Administering Environments with IBM Instana Observability

TN201 (Classroom)

ZN201 (Self-paced)

Course description

In this course, you learn how to perform observability and application performance monitoring functions using IBM Instana Observability. You learn the architecture of Instana and how the data flows from the sensors and tracers, through the agents, and to the big data backend. You learn essential user interface techniques and how to create application perspectives and to use their dashboards to monitor the services. In addition, this course describes distributed tracing and how IBM Instana AutoTrace works and how to quickly trace issues down to the root cause. You also learn how the differences between changes, issues, and incidents and how to create alerts to notify team members when certain criteria is met. You experiment with establishing roles for users with group permissions. And you learn how to create custom dashboards to help you keep track of the things for which you are responsible.

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 Instana Observability

Audience

This course is designed for those who need to know what Instana is capable of doing for their enterprise and for those who need to maintain the stability and uptime of their applications and for those who are interested in optimizing performance and response times and user experiences.

Learning objectives

After completing this course, you should be able to:

* Describe the purpose of IBM Instana Observability and why it is needed
* Check to ensure that all the services are enabled and running
* Use Instana user interface features and dashboards
* Navigate the Infrastructure map, perform Dynamic Focus Queries, and compare services using the Comparison table
* Create application perspectives and analyze services and endpoints
* Track down issues to the root cause using the dashboards, analytics, and tracing features
* Use incidents, issues, and changes to help observe a system
* Create custom events, alert channels, and alerts
* Configure Smart Alerts and Custom Payloads
* Manage user roles using group permissions
* Create custom dashboards

Prerequisites

* Fundamental understanding of distributed applications
* Knowledge of Linux a plus

Duration

2 days

Skill level

Intermediate

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 part of the IBM Instana Observability learning path.

Course agenda

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| Course introductionDuration:  |

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| Unit 1. Essentials of IBM Instana ObservabilityDuration: 45 minutes |
| Overview | This unit explains the need for an enterprise observability and Application Process Monitoring (APM) tool. It also explains how to sign on to the IBM Instana user interface and how to verify the status of the IBM Instana host agents. |
| Learning objectives | After completing this unit, you should be able to:* Explain the need for an enterprise observability and Application Process Monitoring (APM) tool
* Sign in to the IBM Instana user interface
* Verify the status of the IBM Instana host agents
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| Exercise 1. Introduction to IBM Instana ObservabilityDuration: 45 minutes |
| Overview | This exercise covers familiarization with the Lab environment, how to configure the Robot host as the main interface to the lab exercises for all hosts, how to start services on all the hosts, and to verify that the two web sites are accessible, specifically, the Instana GUI and Stan's Robot Shop microservices website. |
| Learning objectives | After completing this exercise, you should be able to:* Connecting to the Robot virtual machine
* SSH into the Instanaserv host from the Robot host
* Start services on the Instana server
* Start services on the Robot Shop server
* Verify that you can access the Instana GUI from the Robot host
* Verify that you can access Stan's Robot Shop web application
* Start services on the DB2 server
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| Unit 2. Introduction to IBM Instana ObservabilityDuration: 45 minutes |
| Overview | This unit provides a proper introduction to IBM Instana Observability, and it explains what IBM Instana is and the problems it helps to solve. You learn the core APM and Observability concepts of IBM Instana and the basic architecture. You also learn more about some additional user interface features. |
| Learning objectives | After completing this unit, you should be able to:* Explain what IBM Instana is and the problems it helps to solve
* Define the core APM and Observability concepts of IBM Instana
* Describe basic IBM Instana architecture
* Demonstrate essential user interface features
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| Exercise 2. Introduction To InstanaDuration: 25 minutes |
| Overview | This exercise introduces you to some of the Instana user interface features. |
| Learning objectives | After completing this exercise, you should be able to:* Understand how to use the Tools pane
* Use the Time Window
* Utilize the Time-Correlated graphs
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| Unit 3. Infrastructure view and Dynamic Focus QueryDuration: 1 hour |
| Overview | This unit introduces the Infrastructure map and how to access dashboard from the map. You learn how to perform Dynamic Focus Queries, filters, and saved searches. You also learn to compare different services and entities using the Comparison Table feature. |
| Learning objectives | After completing this unit, you should be able to:* Use features of the Infrastructure map
* Access dashboards from the Infrastructure map
* Perform Dynamic Focus Queries, filters, and searches
* Save searches
* Use the Comparison Table feature
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| Exercise 3. Infrastructure View and Dynamic Focus QueriesDuration: 35 minutes |
| Overview | In this lab, you learn various aspects of the Infrastructure map, Comparison Table, and Dynamic Focus Queries |
| Learning objectives | After completing this exercise, you should be able to:* Log in to Instana’s GUI
* Explore the Infrastructure view map
* Explore the Infrastructure view Comparison Table
* Interact with the Infrastructure map features
* Perform Dynamic Focus Queries
* Search for a Docker container that runs an Instana agent
* Create a Dynamic Focus search query for a specific JVM based application
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| Unit 4. Applications and ServicesDuration: 1 hour and 30 minutes |
| Overview | This unit describes the purpose of application perspectives. You learn how to create application perspectives and how to use some of their dashboard options. |
| Learning objectives | After completing this unit, you should be able to:* Describe the purpose of application perspectives
* Create an application perspective
* Describe the application perspective dashboard options
* Analyze services and endpoints
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| Exercise 4. Applications and ServicesDuration: 1 hour |
| Overview | In this exercise, you learn about Application Perspectives, how to create them, and how to use them to explore various views of information. |
| Learning objectives | After completing this exercise, you should be able to:* Start the Load Generator tool on the Robot image
* Create the Robot Shop application perspective
* Use the Context Guide’s Stack option
* Use the Robot Shop Upstream / Downstream views
* Use the various Robot Shop application tabs
* Utilize the Services tab
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| Unit 5. Analytics and TracingDuration: 1 hour |
| Overview | This unit describes distributed tracing with IBM Instana. You also learn how IBM Instana AutoTrace™ works. You learn how to identify services and endpoints and what they mean. You learn how to use the Analytics feature to trace the root cause of issues. |
| Learning objectives | After completing this unit, you should be able to:* Describe the distributed tracing with IBM Instana
* Describe how IBM Instana AutoTrace™ works
* Identify services and endpoints
* Use the Analytics feature to trace the root cause of errors
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| Exercise 5. Analytics and TracingDuration: 30 minutes |
| Overview | This unit describes distributed tracing with IBM Instana. You also learn how IBM Instana AutoTrace™ works. You learn how to identify services and endpoints and what they mean. You learn how to use the Analytics feature to trace the root cause of issues. |
| Learning objectives | After completing this exercise, you should be able to:* Groups calls
* Filter calls
* Use the Stack option to navigate the Infrastructure to view a specific host
* Trace calls
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| Unit 6. Events and AlertsDuration: 1 hour and 45 minutes |
| Overview | This unit describes how to navigate the user interface for events and alerts. It also covers how to use incidents, issues, and changes to help you observer your system. You learn to create custom events, alert channels, and custom alerts. This unit also describes Smart Alerts and Custom Payloads. |
| Learning objectives | After completing this unit, you should be able to:* Navigate the user interface for events and alerts
* Use incidents, issues, and changes to help you observe your system
* Create custom events
* Configure alert channels
* Configure custom alerts
* Describe Smart Alerts
* Configure Custom Payloads
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| Exercise 6. Events and AlertsDuration: 40 minutes |
| Overview | In this exercise, you will explore built-in Events, filter Events, create a custom Events, configure an Alert Channel, and configure an Alert. |
| Learning objectives | After completing this exercise, you should be able to:* Locate built-in Events
* Filter Events
* Create custom Events
* Create Alert Channels
* Create Alerts
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| Unit 7. Users and GroupsDuration: 30 minutes |
| Overview | This unit describes Instana's role-based access control. You learn how to configure identity providers (LDAP and Google SSO) and how to create and manage groups and group permissions. You also learn how to create and manage user accounts. |
| Learning objectives | After completing this unit, you should be able to:* Describe Instana's role-based access control
* Configure identity providers
* Create and manage groups
* Create and manage user accounts
* Reset LDAP
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| Exercise 7. Users and GroupsDuration: 40 hours |
| Overview | In this exercise you integrate Instana users with a test LDAP server, verify the permissions of the new admin user, test other LDAP users and their permissions and learn how to govern permissions through role-based permissions of groups. You also learn to adjust group permissions and how to reset Instana’s LDAP configuration. |
| Learning objectives | After completing this exercise, you should be able to:* Integrate Instana users with a test LDAP server
* Verify your new main administrator
* Test other LDAP users and their limited permissions
* Create a custom role for a user by creating a new group
* Verify the custom group permissions
* Add more permissions to the custom group (role)
* Reset LDAP integration
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| Unit 8. Custom DashboardsDuration: 40 minutes |
| Overview | This unit describes the features of the built-in dashboards and how to create custom dashboards. You learn how to set a custom dashboard as the new landing page. Since dashboards are essentially a collection of widgets, you learn several widget types and how to configure some. You also learn how to make your custom dashboards public so that they can be accessed by others and also so that they can be used by the REST API. |
| Learning objectives | After completing this unit, you should be able to:* Use the features of the built-in dashboards
* Set a custom dashboard as the new landing page
* Create custom dashboards
* Describe the types of widgets
* Make a dashboard public
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| Exercise 8. Custom DashboardsDuration: 30 minutes |
| Overview | In this exercise, you examine the option of building native custom dashboards directly within Instana. You also learn how to add and configure different kinds of widgets to a custom dashboard. |
| Learning objectives | After completing this exercise, you should be able to:* Create an empty custom dashboard
* Add a graph to a dashboard
* Modify a custom widget
* Add more widgets to the dashboard
* Share your custom dashboard
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| Unit 9. 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