

Module Title : JB501: Building Advanced Red Hat Enterprise Application

Duration : 4 days

Overview

The course is based on a case study. Several Red Hat Middleware products are utilized in the solution including [Red Hat JBoss Data Grid](#), [Red Hat JBoss Enterprise Application Platform](#), [Red Hat JBoss BPM Suite](#), [Red Hat JBoss Fuse](#), and [Red Hat JBoss A-MQ](#). The student will use Java™ EE 6, Java Persistence API (JPA), business processes, business rules, Camel routes, caching, and queuing in the integrations. Each step of the way, students participate in architectural discussions regarding the design, as they work toward a final solution. Students are expected to have prior knowledge and basic skills in the products utilized.

Course content summary

- Camel routes
- JMS queues
- OSGi deployment
- Caching
- Data grid remote querying
- Business Central projects
- Business process development
- Business rules development
- JAX-RS and JAX-WS web services
- Java EE 6 topics: JPA, CDI, EJB, JSF
- Automated testing with JUnit, Arquillian, and Selenium

Audience

This course is intended for enterprise Java developers.

Prerequisites

This course requires attaining certification, completing the following courses, or the equivalent experience listed:

- Certificate of Expertise in Camel Development, completion of Camel Development with Red Hat JBoss Fuse (JB421), or experience writing Camel routes in Java.
- Completion of Red Hat JBoss Data Grid Development (JB453), or experience writing applications that use caching frameworks and middleware.
- Certificate of Expertise in Business Process Design, completion of Developing Workflow Applications with Red Hat JBoss BPM Suite (JB427), or experience designing business processes using BPMN2.
- Certificate of Expertise in Decision Manager, completion of Implementing Red Hat Decision Manager (JB465), or experience writing business rules in a business rules language, preferably Drools.

Outline

This course is based on a case study in which the student integrates front- and back-office applications. The case study is based on a fictional airline application called JBTravel. In the JBTravel application, the student will:

- Describe the architectural framework and requirements.
- Describe the components and their interaction.
- Code and test the portion of the application that:
 - Orders meals for a flight.
 - Provides flight status to the customer.
 - Generates a flight control report for administrators.
 - Assigns a pilot to a flight.
 - Assigns a departure gate to a flight.
 - Registers the performance of a plane safety check.
 - Calculates fuel needed and places the order.

Impact of this training

Impact on the organization

This course is intended to develop the skills needed to integrate the typical extended stack of Fuse, Rules, Process Management, and data grid software, thus providing for faster integration and deployment at your site.

Red Hat has created this course in a way intended to benefit our customers, but each company and infrastructure is unique, and actual results or benefits may vary.

Impact on the individual

As a result of attending this course, students should be able to integrate all JBoss middleware technologies to create a real world application.

Students should be able to demonstrate the following skills:

- Integrate JBoss Fuse to an existing Java EE web application.
- Integrate Decision Manager to get rules to an existing Java EE web application.
- Integrate BPM Suite to process a workflow to an existing Java EE web application
- Integrate JBoss Data Grid to get customized data structures in a Java EE web application.