



Enterprise Computing Solutions - Education Services

## TRAINING OFFERING

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**Du kan nå os her**

Email: [training.ecs.dk@arrow.com](mailto:training.ecs.dk@arrow.com)  
Phone: +45 7025 4500



# ONTAP Performance Analysis (ONTAP 9.6)

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

NEP\_OT-CLU-PA9.6

3 dage

kr 20,850.00

**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

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		kr 20,850.00
27 Mar 2023	Virtual Classroom (GMT / UTC)	BST	English	Instructor Led Online		kr 20,850.00
22 May 2023	Virtual Classroom (GMT / UTC)	BST	English	Instructor Led Online		kr 20,850.00
05 Jun 2023	Virtual Classroom (GMT / UTC)	BST	English	Instructor Led Online		kr 20,850.00
24 Jul 2023	Virtual Classroom (GMT / UTC)	BST	English	Instructor Led Online		kr 20,850.00

## Yderligere Information

[Denne træning er også tilgængelig som træning på stedet. Kontakt os for at finde ud af mere.](#)