Infrastructure Design

Product Code: CNS-INF-A-WRK-DSGN

At-a-Glance

Stage: Design

The Infrastructure Design engagement provides a comprehensive assessment of your current or planned environment to ensure readiness for deploying Nutanix Cloud Infrastructure (NCI) or NC2 clusters.

Designed as a strategic step in your hybrid cloud journey, especially during the planning and design phases, this engagement focuses on:

- Capturing both high-level architecture and low-level implementation design
- Validating integration prerequisites across identity, networking, and storage
- Aligning infrastructure components with Nutanix best practices for scalability, security, and performance
- Planning for operational readiness, including functional validation and security hardening

This engagement is especially valuable when designing new infrastructure or preparing for workload migration, ensuring your environment is optimized for deployment and future growth.

Related Services

- Infrastructure Deployment
- NC2 Deployment

Service Scope

The Infrastructure Design engagement begins with a series of collaborative workshops led by certified Nutanix consultants who bring deep technical expertise and real-world experience. These sessions are designed to deliver immediate value to your architecture and operations teams by:

- Capturing solution requirements, constraints, dependencies, and key decisions to inform both high-level architecture and low-level implementation design
- Designing cluster architecture, virtual networking, and storage aligned to Nutanix recommended practices and future growth needs
- Validating sizing and integration with identity services, IPAM/DNS, and operational dependencies
- Planning for functional validation testing and security hardening across the environment

Consultants work closely with customer stakeholders to uncover integration challenges, align workloads with recommended practices, and ensure readiness for deployment. The engagement also supports single-site and multisite disaster recovery (DR) topology design, including active/active, active/passive, and hub-spoke configurations.

By the end of the engagement, customer teams will have a validated infrastructure design—covering both strategic high-level architecture and detailed low-level planning—tailored to their operational goals and ready for deployment.

Basic Edition

For customers who want a basic Infrastructure design for on-premises NCI clusters.

The Basic Edition includes the following activities:

- Gather and document solution requirements, constraints, assumptions, dependencies, and decisions in a series of workshops
- Develop NCI architecture, including interoperability, security, and scalability for future growth
- Define integration with Active Directory (AD)/LDAP and IPAM/DNS environments
- Develop on-premises NCI cluster design
- Design virtual networking, including integration with the physical network
- Design virtual storage, including container layout and associated storage optimization features
- Validate cluster sizing based on workload details provided by the customer
- Design management plane and operations dependencies
- Develop a plan for system functional validation testing
- Design security, including data-at-rest encryption, SSL certificate, password complexity, and syslog

Essential Edition

For customers who want essential Infrastructure design for on-premises NCI clusters or NC2.

The Essential Edition includes the following activities:

- Gather and document solution requirements, constraints, assumptions, dependencies, and decisions in a series of workshops
- Develop NCI or NC2 architecture, including interoperability, security, and scalability for future growth
- Define integration with Active Directory (AD)/lightweight directory access protocol (LDAP) and IP address management (IPAM)/domain name service (DNS) environments
- Develop on-premises NCI or NC2 cluster design
- Design virtual networking, including integration with the physical network
- Design public cloud platform connectivity, including mapping of network constructs from on-premises NCI to public cloud, as required
- Design public cloud platform resource access and usage (NC2 only)
- Design virtual storage, including container layout and associated storage optimization features
- Validate cluster sizing based on workload details provided by the customer
- Plan Controller Virtual Machine (CVM) and AHV security hardening and compliance as per the *Nutanix Security Operations Guide*
- Design management plane and operations dependencies, including Multicloud Manager (MCM) for NC2
- Develop a plan for system functional validation testing
- Design security, including data-at-rest encryption, SSL certificate, password complexity, and syslog

Advanced Edition

For customers looking for a more comprehensive design focused on migrating existing workloads and storage.

The Advanced Edition includes the following activities:

- Everything included in the Essential Edition
- Assess the current state of virtualization elements included in the design
- Assess datacenter infrastructure and rack design
- Plan for VM backup and data protection
- Design to support the migration of existing workloads and storage into the new environment
  - Review the existing environment at a high level to support sizing
  - Develop high-level migration methodology
- Design role-based access control (RBAC) and Nutanix categories/tagging
- Design security and required cloud access controls

Optional Activities for the Advanced Edition

- Design for Nutanix Flow Virtual Networking VPC
- Design for Nutanix Flow Network Security Microsegmentation

Site Design Topology

Each edition supports a single site or multisite disaster recovery (DR) topology design.

Basic Edition

- **Single Site** – Single site design in a single physical site.
- **Multisite DR** – DR active/active, active/passive, or hub-spoke design configuration
  - Gather recovery point objective (RPO) and recovery time objective (RTO) requirements for workloads, including DR and replication considerations

Essential and Advanced Edition

- **Single Site** – Single site design in a single physical site, public cloud region, or resource location
- **Multisite DR** – DR active/active, active/passive, or hub-spoke design configuration
  - Including Flow Virtual Networking VPC configurations spanning multiple locations (Advanced Edition only)
  - Gather recovery point objective (RPO) and recovery point objective (RTO) requirements for workloads, including DR and replication considerations

Limitations

- Limited to general virtualization. Workload-specific designs are available that include the NCI Design, including:
  - Database Design Workshop
  - EUC Broker Design Workshop.

  - AI/ML Design Workshop
- Excludes detailed migration planning. Detailed planning, including migration wave planning, is available as part of the Virtual Machine Migration Workshop.
- Excludes design for Cisco Intersight and Cisco UCS Fabric Interconnects

Basic Edition

Single Site Design Topology

- For each quantity purchased, design is limited to a single production environment at one physical site,

Multisite DR Design Topology

- For each quantity purchased, design is limited to a single production environment spanning multiple physical sites
- Design is limited to 2 distinct site patterns, though multiple instances of each pattern can be deployed (common for hub-spoke or branch office architectures)

Essential and Advanced Editions

Single Site Design Topology

- For each quantity purchased, design is limited to a single production environment at one physical site, public cloud region, availability zone, or resource location for a single supported hypervisor

Multisite DR Design Topology

- For each quantity purchased, design is limited to a single production environment spanning multiple physical sites, public cloud regions, availability zones, or resource locations
- Design is limited to 2 distinct site patterns, though multiple instances of each pattern can be deployed (common for hub-spoke or branch office architectures)

Supported Hypervisors

- Nutanix AHV
- VMware ESXi

> **Note**: Support for Microsoft Hyper-V requires a custom SOW.

Prerequisites

- None

Related Product Licenses

- None

Delivered Artifacts

Documentation Option	Delivered Artifact	Description
Workshop Documentation	Configuration Workbook	Captures all necessary settings gathered during design workshops to support solution deployment.
	Deployment Readiness Checklist (NC2 Design Only)	Captures deployment readiness based on customer-owned prerequisites. Ensures all technical, operational, and logistical elements—such as environment setup, access, configurations, and stakeholder alignment—are in place before deployment begins. This checklist helps avoid delays and supports a smooth, successful deployment experience.
Standard Documentation	Configuration Workbook	Captures all necessary settings gathered during design workshops to support solution deployment.
	Design Documentation	Captures the customer's architecture based on workshop outcomes, encompassing both high-level and low-level design. It begins with a thorough understanding of requirements, constraints, assumptions, and risks. The document provides detailed rationale for each design decision—whether aligned to industry best practices or tailored to specific customer needs—ensuring the solution is architected to meet goals across performance, availability, scalability, and more.
	Deployment Readiness Checklist (NC2 Design Only)	Captures deployment readiness based on customer-owned prerequisites. Ensures all technical, operational, and logistical elements—such as environment setup, access, configurations, and stakeholder alignment—are in place before deployment begins. This checklist helps avoid delays and supports a smooth, successful deployment experience.

Level of Effort

Site Topology/ Documentation Type	Basic	Essential	Advanced
Single Site Workshop Documentation	Typically up to 3 days	Typically up to 4 Days	Not Applicable
Single-Site Standard Documentation	Typically up to 5 days	Typically up to 6 days	Typically up to 9 days
Multisite DR Workshop Documentation	Typically up to 5 days	Typically up to 6 days	Not Applicable
Multisite DR Standard Documentation	Typically up to 8 days	Typically up to 9 days	Typically up to 14 days

Delivery Type

Delivery Type	Basic	Essential	Advanced
Virtual	Virtual workshop Virtual documentation	Virtual workshop Virtual documentation	Virtual workshop Virtual documentation
In-person	In-person workshop Virtual documentation	In-person workshop Virtual documentation	In-person workshop Virtual documentation

Related Products

- Nutanix Cloud Infrastructure (NCI)
- Nutanix Cloud Clusters (NC2)

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