



Enterprise Computing Solutions - Education Services

TRAINING OFFERING

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CODE:	LENGTH:	PRICE:
EDU-VMW-NSXD4	40 Hours (5 days)	\$4,625.00

Description

This five-day course provides comprehensive training on considerations and practices to design a VMware NSX® environment as part of a software-defined data center strategy. This course prepares the student with the skills to lead the design of an NSX environment, including design principles, processes, and frameworks. The student gains a deeper understanding of the NSX architecture and how it can be used to create solutions to address the customer's business needs

Objectives

Upon completing this course, the learner will be able to meet these overall objectives: Describe and apply a design framework Apply a design process for gathering requirements, constraints, assumptions, and risks Design a VMware vSphere® virtual data center to support NSX requirements Create a VMware NSX® Manager™ cluster design Create a VMware NSX® Edge™ cluster design to support traffic and service requirements in NSX Design logical switching and routing Recognize NSX security best practices Design logical network services Design a physical network to support network virtualization in a software-defined data center Create a design to support the NSX infrastructure across multiple sites Describe the factors that drive performance in NSX

Audience

The primary audience for this course is as follows: Network and security architects and consultants who design the enterprise and data center networks and NSX environments.

Prerequisites

Before taking this course, you must complete the following course: VMware NSX: Install, Configure, Manage [V4.0] 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 and L3) Network and application delivery services (L4 through L7) Firewalling (L4 through L7) vSphere environments The VMware Certified Professional – Network Virtualization certification is recommended.

Program

Module 1: Course Introduction Introduction and course logistics Course objectives Module 2: NSX Design Concepts Identify design terms Describe framework and project methodology Describe the role of VMware Cloud Foundation™ in NSX design Identify customers' requirements, assumptions, constraints, and risks Explain the conceptual design Explain the logical design Explain the physical design Module 3: NSX Architecture and Components Recognize the main elements in the NSX architecture Describe the NSX management cluster and the management plane Identify the functions and components of management, control, and data planes Describe the NSX Manager sizing options Recognize the justification and implication of NSX Manager cluster design decisions Identify the NSX management cluster design options Module 4: NSX Edge Design Explain the leading practices for edge design Describe the NSX Edge VM reference designs Describe the bare-metal NSX Edge reference designs Explain the leading practices for edge cluster design Explain the effect of stateful services placement Explain the growth patterns for edge clusters Identify design considerations when using L2 bridging services Module 5: NSX Logical Switching Design Describe concepts and terminology in logical switching Identify segment and transport zone design considerations Identify virtual switch design considerations Identify uplink profile and transport node profile design considerations Identify Geneve tunneling design considerations Identify BUM replication mode design considerations Module 6: NSX Logical Routing Design Explain the function and features of logical routing Describe the NSX single-tier and multitier routing architectures Identify guidelines when selecting a routing topology Describe the BGP and OSPF routing protocol configuration options Explain gateway high availability modes of operation and failure detection mechanisms Identify how multitier architectures provide control over stateful service location Identify EVPN requirements and design considerations Identify VRF Lite requirements and considerations Identify the typical NSX scalable architectures Module 7: NSX Security Design Identify different security features available in NSX Describe the advantages of an NSX Distributed Firewall Describe the use of NSX Gateway Firewall as a perimeter firewall and as an intertenant firewall

Determine a security policy methodology Recognize the NSX security best practices Module 8: NSX Network Services Identify the stateful services available in different edge cluster high availability modes Describe failover detection mechanisms Compare NSX NAT solutions Explain how to select DHCP and DNS services Compare policy-based and route-based IPsec VPN Describe an L2 VPN topology that can be used to interconnect data centers Explain the design considerations for integrating VMware NSX® Advanced Load Balancer™ with NSX Module 9: Physical Infrastructure Design Identify the components of a switch fabric design Assess Layer 2 and Layer 3 switch fabric design implications Review guidelines when designing top-of-rack switches Review options for connecting transport hosts to the switch fabric Describe typical designs for VMware ESXi™ compute hypervisors with two pNICs Describe typical designs for ESXi compute hypervisors with four or more pNICs Differentiate dedicated and collapsed cluster approaches to SDDC design Module 10: NSX Multilocation Design Explain scale considerations in an NSX multisite design Describe the main components of the NSX Federation architecture Describe the stretched networking capability in Federation Describe stretched security use cases in Federation Compare the Federation disaster recovery designs Module 11: NSX Optimization and DPU-Based Acceleration Describe Geneve Offload Describe the benefits of Receive Side Scaling and Geneve Rx Filters Explain the benefits of SSL Offload Describe the effect of Multi-TEP, MTU size, and NIC speed on throughput Explain the available enhanced datapath modes and use cases List the key performance factors for compute nodes and NSX Edge nodes Describe DPU-Based Acceleration Define the NSX features supported by DPUs Describe the hardware and networking

Session Dates

On request. Please [Contact Us](#)

Additional Information

[This training is also available as onsite training. Please contact us to find out more.](#)