
Integrating Hybrid Clouds with Microsoft Azure

Duration: 2 Days **Course Code: NEP_UNCMMAZ**

Overview:

In this course, you learn to implement a hybrid cloud solution with Microsoft Azure by using the NetApp Cloud Volumes ONTAP® solution. You connect an Azure Virtual Network (VNet) and an on-premises data center to unify your infrastructure. You use the NetApp Console™ to move data and manage storage in the hybrid cloud. You learn how NetApp® cloud services are integrated into The NetApp Console to provide persistent storage for Kubernetes containers and enhance data protection, security, and compliance. You also learn to optimize the capacity and performance of Cloud Volumes ONTAP.

Updated October 2026

Target Audience:

Systems administrator, operator, cloud architect, enterprise architect, and integration developer

Objectives:

- **This course focuses on enabling you to do the following:**
 - Configure a VNet and connect it to an on-premises data center with VPN Internet Protocol security (IPsec)
 - Describe Cloud Volumes ONTAP architecture
 - Install an agent and deploy Cloud Volumes ONTAP
 - Explain basic system administration tasks with the NetApp Console
 - Copy data between an ONTAP based system and Cloud Volumes ONTAP for Azure for disaster recovery
 - Use data tiering to Azure Blob storage for Cloud Volumes ONTAP
 - Use Cloud Volumes ONTAP as persistent storage for Kubernetes containers
 - Identify performance and sizing options for Cloud Volumes ONTAP
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Prerequisites:

- Integrating Hybrid Clouds Foundation
- Cloud computing concepts: Cloud characteristics, service delivery methods, and cloud deployment models
- Networking concepts and definitions: Classless Inter-Domain Routing (CIDR) and network address translation (NAT)
- Azure concepts: Subscriptions, VNet, virtual machines (VMs), Azure storage accounts, and Azure Blob storage

Testing and Certification

None

Follow-on-Courses:

None

Content:

Module 1: Public cloud essential concepts

Lessons for Module 1:

- Azure networking and other concepts
- Terraform introduction

Exercises for Module 1:

- Controlling cloud resources with CLI
- Configuring cloud resources with PowerShell
- Controlling NetApp ONTAP (on-premises) resources with NetApp PowerShell Toolkit
- Configuring resources in Azure by using Terraform
- Reviewing resources by using Azure Portal
- Verifying connectivity to the virtual machines (VM) in front-end and back-end subnets

Module 2: Connectivity from the public cloud to other networks

Lessons for Module 2:

- Microsoft Azure VNet connectivity to an on-premises network

Exercises for Module 2:

- Connecting Azure VNet to an on-premises network
- Configuring on-premises DNS for Azure VMs
- Joining an Azure VM to Active Directory in the on-premises environment

Module 3: Deploying an agent

Lessons for Module 3:

- Reviewing an agent

Exercises for Module 3:

- Deploying an agent

Module 4: NetApp Cloud Volumes ONTAP

Lessons for Module 4:

- NetApp Cloud Volumes ONTAP architecture review
- Deploying the Cloud Volumes ONTAP solution
- Highly available NetApp Cloud Volumes ONTAP in Azure

Exercises for Module 4:

- Deploying a single-node Cloud Volumes ONTAP instance
- Creating an NFS volume and accessing it from an NFS client
- Creating an SMB volume and accessing it from an SMB client
- Deploying a Cloud Volumes ONTAP high-availability pair

Module 5: Administration of NetApp Cloud Volumes

Lessons for Module 5:

- NTAP Administering the Cloud Volumes ONTAP solution

Exercises for Module 5:

- Using The NetApp Console for basic administration of Cloud Volumes ONTAP
- Performing basic administration of The NetApp Console

Module 6: Data protection

Lessons for Module 6:

- Administering Cloud Volumes ONTAP
- Data protection

Exercises for Module 6:

- Configuring and managing ransomware protection
- Configuring and managing Disaster Recovery in the data fabric

Module 7: Tiering

Lessons for Module 7:

- Tiering

Exercises for Module 7:

- Backup data to Azure Blob storage

Further Information:

For More information, or to book your course, please call us on 0800/84.009

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