

Oracle WebLogic Server 14c: JMS Administration

Course Duration: 32 Hours

Course code: Oracle WebLogic Server 14c

1. Course Overview

This course provides administrators with the knowledge and skills to configure, manage, and monitor Java Message Service (JMS) resources in Oracle WebLogic Server 14c. Learners will explore the concepts of messaging in enterprise applications, set up JMS servers and modules, and administer advanced features such as distributed destinations, persistent stores, message-driven beans, and security. The course also covers tuning, troubleshooting, and monitoring JMS resources to ensure high availability, scalability, and reliability in enterprise deployments.

2. What you'll learn?

By the end of the course, participants will be able to:

- Understand JMS concepts and architecture within WebLogic Server.
- Configure JMS servers, system modules, and resources.
- Create and manage connection factories, queues, and topics.
- Set up persistent stores for message reliability.
- Configure and manage distributed queues and topics.
- Integrate Message-Driven Beans (MDBs) with JMS.
- Apply load balancing and failover strategies for JMS.
- Implement JMS security policies and user roles.
- Monitor JMS resources with WebLogic Administration Console and WLST.
- Troubleshoot common JMS issues and optimize performance.

3. Target Audience

- WebLogic administrators managing messaging and integration services.
- Middleware administrators responsible for enterprise application deployments.

- Java EE developers working with JMS-based applications.
- System architects planning scalable messaging solutions.

4. Pre-Requisites

- Familiarity with WebLogic Server administration.
- Basic understanding of Java EE and JMS concepts.
- Knowledge of networking and databases is beneficial.

5. Course content

Module 1: Introduction to JMS and WebLogic Messaging

JMS overview and benefits

JMS architecture in WebLogic Server 14c

Role of JMS in enterprise applications

Module 2: JMS Resources in WebLogic

JMS servers, modules, and sub-deployments

Configuring connection factories, queues, and topics

JMS templates for reusability

Module 3: Persistence and Reliability

File stores vs. JDBC stores

Configuring persistent stores for JMS servers

Ensuring reliable message delivery

Module 4: Distributed Destinations

Configuring distributed queues and topics

Load balancing and failover with distributed destinations

Message routing and ordering

Module 5: Message-Driven Beans (MDBs) and Integration

JMS integration with MDBs

Configuring MDB deployment

Best practices for MDB performance

Module 6: JMS Security Administration

Configuring security policies for JMS resources

Controlling access with users, groups, and roles

Securing connections and destinations

Module 7: Monitoring and Troubleshooting JMS

Monitoring JMS servers and destinations with Administration Console

Using WLST scripting for JMS administration

Common JMS errors and troubleshooting approaches

Module 8: JMS Tuning and Best Practices

Performance tuning parameters for JMS servers

High availability strategies

Best practices for designing scalable JMS solutions

Module 9: Capstone Lab

Configure a JMS messaging solution with:

Persistent store

Distributed queues

MDB integration

Security policies and monitoring