

**Appendix
C**

WORKSHOP

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1 Introduction

Objectives

- Become familiar with the concepts and facilities of WebSphere MQ.
- Understand when MQ should be used.
- Become familiar with the MQ components and their function in MQ.

Questions

1. The _____ identifies the message and contains additional control information, such as the type of message and the priority assigned to the message by the sending application.
 - a) Control Data
 - b) Message Descriptor
 - c) Prolog
 - d) Header
 - e) CCR
2. Queues are managed by:
 - a) Queue Manager
 - b) DB2
 - c) Directly by the kernel
 - d) Optimizer
 - e) MQ Controller
3. Which of the following is NOT an advantage associated with Asynchronous processing?
 - a) Requests need not be targeted to specific server.
 - b) A service need not be available when a request is made.
 - c) There is no blocking; therefore resources readily be made free.
 - d) Can use a connectionless protocol.
 - e) All are advantages.
4. Which are characteristics of messaging and queuing which differentiate it from other communication styles:
 - a) Communicating programs can run at different times.
 - b) There are no constraints on application structure.
 - c) Programs are insulated from environmental differences.
 - d) a and b
 - e) a, b and c


5. Which of the following queue is not an object in WebSphere MQ?
- a) Local Queue
 - b) Sargable Queue
 - c) Remote Queue
 - d) Alias Queue
 - e) Model Queue
6. Messages can be used to start the execution of a program. In MQ, this procedure is called:
- a) Start
 - b) Fork
 - c) Trigger
 - d) EXEC
 - e) a or b
7. There are six types of message channels. Which is NOT a message channel?
- a) Sender
 - b) Receiver
 - c) Cluster-sender
 - d) Cluster-receiver
 - e) All are message channels.
8. A point of consistency which is also called a commit point is a:
- a) Syncpoint
 - b) Checkpoint
 - c) Stable point
 - d) UR
 - e) None of the above.
9. Log records which are written sequentially across several files, then “wrap” back to the first file is categorized as which of the following:
- a) Disk log
 - b) Circular log
 - c) Linear log
 - d) BSDS log
 - e) None of the above.
10. The MQ programming routine for setting the attributes of a queue is:
- a) SET
 - b) SETINQ
 - c) INIT
 - d) MQSET
 - e) MODMQ

2 Objects and Architecture

Objectives

- Examine the objects and architecture in MQ.

Questions

1. Sending and receiving application programs are decoupled; the characteristics associated with decoupling are:
 - a) The exchange of messages between the sending and receiving programs is independent of time.
 - b) One program continues processing without waiting for the receiver.
 - c) Triggers can be initiated when messages arrive on a queue.
 - d) a and b.
 - e) a, b and c.
2. The default maximum message length is:
 - a) 4 MB
 - b) 4 K
 - c) 8 MB
 - d) 8 K
 - e) 100 MB
3. Each queue is owned by a:
 - a) Creator
 - b) Queue Manager
 - c) OS
 - d) Queue Controller
 - e) Queue Director
4. The following symbol represents:
 - a) Queue Manager
 - b) Queue Controller
 - c) Queue Director
 - d) Queue
 - e) Channel
5. Predefined queues are created using:
 - a) MQCREATE
 - b) MQCONN
 - c) MQSC
 - d) MQBUILD
 - e) a, b or c

6. Dynamic queues are created by:
- a) The Application program
 - b) MQCONN
 - c) MQSC
 - d) MQBUILD
 - e) a, b or c.
7. In order to allow applications to send messages to a queue on another queue manager:
- a) Namelists must be defined.
 - b) Clustering must be turned on.
 - c) A transmission queue and channels between the queue managers must be defined.
 - d) SNA must be available.
 - e) c and d.
8. Which is NOT a characteristic of a model queue?
- a) The model queue is a template for creating a dynamic queue.
 - b) They are created in a local queue.
 - c) Applications can specify the queue name.
 - d) Queue names can be generated.
 - e) They are all characteristics of a model queue
9. The Initiation queues are an integral part of:
- a) Queue Manger startup
 - b) Triggering
 - c) MQ IPL
 - d) Transmission
 - e) a, b an c
10. The default dead letter queue name is:
- a) DEAD.LETTER.QUEUE
 - b) SYSTEM.DEAD.LETTER.QUEUE
 - c) DEAD.QUEUE
 - d) DEAD
 - e) UNDELIVERABLE

3 WebSphere MQ: Administrative Tasks

Objectives

- Use MQ system commands.
- Create, start, stop and delete a Queue Manager.

Details

Create a new Queue Manager with the following characteristics:

- Default transmission queue of MY.XMIT.QUEUE.
- Use the system default dead letter queue.
- Make this Queue Manager the default Queue Manager.
- The new Queue Manager is SYSED.MY.QUEUE.MANAGER.

Perform the following tasks:

- Start the queue manager and test that it works.
- Stop the Queue Manager.
- Review the log files.
- Delete the Queue Manager.

4 WebSphere MQ: Command Execution

Objectives

- Acquire proficiency with the runmqsc command.
- Create and use queues.

Details

- Create a local queue with the following characteristics:

Queue Name: MyQueue

Default Priority: 3

Default Persistence: Yes

Maximum Depth: 100

Maximum Message Length: 150

Perform the following tasks:

- Display the attributes of the queue.
- Test the queue by adding items to the queue using the sample program for adding messages to a queue.
- Change the queue to have an attribute Maximum Depth of 50.
- Clear the queue.
- Delete the queue.
- Develop a script which will create the above queue and execute it through runmqsc using redirection.
- Display information on the Queue Manager created in the previous exercise.

5 Remote Administration

Objectives

- Create a QM that permits remote administration.
- Perform a variety of remote administration tasks.
- Create channels and transmission queues.

Details

- Using two queue managers, create a sender and receiver channel on each one.

Perform the following tasks:

- Start the channels.
- Start the listeners.
- Display the status of the listeners and the channels

Setup one of the queue managers for remote administration. Use the remote queue managers and remote administration, to create a new local queue on a remote machine.

6 WebSphere MQ Configuration

Objectives

- Configure the Queue Manager.

Details

- A commonly used port number for WebSphere MQ is 1414; Reset the port number to another port.
- The PipeLineLength is the maximum number of concurrent threads a channel will use; Reset it to 2.
- Reset the maximum number of channels allowed to 200.
- Change the LogType to linear.

7 Dead-Letter Queue Handler

Objectives

- Become proficient with the Dead-Letter Queue Handler utility.

Details

- Run a Dead-Letter Queue Handler that will retry all messages in the dead letter queue.
- Run a Dead-Letter Queue Handler that will retry all messages that have a reason code of MQRC_PUT_INHIBITED in the dead letter queue.
- Run a Dead-Letter Queue Handler that will delete all messages that have a reason code of MQRC_PUT_INHIBITED in the dead letter queue.
- Run a Dead-Letter Queue Handler that will delete all messages in the dead letter queue.

8 Recovery and Restart

Objectives

- Become knowledgeable with the concepts of recovery and restart.

Questions

1. A log consists of two components; one or more files of log data and a:
 - a) DB2 log
 - b) Log control file
 - c) Security Accounts
 - d) Lock Locking Mechanism
 - e) b and c
2. One advantage in using circular logging is:
 - a) Both restart recovery and media or forward recovery.
 - b) Log space is not reused.
 - c) Given that disk space is finite, it might be necessary to consider using some form of archiving.
 - d) You never run out of log files.
 - e) b and d.
3. A point in time when the record described in the log is the same as the record in the queue is a:
 - a) Rollback
 - b) Backout
 - c) Checkpoint
 - d) Boot Strap
 - e) Entry Point
4. The configuration option for the number of preallocated primary log files is:
 - a) PreallocatedPrimary
 - b) Primary
 - c) PreAllocated
 - d) LogPrimaryFiles
 - e) None of the above.
5. What is the fully qualified name of the directory that contains the log files?

9 Problem Determination

The instructor will perform demonstrations specific to the client organization.



10 Clients

The instructor will perform demonstrations specific to the client organization.



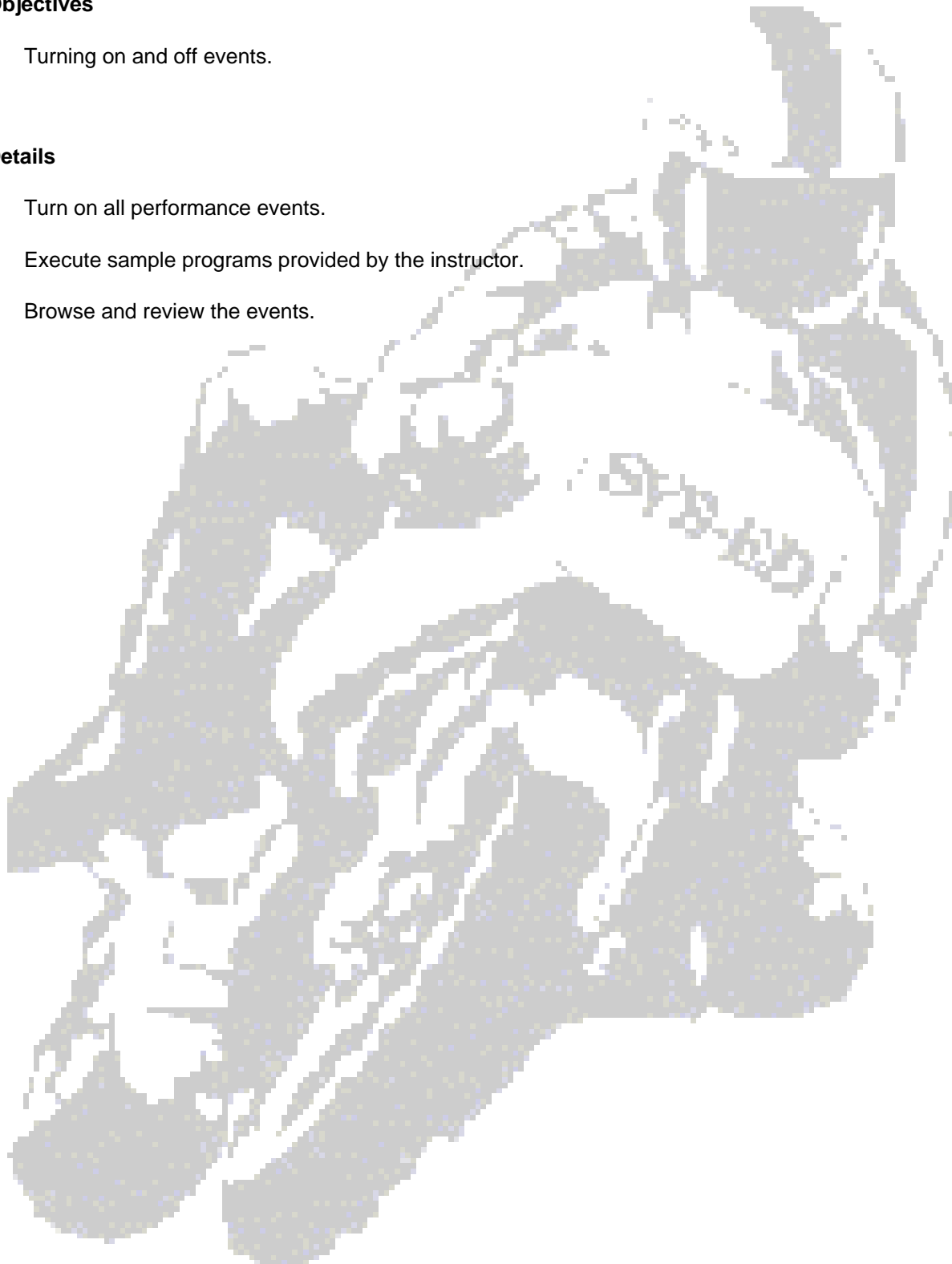
11 Events

Objectives

- Turning on and off events.

Details

- Turn on all performance events.
- Execute sample programs provided by the instructor.
- Browse and review the events.



12 Clusters

Objectives

- Set clustering.
- Create and test queues in a cluster.

Details

- Using two Queue Managers on different machines, define the cluster sender and receiver channels.
- Start the channel listeners.
- Define a queue in both Queue Managers. The queue in each Queue Manager should have the same name and be associated with the clusters.
- Test the queue by writing messages to the queue.
- Suspend one Queue Manager in the cluster. Resume that Queue Manager.