VMWA-29 - VMWARE NSX-T DATA CENTER: DESIGN [V3.2]

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-T Data Center requirements
- Create a VMware NSX® Manager™ cluster design
- Create a VMware NSX® Edge™ cluster design to support traffic and service requirements in NSX-T Data Center
- Design logical switching and routing
- Recognize NSX-T Data Center 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-T Data Center infrastructure across multiple sites
- Describe the factors that drive performance in NSX-T Data Center

PREREQUISITI

Before taking this course, you should have completed the following course:
- VMware NSX-T Data Center: Install, Configure, Manage

You should also have the 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-L3)
  - Network and application delivery services (L4-L7)
  - Firewalling (L4-L7)
  - vSphere environments

The VMware Certified Professional - Network Virtualization certification is recommended.

CONTENUTI

1 Course Introduction
- Introductions and course logistics

- Course objectives

2 Design Concepts

- Identify design terms
- Describe framework and project methodology
- Describe VMware Validated 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-T Data Center 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, VMware vSphere® Network I/O Control 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 NSX-T Data Center 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 VRF Lite requirements and considerations
- Identify the typical NSX scalable architectures

7 NSX Security Design

- Identify different security features available in NSX-T Data Center

- 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-T Data Center security best practices

8 NSX Network Services

- Identify the stateful services available in different edge cluster high availability modes
- Describe failover detection mechanisms
- Explain the design considerations for integrating VMware NSX® Advanced Load Balancer™ with NSX-T Data Center
- Describe stateful and stateless NSX-T Data Center NAT
- Identify benefits of NSX-T Data Center DHCP
- Identify benefits of metadata proxy
- Describe IPSec VPN and L2 VPN

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
- Describe a typical design for a KVM compute hypervisor with two pNICs
- Differentiate dedicated and collapsed cluster approaches to SDDC design

10 NSX Multilocation Design

- Explain scale considerations in an NSX-T Data Center 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 Federation disaster recovery designs

11 NSX Optimization

- 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 N-VDS enhanced datapath modes and use cases
- List the key performance factors for compute nodes and NSX Edge nodes

INFO

Esame: 3V0-42.23 - VMware NSX 4.X Advanced Design --- VMware Certified Advanced Professional - Network Virtualization Design (VCAP-NV Design)

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)