



Enterprise Computing Solutions - Education Services

TRAINING OFFERING

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ONTAP Performance Analysis (ONTAP 9.6)

CODE:**LENGTH:****PRICE:**

NEP_OT-CLU-PA9.6

3 day(s)

€2,850.00

Description

This course enables you to collect and analyze system performance data from NetApp® storage systems that run NetApp ONTAP® 9 software. You learn how to interpret data and how to identify and implement changes that improve system efficiency. You also learn how to use system commands and features to monitor and enhance storage system performance. You learn from hands-on exercises, case studies, and technical discussions.

Objectives

This course focuses on enabling you to do the following:

- Describe how to use NetApp tools for performance measurement
- Describe the layers within the ONTAP architecture
- Diagram the flow of read and write requests through the network and data layers of ONTAP software
- Discuss how storage quality of service (QoS) operates in an ONTAP cluster
- Explain how to monitor and manage workload performance
- Use the performance analysis tools to identify NAS and SAN performance obstacles

Audience

Professionals who manage NetApp storage systems and would like a deeper understanding of Clustered Data ONTAP system performance

Prerequisites

Hands-on experience with ONTAP software (6 months to 12 months) is required in addition to the OT-CLU-DPA instructor led class.. [OT-CLU-DPA - ONTAP Cluster Administration & Data Protection](#)

Programme

Basic Concepts of Performance

Module 1: Performance Analysis Fundamentals Performance Monitoring Methodology **Module 2: Performance Analysis Tools**

Performance terminology

FAS and AFF Architecture
Data Flow

Using Active IQ Unified Manager

Module 3: Storage System Architecture and Data Flow

NVRAM Functionality

WAFL Functions

Identifying CPU Performance Bottlenecks

WAFL Readahead

Resolving CPU Performance Bottlenecks

Module 4: WAFL Resolving WAFL issues

Module 5: CPU and Memory

Identifying Memory Performance Bottlenecks

Disk Subsystem Hardware

Analyzing and Isolating Disk Subsystem Bottlenecks

Analyzing Disk Subsystem Bottlenecks with Statiit

Module 6: Disk Subsystem

Resolving Disk Subsystem Bottlenecks

Module 7: Cache Subsystem

Cache Subsystem Overview
 Flash Cache Feature
 Flash Pool Feature
 Flash Cache Policies and Flash Pool Policies
 Storage Pool
 Cache Sizing

Module 8: Storage Quality of Service Managing System Performance with QoS

SAN Overview
 SAN Multipathing
 SAN load balancing
 SAN I/O Misalignment

NAS functions
 Identifying NAS Bottlenecks

Module 9: NAS Subsystem Resolving NAS Bottlenecks **Module 10: SAN Subsystem** Queue depth **Labs:**

Identifying cluster components
 Analyzing performance statistics
 OnCommand performance manager thresholds, events and alerts
 Identifying and resolving storage controller performance issues
 WAFL performance monitoring and analysis
 Identifying and resolving disk I/O bottlenecks
 Exploring cache performance
 Cluster interconnect performance
 Workload management with storage QoS
 NAS performance
 SAN protocol performance

Session Dates

Date	Location	Time Zone	Language	Type	Guaranteed	PRICE
23 Jan 2023	Virtual Classroom (GMT / UTC)	GMT	English	Instructor Led Online		€2,850.00
27 Mar 2023	Virtual Classroom (GMT / UTC)	BST	English	Instructor Led Online		€2,850.00
22 May 2023	Virtual Classroom (GMT / UTC)	BST	English	Instructor Led Online		€2,850.00
05 Jun 2023	Virtual Classroom (GMT / UTC)	BST	English	Instructor Led Online		€2,850.00
24 Jul 2023	Virtual Classroom (GMT / UTC)	BST	English	Instructor Led Online		€2,850.00

Additional Information

[This training is also available as onsite training. Please contact us to find out more.](#)