

## VNSXTDC32-TSHO

# VMware NSX-T Data Center: Troubleshooting and Operations

40 horas

Network Virtualization

VMware

## INTRODUÇÃO

This five-day, hands-on training course provides the advanced knowledge, skills, and tools to achieve competency in operating and troubleshooting the VMware NSX-T™ Data Center environment. In this course, you are introduced to workflows of various networking and security constructs along with several operational and troubleshooting tools that help you manage and troubleshoot your NSX-T Data Center environment.

In addition, you are presented with various types of technical problems, which you will identify, analyze, and solve through a systematic process.

## OBJETIVO DO CURSO

Objectives

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

- Use the native tools available in NSX-T Data Center to identify and troubleshoot the problems related to the NSX-T Data Center environment.
- Use VMware vRealize® Log Insight™ and VMware vRealize® Network Insight™ to identify and troubleshoot the problems related to the NSX-T Data Center environment.
- Explain the NSX-T Data Center infrastructure components and the communications between them.
- Identify, analyze, and troubleshoot problems related to the management, control, and data planes in NSX-T Data Center.
- Identify, analyze, and troubleshoot problems related to infrastructure preparation in NSX-T Data Center.
- Identify, analyze, and troubleshoot problems related to logical switching and logical routing in NSX-T Data Center.
- Identify, analyze, and troubleshoot network security problems related to the NSX-T Data Center Distributed and Gateway firewalls.
- Identify, analyze, and troubleshoot problems related to VPN and the VMware NSX® Advanced Load Balancer™.
- Identify the components and packet flows involved in the NSX-T Data Center datapath and troubleshoot related problems.

## PÚBLICO-ALVO

Audience

- Experienced system administrators and network administrators
- Network and security professionals who work with enterprise and data center networks

## PRÉ-REQUISITOS

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### Prerequisites

Before taking this course, you must complete the following course:

- VMware NSX-T Data Center: Install, Configure, Manage [V3.2]
- You should also have understanding or knowledge of these technologies:
- Good understanding of TCP/IP services and protocols
- Knowledge and working experience of computer networking and security, including:
- Switching and routing technologies (L2-L3)
- Network and application delivery services (L4-L7)
- Firewalling (L4-L7)
- VMware vSphere® environments

The VMware Certified Professional - Network Virtualization certification is recommended.

## Outline Course

### 1. Course Introduction

- Introduction and course logistics
- Course objectives

### 2. NSX-T Data Center Operations and Tools

- Explain and validate the native troubleshooting tools (dashboards, Traceflow, live traffic analysis, port mirroring) for the NSX-T Data Center environment
- Configure syslog, IPFIX, and log collections for the NSX-T Data Center environment
- Integrate NSX-T Data Center with vRealize Log Insight and vRealize Network Insight
- Validate and review the API methods available to configure the NSX-T Data Center environment

### 3. Troubleshooting the NSX Management Cluster

- Describe the NSX Management cluster architecture, components, and communication channels
- Identify the workflows involved in configuring the NSX Management cluster
- Validate and troubleshoot the NSX Management cluster formation

### 4. Troubleshooting Infrastructure Preparation

- Describe the data plane architecture, components, and communication channels
- Explain and troubleshoot VMware ESXi™ transport node preparation issues
- Explain and troubleshoot KVM transport node preparation issues
- Explain and troubleshoot VMware NSX® Edge™ transport node preparation issue

### 5. Troubleshooting Logical Switching

- Describe the architecture of logical switching
- List the modules and processes involved in configuring logical switching
- Explain the importance of N-VDS and VDS in transport nodes
- Describe the procedure to migrate from N-VDS to VDS
- Review the architecture and workflows involved in attaching workloads to segments
- Identify and troubleshoot common logical switching issues

### 6. Troubleshooting Logical Routing

- Review the architecture of logical routing and NSX Edge nodes
- Explain the workflows involved in the configuration of Tier-0 and Tier-1 gateways
- Explain the high availability modes and validate logical router placements
- Identify and troubleshoot common logical routing issues using both BGP and OSPF

### 7. Troubleshooting Security

- Review the architecture of the Distributed Firewall
- Explain the workflows involved in configuring the Distributed Firewall
- Review the architecture of the Gateway Firewall
- Explain the workflows involved in configuring the Gateway Firewall
- Identify and troubleshoot common distributed firewall and Gateway Firewall issues

### 8. Troubleshooting Services

- Review the NSX Advanced Load Balancer architecture and components
- Identify and troubleshoot common NSX Advanced Load Balancer issues
- Review of IPsec and L2 VPN architecture and components

- Identify and troubleshoot common IPsec and L2 VPN issues

## 9. Datapath Walkthrough

- Verify and validate the path of the packet on the NSX datapath (East-West and South-North)
  
- Identify and perform packet captures at various points in the datapath
- Use NSX CLI and native hypervisor commands to retrieve configurations involved in the NSX datapath