VMWA-17 - VMWARE NSX: DESIGN [V4.X]

Categoria: **VMware**

INFORMAZIONI SUL CORSO

Durata:	Categoria:	Qualifica Istruttore:	Dedicato a:	Produttore:
5 Giorni	VMware	VMware Certified Instructor	Professionista IT	VMware

OBIETTIVI

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

PREREQUISITI

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

-VMware NSX: Install, Configure, Manage

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.

CONTENUTI

1 Course Introduction

-Introduction and course logistics
-Course objectives

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

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

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

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

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

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

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

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

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

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 configurations supported with DPUs

INFO

Materiale didattico: Materiale didattico ufficiale VMware in formato digitale
Costo materiale didattico: incluso nel prezzo del corso a Calendario
Natura del corso: Operativo (previsti lab su PC)