



**Enterprise Computing Solutions - Education Services**

## **TRAINING OFFERING**

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# Integrating Hybrid Clouds with Microsoft Azure

**CODE:**

NEP\_UNCMMAZ

**LENGTH:**

16 Hours (2 days)

**PRICE:**

£1,795.00

## Description

In this course, you learn to implement a hybrid cloud solution with Microsoft Azure by using NetApp® Cloud Volumes ONTAP®. You connect an Azure Virtual Network (VNet) and an on-premises data center to unify your infrastructure. You use NetApp BlueXP™ (formerly Cloud Manager) to move data and manage storage in the hybrid cloud. You learn how NetApp cloud services are integrated into BlueXP 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.

## 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 a connector and deploy Cloud Volumes ONTAP
- Explain basic system administration tasks with BlueXP
- 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

## Audience

- NetApp Employees
- NetApp Partners
- Customer Storage Administrators of any experience level

## Prerequisites

Understanding of the following is required..

- 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

In addition to attendance on the following one day course.. **IHCF - Integrating Hybrid Clouds Foundation**

## Programme

Lesson 1: Azure networking and other concepts

**Module 1: Public cloud essential concepts** Lesson 2: Terraform introduction

Exercise 1: Controlling cloud resources with CLI

Exercise 2: Controlling cloud resources with PowerShell

Exercise 3: Controlling NetApp ONTAP (on-premises) resources with NetApp PowerShell Toolkit

Exercise 4: Configuring resources in Azure by using Terraform

Exercise 5: Reviewing resources by using Azure Portal

Exercise 6: Verifying connectivity to the VMs in front-end and back-end subnets

**Module 2: Connectivity from the public cloud to other networks**

Lesson 1: Microsoft Azure VNet connectivity to an on-premises network

Exercise 1: Connecting Azure VNet to an on-premises network  
Exercise 2: Configuring on-premises DNS for Azure VMs  
Exercise 3: (Optional) Joining an Azure VM to Active Directory in the on-premises environment **Module 3: Deploying a connector**  
Lesson 1: Review a connector Exercise 1: Deploying a connector **Module 4: NetApp Cloud Volumes ONTAP**  
Lesson 1: NetApp Cloud Volumes ONTAP architecture review  
Lesson 2: Deploying Cloud Volumes ONTAP  
Lesson 3: Highly available NetApp Cloud Volumes ONTAP in Azure  
Exercise 1: Deploying a single-node Cloud Volumes ONTAP instance  
Exercise 2: Creating an NFS volume and accessing it from an NFS client  
Exercise 3: Creating an SMB volume and accessing it from an SMB client  
Exercise 4: Deploying a Cloud Volumes ONTAP high-availability pair  
**Module 5: Administration of NetApp Cloud Volumes ONTAP** Lesson 1: Administering Cloud Volumes ONTAP  
Exercise 1: Using BlueXP for basic administration of Cloud Volumes ONTAP  
Exercise 2: Doing basic administration of BlueXP **Module 6: Data protection**  
Lesson 1: Data protection Exercise 1: Configuring and managing ransomware protection  
Lesson 2: Administering Cloud Volumes ONTAP Exercise2: Configuring and Managing Disaster Recovery in the Data Fabric  
**Module 7: Tiering** Lesson 1: Tiering in Azure Exercise 1: Tiering backup data to Azure Blob storage

Session Dates

Date	Location	Time Zone	Language	Type	Guaranteed	PRICE
14 May 2024	Virtual Classroom	BST	English	Instructor Led Online		£1,795.00
11 Jun 2024	Virtual Classroom	BST	English	Instructor Led Online		£1,795.00
09 Jul 2024	Virtual Classroom	BST	English	Instructor Led Online		£1,795.00
20 Aug 2024	Virtual Classroom	BST	English	Instructor Led Online		£1,795.00
10 Sep 2024	Virtual Classroom	BST	English	Instructor Led Online		£1,795.00
08 Oct 2024	Virtual Classroom	BST	English	Instructor Led Online		£1,795.00
12 Nov 2024	Virtual Classroom	GMT	English	Instructor Led Online		£1,795.00
10 Dec 2024	Virtual Classroom	GMT	English	Instructor Led Online		£1,795.00

Additional Information

[This training is also available as onsite training. Please contact us to find out more.](#)