



Enterprise Computing Solutions - Education Services

TRAINING OFFERING

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Cluster Administration & Data Protection

CODE:	LENGTH:	PRICE:
NEP_OT-CLU-DPA	40 Hours (5 days)	kr57,900.00

Description

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

The first 3 days teaches the basic administration tasks of a NetApp® ONTAP® 9.12 cluster. You use the clustershell and NetApp ONTAP System Manager to manage cluster storage and network resources. The course explains the configuration of basic data protection and data efficiency functions and common cluster maintenance tasks .

Students spend the final 2 days learning about key concepts and techniques for protecting data on NetApp® ONTAP based storage systems. You learn about the data protection solutions that are integrated in ONTAP software. You also learn about tools to manage ONTAP data protection features.

In the hands-on exercises, you use NetApp ONTAP System Manager and the ONTAP CLI to perform key data protection tasks. This course is updated for ONTAP 9.12.1 software.

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

NetApp Administrators, Architects and Operators

Prerequisites

Completion of the following web based training modules accessed free of charge via the NetApp Learning Centre

- ONTAP Cluster Fundamentals
- ONTAP NAS Fundamentals
- ONTAP SAN Fundamentals

Please contact us for further support as required.. [**Contact Us**](#)

Programme

		<ul style="list-style-type: none">• ONTAP deployment options• The ONTAP cluster• Storage VMs	
3 day Cluster Administration	Module 1: NetApp ONTAP 9 Clusters	• Software-defined storage	Module 2: Cluster Setup
<ul style="list-style-type: none">• Supported ONTAP cluster configurations• Setting up a cluster• Administration interfaces			Module 3: Cluster Management
	Exercises	Exploring ONTAP management UIs	<ul style="list-style-type: none">• Access control• ONTAP licensing• Policies and schedules• NetApp ONTAP network review• Network ports• Network traffic segregation• LIFs• Nondisruptive LIF configuration• Network security
Managing ONTAP clusters			
Managing ONTAP administrators			
Exercises	Configuring multi-admin verification	Module 4: Network management	• Routing management
Managing physical and logical network resources			Exercises
Managing virtual network resources		Module 5: Physical Storage Management	
<ul style="list-style-type: none">• Drives, RAID, and aggregates• Advanced Disk Partitioning• Flash Cache and Flash Pool features• FabricPool aggregates• Managing physical storage• Exploring RAID-TEC• Creating a Flash Pool aggregate• Creating a FabricPool aggregate	Exercises	Creating a FabricPool aggregate	Module 6: Logical Storage Management
		Managing data volumes	
	Exercises	Creating a FlexGroup volume	Module 7: Data Access
		Configuring the NFS protocol in a storage VM	
		Configuring the SMB protocol in a storage VM	
		Configuring iSCSI in a storage VM	
		Configuring NVMe in a storage VM	
		Configuring the S3 protocol in a storage VM	
<ul style="list-style-type: none">• Use NAS protocols to access data• Use SAN protocols to access data• Use object protocols to access data• Manage Snapshot copies• Restore data from a Snapshot copy• Back up and replicate data• Compliance• Storage encryption• Ransomware protection• Thin provisioning• Deduplication and compression• Flash efficiency• Logical space reporting• Volume and file clones• Data collection, monitoring, and automation tools• Backing up and restoring your cluster configuration• Upgrading your cluster• Recommended practices for performance• Technical support	Exercises	Managing NAS storage VMs	Module 8: Data Protection
		Managing Snapshot copies	
		Encrypting a volume	
	Exercises	Enabling anti-ransomware protection	Module 9: Storage Efficiency
		Managing storage efficiency	
	Exercises	Managing FlexClone volumes	Module 10: Cluster Maintenance
		Exercises	Installing and configuring Active IQ Config Advisor
			<ul style="list-style-type: none">• Data protection introduction• ONTAP data protection solutions
2 day Data Protection	Module 0: Welcome and Getting Started	• ONTAP management solutions	Exercises
			<ul style="list-style-type: none">• SnapMirror overview• Configuring SnapMirror relationships• Guidelines for intercluster networking
Checking the exercise equipment	Module 1: SnapMirror Fundamentals	• Cluster and storage VM peering	Exercises
Configuring cluster peering and storage VM peering	Module 2: SnapMirror for Disaster Recovery and Backup		
<ul style="list-style-type: none">• SnapMirror for FlexVol volumes• SnapMirror configuration considerations• SnapMirror for disaster recovery• SnapMirror for backup• Interaction between SnapMirror and other ONTAP features• S3 SnapMirror• FabricPool			Exercises

- Using SnapMirror to mirror FlexVol volumes
- Performing SnapMirror disaster recovery
- Configuring SnapMirror for unified replication
- Restoring data from a Snapshot copy
- Configuring cluster and storage VM peering for a cascade relationship (optional)
- Configuring a cascade relationship(optional)
- SnapMirror Synchronous
- Configuring SnapMirror Synchronous for disaster recovery

Module 3: SnapMirror Synchronous for Disaster Recovery • Additional SnapMirror Synchronous configuration
Exercises Configuring a SnapMirror Synchronous relationship

- SVM DR introduction
- SVM DR requirements and configuration
- SVM data mobility

- Exercises** Configuring storage VM data recovery
- NDMP fundamentals
 - NDMP topologies

Module 5: ONTAP Backup and Archive Solutions • NDMP management

- SnapMirror Cloud
- Cloud Volumes ONTAP
- Data protection with NetApp BlueXP
- MetroCluster fundamentals
- MetroCluster operations
- Consistency group management
- SnapMirror Business Continuity introduction
- SnapMirror Business Continuity configuration
- Failover operations and failure scenarios

Module 7: ONTAP Business Continuity Solutions

Module 6: Cloud-based Data Protection

Test and Certification

This course supports part of the following NetApp certifications:

- NetApp Certified Storage Installation Engineer (NCSIE)
- NetApp Certified Data Administrator (NCDA)

Session Dates

Date	Location	Time Zone	Language	Type	Guaranteed	PRICE
13 May 2024	Virtual Classroom (Timezone Stockholm)	CEDT	English	Instructor Led Online		kr57,900.00
10 Jun 2024	Virtual Classroom (Timezone Stockholm)	CEDT	English	Instructor Led Online		kr57,900.00
08 Jul 2024	Virtual Classroom (Timezone Stockholm)	CEDT	English	Instructor Led Online		kr57,900.00
19 Aug 2024	Virtual Classroom (Timezone Stockholm)	CEDT	English	Instructor Led Online		kr57,900.00
23 Sep 2024	Virtual Classroom (Timezone Stockholm)	CEDT	English	Instructor Led Online		kr57,900.00
07 Oct 2024	Virtual Classroom (Timezone Stockholm)	CEDT	English	Instructor Led Online		kr57,900.00
11 Nov 2024	Virtual Classroom (Timezone Stockholm)	CET	English	Instructor Led Online		kr57,900.00
16 Dec 2024	Virtual Classroom (Timezone Stockholm)	CET	English	Instructor Led Online		kr57,900.00
20 May 2024	Virtual Classroom (Timezone Stockholm)	CEDT	English	Instructor Led Online		kr57,900.00

Ytterligare information

Denna utbildning finns också som utbildning på plats. Kontakta oss för mer information.