Implementing VMware vSphere on Data ONTAP (IMPVMVS)

Module 1: Overview of VMware vSphere

- VMware Hypervisor architecture
- Datastores
- vSphere components
- NetApp virtualization components
- Data storage virtual machines
- Data LIFs

Module 2: Introduction to the Virtual Storage Console Plug-In

- vCenter Installation components and options
- vCenter server deployment architecture 6.0
- Virtual Storage Console (VSC) overview
- VSC installation
- VMware vSphere APE for Storage Awareness (VASA) overview
- VASA installation guidelines

Module 3: NAS (NFS) Considerations

- VMware vSphere networking concepts
- Clustered Data ONTAP networking
- Networking best practices and recommendations
- NAS (NFS) datastores
- Export policies and best practices
- NAS LIF best practices
- VAAI Plug-in
- NFSv3 and NFSv4 differences

Module 4: SAN Considerations

- SAN storage virtualization – FC and iSCSI
- vSphere SAN network modeling
- ESX network design for IP storage
- Clustered Data ONTAP SAN implementation
- Configure FC in vSphere
- VM Kernel pluggable storage architecture
- Configure iSCSI in vSphere
- iSCSI implementation
- SAN datastores
- Clustered Data ONTAP LUN implementation

Module 5: Configuration of vCenter and VSC

- VSC role-based access-control
- VSC datastore-provisioning functionality
- Migrating virtual machines

- vCenter converter
- Cloning virtual machines
- Datastores cloning
- Virtualized environment alignment issues

Module 6: Configuation of vSphere Virtual Volumes Datastores

- Virtual volumes framework
- VVol advantages and concepts
- Protocol endpoints
- VASA provider overview and implementation
- Virtual machine storage policies
- VVol management
- Data ONTAP 8.3 on-demand functionality

Module 7: Advanced Storage Technologies

- VMFS datastore optimization: deduplication and thin-provisioning
- VMFS optimization best practice
- NFS datastore optimization and best practices
- VM optimization
- Storage QoS
- Storage I/O control
- VMware storage distributed resource scheduler

Module 8: vSphere Data Protection

- Virtual machine backup and restore
- SnapMirror disaster recovery for virtual machines
- VMware vCenter site recovery manager
- SnapCenter integration
- Snap creator framework
- MetroCluster

Module 9: Virtualization management in cloud environments

- NetApp Alta Vault cloud integrated storage
- OnCommand WFA 3.0
- OnCommand Shift overview
- OnCommand Shift deployment