “get started” on the right hand menu.

Virtual Learning

This interactive training can be taken from any location, your office or home and is delivered by a trainer. This training does not have any delegates in the class with the instructor, since all delegates are virtually connected. Virtual delegates do not travel to this course, Global Knowledge will send you all the information needed before the start of the course and you can test the logins.

Target Audience:

This course is designed for Java application developers.

Objectives:

- Deploy microservice applications on Red Hat OpenShift Container Platform.
- Build a microservice application with Quarkus.
- Implement unit and integration tests for microservices.
- Use the config specification to inject data into a microservice.
- Secure a microservice using OAuth.
- Implement health checks, tracing and monitoring of microservices.
- Build reactive and asynchronous applications using Quarkus.

Prerequisites:

- 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)

Testing and Certification

Red Certified Cloud-Native Developer Exam (EX378)

Follow-on-Courses:

- DO188 - Red Hat OpenShift Development I: Introduction to Containers with Podman
- DO288 - Red Hat OpenShift Developer II: Building and Deploying Cloud-native Applications
- DO328 - Building Resilient Microservices with Istio and Red Hat OpenShift Service Mesh
- DO400 - Red Hat DevOps Pipelines and Processes: CI/CD with Jenkins, Git, and Test Driven Development

Content:

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.

Additional Information:

Impact on the organization Organizations are striving to make the move from monolithic applications to applications based on microservices, as well as how to reorganize their development paradigm to reap the benefits of microservice development in a DevOps economy. With Quarkus, developers can more quickly build, test, and deploy their applications, improving application time to market. Organizations are also invested in the familiarity of Java programming frameworks as well as the stability and benefits Red Hat OpenShift Container Platform. This course teaches developers how to leverage microservice application development with Quarkus for streamlined deployment on OpenShift clusters.

Impact on the individual

As a result of attending this course, you will understand how to develop, monitor, test, and deploy microservice-based applications using Quarkus and Red Hat OpenShift.

You should be able to demonstrate these skills: Design a microservices-based architecture for an enterprise application. Quickly build and test microservices with Quarkus and deploy on to OpenShift Container Platform. Implement fault tolerance and health checks for microservices. Secure microservices to prevent unauthorized access. Monitor and trace microservices.

Further Information:

For More information, or to book your course, please call us on 00 971 4 446 4987

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