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## Designing, Implementing, and Managing IBM MQ V9 Clusters

**Duration: 3 Days**    **Course Code: WM253G**    **Delivery Method: Company Event**

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### Overview:

This course prepares you to plan, design, configure, and administer IBM MQ clusters.

After a review of IBM MQ, the course explains the similarities and differences between administration of a cluster and administration of a distributed message IBM MQ environment. You learn cluster specific commands and procedures, and explore the role of a cluster in a highly available IBM MQ infrastructure. You learn how to do a detailed verification of a new cluster configuration, review and identify all resulting components, and troubleshoot problems.

You also learn about cluster administration, workload balancing, security, and use of publish/subscribe clusters. You learn how to recognize when a problem is due to connection authentication, channel authentication, or object authorizations. You also learn about design options such as overlapping clusters and use of clusters with z/OS queue sharing groups. Many of the considerations in this course are based on actual engagement experiences.

### Company Events

These events can be delivered exclusively for your company at our locations or yours, specifically for your delegates and your needs. The Company Events can be tailored or standard course deliveries.

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### Target Audience:

This course is designed for IBM MQ administrators, architects, application developers, and other professionals who need to understand the design considerations, architectural role, and implementation of IBM MQ clusters

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### Objectives:

- Describe the basic IBM MQ components
  - Identify which IBM MQ objects are used to impact routing in a cluster environment
  - Identify who in your organization can impact the health of a cluster and the need for adequate communication
  - Describe the correct role of a cluster in a highly available IBM MQ infrastructure
  - Describe the differences and similarities between administering clustered and non-clustered IBM MQ environments
  - Describe how to configure, verify, and troubleshoot an IBM MQ cluster
  - Identify the various channels that are present in a cluster environment and how each is created
  - Describe how to use separate transmission queues in a clustered queue manager
  - Explain how to remove a queue manager from a cluster on a permanent or temporary basis
  - Explain IBM MQ connection authentication
  - Explain IBM MQ channel authentication
  - Describe IBM MQ object authorizations
  - Explain how to troubleshoot security challenges in a cluster
  - List ways to influence workload balancing in a cluster
  - Describe the history and basic components of IBM MQ publish/subscribe
  - Explain the considerations and details of implementing publish/subscribe in an IBM MQ clustered environment
  - Describe cluster design architectural considerations
  - Summarize the benefits of design and configuration simplicity in a cluster implementation
  - Explain how to configure overlapping clusters
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### Prerequisites:

Before taking this course, you should have experience with IBM MQ or complete one of the following courses:

- IBM MQ V9 System Administration (using Windows for labs) (WM153G)
  - IBM MQ V9 System Administration (using Linux for labs) (WM154G)
  - IBM MQ V8 System Administration for z/OS (WM302G)
- You should also have working knowledge of the Windows operating system to run the lab exercises.

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## Content:

IBM MQ baseline	Exercise: Working with cluster administration tasks	Exercise: Configuring a publish/subscribe cluster
Exercise: Configuring and reviewing base IBM MQ resources	IBM MQ security and clusters	Cluster design considerations
Before you start	Exercise: Working with IBM MQ security	Exercise: Configuring an overlapping cluster
Understanding and implementing an IBM MQ cluster	Influencing workload balancing behavior	Course summary
Exercise: Implementing and verifying a cluster, cluster queues, and a cluster gateway	Exercise: Working with workload balancing options	
Cluster administration tasks and commands	Publish/subscribe and clusters	

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## Further Information:

For More information, or to book your course, please call us on Head Office 01189 123456 / Northern Office 0113 242 5931

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