NSX-T: 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.

This course aligns with the following products: NSX-T Data Center 2.4

TARGET AUDIENCE

Experienced system administrators or network administrators

COURSE OBJECTIVES

After completing this course you should be able to:

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

1. Introductions and course logistics
2. Overview of modules and course objectives

VMware Virtual Cloud Network and NSX-T Data Center Overview

1. Introduce VMware's Virtual Cloud Network vision
2. Describe VMware NSX-T Data Center portfolio
3. Describe NSX-T Data Center value proposition and use cases
4. Introduce Software-Defined Networking and VMware vSphere®
5. Describe NSX-T Data Center architecture and components
6. Explain the management, control, data, and consumption planes and function
7. Introduce Converged Appliance

NSX-T Data Center Infrastructure Deployment

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

NSX-T Data Center Logical Segment

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

NSX-T Data Center Logical Bridging

1. Explain the function and purpose of logical bridging
2. Describe the components of logical bridging
3. Create logical bridges and bridge profiles

NSX-T Data Center Logical Routing

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

NSX-T Data Center Advanced Services

1. Describe NSX-T Data Center services
2. Explain the Network Address Translation (NAT) service
3. Explain the DNS and DHCP services
4. Explain the load-balancing features and rules
5. Describe the load-balancing benefits
6. Configure L4-7 load balancing
7. Introduce the IP Sec VPN and L2 VPN concepts
8. Configure IP Sec VPN and L2 VPN using Policy Manager

NSX-T Data Center Security

1. Introduce the NSX-T Data Center security approach and model
2. Explain the use cases and benefits of micro-segmentation
3. Describe the distributed firewall architecture, components, and functions
4. Create distributed firewall sections and rules
5. Describe the edge firewall architecture and functions
6. Configure edge firewall sections and rules
7. Introduce bridge firewall
8. Describe the service insertion feature

9. Explain the integration of partner security solutions with NSX-T Data Center
10. Configure Endpoint Protection policies
11. Configure Network Introspection policies

User and Role Management

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

NSX-T Data Center Basic Troubleshooting

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

COURSE PREREQUISITES

Attendees should meet the following prerequisites:

1. Good understanding of TCP/IP services
2. Working experience of enterprise switching and routing
3. Good understanding of network security and working experience with firewalls
4. 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

TEST CERTIFICATION

Recommended as preparation for the following exams: There are no exams currently aligned to this course