Red Hat Training and Certification

AD482
Developing Event-Driven Applications with Apache Kafka and Red Hat AMQ Streams

Develop, scale, and troubleshoot event-driven microservice applications.

Learn to use Kafka and AMQ Streams to design, develop, and test event-driven applications. Event-driven microservices scale globally, store and stream process data, and provide low-latency feedback to customers. This course is for application developers and is based on Red Hat AMQ Streams 1.8 and Red Hat OpenShift Container Platform 4.6.

Course content summary

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- Describe the basics of Kafka and its architecture.
- Develop applications with the Kafka Streams API.
- Integrate applications with Kafka Connect.
- Capture data change with Debezium.
- Troubleshoot common application streaming issues.

Audience for this course

- Application developers with microservice development experience.

Prerequisites for this course

- Experience with microservice application development and design, such as DO378 or equivalent experience.
- OpenShift experience is recommended, but not required.

Outline for this course

- **Designing Event-Driven Applications**
  Describe the principles of event-driven applications.
- **Introducing Kafka and AMQ Streams Concepts**
  Build applications with basic read-and-write messaging capabilities.
- **Building Applications with the Streams API**
  Leverage the Streams API to create data streaming applications.
- **Creating Asynchronous Services with Event Collaboration**
  Create and migrate to asynchronous services using the event collaboration pattern.
- **Integrating Data Systems with Kafka Connect**
  Connect data systems and react to data changes using Kafka Connect and Debezium.
- **Troubleshooting AMQ Streams Applications**
  Handle common problems in Kafka and AMQ Streams applications.

Impact on the Individual

As a result of attending this course, students will understand the architecture of Kafka and AMQ Streams and will be able to identify proper use cases for event-driven applications. In addition to learning the fundamental principles and features of Kafka and AMQ Streams, Students will learn how to design, develop, and test event-driven applications.

Students should be able to demonstrate the following skills:

- Design, build, and use event-driven applications for relevant scenarios with standard patterns.
- Detect and react to data changes with Debezium to improve application performance.
- Troubleshoot common problems with event-driven applications.

Course reference https://www.redhat.com/en/services/training/ad482-developing-event-driven-applications-apache-kafka-and-red-hat-amq-streams?section=overview