

Nutanix Certified Professional (NCP) 5.5

Exam Blueprint Guide v1.2



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Disclaimer:

The Nutanix Certified Professional (NCP) 5.5 Exam Blueprint Guide provides an overview of the objectives that must be mastered to achieve the NCP credential. Nutanix does not offer any guarantees that this guide will ensure a candidate's success in achieving the NCP Certification. All information in this guide is subject to change at any time at the sole discretion of Nutanix.

Table of Contents

1. The Exam	3
1.1 Purpose of Exam	3
1.2 Number of Questions	3
1.3 Pricing.....	3
1.4 Passing Score	3
1.5 How Objectives Relate to Questions on the Exam	3
1.6 Languages.....	3
1.7 Time Limit.....	3
1.8 Scheduling and Taking the Exam	4
1.9 Certification Tracks.....	4
1.10 Retake Policy	4
1.11 Exam Security.....	4
1.12 Recertification	4
2. Intended Audience	5
2.1 Intended Audience	5
3. Objectives covered in the NCP 5.5 Exam	5
3.1 Introduction	5
3.2 Objectives.....	5
4. The Nutanix Administration Track and Course Recommendations.....	12
4.1 Nutanix Administration Track.....	12
4.2 Course Recommendation	12
5. Resources.....	13
5.1 Nutanix Community Edition	13
5.2 The Nutanix Next Community	13

1. The Exam

1.1 Purpose of Exam

The Nutanix Certified Professional (NCP) 5.5 Exam tests candidates on their skills and abilities deploying, administering and troubleshooting Nutanix AOS 5.5 in the datacenter. Successful candidates demonstrate mastery of these skills and abilities.

1.2 Number of Questions

The NCP 5.5 exam consists of 75 multiple choice and multiple response questions.

1.3 Pricing

The price of each NCP 5.5 exam attempt is \$199 (USD).

1.4 Passing Score

The passing score for this exam is 3000, using a scaled scoring method. The scale is from 1000-6000. Scaled scores are calculated using a mathematical formula that considers a variety of factors, including the number and type of exam questions included in a specific version of the exam. Because this combination may vary in different versions of the same examination, scaled scores provide a fair score for everyone based on the version of the exam taken.

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 AOS 5.5 cluster. 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 exam is available in English.

1.7 Time Limit

The time limit for the exam is 120 minutes.

1.8 Scheduling and Taking the Exam

This exam is delivered via 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.

1.9 Certification Tracks

The NCP 5.5 exam is a core component of the Nutanix Administration track. 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 course and track 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 e-mail education@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 achieved the NCP 5.5 certification, it will remain valid until Nutanix releases the next version of the certification. At that time, you have one year to upgrade your certification to the new release before it expires. Nutanix provides a delta training covering features that are part of the AOS release that coincides with the new version of the certification.

2.Intended Audience

2.1 Intended Audience

A candidate for the NCP 5.5 certification has approximately three to six months experience working with an AOS implementation. They are typically infrastructure personnel who are capable of deploying and administering Nutanix AOS 5.5 nodes, blocks and clusters and can use Prism Element to monitor, manage, troubleshoot and administer AHV hosts and virtual machines. The successful candidate will most likely have additional general systems administration experience (typically 1-2 years).

3.Objectives covered in the NCP 5.5 Exam

3.1 Introduction

It is recommended that candidates have the knowledge and skills necessary to deploy, administer and troubleshoot a Nutanix AOS environment before attempting the NCP 5.5 exam. It is also recommended that the candidate complete the recommended course prior to taking the exam.

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 – Nutanix Enterprise Cloud Concepts

Objectives

- Define and differentiate features and technologies present in Acropolis, Prism and Calm
- Explain the relationship between nodes, blocks and clusters
- Recognize the benefits of a Nutanix hyperconverged infrastructure solution
- Differentiate between physical and logical cluster components
- Describe some of the primary AOS services running on the CVM

References

- [eBook – Enterprise Cloud for Dummies](#)

- [Video – Nutanix – How it Works \(Detailed\)](#)
- [Whitepaper – The Definitive Guide to Hyperconverged Infrastructure](#)

Section 2 – Managing a Nutanix Cluster

Objectives

- Identify methods for managing a Nutanix Enterprise Cloud
- Identify how to download and configure tools and applications like Prism Central, Cmdlets, and REST API
- Utilize Prism Element to configure and monitor a cluster
- Describe, differentiate and utilize nCLI/aCLI to configure and monitor a cluster
- Differentiate between Pulse and Alert technologies
- Use the REST API Explorer to retrieve and/or make changes to a cluster

References

- [Prism Element 5.5 Guide](#)
- [Prism Central 5.5 Guide](#)
- [Acropolis Command-Line Interface](#)
- [Nutanix Command-Line Interface](#)
- [Nutanix REST API](#)
- [Nutanix PowerShell Cmdlets](#)

Section 3 – Securing a Nutanix Cluster

Objectives

- Describe how Nutanix provides cluster security
- Explain security concepts such as two-factor authentication, key management and cluster lockdown
- Explain Data-at-Rest Encryption (DARE) functionality
- Configure user authentication
- Install an SSL certificate

References

- [Security Management](#)
- [User Management](#)
- [Nutanix Controller VM Security Operations Guide](#)
- [Tech Note – Information Security with Nutanix](#)
- [Video – Data-at-Rest Encryption Configuration on Nutanix](#)
- [Whitepaper - Building Secure Platforms and Services with Nutanix Enterprise Cloud](#)

Section 4 – Networking

Objectives

- Differentiate AHV managed and unmanaged networks
- Describe AHV networking components and configuration settings
- Explain and implement network segmentation
- Explain how to separate 1GbE and 10GbE interfaces
- Identify the default AHV network configuration
- Explain IP Address Management (IPAM)
- Define and differentiate AHV Bond Modes
- Create a Backplane Network
- Create a User VM Network
- Given a scenario, configure the appropriate AHV Bond Mode

References

- [Network Management](#)
- [Host Network Management](#)
- [Best Practices Guide – AHV Networking](#)
- [Best Practices Guide – AHV](#)
- [Video Series – nu.school Tech TopX Networking Series with Jason Burns](#)

Section 5 – VM Creation and Management

Objectives

- Explain Live Migration
- Describe VM High Availability functionality
- Describe VM Data Path Redundancy
- Perform guest customization on a Virtual Machine
- Perform a Self-Service Restore of a VM
- Use the Image Service to deploy a VM

References

- [Virtual Machine Management – AHV Administration Guide](#)
- [Virtual Machine Management – Prism Element](#)
- [Tech Note – Data Protection for AHV-Based VMs](#)
- [Best Practices Guide – AHV](#)

Section 6 – Health Monitoring and Alerts

Objectives

- Identify dashboards and monitoring tools that can be used to resolve cluster issues
- Utilize the Health dashboard and its major components
- Configure Alert e-mail settings for a cluster
- Utilize methods for configuring and monitoring health dashboards and alerts to resolve a given scenario

References

- [Health Monitoring](#)
- [Alert and Event Monitoring](#)

Section 7 – Distributed Storage Fabric

Objectives

- Identify methods for creating a Storage Container
- Determine what capacity optimization method(s) should be used based on a given workload
- Describe and differentiate technologies used in conjunction with a Distributed Storage Fabric, including snapshots, clones, high availability and disaster recovery
- Configure Deduplication, Compression, and Erasure Coding on Nutanix containers
- Given a workload, determine how to best optimize storage capacity and explain how the various Nutanix Capacity Optimization features work.

References

- [Storage Management](#)
- [eBook – Software-Defined Storage for Dummies](#)
- [Video – Snapshots and Clones](#)
- [Video – Deduplication](#)
- [Tech Note – Data Efficiency](#)

Section 8 – AHV Workload Migration

Objectives

- Describe the steps needed to perform an ESXi to AHV workload migration from preparation through completion
- Migrate a VM from an ESXi cluster to an AHV cluster

References

- [Migration Guide](#)
- [Xtract for VMs](#)
- [Tech Note – Migrating from ESXi to Nutanix AHV](#)

Section 9 – Acropolis Services

Objectives

- Define and differentiate Acropolis Block Services (ABS) and Acropolis File Services (AFS)
- Configure Acropolis Block Services (ABS)
- Configure Acropolis File Services (AFS)
- Determine and implement storage services based on a given workload

References

- [Acropolis File Services](#)
- [Acropolis Block Services](#)
- [White Paper – Reimagine File Services with Nutanix Acropolis File Services](#)
- [Tech Note – Acropolis File Services](#)
- [Best Practices Guide – Acropolis Block Services](#)

Section 10 – Data Resiliency

Objectives

- Describe the concept of the Redundancy Factor and related requirements
- Explain how availability impacts components and VMs within a Nutanix Cluster
- Identify Data Resiliency requirements and policies related to a Nutanix Cluster
- Describe and differentiate component, service, and CVM failover processes such as Disk Failure, CVM Failure, and Node Failure

References

- [Failure Scenarios](#)
- [VM High Availability in Acropolis](#)
- [Best Practices Guide – Data Protection and Disaster Recovery](#)
- [Whitepaper – The Definitive Guide to Data Protection and Disaster Recovery](#)
- [Video – Tech TopX – Redundancy Factor vs. Replication Factor](#)
- [Tech Note – Infrastructure Resiliency](#)
- [Tech Note – Data Protection and Disaster Recovery](#)

Section 11 – Data Protection

Objectives

- Describe and differentiate Nutanix data protection technologies such as NearSync, Cloud Connect, and Protection Domains
- Explain failover and failback processes
- Create and modify a Protection Domain
- Configure a Remote Site

References

- [Data Protection](#)
- [Failing From one Site to Another](#)
- [Best Practices Guide – Data Protection and Disaster Recovery](#)
- [Whitepaper – The Definitive Guide to Data Protection and Disaster Recovery](#)
- [Video – Tech TopX – Redundancy Factor vs. Replication Factor](#)
- [Tech Note – Data Protection for AHV-Based VMs](#)

Section 12 – Prism Central

Objectives

- Identify Prism Central requirements
- Describe and differentiate Prism Element and Prism Central
- Identify methods for viewing information about VMs, clusters, hosts, disks, containers, and storage containers
- Deploy a Prism Central VM
- Register/Unregister a Nutanix Cluster with Prism Central
- Create and configure a custom dashboard
- Configure a custom report

References

- [Prism Central](#)
- [Video – Prism: Element, Central and Pro](#)
- [Tech Note – Prism Central and Prism Pro](#)

Section 13 – Cluster Maintenance

Objectives

- Describe available methods and resources for cluster maintenance
- Perform one or more Nutanix Cluster Checks
- Install NCC
- Configure an HTTP Proxy

References

- [Troubleshooting Tools](#)
- [Support Services](#)
- [Upgrading Nutanix Cluster Check](#)
- [Nutanix Cluster Check \(NCC\) 3.5 Guide](#)

Section 14 – Lifecycle Operations

Objectives

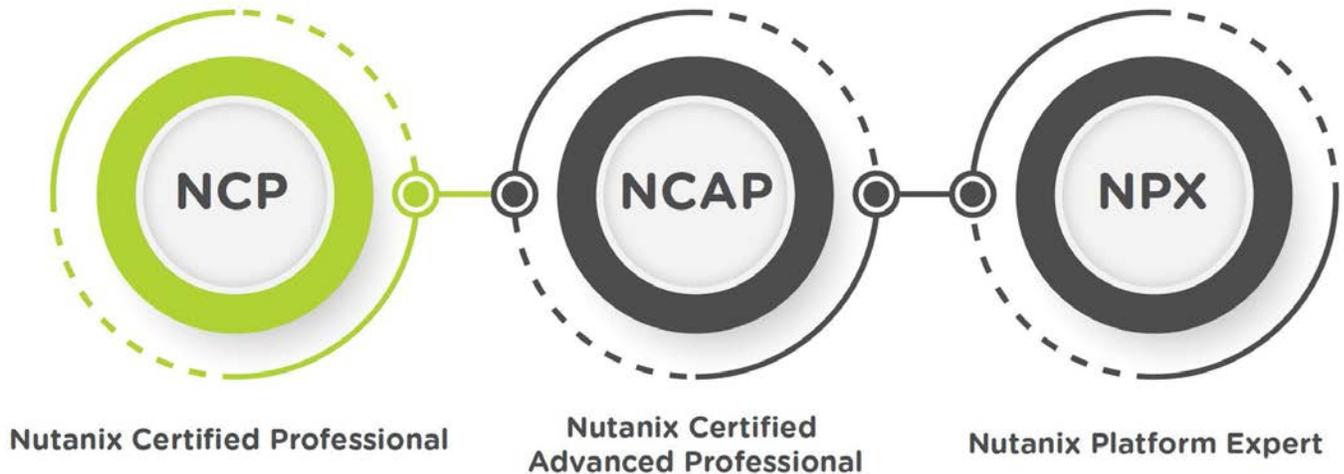
- Describe processes and procedures for license management, including AOS and Prism licenses
- Given a scenario, recognize processes to start, stop, and expand a cluster
- Install, upgrade and reclaim licenses
- Start a node and shut down a node in a Nutanix Cluster
- Eject a node from a Nutanix Cluster

References

- [Cluster Management – AOS Advanced Administration Guide](#)
- [Cluster Management – Prism Element](#)
- [Video – Maintain Infrastructure with Zero Downtime](#)

4. The Nutanix Administration Track and Course Recommendations

4.1 Nutanix Administration Track



4.2 Course Recommendation

Nutanix offers a course that provides training on the objectives tested for in the exam. The details are as follows:

[Nutanix® Enterprise Cloud Administration \[V5.5\]](#)

A four-day, hands-on training course that explores the deployment, administration and troubleshooting of a Nutanix Enterprise Cloud. The course covers the following objectives:

- Introduction to the Nutanix Enterprise Cloud
- Managing a Nutanix Cluster
- Securing a Nutanix Cluster
- Networking
- VM Creation and Management
- Health Monitoring and Alerts
- Distributed Storage Fabric
- AHV Workload Migration
- Data Resiliency
- Data Protection
- Prism Central
- Cluster Maintenance
- Lifecycle Operations

The material provided in the course covers a majority of the objectives (approximately 80%) that appear on the NCP 5.5 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.

5.Resources

5.1 Nutanix Community Edition

The Nutanix Community Edition is a free product that allows you to deploy a Nutanix Enterprise Cloud. To download the software and build your own environment for exam preparation, click here:

https://www.nutanix.com/products/register/?utm_source&utm_medium&utm_campaign&cache=449194096.

You can also take a 2-hour Hyperconverged Test Drive, which utilizes the Nutanix Community Edition, by clicking here:

<https://www.nutanix.com/test-drive-hyperconverged-infrastructure/>.

5.2 The Nutanix Next Community

The Nutanix Next Community is a social interaction site where professionals can connect with cloud builders from around the world, learn from IT Pros in the industry and share experiences. The community maintains an area focused on the NCP certification, which is located here: <https://next.nutanix.com/nutanix-certified-professional-ncp-36>.