VMware NSX: Install, Configure, Manage [V6.1]

Course Code: VMNSXICMV61 **5 days; Instructor-led training**
50% lecture, 50% hands-on lab

Course Overview

This comprehensive, fast-paced training course focuses on installing, configuring, and managing VMware NSX™. This course covers NSX as a part of the software-defined data center platform, implementation use cases along with features of NSX, and functionality operating at Layer 2 through Layer 7 of the OSI model. Lecture and hands-on lab activities support the student's understanding of NSX features, functionality, and on-going management and control.

Course Objectives

By the end of the course, you should be able to meet the following objectives:

- Describe the software-defined data center
- Describe how NSX is the next step in the evolution of the software-defined data center
- Describe features and benefits of NSX network virtualization
- Identify prerequisites for NSX
- Configure and deploy NSX management, control, and data plane components
- Configure, deploy, and use logical switch networks
- Configure and deploy NSX distributed router to optimize East West data center traffic flows
- Configure and deploy VMware NSX Edge™ services gateway appliances
- Configure and use all the main features of the NSX Edge services gateway
- Configure and use NSX virtual private networks
- Configure and use logical load balancing
- Configure NSX Edge firewall and Distributed Firewall policy rules
- Configure service composer security groups and policies
- Use role-based access to control user account privileges
- Use activity monitoring to validate and create security policies
- Describe how VMware vCloud® Automation Center™ and NSX enable automated provisioning of IT services and networks

Course Modules

1 Course Introduction
- Introductions and course logistics
- Course objectives

2 Software-Defined Data Center
- Describe the software-defined data center concepts
- Evolution of the software-defined data center
- Introduction to VMware vSphere® virtualization
- Introduction to network virtualization

3 Networking Fundamentals
- Describe Ethernet switching fundamentals
- Describe IP routing fundamentals
- Identify challenges of traditional data network topologies
- Identify data center network topologies optimized for network virtualization

4 Management and Control Planes
- Describe the role of VMware NSX Manager™ and VMware NSX Controller™
- Identify NSX Controller clustering best practices
- Deploy the NSX Manager and the NSX Controller cluster

7 Layer 2 Bridging
- Describe Layer 2 bridging between VXLAN and VLAN
- Describe the traffic flow between VXLAN and VLAN

8 Edge Services
- Describe NSX Edge network address translation operation
- Describe NSX Edge one-arm and inline load balancing
- Compare NSX Edge high availability modes
- Scale and place NSX Edge appliances

9 Virtual Private Networking
- Identify NSX VPN use cases
- Configure site-to-site IPsec VPNs
- Configure SSL VPNs for remote access
- Configure Layer 2 VPN

10 Firewalls
- Describe microsegmentation
- Compare the NSX Edge and NSX Distributed Firewalls to traditional firewalls
- Configure NSX firewall policies
- Configure security groups and security policies with service composer

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5	**Logical Switch Networks** • Describe VXLAN protocol • Identify VTEP functions • Describe how NSX logical switches process Broadcast, Unknown unicast, and Multicast traffic • Describe ARP suppression • Compare unicast, multicast, and hybrid controller replication modes
6	**NSX Routing** • Identify supported dynamic routing protocols • Describe the role of the NSX logical router and NSX Edge gateway • Diagram East-West and North-South traffic flows
11	**Operations** • Implement NSX role-based access control • Analyze NSX flow monitoring data • Create or modify firewall rules from NSX flow monitoring data
12	**Automation** • Describe vCloud Automation Center capabilities • Describe how vCloud Automation Center and NSX interact