Mildain Solutions

VMware NSX: Troubleshooting and Operations [V6.3]

Summary:

- Formats: **Classroom**, **Live Online**, **Onsite**

- Length: 5 Days

Overview:

This five-day, 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

Objectives:

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

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

Intended Audience:

Network professionals who work with enterprise networks and VMware Sphere®

Prerequisites:

- Understanding of layers 2 through 3 networking protocols, and switching and routing methodology
- Understanding of layers 4 through 7 network services
- Understanding of 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.

Outline:

1. Course Introduction
   o   Introduction and course logistics
   o   Course objectives
   o   Resources and references
   o   Learning paths and certifications

2. Troubleshooting Methodology
   o   Develop a structured troubleshooting approach
   o   Differentiate between symptoms and root causes

- o Identify and isolate problems residing in various areas
- o Apply an appropriate methodology and procedure to troubleshooting

3. Troubleshooting and Operating NSX Infrastructure

- o Describe the NSX infrastructure and component communications
- o Discuss common VMware NSX® Controller™ deployment problems
- o Install NSX components for host preparation
- o Troubleshoot host preparation problems
- o Troubleshoot management and control plane synchronization problems
- o Introduce the NSX central CLI

4. Troubleshooting and Operating NSX Logical Switches

- o Describe the components involved in NSX logical switching
- o Describe the logical switching control plane operations
- o Explain the management plane operations and solve VMware NSX® Manager™ problems
- o Configure vSphere distributed switches for VXLAN
- o Troubleshoot NSX Controller problems related to logical switching
- o Troubleshoot virtual machine connectivity problems

5. Troubleshooting and Operating NSX Logical Routers

- o Describe the communications between routing components
- o Distinguish between the distributed logical router (DLR) and the edges services gateway and their purposes
- o Describe DLR packet flow
- o Configure the transport zone
- o Describe VMware NSX® Edge™ nodes

6. Troubleshooting and Operating NSX Security Services

- o Describe the distributed firewall (DFW) components and explain how they communicate with each other
- o Explain how the DFW and NSX Edge firewall rules are managed by NSX Manager
- o Describe the Service Composer architecture
- o Explain the architecture of Guest Introspection with third-party devices
- o Explain how NSX service chaining dynamically responds to changing security conditions
- o Explain how the DFW, the filtering module, and traffic redirection modules work together

7. Troubleshooting and Operating NSX Edge Services

o Use the GUI and CLI commands to verify the DHCP relay configuration

o Configure SSL VPN-Plus server and clients

o Use GUI and CLI commands to verify SSL VPN-Plus session details

o Troubleshoot common SSL VPN-Plus problems

o Configure L2 VPN service

o Capture L2 VPN packets for troubleshooting and analysis

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

o Configure IPsec VPN tunnels between sites

o Use logging to troubleshoot IPsec VPN issues

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

o Describe the logical load-balancing features Analyze common high availability configuration problems and provide solutions

8. vRealize Operational Tools for NSX Operations Management

o Describe some common network operation challenges and misconceptions

o Discuss the architecture and components of vRealize Network Insight

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

o Monitor the network health, using dashboards, widgets, and alerts

o Retrieve network statistics, network flow information, packet information, and NSX system events

o Investigate root causes of problems and troubleshoot based on log analysis

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

o Create templates to generate reports for NSX for vSphere objects

o Describe the creation of custom dashboards for NSX