

## **AD183: Red Hat Application Development I: Programming in Java EE**

Course Code: AD183

Duration: 5 days

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

### **OVERVIEW**

Helping Java SE developers write Java EE applications. Red Hat Application Development I: Programming in Java EE (AD183) exposes experienced Java Standard Edition (Java SE) developers to the world of Java Enterprise Edition (Java EE).

This course is based on Red Hat® Enterprise Application Platform 7.0. In this course, you will learn about the various specifications that make up Java EE. Through hands-on labs, you will transform a simple Java SE command line application into a multi-tiered enterprise application using various Java EE specifications, including Enterprise Java Beans, Java Persistence API, Java Messaging Service, JAX-RS for REST services, Contexts and Dependency Injection (CDI), and JAAS for securing the application.

### **SKILLS COVERED**

- Generating multi-tiered Java EE applications.
- Packaging and deploying Java EE applications.
- Creating Enterprise Java Beans, including message-driven beans.
- Managing persistence.
- Creating REST services with JAX-RS.
- Implementing Contexts and Dependency Injection.
- Creating messaging applications with JMS.
- Securing Java EE applications with JAAS.

### **WHO SHOULD ATTEND?**

This course is designed for Java developers who want to learn more about the specifications that comprise the world of Java Enterprise Edition (Java EE).

### **PREREQUISITES**

- Proficiency in developing Java SE applications, with 2+ years of experience required
- Proficiency in using an IDE such as Red Hat Developer Studio or Eclipse
- Experience with Maven is recommended but not required

### **MODULES**

#### **Module 1: Transition to Multi-Tiered Applications**

- Describe Java EE features and distinguish between Java EE and Java SE applications.

#### **Module 2: Package and Deploying Applications to An Application Server**

- Describe the architecture of a Java EE application server, package an application, and deploy the application to an EAP server.

#### **Module 3: Create Enterprise Java Beans**

- Develop Enterprise Java Beans, including message-driven beans.

#### **Module 4: Manage Persistence**

- Create persistence entities with validations.

**Module 5: Manage Entity Relationships**

- Define and manage JPA entity relationships.

**Module 6: Create REST Services**

- Create REST APIs using the JAX-RS specification.

**Module 7: Implement Contexts and Dependency Injection**

- Describe typical use cases for using CDI and successfully implement it in an application.

**Module 8: Create Messaging Applications with JMS**

- Create messaging clients that send and receive messages using the JMS API.

**Module 9: Secure Java EE Applications**

- Use JAAS to secure a Java EE application.

**Module 10: Comprehensive Review of Red Hat JBoss Development I: Java EE**

- Demonstrate proficiency of the knowledge and skills obtained during the course.

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