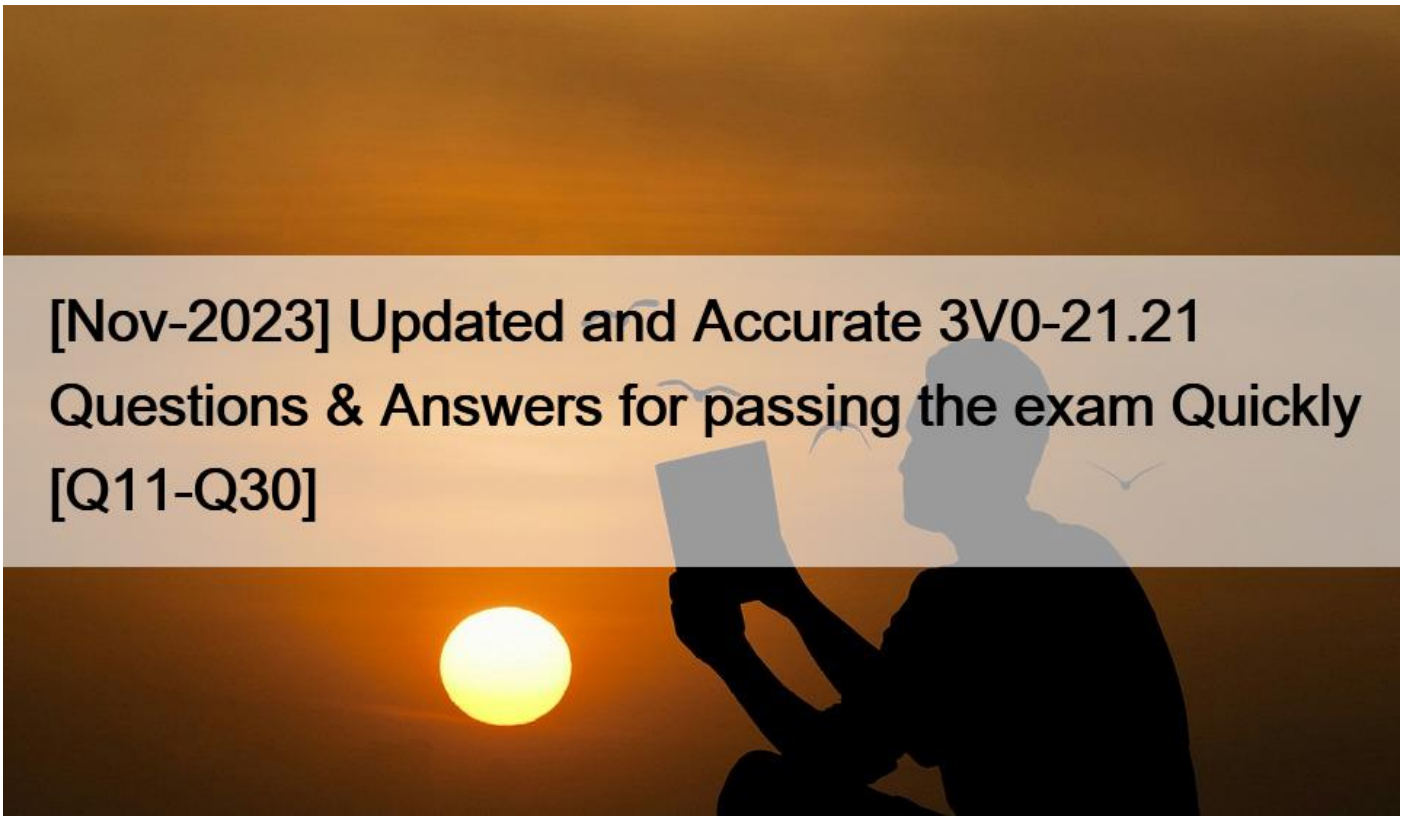
[Nov-2023 Updated and Accurate 3V0-21.21 Questions & Answers for passing the exam Quickly [Q11-Q30



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QUESTION 11

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

QUESTION 12

A VMware Service Provider is tasked with delivering a solution for continuous availability for a subset of Tier 1 virtual machines (VMs) and vApps running in their vSAN environment. The VMs make up a mission-critical application and there can be no data loss in the event of an outage at their primary data center. In the event of a regional outage, they have established a 10-minute recovery point objective (RPO). Failover/failback to the third site must be automated.

They have the following in place:

Two local data centers (primary and secondary) connected with 100 Gb dedicated fiber

2ms round-trip time (RTT) latency between the sites

A third data center located on another power grid

70ms latency between the primary and secondary data centers

Matching storage arrays at all locations

Which two solutions could be used to meet the requirements? (Choose two.)
* Site Recovery Manager
* Snapshots
* vSAN Metro Cluster
* vSphere Data Protection
* vStorage APIs for Array Integration (VAAI)

https://core.vmware.com/resource/vsan-stretched-cluster-guide#section1

https://www.delltechnologies.com/asset/en-us/products/converged-infrastructure/technical-support/vxrail-stretched-cluster-planning-guide-for-7-0.pdf

– a latency of less than or equal to 100 milliseconds is preferred.

Witness to Site — less than 100msec; 200msec is acceptable
https://www.delltechnologies.com/asset/en-us/products/converged-infrastructure/technical-support/vxrail-stretched-cluster-planning-guide-for-7-0.pdf – a latency of less than or equal to 100 milliseconds is preferred.

QUESTION 13

Following a recent acquisition, an architect needs to merge IT assets into its current data center. The combined vSphere environment will need to run the newly acquired company’s virtual machines.

Network integration work has already been completed and the current environment has capacity to host all virtual machines. The Operations team needs to identify which virtual machines belong to the acquired company and report on their usage.

How should the architect merge the company’s assets and virtual machines?
* Leave the newly acquired company’s assets in its current place
* Lift and shift the acquired assets into the data center
* Migrate the acquired company’s virtual machines into the existing vSphere environment
* Migrate and apply vSphere tags to the acquired company’s virtual machines

QUESTION 14

During a requirements gathering workshop, the customer provides the following requirement that is pertinent to the design of a new vSphere environment:

The Maximum Tolerable Downtime (MTD) for all Tier 1 applications is one hour.

Which requirement classification is being gathered for the design documentation?
* Manageability
* Performance
* Availability
* Recoverability

QUESTION 15

There is a request for approved virtual machine applications through a new vSphere platform’s integrated automation portal. The platform was built following all provided company security guidelines and has been assessed against Sarbanes-Oxley Act of 2002 (SOX) regulations.

The platform has the following characteristics:

vRealize Operations is being used to monitor all clusters.

There is a dedicated ESXi cluster, supporting all management services.

All network traffic is via distributed virtual switches (DVS).

There is a dedicated ESXi cluster for all line-of-business applications.

Network traffic is serviced by NSX-T.

There is a dedicated ESXi cluster for virtual desktop infrastructure (VDI).

Network traffic is serviced by NSX-T.

The application owner is requesting approval to install a new service that must be protected as per the Payment Card Industry (PCI) Data Security Standard.

Which additional non-functional requirement should the architect include in the design to support the new service?
* The vSphere hosting platform and all PCI application virtual machines must be assessed against Payment Card Industry (PCI) Data Security Standard compliance.
* The vSphere hosting platform and all PCI application virtual machines must be assessed for SOX compliance.
* The vSphere hosting platform and all PCI application virtual machine network traffic must be routed via NSX-T.

* The vSphere hosting platform and all PCI application virtual machines must be monitored using the vRealize Operations Compliance Pack for Payment Card Industry.
The vSphere hosting platform and all PCI application virtual machines must be monitored using the vRealize Operations Compliance Pack for Payment Card Industry.

“Non-functional requirements specify all the remaining requirements not covered by the functional requirements. They specify criteria that judge the operation of a system, rather than specific behaviours”

QUESTION 16

An architect is designing a VMware software-defined data center (SDDC) solution based on the following customer requirements:

The solution must initially support 1,000 virtual machines

The solution must scale to support the concurrent running of up to 5,000 virtual machines The production environment should be delivered across two data centers The solution should have a maximum tolerable downtime (MTD) of four hours The solution should have a monthly service availability target of 99.8% Which two assumptions could the architect make based on the information from the customer to help size the solution? (Choose two.)
* The number of vSphere hosts in a cluster
* The average resource utilization of a virtual machine
* The size (CPU/RAM/storage) of the average virtual machine
* The guest operating system for each virtual machine
* The size (CPU/RAM/storage) of the vSphere hosts

QUESTION 17

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?
* 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
* 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
* 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
* 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
” The problem is that in A VM network and management is together. In this scenario backup and VM network should be together. From the load point of view, it makes sense, as backup can saturate 100% of NIC but it is not service.”

QUESTION 18

An architect is preparing a design for a customer. Based on requirements, the architect recommends an HCI- based infrastructure with all-flash architecture. During the assessment, it is confirmed that the network throughput generated by virtual machines does not exceed 150 Mb/s.

What is the minimum number and type of network adapters in each server that the architect can recommend to ensure requirements are met and there is no single point of failure?
* Two 1 GbE network adapters per server
* Four 1 GbE network adapters per server
* Four 10 GbE network adapters per server
* Two 10 GbE network adapters per server

QUESTION 19

An architect is reviewing a physical storage design. The customer has specified that a new active-passive based storage array will be used to provide storage for the vSphere clusters.

Which configuration should for the architect recommended?
* VMW_SATP_LOCAL
* VMW_PSP_MRU
* VMW_SATP_DEFAULT_AA
* VMW_PSP_FIXED
The Most Recently Used (VMware) policy is enforced by VMW_PSP_MRU. It selects the first working path discovered at system boot time. The Most Recently Used policy does not use the preferred path setting. This policy is default for most active-passive storage devices. https://docs.vmware.com/en/VMware-vSphere/6.7/vsphere-esxi-vcenter-server-671-storage-guide.pdf

QUESTION 20

A architect is designing a new VMware software-designed data center (SDDC) using vSphere 7 to meet the following requirements:

The SDDC must be deployed at two locations: primary and secondary.

vSphere Replication must be used to replicate virtual machines between the two locations.

Site Recovery Manager must be used to orchestrate disaster recovery (DR) activities.

One single-sign on (SSO) domain must be used to authenticate access at both locations.

Which design decision should the architect make to meet these requirements?
* A vCenter Server Appliance will be deployed to each site. Unique SSO domains will be created per site.
* A vCenter Server will be installed on Windows virtual machines deployed to both sites.
* A vCenter Server Appliance will be deployed to each site.
* A vCenter Server Appliance will be deployed to the primary site only.
https://docs.vmware.com/en/Site-Recovery-Manager/8.4/com.vmware.srm.install_config.doc/GUID-BB0C03E4-72BE-4C74-96C3-97AC6911B6B8.html

“One single-sign on (SSO) domain must be used to authenticate access at both locations.” Install vCenter at Primary site, create SSO Domain. Install vCenter at Secondary site, join to SSO Domain.

QUESTION 21

Which design decision must be included in a design to allow for the deployment of a minimum supported configuration of vCenter High Availability (HA)?
* A new subnet will be provisioned for vCenter HA services
* A vSphere cluster will consist of more than three nodes
* The deployed vCenter Server will be Tiny
* The vCenter HA network will support a latency of less than 50 ms
https://docs.vmware.com/en/VMware-vSphere/7.0/com.vmware.vsphere.avail.doc/GUID-8FD87389-8CC9-4298-8B08-A1526FB44524.html

QUESTION 22

An architect will be taking over control of a former Linux server fleet and repurposing the hardware into a new vSphere cluster. The current environment is already connected to the network but the hosts do not have any local disks. Since the fleet hardware is uniform, the architect can use a single ESXi image. All hosts within the cluster have the same CPU and memory capacity.

Which ESXi deployment method should the architect use?
* Stateless cached vSphere Auto Deploy
* Stateless vSphere Auto Deploy
* Manual install of each ESXi host with an image from USB
* Stateful vSphere Auto Deploy
https://www.oreilly.com/library/view/mastering-vmware-vsphere/9781787286016/28754c90-98d5-4f29-9606-1f1c2e3e1b11.xhtml
Reference:

Both Stateless caching and Stateful Auto Deploy options store ESXi configuration or state on the host disk.

QUESTION 23

An organization’s existing vSphere environments are configured for Enhanced Linked Mode. The DevOps team automates the creation of hardened virtual machine images for various operating systems. Their continuous integration/continuous delivery (CI/CD) pipeline runs a task at the end of a successful build, which uploads the Open Virtualization Format (OV) image to a sandbox content library, deploys a virtual machine from the image, and then destroys these objects after quality checks are complete.

The following requirements have been noted:

All content libraries and images must be centrally created and managed.

All images must be capable of being updated.

All images must be refreshed and available to subscribed libraries within 24 hours.

All images must provide details of the image contents and versions.

All images must be capable of being reverted to a previous version.

All images must be capable of having the hardware and guest operating system customized during deployment.

Which three recommendations should the architect make to design a content library solution that will meet these requirements? (Choose three.)
* Create a local content library in the primary vSphere environment and enable publishing.
* Create and publish a new subscription to a new subscriber library for each target vSphere environment.
* Deploy the OVF images to vSphere and clone as an OVF template to a local content library.
* Deploy the OVF images to vSphere and clone as a VM template to a local content library.
* Edit the Auto Sync Refresh Interval advanced setting for each subscribed library.
* Add a new subscriber library from each vSphere environment.

QUESTION 24

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?
* Create smaller datastores to balance space with Storage DRS
* Use a larger number of storage profiles (varied disk speeds and RAID levels) to improve performance
* Create larger datastores to balance space with Storage DRS
* Create more datastores within each Storage DRS cluster to balance space and performance
You could create 2x 64TB LUNs, 4x 32TB LUNs, 16x 8TB LUNs or 32x 4TB LUNs. When there are more datastores, SDRS will have more option to find right datastore to fit the virtual machine to placed or moved

QUESTION 25

An architect is designing a new vSphere environment to meet the following requirements:

The environment must support 5,000 virtual machines.

The environment will be built initially using 350 hosts.

Which vCenter Server appliance deployment size should the architect specify for the design?
* Large
* Small
* Tiny
* Medium

QUESTION 26

A customer requires the use of data encryption to ensure data is not accessible when a drive is removed from the primary storage platform. However, there is also a requirement to use deduplication and compression against all workloads in order to conserve

space.

Which solution meets the customer requirements?
* Data-in-transit encryption
* OS-level encryption
* Encrypted backups
* Array-based encryption

Array-based encryption provides the same benefits as SEDs (self-encrypting drives), in that the drive shows no readable data once it is removed from the array. That means drives don’t need to be physically destroyed when they are removed, which brings cost, security and environmental benefits

QUESTION 27

An architect is designing an environment for a retail customer. The design will use a single small vCenter Server Appliance and a cluster of eight ESXi hosts at a remote site. There is a single 10 GbE connected network at the remote site to support all management services. It is not possible to create additional management networks at the remote site. Virtual machine backups at the site will be dependent on the vCenter Server being available.

Which design decision should the architect make to maximize availability for backups?
* vCenter Server High Availability will be configured.
* The vCenter Server Appliance will be protected with vSphere Fault Tolerance.
* The cluster will be configured to use vSphere DRS in fully automated mode.
* The cluster will be configured with vSphere HA and set to restart virtual machines based on guest operating system heartbeat monitoring.

https://kb.vmware.com/s/article/1024051

QUESTION 28

A customer has a database cluster with 40/60 read/write ratio and a high IOPs requirement with no contention on an all-flash vSAN cluster.

Which two storage settings should be configured for best performance? (Choose two.)
* IOPs limits enabled
* RAID 1
* Deduplication and Compression disabled
* RAID 5/6
* Deduplication and Compression enabled

QUESTION 29

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.)
* All virtual machines matching Virtual Machine Resource Profile 2 should be placed on Cluster One.
* All virtual machines matching Virtual Machine Resource Profile 1 should be placed on Cluster One.
* All virtual machines matching Virtual Machine Resource Profile 2 should be placed on Cluster Two.
* All virtual machines matching Virtual Machine Resource Profile 1 should be placed on Cluster Two.
* All virtual machines matching Virtual Machine Resource Profile 2 should be placed on Cluster Three.

https://docs.vmware.com/en/VMware-vSphere/7.0/com.vmware.vsphere.resmgmt.doc/GUID-FEAC3A43-C57E-49A2-8303-B06DBC9054C5.html Profile 2 to Cluster 1 Fully Automated DRS allows Automated Initial VM Placement TPS is enabled to support Memory Sharing requirement (can be used) Profile 1 to Cluster 2 Partially Automated DRS still allows Automated Initial VM placement.

TPS is disabled to support Memory Sharing requirement (cannot be used)

QUESTION 30

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?
* 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
* 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
* 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
* 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