

Basic NetApp Configuration and Administration (BNCA)

Module 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

Module 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

Module 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

Module 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

Module 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

Module 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

