

# VMware NSX-T Data Center: Install Configure Manage [4.0]

Course code: VMWNSXTICM

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 3.2 release, including the overall infrastructure, logical switching, logical routing, networking and security services, firewalls and advanced threat prevention, and more. Product Alignment • VMware NSX-T Data Center 3.2

## Who is the course for

Experienced system administrators or network administrators.

## What we teach you

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 segmenting and bridging.
- Explain the tiered routing architecture and configure logical routers.
- Configure advanced services such as VPN and load balancing.
- Explain the NSX-T Data Center security model with micro-segmentation.
- Configure distributed and edge firewall to protect east-west and north-south traffic.
- Explain advanced security enforcement with partner service insertion.
- Gather relevant information and perform basic troubleshooting.

## Required skills

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:

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

## Course outline

### 1 NSX-T Data Center Introduction

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

### 2 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

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## 3 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

## 4 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 ESXi™ 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

## 5 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

## 6 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™ 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

## 7 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

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- Explain the load-balancing features and rules
  - Describe the load-balancing benefits
  - Configure L4-7 load balancing
  - Introduce the IPSec VPN and L2 VPN concepts
  - Configure IPSec VPN and L2 VPN using Policy Manager
- ## 8 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
- ## 9 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
- ## 10 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

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