

Course Description: This course introduces Java developers to the Java Message Service (JMS). Basic messaging concepts and the JMS API programming model are covered along with details of the JMS message format. Tuning mechanisms for improving JMS reliability are discussed and demonstrated. WebLogic Server is used as the JMS Provider for examples and programming exercises.

Who Should Attend: All developers wishing to learn about the Java Messaging Service should attend this course.

Prerequisites: Beginning or advanced java programming experience with J2EE technology and/or WebLogic is helpful, but not required.

Benefits of Attendance: Upon completion of this course, students will be able to:

- Compare point-to-point and publish subscribe messaging.
- Understand the JMS programming model, including connection factories, connections, sessions, consumers, producers, and destinations.
- Use different JMS message types.
- Use JMS message header fields and properties
- Tune JMS reliability features such as message persistence, message priority, and message expiration.
- Create durable subscribers and temporary destinations.
- Commit and rollback JMS transactions.
- Configure JMS servers and destinations using WebLogic.

Course Outline:

Introduction to WebLogic

What is WebLogic?
Overview of WebLogic
WebLogic Directory Structure
The config.xml File
Starting and Stopping WebLogic
Administration Console
WebLogic Development Environment Setup

JMS Concepts

Introduction
JMS and the J2EE Platform
Basic JMS Concepts
The JMS Programming Model
Point-to-Point Example – Sender
Point-to-Point Example – Receiver
Configuring JMS for WebLogic
Running the Point-to-Point Example
Publish/Subscribe Example - Publisher
Publish/Subscribe Example – Subscriber
Running the Publish/Subscribe Example

JMS Message Format

Message Header Fields
Message Properties
Message Selectors
Using Other Message Formats

JMS Reliability

Reliable Message Delivery
Message Acknowledgement
Message Persistence
Configuring a JDBC Connection Pool
Configuring Data Sources
Configuring a JMS Store in WebLogic
Viewing the JMS JDBC Store
Temporary Destinations
Enabling Temporary Destinations in WebLogic
Durable Subscriptions
JMS Transactions
JMS Transactions – Example
Special Considerations for JMS Transactions

Appendix A: Java Naming and Directory Interface (JNDI)

What is JNDI?
Benefits of JNDI
Naming Services
Directory Services
Using JNDI
Context Operations
JNDI Utility Class
JNDI Example
Running the JNDI Example
Naming Exceptions

Appendix B: Message-Driven Beans

Message-Driven Beans
Message-Driven Bean Example
Running the Message-Driven Bean Example

Appendix C: WebLogic JMS Extensions

Setting Message Delivery Times
Creating Destinations Dynamically