



NETAPP DATAONTAP 9.X ADMINISTRATION

Course Outline:-

- Introduction to SNIA & SAN Fundamentals
- Introduction, Overview features and functions of DataONTAP
- Basic Administration
- Managing Disks and Volumes
- Networking
- NFS Administration
- CIFS Administration in Windows
- Multiprotocol Administration
- SAN Administration
- Installation
- Snapshots
- Quotas Administration
- NDMP
- Vol copy
- SnapRestore
- SnapMirror
- Replication setup
- Cluster mode
- Cluster Configuration and Management
- Differences between 7.x Ontap and 8.x Ontap & ONTAP 9.0
- Difference between 7 mode and C Mode?

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NetApp Data Ontap Fundamentals

OverView

- Primary function of a storage appliance
- Identify the protocols supported by a storage appliance
- Describe the WAFL File System
- Describe the Snapshot feature
- Describe how NVRAM is implemented
- Describe how RAID is implemented

Basic Administration

- Access and execute commands using the console
- Navigate and execute commands using FilerView
- View a storage appliance's system configuration
- Access a storage appliance's configuration files from a remote admin host
- Setup and test the Autosupport service

Managing Disks and Volumes

- Describe storage appliance RAID group concepts
- Design a hot spare disk strategy
- Describe how disks may be mixed and matched
- Describe RAID configuration options
- Configure RAID groups
- Describe disk drive qualification
- Identify and recover from insertion of an unqualified disk

Networking

- Describe hostname resolution as it applies to storage appliances
- Manage interface parameters on a storage appliance

- Describe the physical interfaces used by the filer
- Create virtual interfaces (VLANs and VIFs) used by the storage appliance

NFS Administration

- Explain the purpose and format of the `/etc/exports` file
- List and define the export specification options
- Explain the rules for exports & Describe the use of the `exportfs` command to modify exports
- Explain the use of the export specifications to grant access privileges
- Describe the syntax for listing options and hosts in the command line
- Detail the limitations for each option

CIFS Administration Windows 2000

- List the prerequisites for running CIFS setup
- Run `cifs setup` to configure the storage appliance
- Explain the relationship between directories on the storage appliance and access to them from user machines
- Describe the options and required specifications when creating a share
- Use the `cifs shares` command to create shares

MultiProtocol Administration

- Distinguish a qtree from a volume and list the advantages of using qtrees
- List the limitations of using qtrees
- Create qtrees with the `qtree` command
- Display qtree information using the `qtree status` command
- Set the security style of a qtree

SAN Administration

- Define SAN
- Describe and illustrate the supported configurations
- Distinguish between FCP and iSCSI protocols
- Define LUN
- Overview of LUN attributes to specify
- Prepare the storage appliance
- Prepare the host
- Describe how the lun setup program works

Installation

- Identify the location of hardware and software installation information
- List steps to prepare for Installation and info needed to complete the install
- Configure a new storage appliance
- Describe the different types of installation procedures
- Upgrade Data ONTAP via CIFS, NFS and the software command
- Re-purpose a storage appliance

Snapshots

- Describe how snapshots function
- Recognize and perform snapshot commands
- Set and modify snapshot options
- Create a snapshot schedule

Quotas Administration

- Describe how quotas are used to restrict and track disk access
- Determine the function of quotas & Recognize the purpose of the /etc/quotas file
- Interpret the contents of the /etc/quotas file
- Define the function and syntax of quota, quota resize, quota report, and quota logmsg commands
- Turn quotas on for a specific volume & Display a quota report to view current status
- Identify and define the function of two special entries in the /etc/quotas file

NDMP

- Define NDMP, Describe the purpose and function of NDMP
- Identify the types of tape devices that can be used with NDMP
- Turn on NDMP services, Check NDMP status & Terminate an NDMP session

Vol copy

- Describe the purpose and function of the volume copy feature
- Recognize benefits of using vol copy
- Describe considerations for using vol copy
- Recognize situations where vol copy would be used
- Recognize correct command syntax

- Recognize options and arguments used with the command
- Identify the pre-requisites for performing volume copy operations
- Use the vol copy command to copy a volume

SnapRestore

- Explain how snapRestore works with snapshot copies
- Describe what snapRestore reverts
- Reverts a volume or a file using snapRestore
- Explain how snapRestore works with snapmirror
- Describe the effects of snaprestore on backup operations

SnapMirror

- Explain the snapmirror Async, sync and semi-sync modes of operation
- Describe how volume snapmirror and Qtree SnapMirror replicate data
- Configure SnapMirror
- Perform advanced SnapMirror operations
- Explain SnapMirror performance impact
- Types of vservers
- Types of lifs
- vservers create, modify, delete
- lifs create, modify, delete
- Replication setup (snapmirror) on SVM level and volume level
- Encryption on disk level and volume level (NSE and NVE)
- Deduplication and compression
- vscan setup
- ONTAP upgrade
- Power cycle activities
- Migrating the data from 7 mode to Cluster mode via 7MTT
- SAN concepts (Brocade & Cisco SAN switches)
- Other concepts (OSI, DNS, Networking basics)
- Core troubleshooting on real time scenarios
- Awareness on ticketing tools, Daily standup meetings & insights on RCA.