

EXAM BLUEPRINT GUIDE

# Nutanix Certified Professional Multicloud Infrastructure (NCP-MCI) 6.10 Beta Exam



# Table of Contents

Author	3
Contributors	3
<b>1. The Exam</b>	<b>4</b>
1.1 Purpose of Exam	4
1.2 Number of Questions	4
1.3 Pricing	4
1.4 Passing Score	4
1.5 How Objectives Relate to Questions on the Exam	4
1.6 Languages	4
1.7 Time Limit	4
1.8 Scheduling and Taking the Exam	5
1.9 Certification Tracks	5
1.10 Retake Policy	5
1.11 Exam Security	5
1.12 Recertification	5
1.13 Benefits of Certification	6
<b>2. Intended Audience</b>	<b>6</b>
<b>3. Objectives Covered in the NCP-MCI 6.10 Beta Exam</b>	<b>7</b>
3.1 Introduction	7
3.2 Objectives	7
Section 1 – Manage VMs within a Nutanix Multicloud Environment	7
Section 2 – Manage Clusters within a Nutanix Multicloud Environment	9
Section 3 – Configure Disaster Recovery and Data Protection within a Nutanix Multicloud Environment	12
Section 4 – Troubleshoot a Nutanix Multicloud Environment	13
Section 5 – Conduct Custom Monitoring within a Nutanix Multicloud Environment	16
<b>4. NCP-MCI 6.10 Training Recommendations</b>	<b>18</b>
4.1 Course Recommendation	18
<b>5. Resources</b>	<b>19</b>
5.1 Nutanix Community Edition	19
5.2 Test Drive	19
5.3 The Nutanix Community	19

## **Author**

Jeff Hall, Manager, Technical Certification Development

## **Contributors**

Chris McMahon; Advisory Portfolio Architect - NCM  
Chris Nelson; Advisory Portfolio Architect - NCM  
Christian Marrero; Shared Services Systems Engineer  
Daniel Sullivan; Field Engineer  
John Burton; Sr. Staff Escalation Engineer  
Joshua Hutchins; Staff Escalation Engineer  
Kenneth Fingerlos; Director, Global Practices - Services  
Lev Goronshtein; Advisory Systems Engineer  
Lochan Serma; Staff Consulting Architect  
Maroane Boutayeb; Global Unit Lead - Nutanix on OVHcloud  
Matthew Gauch; Sr. Staff Escalation Engineer  
Nitesh Singh; Systems Reliability Engineer II  
Paul Monroe; Staff Escalation Engineer  
Ranvir Mankoo; Sr. Technical Course Developer  
Rickard Wendel; Sr. Systems Engineer  
Rob Buchanan; Sr. Systems Engineer  
Ross Hunt; Staff Resident Architect  
Samuele Cerutti; Advisory Systems Engineer  
Shaun Sparks; Sr. Cloud Engineer  
Thomas Lehrer; Virtualization Architect  
Tod Holsenbeck; Sr. Staff Enterprise Architect and Practice Lead  
Vincent LaPaglia; Cloud Data Architect  
Vlad Glemb; Staff Consulting Architect

### Disclaimer:

The Nutanix Certified Professional - Multicloud Infrastructure (NCP-MCI) 6.10 Beta Exam Blueprint Guide provides an overview of the objectives that must be mastered to achieve the NCP-MCI 6 credential. Nutanix does not offer any guarantees that this guide will ensure a candidate's success in achieving the NCP-MCI 6 certification. All information in this guide is subject to change at any time at the sole discretion of Nutanix.

# 1. The Exam

## 1.1 Purpose of Exam

The Nutanix Certified Professional - Multicloud Infrastructure (NCP-MCI) 6.10 beta exam will measure a candidate's ability to interpret documented standards and perform key administrative tasks, such as deploying, configuring, migrating, troubleshooting, expanding, and managing within a Nutanix multicloud platform environment. Successful candidates demonstrate mastery of these skills and abilities.

## 1.2 Number of Questions

The NCP-MCI 6.10 beta exam consists of 114 multiple-choice and multiple-response questions.

## 1.3 Pricing

There is no cost for the NCP-MCI 6.10 beta exam.

## 1.4 Passing Score

The final score will be determined by examining the results from the beta exam period, determining which exam items performed well, and evaluating each candidate's results, based on only the items that performed well.

This process can take from 4-6 weeks from the time the beta period has ended. Once the evaluation is complete, candidates will receive their scores. Candidates who have passed will not need to take the live exam.

## 1.5 How Objectives Relate to Questions on the Exam

Objectives summarize what the test is designed to measure. Objectives are developed by Exam Developers and Subject Matter Experts based on identified tasks that relate to the job of deploying and administering a Nutanix multicloud platform environment.

Once the initial development process is complete, these objectives are verified using an external group of individuals in the actual job role. Finally, a number of questions is determined for each objective, which relates directly to the criticality of the task in the job role.

## 1.6 Languages

The beta exam is available in English.

## 1.7 Time Limit

The time limit for the beta exam is 180 minutes.

## 1.8 Scheduling and Taking the Exam

The NCP-MCI 6.10 beta exam is delivered via remote proctoring or in-person at select test centers.

If you select remote proctoring, after registering for the exam and providing valid identification, you will receive information on how to take the exam from your location using a web browser. Because the exam is remote proctored, you will be provided with a locked down, monitored, secure exam experience.

If you select in-person testing, you will be able to select a test center near you. On the day of the exam, you will need to arrive at the test center 15 minutes prior to the exam start time with a valid government-issued ID.

## 1.9 Certification Tracks

The NCP-MCI 6.10 beta exam is a core component of the Nutanix Multicloud Infrastructure track. Passing this exam results in achieving the NCP-MCI 6 certification.

The certification requires a passing score on the exam. While it is not required that you attend a course, Nutanix provides training that covers the objectives on the exam. Details on the recommended training course are provided in [Section 4](#).

## 1.10 Retake Policy

If a candidate fails an exam on the first attempt, he or she is allowed two additional attempts. There is a seven-day waiting period between attempts. Like the first attempt, these are paid for individually and Nutanix recommends that you allow sufficient time between attempts to be properly prepared and to maximize your chances for success.

Please note: After three attempts, you will be unable to take the exam for 60 days, after which you can email [university@nutanix.com](mailto:university@nutanix.com) and request that your attempts are reset. Nutanix recommends you utilize the time to thoroughly review this guide and the related references and/or take the recommended training for this exam.

## 1.11 Exam Security

Nutanix reserves the right to refuse certifying a candidate who violates exam security policies. This includes copying and redistribution of exam material, using any type of study material during the exam itself, attempting to photograph exam items and taking an exam using a false identity. Your identity is captured as part of the exam registration process and must be validated before you will be allowed to take the exam.

## 1.12 Recertification

Once you have passed the Nutanix Certified Professional – Multicloud Infrastructure 6.10 exam and achieved the NCP-MCI 6 certification, it will remain valid for two years.

To maintain your certification status, you must either renew your existing certification, pass an equivalent NCP-level exam within another certification track, or pass the NCM-MCI exam.

## 1.13 Benefits of Certification

- Digital badge from Credly that you can share on social media
- Points on Nutanix Xtribe that you can redeem for prizes (only available for Nutanix customers)
- Access to the Certification store at <http://store.nutanix.com> for shirts, mugs, and more
- Opportunity to participate as a SME to develop future exams
- Discount on attending Nutanix .NEXT

## 2. Intended Audience

A candidate for the NCP-MCI 6.10 exam and NCP-MCI 6 certification has approximately 1-2 years of holistic IT infrastructure experience, while having at least 6-12 months of Nutanix administration experience.

Successful candidates are typically IT staff, to include administrators, engineers, and operators, as well as Tier 1 or 2 support personnel and Network or Security Operations Center escalation engineers who are capable of successfully deploying, configuring, migrating, troubleshooting, expanding, and managing within a Nutanix multicloud platform environment. Finally, the successful candidate will most likely have taken training courses, such as the Nutanix Enterprise Cloud Administration (ECA) course.

# 3. Objectives Covered in the NCP-MCI 6.10 Beta Exam

## 3.1 Introduction

It is recommended that candidates have the knowledge and skills necessary to deploy, configure, migrate, troubleshoot, expand, and manage within a Nutanix multicloud platform environment before attempting the Nutanix Certified Professional – Multicloud Infrastructure 6.10 beta exam. It is also recommended that the candidate complete the training course described in [Section 4](#) prior to taking the exam.

For the NCP-MCI 6 certification, candidates will be tested on the following software versions:

- AOS: version 6.10
- Prism Central: version pc2024.2

## 3.2 Objectives

Prior to taking this exam, candidates should understand each of the following objectives. Each objective is listed below; along with related tools the candidate should have experience with, and related documentation that contains information relevant to the objective. Please note that some documentation requires access via the Support Portal. Information on creating an account for use with the Support Portal can be found [here](#).

All objectives may also be referenced in other product documentation not specifically highlighted below. The candidate should be familiar with all relevant product documentation or have the equivalent skills.

### Section 1 – Manage VMs within a Nutanix Multicloud Environment

Objective 1.1: Create and update VMs on the Nutanix platform

Knowledge

- Determine the virtual hardware
- Determine boot mode
- Determine sizing requirements
- Identify VM's configuration to match application requirements
- Determine target environment attributes
- Update VM's virtual hardware configuration
- Assign Affinity policies
- Determine cold vs hot modifications

References

- [Updating a VM through Prism Central \(AHV\)](#)
- [Creating a VM through Prism Element \(AHV\)Traffic Mirroring on AHV Hosts](#)

- [VM Details View](#)
- [Memory Commit Deployment Workflow](#)
- [VM Policy Management](#)

## Objective 1.2: Deploy VMs

### Knowledge

- Deploy VM from template
- Choose the correct VM deployment based on specifications
- Configure Images for VM deployment
- Clone/restore VM from snapshots
- Choose format for importing VM
- Choose format for exporting VM
- Export VMs with 3rd party tools

### References

- [Creating a VM \(AHV\)](#)
- [Creating a VM Template](#)
- [Managing a VM Template](#)
- [Limitations of VM Template Feature](#)
- [Virtual Machine Customization](#)
- [Configuring Images](#)
- [Exporting a VM as an OVA](#)

## Objective 1.3: Migrate VMs

### Knowledge

- Determine prerequisites needed to migrate VM from Source to Target, including the use of Move
- Determine the storage requirements to migrate VMs
- Determine the network requirements to migrate VMs
- Determine AOS\AHV software and any physical hardware requirements

### References

- [Planned Failover](#)
- [Move Migration Workflow](#)
- [Migration Considerations](#)
- [Live vDisk Migration Across Storage Containers](#)
- [Live Migration Restrictions](#)



- [Acropolis Dynamic Scheduling in AHV](#)
- [Live Migration of vGPU-enabled VMs](#)

#### Objective 1.4: Configure VM categories and attributes

##### Knowledge

- Determine the correct Category for a VM
- Demonstrate how to create a Category
- Relate the appropriate key:value of a Category
- Use labels in VM's inventory
- Indicate VM catalog usage
- Assign Storage Policy
- Identify VM Agent usage
- Demonstrate how to assign VM to a Project

##### References

- [Creating a Category](#)
- [Assigning a Category](#)
- [Prism Central GUI Organization](#)
- [Managing a VM](#)
- [Storage Policy Management](#)
- [Assigning a VM to a Project Member](#)

## Section 2 – Manage Clusters within a Nutanix Multicloud Environment

#### Objective 2.1: Perform storage administration procedures

##### Knowledge

- Perform create/read/update/delete (CRUD) operations
  - Storage containers
  - Volume groups

##### References

- [Secure Snapshots using Approval Policy](#)
- [Creating a Storage Container in Prism Central](#)
- [Creating a Storage Container in Prism Element](#)
- [Limitations for Storage Containers](#)

- [Volume Group Management in Prism Central](#)
- [Volume Group Configuration in Prism Element](#)

## Objective 2.2: Configure AOS and Prism Central Settings

### Knowledge

- Configure Authentication methods
- Describe SSL certificate management
- Configure AHV hardening
- Determine network segmentation
- Determine appropriate IAM RBAC
- Establish and Manage Projects
- Configure NTP settings
- Configure SMTP server
- Configure syslog settings
- Configure backup and recovery settings

### References

- [Configuring Authentication](#)
- [Hardening AHV](#)
- [Securing Traffic Through Network Segmentation](#)
- [Enabling High Availability for the Cluster](#)
- [Bandwidth Throttling Policies](#)
- [Project Management](#)
- [Additional Operations in Prism Central](#)
- [Configuring NTP Servers for Prism Central](#)
- [Syslog Modules](#)

## Objective 2.3: Perform network administration procedures

### Knowledge

- Create VLAN-backed subnets
- Create new Virtual Switches
- Edit network load balancing policies
- Interpret physical NIC usage

### References

- [Network Configuration for the Cluster](#)
- [Creating VLAN Connections](#)

- [Creating or Updating a Virtual Switch](#)
- [MAC Address Prefix](#)
- [Network Visualization](#)
- [IGMP Snooping](#)
- [Enabling RSS Virtio-Net Multi-Queue](#)

#### Objective 2.4: Perform software and hardware firmware Life Cycle Management (LCM)

##### Knowledge

- Configure LCM service as needed
- Perform an LCM inventory
- Select and perform Hardware/Firmware updates
- Select and perform Software updates

##### References

- [LCM Update Prerequisites](#)
- [LCM Inventory](#)
- [Performing Software Updates with LCM](#)
- [Performing Firmware Updates with LCM](#)

#### Objective 2.5: Perform hardware maintenance operations

##### Knowledge

- Add and Remove nodes
- Perform hardware upgrades
- Determine how to appropriately replace NVMe
- Add/remove physical disks

##### References

- [Expanding a Cluster](#)
- [Node Maintenance Mode](#)
- [Removing a Node](#)

#### Objective 2.6: Configure Intelligent Operations

##### Knowledge

- Modify Capacity Configurations and Operational Policies
- Discover Application relationships

- Configure What-if scenarios
- Demonstrate understanding of capacity runway

#### References

- [Updating Capacity Configurations](#)
- [Cluster Details View](#)
- [Creating Playbooks using Alert](#)
- [Behavioral Learning Tools](#)
- [Enabling Application Discovery](#)
- [Capacity Runway Summary View](#)

### **Section 3 – Configure Disaster Recovery and Data Protection within a Nutanix Multicloud Environment**

#### Objective 3.1: Configure Protection Policies and Domains

##### Knowledge

- Determine entities to protect
- Determine Recovery location
- Determine Schedule
- Determine Consistency Groups
- Determine entity to protect
- Determine appropriate schedule settings
- Configure retention policy
- Configure remote site for replication

##### References

- [Data Protection with Near-Sync Replication](#)
- [Data Protection with Asynchronous Replication](#)
- [Conditions for Application-consistent Snapshots](#)
- [Availability Zones](#)
- [Pairing Availability Zones](#)
- [Remote Site Configuration](#)

## Objective 3.2: Configure and execute Recovery Plans

### Knowledge

- Determine the requirements for script execution
- Determine the requirements for network mapping
- Determine the correct failover strategy

### References

- [Recovery Plans](#)
- [Creating a Recovery Plan](#)
- [Requirements for DR Configuration between On-Prem AZs](#)
- [Protection Policy and Recovery Plan Based Method](#)

## Objective 3.3: Configure Metro Replication

### Knowledge

- Compare Metro Availability on vSphere versus AHV
- Given a specific failover handling scenario, determine correct failover methodology
- Perform planned and unplanned failover
- Prevent split-brain

### References

- [Metro Availability](#)
- [AHV Metro Recovery Workflows](#)
- [AHV Metro \(Witness Option\)](#)
- [On-Demand Cross-Cluster Migration](#)
- [Limitations of Synchronous Replication](#)
- [Data Protection with Near-Sync Replication](#)

## Section 4 – Troubleshoot a Nutanix Multicloud Environment

### Objective 4.1: Troubleshoot Protection Policies and Recovery Plans

#### Knowledge

- Diagnose and address network mapping failure
- Diagnose and address vNIC issues

- Diagnose and address script execution failure
- Diagnose and address issue with connecting to Recovery Location
- Diagnose and address issue with recovery point schedule
- Diagnose and address issue with too many recovery points

#### References

- [Disaster Recovery Environment and Protection Setup](#)
- [Remote Site Configuration](#)
- [Requirements for Synchronous Replication](#)
- [Requirements for Asynchronous Replication](#)
- [Troubleshooting PostThaw Script Failures](#)
- [NCC Remote Site Connectivity Check](#)

#### Objective 4.2: Troubleshoot Metro Replication

##### Knowledge

- Diagnose and address naming convention issues
- Diagnose and address network limitation issues
- Diagnose and address replication state issues
- Diagnose and address metro design issues

##### References

- [Metro Availability](#)
- [AHV Metro Requirements and Recommendations](#)
- [Metro Availability Best Practices Checklist](#)
- [Configuring AHV Metro](#)
- [Metro Availability on ESXi](#)
- [NCC Data Locality Check](#)
- [NCC Metro Aggressive Break Replication Timeout Check](#)

#### Objective 4.3: Troubleshoot AOS/Prism Central security issues

##### Knowledge

- Resolve CVM communication issues
- Address security warnings from Prism (password management)
- Gather health status from command line

- Retrieve and interpret information from Logs

#### References

- [Controlling Remote \(SSH\) Access](#)
- [Hardening Controller VM](#)
- [Data-in-Transit Encryption](#)
- [Security Management using Identity and Access Management \(Prism Central\)](#)
- [SSL Certificate Management](#)
- [Secure Snapshots Using Approval Policy](#)

#### Objective 4.4: Troubleshoot LCM operations

##### Knowledge

- Diagnose and address issue with LCM failing to run inventory
- Diagnose and address LCM version failing to update

##### References

- [LCM Overview](#)
- [LCM Inventory](#)
- [Downloading Latest Compatibility Bundle Before Updating Software or Firmware](#)
- [Custom LCM Pre-Checks for AOS, Prism Central, and ESXi](#)
- [LCM Log Collection](#)
- [Stopping LCM Updates](#)

#### Objective 4.5: Troubleshoot performance issues

##### Knowledge

- Demonstrate how to locate and interpret performance-related information within log files
- Demonstrate how to read performance related charts
- Interpret configuration settings
- Fix VM configuration to meet performance requirements

##### References

- [Interpreting CPU Ready Values](#)
- [Apps Management Metrics Tab](#)
- [Chart Metrics](#)
- [Alerts/Health Checks Reference](#)

- [NCC Storage Pool Usage Check](#)
- [MySQL on Nutanix Best Practices - File System](#)
- [Minimum Hardware Requirements for RPO - Asynchronous](#)
- [Windows Defender Credential Guard Support in AHV](#)

## **Section 5 – Conduct Custom Monitoring within a Nutanix Multicloud Environment**

Objective 5.1: Conduct analysis of performance charts

Knowledge

- Determine schedule retention policies
- Create custom SLAs
- Determine storage requirements based on a policy
- Manage SLAs for multiple clusters
- Determine the number of snapshots

References

- [Prism Element Analysis Dashboard](#)
- [Behavioral Learning Tools](#)
- [Chart Management for Performance Analysis](#)
- [Adding a Chart](#)
- [Downloading a Chart as a Report](#)

Objective 5.2: Create Reports


Knowledge

- Identify type of report required
- Choose frequency of report to be generated
- Choose desired format of report
- Identify retention properties of desired report
- Choose any additional report customizations

References

- [Configuring Report Settings](#)
- [Scheduling a Predefined System Report Configuration](#)
- [Importing a Custom Report Configuration](#)





### Objective 5.3: Analyze capacity management

#### Knowledge

- Analyze cluster runway
- Determine capacity configuration options
- Compare scenarios options

#### References

- [Intelligent Operations Analysis Dashboard](#)
- [Capacity Runway Summary View](#)
- [Updating Capacity Configurations](#)
- [Resource Planning - Creating a Scenario](#)

## 4. NCP-MCI 6.10 Training Recommendations

### 4.1 Course Recommendation

Nutanix offers a course that provides training on the objectives tested for in the exam. More information on this course, including delivery methods and pricing, can be found at [nutanix.com/training](https://nutanix.com/training).

The course details are as follows

The [Nutanix® Enterprise Cloud Administration \(ECA\)](#) hands-on training explores the deployment, administration and troubleshooting of a Nutanix Multicloud environment. The course covers the following objectives:

- Managing Virtual Machines
- Managing clusters
- Configuring Disaster Recovery
- Configuring Data Protection
- Troubleshooting
- Conducting custom monitoring
- Managing resource capacity

This course is available online or instructor-led. More information including schedules and how to register can be found at [www.nutanix.com/university](https://www.nutanix.com/university).

The material provided in the course covers a majority of the objectives (approximately 80%) that appear on the NCP-MCI 6.10 beta exam and is recommended for individuals who want to gain a good understanding of these objectives. Please note that additional exposure to a Nutanix environment is highly recommended.

#### NCP-MCI Exam Prep

This course helps prepare you for the Nutanix Certified Professional - Multicloud Infrastructure (NCP-MCI) exam. This course will refresh the knowledge covered by the Enterprise Cloud Administration (ECA) course by going through all course topics in condensed format, and by running you through a set of test questions for each module.

## 5. Resources

### 5.1 Nutanix Community Edition

The Nutanix Community Edition is a free product that allows you to deploy a Nutanix Cloud Platform. To download the software and build your own environment for exam preparation, click [here](#).

### 5.2 Test Drive

You can also take a 2-hour Hyperconverged Test Drive, which utilizes the Nutanix Community Edition, by clicking [here](#).

### 5.3 The Nutanix Community

Connect with cloud builders from around the world, learn from IT Pros in your industry and share experiences on the Nutanix Community. The community maintains an area focused on Nutanix certifications, which is located [here](#).

**NUTANIX**

+1 (855) 688-2649 | [certification@nutanix.com](mailto:certification@nutanix.com) | [www.nutanix.com](http://www.nutanix.com)

©2024 Nutanix, Inc. All rights reserved. Nutanix, the Nutanix logo and all product and service names mentioned herein are registered trademarks or trademarks of Nutanix, Inc. in the United States and other countries. All other brand names mentioned herein are for identification purposes only and may be the trademarks of their respective holder(s).