**IBM Cloud Application Performance Management 8.1.4 Fundamentals**

Description: 5300_IBMpos

**TM674 (Classroom)**



Course description

This course teaches new and experienced operators, administrators, and implementers of Application Performance Management v8.1.4 how to effectively use the tools to manage their enterprise monitoring needs.

IBM Cloud Application Performance Management v8.1.4 monitors the performance and availability of computer operating systems and applications

In this course, you learn about the IBM Cloud Application Performance Management architecture and how to install and configure the product. You also learn how to navigate the Cloud APM console to manage events and user access privileges. The course also covers integration with other products, such as Netcool/OMNIbus, IBM Tivoli Monitoring, and the Dashboard Application Services Hub.

The lab environment for this course uses the RHEL 7.3 and Windows 2012 Server platforms.

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

http://www.ibm.com/training

General information

Delivery method

Classroom

Course level

ERC 1.0

Product and version

IBM Cloud Application Performance Management 8.1.4

Audience

This course is designed for operators, administrators, and implementers

Learning objectives

After completing this course, you should be able to:

* Describe the overall solution
* Install and configure the Cloud APM server
* Install, configure, and manage operating system agents
* Administer Cloud APM, including:
  + Applications
  + Users
  + Groups
  + Custom views
  + LDAP integration
* Monitor events
* Deploy and monitor the end user experience
* Deploy and monitor applications with synthetic transactions
* Deploy and monitor application resources
* Track transactions through application components
* Configure and perform deep-dive request analysis
* Integrate Cloud APM with other solutions
* Configure and generate reports

Prerequisites

Before taking this course, you should be able to navigate Linux and Windows applications, and have a working knowledge of an Internet browser.

Duration

3 days

Skill level

Intermediate

Notes

The following unit and exercise durations are estimates, and might not reflect every class experience.

This course is an update of the following previous courses:

* TM672G, *IBM Application Performance Management Advanced 8.1.3 Fundamentals*
* TM673G, *IBM Monitoring 8.1.3 Implementation and Administration*

Course agenda

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| Course introduction  Duration: 10 minutes |

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| Unit 1. Introduction to IBM Cloud Application Performance Management  Lecture: 1 hour and 15 minutes  Exercises: 15 minutes | |
| Overview | This unit introduces IBM Cloud Application Performance Management and describes its architecture. It explains the agents that are available with IBM Cloud Application Performance Management, and identifies the products that IBM Cloud Application Performance Management integrates with.  In the exercises, you start and verify the lab environment, access the DayTrader application, and make a simple stock trade. |
| Learning objectives | After completing this unit, you should be able to:   * Describe IBM Cloud APM and its architecture * List some monitoring agents and categories of monitoring agents * Describe application-based monitoring * Describe some examples of monitoring agent output * Explain integration with other products * Describe the classroom lab environment |

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| Unit 2. Cloud APM server installation  Lecture: 30 minutes  Exercises: 1 hour and 30 minutes | |
| Overview | This unit covers the installation of the Cloud APM server. You learn about packaging, prerequisites, and the step-by-step installation instructions.  In the exercises, you install the Cloud APM server and several operating system monitoring agents. |
| Learning objectives | After completing this unit, you should be able to:   * Describe the installation process for Cloud APM * Explain the prerequisites and the prerequisite checker * Install and configure the Cloud APM server |

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| Unit 3. Installing, configuring, and managing Cloud APM agents  Lecture: 45 minutes  Exercises: 1 hour | |
| Overview | This unit covers the installation of the Cloud APM monitoring agents on both Windows and Linux environments. You learn how to install and pre-configure monitoring agents, stop and start an agent, and access data from an agent. You also learn how to configure and use the log file agent capabilities of the Monitoring agent for Linux OS.  In the exercises, you install several operating system monitoring agents. You manage those operating system agents and access data from them. You also configure and access log file data from the operating system agents. |
| Learning objectives | After completing this unit, you should be able to:   * Install and pre-configure the various types of Cloud APM agents * Start and stop the Cloud APM agents * Access data from a Cloud APM agent * Configure and use the log file agent |

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| Unit 4. Administration  Lecture: 1 hour and 30 minutes  Exercises: 1 hour and 30 minutes | |
| Overview | This unit teaches you how to manage the components of the Cloud APM server, and how to use and administer the Cloud APM console.  In the exercises, you learn how to manage the Cloud APM server. You create applications that are composed of the data from the monitoring agents. You create several custom views. You also explore the Attribute details of various agents and save customized charts with other users. Additionally, you create new users and assign capabilities to those users. Optionally, you set up the Cloud APM server to connect to LDAP. |
| Learning objectives | After completing this unit, you should be able to:   * Manage the Cloud APM server components * Describe the major functions that are involved in managing applications * Create custom views in the Cloud APM console * Use attribute details to access data from an agent * Manage users of the Cloud APM console |

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| Unit 5. Monitoring events  Lecture: 30 minutes  Exercises: 1 hour | |
| Overview | This unit covers how to create, update, and delete thresholds, which in turn create events. You explore the Threshold Manager, where you create and modify thresholds that create events if the defined thresholds are met. You also learn how to use the resource group manager, which determines which agents on specific servers evaluate the thresholds that are defined.  In the exercises, you learn the relationship between thresholds and events. You create thresholds that test for simple and multiple conditions. You create thresholds that run commands to solve the issues they detected. You adjust resource groups and learn the impact of these adjustments on thresholds and events. |
| Learning objectives | After completing this unit, you should be able to:   * Describe the use of events in Application Performance Management * Describe how thresholds are used to create events * Create resource groups to manage the events for managed systems in your enterprise |

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| Unit 6. Monitoring the end user experience of applications  Lecture: 1 hour  Exercises: 45 minutes | |
| Overview | In this unit, you learn how to monitor the user experience of your application by monitoring the HTTP requests that the user makes to your application.  In the exercises, you deploy front-end transactional monitoring with the Response Time and HTTP Server agents. |
| Learning objectives | After completing this unit, you should be able to:   * Describe user experience monitoring * Describe and navigate Response Time and HTTP Server agent data in the Performance Management console * Deploy the Response Time agent, HTTP Server agent, and JavaScript injection |

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| Unit 7. Monitoring applications with synthetic transactions  Lecture: 45 minutes  Exercises: 30 minutes | |
| Overview | In this unit, you learn how to monitor an application by using synthetic transactions.  In the exercises, you create a synthetic transaction for playback and monitoring. By completing these tasks, you enable periodic monitoring of the website that the script accesses. |
| Learning objectives | After completing this unit, you should be able to:   * Describe how to monitor an application with synthetic transactions * Describe and navigate the synthetic transaction data in the IBM Cloud APM console * Deploy synthetic transaction monitoring in an IBM Cloud APM, Advanced Private environment |

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| Unit 8. Monitoring resources  Lecture: 45 minutes  Exercises: 1 hour | |
| Overview | This unit covers installation and configuration of monitoring agents on the Windows and Linux environments. You learn about agent installation, configuration, and resource-monitoring features of monitoring agents.  The exercises begin by guiding you through the installation of the WebSphere and DB2 monitoring agents on the Linux system. You then use the workspaces of those monitoring agents to review some of the resources that Cloud APM, Private can monitor. You see how resource monitoring helps you identify and address potential issues with your infrastructure, application components, and workloads. |
| Learning objectives | After completing this unit, you should be able to:   * Describe the features of resource monitoring * Explain the types of configuration * Configure monitoring agents for DB2, WebSphere, and Node.js (agent and data collectors) |

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| Unit 9. Tracking transactions through application components  Lecture: 45 minutes  Exercises: 15 minutes | |
| Overview | In this unit, you learn about the transaction tracking features of IBM Cloud Application Performance Management, Advanced.  In the exercises, you access the information that transaction tracking collects, and learn how to interpret this data. You also learn how to turn transaction tracking off. |
| Learning objectives | After completing this unit, you should be able to:   * Describe the major functions of transaction tracking * List monitored domains that support transaction tracking * Explain how to enable and disable transaction tracking |

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| Unit 10. Introduction to deep-dive diagnosis  Lecture: 1 hour  Exercises: 1 hour and 30 minutes | |
| Overview | This unit is a technical overview of the code-level monitoring features of IBM Cloud Application Performance Management, Advanced.  The exercises illustrate code-level monitoring that uses the example of the WebSphere monitoring agent. |
| Learning objectives | After completing this unit, you should be able to:   * Describe deep-dive diagnosis * Explain the code-level monitoring features of all agents * Explain additional code-level monitoring features of select agents * Plan deep-dive resource monitoring * Configure monitoring agents and data collectors for deep-dive diagnosis |

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| Unit 11. Integrating Cloud APM with other products  Lecture: 1 hour and 30 minutes  Exercises: 1 hour and 15 minutes | |
| Overview | This unit describes how to integrate IBM Tivoli Monitoring, Netcool/OMNIbus, IBM Operations Analytics Log Analysis, Dashboard Application Services Hub, and other products with IBM Cloud APM.  In the exercises, you integrate Cloud APM with IBM Tivoli Monitoring, IBM Netcool/OMNIbus, and IBM Dashboard Application Services. You also configure email notification and examine other advanced configuration options. |
| Learning objectives | After completing this unit, you should be able to:   * Describe how Cloud APM can integrate with other products * Integrate IBM Tivoli Monitoring * Integrate Netcool/OMNIbus * Integrate IBM Cloud and IBM Cloud Private * Monitor API Connect * Populate Dashboard Application Services Hub with Cloud APM agent data |

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| Unit 12. Reporting and 7-day comparison  Lecture: 30 minutes  Exercises: 30 minutes | |
| Overview | In this unit, you learn how to display 7-day comparison reports and install and run Tivoli Common Reporting reports.  In the exercises, you learn how to use historical 7-day comparison, in which certain widgets that display information are compared against the same time frames from other days. You also learn how to install and access Tivoli Common Reporting reports. |
| Learning objectives | After completing this unit, you should be able to:   * Produce a historical 7-day comparison * Install and run reports |

For more information

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