

Development and Administration of Applications with IBM Business Monitor V8.5.7

WB896 (Classroom)

ZB896 (Self-paced)

Course description

IBM Business Monitor is a business activity monitoring (BAM) product that supports BPM by measuring business performance, monitoring, and reporting on business transactions. This course includes topics of interest for students who want to use the IBM Business Monitor environment to develop applications.

In this course, you learn how to develop, implement, and test IBM Business Monitor applications so that you can generate real-time business views of enterprise data. The course begins with an overview of BAM and BPM, and the capabilities that IBM Business Monitor provides. In subsequent units, you learn how to build monitor models, establish performance metrics, monitor events, manage action services, and build a business space dashboard. You also learn how to enable events from various sources, including using BPEL and BPMN processes from IBM Business Process Manager Advanced and IBM Integration Bus. Finally, you learn how to monitor events from JMS emitter and REST emitter sources. You also learn some basic administration and maintenance capabilities of IBM Business Monitor.

From the hands-on exercises that are provided throughout the course, you develop and implement a monitoring solution. The exercises include how to use the various components of IBM Business Monitor, such as the IBM Cognos Business Intelligence and the Monitor development toolkit, for reporting and dimensional analysis along with WebSphere Application Server. You use the Monitor development toolkit to develop a monitor model, and then use the IBM Integration Designer to test the model. You also build customized business space dashboards that can be used to analyze and troubleshoot process performance.

The lab environment for this course uses the Windows 2012 server R2 64-bit platform.

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

**ibm.com**/training

General information

Delivery method

Classroom or self-paced virtual classroom (SPVC)

Course level

ERC 1.0

Product and version

IBM Business Monitor V8.5.7

Audience

This course is designed for implementation consultants, integration developers, IT specialists, project managers, technical business analysts, and support engineers.

Learning objectives

After completing this course, you should be able to:

* Explain monitoring concepts
* Describe the architecture of IBM Business Monitor
* Explain how IBM Business Monitor retrieves business data from various sources
* Generate events by using Dynamic Event Framework
* Develop the business measures mode
* Test Monitor models by using the unit test environment servers
* Configure the Action Services Manager
* Configure Business Monitor widgets in a business space
* Monitor events from various sources such as BPEL, BPMN, JMS and REST API.

Prerequisites

Familiarity with WebSphere related products

Duration

3 1/2 days

Skill level

Intermediate

|  |  |
| --- | --- |
| Classroom (ILT) setup requirements | |
| Processor | Intel Core i7-3630QM processor (2 CPU) |
| GB RAM | 16 |
| GB free disk space | 120 |
| Network requirements | None |
| Other requirements | 2 CPUs are required |

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 previous course:

* WB895: Developing Applications with IBM Business Monitor V8.5.5 ERC1.0

Course agenda

|  |
| --- |
| Course introduction  Duration: 15 minutes |

|  |  |
| --- | --- |
| Unit 1. Overview: BPM, BAM, and IBM Business Monitor  Duration: 1 hour | |
| Overview | This unit provides an overview of the features of IBM Business Monitor, and how IBM Business Monitor supports business process management capabilities in an organization. |
| Learning objectives | After completing this unit, you should be able to:   * Describe the business and IT challenges that the WebSphere tool set addresses * Explain the concept of business process management (BPM) * Identify the primary capabilities of IBM Business Monitor |

|  |  |
| --- | --- |
| Exercise 1. Exploring IBM Business Monitor  Duration: 1 hour and 30 minutes | |
| Overview | In this exercise, you examine the core features of IBM Business Monitor and how they function. |
| Learning objectives | After completing this exercise, you should be able to:   * Examine a monitor model in the IBM Business Monitor toolkit for IBM Integration Designer * Install a monitor model in IBM Business Monitor * Generate events * Create a business space dashboard to view performance-related data |

|  |  |
| --- | --- |
| Unit 2. IBM Business Monitor architecture and integration  Duration: 1 hour | |
| Overview | This unit describes the architecture and main components of IBM Business Monitor, and explains how it integrates with other products. |
| Learning objectives | After completing this unit, you should be able to:   * Explain the architecture of IBM Business Monitor * Describe the major components of IBM Business Monitor, including Monitor server, action services, dashboards, databases, and data movement services * Explain how IBM Business Monitor integrates with the Lotus Mashups framework |

|  |  |
| --- | --- |
| Exercise 2. Creating a monitor model  Duration: 30 minutes | |
| Overview | In this exercise, you create a monitor model from scratch. |
| Learning objectives | After completing this exercise, you should be able to:   * Create a monitor model from scratch with the event definition that contains business information |

|  |  |
| --- | --- |
| Unit 3. Monitoring events  Duration: 1 hour and 30 minutes | |
| Overview | In this unit, you learn what types of business event data can be monitored and how it is retrieved for processing by IBM Business Monitor. |
| Learning objectives | After completing this unit, you should be able to:   * Explain how IBM Business Monitor retrieves business data from various sources * Explain Dynamic Event Framework * Explain the architecture of the Common Event Infrastructure (CEI) in IBM Business Process Manager Advanced * Describe how to configure the CEI in IBM Business Process Manager Advanced to generate events for IBM Business Monitor * Describe the difference between the table-based and queue-based methods of receiving events * Differentiate between a Common Base Event and an XML schema definition event * Explain event parts |

|  |  |
| --- | --- |
| Exercise 3. Selecting events and generating a monitor model  Duration: 1 hour | |
| Overview | In this exercise, you learn how to import an existing business process and generate events for IBM Business Monitor to process. |
| Learning objectives | After completing this exercise, you should be able to:   * Import a business process * Create several inbound events for the monitor model |

|  |  |
| --- | --- |
| Unit 4. Monitor development toolkit and monitoring concepts  Duration: 1 hour | |
| Overview | This unit explains the Monitor development toolkit and how it is used to create a monitor model. |
| Learning objectives | After completing this unit, you should be able to:   * Describe the components of the IBM Business Monitor development toolkit * Explain the monitor model and define monitoring concepts * Explain the following monitor model elements:   + Inbound event   + Outbound event   + Metric   + Map   + Stopwatch   + Counter   + Trigger |

|  |  |
| --- | --- |
| Unit 5. Using the Monitor model editor to define elements  Duration: 45 minutes | |
| Overview | In this unit, you learn about the elements that a monitor model comprises. |
| Learning objectives | After completing this unit, you should be able to:   * Describe how to create a monitor model in the IBM Business Monitor toolkit * Use the Monitor model editor to create monitor models * Explain the purpose and use of monitor model templates * Define the following elements:   + Inbound event definition (event entry point)   + Outbound event definition (event exit point)   + Metric definition   + Stopwatch definition   + Counter definition   + Trigger definition |

|  |  |
| --- | --- |
| Exercise 4. Creating triggers in a monitor model  Duration: 45 minutes | |
| Overview | In this exercise, you augment the existing monitor model by adding triggers to increase the flexibility of the monitor model. |
| Learning objectives | After completing this exercise, you should be able to:   * Define triggers in the monitor model |

|  |  |
| --- | --- |
| Unit 6. Dimensional, KPI and visual models  Duration: 30 minutes | |
| Overview | This unit explains the types of common models that are used in business monitoring. |
| Learning objectives | After completing this unit, you should be able to:   * Explain dimensional and visual model support * Explain the key performance indicators (KPIs) model * Describe how user-defined functions are used in the monitor model |

|  |  |
| --- | --- |
| Exercise 5. Creating metrics in a monitor model  Duration: 1 hour | |
| Overview | In this exercise, you create metrics for your monitor model |
| Learning objectives | After completing this exercise, you should be able to:   * Create several metrics for the monitor model * Create a counter for the monitor model |

|  |  |
| --- | --- |
| Unit 7. Deploying a monitor model  Duration: 1 hour | |
| Overview | In this unit, you learn the various methods that are used to deploy models to the IBM Business Monitor runtime environment. |
| Learning objectives | After completing this unit, you should be able to:   * Explain various deployment mechanisms, such as using the administrative console with either the default settings or custom settings * Describe the steps that are involved in deploying a model * Describe how to use the administrative console to install a monitor model * Describe the options available for scripted monitor model installations |

|  |  |
| --- | --- |
| Exercise 6. Deploying and running the monitor model and the application  Duration: 1 hour | |
| Overview | In this exercise, you deploy and run the monitor model to analyze performance data. |
| Learning objectives | After completing this exercise, you should be able to:   * Complete the monitor model and generate the enterprise application * Deploy the monitor model to an IBM Business Monitor test environment |

|  |  |
| --- | --- |
| Unit 8. Using IBM Business Monitor business space dashboards to manage business processes  Duration: 1 hour | |
| Overview | In this unit, you learn how to use business space dashboards to construct customizable user interfaces for IBM Business Monitor users. |
| Learning objectives | After completing this unit, you should be able to:   * Explain the concept of the business space * Describe the business space dashboard and the benefits of using it * Use KPI history and prediction * Describe the widgets that are provided in IBM Business Monitor business space:   + KPI manager   + KPI history   + Reports   + Alerts   + Diagrams   + Instances   + Dimensions |

|  |  |
| --- | --- |
| Exercise 7. Building dashboards in IBM Business Monitor  Duration: 1 hour and 30 minutes | |
| Overview | In this exercise, you build a business space dashboard by implementing several configurable widgets. |
| Learning objectives | After completing this exercise, you should be able to:   * Generate and send events to monitor model * Start the IBM Business Monitor dashboard * Create an instance widget |

|  |  |
| --- | --- |
| Unit 9. Managing action services and event emissions  Duration: 1 hour | |
| Overview | In this unit, you learn how to use the monitor action services component of IBM Business Monitor to take defined actions when events occur within a model. |
| Learning objectives | After completing this unit, you should be able to:   * Describe monitor action services * Describe how to create action services * Define situation events * Explain how to bind situation events to action services * Describe how to register an action service |

|  |  |
| --- | --- |
| Exercise 8. Monitoring events from a BPEL process  Duration: 2 hours and 30 minutes | |
| Overview | In this exercise, you monitor events from BPEL process using IBM Business Monitor. |
| Learning objectives | After completing this exercise, you should be able to:   * Complete a model and then generate events from a BPEL process for monitoring * Create process instances by using the Business Process Choreographer (BPC) Explorer to generate monitored events * Create an alert template * Create situation events and bind them to action services * Start the IBM Business Monitor dashboard and create several widgets |

|  |  |
| --- | --- |
| Unit 10. Monitoring events from other products  Duration: 1 hour | |
| Overview | This unit explains how IBM Business Monitor can process events from IBM and non-IBM products. |
| Learning objectives | After completing this unit, you should be able to:   * Explain how IBM Business Monitor can receive events from:   + IBM CICS   + IBM IMS   + IBM FileNet   + IBM Operational Decision Management   + IBM Business Process Manager Advanced   + IBM Integration Bus   + Other applications (through IBM Adapters) and application programming interfaces for WS-Notification, Java Message Service, and Representational State Transfer (REST) |

|  |  |
| --- | --- |
| Exercise 9. Monitoring events from IBM Integration Bus  Duration: 30 minutes | |
| Overview | In this exercise, you implement a model that is exported from IBM Integration Bus to demonstrate how events from another product can be processed within IBM Business Monitor. |
| Learning objectives | After completing this exercise, you should be able to:   * Explore a sample monitor model that is exported from IBM Integration Bus message flow * Test the monitor model in the Monitor test environment server |

|  |  |
| --- | --- |
| Exercise 10. Monitoring events from a BPMN process  Duration: 2 hours | |
| Overview | In this exercise, you monitor events from a BPMN process using IBM Business Monitor. |
| Learning objectives | After completing this exercise, you should be able to:   * Import a process in IBM Process Designer * Enable tracking in a process * Generate monitor model for a process application and then deploy to monitor server * Run process instances in Process Portal * View the data in Business Space |

|  |  |
| --- | --- |
| Exercise 11. Monitoring events from JMS emitter and REST emitter.  Duration: 1 hour and 30 minutes | |
| Overview | In this exercise, you configure two emitters: a JMS emitter and a REST emitter to emit events to IBM Business Monitor. |
| Learning objectives | After completing this exercise, you should be able to:   * Create JMS resources in IBM Business Monitor * Create a queue manager and a queue in IBM WebSphere MQ * Emit events from IBM WebSphere MQ that are consumed by IBM Business Monitor * Use SOAPUI to send REST events that are consumed by IBM Business Monitor |

|  |  |
| --- | --- |
| Unit 11. Administering IBM Business Monitor and monitor models  Duration: 1 hour | |
| Overview | This unit explains how to do some basic administrations tasks in IBM Business Monitor and monitor models. |
| Learning objectives | After completing this unit, you should be able to:   * Describe the features of the IBM Business Monitor administrative console * Configure Monitor model runtime properties and resources * Explain and configure Monitor model securityRecord and play back eventsView event details and import events |

|  |  |
| --- | --- |
| Unit 12. Maintaining and troubleshooting IBM Business Monitor  Duration: 1 hour | |
| Overview | This unit explains how to do some basic maintenance and troubleshooting in IBM Business Monitor and monitor models. |
| Learning objectives | After completing this unit, you should be able to:   * Explain how to manage Monitor model versions * Describe how to create, review, and remove Monitor model versions and data * Explain the maintenance steps for the IBM Business Monitor database * Describe how to manage monitor scheduled services * Describe failed and unrecoverable events and how to manage them * Describe the configuration and use of log files and trace * Describe considerations for handling exceptions that occur during monitor execution * Explain additional troubleshooting considerations |

|  |  |
| --- | --- |
| Unit 13. Course summary  Duration: 30 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 * Identify other IBM Training courses that are related to this course * Access the IBM Training website * Locate appropriate resources for further study |

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