ONTAP 9.3 Cluster Administration and Data Protection Bundle (CDOTDP9)

COURSE OVERVIEW:

This 5-day course comprises the 3-day ONTAP 9.3 Cluster Administration (ONTAP9ADM) followed by the 2-day ONTAP 9.3 Data Protection Administration (DATAPROT9) courses.

The first 3 days uses lecture and hands-on exercises to teach basic administration of an ONTAP® cluster. You configure and maintain a cluster. You practice working with ONTAP features. 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 customers, partners, and NetApp employees.

Students spend the final 2 days learning the core technologies of ONTAP Data protection administration. You will learn to become proficient with ONTAP SnapMirror, SnapVault, SVM DR, SyncMirror, and NDMP technologies used to replicate, restore, and protect mission-critical data in the enterprise. Backup and restore operations are taught using the NetApp storage system CLI and the OnCommand System Manager.

The course also provides an overview of the ONTAP MetroCluster high-availability and disaster recovery software solution.

WHO WILL BENEFIT FROM THIS COURSE?
- Network Engineers
- Channel Partners
- System Engineers
- NetApp Customers

PREREQUISITES:

Completion of the following web-based training modules:
- ONTAP Cluster Fundamentals WBT (OCFWBT)
- ONTAP Data Management Fundamentals (DMFWBT)
- ONTAP Flash Fundamentals (FFWBT)
- ONTAP NAS Fundamentals WBT (ONFWBT)
- ONTAP SAN Fundamentals WBT (OSFWBT)
- ONTAP Data Protection Fundamentals WBT

COURSE OBJECTIVES:

By the end of this course, you should be able to:
- Describe how ONTAP fits into the NetApp Cloud and Data Fabric strategy
- Identify supported ONTAP configurations
- Create a cluster
- Manage ONTAP administrators
- Configure and manage storage resources

- Configure and manage networking resources
- Create and configure a storage virtual machine (SVM)
- Create and manage FlexVol® volumes
- Implement storage efficiency features
- Create protocol servers within an SVM
- Upgrade and revert ONTAP patches and releases
- Describe NetApp protection technology and the NetApp integrated data-protection solutions that are supported in ONTAP
- Design, implement and manage ONTAP SnapMirror replication
- Perform storage virtual machine disaster recovery setup and operation
- Design, implement and manage ONTAP SnapVault replication
- Use the OnCommand System Manager to set up and manage backup and restore operations
- Describe how SyncMirror software can be used to protect data at the aggregate level
- Describe how to implement the NDMP protocol in ONTAP software

COURSE OUTLINE:

ONTAP Cluster Administration

Module 1: ONTAP 9
- Data Fabric foundation
- ONTAP deployment options
- Software Defined storage
- Cluster components
- Storage Virtual Machine (SVM)

Module 2: Cluster Setup
- Supported FAS and all Flash FAS configurations
- Cluster setup
- Administration interfaces
- OnCommand System Manager

Module 3: Cluster Management
- Manage access control
- Configure cluster setting
- Manage cluster-level features
- Date and time
- Licenses
- Policies, jobs and schedules

Module 4: Network Management
- Network review
- Network ports
- IPspaces
- LIFs
- Nondisruptive LIF configuration
- Routing management

Module 5: Physical Storage Management

- Architecture concepts
- Storage resources
- Disks
- RAID groups
- Aggregates
- Disk partitioning
- Flash pool and Flash cache
- FabricPool aggregates

Module 6: Logical Storage Management

- Flexible volumes
- FlexVol
- FlexGroup
- Provisioning storage resources
- Moving storage resources

Module 7: Managing Data

- Unified storage
- NAS protocols
- NFS
- SMB
- SAN protocols
- iSCSI
- Managing Snapshot copies
- Snapshot policy
- Restoring data from Snapshot copy

Module 8: Storage Efficiency

- Thin provisioning
- Deduplication and compression
- Flash efficiency
- Inline data compaction
- FlexClone volumes

Module 9: Cluster Maintenance

- Active IQ
- Upgrading the cluster
- Events and alerts
- Performance best practices
- Technical support

Labs

- Exploring ONTAP management UIs
- Managing ONTAP clusters and administrators
- Managing physical and logical network resources

- Managing virtual network resources
- Managing physical storage
- Exploring RAID-TEC and creating a flash pool
- Managing data volumes
- Configuring NAS protocols in an SVM
- Configuring iSCSI in an SVM
- Managing Snapshot copies
- Managing storage efficiency
- Managing FlexClone volumes
- Exploring the event log

ONTAP Data Protection

Module 1: ONTAP Integrated Data Protection
- Overview
- Data protection solutions
- Integrated data protection features
- Monitor and manage solutions

Module 2: NetApp Mirroring Fundamentals
- Mirror relationship components
- SnapMirror policy configuration
- intercluster network configurations
- SnapMirror and SnapVault cascade deployments
- Cluster and SVM peering

Module 3: Implementation of SanpMirror Relationships
- Creating and initializing the SnapMirror relationship
- Disaster recovery
- SnapMirror and ONTAP feature interaction

Module 4: Disaster Recovery for Storage Virtual Machines
- SVM disaster recovery requirements
- SVM for data protection
- Manual SVM update
- Scheduled SMV updates

Module 5: Disk-To-Disk Backup with SnapVault Software
- SnapVault relationship
- SnapVault and storage compression
- Restoring data using SnapVault

Module 6: SyncMirror and MetroCluster Software
- SyncMirror components
- SyncMirror operation
- MetroCluster overview
- MetroCluster switchover, healing and switchback

Module 7: NDMP and Tape Backup

- NDMP fundamentals
- Terms and concepts
- Backup models
- NDMP management

Labs

- Preparing for mirror relationships
- Using SnapMirror software to mirror FlexVol volumes
- Performing SnapMirror disaster recovery
- Using FlexClone technology to clone a SnapMirror volume
- Configuring storage virtual machine disaster recovery
- Configuring the SnapVault relationship
- Using SnapVault to restore data

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- Sunset Learning has won numerous Instructor Excellence and Instructor Quality Distinction awards since 2012

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