

Course Description: This course covers System Administration for WebLogic Server, Version 10. Students will learn to configure, monitor, and tune components for J2EE web and enterprise applications, including JDBC connection pools, JMS destinations, servlets, JSPs, and EJBs. Students will also configure and deploy applications to WebLogic Clusters, including both local and remote server instances.

Who Should Attend: This course is for anyone needing to administer the WebLogic 10 Server in a production or development environment.

Prerequisites: Previous experience using WebLogic and/or developing Java EE applications is required. Java developers should take one of the WebLogic courses (Web Applications or Enterprise JavaBeans) or have equivalent knowledge. System administrators or other non-developers should take the J2EE Technology Overview prior to attending this course.

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

- Describe the directory structures for WebLogic Server and a WebLogic Server domain
- Use the Configuration Wizard to create new domains
- Use the Administration Console extensively to modify and monitor domain and server configurations
- Administer WebLogic services, including JDBC connection pools and multi-pools, and JMS servers, stores, and destinations
- Manage users, passwords, and user lockouts
- Build, deploy, and update web applications, enterprise applications, and EJB components
- Configure and manage WebLogic clusters across a network
- Deploy applications in a clustered environment
- Configure WebLogic Plug-Ins for use with HTTP servers from other vendors
- Perform detailed monitoring of execute queues, JVM performance, connection pools, transactions, JMS destinations, and EJB's
- Use Apache JMeter to load-test a web application
- Tune settings to improve server and application performance

Course Outline:

WebLogic™ Server Basics

Overview of WebLogic
WebLogic Directory Structure
The config.xml File
Starting and Stopping WebLogic
WebLogic Development Environment Setup

The Administration Console

Overview of the Administration Console
Working with the Change Center
Domain Configuration
Servers Configuration
Viewing Log Files
Viewing the JNDI Tree

Configuring WebLogic Services

Connection Pools and Data Sources
Configuring Data Sources
Data Source Settings
Multi Data Sources
JMS Stores
Configuring a JMS JDBC Store
Configuring a JMS File Store
Configuring JMS
JMS Server Settings
Flow Control
JMS Destinations Settings

Security

Security Concepts
Managing Users
Managing Groups
Managing User Lockouts
Setting Minimum Password Length
Java EE Security

Deployments

Java EE Web Applications
Settings in the web.xml File
Example web.xml
Deploying a Web Application
Java EE Enterprise Applications
Settings in the application.xml File
Example application.xml
Deploying an Enterprise Application
The weblogic.Deployer Utility

Introduction to WebLogic Clusters

What is a Cluster?
Communications in a Cluster
Cluster-Wide JNDI Tree
Configuring Clusters
Node Manager
Deploying Applications to a Cluster
Creating a Cluster
Disabling Hostname Verification
Starting the Cluster
Deploying an Application to the Cluster
Testing the Deployment

Clusters and Remote Servers

Adding a Remote Server to the Cluster
Starting the Cluster
Deploying an Application to the Cluster
Testing the Deployment

Web Server Plug-Ins

Overview of Plug-Ins
Configuring IIS as the HTTP Server
Testing the IIS Configuration

Monitoring and Performance Tuning

General Information
Server Performance
User Logins
Transactions
Connection Pools
JMS Destinations
Guidelines for Enterprise JavaBeans
Stateless Session Beans
Stateful Session Beans
Entity Beans
Message Driven Beans
JVM Performance – Sun SDK
JVM Performance - JRockit

Command Line Utilities and Other Tools

The weblogic.Admin Utility
WebLogic Scripting Tool (WLST)
Recording WLST Scripts
Other Utilities

Appendix A: Ant

Ant Basics

Properties
Targets
Tasks
Example Build File
A Few Details
Ant Command Line Options

Appendix B: JMeter

What is JMeter
Creating a Test Plan
Running the Test Plan
Remote Testing

Appendix C: Troubleshooting Lab

Setting Up the Application
Running the Application