VMware NSX-T Data Center: Install, Configure, Manage

Course Overview
This five-day, fast-paced course provides comprehensive training on how to install, configure, and manage a VMware NSX-T™ Data Center environment. This course covers key NSX-T Data Center features and functionality offered in the NSX-T Data Center 2.4 release, including the overall infrastructure, logical switching, logical routing, networking and security services, micro-segmentation and firewalls, and so on. Access to a software-defined data center environment is provided through hands-on labs to reinforce the skills and concepts presented in the course.

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

- Describe VMware Virtual Cloud Network and the NSX-T Data Center architecture
- Describe the NSX-T Data Center components and main functions
- Explain the NSX-T Data Center key features and benefits
- Deploy and configure NSX-T Data Center infrastructure
- Configure layer 2 logical switching and bridging
- Explain the tiered routing architecture and configure gateways
- Configure advanced services such as VPN and load balancing
- Describe the NSX-T Data Center security model with micro-segmentation
- Configure Distributed Firewall and Gateway Firewall to protect east-west and north-south traffic
- Explain advanced security enforcement with partner service insertion
- Integrate VMware Identity Manager™ with NSX-T Data Center and configure Role-Based Access Control
- Gather relevant information and perform basic troubleshooting with various tools

Target Audience
- Experienced system administrators or network administrators

Prerequisites
- Good understanding of TCP/IP services and network security and working experience with firewalls
- Working experience of enterprise switching and routing
- Solid understanding of concepts presented in the following courses:
  - VMware Data Center Virtualization Fundamentals
  - VMware Introduction to Network Virtualization with NSX
  - VMware Network Virtualization Fundamentals

Course Delivery Options
- Classroom
- Live Online
- Onsite
- On Demand

Product Alignment
- NSX-T Data Center 2.4
Course Modules

1 Course Introduction
   • Introductions and course logistics
   • Overview of modules and course objectives

2 VMware Virtual Cloud Network and NSX-T Data Center
   • Introduce VMware’s Virtual Cloud Network vision
   • Discuss NSX-T Data Center solutions, use cases, and benefits
   • Explain NSX-T Data Center architecture and components
   • Describe VMware NSX® product portfolio and features
   • Explain the management, control, data, and consumption planes and function

3 NSX-T Data Center Infrastructure Deployment
   • Describe NSX Management Cluster
   • Deploy VMware NSX® Manager™ nodes on VMware ESXi™ and KVM hypervisors
   • Navigate through the NSX Manager UI
   • Explain data plane components such as N-VDS, transport nodes, transport zones, profiles, and more
   • Perform transport node preparation and establish the data center infrastructure
   • Verify transport node status and connectivity

4 NSX-T Data Center Logical Switching
   • Introduce key components and terminology in logical switching
   • Describe the types of L2 segments and function
   • Explain tunneling and the GENEVE encapsulation
   • Configure logical segments and attach hosts using NSX Manager 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-T Data Center 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 VMware 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 the single-tier and multiltier packet flow
   • Configure static routing and dynamic routing
   • Enable ECMP on Tier-0 Gateway
   • Describe NSX Edge HA, failure detection, and failback modes

6 NSX-T Data Center Logical 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-T Data Center Services
   • Describe NSX-T Data Center services
   • Explain and configure Network Address Translation (NAT)
   • Explain and configure DNS and DHCP services
   • Describe the load-balancing function, topologies, components, and use cases
   • Configure L4-L7 load balancing
   • Discuss the IPSec VPN and L2 VPN function and use cases
   • Configure IPSec VPN and L2 VPN using NSX Manager UI

8 NSX-T Data Center Security
   • Introduce the NSX-T Data Center security approach and model
   • Describe the micro-segmentation benefits and use cases
   • Describe the Distributed Firewall architecture, components, and function
   • Configure Distributed Firewall sections and rules
   • Describe the Gateway Firewall architecture, components, and function
   • Configure Gateway Firewall sections and rules
   • Describe Network Introspection service insertion for east-west and north-south security
   • Describe Endpoint Protection and use cases
• Discuss the integration and benefits of partner security solutions with NSX-T Data Center

9 User and Role Management
• Describe the function and benefits of VMware Identity Manager in NSX-T Data Center
• Integrate VMware Identity Manager with NSX-T Data Center
• Identify the various types of users, authentication policies, and permissions
• Use Role-Based Access Control to restrict user access
• Explain the built-in roles in VMware Identity Manager and role assignment to users

10 NSX-T Data Center Basic Troubleshooting
• Introduce the troubleshooting methodology and process
• Use various methods to collect local and remote log files
• Describe troubleshooting tools, such as IPFIX, Traceflow, Packet Capture, SPAN, and so on
• Solve basic problems related to installation, switching, routing, and firewalls
• Use CLI commands to verify the component configuration and status in NSX-T Data Center

Contact
If you have questions or need help registering for this course, click here.