

## **Enterprise Computing Solutions - Education Services**

## TRAINING OFFERING

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# ■ NetApp ONTAP 9.10 Cluster Administration and Data Protection

CODE: LENGTH: PRICE:

NEP OT-CLU-DPA9.10 40 Hours (5 dage) kr 34,750.00

### **Description**

This 5 day course comprises the ONTAP Cluster Administration followed by the 2 day ONTAP Data Protection Administration courses.

The first 3 days uses lecture and hands-on exercises to teach the basic administration tasks of an ONTAP 9.10 cluster. You use the cluster shell and OnCommand System Manager to manage storage and network resources. ONTAP Cluster Administration is an intermediate course in a comprehensive learning path for NetApp customers, partners and employees.

Students spend the final 2 days learning about the different data protection solutions that are integrated into ONTAP software, including the SyncMirror, SnapMirror, storage virtual machine (SVM) disaster recovery, and SnapVault solutions. The course also provides an overview of ONTAP MetroCluster configuration, NDMP, and cloud-based data protection with NetApp Cloud Volumes ONTAP and NetApp Data Availability Services. You also learn about the tools for managing ONTAP data protection features. In the hands-on exercises, you use NetApp OnCommand System Manager and the CLI to complete key data protection tasks. The course also provides an overview of the ONTAP MetroCluster high-availability and disaster recovery software solution.

#### **Objectives**

- Define ONTAP cluster components
- Describe the role of a storage VM (storage virtual machine, also known as SVM) in the NetApp storage architecture
- Configure an ONTAP cluster
- Configure and manage storage resources
- Configure and manage networking resources
- Create and configure a storage VM
- Create, manage, and protect NetApp FlexVol® volumes
- Implement storage efficiency features
- Manage ONTAP administrator access and user accounts
- Maintain NetApp storage systems
- Describe and distinguish the data protection features in ONTAP software
- · Administer the appropriate ONTAP data protection feature to address your data protection concern
- Configure NetApp SnapMirror® relationships for disaster recovery and data backup
- Demonstrate SVM DR
- Illustrate NDMP-enabled operations to back up NAS data to tape
- Integrate the cloud-based data protection solutions that complement your ONTAP based storage systems
- Structure NetApp MetroCluster components and functionality
- Illustrate NetApp SnapMirror Business Continuity components and functionality

#### **Audience**

- Network Engineers
- Channel Partners
- System Engineers
- NetApp Customers

#### **Prerequisites**

Completion of the following free of charge web based training modules via the NetApp Learning Center are required.

- ONTAP Cluster Fundamentals
- ONTAP NAS Fundamentals
- ONTAP SAN Fundamentals
- ONTAP Data Protection Fundamentals

Please contact us for further support.. https://edu.arrow.com/uk/contact-us/

#### **Programme**

#### Module 1: NetApp ONTAP 9 clusters

ONTAP deployment options

Module 2:Cluster setup • The ONTAP cluster Supported ONTAP cluster configurations

Storage VMs

Setting up a cluster

Module 0: Welcome • Software-defined storage

Module 6: Logical storage management

· Administration interfaces

Access control

ONTAP licensing

· Flexible volumes

FlexGroup volumes

FlexCache volumes

Policies and schedules

#### Module 4:Network management

NetApp ONTAP network review

Network ports

· Network traffic segregation

Module 5:Physical storage management

- Module 3:Cluster management LIFs
  - Nondisruptive LIF configuration
  - Routing management
  - Network security
- · Drives, RAID, and aggregates
- Advanced Disk Partitioning
- Flash Cache and Flash Pool features
- FabricPool aggregates

## **Module 8:Data protection**

- Manage Snapshot copies
- · Restore data from a Snapshot copy
- · Back up and replicate data
- Using NAS protocols to access data Compliance
- Using SAN protocols to access data Storage encryption
- Use object protocols to access data Ransomware protection
- Moving storage resources Module 9: Storage efficiency
- Thin provisioning

#### Module 10:Cluster maintenance

- Deduplication and compression Data collection, monitoring, and automation tools
  - Backing up and restoring your cluster configuration
- Flash efficiency Logical space reporting
- · Upgrading your cluster
- Volume and file clones
- · Recommended practices for performance

Module 7:Data access

#### Module 1: Overview of ONTAP data protection

- Data protection introduction
- ONTAP Data Protection Solutions
- ONTAP Management Solutions

#### Module 2: SnapMirror Fundamentals

- SnapMirror Overview
- Configuring SnapMirror Relationships
- · Guidelines for Intercluster Networking
- Cluster and Storage VM Peering

#### Module 3: SnapMirror for disaster recovery and backup

- SnapMirror for FlexVol volumes
- SnapMirror configuration considerations
- Using SnapMirror for volumes
- Interaction between SnapMirror and other ONTAP features
- S3 SnapMirror
- FabricPool
- · Load-sharing mirrors
- Addendum: SnapMirror and other data protection feature interaction

#### Module 4: SnapMirror Synchronous for disaster recovery

- SnapMirror Synchronous
- Configuring SnapMirror Synchronous
- Additional SnapMirror Synchronous configuration

#### Module 5: Storage VM Disaster Recovery (SVM DR)

- SVM DR Overview
- SVM DR requirements and configuration
- · SVM data mmobility

#### Module 6: ONTAP backup and archive solutions

- NDMP fundamentals
- NDMP topologies
- NDMP management
- Addendum: NetApp SnapCenter

#### Module 7: Cloud-based data protection

- Cloud Volumes ONTAP
- SnapMirror Cloud
- Cloud Backup Service
- ONTAP data protection with cloud volumes

#### Module 8: ONTAP business continuity solutions

- MetroCluster funamentals
- Metrocluster operations
- · Consistency group management
- SnapMirror Business Continuity introduction
- SnapMirror Business Continuity configuration
- Failover operations and failure scenariosAddendum: SyncMirror feature

#### **Session Dates**

På anmodning. Kontakt os venligst

### **Yderligere Information**

Denne træning er også tilgængelig som træning på stedet. Kontakt os for at finde ud af mere.