IBM MQ Clustering - Design & Administration Training

Duration: **3 Day**

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This new, three-day course from RSM describes and explains how to design, set up and administer effective IBM MQ clustering.
A significant feature of this course is the time devoted to extensive practical exercises. The exercises are conducted in a Windows environment, but the principles learned are relevant to all MQ implementations, including z/OS.

This course is also available for one-company, on-site presentations and for live presentation over the Internet, via the Virtual Classroom Environment service.

Prerequisites

Experience of administering IBM MQ in a Linux, UNIX and/or Windows environment, or in a z/OS environment.

What You Will Learn

- explain clustering terminology and basic clustering concepts
- describe how a cluster works
- implement a cluster and perform common administrative tasks
- recognise the symptoms of frequently encountered problems and solve them
- evaluate and exploit the range of workload management options
- use distributed queuing techniques to connect Queue Managers inside a cluster to Queue Managers outside a cluster
- configure overlapping clusters
- outline how clusters support distributed publish/subscribe
- take steps to render a cluster secure
- discuss clustering current best practices.

Training Outline

Introduction to Clustering

What is an IBM MQ cluster?; What an MQ cluster is not; Cloned application services; Continuous putting; Scalability; Cluster components; Reduced administration; Joining a Queue Manager to a cluster; Definition through use; Disseminating cluster information; Cluster information message contents; Retention of information in repositories; Dynamically created reply to queues.

Definition, Administration and Management

Basic cluster configuration; Cluster administration commands; DISPLAY CLUSQMGR; DISPLAY QCLUSTER; SUSPEND QMGR; RESUME QMGR; REFRESH CLUSTER; RESET CLUSTER; Cluster management tasks; Removing a cluster queue from the cluster; Moving a full repository; Removing a Queue Manager from the cluster.

Troubleshooting

Common symptoms and problems; Retrying CLUSSDR channel; SYSTEM.TEMP CLUSQMGR names; Unknown Object Name (RC 2085); Cluster resolution error (RC 2189); DISPLAY CLUSQMGR displays a

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Queue Manager twice.

Workload Management

Workload management before Version 6; Workload management options since V6; CLWLUSEQ(ANY); CLWLRANK; CLWLPRTY; CLWLMRUC; CLWLWGHT; NETPRTY; The workload management algorithm; What happens when a target queue is unavailable?; BIND Options; DEFBIND, DEFPRTY and DEFPSIST.

Clustering and Distributed Queuing

Aliases revisited: Queue Manager aliases, queue aliases; Using queue aliases in clusters; Gateways; Accessing an individual queue outside the cluster; Accessing all queues owned by an external Queue Manager; Accessing external predefined queues via a QM alias; Accessing an individual queue inside the cluster; Accessing all of a cluster Queue Managers' queues; Workload management from outside the cluster.

Overlapping Clusters

What are overlapping clusters?; Definitions for overlapping clusters; Putting across the cluster boundary.

Publish/Subscribe Clusters

MQ Publish/Subscribe; Distributed publish/subscribe; Hierarchies and clusters; Proxy subscriptions in clusters; Publish/Subscribe clusters: recommendations.

Security

Stopping unauthorized Queue Managers connecting to your Queue Manager; Stopping unauthorized Queue Managers putting messages on your queues; Authorizing putting messages to remote cluster queues; Preventing Queue Managers joining a cluster; Forcing unwanted Queue Managers to leave a cluster; SSL and clusters.

Recommendations, Best Practices and Hints

Ten tips for a healthy MQ cluster; Why exactly two full repositories?; Dedicated servers for full repositories; Only one manually defined CLUSSDR; Naming channels.