

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

# TRAINING OFFERING

Skontaktuj się z nami

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### **■ NetApp** ONTAP Cluster Administration & Data Protection

Kod: Czas trwania: Cena netto:

NEP OT-CLU-DPA 40 Hours (5 days) zł23,350.00

#### **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.

#### Cel szkolenia

- 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<sup>™</sup> components and functionality
- Illustrate NetApp SnapMirror Business Continuity components and functionality

#### Uczestnicy

NetApp Administrators, Architects and Operators

#### Wymagania wstępne

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

#### Program szkolenia

· Setting up a cluster

Administration interfaces

- 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** 

**Module 3: Cluster Management** 

Access control

- ONTAP licensing Exercises Exploring ONTAP management UIs • Policies and schedules
  - NetApp ONTAP network review
  - Network ports
  - · Network traffic segregation
  - LIFs

Managing ONTAP clusters Managing ONTAP administrators · Nondisruptive LIF configuration

Network security

Exercises Configuring multi-admin verification Module 4:Network management • Routing management **Exercises** 

Managing physical and logical network resources

Supported ONTAP cluster configurations

Managing virtual network resources Module 5:Physical Storage Management

· Drives, RAID, and aggregates Managing physical storage Advanced Disk Partitioning **Exploring RAID-TEC** 

• Flash Cache and Flash Pool features Creating a Flash Pool aggregate

 FabricPool aggregates Exercises Creating a FabricPool aggregate Module 6: Logical Storage Management

 Managing physical storage Exploring RAID-TEC

· Creating a Flash Pool aggregate Managing data volumes

• Creating a FabricPool aggregate 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

 Use NAS protocols to access data Configuring NVMe in a storage VM

· Use SAN protocols to access data Configuring the S3 protocol in a storage VM

• Use object protocols to access data Exercises Managing NAS storage VMs **Module 8: Data Protection** 

· Manage Snapshot copies

· Restore data from a Snapshot copy

• Back up and replicate data

 Compliance Managing Snapshot copies Storage encryption Encrypting a volume

Exercises Enabling anti-ransomware protection Module 9: Storage Efficiency Ransomware protection

Thin provisioning

Deduplication and compression

· Flash efficiency

 Logical space reporting Managing storage efficiency

 Volume and file clones Exercises Managing FlexClone volumes Module 10: Cluster Maintenance

· Data collection, monitoring, and automation tools

- · Backing up and restoring your cluster configuration
- Upgrading your cluster
- Recommended practices for performance

Technical support

Exercises Installing and configuring Active IQ Config Advisor

- Data protection introduction
- ONTAP data protection solutions

2 day Data Protection Module 0: Welcome and Getting Started • ONTAP management solutions Exercises

- 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

- 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 Module 4: Storage VM Disaster Recovery (SVM DR)

- 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 Module 6: Cloud-based Data Protection

- SnapMirror Cloud
- Cloud Volumes ONTAP
- Data protection with NetApp BlueXP Module 7: ONTAP Business Continuity Solutions
- MetroCluster fundamentals
- · MetroCluster operations
- · Consistency group management
- SnapMirror Business Continuity introduction
- SnapMirror Business Continuity configuration
- Failover operations and failure scenarios

#### **Test and Certification**

This course supports part of the following NetApp certifications:

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

#### **Terminy**

Data	Lokalizacja	Strefa czasowa	Język	Typ szkolenia	Gwarancja	Cena netto
13 May 2024	Virtual Classroom	CEDT	English	Instructor Led Online		zł23,350.00
10 Jun 2024	Virtual Classroom	CEDT	English	Instructor Led Online		zł23,350.00
08 Jul 2024	Virtual Classroom	CEDT	English	Instructor Led Online		zł23,350.00
19 Aug 2024	Virtual Classroom	CEDT	English	Instructor Led Online		zł23,350.00
09 Sep 2024	Virtual Classroom	CEDT	English	Instructor Led Online		zł23,350.00
07 Oct 2024	Virtual Classroom	CEDT	English	Instructor Led Online		zł23,350.00
11 Nov 2024	Virtual Classroom	CET	English	Instructor Led Online		zł23,350.00
09 Dec 2024	Virtual Classroom	CET	English	Instructor Led Online		zł23,350.00
10 Jun 2024	Virtual Classroom	CEDT	Polish	Instructor Led Online		<del>zł 23,350.00</del> zł15,177.50

#### Dodatkowe informacje

