

3V0-21.21 Dumps

Advanced Design VMware vSphere 7.x

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NEW QUESTION 1

An architect is reviewing a physical storage design. The customer has specified that storage DRS will be used for ease of operational management for capacity and performance.

Which recommendation should the architect include in the design?

- A. Create smaller datastores to balance space with Storage DRS
- B. Use a larger number of storage profiles (varied disk speeds and RAID levels) to improve performance
- C. Create larger datastores to balance space with Storage DRS
- D. Create more datastores within each Storage DRS cluster to balance space and performance

Answer: D

NEW QUESTION 2

A customer requests a review of its current vSphere platform design.

The following information is noted:

- There are three different workload profiles for the virtual machines:
- Tier-1 virtual machines operate resource-intensive applications and require dedicated allocations for CPU and RAM.
- Tier-2 virtual machines operate internet-facing applications and require access to externally facing networks.
- Tier-3 virtual machines operate platform management tools such as vCenter Server and have different lifecycle management requirements.
- Tier-1, Tier-2 and Tier-3 virtual machines are all hosted on a single large vSphere cluster.
- The Chief Information Security Officer (CISO) has raised concerns that hosting externally facing applications alongside management tools does not meet internal compliance standards.
- The Operations team has raised concerns about Tier-1 virtual machines negatively impacting the performance of vCenter Server.
- The Operations lead has stated that management changes have consistently been rejected by application teams.

As a result of the review, which recommendation should the architect make regarding the design of this platform?

- A. Separate Tier-1, Tier-2 and Tier-3 virtual machines using dedicated distributed virtual switches (DVS)
- B. Separate Tier-2 virtual machines onto a dedicated cluster
- C. Separate Tier-1, Tier-2 and Tier-3 virtual machines onto dedicated clusters
- D. Separate Tier-1, Tier-2 and Tier-3 virtual machines using resource pools and shares

Answer: C

NEW QUESTION 3

An architect is designing a VMware solution for a customer based on the following information:

- The solution must support the ability to migrate workloads between hosts within a cluster.
- The solution must support resource management priorities.
- The solution must support the ability to connect virtual machines directly to LUNs.
- The solution should use existing IPv4 based network infrastructure.
- There is no budget for additional physical hardware.

Which two design decisions could the architect make to meet these requirements? (Choose two.)

- A. The ESXi hosts will leverage Fibre Channel (FC)
- B. The ESXi hosts will leverage NFS 3
- C. The ESXi hosts will leverage Fibre Channel over Ethernet (FCoE)
- D. The ESXi hosts will leverage iSCSI
- E. The ESXi hosts will leverage NFS 4.1

Answer: BD

Explanation:

<https://docs.vmware.com/en/VMware-vSphere/7.0/com.vmware.vsphere.storage.doc/GUID-8A929FE4-1207-4C> Starting from vSphere 7.0, VMware no longer supports software FCoE in production environments.

<https://docs.vmware.com/en/VMware-vSphere/7.0/com.vmware.vsphere.storage.doc/GUID-6B49866F-7005-40>

NEW QUESTION 4

Following a recent acquisition, the architect learns that both companies use vSphere on-premise and will need to combine the data centers into one. The acquired company's licenses will not be renewed for cost-savings related to the acquisition. All consumed vSphere licenses must have active support to support line-of-business operations. The merged environment must maintain 25% spare capacity. The architect has a small budget remaining unallocated for hardware. The architect has calculated that the current vSphere environment can absorb the acquired company's virtual machines but the cluster will run at 90% memory utilization and at 50% CPU utilization.

Which design decision can the architect make to incorporate the new company's virtual machines into the combined vSphere environment?

- A. Migrate the acquired company's virtual machines into the vSphere environment as it will currently fit.
- B. Use the current budget to add memory to the cluster to increase each ESXi host's capacity and add the new virtual machines.
- C. Purchase extra hosts to add to the cluster in anticipation of adding the acquired company's virtual machines.
- D. Purchase new licenses for some of the acquired company's ESXi hosts and add them to the cluster to hold the acquired company's virtual machines.

Answer: B

NEW QUESTION 5

An architect is designing a new vSphere platform to meet a list of requirements from the security team. Which two requirements would be classified as non-

functional requirements? (Choose two.)

- A. Migration of virtual machines between hosts must be encrypted
- B. Log information must be verbose to support incident resolution
- C. Critical events generated within the platform must be logged to an external Syslog service
- D. Data integrity must be ensured
- E. A common content library must be maintained across all data centers

Answer: CD

NEW QUESTION 6

Refer to the exhibit.

During a requirements gathering workshop, the architect shares the following diagram:



What should the architect recommend for guaranteed throughput for each service?

- A. Use explicit failover order with pNIC0 as Active for ESXi Management and VM Network Use explicit failover order with pNIC1 as Active for backup network Use explicit failover order with pNIC2 as Active for vMotion Use explicit failover order with pNIC3 as Active for replication
- B. Use the Route Based on IP Hash for ESXi management and VM network Use the Route Based on IP Hash for backup network Use the Route Based on the Originating Virtual Port for vMotion Use failover with pNIC3 as Active for replication
- C. Create a link aggregation group (LAG) for vDS_01 Use the Route Based on Physical NIC Load for vMotion Use the Route Based on Physical NIC Load for replication
- D. Use the Route Based on IP Hash for ESXi management and VM network Use failover with pNIC1 as Active for backup network Create a link aggregation group (LAG) for vDS_02

Answer: A

NEW QUESTION 7

An architect is designing a new backup solution for a vSphere platform that has been recently upgraded to vSphere 7.

The architect wants the backup solution to perform the following:

- Full virtual machine image backup and restore
- Incremental virtual machine image backup and restore
- File level backup and restore within both Windows and Linux virtual machines
- LAN-free backup

Which functional requirement should the architect include in the design of the new backup solution?

- A. The backup solution must leverage the VMware Consolidated Backup (VCB) framework.
- B. The backup solution must leverage virtual machine snapshots.
- C. The backup solution must leverage VMware vSphere Storage APIs - Data Protection.
- D. The backup solution must leverage VMware vStorage APIs for Data Protection (VADP).

Answer: C

NEW QUESTION 8

An architect is tasked with designing a greenfield VMware software-defined data center (SDDC) solution that will be used to deliver a private cloud service for a customer.

During the initial meeting with the service owner and business sponsor, the customer has provided the following information to help inform the design:

- The solution must initially support the concurrent running of 300 production and 600 development virtual machines.
- The production environment should be delivered across two geographically dispersed data centers. The development environment must be vSphere-based but does not have to be deployed on-premises.
- The two data centers are connected to each other through multiple diversely routed, high bandwidth and low latency links.
- The customer's server hardware standard document states that all virtual infrastructure hosts must be based on blade architecture only.
- The service owner has said that is important to ensure that neither the availability target of 99.5% nor the resource capacity is affected when the operations team completes maintenance activities, such as the monthly software patching and ad-hoc hardware break/fix.
- All virtual machine backups must be completed using the existing backup service. The recovery time objective (RTO) for the service is four hours.
- The recovery point objective (RPO) of the service is 24 hours.

Given the information from the customer, which two would be classified as assumptions within the design? (Choose two.)

- A. The backup service will store data in a secure facility
- B. The backup service has sufficient capacity for the new requirements
- C. The customer will update their hardware standard to support rack mount servers
- D. All virtual machines will be deployed with the same resource profile for production and development
- E. The clusters will have a minimum redundancy of N+1

Answer: BE

NEW QUESTION 9

An architect is considering placement of virtual machines within an existing VMware software-defined data center (SDDC). During the discovery phase, the following information is documented:

Cluster One

- Six ESXi hosts
- vSphere HA with host failures cluster tolerates = 1
- Proactive HA is enabled and set to automated
- Fully Automated vSphere DRS
- Transparent Page Sharing (TPS) is enabled

Cluster Two

- Eight ESXi hosts
- vSphere HA with host failures cluster tolerates = 1
- Proactive HA is disabled
- Partially Automated vSphere DRS
- Transparent Page Sharing (TPS) is disabled

Cluster Three

- Three ESXi hosts
- vSphere HA with admission control is disabled
- Proactive HA is not supported
- Transparent Page Sharing (TPS) is disabled

Virtual Machine Resource Profile 1

- Memory sharing techniques should not be used
- Virtual machines should be automatically restarted in the event of host failure if resources are available
- Automated initial virtual machine placement

Virtual Machine Resource Profile 2

- Memory sharing techniques can be used
- Virtual machines should be protected from any host hardware failures
- Automated initial virtual machine placement

Which two recommendations should the architect make for placement of the virtual machines to meet resource profile requirements? (Choose two.)

- A. All virtual machines matching Virtual Machine Resource Profile 2 should be placed on Cluster One.
- B. All virtual machines matching Virtual Machine Resource Profile 1 should be placed on Cluster One.
- C. All virtual machines matching Virtual Machine Resource Profile 2 should be placed on Cluster Two.
- D. All virtual machines matching Virtual Machine Resource Profile 1 should be placed on Cluster Two.
- E. All virtual machines matching Virtual Machine Resource Profile 2 should be placed on Cluster Three.

Answer: BD

NEW QUESTION 10

An architect is preparing a design for a company planning digital transformation. During the requirements gathering workshop, the following requirements (REQ) and constraints (CON) are identified:

- REQ01 The platform must host different types of workloads including applications that must be compliant with internal security standard.
- REQ02 The infrastructure must initially run 100 virtual machines.
- REQ03 Ten of the virtual machines must be compliant with internal security standard.
- CON01 The customer has already purchased the licenses as part of another project.
- CON02 The customer has five physical servers that must be reused.

Additionally, based on resource requirements, four physical servers will be enough to run all workloads. Which recommendation should the architect make to meet requirements while minimizing project costs?

- A. Use Network I/O Control to ensure the internal security zone has higher share value
- B. Purchase additional servers and plan separate, isolated clusters for workloads that must be compliant with internal security
- C. Use a single cluster and ensure that different security zones are separated at least with dedicated VLANs and firewall
- D. Use a single cluster and configure DRS anti-affinity rules to ensure internal security compliant virtual machines cannot migrate between ESXi hosts.

Answer: C

NEW QUESTION 10

A customer provides the following list of requirements for their vSphere platform:

- REQ01 The solution should utilize dual network connections to eliminate single points of failure.
- REQ02 The solution should allow logs to be retained for a period of 30 days.
- REQ03 All user access to the platform should be recorded for audit purposes.

- REQ04 The solution should allow the management of multiple ESXi hosts.
- REQ05 The solution should allow users to view the remote console of virtual machines.

Which two of the listed requirements would be classified as non-functional requirements? (Choose two.)

- A. The solution should utilize dual network connections to eliminate single points of failure
- B. The solution should allow the management of multiple ESXi hosts
- C. The solution should allow users to view the remote console of virtual machines
- D. All user access to the platform should be recorded for audit purposes
- E. The solution should allow logs to be retained for a period of 30 days

Answer: AE

NEW QUESTION 11

An architect is tasked with planning the design of a new vSphere environment. When commissioned, this environment will be used to migrate an existing set of virtual machines.

An inventory of the existing infrastructure, including configured vCPU, RAM and storage sizes has been provided.

In order for each virtual machine to be migrated, which two data sources with peak and average utilization data are required for sizing? (Choose two.)

- A. %Ready
- B. Disk Write latency
- C. CPU
- D. Ballooned memory
- E. IOPS

Answer: BE

NEW QUESTION 13

The architect for a large enterprise is tasked with reviewing a proposed design created by a service partner.

Which design elements are expected to be detailed within the physical design section of the documentation?

- A. A design diagram illustrating the configuration and specific attributes, such as IP addresses
- B. A list of requirements, constraints, and risks
- C. A solution architecture diagram with the components and data flow
- D. An entity relationship diagram describing upstream and downstream dependencies for specific service components

Answer: B

NEW QUESTION 17

A customer defines a requirement to minimize the vMotion migration time during a maintenance period. The servers being used are equipped with eight 1 GbE network adapters.

Per the defined logical network configuration, there are two network adapters each used for:

- Management traffic
- vMotion traffic
- iSCSI traffic
- Virtual machine traffic

Which design decision should the architect make to meet the customer requirement?

- A. Use Network I/O Control to define a reservation for vMotion traffic.
- B. Implement Multi-NIC vMotion by adding additional vMotion VMkernels.
- C. Configure a dedicated TCP/IP stack for vMotion traffic.
- D. Combine vMotion and Management traffic to make use of four adapters.

Answer: A

NEW QUESTION 21

An architect is designing a vSphere environment for a customer based on the following information:

- The vSphere cluster will have three hosts only due to budget considerations.
- A database cluster (node majority) consisting of three virtual machines will be running on the vSphere cluster.

Which two recommendations can the architect make so that the customer achieves the highest level of application availability while taking into consideration operational resiliency? (Choose two.)

- A. Create VM-VM anti-affinity rules
- B. Set das.respectvmvanti-affinityrules to false
- C. Create VM-Host anti-affinity rules
- D. Disable vSphere HA during maintenance
- E. Set das.ignoreinsufficienthbdastore to true

Answer: BC

NEW QUESTION 24

A new real-time financial service application is being developed by the engineering team at a financial firm and will be released as a public Software-as-a-Service (SaaS) offering. The solutions architect has designed and deployed a new vSphere environment and the supporting network infrastructure for hosting all public services. ESXi hosts are configured to use Precision Time Protocol (PTP) and a local stratum-1 network time server.

Application provisioning and scaling will be managed by VMware vRealize Automation and can be run on Microsoft Windows or multiple distributions of Linux.

Which three recommendations should the architect include in the design to ensure that the service maintain timekeeping within an accuracy of one second?

(Choose three.)

- A. Use Microsoft Windows Server as the guest operating system.
- B. Configure the chrony time-sync agent on each virtual machine guest operating system.
- C. Set the virtual hardware device to use Host System Time (NTP) for each virtual machine running the application.
- D. Add a precision clock virtual device to each virtual machine running the application.
- E. Use a Linux distribution as the guest operating system.
- F. Add a virtual watchdog timer (VWDT) device to each virtual machine running the application.

Answer: ABC

NEW QUESTION 26

During a requirements gathering workshop, the customer provides the following requirement (REQ) and constraints (CON):

- REQ01: The customer is looking for a way to limit database virtual machine (VM) placement to save on CPU licensing costs.
- CON01: There is a single cluster with no budget to scale.
- CON02: All virtual machines must run on the consolidated cluster.

Which two design decisions should the architect make to meet the customer requirement? (Choose two.)

- A. The solution must use VM-VM anti-affinity rules
- B. The solution must use vSphere DRS in manual mode
- C. The solution must use a vRealize Orchestrator workflow for VM placement
- D. The solution must use VM-Host affinity rules
- E. The solution must use vSphere VM and host DRS groups

Answer: DE

NEW QUESTION 31

An architect is tasked with expanding an existing VMware software-defined data center (SDDC) solution so that it can be used to deliver a virtual desktop infrastructure (VDI) service off-shore development activities.

The production environment is currently delivered across two geographically dispersed data centers. The two data centers are currently connected to each other through multiple diversely routed, high bandwidth and low latency links. The current operations management components are deployed to a dedicated management cluster that is configured with N+1 redundancy. The current VMware software-defined data center (SDDC) has a monthly availability target of 99.5%, which includes all management components.

The customer requires that the new solution scale to support the concurrent running of 500 persistent virtual desktops. The virtual desktops must not share the same virtual infrastructure as existing virtual machines, but can be managed using the same VMware operations management components. Any new VDI service management components must be installed into the management cluster. There is no requirement to back up the virtual desktops because all relevant user data is stored centrally. The VDI service is providing business critical services and must have an availability target of 99.9%.

Given the information from the customer, which two assumptions would the architect include in the design? (Choose two.)

- A. The existing virtual infrastructure has sufficient capacity to host the new VDI workloads
- B. The existing operations monitoring tools have sufficient capacity to monitor the new VDI services
- C. The existing management cluster has enough available capacity to host any VDI service management component
- D. The management cluster has N+1 redundancy
- E. The VDI service has a higher service-level agreement (SLA) than the operations management SLA

Answer: BD

NEW QUESTION 36

An architect is tasked with designing a new VMware software-defined data center (SDDC) solution for an online retail customer who has a primary and secondary data center as well as 10 distribution hubs.

The customer has provided the following business requirements to help inform the design:

- The solution must support the running of up to 1,000 concurrent virtual machines across the primary and secondary data center.
- The solution must support the running of up to 20 concurrent virtual machines in each distribution hub.
- The solution must support the separation of management and lines-of-business application virtual machines.
- All management components (including directory services, backup, automation, operations and logging) must be deployed to the primary data center.
- All virtual infrastructure components must have redundancy of N+1.
- The solution should support a monthly uptime target of 99.9%.
- The recovery time objective (RTO) for the solution must be four hours.
- The recovery point objective (RPO) for the solution must be 24 hours.

Given the information from the customer, which assumption should the architect include in the design?

- A. All business application virtual machines can be deployed into a single cluster within the primary data center.
- B. Each distribution hub should be configured with a backup device.
- C. The wide area network has sufficient bandwidth to support centralized management.
- D. Each cluster will have a minimum of four hosts.

Answer: B

NEW QUESTION 38

An architect is designing a series of new vSphere environments for an organization. The environments will be deployed in their US-East and US-West region data centers. Each data center may have one or more dedicated vSphere environments. Only the vSphere environments within a data center will be configured with Enhanced Linked Mode. The Chief Technology Officer (CTO) has authorized the use of VMware vRealize Automation Cloud for automation. The build team creates standardized virtual machine images for various operating systems in Open Virtualization Format (OVF) and publishes the latest version on an as-needed basis to an internal HTTPS-accessible repository.

The architect must design a content library topology that meets the following requirements:

- A localized content library must be available in each data center.
- Each content library must be updated when an image is updated and released by the build team.
- It must leverage the existing build team processes.

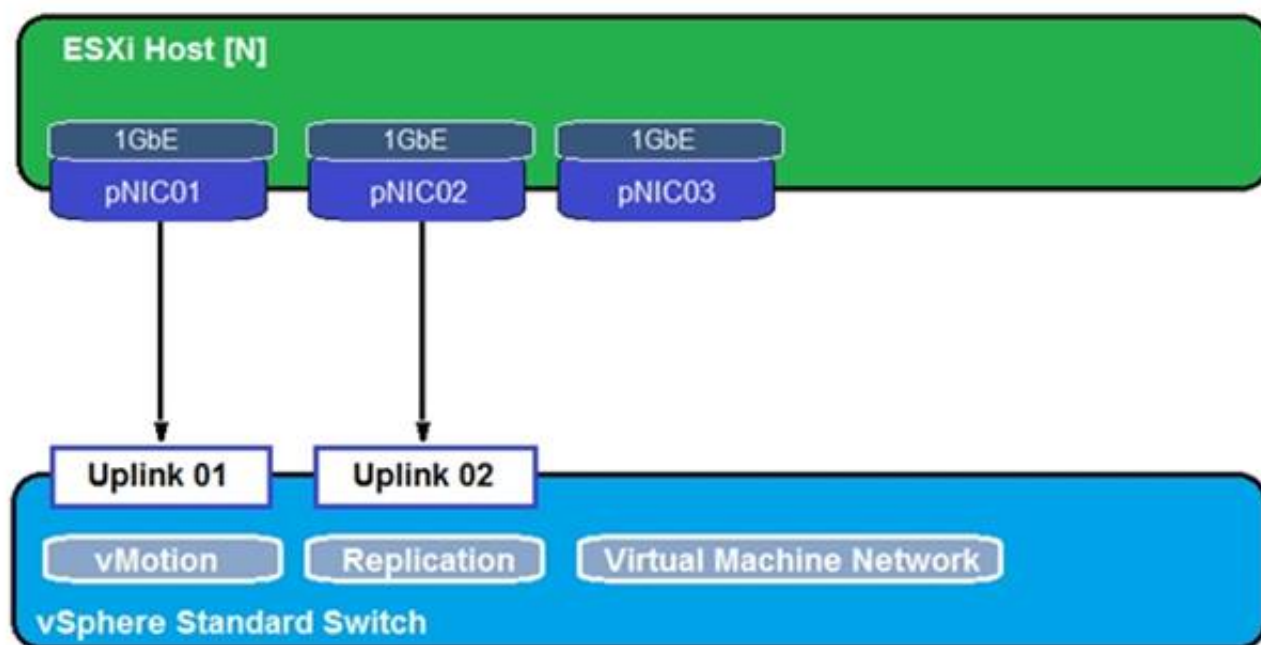
What should the architect recommend to meet the requirements?

- A. Work with the build team to create a local content library for each vSphere environment. Import the OVF images when new image are published to the repository.
- B. Create a local content library for the primary vSphere environment in each data center. Create a subscribed content library for each additional vSphere environment in each data center
- C. Configure the content library to download content automatically.
- D. Work with the build team to automate a JSON-based manifest to the repository when changes occur in the repository. Create a subscribed content library for each vSphere environment
- E. Configure the content library to download content when needed.
- F. Work with the build team to automate a JSON-based manifest to the repository when changes occur in the repository. Create a subscribed content library for each vSphere environment
- G. Configure the content library to download content automatically.

Answer: B

NEW QUESTION 42

Refer to the exhibit.



During a requirements gathering workshop, the customer shares the following about their existing ESXi host virtual networking infrastructure:
The customer confirms that:

- Each ESXi host has approximately 200 virtual machines.
- They want to maximize the number of concurrent virtual machine migrations.
- When placing a host in maintenance mode, it takes a long time to evacuate the virtual machines. Which two recommendations should the architect make in order to help the customer overcome their challenge? (Choose two.)

- A. Configure the network to use MTU for the VMotion VMKernel to 1,600 bytes
- B. Configure the network to use MTU for the VMotion VMKernel to 9,000 bytes
- C. Create an additional standard switch with pNIC3 to use for vMotion
- D. Use the 3 pNICs and bundle them in a link aggregation group (LAG) configuration
- E. Use 10 GbE NICs instead of 1 GbE

Answer: CE

NEW QUESTION 44

An architect is finalizing the design for a new vCenter Server High Availability deployment. What is one thing the architect must document in the design?

- A. The load balancing algorithm used by the Management Distributed Virtual Switches (DVS)
- B. The SSH configuration settings for the vCenter Server's active node
- C. The vCenter Management Network IPv4 addresses for the witness node vCenter Server
- D. The details of each of the vCenter Server licenses for active, passive and witness nodes

Answer: C

Explanation:

<https://docs.vmware.com/en/VMware-vSphere/7.0/com.vmware.vsphere.avail.doc/GUID-9B176C8A-4EEE-4A>

NEW QUESTION 47

An architect is tasked with designing a new VMware software-defined data center (SDDC) using VMware vSAN. The architect uses a storage assessment tool to determine the storage requirements for the new vSAN cluster. The new SDDC is going to be deployed into the existing data center and must be connected to a shared core network switch.

The architect decides to use vSAN ReadyNodes with the following configuration:

- Two disk groups with:
- Write Intensive NVMe 800 GB drive for cache

- Four 3.84 TB Mixed Use NVMe for capacity
- Four 10 GbE ports

Which element represents a risk that should be included in this design?

- A. The number of 10 GbE capable ports in the vSAN ReadyNode
- B. The use of vSAN ReadyNodes
- C. The existing network is 10 GbE capable
- D. The use of NVMe drives for cache and capacity

Answer: C

NEW QUESTION 52

As part of a requirements gathering workshop, the customer provides the following requirements for the design of a new greenfield virtual infrastructure:

- Some applications have a latency that must be less than 5 minutes.
- The solution must be able to support a workload growth rate of 10% per year. Which requirement classification is being gathered for the design documentation?

- A. Performance
- B. Manageability
- C. Recoverability
- D. Availability

Answer: A

NEW QUESTION 57

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