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Learning Style: Virtual Classroom

Technology: VMware

Difficulty: Intermediate

Course Duration: 5 Days

VMware NSX-T Data Center: Troubleshooting and Operations V4.0

About this Course:

This five-day, hands-on training course provides you with 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.

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

Course Objectives:

- Use the native tools available in NSX-T Data Center to identify and troubleshoot the problems related toNSX-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 the following problems related to the NSX-T Data Center:
  Management, control, data planes, infrastructure preparation
  Logical switching and logical routing
- 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 load balancer services
- Identify the components and packet flows involved in the NSX-T Data Center datapath and troubleshoot various problems that could occur in the datapa
- Describe lifecycle, troubleshooting scenarios, and support resources for a VMware Cloud on AWS SDDC

Audience:

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

Prerequisites:

- Before taking this course, you should have completed the VMware NSX-T Data Center: Install, Configure, Manage [V3.0] course.

You should also have the following understanding or knowledge:

- Good understanding of TCP/IP services and protocols
- Knowledge and working experience of computer networking, including:
  - Switching and routing technologies (L2-L3)
  - Network and application delivery services (L4-L7)
- Knowledge and working experience of VMware vSphere® environments and KVM-based environments

The VMware Certified Professional – Network Virtualization (2020) certification is recommended.

Course Outline:

1 Course Introduction
? Introductions and course logistics
? Course objectives

2 NSX-T Data Center Operations and Tools
? Explain and validate the native troubleshooting tools (dashboards, traceflow, 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 APIs 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 issues

5 Troubleshooting Logical Switching
? Understand 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
? Review the architecture and workflows involved in configuring
? 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 HA modes and logical router placements
? Identify and troubleshoot common logical routing issues

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 Load Balancing and VPN Services
? Review load balancer architecture and components
? Identify and troubleshoot common load balancing 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-T datapath (East-West and North-South)
? Identify and perform packet captures at various points in the datapath
? Use nsxcli to retrieve configurations involved in the NSX-T datapath

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