Accelerated NCDA Boot Camp Data ONTAP 7-Mode (ANCDABC87)

Modality: Virtual Classroom

Duration: 5 Days

NATU: 60 Units

About this Course:

This online course is designed for those individuals who aspire to train and become qualified Data ONTAP 7-mode professionals. Those who attend this course, will be exposed to multiple practice exercises so as to prep for the NetApp Certified Data Administrator (NCDA) EXAM. This course also includes a range of online sessions designed by experts . The main idea is to build the capacity of students who are aiming to appear in the NetApp Certified Data Administrator (NCDA) EXAM. Primarily this course hopes to fully and completely prep you for the aforementioned exam in order for you to successfully clear it.

Course Objectives:

By the end of this course, the students should be have learnt the following skills and be able to;

- Acquire the skills needed to configure a Data ONTAP storage system in an NFS environment
- Learn the methodologies necessary to configure and administer a storage system for an efficient functionality of CIFS
- Gain a comprehensive understanding and be able to explain how to configure a storage system for a SAN FC environment
- Learn how to configure and administer a storage system in a SAN iSCSI environment
- Elucidate and put into practice the backup and recovery methods that are available in the Data ONTAP operating system
- Learn and effectively work with the business continuance techniques that are available in the Data ONTAP operating system

Audience:

This course is targeted towards the following audience;

- Those who are Net App customers, partners and/or employees

Prerequisites:

These are the prerequisites which are an absolute requirement for attending this course.

- A minimum of three years of experience working in a storage related function, for exaample as a storage administrator or field engineer
- A minimum of six months experience working with Net App storage solutions
- Data ONTAP 7-Mode Administration (D7ADM)

NOTE: Those who have experience working in a Net App ONTAP Operating System can also be a part of this intense boot camp. The web-based version of Data ONTAP 7-Mode will not help with sufficient preparation for those aiming to be NCDA certified after attending of this course.

Suggested prerequisite course:

The following courses are suggested to be taken prior to attending this course

- Those who are interested in attending this course must have completed the D7ADM learning program prior to beginning this course. This is so because this course is completely based on the D7ADM learning program.

Course Outline:

Module 1: NCDA Overview

- Identify the skills and knowledge that NetApp Certified Data Management Administrator (NCDA) certification verifies
- Describe the benefits of certification
- Explain the key concepts of Data ONTAP operating in 7-mode

Module 2: NFS Overview

- Define NFS
- Differentiate between NFS protocol versions
- Recognize the differences between stateless and stateful protocols
- Describe how the storage system acts as an NFS file server
- List the requirements of NFS

Module 3: NFS Setup

- Configure NFS on a NetApp® storage system
- Configure a storage system to perform IP to host-name resolution
- Add Network Information Server (NIS) to manage users, groups, and name-to-IP resolution
- Configure a storage system to centrally manage users and groups
- Configure PC-NFS and WebNFS environments to extend the reach of NFS

Module 4: Exports and Mounts

- Identify exportable resources
- Export and unexport resources to clients, subnets, and netgroups
- Manage exports with the exportfs command
- Create mount points and mount exported resources on a client
- Monitor the usage of exported resources
- Explain how to monitor exports with access cache

Module 5: CIFS Overview

- Describe basic CIFS terminology and CIFS versions
- Describe the role of the Data ONTAP storage system within Windows environments:
    - Microsoft® Windows® workgroup
    - Non-Windows workgroup
    - Windows domains
- Describe host name resolution
- Describe user authentication and authorization

Module 6: CIFS Workgroups

- License CIFS on a storage system
- Join a storage system to a Microsoft® Windows® workgroup environment using the CIFS setup command
- Review the results of CIFS setup
- Manage newly created configuration files for a CIFS workgroup environment

Module 7: CIFS Shares and Sessions

- Display the list of shared resources available on the storage system
- Configure a client machine to access a storage system share
- Identify users and hosts that are connected to the storage system in CIFS sessions
- Add, modify, and delete shares

Module 8: CIFS Access Control

- Create and manage local users for a storage system
- Create and manage local users for a storage system
- Create local group and local users for that group
- Use the CLI (command-line interface), NetApp® System Manager, and Microsoft® tools to add, delete, and modify access permissions for shares
- Use Microsoft tools to add, delete, and modify access permissions for files and folders

Module 9: CIFS Domains

- Terminate the CIFS service to prepare for CIFS domain configuration
- Reconfigure the CIFS service for a Windows® domain
- Identify the resulting files
- Create domain users and add the domain users to a local storage system group
- Configure preferred domain controllers (DCs)

Module 10: NAS Multiprotocol

- Describe security styles and how they affect file permissions
- Determine and verify user mappings for CIFS users that access UNIX® volumes and qtrees and mixed volumes and qtrees
- Determine and verify user mappings for UNIX users that are access New Technology File System (NTFS) volumes and qtrees and mixed volumes and qtrees
- Describe the WAFL (Write Anywhere File Layout) Credential Cache

Module 11: NAS Troubleshooting

- Locate options and configuration files that might be misconfigured on the storage system
- Test for Domain Name System (DNS) resolution on both the storage system and the client
- Use client-side tools to test the client configuration
- Use storage system and client tools to isolate network system blockages
- Recognize typical error messages and list the commands to identify their sources

Module 12: SAN Overview

- Describe the differences between network-attached storage (NAS) and storage area network (SAN)
- List the protocols to implement a SAN environment
- Define a LUN, initiator, and target
- Describe ports, worldwide node names (WWNNs), and worldwide port names (WWPNs)
- Implement a SAN

Module 13: iSCSI Connectivity

- Describe multiple-path implementation with iSCSI connectivity
- Configure network ports on Windows® and NetApp® systems
- Identify the node name (WWNN) on Windows and NetApp systems
- Configure and verify multiple-path iSCSI connectivity between Windows and NetApp systems

Module 14: FC Connectivity

- Implement multiple paths with Fibre Channel (FC) connectivity
- Configure FC ports on Windows® and Data ONTAP systems
- Describe the commands and utilities to identify worldwide node names (WWNNs) and worldwide port names (WWPNs) on Windows® and Data ONTAP systems

Module 15: LUN Access

- Describe the steps that are required to enable a Windows® Server initiator to access a LUN on a storage system

Module 16: Availability Features

- Describe the features that you can use to ensure system availability
- Explain RAID-DP functionality
- Define SyncMirror
- Define the high-availability controller configuration
- Describe a stretch MetroCluster environment
- List the basic steps to implement a stretch MetroCluster
- Describe a fabric-attached MetroCluster environment
- List the basic steps to implement a fabric-attached MetroCluster

Module 17: Managing Snapshot Copies

- Describe the functions and benefits of Snapshot and SnapRestore technologies
- Use the storage system CLI and NetApp System Manager interfaces to manage Snapshot copies
- Manage and reclaim space used by Snapshot copies
- Use Snapshot copies to restore lost data

Module 18: SnapMirror Technology

- Explain the SnapMirror Async, Sync, and Semi-Sync modes of operation
- Describe how volume SnapMirror and qtree SnapMirror software replicate data
- Configure SnapMirror software
- Perform advanced SnapMirror operations
- Explain SnapMirror performance impact

Module 19: Managing SnapVault Technology

- Describe SnapVault® components and benefits
- Configure SnapVault software on primary and secondary systems
- Administer a SnapVault backup on primary and secondary systems
- Describe the application-consistent backup operations
- Restore data from secondary system to primary system

Module 20: Open Systems SnapVault

- Describe how Open Systems SnapVault® integrates with Data ONTAP® SnapVault
- Describe Open Systems SnapVault advanced features
- Configure and administer Open Systems SnapVault
- Perform Open Systems SnapVault backup and restore operations
- Troubleshoot and resolve Open Systems SnapVault transfer failures

Module 21: Storage Efficiency

- Utilize FlexClone technology to create efficient copies of volumes, files, and LUNs
- Use deduplication and compression to manage data growth

Module 22: Performance and Data Collections Tools

- Use Data ONTAP operating system commands and tools to capture performance data
- Describe Data ONTAP tools that can affect performance
- Use the reallocate command to maintain performance
- Use recommended techniques to optimize Data ONTAP configuration for SAN and NAS

Labs

- Log in to the exercise environment
- Perform a health check on the storage systems and the Linux server
- Install NetApp OnCommand System Manager
- Add storage systems to System Manager

- Use OnCommand System Manager to create aggregates
- Use OnCommand System Manger to create an aggregate with a flash pool
- Use the CLI to create aggregates
- Use the CLI to create an aggregate with a flash pool
- Destroy an aggregate and initialize its disks
- Create a Flexvol volumes
- Resize Flexvol volumes
- Create Qtrees
- Use the CLI to investigate the status of the NFS protocol
- Investigate NI