Java Message Service Version 1.2

Course Summary

Description

This course introduces Java developers to asynchronous messaging using the Java Message Service, or JMS. Both the point-to-point and publish-and-subscribe messaging styles are covered, but there is an emphasis on the more popular point-to-point approach using message queues. The course moves quickly from JMS fundamentals -- connections, sessions, queues, topics, etc. -- to intermediate techniques such as message properties and selectors. By the end of the day, students will understand JMS reliability and be able to make intelligent architectural choices between delivery modes, acknowledgement modes, and transacted sessions.

This version of the course is designed to work with the Java EE 5 SDK, Update 7, which includes the GlassFish application server, version 2.1. Variants of the course are also available with specific support for recent versions of JBoss and WebLogic.

Objectives

At the end of this course, students will be able to:

- Use JMS queues to manage message transmission between a single producer and a single consumer.
- Use JMS topics to allow for broadcasting of messages in real time.
- Use various JMS message types, including text, object, and map-based messages.
- Set message headers and use properties to define additional information about messages.
- Use message selectors to filter messages in consumption.
- Trigger redelivery of messages using various acknowledgement modes and techniques.
- Use JMS transactions to assure that message receipts and sends are grouped into atomic units of execution.

Topics

- Fundamentals
- Message Content
- Reliability

Prerequisites

Students should have solid Java programming experience and an understanding of Java web applications will be helpful, but is not required.

Duration

One day

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Course Outline

I. Fundamentals
- A. Asynchronous Messaging
- B. The Java Message Service
- C. Point-to-Point Messaging
- D. Publish-and-Subscribe Messaging
- E. JNDI
- F. Connections and Sessions
- G. Working with Queues
- H. Working with Topics
- I. GlassFish JMS Administration
- J. Expiration

II. Message Content
- A. Message Types
- B. Header Fields
- C. Properties
- D. Message Selectors

III. Reliability
- A. Message Persistence
- B. JMS from Web Applications
- C. The Component Environment
- D. Acknowledgement and Redelivery
- E. Acknowledgement Modes
- F. Session Recovery
- G. Transactions
- H. What JMS Transactions Are and Aren't
- I. Transaction Pitfalls
- J. Batch Processing
- K. Priority
- L. JMS and EJB: Message-Driven Beans
- M. JMS and Web Services: SOAP Messaging

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