**IBM Application Performance Management Advanced 8.1.3 Fundamentals**



TOD45 (SPVC)

# Course description

This course covers the key features of IBM Application Diagnostics, including installation, configuration, resource monitoring, and transaction diagnosis. Exercises will be carried out for a WebSphere Application Server and Node.js agents. All other domains will be covered using slides. For information about other related courses, visit the Cloud & Smarter Infrastructure education training paths website:

The lab environment for this course uses the <PLATFORM> platform.



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

<http://www.ibm.com/training>

# General information

**Delivery method**

Self-paced virtual learning (SPVC)

**Course level**

ERC 1.0

**Product and version**

IBM Application Performance Management Advanced 8.1.3

**Audience**

This course is designed for application-monitoring specialists and technical sales personnel.

**Learning objectives**

* Describe the IBM Application Performance Management Advanced architecture
* Learn the monitoring features of the four supported IBM Application Diagnostics agents
* Monitor resources, application code, transactions, and users with the WebSphere agent

**Prerequisites**

Before taking this course, make sure that you have the following skills:

* Familiarity with application server monitoring
* Familiarity with the Performance Management Console
* Familiarity with the Tivoli Enterprise Portal

Before taking this course make sure that you have taken the following courses:

* IBM Monitoring 8.1.1 Implementation and Administration (TM065)
* InterConnect 2015 CAP-3630: Introduction to Application Performance Management (recommended but not required)

**Duration**

1 day

**Skill level**

Intermediate

**Classroom (ILT) setup requirements (not necessary for SPVC)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Configuration for each student | | | | | |
| System label | Machine type and processor | RAM | Hard disk | Display resolution | Operating system |
| LIN1 | 2.5 GHz or faster Multi Core (4 processors) | 4096 MB | 45 GB | 1280 X 1024 | SLES 11.3 64-bit |
| LIN2 | 2.5 GHz or faster Multi Core (4 processors) | 9000 MB | 100 GB | 1280 X 1024 | RHEL 6.5 64-bit |
| APM | 2.5 GHz or faster Multi Core (8 processors) | 13000 MB | 100 GB | 1280 x 1024 | RHEL 6.5 64-bit |

|  |  |
| --- | --- |
| Required network configurations | |
| Network configuration | Classroom requirement |
| Specify isolated networks or a single network | isolated networks |
| Specify whether Internet access is required | must not be provided during set-up, but not necessary during class |
| Specify whether a DHCP server is required | not necessary |
| Specify whether promiscuous mode is required | not necessary |

|  |  |  |  |
| --- | --- | --- | --- |
| Required software for class | | | |
| Software product | Version | Operating systems | System labels requiring software product |
| SLES | 11.3 64-bit | SLES 11.3 64-bit | LIN1 |
| RHEL | 6.5 64-bit | RHEL 6.5 64-bit | APM, LIN2 |
| DNSMASQ, downloaded from here:  http://www.thekelleys.org.uk/dnsmasq/doc.html |  | Linux | APM |
| IBM Application Performance Management Advanced 8.1.3 eAssembly: CRW73ML  Part numbers  Agents Lin 64: CNAR4ML  APM Advanced 64 Lin server: CNAR3ML | 8.1.3 | Linux | APM |
| WebSphere Application Server  Part numbers:CIYW0ML | 8.5.5.2 | Linux | LIN1 |
| IBM Installation Manager  Part number:CIK2GML | 1.6.2 | Linux | LIN1 |
| WebSphere Application Server Supplements  Part numbers:  CI6X0ML,  CI6X1ML,  CI6X2ML |  |  |  |
| DB2  Part Number: CI1VXEN  DB2\_9704\_limited\_CD\_Linux\_x86-64.tar.gz | 9.7.0.4 | Linux | LIN1 |
| DayTrader WAS sample application  Download-able from here:  http://www-01.ibm.com/software/webservers/appserv/was/performance.html | 3 | Linux | LIN1 |
| Selenium IDE, downloaded from http://www.seleniumhq.org/download/ |  | Linux | LIN1 |
| IBM Installation Manager (from http://www-01.ibm.com/support/docview.wss?uid=swg24039012#DNLD) | 1.8.2 | Linux 64 bit | LIN2 |

# Notes

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

This course is a new course.

# Course agenda

The course contains the following units:

1. Monitoring with IBM Application Performance Management Advanced

This presentation is technical overview of IBM Performance Management and Application Diagnostics.

Number of exercises: 4

Estimated time: Presentation, 30 minutes; exercises, 30 minutes

In this unit, you learn to perform the following tasks:

* + Describe IBM Application Performance Management 8.1.3 Advanced, including IBM Application Diagnostics
  + Describe the architecture

1. Monitoring application resources

This presentation is a technical overview of the resource-monitoring features of IBM Application Diagnostics agents.

Number of exercises: 2

Estimated time: Presentation, 30 minutes; exercises, 45 minutes

In this unit, you learn to describe the resource-monitoring features of currently supported agent domains for IBM Application Diagnostics:

* + MS .NET
  + Node.js
  + Ruby
  + WebSphere Application Server

1. Code-level monitoring

This presentation is a technical overview of the code-level monitoring features of IBM Application Diagnostics.

Number of exercises: 2

Estimated time: Presentation, 30 minutes; exercises, 60 minutes

In this unit, you learn to describe the code-level monitoring features of supported agent domains for IBM Application Diagnostics.

1. Transaction tracking

This presentation is an overview of the transaction monitoring features of IBM Application Performance Management Advanced.

Number of exercises: 2

Estimated time: Presentation, 60 minutes; exercises, 30 minutes

In this unit, you learn to describe the transaction monitoring features of IBM Application Performance Management Advanced, including Application Diagnostics.

1. Synthetic transaction and user monitoring

This presentation is an overview of the transaction monitoring features of IBM Application Performance Management Advanced for synthetic transactions, websites, and users.

Number of exercises: 3

Estimated time: Presentation, 30 minutes; exercises, 45 minutes

In this unit, you learn to describe these features of IBM Application Performance Management Advanced and Application Diagnostics for monitoring:

* + Synthetic transactions
  + Users

# For more information

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

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

## Monitoring with IBM Application Performance Management Advanced

Lesson 1 Overview and architecture

Lesson 2 Performance Management console Exercise 1 Starting DB2

Exercise 2 Modifying the gdc\_custom.properties file Exercise 3 Starting the DayTrader script

Exercise 4 Accessing the Performance Management console

1. **Monitoring application resources** Lesson 1 Monitoring .NET resources Lesson 2 Monitoring Node.js resources Lesson 3 Monitoring Ruby resources Lesson 4 Monitoring WebSphere resources

Exercise 1 Monitoring WebSphere resources Exercise 2 Monitoring the heap

## Code-level monitoring

Lesson 1 Code-level monitoring

Lesson 2 Additional features of the WebSphere agent Exercise 1 Accessing code-level data for WebSphere Exercise 2 Generating more traffic

## Transaction tracking

Lesson 1 Components supporting transaction tracking Lesson 2 How topologies work

Lesson 3 Using topologies

Exercise 1 Exploring aggregate topologies

Exercise 2 Exploring transaction instance topologies

1. **Synthetic transaction and user monitoring** Lesson 1 Monitoring synthetic transactions Lesson 2 Monitoring users

Exercise 1 Configuring a synthetic transaction Exercise 2 Creating a synthetic application Exercise 3 Viewing synthetic transactions

## Appendix A

Exercise 1 Reviewing more Node.js configuration options Exercise 2 Generating Node.js traffic

Exercise 3 More configuration options

Exercise 4 Logging in to the Performance Management console

Exercise 5 Creating the Keystone application in the Performance Management console Exercise 6 Monitoring Node.js resources