

## IBM Certified Solution Developer - Integration Bus v10.0

Course#: C9530-001

Duration: 5 Days

Price: 0.00

### Course Description

This course teaches you how to use IBM Integration Bus to develop, deploy, and support message flow applications. These applications use various messaging topologies to transport messages between service requesters and service providers, and also allow the messages to be routed, transformed, and enriched during processing. In this course, you learn how to construct applications to transport and transform data. The course also explores how to control the flow of data by using various processing nodes, and how to use databases and maps to transform and enrich data during processing.

### Objectives

After completing this course, you should be able to:

- Describe the features and uses of the IBM Integration Bus
- Develop, deploy, and test message flow applications
- Generate message flow applications from predefined patterns
- Use IBM Integration Bus problem determination aids to diagnose and solve development and runtime errors
- Describe the function and appropriate use of IBM Integration Bus processing nodes
- Write basic Extended Structured Query Language and Java programs to transform data
- Use the IBM Graphical Data Mapping editor to transform data

### Audience

This course is designed for experienced integration specialists and senior-level developers with experience in application development, messaging middleware applications, and transport protocols such as HTTP and FTP.

### Prerequisites

A basic understanding of current IT technologies such as Structured Query Language (SQL), Extensible Markup Language (XML), Java, and XML Path language (XPath).

An understanding of the business needs of your organization

A basic understanding of transport protocols such as HTTP and FTP, and message-oriented middleware such as Java Message Service (JMS) and IBM MQ

## **Content**

### 1. Introduction to IBM Integration Bus

Describe the features and functions of IBM Integration Bus

Describe the business value of IBM Integration Bus

Describe the IBM Integration Bus architecture and components

Identify the IBM Integration Bus editions

### 2. Application development fundamentals

List the prerequisite hardware and software for IBM Integration Bus

Explain how to install IBM Integration Bus

Create queue managers, integration nodes, and integration servers

Plan for runtime security

### 3. Creating message flow application

Create a message flow application

Add nodes to a message flow

Package and deploy message flow applications and resources

## 4. Connecting to IBM MQ

Describe the IBM MQ connection options

Examine the properties of the IBM MQ nodes

Predict the location of the message if a runtime error is encountered during message flow processing

Attach an MQEndpoint policy to one or more IBM MQ nodes in a message flow to control connection details at run time

## 5. Controlling the flow of message

Describe logical messages and the message assembly, and explain how they are used in IBM Integration Bus application programming

Use the Filter and Route message processing nodes to examine the contents of a message and alter its flow

Use the RouteToLabel and Label nodes to dynamically change the routing of messages

Use the FlowOrder node to control the flow path order in which a message is processed through a message flow

## 6. Modelling data

Explain the concepts of message models and how they are used to help message transformation

List the parsers that are available for use within IBM Integration Bus

Create and modify a DFDL model

Use importers to create data models

Choose the appropriate message validation options

## 7. Processing file data

Describe the file processing nodes

Describe the record detection options for splitting files into multiple records

Use a file as a message flow source and target

Include file input and output nodes that use File Transfer Protocol (FTP) and secure FTP (SFTP) to transfer data

## 8. Using problem determination tools and help resources

Use the TryCatch and Throw nodes to implement explicit error handling within a message flow

Describe the structure of the ExceptionList component of the message assembly, and the role it plays in runtime error handling

Use problem determination tools to debug message flows

Use help resources to learn more about the product and find information about resolving problems

## 9. Mapping messages with the Graphical Data Mapping editor

Use the Graphical Data Mapping editor to map logical messages

Run message maps within message flows

## 10. Referencing a database in a message flow application

Use database message processing nodes to modify messages and control message processing

Configure database nodes to access user databases

Describe the differences between ESQL and SQL SELECT

Create a database definition file

## 11. Using Compute nodes to transform messages

Use the Compute node and ESQL to transform messages

Use the JavaCompute node and Java to transform messages

## 12. Processing JMS, HTTP, and web service messages

Describe how to use message flow applications with JMS

Describe how message flow applications can support Hypertext Transfer Protocol (HTTP) and SOAP messages

Explain how the Web Services Definition Language (WSDL) file is used to develop web services message flows

## 13. Preparing for production

Deploy applications and shared libraries at run time to affect the visibility of resources

Use promoted properties, user-defined properties, and operational policies to develop environment-aware message flows

Dynamically route messages in a message flow by using external registries and registry lookup nodes to allow policy-driven message flows to meet governance requirements

Add monitoring and auditing to a message flow.