



TODD LAMMLE

Advanced Network Training

VMware NSX-T: Install, Configure, Manage [V3.0]

Course Objectives

Upon completing this course, the learner will be able to meet these overall 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 URL analysis, partner service insertion
- Integrate VMware Identity Manager with NSX-T Data Center and configure role-based access control
- Describe NSX-T Data Center Federation use-cases and architecture for switching, routing, and security

Module 1: Course Introduction

- Introductions and course logistics
- Course objectives

Module 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

Module 3: Deployment Preparing the NSX-T Data Center Infrastructure

- 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

Module 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

Module 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 multitier packet flow
- Configure static routing and dynamic routing
- Enable ECMP on Tier-0 Gateway
- Describe NSX Edge HA, failure detection, and failback modes

Module 6: NSX-T Data Center 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

Module 7: 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 URL analysis and distributed intrusion system importance and use-cases.
- Describe the service insertion functionality for east-west and north-south security
- Discuss the integration and benefits of partner security solutions with NSX-T Data Center