NKP Design Workshop

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

At-a-Glance

Stage: Design

The Nutanix Kubernetes Platform (NKP) Design Workshop offers Cloud Native teams in-depth and practical guidance to create a comprehensive design for NKP. The service covers various key design aspects such as performance, scalability, flexibility, integration, and operational needs. This workshop is beneficial during the Design stage of the hybrid multicloud journey.

Related Services

- Nutanix Kubernetes Platform Deployment
- Infrastructure Design
- NUS Design

Service Scope

Highly skilled consultants with solid Kubernetes domain expertise and rich experience deliver design workshops to ensure that the solution requirements and required outcomes are identified. Design workshops require collaboration with key customer stakeholders in architecture, virtualization, security, and development operations. After the design workshop, the consultant develops a Design document and a Configuration Workbook that addresses conceptual, logical, and physical Kubernetes design elements.

The completed design can be deployed multiple times in various environments, such as development, testing, and production.

Essential Edition

For customers who want to deploy NKP on an on-premises Nutanix Cloud Infrastructure (NCI) or Nutanix Cloud Clusters (NC2) cluster.

The Essential Edition includes the following activities:

- Gather and document solution requirements, constraints, assumptions, dependencies, risks, mitigations, and decisions in the workshop
  - Review targeted containerized workload use cases
  - Assess NKP Control Plane, Workers, and infrastructure nodes quantity and capacity requirements based on solution sizing
- Develop NKP architecture, including Cluster API (CAPI) provisioning method, interoperability, security, and scalability for future growth
- Define integration with AD/LDAP and IPAM/DNS environments
- Design virtual networking for NKP nodes (east-west / north-south)
  - Plan communications for NKP Control Plane and Workers
- Develop virtual storage for NKP nodes and containerized workload design
- Plan container storage interface (CSI) integration-based solution for NKP

![Nutanix logo]

Tel 1 (855) 688-2649 · **Fax** 1 (408) 916-4039 · **Email** info@nutanix.com · 2024.11

- Design NKP image registry solution integration, as needed
- Plan SSL certificate strategy
- Develop a project schedule
- Develop a validation plan
- Provide a design presentation

Advanced Edition

The Advanced Edition is for customers who want to deploy NKP on a supported cloud or on-premises infrastructure provider, including NKP Platform Applications.

The Advanced Edition includes the following activities:

- Everything in the Essential Edition
- Design an NKP Compute base machine template, as needed
- Review Graphics Processing Unit (GPU)-targeted containerized workload use cases and assess NKP Worker node pools, quantity, and capacity requirements based on solution sizing, as needed
- Design an NKP backup strategy using the default provided NKP backup solution

Enterprise Edition

The Enterprise Edition is for customers who want to deploy NKP on a supported cloud or on-premises infrastructure provider. It includes NKP Platform Applications and multicluster management capabilities.

The Enterprise Edition includes the following activities:

- Everything in the Advanced Edition
- Design additional infrastructure provisioners and design elements, as needed
- Design additional provider locations/sites and design elements for NKP-managed workload clusters
- Design NKP multitenancy model, including role-based access control (RBAC) policy
- Review containerized workload use cases and assess NKP Worker node pools, quantity, and capacity requirements for the NKP management cluster and managed workload clusters based on solution sizing
- Document observability design elements for centralized monitoring and logging as they pertain to the designed multitenancy model

Limitations

- Excludes continuous integration (CI) design of containerized workloads
- Excludes CAPI infrastructure provisioner design
- Selected CAPI provisioner must support the hardware platform

Essential Edition

- Cluster API provisioning method limited to the Nutanix infrastructure
- Excludes continuous delivery design of containerized workloads

Advanced Edition

- NKP Compute base machine template design limited to a single template
- GPU workload-related design limited to a single node pool
- Excludes continuous delivery design of containerized workloads

Enterprise Edition

- NKP Compute base machine template design limited to a single template per provider type
- GPU workload-related design limited to a single node pool per provider type
- NKP multitenancy model design limited to a single NKP managed environment (1 NKP management cluster)
- Additional provider location/site and cluster design limited to up to 1 NKP workload cluster per provider
- NKP multitenancy design limited to up to 1 NKP workspace and 2 NKP projects
- RBAC design limited to up to 3 default-provided NKP RBAC personas and via the NKP user interface (UI)
- Excludes continuous delivery design of containerized workloads outside of default NKP-supported methods

Supported Hypervisors

- Nutanix AHV

Supported On-premises Providers

- Pre-provisioned
- Nutanix Cloud Infrastructure (NCI)
- VMware Cloud Director
- VMware vSphere

Supported Public Cloud Providers

Essential and Advanced Editions

- Nutanix Cloud Customers (NC2)
- Amazon Web Services (AWS)
- Microsoft Azure
- Amazon Elastic Kubernetes Service (EKS)
- Microsoft Azure Kubernetes Services (AKS)
- Google Kubernetes Engine (GKE)

Prerequisites

- Targeted containerized workload use cases have been identified

Required Product Licenses

Essential Edition

- Nutanix Kubernetes Platform Starter or greater

Advanced Edition

- Nutanix Kubernetes Platform Pro or greater

Enterprise Edition

- Nutanix Kubernetes Platform Ultimate

Deliverables

- Project Kickoff
- Project Schedule
- Project Status Report(s)
- Workshop
- Configuration Workbook
- Design Document
- Project Closeout

Duration

Essential	Advanced	Enterprise
Typically 5 days	Typically 7 days	Typically 11 days

Related Products

- Nutanix Kubernetes Platform (NKP)
- Nutanix Cloud Infrastructure (NCI)
- Nutanix Cloud Clusters (NC2)
- Nutanix Unified Storage (NUS)

Terms and Conditions