

Oracle WebLogic Server 12c: Performance Tuning Workshop

Duration: 3 Days

What you will learn

This course teaches you how to monitor the effects of a running Oracle WebLogic Server application on the overall system.

Learn how to:

Describe a typical performance methodology

Use a load-testing tool such as the Grinder

Use command-line and graphical tools such as jps, jcmd, Java VisualVM, Mission Control, and Flight Recorder

Generate and analyze performance data

Tune operating system resources

Tune Java Virtual Machine (JVM) and Oracle WebLogic Server parameters

Benefits to You

You develop skills to increase the performance and scalability of your organization's applications and services with the Oracle WebLogic Server -- the world's #1 application server. You learn how to simplify deployment and significantly improve time-to-market.

Tune the System

You learn how to tune the system at different levels to ensure that applications run smoothly without overtaxing available resources. In addition, you develop an understanding of how performance-test data is generated, gathered, analyzed, and saved.

Identify Performance Differences

You learn how to use a combination of tools to examine system resource, Java Virtual Machine, and Oracle WebLogic Server runtime metrics so that you can identify performance differences before and after configuration changes. You also practice analyzing these differences to determine the settings that optimize application performance.

Audience

Administrator

Java EE Developers

Project Manager

SOA Architect

Support Engineer

System Integrator

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Technical Consultant
Web Administrator

Related Training

Required Prerequisites

Adequate knowledge of administering Oracle WebLogic Server
Oracle WebLogic Server 12c: Administration I

Suggested Prerequisites

Basic knowledge of Java programming

Course Objectives

Configure a work manager for an application.
Monitor and tune Java EE applications.
Use a standard tuning methodology.
Tune an operating system to support WebLogic.
Monitor and tune JVM performance.
Monitor and tune server performance.
Monitor and tune cluster performance.
Monitor and tune JDBC services.
Monitor and tune a persistent store.

Course Topics

Tuning Methodology

Introduction to Performance Tuning
Benchmarking
Load and Stress Testing
Identifying Bottlenecks
Performance Monitoring and Testing Tools

Tuning Operating Systems

Operating System Resources
Linux Performance Monitoring

Monitor and Tune JVM Performance

JVM Performance: Overview
The JVM and Garbage Collection
Command-Line JVM Tools
GUI JVM Tools

Monitor and Tune Server Performance

Domain Startup Mode
On-Demand Deployment
Native I/O Performance Pack
Overload Protection

- Garbage Collection Thresholds
- Connection Backlog
- Secure Sockets Layer (SSL) Tuning
- Logging Considerations

Monitor and Tune Cluster Performance

- Clustering: Review
- Load Balancing and Failover
- HTTP Session Persistence: Review
- Deployment Packaging
- Peer-to-Peer Communication
- Basic Cluster Architecture
- Multitier Cluster Architecture
- Load Balancers

Monitoring and Tuning Data Sources and Persistent Stores

- JDBC: Review
- JDBC and Application Design
- Connection Pools
- Logging Last Resource (LLR) Transactions
- Batch Updates
- Transactions
- Persistent Stores
- Database Tuning

Configuring Work Managers

- Monitoring a Server Thread Pool
- WebLogic Server Thread Tuning
- Work Manager
- Work Manager Configuration
- Tuning Transactions

Monitoring and Tuning Java EE Applications

- Tuning Web Applications
- Tuning Enterprise JavaBeans (EJBs)
- Tuning JPA
- Tuning Web Services