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## NetApp Basic Configuration and Administration

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# Basic NetApp Configuration and Administration (BNCA)

## Course Overview:

Learn how to configure the basic technologies of the NetApp Data ONTAP® operating system—clustered Data ONTAP and Data ONTAP operating in 7-Mode. Through lectures and hands-on exercises, learn how to create aggregates, storage virtual machines (SVMs), virtual interfaces (VIFs), FlexVol® volumes, qtrees, Snapshot® copies, and more.

## Course Outline:

### 1: ONTAP Cluster Fundamentals: Clusters

- Cluster components
- ONTAP 9 software
  - Cluster
  - Nodes
  - High-Availability pairs
  - Networks
  - Ports and logical interfaces
- ONTAP storage architecture
  - Physical Storage
  - Aggregates
  - Logical storage
  - SVM with FlexVol volumes
- Cluster configurations
- ONTAP 9 software deployments
  - All Flash FAS and FAS
  - FlexPod solution
  - FlexArray virtualization
  - ONTAP Select
  - NetApp Prostate Storage (NPS)
  - ONTAP Cloud
- Supported cluster configuration
  - Single node
  - 2-node switchless
  - Multimode switched
  - MetroCluster

- Create a cluster

## **2: ONTAP Cluster Fundamentals: Management**

- Administrators
  - Cluster administrators
  - SVM administrators
- Accessing the cluster
  - Command line interface (CLI)
  - OnCommand System Manager
- Managing clusters
- Clustershell
- System manager dashboard
- OnCommand Management portfolio
- Configuring clusters
- Managing cluster access
  - User accounts
  - Access method
  - User role
- Predefined SVM roles
- Monitoring clusters
  - AutoSupport
  - OnCommand portfolio

## **3: ONTAP Cluster Fundamentals: Networking**

- Management and data networks
- Ports and logical interfaces
  - Physical ports
  - Interface groups
  - VLANs
  - Network ports
- IPspaces
  - Components
  - Broadcast domains
  - Subnets
- Network interfaces

- Data LIFs

#### **4: ONTAP Cluster Fundamentals: Storage Virtual Machines**

- Data SVM
  - Benefits
  - Considerations
  - SVM with FlexVol volumes
  - FlexGroup volume
  - Root volume
  - Administration
- FlexVol volumes
- Snapshot technology
- Volume efficiency
- Deduplication
- Data compression
- Inline data compaction
- Moving volumes
- Cloning volumes
- SVM setup workflow
- Editing an SVM
- Configuring SVMs

#### **5: ONTAP NAS Fundamentals**

- NAS
  - Overview
  - FlexVol volume
  - Controlling file access
- SVM namespace
  - Root volume and junctions
  - Namespace architecture
  - Namespace protection
- NFS protocol
  - Overview
  - Configure NFS file access
  - UNIX file permissions

- SMB protocol
  - Overview
  - Configure SMB file access

## 6: ONTAP SAN Fundamentals

- SAN
  - Overview
  - Protocols: FC, iSCSI FCoE
- SCSI concepts
- LUN
  - IP SAN nodes and ports
  - Implementing a SAN
    - Steps
    - Interoperability matrix tool
    - Host utilities
- IP SAN
  - Architecture
  - Configurations
  - IP SAN target configuration
  - IP SAN initiator configuration
  - LUN access steps
    - Preparation
    - Thick provisioning
    - Thin provisioning
    - Configuration decision
    - Create a LUN
    - Initiator group
    - Map a LUN
    - Verification
- Windows multipath driver overview

### Labs:

- Navigating the NetApp OnCommand System Manager
- Updating NetApp Oncommand System Manager administration settings
- Synchronize the system time for Windows domain
- Assign an NTP server to the cluster

- Networking ports
- IPspaces
- Network interfaces
- Components and features
- FlexVol volumes
- Volume move
- Creating and managing SVMs
- Explore ONTAP NAS configuration
- Explore SMB client configuration
- Explore the NFS client configuration
- Explore ONTAP IP SAN configuration
- Explore the iSCSI client configuration

#### **Prerequisites:**

- Storage Fundamentals WBT
- Introduction to NetApp Products WBT

#### **Who Can attend:**

- NetApp customers, IT generalists, and academic alliance students

#### **Number of Hours: 40hrs**

#### **Certification: BNCA**

#### **Key Features:**

- One to One Training
- Online Training
- Fastrack & Normal Track
- Resume Modification
- Mock Interviews
- Video Tutorials
- Materials
- Real Time Projects

- Virtual Live Experience
- Preparing for Certification

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