

EXAM BLUEPRINT GUIDE

Nutanix Certified Expert Multicloud Infrastructure (NCX-MCI) Exam



Table of Contents

Authors	3
Contributors	3
1. The Exam	2
1.1 Purpose of Exam	2
1.2 Exam Structure	2
1.3 Pricing	2
1.4 Passing Score	2
1.5 Knowledge Categories	2
1.6 Languages	3
1.7 Time Limit	3
1.8 Scheduling and Taking the Exam	3
1.9 Certification Tracks	3
1.10 Retake Policy	3
1.11 Exam Security	3
1.12 Recertification	3
1.13 Benefits of Certification	4
2. Intended Audience	4
3. Objectives Covered in the NCX-MCI Exam	4
3.1 Introduction	4
3.2 Objectives	4
Section 1 – Customer Consultation	5
Section 2 – Conceptual/Logical Design	5
Section 3 – Physical Design	7
4. NCX-MCI Training Requirements	8
4.1 Course Requirement	8
5. Resources	10
5.1 Nutanix Community Edition	10
5.2 Test Drive	10
5.3 The Nutanix Next Community	10



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Disclaimer:

The Nutanix Certified Expert -Multicloud Infrastructure (NCX-MCI) Exam Blueprint Guide provides an overview of the objectives that must be mastered to achieve the NCX-MCI credential. Nutanix does not offer any guarantees that this guide will ensure a candidate's success in achieving the NCX-MCI 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 Expert - Multicloud Infrastructure (NCX-MCI) exam tests a candidate's ability to design enterprise-scale solutions that support business-critical applications with service level agreements specified by business stakeholders. Candidates must demonstrate mastery of the Nutanix Design Method (derived from the Nutanix Platform Expert (NPX) Program) and present a solution that meets or exceeds customer requirements for: Scalability, Resiliency, Performance, Manageability, Data Protection, Recoverability, Regulatory Compliance, Security, and TCO/ROI.

1.2 Exam Structure

The NCX-MCI exam is modeled after an academic viva voce defense (live, oral exam) and requires candidates to present their solution to, and answer questions posed to them, by two NCX-Certified Examiners. This method best simulates an actual field engagement where a proposed Nutanix Multicloud Infrastructure solution is presented to a customer by the primary architect or team of architects.

This format provides an opportunity for NCX Examiners to ask questions about all aspect of the proposed solution and provides the Systems Engineer, Consultant, or Architect an opportunity to justify their design decisions and demonstrate how customer requirements are being met or exceeded by each component of their design.

1.3 Pricing

The NCX Certification Exam currently costs \$399 per attempt. A voucher for this is included with the required Nutanix Multicloud Infrastructure Design (NMCID) course. Candidates are responsible for travel and other costs related to their pursuit of the credential.

1.4 Passing Score

The NCX-MCI is a live, performance-based exam and is scored using a rubric to ensure consistency in evaluation of candidates. The NCX-MCI rubric contains documented performance criteria, a rating scale, and specific performance indicators for each knowledge area evaluated during the presentation.

The passing score for this exam is 3000, using a scaled scoring method. The scale is from 1000-6000.

1.5 Knowledge Categories

When using a performance-based exam, knowledge categories define what the test is designed to measure. In the case of NCX-MCI, the knowledge categories were developed by Subject Matter Experts based on identified tasks that relate to the job of designing an enterprise-class Multicloud infrastructure solution based on Nutanix technology. Once the initial development processes were complete, these knowledge categories were verified using an external group of individuals in the actual job roles of Systems Engineer, and/or Solution Architect. Finally, performance criteria, a rating scale, and specific performance indicators for each knowledge area were defined in order to create the scoring rubric.

1.6 Languages

The exam is available in English.

1.7 Time Limit

The time limit for this exam is 60 minutes. This includes time to present the solution and participate in a Q&A session with examiners.

1.8 Scheduling and Taking the Exam

This exam is currently delivered on-demand via remote conferencing technology (Zoom) or in-person at specific events such as .NEXT.

Exam registration is facilitated by the NCX/NPX Program Manager. To set up a time to review your presentation materials and schedule your exam, email your request to: npx@nutanix.com.

1.9 Certification Tracks

NCX-MCI exam is a core component of the Nutanix Multicloud Infrastructure track. The certification requires a passing score on the exam. Unlike other certifications in this track which do not specifically require completion of a training course, it is required that NCX-MCI candidates attend the Nutanix Multicloud Infrastructure Design (NMCID) course prior to attempting the exam. Details on the course and track are provided in section 4.

1.10 Retake Policy

If a candidate does not achieve a passing score, a one month waiting period is required before another attempt at the NCX-MCI credential can be scheduled. The NCX/NPX Program Manager will provide feedback and may recommend remedial study and/or provide a mentor to assist the candidate as required.

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 NCX-MCI exam and achieved the 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 becomes legacy.

1.13 Benefits of Certification

- Digital badge from Credly that you can share on social media
- 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

Experienced and expert technologists, Systems Engineers, Consultants, and Solution Architects, with portfolios of design work, who drive adoption of Nutanix Multicloud Infrastructure in the enterprise. The goal of this Certification is to prepare candidates to engage with enterprise customers as an Architect and design Nutanix Multicloud solutions that deliver real business value.

3. Objectives Covered in the NCX-MCI Exam

3.1 Introduction

Candidates for NCX-MCI are required to hold the NCP-MCI certification and must complete the Nutanix Multicloud Infrastructure Design (NMCID) course prior to scheduling their NCX-MCI exam.

3.2 Objectives

Prior to taking this exam, candidates should master each of the knowledge areas as introduced in the Nutanix Multicloud Infrastructure Design (NMCID) course. The knowledge areas are divided into 3 categories, each related to the customer engagement strategy and solution design method developed for the NPX Program.

To provide a framework for presenting solutions during the NCX-MCI exam, a prescriptive slide template and presentation guide is provided to NMCID course graduates along with the standard course materials.

Each NCX-MCI knowledge area is listed below along with related tools and documentation relevant to the knowledge area.

Section 1 – Customer Consultation

Knowledge

- Requirements
 - Gather specific, measurable, traceable, and concise business, technical, functional, and non-functional requirements from the customer
- Risks
 - Identify risks to solution success; and create a high-level impact analysis and/or risk mitigation plan
- Constraints
 - Identify constraints that influence the solution and create a high-level impact analysis
- Assumptions
 - Identify assumptions that influence the solution and create a high-level impact analysis
- Operational Readiness
 - Complete a high-level organizational readiness assessment and make recommendations for training or organizational changes as required
- Migration & Transition
 - Formulate a low-risk migration strategy and discuss a roll-back strategy

References

- NMCID Course Materials (given out during course)
- NMCID Solution Design Presentation (created during team-based design scenarios)
- NCX Slide Template (Provided with NMCID Course Materials)
- [Nutanix Validated Designs](#) (Requires Nutanix Support Portal Access)
- [Solutions Documentation List](#) (Requires Nutanix Support Portal Access)
- [Nutanix Sizer](#) (Requires Nutanix Support Portal Access)
- [The Nutanix Bible](#)

Section 2 – Conceptual/Logical Design

Knowledge:

- Scalability

- Identify and explain options for scaling Nutanix solution including application layer. Demonstrate an understanding of relationships between scalability, performance, and resilience
- Resiliency
 - Identify failure scenarios and domains and provide traceability to SLAs limited to infrastructure (SLAs, RTO, RPO)
- Performance
 - Show how customer requirements have been met and demonstrate an understanding of performance/validation tools such as FIO, IOMeter, JetStress.
 - Describe what can be tuned in the platform and when/when not to change default settings.
- Manageability & Control Plane Architecture
 - Explain how management components interact and minimize complexity.
 - Describe the “business as usual” activities such as patching, upgrades, and configuration management
- Data Protection & Recoverability
 - Explain how the solution’s data protection and recoverability was designed and validated at a high-level and how RPO/RTO requirements are met
- Logical Sizing and Capacity Planning
 - Defend and validate that the design meets capacity requirements
- Compliance & Security
 - Explain how compliance, security, and risk requirements were met; Identify and provide understanding of where industry-standard security and compliance frameworks such as PCI DSS, STIG, HIPAA, EUGDPR, ISO 27001 apply
- Virtual Machine Logical Design
 - Provide explanation of virtual machine logical specifications, interoperability, and configuration
- Third Party Product Integration
 - Provide explanation of how third-party integrations provide cost-effective solutions that meet customer requirements

References

- NMCID Course Materials (given out during course)
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Section 3 – Physical Design

Knowledge

- Hardware Sizing
 - Justify sizing rationale based on calculations and demonstrate how the application working set size was obtained
- Storage Infrastructure
 - Explain impact and implications of protocols, IO sizes and patterns, and data transforms; Explain combined storage infrastructure design decisions
- Platform Selection
 - Justify selection of components in a node and cluster configuration
- Networking Infrastructure
 - Identify configuration options and explain how the chosen network topology meets customer requirements
- Virtual Machine Physical Design
 - Identify necessary physical virtual machine components such as type of scsi adaptor and system network adaptor configuration
- Management Component Design
 - Provide explanation and justification of management component configuration (e.g., patching, monitoring, updating, upgrading, sizing) such as automated patching, RHN satellite, spacewalk, PRISM Central, and Acropolis
- Data Center Infrastructure - Environmental & Power
 - Provide specifications for space, power usage, heat output and show how the solution conforms to the resources available in the chosen location(s)

References

- NMCID Course Materials (given out during course)
- NMCID Solution Design Presentation (created during team-based design scenarios)
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4. NCX-MCI Training Requirements

4.1 Course Requirement

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

The Nutanix Multicloud Infrastructure Design (JNMCID) course is designed to provide you with a technical deep dive into Nutanix solutions and the Nutanix solution design methodology, which is based on the Nutanix Platform Expert (NPX) Program. NPX skills have been used to consistently deliver business-critical solutions to the most demanding customers- from SMB to the G2000.

This four-day event will prepare you to engage with enterprise customers and design Nutanix Enterprise Cloud solutions that deliver real business value. The boot camp is led by a team of NPX-certified instructors who will focus on designing multi-hypervisor solutions capable of supporting enterprise-class applications according to clearly defined service level agreements.

You will be asked to divide into teams and engage in a multi-day, interactive role-play exercise to extract the business requirements, technical requirements, risks, and constraints that will shape your solutions. Participation requires daily design presentations from each team and participation in Q&A sessions with instructors and peers. You will be required to defend your team's design decisions at each stage of the exercise.

This is an intense and immersive learning experience that will change how you approach solution design and delivery. If your goal is to become a G2000-ready solution architect, this is where your journey begins.

COURSE OUTLINE

During this boot camp, you will develop G2000-class solution design and delivery skills by:

- Gathering/classifying customer business requirements
- Identifying constraints, risks, and assumptions
- Mapping desired business outcomes to technical solutions
- Considering and presenting options/alternatives
- Making business-driven design decisions
- Assessing organizational readiness for HCI adoption
- Creating enterprise-grade documentation
- Presenting solutions to technically-savvy business stakeholders

Deep dives will include:

- 
- Planning for successful migrations
 - Supporting multiple hypervisors
 - Infrastructure and hardware and resource sizing
 - Designing for resiliency and high availability
 - Network design for HCI
 - HCI storage configuration options
 - Supporting security requirements
 - Integrating disaster recovery solutions
 - Business-critical applications: Exchange, SQL, Oracle, Splunk, SAP
 - Virtual desktop solutions

This course is only available as an in-person instructor-led workshop. More information including schedules and how to register can be found at www.nutanix.com/university

The material provided in the course covers a majority of the objectives that appear on the NCX-MCI exam and is required for individuals who want to attempt the NCX-MCI exam. Please note that additional exposure to Nutanix environments 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](#).

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 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 Nutanix certifications, which is located [here](#)

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