VMware NSX: Troubleshooting and Operations v6.3

Course Summary

Description

This hands-on training course provides you with the advanced knowledge, skills, and tools to achieve competence in operating and troubleshooting the VMware NSX 6.3 environment. In this course, you will be presented with various types of technical problems. You will learn how to identify the problems and solve them through a systematic process. You will also be introduced to several operational, management, and troubleshooting tools.

Product Alignment
- NSX 6.3
- VMware vRealize Log Insight 4.3
- VMware vRealize Network Insight 3.3
- VMware vRealize Operations Manager 6.5

This course prepares you for VMware Certified Advanced Professional – Network Virtualization Deployment (VCAP6-NV Deploy) certification.

Objectives

After taking this course, students will be able to:
- Establish and apply a structured approach and methodology for troubleshooting
- Troubleshoot NSX infrastructure and component problems
- Troubleshoot physical and logical networking problems involving switching and routing
- Troubleshoot advanced edge services
- Troubleshoot network security problems
- Use tools to monitor, operate, and troubleshoot NSX deployments

Topics

- Course Introduction
- Troubleshooting Methodology
- Troubleshooting and Operating NSX Infrastructure
- Troubleshooting and Operating NSX Logical Switches
- Troubleshooting and Operating NSX Logical Routers

- Troubleshooting and Operating NSX Security Services
- Troubleshooting and Operating NSX Edge Services
- vRealize Operational Tools for NSX Operations Management

Audience

This course is designed for network professionals who work with enterprise networks and VMware Sphere.

Prerequisites

Before taking this course, students should understand layers 2 through 3 networking protocols, and switching and routing methodology. They should understand layers 4 through 7 network services. Students should also understand the concepts presented in the VMware NSX: Install, Configure, Manage course or the VMware NSX for Internetworking Experts Fast Track course, or equivalent networking and vSphere experience. VCP6-NV certification is recommended.

Duration

Five days

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Course Outline

I. Course Introduction
  A. Introduction and course logistics
  B. Course objectives
  C. Resources and references
  D. Learning paths and certifications

II. Troubleshooting Methodology
  A. Develop a structured troubleshooting approach
  B. Differentiate between symptoms and root causes
  C. Identify and isolate problems residing in various areas
  D. Apply an appropriate methodology and procedure to troubleshooting

III. Troubleshooting and Operating NSX Infrastructure
  A. Describe the NSX infrastructure and component communications
  B. Discuss common VMware NSX® Controller™ deployment problems
  C. Install NSX components for host preparation
  D. Troubleshoot host preparation problems
  E. Troubleshoot management and control plane synchronization problems
  F. Introduce the NSX central CLI

IV. Troubleshooting and Operating NSX Logical Switches
  A. Describe the components involved in NSX logical switching
  B. Describe the logical switching control plane operations
  C. Explain the management plane operations and solve VMware NSX® Manager™ problems
  D. Configure vSphere distributed switches for VXLAN
  E. Troubleshoot NSX Controller problems related to logical switching
  F. Troubleshoot virtual machine connectivity problems

V. Troubleshooting and Operating NSX Logical Routers
  A. Describe the communications between routing components
  B. Distinguish between the distributed logical router (DLR) and the edges services gateway and their purposes
  C. Describe DLR packet flow
  D. Configure the transport zone
  E. Describe VMware NSX® Edge™ nodes

VI. Troubleshooting and Operating NSX Security Services
  A. Describe the distributed firewall (DFW) components and explain how they communicate with each other
  B. Explain how the DFW and NSX Edge firewall rules are managed by NSX Manager
  C. Describe the Service Composer architecture
  D. Explain the architecture of Guest Introspection with third-party devices
  E. Explain how NSX service chaining dynamically responds to changing security conditions
  F. Explain how the DFW, the filtering module, and traffic redirection modules work together

VII. Troubleshooting and Operating NSX Edge Services
  A. Use the GUI and CLI commands to verify the DHCP relay configuration
  B. Configure SSL VPN-Plus server and clients
  C. Use GUI and CLI commands to verify SSL VPN-Plus session details
  D. Troubleshoot common SSL VPN-Plus problems
  E. Configure L2 VPN service
  F. Capture L2 VPN packets for troubleshooting and analysis

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Course Outline (cont'd)

G. Use GUI and CLI commands to verify L2 VPN configuration settings, policies, mapping tables, and operational status

H. Configure IPsec VPN tunnels between sites

I. Use logging to troubleshoot IPsec VPN issues

J. Perform a packet walk in a hub-and-spoke IPsec VPN environment

K. Describe the logical load-balancing featuresAnalyze common high availability configuration problems and provide solutions

VIII. vRealize Operational Tools for NSX Operations Management

A. Describe some common network operation challenges and misconceptions

B. Discuss the architecture and components of vRealize Network Insight

C. Explain how to use vRealize Network Insight to identify and troubleshoot network problems in a data center

D. Monitor the network health, using dashboards, widgets, and alerts

E. Retrieve network statistics, network flow information, packet information, and NSX system events

F. Investigate root causes of problems and troubleshoot based on log analysis

G. Identify how to use vRealize Operations Manager to visualize all NSX networking services deployed in each vSphere cluster

H. Create templates to generate reports for NSX for vSphere objects

I. Describe the creation of custom dashboards for NSX