

# VMC on AWS to NC2 Migration Bundle Enterprise Edition

Product Code: CNS-INF-B-VMC-MIG

## At-a-Glance

**Stage:** Design, Deploy, and Migrate

The VMware Cloud (VMC) to Nutanix Cloud Clusters (NC2) Migration Bundle Enterprise Edition offers IT teams a comprehensive solution for designing and deploying NC2 to support applications and workloads running on an Amazon Web Services (AWS) Elastic Cloud Compute (EC2) Bare-Metal instance in preparation for migrating workloads from VMC on AWS to NC2 on AWS. This bundle is ideal for the Design, Deploy, and Migrate stages of the hybrid multicloud journey.

## Related Services

- Virtual Machine Migration
- Database Design Workshop
- EUC Broker Design Workshop
- NUS Deployment

## Service Scope

A series of design workshops is delivered by highly skilled consultants with strong domain expertise and rich experience to ensure that the solution requirements and required outcomes are identified. Design workshops require collaboration with key customer stakeholders from architecture, virtualization, and networking teams. After the design workshop, the consultant develops a Nutanix Design document and Configuration Workbook that addresses conceptual, logical, and physical solution design elements.

The consultant then conducts a discovery session that collects migration requirements, current and desired guest operating system (OS) versions, application dependencies, and maintenance windows. This session is a collaborative discussion with key customer stakeholders. Following the discovery session, the consultant conducts a workshop, selects the migration tool, and creates a Migration Plan.

The consultant begins the deployment of the NC2 on AWS cluster according to Nutanix-recommended practices and the Design document. This includes configuring for disaster recovery (DR) as well as deploying Flow Virtual Networking and Flow Network Security Microsegmentation. After the deployment, the consultant creates a customized As-built document and updated Configuration Workbook to document the final configuration of the NC2 cluster.

The consultant then migrates the virtual machines (VMs) according to the Migration Plan.

The service includes the following activities:

## Infrastructure Design Workshop

- Gather and document solution requirements, constraints, assumptions, dependencies, and decisions in a series of workshops
- Develop NC2 architecture, including interoperability, security, and scalability for future growth

- Define integration with Active Directory (AD)/light-weight directory access protocol (LDAP) and IP address management (IPAM)/domain name service (DNS) environments
- Develop NCI or NC2 cluster design
- Design virtual networking, including integration with the physical network
- Design public cloud platform connectivity, including mapping 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, compression, and de-duplication
- Design for Nutanix Unified Storage (NUS) data services (Objects, Volumes, or Files) (choice of 1, optional)
- 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*

**Note:** For security hardening and compliance requirements, see *Nutanix Security Operations Guide* on the Nutanix Support Portal.

- 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
- Assess the current state of elements included in the design
- Assess datacenter infrastructure and rack design
- Plan for VM 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
- Design for DR active/active, active/passive, or hub-spoke design configuration
  - Including data replication for NUS data services (Objects, Volumes, or Files)
  - Including Flow Virtual Networking VPC configurations spanning multiple locations (Advanced Edition only)
  - Gather RPO and RTO requirements for workloads, including DR and replication considerations
- Optional services include:
  - Design for Nutanix Flow Virtual Networking VPC
  - Design for Nutanix Flow Network Security Microsegmentation
  - Design for all NUS data services (Objects, Volumes, and Files)

## VM Migration Workshop

- Conduct a VM migration discovery session:
  - Gather and document migration requirements, constraints, assumptions, dependencies, and decisions for the migration effort
  - Assess the current state of systems to be migrated
- Conduct a VM migration workshop:
  - Review options for migrating existing virtual and physical machines to the planned Nutanix Cloud Platform (NCP)
  - Assess network configuration impacts and requirements
  - Select a migration tool
  - Develop a Migration Plan and process, rollback plans, and migration wave(s)
  - Develop a post-migration validation plan

## NC2 on AWS Cluster Deployment

- Deploy and configure an NC2 Cluster on AWS
  - Deploy Nutanix Cluster on AWS via the NC2 Console
  - Register to a compatible existing Prism Central
  - Deploy AWS Route 53 domain name service (DNS) resolvers to integrate on-premises DNS
  - Configure AWS virtual private gateways with static or dynamic routes
  - Create a new AWS VPC
  - Create subnets
  - Assign network address translation (NAT) and Internet gateways
  - Create identity and access management (IAM) roles in AWS
  - Map the AWS account into the NC2 Console
- Integrate with the following existing infrastructure components:
  - Integrate with light-weight directory access protocol (LDAP) using existing Active Directory
  - Integrate with SMTP using an existing mail relay
  - Assist with AWS VPN endpoint configuration

## DR Deployment - Asynchronous or NearSync Solution

- Review customer-provided DR design documentation, RPO, and RTO requirements
- Review sizing for Nutanix snapshots
- Review requirements for Nutanix Guest Tools (NGT)
- Based upon customer-provided DR design:
  - Configure availability zones
  - Configure protection policies
  - Configure recovery plans
  - Configure custom IP mappings
- Deploy and integrate Prism Central, as required

- Install NGT (optional, requires supported guest operating systems)
- Test and validate recovery of nonproduction-protected VMs

## Flow VPC Deployment

- Configure Flow Virtual Networking on 2 Prism Central instances
  - Integrate Flow Virtual Networking into an existing DNS service
  - Create an external network (NAT)
  - Create VPCs
  - Create subnets
  - Configure and assign floating IPs
- Create policy-based routing policies for the following use cases:
  - Traffic flow between subnets
  - Traffic flow in/out of a VPC
- Create and execute a Flow Virtual Networking Test Plan to validate the solution
- Configure a VPN endpoint between Prism Central instances

## Flow Network Security Microsegmentation Deployment

- Enable and license Nutanix Flow Network Security on the deployed NC2 cluster, if needed
- Execute the deployment plan, process, and deployment waves
  - Configure categories and apply them to VMs as defined in the plan
  - Configure policies as defined in the plan
  - Conduct testing and validation of the policies
  - Optionally enable Flow Network Security Central
- Execute the existing post-migration validation plan

## VM Migration

- Validate VM migration requirements and validation plan
- Deploy migration tools as required according to the Migration Plan
- Configure infrastructure as required by the Migration Plan
- Migrate the VMs based on the Migration Plan
- Monitor the migration process via periodic touchpoints
- Remediate identified migration issues
- Execute the existing post-migration validation plan

## Limitations

- For each quantity purchased, the bundle is limited to a single production environment spanning multiple physical sites, public cloud regions, availability zones, or resource locations

## Infrastructure Design Workshop

- Limited to general virtualization.

**Note:** Database workloads and end user computing (EUC) workload designs are available via the *Database Design Workshop* and *EUC Broker Design Workshop* services, respectively.

- 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, which is common for hub-spoke or branch office architectures.

## VM Migration Workshop

- Migration planning is limited to 500 VMs.
- Detailed planning for database- and application-specific migrations is available via separate application-specific service offers

## NC2 on AWS Cluster Deployment

- Deployment is limited to 2 physical sites and 2 NC2 Clusters on AWS with a maximum of 28 nodes in each site and:
  - 2 AWS Route 53 DNS resolvers
  - 2 AWS virtual private gateways with up to 6 static or 6 dynamic routes
  - 6 subnets
- Excludes creation or updates to existing Design documents
- Excludes on-premises routing and VPN endpoint/firewall configuration

## Flow VPC Deployment

- Configuration for each Prism Central instance limited to:
  - A single external network (NAT)
  - 5 VPCs, 10 subnets per VPC, and 5 floating IPs per VPC
  - 5 floating IPs per VPC and up to 10 VMs
  - 5 policy-based routing policies
- VPN endpoint configuration is limited to the Nutanix VPN gateway

## VM Migration

- Migration must occur as a single contiguous migration wave
- Migration is limited to up to 5 VMs or up to 2.5TiB of total data Migration is limited to 5 VMs or 2.5TiB

## Supported Hypervisors

- Nutanix AHV

## Prerequisites

- Amazon Web Services (AWS) account with sufficient CPU quota
- At least one external VLAN accessible from Prism Central

- Access to customer networking team to implement static routes
- Prism Central and Prism Element time synced
- Active Directory domain and user group requirements as required for the VDI policy
- Production and Test virtual networks already configured
- Fully supported and functional source environment
- Operating systems are supported by both NCI and the selected migration tool

**Note:**

For information on the NC2 deployment prerequisites, see NC2 on AWS Requirements in the *Nutanix Cloud Clusters on AWS Deployment and User Guide* on the Nutanix Support Portal.

For information on the requirements for configuring Nutanix Disaster Recovery, see Disaster Recovery Requirements in the *Nutanix Disaster Recovery Guide* on the Nutanix Support Portal.

For information on the requirements for configuring NCI Flow Virtual Networking, see *Prerequisites for Flow Virtual Networking* on the Nutanix Support Portal.

For information on the requirements for configuring NCI Flow Network Security, see the *Flow Microsegmentation Guide* on the Nutanix Support Portal.

For information on the requirements for using Nutanix Move Application Migration, see *Move User Guide* on the Nutanix Support Portal.

For information on the supported guest operating systems, see *Nutanix Compatibility and Interoperability Matrix* on the Nutanix Support Portal.

## Required Product Licenses

- Nutanix Cloud Infrastructure (NCI) Pro or Ultimate Edition

## Deliverables

- Project Kickoff
- Project Schedule
- Project Status Report(s)
- Workshop
- Configuration Workbook
- Design Document
- Deployment
- As-built Guide
- Migration
- Migration Procedure
- Migration Summary
- Project Closeout

## Duration

Typically up to 42 days

**Note:** All deployment and migration activities are delivered remotely

## Related Products

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

## Terms and Conditions

This document contains the entire scope of the service offer. Anything not explicitly included above is out of scope. This service offer is subject to the Nutanix Services General Terms and Conditions that can be viewed at <https://www.nutanix.com/support-services/consulting-services/terms-and-conditions>

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