NUTANIX UNIVERSITY

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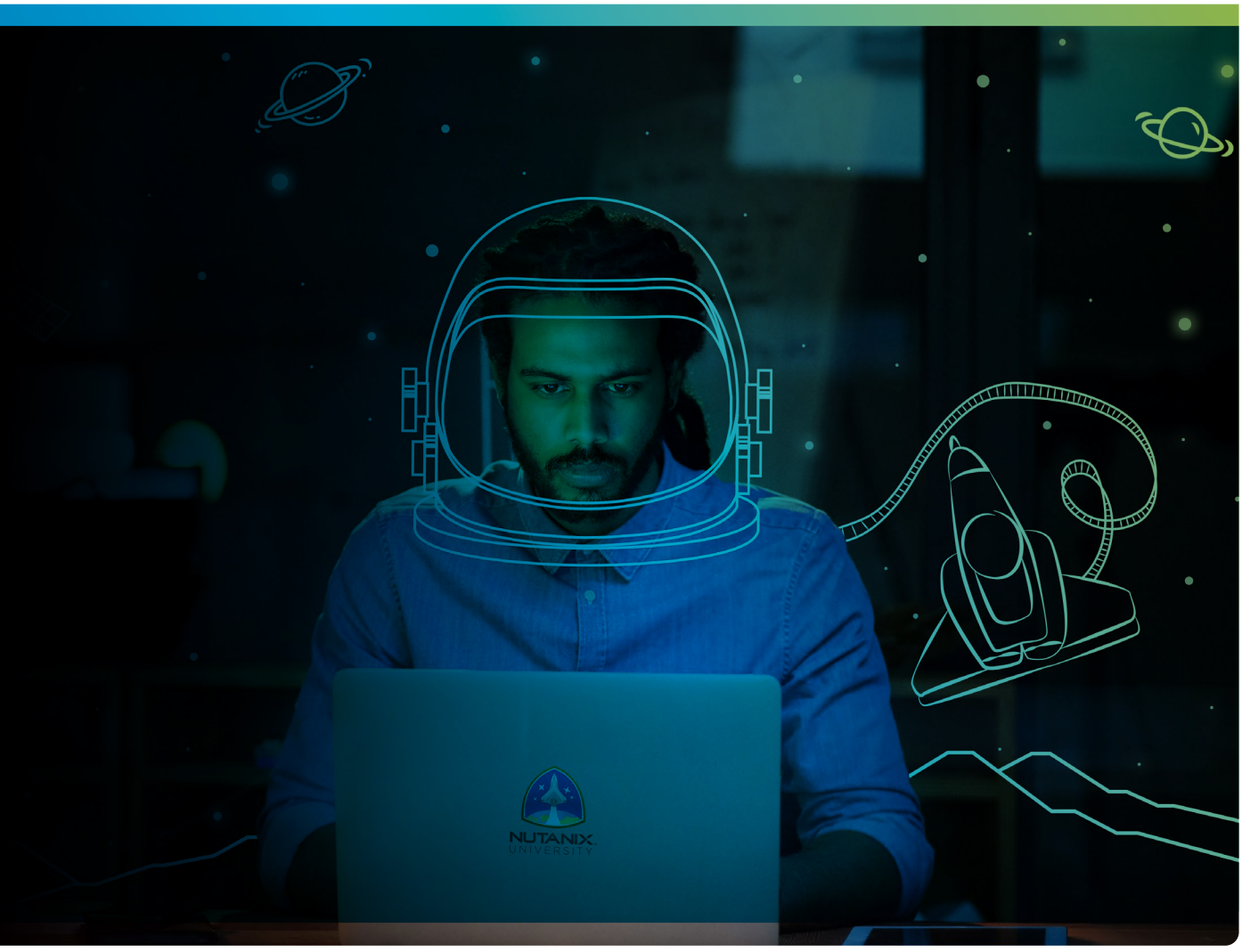
Exam Blueprint Guide

Nutanix Certified Expert - Multicloud Infrastructure (NCX-MCI)



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Disclaimer:
The Nutanix Certified Expert - Multicloud Infrastructure (NCX-MCI) Exam Blueprint Guide provides an overview of the knowledge categories 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 the NCX-MCI Program. 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) 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 an understanding of Nutanix's design methodology as well as a familiarity with Nutanix Validated Designs (NVDs). Candidates will then 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 certified NCX Examiners (NCXE). 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 aspects 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 is currently offered free of charge to qualified applicants.

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.

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 in-person/on-demand via remote conferencing technology (Zoom). 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 record the exam or 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

At this time, the NCX-MCI certification does not expire. Nutanix will notify existing certification holders should this policy change.

2. Intended Audience

Experienced technologists, Systems Engineers, Consultants, and/or 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. Knowledge Areas 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 Knowledge Areas

Prior to taking this exam, candidates should master each of the knowledge areas as introduced in the NMCID course. The knowledge areas are divided into 3 categories, each related to the customer engagement strategy and Nutanix's Design Methodology. 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 and Tools

- NMCID Course Materials (given out during course)
- NMCID Solution Design Presentation (created during team-based design scenarios)
- NCX Slide Template (Provided with NMCID Materials)
- Hybrid Cloud: AOS 6.5 with AHV On-Premises Design (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, SQLIO, 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, HIPPA, 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 and Tools

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Section 3 – Physical Design

- 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 and Tools

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4. The Nutanix Multicloud Infrastructure Track and NCX-MCI Course Requirements

4.1 Nutanix Multicloud Infrastructure Track

Candidates mastering this track have demonstrated the knowledge and skills necessary to design an enterprise-class Nutanix Multicloud Infrastructure solution capable of supporting business critical applications with service level agreements specified by business stakeholders.

4.2 NCX-MCI Course Requirements

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

Nutanix Multicloud Infrastructure Design (NMCID)

The Nutanix Multicloud Infrastructure Design (NMCID) course is designed to provide you with a technical deep dive into Nutanix design methodology, which is based on the Nutanix Hybrid Cloud Reference Architecture. These skills have been used to consistently deliver business-critical solutions to the most demanding customers-from SMB to the G2000.

This three-day course will prepare you to engage with enterprise customers and design Nutanix Enterprise Cloud solutions that deliver real business value. The course is led by a team of Nutanix certified instructors and is focused on Nutanix's methodology for designing multi-hypervisor solutions capable of supporting enterprise-class applications according to clearly defined service level agreements.

A key component of this course is the Nutanix Validated Design (NVD). NVD's use robust validation to simplify the process of architecting and deploying solutions. They detail the design decisions that support the deployment of scalable, resilient, and secure solutions. An NVD is an example of a Nutanix supported design configuration. Nutanix provides NVDs for hybrid cloud, unified storage, database deployment, end user computing, and more. While an NVD can be used as the starting point for a Nutanix design, actual designs are based off specific business requirements. This course will teach you how to use an NVD, in conjunction with validated business requirements, to design a solution that deviates from the base NVD while still following Nutanix best practices.

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 Objectives

During this course, 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 Multicloud adoption
- Creating enterprise-grade documentation
- Presenting solutions to technically-savvy business stakeholders

Deep dives will include:

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

5. Resources

5.1 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 NCX-MCI certification, which is located here.

5.2 Nutanix Community Edition

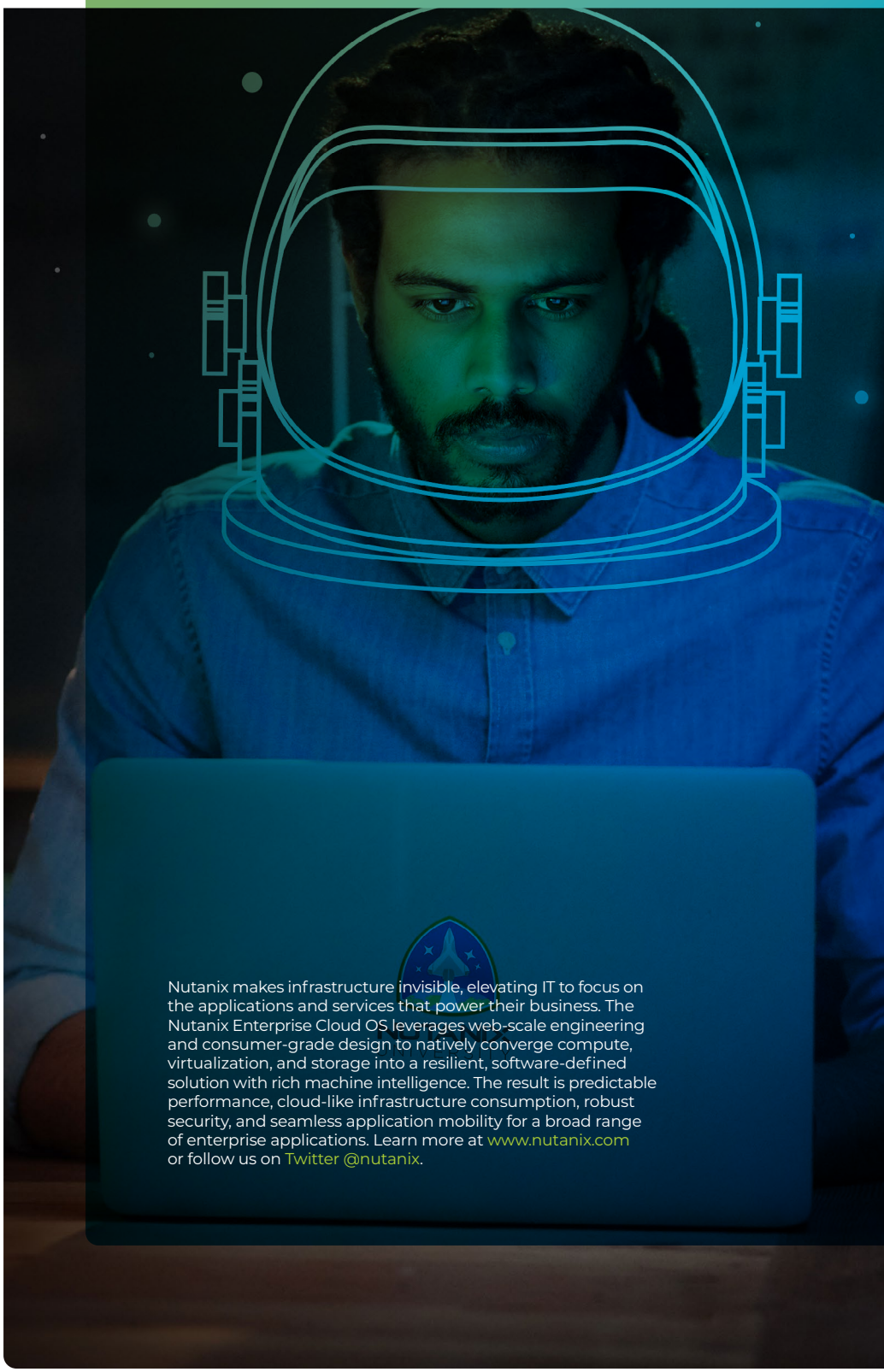
The Nutanix Community Edition is a free product that allows you to deploy a Nutanix Enterprise Cloud. To download the software and build your own environment for exam preparation, click here.

5.3 Test Drive

Build your clouds your way in a few clicks and instantly complete all your IT tasks on a unified cloud platform with Test Drive. Click here to take a Test Drive today!

5.4 Nutanix Validated Designs

Nutanix publishes comprehensive reference architectures to empower virtualization and cloud teams to design and rapidly deploy complete solutions using Nutanix-based infrastructures. The Nutanix Validated Designs (NVDs) are available from the Nutanix Support Portal here.



Nutanix makes infrastructure invisible, elevating IT to focus on the applications and services that power their business. The Nutanix Enterprise Cloud OS leverages web-scale engineering and consumer-grade design to natively converge compute, virtualization, and storage into a resilient, software-defined solution with rich machine intelligence. The result is predictable performance, cloud-like infrastructure consumption, robust security, and seamless application mobility for a broad range of enterprise applications. Learn more at www.nutanix.com or follow us on Twitter @nutanix.

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