

## **WebSphere MQ for System Administrators (custom for Vanguard)**

### **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. Two common platforms Solaris UNIX and 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 MQSeries 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. This course covers materials that are required for taking IBM's certification.

#### **Topics**

- WMQ Structure
- Installation
- Customization
- Intersystem Communication
- Operation
- System Administration
- WMQ Application Interface (MQI)
- Triggering
- Security Basics
- Problem Determination Basics
- Review Questions
- Hands-on Exercises

#### **Audience**

This course is designed for WMQ System Administrators and System Programmers. Class size is limit to 15 students per class.

#### **Prerequisites**

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

#### **Duration**

Three 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 Z/OS, UNIX and Windows
- B. Distributed WMQ intercommunication
- C. MQ Client
- D. Relationship to Databases and Transaction Managers (CICS, IMS, MTS)
- E. Quiz 2

#### III. Installation and Customization

- A. Distributed Platforms – Installation, Create QMGR, Logs, Directories
- B. Libraries
- C. Distributed Platforms – Parameters, queue manger options
- D. Other system processes
- E. Quiz 3
- F. Quiz 4
- G. Exercise 1 (Create a queue manager)

#### IV. Operation and Administration

- A. Distributed Platforms – System Commands, MQ System Commands
- B. WMQ Explorer
- C. Manage MQ Objects- Define, Display and Alter
- D. Procedures
- E. Quiz 5
- F. Exercise 2 (Use NT 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. Re-creating Objects
- D. Quiz 8
- E. Exercise 7 (Running Recovery Utilities)

#### IX. Monitoring and Performance

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

#### X. Security

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

#### XI. Problem Determination

- A. Distributed Platforms - Error FFST, Trace,
- B. System Levels Syslog, Event Viewer
- C. Quiz 11