

Technical Introduction to IBM WebSphere MQ

Course Summary

Description

This course is designed to provide technical information for information managers, developers and architects. This class explains what middleware is and the characteristics of MQ. It shows the role MQ plays on the world of electronic business, SOA and ESB. The relationship of WMQ to application servers and multi-tiers applications and processes is highlighted.

The major components of WMQ will be described. The main application interface MQI will be discussed in the details. Other application interfaces particularly JMS will be discussed. The WMQ interfaces to other system components are shown major ones are system management, databases, security and transactional co-ordinations.

Three common platforms will be covered so students will know their concepts and structure. Much emphasis is given to the connection of multiple queue managers and the control of recovery of channels. This course covers materials that are required for taking IBM's certification.

Topics

- IBM MQSeries Concepts
- IBM's MQSeries Structure
- Installation and Customization
- Distributed Platforms – Installation, Create QMGR, Logs, Directories
- Operation and Administration
- PCF Commands
- Naming Convention
- MQI structure
- Intersystem Communication
- Recovery and Restart
- Clustering
- Monitoring and Performance
- Security
- Problem Determination

Audience

This course is designed for MQSeries System Managers, Architects, Application Designers and System Programmers who interact with WMQ.

Prerequisite

Students must have experience in one of the three operating systems, one of OS/390, UNIX (Linux, AIX, HP or SUN Solaris), or Windows (2000, 2003 or XP). Knowledge of databases or transaction management is desirable.

Duration

One Day

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Course Outline

- I. IBM MQSeries Concepts**
 - A. Message Structure
 - B. Queue Manager
 - C. Queue
 - D. Other MQ objects
 - E. Quiz 1
- II. IBM's MQSeries Structure**
 - A. Components of MQSeries for OS/390, UNIX and Windows
 - B. Distributed MQSeries intercommunication
 - C. MQ Client
 - D. Relationship to Databases and Transaction Managers (CICS, IMS, MTS)
 - E. Quiz 2
- III. Installation and Customization**
 - A. OS/390 - subsystem, BSDS, Logs and PageSets
- IV. Distributed Platforms – Installation, Create QMGR, Logs, Directories**
 - A. Libraries
 - B. OS/390 - ZPARM, XPARM, procedures
 - C. Distributed Platforms – Parameters, queue manger options
 - D. Other system processes
 - E. Quiz 3
 - F. Quiz 4
 - G. Exercise 1 (Create a queue manager)
- V. Operation and Administration**
 - A. OS/390 – console commands, ISPF panels and utilities
 - B. Distributed Platforms – System Commands, MQ System Commands
 - C. NT MMC
- VI. PCF Commands**
 - A. Manage MQ Objects- Define, Display and Alter
 - B. Procedures
 - C. Quiz 5
- VII. 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
- VIII. MQI structure**
 - A. MQ 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)
- IX. 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)
- X. Recovery and Restart**
 - A. Backup System Objects
 - B. Backup Application Objects
 - C. Coordination with Databases and CICS
 - D. Re-creating Objects
 - E. Quiz 8
 - F. Exercise 7 (Running Recovery Utilities)
- D. Exercise 2 (Use NT system commands and MQ system commands)**

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Course Outline (cont.)

XI. Clustering

- A. Architecture
- B. Components
- C. Setup
- D. Workload Exit
- E. Quiz 9
- F. Exercise 8 (Setting up a Cluster)

XII. Monitoring and Performance

- A. Components
- B. Events
- C. SMF
- D. Vendor Products
- E. Home Grown

XIII. Security

- A. Architecture
- B. OS/390 External Security Manager

- C. UNIX/NT/OAM
- D. Firewall
- E. Application
- F. End-to-end
- G. Quiz 10

XIV. Problem Determination

- A. OS/390 - SMF, Console Log, Logrec, Dumps
- B. Distributed Platforms - Error FFST, Trace,
- C. System Levels
- D. Quiz 11
- E. Exercise 9 (Look at sample Traces)