NCI Flow Design

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

At-a-Glance

Stage: Design

The Flow Design engagement delivers a tailored networking architecture for existing Nutanix Cloud Infrastructure (NCI) or Nutanix Cloud Clusters (NC2) clusters, ensuring readiness for advanced network security and software-defined networking capabilities.

Designed as a strategic step in your hybrid cloud journey, this engagement focuses on:

- Capturing requirements and constraints to inform both a high- and low-level NCI Flow design
- Designing Flow Microsegmentation policies and Flow Virtual Networking aligned with Nutanix-recommended practices
- Validating integration prerequisites across identity, networking, and operational dependencies
- Planning for functional validation and security hardening

This engagement is especially valuable when implementing Flow Network Security (FNS) or Flow Virtual Networking (FVN) for use cases such as workload isolation, disaster recovery, and multitenant segmentation.

Related Services

- NCI Flow Deployment
- Infrastructure Design

Service Scope

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

- Gathering design goals, requirements, constraints, and risks to inform architecture decisions
- Designing FNS policies or FVN configurations for identified use cases
- Validating readiness of existing Nutanix components for integration with Nutanix Flow
- Planning for post-implementation validation and security hardening

Consultants work closely with customer stakeholders to uncover integration challenges, align workloads with recommended practices, and ensure readiness for deployment. The engagement supports both single site and multisite topologies.

Essential Edition

For customers who want an essential networking design for on-premises NCI or NC2 clusters leveraging either FNS or FVN.

Flow Network Security

For customers designing a software-based microsegmentation solution leveraging FNS for the following use cases.

- End user computing, including Citrix Virtual Apps and Desktops (CVAD) and Omnissa Horizon
- 3-tier applications including presentation, application, and data tiers
- Service or environment isolation
- Flow service chaining to network function virtual machines (VMs)
- Flow intersection with Nutanix Unified Storage (NUS) Files, Nutanix Database Services (NDB) and Nutanix Kubernetes Platform (NKP)

The service includes the following activities

- Gather design goals including requirements, constraints, assumptions and risks in a series of workshops
- Review features and functions of FNS, including microsegmentation, network service insertion, and network automation
- Review and key concepts used in AHV networking terminology
- Assess the current state of the existing on-premises NCI or NC2 deployment
- Assess the current state of applications that require network segmentation
- Discover management plane and operational dependencies
- Review requirements for network controller
- Develop security, including syslog integration and IP Flow Information Export (IPFIX)
- Develop security policies and categories for the identified use case
- Develop a Flow Microsegmentation Implementation Plan
- Develop a post-implementation validation and Test Plan

Flow Virtual Networking

For customers designing a software-defined networking solution leveraging FVN for the following use cases.

- Multisite disaster recovery (DR) failover
- VM migration
- Multitenant segmentation
- Integration with NKP, NUS, NDB, or other Nutanix products

The service includes the following activities

- Gather design goals including requirements, constraints, assumptions and risks
- Review features and functions of FVN, including virtual private clouds (VPCs), connectivity to external subnets, NAT gateways, routing and network automation
- Review AHV networking terminology
- Assess the current state of the existing on-premises NCI or NC2 deployment

- Assess the current state of applications or tenants that require overlay networking
- Discover management plane and operational dependencies
- Review requirements for the network controller
- Design network profiles leveraging single-root input/output virtualization (SR-IOV) or network offload
- Assess the current state of the existing Nutanix deployment and existing infrastructure design
- Analyze and determine physical network readiness
- Design VPC implementation for the chosen use case
- Plan VPC subnets
- Plan connectivity via external subnets
- Gather and document network gateway implementation requirements using either virtual private network (VPN), virtual tunnel endpoint (VTEP), or border gateway protocol (BGP)
- Identify routing requirements, including BGP and static routing
- Design Layer 4 network load balancer
- Develop an FVN Implementation Plan
- Develop a post-implementation validation and Test Plan

Advanced Edition

For customers who want an essential networking design for on-premises NCI or NC2 clusters leveraging both FNS and FVN.

- Everything included in the Essential Edition.
- Design for both FNS and FVN
- Design FNS polices for both managed virtual local area network (VLAN) and VPC environments

Site Design Topology

Each edition supports a single site or multisite topology design.

Single Site

- Single site design in a single physical site or cloud availability zone across a single Prism Central

Multisite

- Design for active-active, active-passive across multiple physical sites, cloud availability zones or Prism Centrals
- Design policy synchronization (FNS policies on non-VPC networks only)
- Design for FVN VPC configurations across multiple availability zones or Prism Centrals (FVN only)
- Design Layer 2 subnet extensions for migration or DR purposes (FVN only)

Project Management

Nutanix Project Management (PM) oversees Nutanix resources and aligns execution with your goals, scope, and timelines.

Core Project Management activities may include the following:

- Serve as a single point of contact for all project communication
- End-to-end Nutanix resource management
- Coordinate change window(s) and implementation schedules with customer
- Track and facilitate readiness and prerequisite completion
- Conduct project kickoff/technical readiness meeting(s)
- Integrate customer resources into the high-level project timeline
- Send status update(s)
- Manage timeline(s)
- Deliver created artifacts to the customer
- Facilitate project closeout activities

Limitations

- Limited to Nutanix Flow Networking and Flow Network Security design
- Excludes infrastructure and workload specific designs

  Note: For infrastructure or workload-specific solutions, tailored design offerings are available including *Infrastructure Design, Database Design Workshop, EUC Broker Design Workshop*, and *AI/ML Design Workshop*.

- Limited to 10 applications for development of security policies, VPCs, static routes and categories

Single Site

- For each quantity purchased, design is limited to a single production environment at a single physical site or cloud availability zone

Multisite

- For each quantity purchased, design is limited to a single production environment spanning multiple physical sites or cloud availability zones
- Design is limited to 2 distinct site patterns, though multiple instances of each pattern can be deployed

Project Management

- Excludes scheduling customer resources and activities
- Excludes detailed project plan (schedule) development and management
- Excludes responsibility for creating, managing, or delivering change management communications

Supported Hypervisors

- Nutanix AHV

Supported Cloud platforms

- Amazon AWS

- Microsoft Azure

Prerequisites

- Customer-provided and Nutanix-approved Infrastructure Design Document for AHV

Related Product Licenses

- Nutanix Cloud Infrastructure (NCI)

Delivered Artifacts

Documentation Option	Delivered Artifact	Description
Workshop Documentation	Configuration Workbook	Captures all required configuration settings and decisions gathered during the design workshop to support accurate and consistent solution deployment.
Standard Documentation	Configuration Workbook	Captures all required configuration settings and decisions gathered during the design workshop to support accurate and consistent solution deployment.
	Design Document	Captures the customer's solution architecture based on workshop outcomes, detailing both high-level and low-level designs. It documents requirements, constraints, assumptions, and risks, and provides clear rationale for design decisions to ensure the solution meets performance, availability, scalability, and other critical objectives.

Level of Effort

Site Topology/ Documentation Type	Essential Edition	Advanced Edition
Single Site Workshop Documentation	Typically up to 3 days	N/A
Single Site Standard Documentation	Typically up to 4 days	Typically up to 6 days
Multisite Standard Documentation	Typically up to 6 days	Typically up to 8 days

Delivery Type

Delivery Type	Deliverables
Virtual	• Virtual workshop • Virtual documentation • Virtual project management **Note:** Any in-person project management activities provided solely at Nutanix's discretion
In-person	• In-person workshop • Virtual documentation • Virtual project management **Note:** Any in-person project management activities provided solely at Nutanix's discretion

Related Products

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

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