

# Nutanix Cloud Clusters On Azure Administration (NC2A-Azure)

## Summary:

Formats: Instructor-Led Training with Hands-on-labs

Length: 3 Days

## Overview:

In the Nutanix Cloud Clusters (NC2) on Azure Administration course for, you will explore how you can unify your private and public clouds for a true, hybrid cloud experience.

In this course, you will explore a number of subjects including:

- An introduction to NC2 and the NC2 console
- You will learn key technology concepts
- How to work with various entities such as customers, organizations, clusters, and users
- You will explore the cluster deployment process and review the configuration of different Microsoft Azure components that must be configured for NC2, such as:
  - Resource Providers
  - App Registration
  - Resource Groups
  - VNets
  - Subnets
- Note that setting up and configuring Azure resources is beyond the scope of this course
- You will review and understand key Azure cloud resources that are required for the deployment of NC2
- After you have successfully deployed a cluster, you will learn to:
  - Manage a cloud cluster, including creating virtual machines (VMs) and networks
  - Configuring backup and recovery
- One key benefit of NC2 is that your cloud cluster looks and feels like an on-prem AHV cluster, so you can expect to quickly ease into administering NC2.
- Finally, you will explore several monitoring and maintenance concepts and features, including alerts and events, investigating issues, performing upgrades, and engaging with Nutanix support.

## Audience

- IT administrators and similar job roles who want to learn how to deploy, configure, and manage Nutanix Cloud Clusters within a public cloud environment.

- Anyone preparing for the Nutanix Certified Professional - Cloud Integration - Azure (NCP-CI-Azure) 6.7 certification exam.

## Software Versions

- AOS 6.6
- Prism Central 2023.1

## Course Outline

### 1: Getting Started with Nutanix Cloud Clusters

- Introduction to Nutanix Cloud Clusters
- Creating My Nutanix and NC2 Accounts
- Logging into NC2 for the First Time
- Creating Organizations and Users
- Managing Support Authorization
- Hands-on Labs
  - Accessing and Exploring the NC2 Console
  - Creating and Managing an Organization
  - Adding Users from the NC2 Console
  - Managing Support Authorization

### 2: Deploying and Configuring NC2 on Azure

- Planning Your NC2 on Azure Implementation
- Deploying NC2 on Azure
- Reviewing the Configuration of Azure for NC2
- Configuring the NC2 Console for Azure
- Creating a Cluster
- Establishing Connectivity Between Your On-Prem Datacenter and NC2
- Hands-on Labs
  - Configuring Prism Element On-Prem
  - Configuring Prism Central On-Prem
  - Reviewing the Configuration of Azure (Account Roles, App Registration, Allowlisting, Resource Providers, Gateways, Subnets, VNets, and VPNs)
  - Creating a Cluster
  - Performing the Initial Configuration of the Cloud Cluster

### 3: Managing NC2 Clusters

- Performing Cluster Management and Maintenance Tasks
- Creating and Configuring User Virtual Machine (VM) Networks
- Creating and Managing User VMs
- Configuring Backup and Recovery
- Hands-on Labs
  - Creating VMs on the Cloud Cluster
  - Using Nutanix Disaster Recovery to Migrate VMs

#### 4: Monitoring, Maintaining, and Investigating Issues with NC2 Clusters

- Monitoring Cluster Health
- Investigating Cluster Deployment Issues
- Investigating Connectivity Issues
- Working with Support
- Performing Upgrades
- Hands-on Labs
  - Monitoring Cluster Health
  - Collecting a Log Bundle
  - Viewing Azure Events in the NC2 Console
  - Performing Software Updates

#### Related Certification

##### **Nutanix Certified Professional - Cloud Integration - Azure (NCP-CI-Azure) 6.7**

The Nutanix Certified Professional - Cloud Integration - Azure (NCP-CI-Azure) 6.7 exam will measure a candidate's ability to successfully plan, deploy, configure, and manage Nutanix Cloud Clusters within an Azure public cloud environment.

## Course Outline

### 1: Exploring Nutanix Storage Features

- Understanding Nutanix AOS Services and AOS Storage Services
- Exploring Storage Components
- AOS Storage Data Pathing

#### Hands-on Labs

- Creating a Storage Container
- Updating Reported Capacity

### 2: Creating a Highly Available, Performant, and Resilient Storage Layer

- Creating Highly Available, Resilient Infrastructure
- Storage Optimization and Data Efficiency
- Optimizing and Planning for New Workloads
- Storage Best Practices for Application Workloads

#### Hands-on Labs

- Observing Nutanix Cloning Efficiency
- Reserving Rebuild Capacity in AHV
- Observing the Rebuild Process
- Disabling Rebuild Capacity Reservation
- Creating a Storage Container with Deduplication Enabled
- Reviewing Deduplication Savings
- Enabling Replication Factor 1 and Creating a Storage Container

### 3: Optimizing Physical and Virtual Networks in AOS

- Optimizing Physical & Virtual Networks
- Best Practices

#### Hands-on Labs

- Managing Virtual Switches and Uplinks
- Viewing Virtual Switches from Prism Element
- Configuring CVM Network Segmentation
- Configuring QoS Traffic Marking

### 4: Optimizing Overlay Networks Using Flow Networking

- Optimizing Physical & Virtual Networks
- Implementing Flow Networking
- Implementing VPCs
- Overlay Network Use Cases

#### Hands-on Labs

- Enabling Flow Networking
- Creating an External Subnet

- Creating a VPC
- Creating VMs using the Overlay Subnets
- Configuring Local and Remote Gateways
- Establishing a VPN Connection
- Verifying VPN Connectivity

## 5: Optimizing VM Performance

- Sizing the CVM & Prism Central
- Alternate Methods of Provisioning User VMs
- Working with GPUs in AHV
- Improving VM Storage and Network Performance

### Hands-on Labs

- Creating VMs with the REST API
- Configuring VirtIO Multi-Queue
- Configuring Volumes Block Storage

## 6: Analyzing Nutanix Cluster Security Options

- Nutanix Security Technologies
- User Authentication and Permissions
- Hardening AHV and the CVM
- Using Flow Network Security & Flow Security Central
- Data Encryption with Nutanix
- Managing Log Files

### Hands-on Labs

- Configuring Cluster Lockdown
- Replacing Default SSL Certificates
- Configuring Syslog Integration
- Managing User Permissions

## 7: Microsegmentation with Flow Network Security

- Flow Policy Constructs
- Security Policy Models and Types
- Enabling Microsegmentation
- Creating and Applying Policies

### Hands-on Labs

- Enabling Flow Microsegmentation
- Creating Categories
- Creating VMs and Assigning Categories
- Configuring Isolation and Application Security Policies

## 8: Microsegmentation with Flow Network Security

- Evaluating Cluster Health

- Network Packet Capture and Inspection
- Acropolis Service Failures
- Ensuring Efficient Physical Resource Consumption with Machine Learning
- Application Monitoring and Discovery
- Monitoring Performance

#### Hands-on Labs

- Creating a Prism Central Performance Monitoring Dashboard
- Creating Charts to Analyze Metrics Using Prism Central
- Creating Charts to Analyze Entities Using Prism Element

### 9: Business Continuity

- Assessing Business Continuity and Disaster Recovery
- High Availability and Data Protection
- Third Party Backup Integrations
- Best Practices

#### Hands-on Labs

- Configuring Self Service Restore

### 10: Implementing Disaster Recovery

- Replicating Data with AOS
- Disaster Recovery Orchestration
- Disaster Recovery with Protection Domains
- Getting Started with Nutanix Leap
- Protecting Against Ransomware

#### Hands-on Labs

- Enabling Nutanix Leap
- Configuring an Availability Zone
- Configuring a Protection Policy
- Creating Production and Test VLANs
- Preparing VMs for Nutanix Leap
- Configuring a Recovery Plan
- Performing Test and Planned Failover

### **Related Certification**

#### [Nutanix Certified Master - Multicloud Infrastructure \(NCM-MCI\)](#)

The Nutanix Certified Master - Multicloud Infrastructure (NCM-MCI) certification measures your ability to analyze, evaluate, and optimize platform performance, configuration and health. The exam will also validate the candidate's ability to remediate and evolve the platform to be in compliance with business requirements.

Successful NCMs have approximately 3-5 years of holistic IT infrastructure experience and 2-3 years of Nutanix virtualization experience.