**IBM WebSphere Application Server & MQ Administration**

Duration: 88 hours (22 half days)

**Day 1**:

1. **Linux commands for WebSphere & MQ Administration**

* vi editor : Command mode/Insert mode, vi commands, moving within a file, saving and closing a file
* Files and Navigating : ls, cd, pwd, mkdir, rm, cp, mv, touch, cat, tail, find
* Networking : ping, dig, wget, curl, ssh, netstat, ifconfig
* Processes : ps, kill, top, sar, vmstat

**Day 2**:

* System info : date, uptime, who, w, cat, free, du, df, uname
* Compression : tar, gzip
* Permissions : chmod, chown
* Pattern search : grep, locate

**Day 3**:

1. **Shell Scripting**

* scripting introduction
* scripting loops
* scripting parameters
* more scripting

**Day 4**:

1. **Batch Scripting**

* Overview
* Environment
* Commands
* Files
* Syntax
* Variables
* Comments
* Strings
* Arrays
* Decision Making
* Operators
* DATE & TIME
* Input / Output
* Return Code
* Functions
* Process
* Aliases
* Devices
* Registry
* Network
* Printing
* Debugging
* Logging

**Day 5**:

Unit 1. WebSphere Application Server architecture – stand-alone

Unit 2. WebSphere Application Server architecture – federated

Unit 3. IBM Installation Manager

Unit 4. WebSphere Application Server installation

**Day 6**:

Unit 5. Web server installation

Exercise 1. Installing IBM Installation Manager

Exercise 2. Installing WebSphere Application Server

Exercise 3. Installing IBM HTTP Server

Exercise 4. Installing in silent mode

* **Theoretical evolution in Linux and scripting**

**Day 7**:

Unit 6. WebSphere Application Server administrative console

Exercise 5. Exploring the administrative console

Unit 7. Application installation

Exercise 6. Installing an application

**Day 8**:

Unit 8. Problem determination

Exercise 7. Problem determination

Exercise 8. Patching

Unit 9. Introduction to wsadmin and scripting

**Day 9**:

Exercise 9. Using wsadmin

Exercise 10. Jython Scripting Basics

Unit 10. Federating a cell

Exercise 11. Creating a federated cell

**Day 10**:

Unit 11. Workload management

Exercise 12. Clustering and workload management

Exercise 13. DR implementation

Unit 12. Introduction to WebSphere Messaging

Exercise 14. Configuring the service integration bus

**Day 11**:

Unit 13. WebSphere security

Exercise 15. Configuring WebSphere security

Exercise 16. Configuring application security

**Day 12**:

Exercise 17. Configuring SSL for WebSphere

Unit 15. Performance monitoring

Exercise 18. Using the performance monitoring tools

**Day 13**:

Unit 1. IBM MQ review

Unit 2. IBM MQ installation and deployment options

Unit 3. Creating a queue manager and queues

Exercise 1. Using commands to create a queue manager and queues

**Day 14**:

Unit 4. Introduction to IBM MQ Explorer

Exercise 2. Using IBM MQ Explorer to create queue managers and queues

Unit 5. Testing the IBM MQ implementation

Exercise 3. Using IBM MQ sample programs to test the configuration

* **Theoretical evolution in WebSphere Application Server**

**Day 15**:

Unit 6. Implementing distributed queuing

Exercise 4. Connecting queue managers

Unit 7. IBM MQ clients

**Day 16**:

Exercise 5. Connecting an IBM MQ client

Unit 8. Implementing trigger messages and monitors

Exercise 6. Implementing a trigger monitor

**Day 17**:

Unit 9. Diagnosing problems

Exercise 7. Running an IBM MQ trace

Unit 10. Implementing basic security in IBM MQ

Exercise 8. Controlling access to IBM MQ

**Day 18**:

Unit 11. Backing up and restoring IBM MQ messages and object definitions

Exercise 9. Using a media image to restore a queue

Exercise 10. Backing up and restoring IBM MQ object definitions

**Day 19**:

Unit 12. Introduction to queue manager clusters

Exercise 11. Implementing a basic cluster

**Day 20**:

Unit 13. Monitoring and configuring IBM MQ for performance

Exercise 12. Monitoring IBM MQ for performance

**Day 21 & 22**:

* **Theoretical evolution in MQ**
* Practical assignment & evaluation