

**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