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**Learning Style:** Virtual Classroom

**Technology:** VMware

**Difficulty:** Intermediate

**Course Duration:** 5 Days

## VMware NSX: Install, Configure, Manage V4.0



## About this Course:

This intermediate-level 5 days Training Program provides a comprehensive overview of core features and functionalities of VMware NSX®. This course helps Network & System Administrators build familiarity with the core concepts of NSX Logical Switching, Firewall Configuration, Gateway Services, and Security Services. The main goal is to help professionals effectively virtualize switching environments and proficiently optimize and protect NSX Environment. On average, Professional VMware Administrators with proficiency in VMware Technologies earn \$79,168 annually.

Professionals will also get to learn the fundamentals of logical routing and will get to know the effective strategies for dynamically routing multiple virtual environments. In this course, candidates will also get free access to a Software-Defined Data Center Ecosystem and will get to adopt practical skills and knowledge of working in such an environment.

## Course Objectives:

The core objective of this course is to help professionals develop a better understanding and sound knowledge of the following key concepts:

- NSX Components Configuration and Deployment for Control and Management
- NSX Layer 2 Networking Fundamentals and Essentials
- Logical Switch Networking Configuration, Deployment, & Applications
- NSX Distributed Logical Router Appliance Configuration & Deployment
- East-West Connectivity Formation with NSX Distributed Logical Router Appliances
- VMware NSX Edge Services Gateway Appliances Configuration & Deployment
- North-South Connectivity Formation through VMware NSX Edge Services Gateway
- NSX Layer 2 Bridging Configuration
- NSX Edge Services Gateway Configuration and Core Functionalities
- Restricting Network Traffic with NSX Edge & Distributed Firewall Rules Settings
- Service Composer Policies and Identity-Aware Firewall Configuration
- NSX Data Security & Cross-vCenter NSX Features

## Audience:

- Experienced System Administrators
- Professional Network Administrators
- IT Professionals & Experts

## Prerequisites:

Professionals planning to enroll in the VMware NSX: Install, Configure, Manage

V6.4 (VNSXICM61) course must comply with the following prerequisites:

- Fundamental Knowledge of Enterprise Routing and Switching
- Familiarity with Firewall Rule Sets & TCP/IP Services
- Understands the Core Concepts of VMware Data Center Virtualization Fundamentals
- Familiarity with VMware Introduction to Network Virtualization with NSX course

## **Course Outline:**

### 1 Course Introduction

- Introductions and course logistics
- Course objectives

### 2 VMware Virtual Cloud Network and VMware NSX

- Introduce the VMware Virtual Cloud Network vision
- Describe the NSX product portfolio
- Discuss NSX features, use cases, and benefits
- Explain NSX architecture and components
- Explain the management, control, data, and consumption planes and their functions.

### 3 Preparing the NSX Infrastructure

- Deploy VMware NSX® Manager™ nodes on ESXi hypervisors
- Navigate through the NSX UI
- Explain data plane components such as

- Perform transport node preparation and configure the data plane infrastructure
- Verify transport node status and connectivity
- Explain DPU-based acceleration in NSX
- Install NSX using DPUs

#### 4 NSX Logical Switching

- Introduce key components and terminology in logical switching
- Describe the function and types of L2 segments
- Configure logical segments and attach hosts using NSX UI
- Describe the function and types of segment profiles
- Create segment profiles and apply them to segments and ports
- Explain the function of MAC, ARP, and TEP tables used in packet forwarding
- Demonstrate L2 unicast packet flow
- Explain ARP suppression and BUM traffic handling

#### 5 NSX Logical Routing

- Describe the logical routing function and use cases
- Introduce the two-tier routing architecture, topologies, and components
- Explain the Tier-0 and Tier-1 gateway functions • Describe the logical router components: Service Router and Distributed Router

- Discuss the architecture and function of NSX Edge nodes
- Discuss deployment options of NSX Edge nodes • Configure NSX Edge nodes and create NSX Edge clusters
- Configure Tier-0 and Tier-1 gateways • Examine single-tier and multitier packet flows
- Configure static routing and dynamic routing, including BGP and OSPF • Enable ECMP on a Tier-0 gateway
- Describe NSX Edge HA, failure detection, and failback modes • Configure VRF Lite

## 6 NSX Bridging

- Describe the function of logical bridging
- Discuss the logical bridging use cases
- Compare routing and bridging solutions
- Explain the components of logical bridging
- Create bridge clusters and bridge profiles

## 7 NSX Firewalls

- Describe NSX segmentation
- Identify the steps to enforce Zero-Trust with NSX segmentation
- Describe the Distributed Firewall architecture, components, and function

- Configure Distributed Firewall sections and rules
- Configure the Distributed Firewall on VDS

- Describe the Gateway Firewall architecture, components, and function
- Configure Gateway Firewall sections and rules

## 8 NSX Advanced Threat Prevention

- Explain NSX IDS/IPS and its use cases
- Configure NSX IDS/IPS
- Deploy NSX Application Platform
- Identify the components and architecture of NSX Malware Prevention
- Configure NSX Malware Prevention for east-west and north-south traffic
- Describe the use cases and architecture of VMware NSX® Intelligence™
- Identify the components and architecture of VMware NSX® Network Detection and Response™
- Use NSX Network Detection and Response to analyze network traffic events.

## 10 NSX User and Role Management

- Describe the function and benefits of VMware Identity Manager™ in NSX
- Integrate VMware Identity Manager with NSX
- Integrate LDAP with NSX
- Identify the various types of users, authentication policies, and permissions
- Use role-based access control to restrict user access
- Explain object-based access control in NSX

## 11 NSX Federation

- Introduce the NSX Federation key concepts, terminology, and use cases.
- Explain the onboarding process of NSX Federation
- Describe the NSX Federation switching and routing functions.
- Describe the NSX Federation security concepts.