NetApp   ONTAP Cluster Administration & Data Protection

Product code: NEP_OT-CLU-DPA

Duration: 5 days

Regular price: 23 350 PLN

Description:

This 5 day class is a combination of the 3 day Cluster Administration Class and the 2 day Data Protection Class.

Learn the basic administration tasks of a NetApp® ONTAP® 9.14 cluster. Use the clustershell and NetApp ONTAP System Manager to manage cluster storage and network resources. Discover how to configure basic data protection and data efficiency functions and common cluster maintenance tasks.

Explore key concepts and techniques for protecting data on NetApp® ONTAP® based storage systems. Learn about the data protection solutions that are integrated in ONTAP software and examine the tools to manage ONTAP data protection features. In the hands-on exercises, use NetApp ONTAP System Manager and the ONTAP CLI to perform key data protection tasks.

This course is updated for ONTAP 9.14.1 software.

Purpose of the training:

- 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 both networking and storage 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
- Manage 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 storage VM disaster recovery (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 SnapMirror active sync components and functionality

Participants:

- 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

Training program:

3 day Cluster Administration

Module 1:NetApp ONTAP 9 clusters

- ONTAP deployment options
- The ONTAP cluster
- Storage VMs
- Software-defined storage

Module 2: Cluster setup

- Supported ONTAP cluster configurations
- Setting up a cluster
- Administration interfaces
- ONTAP licences
- Policies and Schedules
  Exercises
  Deploying an ONTAP cluster
  Exploring ONTAP management UIs
  Configuring ONTAP Clusters

Module 3: Physical Storage Management

- Drives, RAID, and aggregates
- Advanced Disk Partitioning
- Flash Cache and Flash Pool features
- FabricPool aggregates
  Exercises
  Managing physical storage
  Exploring RAID-TEC

Module 4: Logical Storage Management

- Flexible volumes
- Moving storage resources

- FlexGroup volumes
- FlexCache volumes
  Exercises
  Managing data volumes
  Creating a FlexGroup volume

Module 5: Storage Efficiency

- Thin provisioning
- Deduplication and compression
- Flash efficiency
- Volume and file clones
  Exercises
  Managing storage efficiency
  Managing FlexClone volumes

Module 6: Network Management

- ONTAP network review
- Network ports
- Network traffic segregation
- Logical network interfaces
- Nondisruptive LIF configuration
- Network security
- Routing management
  Exercises
  Managing physical and logical network resources
  Managing virtual network resources

Module 7: NAS Data Access

- Use NAS protocols to access data
- Use the NFS protocol to access data
- Use the SMB protocol to access data
- Use the S3 protocol to access data
  Exercises
  Monitoring with ONTAP File System Analytics
  Configuring the NFS protocol in a storage VM
  Configuring the SMB protocol in a storage VM
  Configuring the S3 protocol in a storage VM

Module 8: SAN Data Access

- Use SAN protocols to access data
- Use the iSCSI protocol to access data
- Use the FC protocol to access data
- Use the NVMe protocol to access data
  Exercises

Configuring iSCSI in a storage VM
Configuring NVMe in a storage VM

Module 9: Data Protection

- Manage Snapshot copies
- Restore data from a Snapshot copy
- Back up and replicate data
- Compliance
  Exercises
  Managing Snapshot copies

Module 10: ONTAP Security

- Access control
- Storage encryption
- Ransomware protection
  Exercises
  Managing ONTAP Administrators

Module 11: Cluster maintenance

- Data collection, monitoring, and automation tools
- Upgrading your cluster
- Technical support
  Exercises
  Installing and configuring Active IQ Config Advisor

2 day Data Protection

Module 0: Welcome and Getting Started

- Data protection introduction
- ONTAP data protection solutions
- ONTAP management solutions
  Exercises
  Checking the exercise equipment

Module 1: SnapMirror Fundamentals

- Introduction to SnapMirror
- Configuring SnapMirror relationships
- Guidelines for Intercluster networking
- 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 dor 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)

Module 3: SnapMirror Synchronous for disaster recovery

- SnapMirror Synchronous
- Configuring 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

Module 5: ONTAP backup and archive solutions

- NDMP fundamentals
- NDMP topologies
- NDMP management

Module 6: Cloud-based data protection

- SnapMirror Cloud
- Cloud Volumes ONTAP
- Data protection with NetApp BlueXP

Module 7: ONTAP business continuity solutions

- Consistency group management
- Introduction to SnapMirror active sync
- SnapMirror active sync configuration
- Failover operations and failure scenarios

- MetroCluster fundamentals

Term:

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