

# **OnCommand Insight: Intelligent Operation (OCIO)**

**Modality: Virtual Classroom**

**Duration: 2 Days**

**NATU: 24 Units**

## **About the course:**

The course enables you to get command over some of the most important features of NetApp OnCommand Insight. The course gives you a relevant and concise training in the usage of day-to-day requirements of NetApp OnCommand Insight features. These requirements pertain to the monitoring, day-to-day management, and troubleshooting of the data infrastructures. The course will give you a professional certification to use in your workforce environment.

The focus of this course is on the Insight features that will assist in the day-to-day system administration tasks in your workforce environment. The course will essentially equip you with skills that will assist you in adequate management of your professional work. If your interest lies in the Insight features of NetApp, related to business reporting or IT department integration, you can look for the course which offers learning and training in these fields.

The course offers you with seven modules in total. In each of the six modules, the course will teach you how to tackle the administrative storage matter. The use of the Insight features, alongside, will allow you to resolve the issue easily and effectively. The course, in this way, helps you to resolve administrative issues that come in the way. You will learn the basic techniques to tackle fundamental issues and through that practice, you will be able to apply the Insight features to other complex issues.

## **Course objectives:**

The course has the following learning objectives:

- Create realistic near-time visualizations of data infrastructure
- Enforce and oversee policies for data-path infrastructure
- Pinpoint prospective prolonging in the performance of the network
- Conduct an analysis of the root cause of issues that deteriorate the performance
- Enforce the proactive overseeing of application-level performance
- Recognize the NFS client hosts that contend for resources
- Smoothly incorporate new assets in a data infrastructure

## **Audience:**

The course has been significantly designed to fulfill the requirements of sales engineer, infrastructure engineer, customers, and NetApp partners.

## **Prerequisites:**

- OnCommand Insight: Fundamentals (Required)

## Course Outline:

### Module 1: Visualizing your Data Infrastructure

- What is Insight
- How to use Insight
- Assets dashboard and UI toolbar
- Resources, dashboards and widgets
- Infrastructure navigation
- Resource pages
- Adding, removing and modifying timelines
- Custom dashboards
- Creating custom queries
- Adding filters
- Creating dashboards
- Widget library
- Custom dashboard
- Annotations
  - Creation
  - Applying
  - Rules

### Module 2: Data Path Management and Policies

- Insight Java UI primary pane
- Navigating the primary pane
- Grouping
- Search options
- Microview toolbar
- Data path policies configuration
  - Menu
  - Storage tab
  - Policies
- Data path analysis tools
  - SAN path violations page
  - Microview panes
  - Topology pane
  - FC ports panes

### Module 3: Performance Policy Creation, monitoring and troubleshooting

- Network performance monitoring
- Data flow
- Zero-buffer-credit state
- Performance policies
  - Violations dashboard

- Policy dialog box
- Setup
- Port policy options
- Alert thresholds
- Policy pages
- Slow drain devices detection
- Finding violations of port performance
  - Expert views: metrics
  - Port and node metric comparisons
- Diagnosis of slow drain device

## **Module 4: Virtual Resource Management and Tools for Root Cause Analysis**

- Virtual resource pages
- Queries
- Building a dashboard with VM data
- Global searches
- Application resource pages
- Performance and correlated resources
- Correlated resources investigations
- Greedy resource
- Tracing correlations
- VM comparison

## **Module 5: Application Infrastructure Monitoring and the Anomaly Detection Engine**

- Application resources creations
- Data resources
- Insight applications
- Anomaly scores
- Finding anomalies
- Anomaly widgets
- Analytical tools
- Examining an anomaly

## **Module 6: Ethernet Monitoring and Troubleshooting**

- Traditional OnCommand Insight view
- New Insight I/O workload contributors chart
- NFS workload monitoring
- Ethernet monitoring
- EMU restrictions
- Internal volume page
- NFSv3 contributors chart
- NFS client activity chart

## **Module 7: Integrating New Resources and Alert Setup**

- Data sources and resources
- Vendor options
- Amazon S3 data sources
- Polling intervals
- Physical hosts
- Port hosts
- Host discovery and resolution
- Policy alerts and setup
- Assure events notification

## Labs:

- Create a dashboard showing top 10 internal volumes for the last 24 hours
- Create an environment annotation list with the values of prod and dev, and bulk apply the annotations to objects using a query
- Create a query to filter virtual machines named ?SE?, use the query to create an annotation rule
- Create an annotation rule based on a query to tag slow running development virtual machines with a note annotation with a value of ?SLOW?
- Create a dashboard to reflect various aspects of the environment
- Analyze a single point of failure
- Analyze a missing redundancy violation for a virtual machine
- Analyze a path outage between a host and storage
- Analyze a switch hop count violation
- Use the Java client to set violation thresholds
- Use the web UI to configure warning violation notification
- Analyze the performance of the BSM system application and show the degradation is due to a slow drain device
- Examine in more detail the performance of the BSM system application and determine associated storage port BB credit zero errors in the same fabric
- Analyze the performance of the exchange application and show the degradation is due to a resource contention
- Analyze a latency violation for Italian\_Air\_VM and determine root cause
- Create an application annotation and apply it to a virtual machine
- Analyze an anomaly for an application
- Create a query to identify all applications with an anomaly score >50
- Create a dashboard to display applications with high anomaly scores
- Demonstrate the function of the anomaly engine as it reduces anomaly scores based on learned performance behavior
- Analyze the ERP system application based on a high anomaly score
- Create a performance policy to monitor virtual machine swap rates
- Explore application performance
- Explore virtual machine performance
- Explore hypervisor host performance
- Explore datastore performance
- Explore internal volume performance