

Oracle WebLogic Server 12c: Performance Tuning Workshop

Duration: 3 Days

What you will learn

This Oracle WebLogic Server training teaches you how to monitor how a running Oracle WebLogic Server application affects the overall system. Learn through a combination of interactive instruction and hands-on exercises.

Learn To:

Describe a typical performance methodology.

Use a load testing tool like 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

Enrolling in this course will help you develop the skills to increase the performance and scalability of your organization's applications and services with the #1 application server. Simplify deployment and significantly improve time-to-market.

Tune the System

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

Identify Performance Differences

Expert Oracle University instructors will demonstrate how you use a combination of tools to gauge system resource utilization, Java Virtual Machine metrics and Oracle WebLogic Server runtime metrics to identify performance differences before and after configuration changes. You'll also practice analyzing these differences to determine which settings make an application perform better.

Audience

Administrator

Java EE Developer

Project Manager

SOA Architect

Support Engineer

System Integrator

Technical Consultant

Web Administrator

Related Training

Required Prerequisites

Fair knowledge of administering Oracle WebLogic Server

Oracle WebLogic Server 12c: Administration I

Suggested Prerequisites

Basic knowledge of Java programming

Course Objectives

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

Configure a work manager for an application

Monitor and tune Java EE applications

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

Using the JSP Compiler: jspc

- Using the Precompile Option
- Setting JSP Page Check Interval
- Setting Servlet Reload Check Interval
- Defining WebLogic Cache Tag

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