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Exam Code: 3V0-42.20

**Exam Name: Advanced Design VMware NSX-T Data Center** 

**Certification Provider: VMware** 

**Corresponding Certification: VCAP-NV Design 2022** 

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## **QUESTION 1**

Which is a family of solutions for data center designs that span compute, storage, networking, and management, serving as a blueprint for a customer's Software Defined Data Center (SDDC) implementations? (Choose the best answer.)

- A. VMware SDDC Design
- B. VMware Validated Design
- C. VMware POC Design
- D. VMware Cloud Foundation

Correct Answer: B Section: (none) Explanation

## **Explanation/Reference:**

## **QUESTION 2**

Which three IPv6 features are supported in an NSX-T Data Center design? (Choose three.)

- A. IPv6 OSPF
- B. IPv6 static routing
- C. IPv6 switch security
- D. IPv6 DNS
- E. IPv6 Distributed Firewall
- F. IPv6 VXLAN

Correct Answer: BCE Section: (none) Explanation

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# Explanation/Reference:

Reference: https://blogs.vmware.com/networkvirtualization/2019/02/ipv6-support-in-nsx-t-2-4.html/

## **QUESTION 3**

An architect is helping an organization with the Physical Design of an NSX-T Data Center solution.

This information was gathered during a workshop:

Some workloads should be moved to a Cloud Provider.

Extend network's VLAN or VNI across sites on the same broadcast domain.

Enable VM mobility use cases such as migration and disaster recovery without IP address changes. Support 1500 byte MTU between sites.

Which selection should the architect include in their design? (Choose the best answer.)

- A. Load Balancer
- B. Reflexive NAT
- C. SSL VPN
- D. L2 VPN

Correct Answer: D Section: (none) Explanation

## **Explanation/Reference:**

## **QUESTION 4**

An architect is helping an organization with the Physical Design of an NSX-T Data Center solution.

This information was gathered during a workshop:

There are six hosts and hardware has already been purchased.



Customer is planning a collapsed Management/Edge/Compute cluster.

Each host has two 10Gb NICs connected to a pair of switches.

There should be no single point of failure in any proposed design.

Which virtual switch design should the architect recommend to the organization? (Choose the best answer.)

A. Create a vSphere Distributed Switch (vDS) for Management VMkernel traffic and assign one NIC.

Also, create an NSX-T Virtual Distributed Switch (N-VDS) for overlay traffic and assign one NIC.

- B. Create an NSX-T Virtual Distributed Switch (N-VDS) for Management VMkernel traffic and assign one NIC. Also, create an NSX-T Virtual Distributed Switch (N-VDS) for overlay traffic and assign one NIC.
- C. Create an NSX-T Virtual Distributed Switch (N-VDS) for Management VMKernel and overlay traffic and assign both NICs.
- D. Create an NSX-T Virtual Distributed Switch (N-VDS) for Management VMkernel and overlay traffic and assign a new virtual NIC.

Correct Answer: A Section: (none) Explanation

## **Explanation/Reference:**

#### **QUESTION 5**

What selection is the key design benefit provided by a dedicated Edge Cluster VM or Bare Metal? (Choose the best answer.)

- A. reduced administrative overhead
- B. predictable network performance
- C. multiple Tier-0 gateways per Edge Node Cluster
- D. support for Edge Node Clusters with more than 10 Edge Nodes

Correct Answer: B Section: (none) Explanation



# Explanation/Reference:

# **QUESTION 6**

An architect is helping an organization with the Logical Design of an NSX-T Data Center solution.

This information was gathered during the Assessment Phase:

There is a performance based SLA for East – West traffic.

The business critical applications require prioritization of their traffic.

One of the services is a file share and has a high demand for bandwidth.

Which selection should the architect include in their design? (Choose the best answer.)

- A. Review average North/South traffic from the core switches and firewall.
- B. Include a segment QoS profile and review the impact of utilizing this feature.
- C. Meet with the organization's application team to get additional information.
- D. Monitor East-West traffic throughout normal business cycles.

Correct Answer: B Section: (none) Explanation

## **Explanation/Reference:**

#### QUESTION 7

Which NSX-T feature is used to allocate the network bandwidth to business-critical applications and to resolve situations where several types of traffic compete for common resources? (Choose the best answer.)

- A. Network I/O Control Profiles
- B. LLDP Profile



C. LAG Uplink Profile

D. Transport Node Profiles

Correct Answer: A Section: (none) Explanation

#### Explanation/Reference:

Reference: https://docs.vmware.com/en/VMware-NSX-T-Data-Center/2.4/installation/GUID-9A8FD62A-F099- 4329-8220-6D5853F9A62D.html

#### **QUESTION 8**

An architect is helping an organization with the Logical Design of an NSX-T Data Center solution.

This information was gathered during the Assessment Phase:

Customer currently has a single 10 host vSphere cluster.

Customer wants to improve network security and automation.

Current cluster utilization and business policies prevent changing the existing vSphere deployment.

High-availability is important to the customer.

Which three selections should the architect include in their design? (Choose three.)

- A. Apply vSphere DRS VM-Host anti-affinity rules to the virtual machines of the NSX-T Edge cluster.
- B. Deploy at least two NSX-T Edge virtual machines in the vSphere cluster.
- C. Deploy the NSX Controllers in the management cluster.
- D. Apply vSphere Distributed Resource Scheduler (vSphere DRS) VM-Host anti-affinity rules to NSX Managers.
- E. Remove 2 hosts from the cluster and create a new edge cluster.
- F. Remove vSphere DRS VM-Host affinity rules to the NSX-T Controller VMs.

Correct Answer: ACE Section: (none) Explanation

#### **Explanation/Reference:**



#### **QUESTION 9**

An architect is helping an organization with the Conceptual Design of an NSX-T Data Center solution.

This information was gathered by the architect during the Discover Task of the Enagagement Lifecycle:

There are applications which use IPv6 addressing.

Network administrators are not familiar with NSX-T Data Center solutions.

Hosts can only be configured with two physical NICs.

There is an existing management cluster to deploy the NSX-T components.

Dynamic routing should be configured between the physical and virtual network.

There is a storage array available to deploy NSX-T components.

Which constraint was documented by the architect? (Choose the best answer.)

- A. Dynamic routing should be configured between the physical and virtual network.
- B. There are applications which use IPv6 addressing.
- C. Hosts can only be configured with two physical NICs.
- D. There are enough CPU and memory resources in the existing management cluster.

Correct Answer: A Section: (none) Explanation

# Explanation/Reference:

## **QUESTION 10**

Which two benefits can be achieved using in-band management of an NSX Bare Metal Edge Node? (Choose two.)



- A. Reduces storage requirements.
- B. Reduces cost.
- C. Preserves packet locality.
- D. Reduces egress data.
- E. Preserves switchports.

Correct Answer: BD Section: (none) Explanation

# Explanation/Reference:

## **QUESTION 11**

An architect is helping an organization with the Physical Design of an NSX-T Data Center solution.

This information was gathered during a workshop:

Any proposed solution must provide low latency.

Any proposed solution must provide high throughput.

Customer is running stock trading applications.

Which two selections should the architect recommend to meet high-performance workload requirements? (Choose two.)

- A. Leverage ESXi as the compute host.
- B. Use LACP for all uplink profiles.
- C. Leverage KVM as the compute host.
- D. Enable enhanced data path mode on the N-VDS.
- E. Enable latency sensitivity mode on the N-VDS.

Correct Answer: AD Section: (none) Explanation



# Explanation/Reference:

# **QUESTION 12**

Which selection is associated with the Review Task of the Engagement Lifecycle? (Choose the best answer.)

- A. Gather and document requirements, assumptions, and constraints.
- B. Build, deploy, implement, and test the design.
- C. Measure performance against customer's objective.
- D. Create and document the logical and physical design.

Correct Answer: C Section: (none) Explanation

## **Explanation/Reference:**

## **QUESTION 13**

An architect is helping an organization with the Logical Design of an NSX-T Data Center solution.

This information was gathered during the Assessment Phase:

NSX-T will span across two sites for disaster recovery.

Public Load Balancer VIP should be accessible from a secondary site.

Distributed Firewall Policies should be available at a secondary site.

Routing capabilities should be maintained after failure.

NAT capabilities are required.

Which two selections should the architect include in their design? (Choose two.)



- A. Use of the same ISPs across sites.
- B. Use two separate ISPs across sites.
- C. Use MTU to 1550 between sites.
- D. Set MTU to 1550 between sites.
- E. Use IP sets or groups to configure DFW rules.

Correct Answer: AE Section: (none) Explanation

## **Explanation/Reference:**

Reference:

https://www.vmware.com/content/dam/digitalmarketing/vmware/en/pdf/products/nsx/vmwaremultisite-solutions-cross-vcenter-nsx-design-guide.pdf

#### **QUESTION 14**

An architect is helping an organization with the Conceptual Design of an NSX-T Data Center solution.

Which risk is documented by an architect? (Choose the best answer.)

- A. The security team has a firewall communication matrix documented.
- B. The team is not trained for NSX-T but have a very strong experience with vSphere.
- C. Open communication between different application tiers is not allowed.
- D. Aggregate N-S throughput at any given time should be at least 10G.

Correct Answer: B Section: (none) Explanation

## **Explanation/Reference:**



## **QUESTION 15**

An architect is helping an organization with the Logical Design of an NSX-T Data Center solution.

This information was gathered during the Assessment Phase:

Data between two networks connected over a public network needs to be encrypted.

Certificate authentication is required.

Dynamic route learning is preferred.

Which selection should the architect include in their design? (Choose the best answer.)

- A. Deploy a Tier-0 gateway in Active/Standby mode. Configure policy-based IPSec VPN with SHA512 with RSA as the hash algorithm.
- B. Deploy a Tier-0 gateway in Active/Active mode. Configure route-based IPSec VPN with SHA512 with RSA as the hash algorithm.
- C. Deploy a Tier-0 gateway in Active/Standby mode. Configure route-based IPSec VPN with SHA512 with RSA as the hash algorithm.
- D. Deploy a Tier-0 gateway in Active/Active mode. Configure policy-based IPSec VPN with SHA512 with RSA as the hash algorithm.

Correct Answer: C Section: (none) Explanation

## **Explanation/Reference:**

#### **QUESTION 16**

An architect is helping an organization with the Physical Design of an NSX-T Data Center solution.

This information was gathered during a workshop:

Migrating existing data center to KVM hosts.

Redundancy and high availability are required.

No component can be a single point of failure.

Which selection should the architect recommend? (Choose the best answer.)

A. Linux Bridge redundancy with Active/Active Mode and multiple pNICs with necessary binding



B. Linux Bridge redundancy with Active/Active Mode and single pNIC with static binding

C. vSS/vDS in Active/Standby Mode with necessary binding

D. vSS/vDS in Active/Active Mode with necessary pNICS and required binding modes

Correct Answer: C Section: (none) Explanation

## **Explanation/Reference:**

## **QUESTION 17**

An architect is helping an organization with the Conceptual Design of an NSX-T Data Center solution.

This information was gathered by the architect during the Discover Task of the Engagement Lifecycle:

There are applications which use IPv6 addressing.

Network administrators are not familiar with NSX-T Data Center solutions.

Hosts can only be configured with two physical NICs.

There is an existing management cluster to deploy the NSX-T components.

Dynamic routing should be configured between the physical and virtual network.

There is a storage array available to deploy NSX-T components.

Which risk was documented by the architect? (Choose the best answer.)

- A. Network administrators are not familiar with NSX-T Data Center solutions.
- B. Dynamic routing should be configured between the physical and virtual network.
- C. There are applications which use IPv6 addressing.
- D. There is a storage array available to deploy NSX-T components.

Correct Answer: B Section: (none) Explanation



#### **Explanation/Reference:**

## **QUESTION 18**

An architect is helping an organization with the Physical Design of an NSX-T Data Center solution.

This information was gathered during a workshop about ESXi Host networking:

A total of 50 ESXi hosts to be configured as Transport Nodes.

All ESXi hosts have a dedicated 2 x Intel 10Gbps Physical Network adapter for the Overlay Traffic.

To achieve low latency, high throughput, redundancy, and performance, which two NIC teaming policies should the architect recommend? (Choose two.)

- A. Load Balance Source MAC
- B. Load Balance Port ID
- C. Load Balance Source
- D. Load Balance Source Port ID
- E. Failover Order

Correct Answer: DE Section: (none) Explanation

## Explanation/Reference:

#### **QUESTION 19**

Which two resources can be used by an NSX architect during the Assessment Phase? (Choose two.)

- A. vRealize Network Insight
- B. VMware Validated Design



C. VMware customer references

D. key stakeholder interviews

E. application licensing

Correct Answer: AE Section: (none) Explanation

# Explanation/Reference:

#### **QUESTION 20**

A customer wants to place their NSX Managers in different subnets.

Which would an architect recommend to support the request? (Choose the best answer.)

A. Use a load balancer.

B. Use round-robin DNS.

C. Use NAT.

D. Use a cluster Virtual IP.

Correct Answer: D Section: (none) Explanation

#### Explanation/Reference:

Reference: http://www.cloudxtreme.info/nsx-t-manager-clustering/

#### **QUESTION 21**

An architect is helping an organization with the Physical Design of an NSX-T Data Center solution.

This information was gathered during a workshop:

Current hypervisor of choice is KVM.

Cost reduction is important.

Which two selections should the architect recommend to the organization? (Choose two.)

- A. Deploy Edge VM Nodes using ISO.
- B. Deploy NSX Manager using OVF.
- C. Deploy NSX Manager using QCOW2.
- D. Deploy bare metal Edge Nodes.
- E. Deploy Edge VM Nodes on KVM.

Correct Answer: CD Section: (none) Explanation

## **Explanation/Reference:**

## **QUESTION 22**

An architect is helping an organization with the Physical Design of an NSX-T Data Center solution.

This information was gathered during a workshop:

The company will use a Leaf and Spine physical network architecture with Layer 3 gateways for top of rack switches.

The company is planning to deploy 120 ESX hosts across 10 racks.

There will be a total of a 12 clusters where each cluster has one host per rack.

What should the architect recommend to allow applications to run on any host in the cluster?

(Choose the best answer.)

- A. Deploy all application networks on NSX segments.
- B. Deploy an L2 VPN to allow the networks to extend to each host.
- C. Deploy a Tier-0 gateway per Rack and configure BGP between racks.





D. Deploy a Tier-1 gateway per Rack and configure BGP between racks.

Correct Answer: D Section: (none) Explanation

#### **Explanation/Reference:**

#### **QUESTION 23**

An architect is designing a solution for containerization. The solution will include high availability and security using NSX-T Data Center. The architect plans to provide a basic required components list in the Logical Design. Which solution should the architect recommend? (Choose the best answer.)

A. 3 NSX Managers, 3 virtual NSX Edges, two Tier-0 gateways in Active/Standby, BGP configuration

B. 2 NSX Managers, 2 virtual NSX Edges, one Tier-0 gateway, BGP configuration and a static route

C. 3 NSX Managers, 3 virtual NSX Edges, one Tier-0 gateway and a static route and OSPF

D. 1 NSX Manager, 2 virtual NSX Edges, two Tier-0 gateways in Active/Active, BGP configuration

Correct Answer: A Section: (none) Explanation

## **Explanation/Reference:**

## **QUESTION 24**

A Solutions Architect is assisting a service provider with designing an NSX-T Data Center solution for these environments:

Virtual Data Center to Virtual Data Center connectivity

Tenant workload on-boarding to Virtual Data Centers.

These requirements must be met: scalability across 5 data centers all sites have a latency of 180ms MTU between sites is 1800 bandwidth is 100Mbps between sites multi-tenancy Which two selections should the Solutions Architect propose to the service provider? (Choose two.)

A. Configure Remote TEPs for stretching network services between Virtual Data Centers.

B. Utilize SSL VPN for workloads on-boarding from on-premises to Virtual Data Centers.

C. Configure IPSec VPN for Tenant T0 gateways for Virtual Data Centers connectivity

D. Configure IPSec VPN for Tenant T1 gateways for Virtual Data Centers connectivity.

E. Utilize L2 VPN for workloads on-boarding from on-premises to Virtual Data Centers.

Correct Answer: DE Section: (none) Explanation

## **Explanation/Reference:**

# **QUESTION 25**

An architect is helping an organization with the Logical Design of a Layer 2 bridging solution.

This information was gathered during the Assessment Phase:

Workloads are running on ESXi hosts.

Workloads are running on KVM hosts.

Workloads on hypervisors should use bridging services.

VLAN 50 is used for Tier-0 uplink connectivity.

Which selection should the architect include in their design? (Choose the best answer.)

- A. Create an NSX Edge Bridge Cluster and configure the bridging profile with VLAN 60.
- B. Create an NSX Edge Bridge Cluster and configure the bridging profile with VLAN 50.
- C. Create an ESXi Bridge Cluster and configure the bridging profile with VLAN 50.
- D. Create an ESXi Bridge Cluster and configure the bridging profile with VLAN 60.



Correct Answer: B Section: (none) Explanation

#### **Explanation/Reference:**

#### **QUESTION 26**

A customer has a requirement to implement a next generation firewall (NGFW) to improve security network introspection. The customer wants to apply the NGFW to all workloads exposed both internally and externally. The customer wants the NGFW to work seamlessly with NSX-T Data Center and vSphere.

Which solution should be recommended to the customer? (Choose the best answer.)

- A. Use network introspection only on the external workloads and use NSX DFW for internal workloads.
- B. Apply the NGFW on bare metal hosts which will offer better performance of inline network introspection.
- C. Apply the NGFW to internal and external workloads for increased protection and use NSX-T Data Center with Federation to set network policies.
- D. Use NSX-T Data Center leveraged with NSX Intelligence to protect all workloads at the network inspection level.

Correct Answer: D Section: (none) Explanation

## **Explanation/Reference:**

#### **QUESTION 27**

According to the Discover Task of the Engagement Lifecycle, which statement would be classified as a risk? (Choose the best answer.)

- A. Enough power and cooling capacity is available in each rack in the data center.
- B. To retain certification to provide financial services to end customers, PCI-DSS audits need to be passed.
- C. A merger and acquisition process was recently completed and new company on-boarding is not completed.
- D. Due to existing contracts and purchase agreements, the existing server hardware needs to be reused.

Correct Answer: B Section: (none) Explanation

## **Explanation/Reference:**

#### **QUESTION 28**

What would an architect recommend to a customer that wants to extend management to an additional data center through Layer 2, but does not want to add additional NSX-T licensing? (Choose the best answer.)

- A. Deploy a standalone NSX Controller.
- B. Deploy a standalone NSX Manager.
- C. Deploy a standalone Edge as the IPSec VPN.
- D. Deploy Autonomous Edge as the L2 VPN client.

Correct Answer: D Section: (none) Explanation

# **Explanation/Reference:**

Reference: https://docs.vmware.com/en/VMware-NSX-T-Data-Center/3.0/nsxt\_30\_admin.pdf

#### **QUESTION 29**

An architect is helping an organization with the Conceptual Design of an NSX-T Data Center solution. This information was gathered by the architect during the Discover Task of the Engagement Lifecycle:

Existing hardware will be used in any design proposal.

Network bandwidth cannot be expanded.

Which concept of the Discover Task do these items belong to? (Choose the best answer.)



| A. constrain | ıt |
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B. requirement

C. risk

D. assumption

Correct Answer: A Section: (none) Explanation

# **Explanation/Reference:**

## **QUESTION 30**

A customer wants to use ECMP to provide additional throughput and availability for their critical business applications. Some applications require load balancing for scale and availability. Which two Edge design choices can an architect present to the customer? (Choose two.)

- A. Create a Tier-0 gateway in Active/Standby mode and a Tier-1 gateway in Active/Standby mode.
- B. Configure ECMP and Load Balancing on the Tier-0 gateway.
- C. Create a Tier-0 gateway in Active/Active mode and a Tier-1 gateway in Active/Standby mode.
- D. Create a Tier-0 gateway in Active/Standby mode.
- E. Configure ECMP on the Tier-0 gateway and Load Balancing on the Tier-1 gateway.

Correct Answer: BD Section: (none) Explanation

**Explanation/Reference:** 

