Technical Introduction to IBM MQ

WM103 (Classroom)

ZM103 (Self-paced)

Course description

In this course, you learn about IBM MQ V9 basic components and the path that messages follow when they are exchanged between applications. You also learn how IBM MQ administrative responsibilities can include the management of topic-based publish/subscribe messaging, managed file transfer, and deployments to the cloud. Topics include an overview of the support that IBM MQ provides for security, publish/subscribe, high availability, administration, logging, auditing, managed file transfer, MQTT, and cloud options.

For information about other related courses, see the IBM Training website:

http://www.ibm.com/training

General information

Delivery method

Classroom or self-paced virtual classroom (SPVC)

Course level

ERC 1.0

Product and version

IBM MQ V9

Audience

This basic course is designed for system administrators, system architects, application developers, quality assurance specialists, and technical sales and marketing professionals.

Learning objectives

After completing this course, you should be able to:

* Summarize current business drivers and the need for flexibility
* Describe enterprise messaging and the capabilities it must provide
* Identify the main ways that IBM MQ can impact application design
* Describe the basic components of IBM MQ
* Differentiate between point-to-point and IBM MQ cluster connectivity
* Summarize queue manager and queue manager components administrative tasks
* Contrast the architectural role of IBM MQ clusters and multiple instance queue managers
* Describe the security provisions of IBM MQ and IBM MQ Advanced Message Security
* Describe how IBM MQ is used as part of the communications infrastructure to:
	+ Connect application environments, such as the World Wide Web, enterprise transaction systems, and database systems
	+ Manage the distribution of publisher information to appropriate subscribers
	+ Provide file transfer management with IBM MQ Managed File Transfer
	+ Serve as a JMS provider
	+ Interface with WebSphere Application Server
	+ Store in-flight messages for IBM Integration Bus
	+ Interact with z/OS applications
	+ Facilitate connectivity to mobile environments with IBM MQ Telemetry
* Describe the options for deployment to the Cloud

Prerequisites

You should have skills and experience in one or more of the following specific areas:

* Communications and networking protocols
* System and network management
* Application development
* Transaction processing
* Client/server solutions

Duration

1 day

Skill level

Basic

Notes

The following unit and exercise durations are estimates, and might not reflect every class experience. If the course is customized or abbreviated, the duration of unchanged units will probably increase.

This course is an update of the following previous course:

* WM102: *Technical Introduction to IBM MQ*

Course agenda

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| Course introductionDuration: 15 minutes |

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| Unit 1. IBM MQ overviewDuration: 30 minutes |
| Overview | This unit provides an overview of the business drivers that contributed to the creation of messaging-oriented middleware (MOM) such as IBM MQ. It also covers the capabilities that are required of a MOM offering and the benefits that IBM MQ brings to the enterprise. |
| Learning objectives | After completing this unit, you should be able to:* Describe the business drivers that demand messaging-oriented middleware
* Describe the advantages of message queuing
* List the main ways that IBM MQ can impact application design and enterprise flexibility
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| Unit 2. IBM MQ basicsDuration: 1 hour |
| Overview | This unit describes the most commonly used IBM MQ components and how these components interact to exchange messages with local and remote applications.  |
| Learning objectives | After completing this unit, you should be able to:* Describe the components of IBM MQ
* Describe the role of a channel in distributed queuing
* Describe how a message gets from source to target queue and where messages are at different times in the process
* Summarize process triggering
* Summarize options for transaction handling
* Differentiate between an IBM MQ server and an IBM MQ client
* Describe the IBM MQ extended transactional client
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| Unit 3. Messaging styles, topologies, and architecture overviewDuration: 30 minutes |
| Overview | This unit expands on IBM MQ connectivity and architectural topics and describes scalability and high availability options. |
| Learning objectives | After completing this unit, you should be able to:* Differentiate between point-to-point and publish/subscribe messaging styles
* Describe the advantages of using queue manager clusters
* Identify the options for high availability, scalability, and load balancing
* Describe the need for standards and governance
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| Unit 4. System administration overviewDuration: 45 minutes |
| Overview | This unit identifies the administrative interfaces for IBM MQ, summarizes the basic administrative tasks, and examines use of the IBM MQ Explorer.  |
| Learning objectives | After completing this unit, you should be able to:* Summarize the system administration interfaces for IBM MQ
* Identify basic differences between IBM MQ on distributed operating systems and z/OS
* Contrast administrative interfaces according to role
* Summarize the system administration tasks
* Describe the installation options
* Describe the concepts of logging and recovery
* Summarize the administrative features of IBM MQ Explorer
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| Unit 5. Security overviewDuration: 30 minutes |
| Overview | This unit summarizes the IBM MQ security requirements and capabilities. It also describes the additional security features that IBM MQ Advanced Message Security provides. |
| Learning objectives | After completing this unit, you should be able to:* Summarize the options for secure messaging
* Describe where security is needed across IBM MQ components
* Describe the IBM MQ security mechanisms
* Summarize the features of IBM MQ Advanced Message Security
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| Unit 6. Introduction to IBM MQ Managed File TransferDuration: 30 minutes |
| Overview | This unit introduces IBM MQ Managed File Transfer, identifies file transfer scenarios, and summarizes basic configuration. |
| Learning objectives | After completing this unit, you should be able to:* Identify IBM MQ Managed File Transfer scenarios
* Describe the main components of IBM MQ Managed File Transfer
* Describe IBM MQ Managed File Transfer basic configuration
* Identify various ways of initiating a transfer
* Summarize auditing capabilities for IBM MQ Managed File Transfer
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| Unit 7. Introduction to IBM MQ Telemetry and IBM MessageSightDuration: 30 minutes |
| Overview | This unit describes how IBM MQ Telemetry supports the “Internet of Things” and extends the enterprise to a mobile environment. It also describes how the IBM MessageSight messaging appliance extends the enterprise in a mobile environment with a secure, easy-to-deploy, appliance-based messaging server. |
| Learning objectives | After completing this unit, you should be able to:* Identify the scenarios that require mobile connectivity
* Describe the MQTT protocol
* Describe how IBM MQ Telemetry facilitates connectivity to telemetry devices
* Summarize the main functions of the IBM MessageSight messaging appliance
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| Unit 8. Introduction to the IBM MQ ApplianceDuration: 30 minutes |
| Overview | This unit summarizes the features of the IBM MQ Appliance messaging server.  |
| Learning objectives | After completing this unit, you should be able to:* Summarize the main functions and benefits of the IBM MQ Appliance
* Compare the IBM MQ Appliance with IBM MessageSight
* Compare the IBM MQ Appliance with IBM MQ
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| Unit 9. Expanding the scope of IBM MQDuration: 45 minutes |
| Overview | This unit provides a brief overview of various linking and bridging mechanisms that are available to expand the scope of messaging and queuing in an enterprise to other IBM products. |
| Learning objectives | After completing this unit, you should be able to:* Identify the IBM MQ z/OS links and bridges
* Describe how IBM MQ can be used as part of the communications infrastructure to act as a JMS provider
* Describe how IBM MQ interfaces with IBM Integration Bus
* Distinguish ways that IBM MQ is used by WebSphere Application Server
* Describe the options for deploying IBM MQ in a Cloud environment
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| Unit 10. Course summaryDuration: 15 minutes |
| Overview | This unit summarizes the course and provides information for future study. |
| Learning objectives | After completing this unit, you should be able to:* Explain how the course met its learning objectives
* Access the IBM Training website
* Identify other IBM Training courses that are related to this topic
* Locate appropriate resources for further study
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For more information

To learn more about this course and other related offerings, and to schedule training, see **ibm.com**/training

To learn more about validating your technical skills with IBM certification, see **ibm.com**/certify