

AD421: Camel Integration and Development with Red Hat Fuse on OpenShift

Course Code: AD421

Duration: 5 days

Instructor-led Training (ILT) | Virtual Instructor-led Training (VILT)

OVERVIEW

Learn to develop, implement, test, and deploy applications utilizing enterprise integration patterns (EIP)

Camel Integration and Development with Red Hat Fuse on OpenShift (AD421) is a hands-on, lab-based course that gives Java™ developers and architects an understanding of Apache Camel and the enhancements and tools Red Hat offers in support of Camel development. This course is based on Red Hat® Enterprise Linux® 7.5, Red Hat® OpenShift® Container Platform 3.9, Red Hat® Fuse 7.1, and Apache Camel 2.21.

Camel and Red Hat Fuse enable developers to create complex integrations in a simple and maintainable format. Camel development is organized around:

- Routes that define a sequence or flow of processing.
- Processors that transform, interpret, and modify messages within a Camel route.
- Components that enable the creation of endpoints that interact with the outside world for acquiring and transmitting data.

This course can assist in preparing for the Red Hat Certified Specialist in Camel Development exam (EX421).

SKILLS COVERED

- Create basic routes and integration solutions with Camel.
- Combine messages through aggregation.
- Develop tests with Camel test kit and mock components.
- Develop REST services with the REST DSL and Swagger.
- Deploy a route on Karaf, EAP, and Spring Boot.
- Increase route throughput with parallel processing.
- Deploy microservices with Red Hat Fuse on OpenShift.

WHO SHOULD ATTEND?

- Java developers who need to learn how to use Camel, implement enterprise integration patterns (EIPs), and develop integration applications with Camel
- Java architects who need to understand how Apache Camel can be used in software architectures requiring integration between applications

PREREQUISITES

- Experience in developing and deploying Java EE 7 applications
- Experience with relational databases, JDBC, and SQL
- Experience with Java development tools such as Maven and Eclipse

MODULES

Module 1: Introduce Red Hat Fuse and Camel

- Describe how Red Hat Fuse and Camel are used to integrate applications.

Module 2: Create Routes

- Develop simple Camel routes.

Module 3: Transform Data

- Convert messages between data formats using implicit and explicit transformation.

Module 4: Create Tests for Routes and Error Handling with Camel

- Develop reliable routes by developing route tests and handling errors.

Module 5: Route with Java Beans

- Create dynamic routes in Camel using Java beans.

Module 6: Implement REST Services

- Enable REST support on Camel with Java REST APIs.

Module 7: Deploy Camel Routes

- Package and deploy Camel applications for deployment with Red Hat Fuse.

Module 8: Implement Transactions

- Provide data integrity in route processing by implementing transactions.

Module 9: Implement Parallel Processing

- Improve route processing throughput using Camel parallel processing mechanisms.

Module 10: Create Microservices with Red Hat Fuse

- Create microservices from Camel routes.

Module 11: Deploy Microservices with Red Hat Fuse on OpenShift

- Deploy microservices based on Camel routes to an OpenShift cluster using Red Hat Fuse on OpenShift.

Module 12: Perform Comprehensive Review

- Demonstrate use of the knowledge gained in this course by coding Camel routes.

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