VMWARE NSX-T DATA CENTER: INSTALL, CONFIGURE, MANAGE

DURATION: 5 DAYS

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 segments, logical routers, 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.

Product Alignment
NSX-T Data Center 2.4

TARGET AUDIENCE

Experienced system administrators or network administrators

COURSE OBJECTIVES

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

1. Describe VMware Virtual Cloud Network and the NSX-T Data Center architecture
2. Describe the NSX-T Data Center components and main functions
3. Explain the NSX-T Data Center key features and benefits
4. Deploy and configure NSX-T Data Center infrastructure
5. Configure layer 2 logical segmenting and bridging
6. Explain the tiered routing architecture and configure logical routers
7. Configure advanced services such as VPN and load balancing
8. Explain the NSX-T Data Center security model with micro-segmentation
9. Configure distributed and edge firewall to protect east-west and north-south traffic
10. Explain advanced security enforcement with partner service insertion
11. Gather relevant information and perform basic troubleshooting

COURSE CONTENT

NSX-T Data Center Introduction

- Introductions and course logistics
- Overview of modules and course objectives

VMware Virtual Cloud Network and NSX-T Data Center Overview

- Introduce VMware's Virtual Cloud Network vision
- Describe VMware NSX-T Data Center portfolio
- Describe NSX-T Data Center value proposition and use cases
- Introduce Software-Defined Networking and VMware vSphere®
- Describe NSX-T Data Center architecture and components
- Explain the management, control, data, and consumption planes and functions
- Introduce Converged Appliance

NSX-T Data Center Infrastructure Deployment

- Deploy the Converged Appliance cluster
- Navigate through the Policy Manager user interface
- Prepare for the NSX-T Data Center infrastructure deployment
- Configure N-VDS, Transport Zones, IP pools, and uplink profiles
- Prepare ESXi and KVM hosts for NSX-T Data Center
- Verify host deployment status and connectivity

NSX-T Data Center Logical Segment

- Introduce logical segment key concepts and terminology
- Explain N-VDS function and characteristics
- Configure logical segments using the Policy Manager GUI
- Attach VMware ESX iTM and KVM hosts to logical segments
- Verify layer 2 connectivity
- Describe various types of segment profiles
- Create segment profiles and apply them to logical segments and ports
- Explain MAC, ARP, and TEP tables used in layer 2 logical segmentation
- Demonstrate Layer 2 unicast packet flow
- Handle layer 2 BUM traffic

NSX-T Data Center Logical Bridging

- Explain the function and purpose of logical bridging
- Describe the components of logical bridging
- Create logical bridges and bridge profiles

NSX-T Data Center Logical Routing

- Introduce the tiered routing architecture
- Explain the functions of Tier-0 and Tier-1 routers
- Describe the logical router components: Service Router and Distributed Router
- Discuss VMware NSX® Edge TM node deployment and sizing options
- Deploy NSX Edge nodes and Edge Cluster
- Configure Tier-0 and Tier-1 logical routers
- Discuss routing topologies and configure services on routers
- Configure static routing, BGP, and ECMP
- Describe NSX Edge high availability (HA)
- Explain HA failure detection and failback modes

NSX-T Data Center Advanced Services

- Describe NSX-T Data Center services

- Explain the Network Address Translation (NAT) service
- Explain the DNS and DHCP services
- Explain the load-balancing features and rules
- Describe the load-balancing benefits
- Configure L4-7 load balancing
- Introduce the IP Sec VPN and L2 VPN concepts
- Configure IP Sec VPN and L2 VPN using Policy Manager

NSX-T Data Center Security

- Introduce the NSX-T Data Center security approach and model
- Explain the use cases and benefits of micro-segmentation
- Describe the distributed firewall architecture, components, and functions
- Create distributed firewall sections and rules
- Describe the edge firewall architecture and functions
- Configure edge firewall sections and rules
- Introduce bridge firewall
- Describe the service insertion feature
- Explain the integration of partner security solutions with NSX-T Data Center
- Configure Endpoint Protection policies
- Configure Network Introspection policies

User and Role Management

- Describe role-based Access Control and VMware Identity Manager™
- Explain the integration of NSX-T Data Center
- with VMware Identity Manager
- Explain authentication policies
- Identify the various types of permissions
- Describe the VMware Identity Manager built-in roles
- Explain VMware Identity Manager domains and user attributes

NSX-T Data Center Basic Troubleshooting

- Troubleshooting methodology for troubleshooting L2, L3, and service issues
- Introduce various troubleshooting tools
- Collect local and remote log files
- Monitor the NSX-T Data Center environment

COURSE PREREQUISITES

Good understanding of TCP/IP services

Working experience of enterprise switching and routing

Good understanding of network security and working experience with firewalls

Solid understanding of concepts presented in the following courses:

- o VMware Data Center Virtualization Fundamentals
- o VMware Introduction to Network Virtualization with NSX
- o VMware Network Virtualization Fundamentals