

Nutanix Certified Advanced Professional (NCAP) 5.5

Exam Blueprint Guide v1.0

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Disclaimer:

The Nutanix Certified Advanced Professional (NCAP) 5.5 Exam Blueprint Guide provides an overview of the objectives that must be mastered to achieve the NCAP credential. Nutanix does not offer any guarantees that this guide will ensure a candidate's success in achieving the NCAP 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 NCAP 5.5 Exam.....	5
3.1 Introduction	5
3.2 Objectives.....	5
4. The Nutanix Administration Track and Course Recommendations.....	10
4.1 Nutanix Administration Track	10
4.2 Course Recommendation.....	10
5. Resources	11
5.1 Nutanix Community Edition	11
5.2 The Nutanix Next Community.....	11

1. The Exam

1.1 Purpose of Exam

The Nutanix Certified Advanced Professional (NCAP) 5.5 Exam tests candidates on their skills and abilities performing advanced administrative tasks and optimizing both virtualized workloads and infrastructure components on an AOS 5.5 implementation. Successful candidates demonstrate mastery of these skills and abilities.

1.2 Number of Questions

The NCAP 5.5 exam consists of 90 multiple choice and multiple response questions.

1.3 Pricing

The price of each NCAP 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 150 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 NCAP 5.5 exam is a component of the Nutanix Administration track. The certification requires that candidates have obtained the NCP 5.5 certification as well as achieved a passing score on the NCAP 5.5 exam. While it is not required that you attend a course, Nutanix provides training that covers the objectives on the exam. Details on this 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 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 NCAP 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 NCAP 5.5 certification has approximately 1-2 years of experience working with AOS with at least 6 months of experience working with AHV, as well as additional generalized systems administration experience. They are typically infrastructure personnel who are capable of deploying, administering, optimizing and securing Nutanix AOS 5.5 nodes, blocks and clusters and can use Prism Central and Calm to centrally monitor, manage and troubleshoot multi-cluster deployments. The following products are covered in this exam:

- Acropolis (all license tiers)
- Prism Central (all license tiers)

3. Objectives covered in the NCAP 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 NCAP 5.5 exam. It is also recommended, though not required, that the candidate complete the course described [section 4](#) in 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 – Administer Advanced Virtual Machine Deployments

Objectives

- Perform unattended installation and configure Nutanix Guest Tools (NGT)
- Set up and configure Self Service Restore
- Add/Remove CPU and/or Memory resources to a live system
- Identify the need for Flash mode/AHV Turbo for VM storage or performance tuning
- Manage Acropolis containers

References

- [Prism Element 5.5 Guide](#)
- [AHV Administration Guide](#)
- [Acropolis Command Reference Guide](#)
- [Best Practices Guide – AHV](#)
- [Best Practices Guide – Data Protection and Disaster Recovery](#)
- [Tech Note – Data Protection and Disaster Recovery](#)
- [Tech Note – Data Protection for AHV-Based VMs](#)
- [Tech Note – AHV](#)

Section 2 – Implement Business Continuity and Disaster Recovery

Objectives

- Based on a given scenario, administer and manage Nutanix data protection solutions
- Demonstrate how to install and configure synchronous replication for multiple hypervisors

References

- [Prism Element 5.5 Guide](#)
- [Acropolis Advanced Administration Guide](#)
- [Best Practices Guide – Metro Availability](#)
- [Best Practices Guide – Data Protection and Disaster Recovery](#)
- [Tech Note – Data Protection and Disaster Recovery](#)
- [Tech Note – Data Protection for AHV-Based VMs](#)

Section 3 – Configure Advanced Networking

Objectives

- Identify the physical switch configuration necessary to support a given AOS networking feature
- Utilize network CLIs to manage OVS (Open vSwitch) instances and make changes to multiple nodes
- Manage bridges and uplinks
- Configure and utilize Network Visualization
- Describe and differentiate Network Segmentation for CVM-CVM/CVM-Hypervisor/CVM-Intranet

References

- [Prism Element 5.5 Guide](#)
- [AHV Administration Guide](#)
- [Acropolis Command Reference Guide](#)

- [Acropolis Advanced Administration Guide](#)
- [Best Practices Guide – AHV Networking](#)
- [Best Practices Guide – AHV](#)
- [Video Series – nu.school Tech TopX Networking Series with Jason Burns](#)

Section 4 – Enable and Customize Security Services

Objectives

- Describe and manage Nutanix’s custom Security Technical Implementation Guides (STIGs)
- Describe and manage role mapping between Prism Element and Prism Central
- Describe and differentiate audit events and logs for local and AD/LDAP users
- Create and install SSH Keys for Cluster Lockdown
- Implement 2-factor authentication for an AOS cluster

References

- [Prism Element 5.5 Guide](#)
- [DISA STIG Compliance Reference Guide](#)
- [Nutanix Controller VM Security Operations Guide](#)
- [Tech Note – Information Security with Nutanix](#)
- [Whitepaper – Building Secure Platforms and Services with Nutanix Enterprise Cloud](#)

Section 5 – Manage Acropolis File and Block Services

Objectives

- Identify use cases for Acropolis Block Services (ABS)
- Identify use cases for Acropolis File Services (AFS)
- Deploy ABS to an AOS cluster (including Volume Groups, iSCSI Initiators, Discovery, CHAP)
- Deploy AFS to an AOS cluster (including a File Server and File Shares)
- Manage an AFS cluster
- Connect to an ABS target from both Windows and Linux clients

References

- [Prism Element 5.5 Guide](#)
- [Acropolis File Services](#)
- [White Paper – Reimagine File Services with Nutanix Acropolis File Services](#)
- [Tech Note – Acropolis File Services](#)
- [Best Practices Guide – Acropolis Block Services](#)
- [Best Practices Guide – General Linux on AHV](#)

Section 6 – Administer Prism Central with and without Prism Pro

Objectives

- Describe and differentiate capabilities of Prism Central with and without Prism Pro
- Use Prism Central to identify and fix bottlenecks and anomalies
- Exploit Machine Learning for entity management and resource optimization
- Plan for future growth using Capacity Runway and What-if Scenarios
- Manage assets and applications using Calm
- Automate application Life Cycle Management (LCM)
- Implement and administer Prism Self-Service

References

- [Prism Central 5.5 Guide](#)
- [Prism Self Service Administration Guide](#)
- [Prism Self Service Users Guide](#)
- [Nutanix Calm Administration and Operations Guide](#)
- [Video – Prism: Element, Central and Pro](#)
- [Tech Note – Prism Central and Prism Pro](#)
- [Tech Note – Nutanix Calm: Application Automation](#)
- [Tech Note – X-Fit: Seasonal Timeseries Analysis and Forecasting using Tournament Selection](#)

Section 7 – Manage and Optimize Performance

Objectives

- Determine correct system storage settings for compression, deduplication, erasure coding and validate expected savings
- Monitor CPU/Memory utilization to identify problems and propose solutions
- Analyze existing network configuration and adjust for optimal performance (NLB, Bond configuration)
- Identify the capabilities of the Enterprise Cloud as they relate to performance of AOS clusters, AHV hosts and VMs
- Describe and monitor storage performance and methods of optimization

References

- [Prism Element 5.5 Guide](#)
- [Prism Central 5.5 Guide](#)
- [AHV Administration Guide](#)
- [Acropolis File Services](#)
- [Best Practices Guide – Acropolis Block Services](#)
- [Best Practices Guide – AHV Networking](#)
- [Best Practices Guide – AHV](#)
- [Tech Note – Prism Central and Prism Pro](#)

Section 8 – Utilize Advanced Management Interfaces

Objectives

- Describe the REST API and demonstrate how to use the REST API explorer
- Install and configure a REST client to trigger REST API and generate code snippets
- Execute PowerShell cmdlets in interactive and batch modes

References

- [Prism Element 5.5 Guide](#)
- [Acropolis v1 API Reference Guide](#)
- [Nutanix PowerShell cmdlets Reference Chart](#)

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® Advanced Administration and Performance Management \[V5.5\]](#)

A four-day, hands-on training course that explores advanced administrative tasks and both virtualized workload and infrastructure optimization of a Nutanix Enterprise Cloud. The course covers the following objectives:

- Implement business continuity and disaster recovery strategies
- Analyze and configure Nutanix systems for peak operational efficiency
- Use Nutanix tools to analyze workloads and optimize cluster and VM sizing
- Perform advanced virtual machine administration
- Customize security for Nutanix systems
- Anticipate and plan for future resource needs

The material provided in the course covers a majority of the objectives (approximately 80%) that appear on the NCAP 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 NCAP certification, which is located here: <https://next.nutanix.com/nutanix-certified-advanced-professional-ncap-66>.