

WebSphere MQ for System Administrators

Course Summary

Description

This course is designed to provide technical knowledge for system administrators or system programmers to install, customize and support a network of MQ managers. Three common platforms of Z/OS, UNIX, Windows) will be covered so students will know their concepts and structure. This course also provides hands-on setup and tailoring of queue managers. Since most WMQ installations have queue managers on multiple platforms, the coverage of this course will give insight to administrators the challenge and solution for such a WMQ complex. A lot of emphasis is given to the connection of multiple queue managers and the control of recovery of channels. Common problem determination techniques is discussed with examples using MQ supplied tools. The class is based on V8 and V9. This course covers materials that are required for taking IBM's certification.

Topics

- IBM WMQ
- IBM's WMQ Structure
- Installation and Customization
- Operation and Administration
- Naming Convention
- MQI structure
- Intersystem Communication
- Recovery and Restart
- Clustering and High Availability
- Monitoring and Performance
- Security
- Problem Determination

Audience

This course is designed for WMQ System Administrators and System Programmers.

Prerequisite

- Students must have experience in one of the three operating systems, one of UNIX (AIX, HP or SUN Solaris or Linux), or Windows (Windows 10).
- Knowledge of databases or transaction management is desirable

Duration

Five Days

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Course Outline

I. *IBM WMQ*

- A. WMQ for ESB and SOA
- B. Message Structure
- C. Queue Manager
- D. Queue
- E. Other MQ objects
- F. Quiz 1

II. *IBM's WMQ Structure*

- A. Components of WMQ for UNIX, SUN Solaris and Windows
- B. Distributed WMQ intercommunication
- C. MQ Client
- D. Relationship to Databases and Transaction Managers (WAS, BEA,.NET)
- E. Quiz 2

III. *Installation and Customization*

- A. Distributed Platforms – Installation, Create QMGR, Logs, Directories
- B. Libraries
- C. Share Memory
- D. Distributed Platforms – Parameters, Queue Manager Options, INI Files
- E. Other system processes
- F. Quiz 3
- G. Quiz 4
- H. Exercise 1 (Create a queue manager)

IV. *Operation and Administration*

- A. Distributed Platforms – System Commands, MQ System Commands
- B. WMQ Explorer
- C. PCF Commands
- D. Manage MQ Objects- Define, Display and Alter
- E. Procedures
- F. Quiz 5
- G. Exercise 2 (Use Windows system commands and MQ system commands)

V. *Naming Convention*

- A. Queue Manager
- B. Predefined Queues
- C. Dynamic Queues
- D. Transmission Queue
- E. Alias Queue
- F. Channels
- G. Queue Manager Alias
- H. Process

VI. *MQI structure*

- A. MQI calls
- B. Local and remote calls
- C. Request/Reply mode
- D. Triggering
- E. Quiz 6
- F. Exercise 2 (Running Sample Programs 1)
- G. Exercise 3 (Setting up triggering environment)

VII. *Intersystem Communication*

- A. Channels
- B. Components
- C. Controlling and Recovery
- D. Remote Queuing
- E. MQ Client
- F. Exits
- G. Quiz 7
- H. Exercise 4 (Setting up Connections)
- I. Exercise 5 (Running Sample Programs 2)
- J. Exercise 6 (Setting up MQ Clients)

VIII. *Recovery and Restart*

- A. Backup System Objects
- B. Backup Application Objects
- C. Coordination with Databases and Application Servers
- D. Re-creating Objects
- E. Quiz 8
- F. Exercise 7 (Running Recovery Utilities)

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Course Outline (cont.)

IX. *Clustering and High Availability*

- A. Architecture
- B. Components
- C. Setup
- D. Workload Exit
- E. Multi Instance Queue Manager
- F. Share Queues
- G. Quiz 9
- H. Exercise 8 (Setting up a Cluster)

X. *Monitoring and Performance*

- A. Components
- B. Events
- C. Statistics and Accounting Data
- D. Vendor Products
- E. Home Grown

XI. *Security*

- A. Architecture
- B. UNIX/WINDOWS/OAM
- C. Firewall
- D. SSL/TLS
- E. Application

- F. Channel Authentication Tables
- G. Exits
- H. End-to-end
- I. Quiz 10

XII. *Problem Determination*

- A. Distributed Platforms - Error FFST, Trace,
- B. System Levels Syslog, Event Viewer
- C. Quiz 11
- D. Exercise 9 (Look at sample Traces)

- There are test questions after each Module. These are similar to IBM's certification questions and prepare students for the test.
- Hands-on lab exercises are provided and may be restricted to certain platforms due to availability of resources. However all students would benefit from the exercises.