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Exam Name: Advanced Design VMware vSphere 7.x

Exam A

QUESTION 1
A customer is deploying a new cluster and wants to be able to patch and update two hosts in parallel.
The cluster must be able to maintain N+1 resiliency across the remaining hosts while patching activities are performed. The current expected utilization of the platform requires a minimum of two hosts to support all of the virtual machines.
What is the minimum number of hosts the customer will require in the cluster in order to meet the required resiliency level?

A. Five
B. Six
C. Four
D. Seven

Correct Answer: A
Section:
Explanation:
MTD -- Maximum Tolerable Downtime: Sum of the RTO and WRT, which is the total time required to recover from a disaster and start serving the business again. <https://vcdx133.com/2015/01/28/vcdx- availability-explained/>

QUESTION 2
A new vSphere platform is being created. The platform will host virtual machines that will run management services and line-of-business applications.
What should the architect consider when designing the number and type of clusters required?

A. Maximum tolerable downtime
B. Predicted platform growth
C. Auditing requirements for the virtual machines
D. The level of isolation required between virtual machine classifications

Correct Answer: D
Section:

QUESTION 3
An architect is creating a network design for a new vSphere environment.
Based on customer requirements, the environment must support the following types of traffic:
Management vMotion vSAN Fault Tolerance Virtual machine traffic, which cannot be impacted by other types of traffic Which design recommendation can the architect make for a resilient infrastructure with vSphere network service tiering?

A. Use different logical networks to ensure traffic is isolated with separate VLANs
B. Use Network I/O Control and ensure appropriate share value is defined for different types of traffic giving priority to the virtual machines traffic
C. Use two dedicated virtual switches with a single adapter each, dedicating one virtual switch for Management, vMotion, vSAN and Fault Tolerance traffic, and the second one for virtual machine traffic
D. Use a NIC teaming policy based on the physical NIC load

Correct Answer: B
Section:
Explanation:

https://docs.vmware.com/en/VMware-vSphere/7.0/vsan-network-design-guide/GUID-6B00B437-53A3-4ACD-8CD7-AC9D0CE5BA8E.html

QUESTION 4
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.respectvmvmantiaffinityrules to false
C. Create VM-Host anti-affinity rules
D. Disable vSphere HA during maintenance
E. Set das.ignoreinsufficienthbdatastore to true

Correct Answer: A, B
Section:
Explanation:
A) Create VM-VM anti-affinity rules - A VM-VM affinity rule specifies whether selected individual virtual machines should run on the same host or be kept on separate hosts. https://docs.vmware.com/en/VMware-vSphere/7.0/com.vmware.vsphere.resmgmt.doc/GUID- 94FCC204-115A-4918-9533-BFC588338ECB.html B. Set das.respectvmvmantiaffinityrules to false - Determines if vSphere HA enforces VM-VM anti-affinity rules. The default value is 'true' and rules are enforced even if vSphere DRS is not enabled. In this case, vSphere HA does not fail over a virtual machine if doing so violates a rule

QUESTION 5
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?

A. Stateless cached vSphere Auto Deploy
B. Stateless vSphere Auto Deploy
C. Manual install of each ESXi host with an image from USB
D. Stateful vSphere Auto Deploy

Correct Answer: B
Section:
Explanation:
Reference: https://docs.vmware.com/en/VMware-vSphere/7.0/com.vmware.esxi.install.doc/GUID-0813B4BE- 485D-4129-902B-49AA42EBF54E.html

QUESTION 6
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

Correct Answer: B
Section:

Explanation:
vCenter HA uses SSH keys for password-less authentication between the Active, Passive, and Witness nodes. The authentication is used for heartbeat exchange and file and data replication. To replace the SSH keys in the nodes of a vCenter HA cluster, you deactivate the cluster, generate new SSH keys on the Active node, transfer the keys to the passive node, and activate the cluster. https://docs.vmware.com/en/VMware-vSphere/7.0/com.vmware.vsphere.avail.doc/GUID-B8E590BA-ACF4-48A1-8644-E492D2241031.html https://docs.vmware.com/en/VMware-vSphere/7.0/com.vmware.vsphere.avail.doc/GUID-5F7DAFB2-60BD-4C50-A7E5-29A319CBB714.html

QUESTION 7

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 should not be used

Virtual machines should be automatically restarted in the event of host failure regardless of available resources

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.

Correct Answer: D, E
Section:
Explanation:
PVLANs divide the broadcast domain into multiple broadcast sub-domains and allow further isolating different devices within the same VLAN. They provide layer 2 isolation between ports within the same broadcast domain. For example: 'Your ESXi host uses several networks. Use appropriate security measures for each network, and isolate traffic for specific applications and functions. For example, ensure that VMware vSphere vMotion traffic does not travel over networks where virtual machines are located. Isolation prevents snooping. Having separate networks is also recommended for performance reasons.' https://docs.vmware.com/en/VMware-vSphere/7.0/vsphere-esxi-vcenter-server-70-security- guide.pdf

QUESTION 8
An architect is designing a new VMware solution for a customer that has a number of different resource profiles.
The following are the business requirements for the design:
The solution must support virtual machines with the following storage profiles:
- Write-intensive
- Backup
- Write-Once-Read-Many (WORM) archive
The solution must support migration of virtual machine disks between storage profiles.
The WORM archive data must be located at an isolated secure site.
The backup storage array must only be connected to a backup media server.
All data should be recoverable from backup.
Which design decision should the architect make to meet the business requirements?

A. The solution will leverage a single storage array for the WORM archive and write-intensive storage profiles
B. The solution will leverage the same array for the backup and write-intensive storage profiles
C. The solution will leverage a different array for each storage profile
D. The solution will leverage a single storage array for all storage profiles

Correct Answer: C
Section:

QUESTION 9
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.
REQ04 The internal security standard specifies logical network separation for in-scope applications.
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.

Correct Answer: C
Section:

QUESTION 10
An architect is designing the expansion of an existing vSphere 7 environment. The customer is requesting a design for a new cluster to support the anticipated future business growth. The requirements specified for the existing environment design must be considered when designing the new cluster.
The existing design has the following requirements:
REQ01 The environment has an availability target of 99.5% for all infrastructure.
REQ02 The recovery time objective (RTO) for Tier 1 virtual machines is one hour.
REQ03 Windows and Linux virtual machines must reside on separate clusters.
REQ04 Access to the management cluster within the environment must be controlled.
Which of the listed requirements would be classified as a functional requirement?

A. The environment has an availability target of 99.5% for all infrastructure
B. The recovery time objective (RTO) for Tier 1 virtual machines is one hour
C. Access to the management cluster within the environment must be controlled
D. Windows and Linux virtual machines must reside on separate clusters

Correct Answer: C
Section:
Explanation:
vCenter HA uses SSH keys for password-less authentication between the Active, Passive, and Witness nodes. The authentication is used for heartbeat exchange and file and data replication. To replace the SSH keys in the nodes of a vCenter HA cluster, you deactivate the cluster, generate new SSH keys on the Active node, transfer the keys to the passive node, and activate the cluster. https://docs.vmware.com/en/VMware-vSphere/7.0/com.vmware.vsphere.avail.doc/GUID-B8E590BA-ACF4-48A1-8644-E492D2241031.html https://docs.vmware.com/en/VMware-vSphere/7.0/com.vmware.vsphere.avail.doc/GUID-5F7DAFB2-60BD-4C50-A7E5-29A319CBB714.html

QUESTION 11
Which two of the listed requirements would be classified as manageability non-functional requirements? (Choose two.)

A. ESXi clusters must scale when compute resources are sustained above 70% for five business days
B. vSphere Fault Tolerance must be supported to improve application uptime
C. ESXi host updates must be installed within one week of release
D. The vSphere environment must support administrator password rotation
E. ESXi clusters must scale to 500 concurrent virtual machines

Correct Answer: A, C
Section:

QUESTION 12
An architect makes the design decision to install ESXi on embedded and resilient 8 GB SD cards.
What is the impact of this design decision?

A. Host profiles must be used for this kind of installation
B. Scratch partition would need to be created on the external storage
C. The size of the SD cards is too small and the installation will fail
D. The vSphere Auto Deploy feature must be enabled on vCenter Server

Correct Answer: B
Section:
Explanation:
https://kb.vmware.com/s/article/2074026 You can store coredumps on the SD boot media, butrefrain from configuring the scratch partition here as the logs are write intensive and can cause theSD card to fail faster resulting in re-installation

of ESXi

QUESTION 13
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?

A. Large
B. Small
C. Tiny
D. Medium

Correct Answer: A
Section:
Explanation:
https://reqtest.com/requirements-blog/functional-vs-non-functional-requirements/ provides explanation for functional requirements. Functional Requirements A requirement specifies a function that a system or component should perform. These may include: Business Rules Authentication Audit Tracking Certification Requirements Reporting Requirements Historical Data Legal or Regulatory Requirements https://technicloud.com/category/vmware/

QUESTION 14
An architect is designing a new greenfield environment with 600 ESXi hosts in an automated fashion.
The engineering department already has a PXE Boot server, TFTP server, and DHCP server set up with an NFS mount for their current Linux servers.
The architect must be able to demonstrate and meet a security requirement to have all infrastructure processes separated.
Which recommendation should the architect make for the ESXi host deployment?

A. Request an isolated network segment to use and dedicate it to Auto Deploy functions
B. Ask the business to expand the engineering environment to service the virtual environment as well
C. Request a common shared network with flexible security measures to accommodate different auto deployment options
D. Deploy each ESXi host individually and document it to satisfy security requirements

Correct Answer: A
Section:
Explanation:
https://docs.vmware.com/en/VMware-vSphere/7.0/com.vmware.esxi.install.doc/GUID-8DAC6FEE-0441-4072-8195-9461095C2041.html

QUESTION 15
An architect is designing a new vSphere environment with the following resources:
600 vCPU
5,760 GB RAM
Average resource usage is:
60 vCPU
1,152 GB RAM
The design must meet the following requirements:
The environment has the ability to burst by 25%.
Each host can schedule 36 vCPUs and has 512 GB RAM.
Management overhead is 20%.
What is the minimum number of hosts required to meet the design requirements?

A. Three
B. Five
C. Four
D. Two

Correct Answer: C
Section:

QUESTION 16
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

Correct Answer: A, B
Section:
Explanation:

QUESTION 17
An architect is finalizing the design for a new vSphere platform based on the following information:
All Windows virtual machines will be hosted on a dedicated cluster for licensing purposes.
All Linux virtual machines will be hosted on a dedicated cluster for licensing purposes. All management virtual machines will be hosted on a dedicated cluster.
A total of ten physical sites will be used to host virtual machines.
In the event of one physical datacenter becoming unavailable, the manageability of the virtual infrastructure in the remaining data centers should not be impacted.
Access to configure the management virtual machines via vCenter Server must be controlled through the management Active Directory domain.
Access to configure the Windows and Linux virtual machines must be controlled through the resource Active Directory domain.
The management and resource Active Directory domains are part of separate Active Directory forests and do not have any trusts between them.
The design will use Active Directory with Integrated Windows Authentication.
How should the architect document the vCenter Server configuration for this design?

A. Deploy a vCenter server for the management cluster.
   Deploy a vCenter Server for all remaining clusters. Create a shared SSO domain for each physical site.
B. Deploy a vCenter Server for the management cluster.
   Deploy a vCenter Server for all remaining clusters.
   Create a shared SSO domain across all physical sites.
C. Deploy a vCenter Server for the management cluster with a dedicated SSO domain.
   Deploy a vCenter Server for all remaining clusters and use a dedicated SSO domain for each physical site.
D. Deploy a vCenter Server for the management cluster with a dedicated SSO domain.
   Deploy a vCenter Server for all remaining clusters and use a dedicated SSO domain into a single physical site.

Correct Answer: C
Section:

QUESTION 18
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

Correct Answer: D
Section:
Explanation:
Reference: https://docs.vmware.com/en/VMwarevSphere/7.0/com.vmware.vsphere.resmgmt.doc/GUID- 51F61A1E-49D5-4F4C-BF4C-5369992AB1CF.html

QUESTION 19
The Chief Information Security Officer (CISO) for an organization is concerned about the security posture of the operating system images that are used for the provisioning of their Software-as-a- Service (SaaS) applications.
The organization is in a growth period. The organization is opening a new data center to launch its next phase of new SaaS-based solutions.
The DevOps team currently creates encrypted virtual machine (VM) templates that are used for various operating systems and adds these to the vSphere inventory. The DevOps team already uses a published content library and has been granted a role with the ability to add and delete library items.
The following requirements have been noted:
Impacts to the DevOps team's operational processes must be kept to a minimum.
The DevOps team must be able to regularly check out a copy of the image for updates and check in a new version of the image.
Images must be synchronized from the primary data center to the new data center.
Which three recommendations should the architect make to design a content library solution that will meet these requirements? (Choose three.)

A. Clone virtual machines as VM templates to the published content library
B. Create a subscribed library from the published library and synchronize Open Virtualization Format (OVF) templates on-demand
C. Create a subscription and publish VM templates to a subscribed content library
D. Create a subscribed library from the published library and synchronize Open Virtualization Format (OVF) templates automatically
E. Clone virtual machines as Open Virtualization Format (OVF) templates to the published content library
F. Update the role for the DevOps team with new privileges

Correct Answer: A, C, F
Section:
Explanation:
Content Library in vSphere 7 has a few new privileges that are important to bring up as well as a few existing ones that should be considered. Please refer to the chart below for more details.
https://blogs.vmware.com/vsphere/2020/04/vsphere-7-content-library.html https://docs.vmware.com/en/VMware-vSphere/7.0/com.vmware.vsphere.vm_admin.doc/GUID- 254B2CE8-20A8-43F0-90E8-3F6776C2C896.html

QUESTION 20
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

Correct Answer: C, E
Section:
Explanation:
'which two data sources with peak and average utilization data are required for sizing' Only CPU and IOPS provide peak and average values. You could get them using for example vRealize Operations Manager. https://sysarticles.com/vmware-vsphere-analyzing-the-current-state/

QUESTION 21
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 onpremises.
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

Correct Answer: B, E
Section:
Explanation:
Use an SSO domain across all vCenter Server instances 'The platform must provide an administrator with the ability to access virtual infrastructure components across all sites from a single management tool instance' Having a single SSO domain will achieve this. 'The platform must provide an administrator with the ability to access virtual infrastructure components across ALL SITES from a SINGLE management tool instance' this is Linked mode.

QUESTION 22
In a meeting to discuss the minimum viable product (MVP) deployment of a new customer-facing application, the key stakeholder shares details of the application components and the application administrators share details of performance and integrity tests for the application.
The application will be made up of the following components:
A web server
- Steps to confirm the web server is operating correctly will take 15 minutes after the application server is online.
An application server
- Steps to confirm application server integrity will take 15 minutes after the database is online.
A database server
- The database server will be managed by a database administrator, with an agreed servicelevel agreement (SLA) to restore and validate database services within one hour.
The existing VMware infrastructure offers a recovery point objective (RPO) of 5 minutes and recovery time objective (RTO) of 15 minutes through a combination of backups and replication.

In the event of an outage impacting all three application components, how long will it take for the application to recover and complete all checks?

A. 15 minutes
B. 60 minutes
C. 105 minutes
D. 90 minutes

Correct Answer: C
Section:
Explanation:
15 restore VMs + 60 restore and test DB + 15 test app server + 15 test web server

QUESTION 23
During a requirements gathering workshop to design a physical to virtual migration, the customer provides the following information:
There is no physical firewall in the data center with no anticipated plans for a future network refresh.
Leveraging the virtual infrastructure to mitigate the lack of network security must be addressed in the design.
All physical servers to be migrated exist on the same VLAN.
Which recommendation should the architect make to address the customer requirement with regard to virtual networking?

A. Split the virtual machines into several VLANs
Use tag actions
B. Create port groups with different names and same VLAN IDs
Enable traffic shaping for ingress and egress traffic
C. Enable traffic filtering and marking
Use allow or drop actions
D. Disable traffic filtering and marking Use tag actions

Correct Answer: C
Section:
Explanation:
In a vSphere distributed switch, by using the traffic filtering and marking policy, you can protect the virtual network from unwanted traffic and security attacks or apply a QoS tag to a certain type of traffic. The traffic filtering and marking policy represents an ordered set of network traffic rules for security and for QoS tagging of the data flow through the ports of a distributed switch. In general, a rule consists of a qualifier for traffic, and of an action for restricting or prioritizing the matching traffic.
Ref: https://docs.vmware.com/en/VMwarevSphere/ 7.0/com.vmware.vsphere.networking.doc/GUID-67CA4C18-4F18-4E23-A5C7- BC33112D4433.html

QUESTION 24
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.)

A. IOPs limits enabled
B. RAID 1
C. Deduplication and Compression disabled
D. RAID 5/6
E. Deduplication and Compression enabled

Correct Answer: B, C
Section:
Explanation:

Reference: https://core.vmware.com/resource/troubleshooting-vsan-performance

QUESTION 25
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?

A. The vSphere hosting platform and all PCI application virtual machines must be assessed against Payment Card Industry (PCI) Data Security Standard compliance.
B. The vSphere hosting platform and all PCI application virtual machines must be assessed for SOX compliance.
C. The vSphere hosting platform and all PCI application virtual machine network traffic must be routed via NSX-T.
D. The vSphere hosting platform and all PCI application virtual machines must be monitored using the vRealize Operations Compliance Pack for Payment Card Industry.

Correct Answer: D
Section:
Explanation:
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 26
An architect is tasked with recommending a solution for a company that is running out of VLANs.
Currently the company is running two separate data centers based on vSphere including an Enterprise Plus license. In the first data center, the problem was solved by using VMware NSX and overlay network. In the second data center, there is currently no VMware NSX implementation in place and no budget for additional licenses.
What should the architect recommend as a potential solution to provide support for additional VLANs?

A. Separate Distributed Virtual Switches (DVS)
B. Private VLANs (PVLAN)
C. Virtual Guest Tagging (VGT)
D. vSwitch VLAN Tagging (VST)

Correct Answer: B
Section:
Explanation:
Private VLAN configuration allows for higher VLAN limits

QUESTION 27
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

Correct Answer: C
Section:

QUESTION 28
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

Correct Answer: A, E
Section:

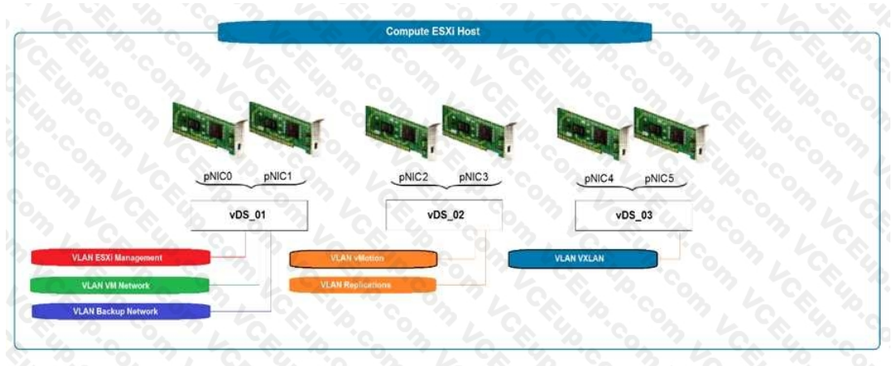
QUESTION 29
During a requirements gathering workshop, the customer provides the following requirement that is pertinent to the design of a new vSphere environment:
The Maximum Tolerable Downtime (MTD) for all Tier 1 applications is one hour.
Which requirement classification is being gathered for the design documentation?

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

Correct Answer: D
Section:
Explanation:

MTD -- Maximum Tolerable Downtime: Sum of the RTO and WRT, which is the total time required to recover from a disaster and start serving the business again. https://vcdx133.com/2015/01/28/vcdx- availability-explained/

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?

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

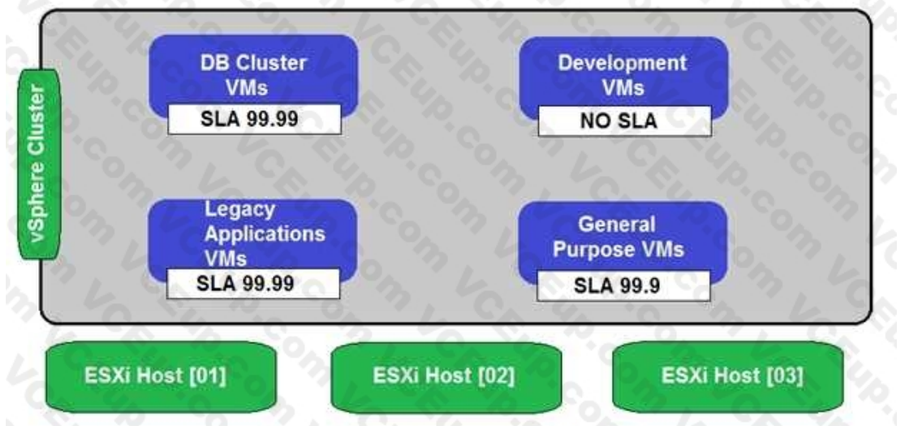
Correct Answer: A
Section:

QUESTION 31
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

Correct Answer: D, E
Section:

QUESTION 32
Refer to the exhibit.



During a requirements gathering workshop, a customer shares the following diagram regarding their availability service-level agreements (SLAs):
The customer states that there is no application level availability for legacy applications.
Which recommendation could the architect make to meet the customer's high availability requirements for the legacy applications virtual machines?

A. Enable vSphere HA and add a VM Override with VM Restart Priority set to Disabled
B. Enable Fault Tolerance
C. Achieve application availability with snapshots
D. Enable vSphere HA and add a VM Override with VM Restart Priority set to Lowest

Correct Answer: B
Section:

QUESTION 33
Which two statements are true about gathering functional business and application requirements?
(Choose two.)

A. It focuses on functional requirements with C-level stakeholders
B. It leverages a single set of
C. It might require multiple rounds of stakeholder interviews
D. It builds stakeholder consensus
E. It is a non-iterative process

Correct Answer: C, D
Section:
Explanation:
You interview stakeholders and conduct workshops to gather requirements and build consensus. Gathering requirements is an iterative process, which might require multiple rounds of interviews. Asking the right questions is vital, and you must gather both functional and nonfunctional requirements. A good strategy for a successful project is to bring the correct people together and build consensus.

QUESTION 34
Which requirement would be classified as a functional requirement within the design documentation?

A. The system must perform virtual machine backups through an API.
B. Virtual machines must be patched within one month of the patch release date.
C. Virtual machines must be restarted within 30 minutes of a host failure.

D. The system must be able to scale to support 500 concurrent virtual machines.

Correct Answer: D
Section:
Explanation:

QUESTION 35
An architect is designing a vSphere environment for a customer and learns that the customer has:
A single vSphere cluster
Two storage arrays with different RAID capabilities
Which two design decisions should the architect make to maximize data availability and data performance for this customer? (Choose two.)

A. Use Storage DRS.
B. Use VMDK anti-affinity rules.
C. Use multiple datastores for heartbeat.
D. Use a minimum of three storage arrays.
E. Use VM to host DRS rules.

Correct Answer: A, B
Section:

QUESTION 36
An architect is planning the physical server configuration for a vSAN-based infrastructure.
Which operations mode should a RAID controller support to minimize potential server downtime during physical disk failures?

A. RAID controller with Passthru mode
B. RAID controller with RAID 5 mode
C. RAID controller with RAID 10 mode
D. RAID controller with RAID 6 mode

Correct Answer: A
Section:
Explanation:
Reference: https://docs.vmware.com/en/VMware-vSphere/7.0/vsan-702-planning-deploymentguide.pdf (25)

QUESTION 37
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

Correct Answer: A
Section:
Explanation:
"The physical design is based on the logical design. The physical design includes specific hardware from specific vendors. This design also lists specific configurations for each of the components that are deployed"

QUESTION 38
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.)

A. Create a local content library in the primary vSphere environment and enable publishing.
B. Create and publish a new subscription to a new subscriber library for each target vSphere environment.
C. Deploy the OVF images to vSphere and clone as an OVF template to a local content library.
D. Deploy the OVF images to vSphere and clone as a VM template to a local content library.
E. Edit the Auto Sync Refresh Interval advanced setting for each subscribed library.
F. Add a new subscriber library from each vSphere environment.

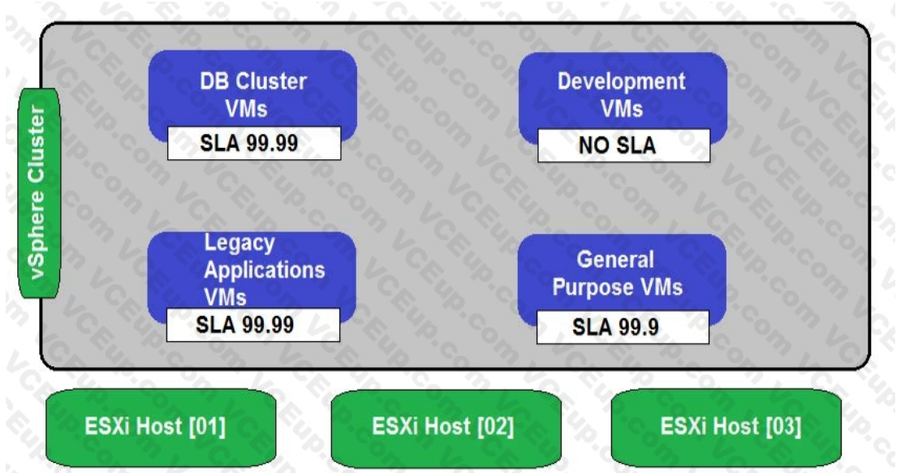
Correct Answer: A, B, D
Section:
Explanation:
A: Local library needed for centralized management.
B: A 'subcription' ensure that content and replication can be managed from the soure i.e. Local library with publishing enabled. (When you create a subscription for a local library, the result is a subscribed library. A publisher library is aware of its subscriptions. Subscriptions enable the administrator of the publisher library to control the content distribution. With subscriptions, content is distributed either when the subscriber initiates synchronization, or when the administrator of the local library publishes the library items to one or more of the existing subscriptions.) Ref: https://docs.vmware.com/en/VMware-vSphere/7.0/com.vmware.vsphere.vm_admin.doc/GUID- 28567D95-D2B6-44F8-9AC7-7D8B618A5848.html
D: VM templates can be checked out for making changes.

QUESTION 39
What is a benefit of using a scale-out method for handling vSphere cluster growth?

A. An increase in the recovery time objective (RTO) for the cluster
B. Faster to reach the limit of virtual machines per host
C. An overall reduction in the license costs for the cluster
D. Less potential impact to virtual machines during a single host failure

Correct Answer: D
Section:

QUESTION 40
Refer to the exhibit.



During a requirements gathering workshop, the customer shares the following diagram regarding their availability service-level agreements (SLAs):
The customer wants database application level availability to always take precedence. What should the architect recommend to meet the customer's requirement?

A. Enable vSphere HA and add a VM Override with VM Restart Priority set to Highest.
B. Enable Fault Tolerance.
C. Enable Sphere HA and maintain the default settings.
D. Enable vSphere HA and add a VM Override with VM Restart Priority set to Lowest.

Correct Answer: A
Section:
Explanation:
default is medium, lowest cannot address the requirement 'take precedence' to 'database application level'.

QUESTION 41
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?

A. Two 1 GbE network adapters per server
B. Four 1 GbE network adapters per server
C. Four 10 GbE network adapters per server
D. Two 10 GbE network adapters per server

Correct Answer: D
Section:
Explanation:
HCI-based infrastructure with all-flash architecture minimum number and type of network adapters so ensure requirements are met and there is no single point of failure Networking Requirements for vSAN Dedicated 1 Gbps for hybrid configurations Dedicated or shared 10 Gbps for all-flash configurations

QUESTION 42
An architect decides to separate virtual desktops and application servers into separate vSphere clusters to meet security and management requirements.
What are two implications of this design decision? (Choose two.)

A. There will be an increase in management overhead.
B. Identical hardware must be procured for all hosts.
C. There will be a reduction in performance.
D. The patching cycles will affect both clusters at the same time.
E. There will be additional licensing and cost requirements for both clusters.

Correct Answer: A, C
Section:

QUESTION 43
An architect is considering placement of virtual machines within an existing VMware softwaredefined 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.

Correct Answer: A, D
Section:
Explanation:
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 44
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.

Correct Answer: B
Section:

QUESTION 45
Which requirement would be classified as a functional requirement within the application design documentation?

A. The application must be hosted with redundancy levels of N+1 or better.
B. Penetration testing must be executed quarterly with a pass rate of 80% or higher.
C. The application must be capable of handling 200 transactions per second.
D. Administrators must monitor the network traffic of the desired systems.

Correct Answer: D
Section:
Explanation:
Functional requirements describe what a system or solution must do. The requirements include the following categories:
• Business rules: For example, the architecture must support both the primary and secondary data centers.
• Administrative functions: For example, network and security administrators must monitor the network traffic of the desired systems.