## **Geeks Idea Websphere Training.**

Course Module	Duration	Fee
Was course + Advanced 8.5	2 Months ( Weekdays only )	22,000 INR
Was course + Advanced 8.5	1 Month( Weekdays + Weekend Classes )	25,000 INR

#### Note:

- Money should be paid first half at the time of 2'rd of the training. Second Half in the time of security concepts.
- You need to understand I also work for an MNC sometimes the timing might change or get delayed.
- The competition of the course could be delayed a max of 1 week in case of any family emergency / others.
- Question Banks and FAQ would be provided out of the trainer's good will as a compliment if the trainee was nice to the trainer ©

## **Extra Includes:**

Videos + PDF + Real time Production Servers + Software, scripts + Ear Files.

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Venkatramanvv -> Search on skype and add me. There would be a fan image.

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## Course agenda

Course introduction

## Unit 1. WebSphere product family overview

### Overview

This unit describes the products in the WebSphere product family and their relationship to WebSphere Application Server V8.5.5.

## Learning objectives

After completing this unit, you should be able to:

- Describe the WebSphere family of products
- Describe the relationships between various products in the WebSphere family
- Describe the WebSphere Application Server V8.5.5 offerings
- Describe the standards that are supported in this release

### Unit 2. WebSphere Application Server architecture - stand-alone

#### Overview

This unit provides an architectural overview of WebSphere Application Server V8.5.5 at run time.

## Learning objectives

After completing this unit, you should be able to:

- Describe a typical e-business application architecture
- Describe the architectural differences between WebSphere Application Server packages
- Describe what is running in a WebSphere Application Server node
- Describe the architectural implications of the web server plug-in
- Describe the use of Java Database Connectivity (JDBC) providers and data sources

## Unit 3. WebSphere Application Server architecture - federated

## Overview

In this unit, you learn the concepts and terminology of a Network Deployment installation.

# Learning objectives

- Describe the Network Deployment runtime flow
- Describe Network Deployment concepts and terminology, such as **cell**, **node**, **node agent**, and **deployment manager**
- Describe the Network Deployment administration flow
- Explain how to manage web servers from WebSphere Application Server

## Unit 4. IBM Installation Manager

## Overview

This unit describes the IBM Installation Manager.

Learning objectives

After completing this unit, you should be able to:

- Define the IBM Installation Manager
- Describe the IBM Installation Manager wizards
- Uninstall the IBM Installation Manager

## Unit 5. WebSphere Application Server installation Duration: 50 minutes

#### Overview

This unit describes the tasks that are involved in the planning, installation, and post-installation of WebSphere Application Server.

## Learning objectives

After completing this unit, you should be able to:

- Describe the installation process for WebSphere Application Server
- Verify the installation of WebSphere Application Server
- Describe WebSphere profiles
- Describe the directories and configuration files for WebSphere Application Server
- Describe how to use configuration commands
- Describe how to use backup and restore configuration utilities

## Unit 6. Web server installation Duration: 40 minutes

## Overview

In this unit, you learn the tasks that are involved in planning and installing IBM HTTP Server and the plug-ins for WebSphere Application Server.

# Learning objectives

After completing this unit, you should be able to:

- Explain the installation process for IBM HTTP Server
- Verify the installation of IBM HTTP Server
- Install web server plug-ins for WebSphere Application Server
- Use the Plug-in Configuration Tool to configure the web server plug-in

## Exercise 1. Installing IBM Installation Manager

#### Overview

IBM Installation Manager is an installation management tool that installs and maintains Installation Manager-based software packages. This Eclipse-based tool enables users to install and modify packages, search for updates, uninstall, and roll back. This exercise covers the installation of IBM Installation Manager.

## Learning objectives

- Install IBM Installation Manager
- View the installation log file
- Confirm the installation of Installation Manager

## Exercise 2. Installing WebSphere Application Server

#### Overview

In this exercise, you install WebSphere Application Server Network Deployment V8.5.5 by usi IBM Installation Manager to install a set of shared product binary files and the Profile Management Tool to create an application server profile. After installation, you test the product ensure that WebSphere Application Server was installed successfully.

## Learning objectives

After completing this exercise, you should be able to:

- Use IBM Installation Manager to install WebSphere Application Server Network Deploym
- Use IBM Installation Manager to modify a product feature
- Use the Profile Management Tool to create a profile
- Verify that the installation was successful by examining log files
- Start and stop the application server

## Exercise 3. Installing IBM HTTP Server

#### Overview

In this exercise, you use IBM Installation Manager to install IBM HTTP Server and WebSphere Application Server plug-ins.).

## Learning objectives

After completing this exercise, you should be able to:

- Install IBM HTTP Server with IBM Installation Manager
- Confirm and test the installation of IBM HTTP Server
- Install Web Server Plug-ins for WebSphere Application Server
- Configure the Web Server Plug-ins for WebSphere Application Server
- Examine the installed directories and files for IBM HTTP Server and the plug-ins

## Unit 7. WebSphere Application Server administrative console

## Overview

This unit describes the features in the administrative console for WebSphere Application Server.

## Learning objectives

- Describe how to access the administrative console
- Describe the administrative console in a cell topology
- Describe the administrative console interface
- Describe the use of the following administrative tools:
  - o Help
  - o Preferences
  - o Filters
  - Guided activities
  - o Troubleshooting
- Describe user and group administrative roles
- Describe the Tivoli Performance Viewer

## Exercise 4. Exploring the administrative console

#### Overview

This exercise provides a guided tour of the administrative console interface by examining varies and configuration information.

### Learning objectives

After completing this exercise, you should be able to:

- Verify that WebSphere Application Server is started
- Start the administrative console
- Explore the navigation and functions of the administrative console
- Use the administrative console to examine configuration information, resources, and properties

## Unit 10. Application installation

#### Overview

In this unit, you learn methods for installing and updating enterprise applications on WebSphere Application Server.

## Learning objectives

After completing this unit, you should be able to:

- Describe methods of installing enterprise applications in WebSphere Application Server
- Explain how fine-grained application updates work
- Describe enterprise application properties
- Enable monitored directories
- Deploy an application by using the monitored directory
- Use a profile-file-based configuration with monitored directories to deploy an application

## Exercise 6. Installing an application

## Overview

In this exercise, you complete the tasks to install various enterprise applications in WebSpher Application Server by using the administrative console and the monitored directory feature.

### Learning objectives

- Use the administrative console to install an application
- Use a web browser to test the application
- Use the drag-and-drop function to deploy an application

#### Unit 11. Problem determination

#### Overview

This unit introduces you to resources and basic methods for problem determination.

## Learning objectives

After completing this unit, you should be able to:

- Describe a basic approach for problem determination
- List resources for completing a problem investigation
- Locate relevant log files
- Examine log activity
- Enable tracing on specific components
- Enable high performance extensible logging (HPEL) and use the Log Viewer
- Locate other troubleshooting tools
- Use the IBM Support Assistant

### Exercise 7. Problem determination

#### Overview

In this exercise, you configure and view log and trace files by using both the Basic mode of logging and tracing and the new High Performance Extensible Logging (HPEL) mode. In addit to log and trace data, you learn how to gather Java virtual machine (JVM)-related dump files.

## Learning objectives

After completing this exercise, you should be able to:

- Use the administrative console to configure and view log data
- Enable a server to use HPEL
- Enable tracing on application server components
- Use the HPEL Log Viewer to examine log and trace data
- Enable verbose garbage collection for an application server
- Enable memory leak detection for an application server
- Describe how IBM Support Assistant tools can be used to analyze JVM memory dumps

## Unit 12. Introduction to wsadmin and scripting

### Overview

This unit introduces you to the capabilities of wsadmin as an administrative tool for WebSphere Application Server.

# Learning objectives

- Use wsadmin to enter administrative commands
- Create Jython scripts to run wsadmin commands
- Customize the wsadmin environment with profiles and property files
- Use property file based configurations to modify an environment
- Use IBM Assembly and Deploy Tools for WebSphere Administration to edit and debug Jython scripts
- Configure and use command assist to develop wsadmin scripts

## Exercise 8. Using wsadmin

#### Overview

In this exercise, you learn how to use wsadmin to run administrative commands and scripts. Yalso learn how to write a simple script in Jython.

#### Learning objectives

After completing this exercise, you should be able to:

- Use wsadmin to run administrative commands interactively and with scripts
- Create a simple administrative script
- Use console command assistance
- Use property file based configuration to modify your settings

## Unit 13. Federating a cell

#### Overview

In this unit, you learn the process of federating a base profile into a cell and the administration of a multinode distributed environment. You learn the process of creating a deployment manager and federating base profiles into a cell. You also learn how to add a node by using commands or the administrative console, and how to manage a web server with the administrative console.

# Learning objectives

After completing this unit, you should be able to:

- Describe WebSphere Application Server cell concepts
- Describe and create the deployment manager profile
- Describe and create other profile types
- Describe custom profiles and automatic federation
- Describe the directories and configuration files for profiles
- Add a node by using commands or the administrative console
- Compare the deployment manager administrative console with the base administrative console
- Compare managed and unmanaged nodes
- Use the administrative console to manage a web server

#### Exercise 9. Creating a federated cell

### Overview

In this exercise, you learn how to create a deployment manager profile, and then federate the base profile into the deployment manager cell. You use the deployment manager administrative console to complete administrative tasks in the cell.

### Learning objectives

- Create a deployment manager profile
- Back up the deployment manager configuration
- Use the deployment manager administrative console
- Federate a node into the deployment manager cell
- Create a custom profile
- Create an unmanaged web server node
- Use the administrative console to start and stop a web server
- Map an application to a web server

## Unit 14. Workload management

## Overview

In this unit, you learn workload management principles and how WebSphere Application Server can be configured to participate in workload management.

## Learning objectives

After completing this unit, you should be able to:

- Define workload management
- Create clusters and cluster members
- Compare clustered configurations
- · Explain how weights are used in workload management
- Describe failover scenarios
- Describe the role of the HTTP plug-in in workload management
- Explain session management
- Configure distributed session management

## Exercise 10. Clustering and workload management

#### Overview

In this exercise, you learn how to create and populate a cluster, and how to test load balancin and failover between two cluster members. You also configure a data replication domain for session management.

### Learning objectives

After completing this exercise, you should be able to:

- Create a cluster and add cluster members
- Map modules to clusters and web servers
- Test load balancing and failover between two cluster members
- Configure a data replication domain for session management

### Unit 15. Introduction to WebSphere Messaging

#### Overview

This unit provides an overview of WebSphere Messaging through the presentation of several sample topologies.

## Learning objectives

- Describe what WebSphere Messaging is and how it is used
- Describe messaging components such as JMS providers, the service integration bus (SIBus), and messaging engines
- Configure resources to support messaging applications such as queues, topics, and connection factories
- Implement various clustered messaging engine policies for high availability and scalability

## Demonstration. Using the job manager

#### Overview

In this demonstration, you learn how to use the job manager to complete common tasks such product installations, updates, and remote tasks.

#### Learning objectives

After completing this demonstration, you should be able to:

- Add a target host to the job manager
- Submit a job to install IBM Installation Manager
- Submit a Manage Offerings job to install WebSphere Application Server V8 on a remote host
- Submit a Manage Profiles job to create a stand-alone server profile on a remote host
- Register a deployment manager with the job manager

## Unit 17. Overview of Intelligent Management

#### Overview

This unit introduces the features of Intelligent Management.

## Learning objectives

After completing this unit, you should be able to:

- Define Intelligent Management
- Describe virtualization and autonomic computing
- Define intelligent routing
- Describe dynamic workload management
- Describe health management features
- Describe application edition management features
- Describe performance management features

## Unit 18. WebSphere security

## Overview

In this unit, you learn basic security concepts and architecture that apply to WebSphere Application Server. You learn how to configure administrative security, application security, and Secure Sockets Layer (SSL).

## Learning objectives

- Explain basic security concepts
- Describe the WebSphere Application Security architecture
- Describe enhancements to certificate management
- Configure fine-grained administrative security
- Configure application security
- Describe SSL concepts and configuration
- Describe support for multiple security domains
- Describe auditing features and functions
- Describe support for Java Platform, Enterprise Edition 6 (Java EE 6) security annotations

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#### Overview

In this exercise, you learn how to enable WebSphere security and configure fine-grained administrative access.

### Learning objectives

After completing this exercise, you should be able to:

- Enable WebSphere security
- Configure administrative security by configuring access to administrative functions
  - Configure fine-grained administrative security

## Exercise 13. Configuring application security

#### Overview

In this exercise, you learn how to configure access to application resources and administrative functions.

### Learning objectives

After completing this exercise, you should be able to:

- Define Java EE security roles
- Define access for resources in an application
- Enable and verify application security

## Exercise 14. Configuring SSL for WebSphere

## Overview

In this exercise, you explore the SSL settings for an application server and configure a web server to use SSL.

### Learning objectives

- Define the certificate life span of a profile
- Use the administrative console to find and view certificates within the cell
- Configure and run the certificate expiration service
- Propagate the generated plug-in keystore out to the plug-in
- Create a keystore for a web server
- Generate a self-signed key
- Configure IBM HTTP Server to load and use HTTPS

## Unit 20. Performance monitoring

Overview	This unit describes performance monitoring methods and tools that are available through the administrative console.
Learning objectives	After completing this unit, you should be able to:  Describe performance monitoring and tuning methods  Use the performance servlet to generate performance data  Configure the Request Metrics tool to generate performance data about the end-to-end request flow  Use Performance Advisors to generate suggested tuning actions

Exercise 16. Using the performance monitoring tools

Overview	In this exercise, you use the performance tools available in WebSphere Application Server to monitor various application and server resources in real time, and generate performance-tuning advice.
Learning objectives	<ul> <li>After completing this exercise, you should be able to:</li> <li>Enable various levels of Performance Monitoring Infrastructure (PMI) statistics for an application server</li> <li>Monitor an application server by using Tivoli Performance Viewer</li> <li>Configure user settings for Tivoli Performance Viewer</li> <li>Examine summary reports and performance modules in Tivoli Performance Viewer</li> <li>View performance messages from the Tivoli Performance Viewer Advisor</li> <li>Enable and configure the Request Metrics tool</li> <li>View Request Metrics messages in the standard logs of an application server</li> <li>Configure IBM Tivoli Composite Application Manager for WebSphere Application Server collector for an application server</li> <li>View IBM Tivoli Composite Application Manager application performance statistics by using Tivoli Performance Viewer</li> </ul>

## Unit 21. Course summary

Overview	This unit summarizes the course, explains the class evaluation process, and provides information for future study.
Learning objectives	<ul> <li>After completing this unit, you should be able to:</li> <li>Explain how the course met its learning objectives</li> <li>Submit an evaluation of the class</li> <li>Identify other WebSphere Education courses that are related to this topic</li> <li>Contact information</li> <li>Locate appropriate resources for further study</li> </ul>