Question 1
What three reasons could be preventing the vSphere Web Client from communicating with this vCenter Server?
When attempting to connect to a vCenter Server, an administrator observes the following at the top of the vSphere Web Client:
Could not connect to one or more vCenter Server Systems: https://vCenter.corp.com:443/sdk
What three reasons could be preventing the vSphere Web Client from communicating with this vCenter Server? (Choose three.)
A. The vCenter Server machine is not responding via the network.
B. An incorrect entry for this vCenter Server exists in the Single Sign-On service.
C. The SSL certificates do not match the FQDN address for the server.
D. The Platform Services Controller is external to this vCenter Server.
E. The DNS entry for the vCenter Server is incorrect.
Correct Answer: ABC
Explanation/Reference:
During the re-installation of vCenter Server, it is possible to have the same vCenter Server registered more than once to Single Sign-On (SSO). With a previous install of vCenter Server, SSL certificates are not overwritten or removed properly during an upgrade or re-installation. Note: If there are previous issues with the certificates, they may not be exposed until the installation and use of the 5.1 Web Client. Before proceeding with the steps in the Resolution section, ensure that you are not experiencing the issue identified in vSphere Web Client 5.1 reports this SSL warning after an installation or upgrade: Failed to verify the SSL certificate for one or more vCenter Server Systems (2036505).

Question 2
Which three requirements must be met for this feature to be available and functional?
An administrator wants to allow users to login to the vSphere Web Client using the Use Windows session authentication check box for faster authentication. Which three requirements must be met for this feature to be available and functional? (Choose three.)
A. Install the vSphere Web Client Integration browser plug-in on the vCenter Server and Platform Services Controller machines.
B. Install the vSphere Web Client Integration browser plug-in on each workstation from where a user will sign in.
C. The users must be signed into Windows using Active Directory user accounts.
D. The administrator must create a valid Identity Source in Single Sign-On for the users domain.
Correct Answer: BCD
Explanation/Reference:
1 Navigate to the vSphere Web Client login page.
2 If the Use Windows session authentication check box is not available, click Download the Client Integration Plug-in at the bottom of the login page.
3 If the browser blocks the installation by issuing certificate errors or by running a pop-up blocker, follow the Help instructions for your browser to resolve the problem.
4 Close other browsers if you are prompted to do so.
5 After installation, the plug-in is available for all browsers.

Question 3
What are three likely causes contributing to this issue?
An administrator is unable to see performance statistics for only the Past Week performance data. The vCenter Server is using a Microsoft SQL Server Database. What are three likely causes contributing to this issue? (Choose three.)
A. Performance statistics are turned off.
B. The Past Day rollup job is not present.
C. The stats_rollup_1_proc is not present.
D. The VMware Performance Charts Service is stopped.
E. The JDBC URL is incorrect in the vcdb.properties file.
Correct Answer: ABC
Explanation/Reference:
Please refer to this link to troubleshoot this issue: https://kb.vmware.com/selfservice/microsites/search.do?language=en_US&cmd=displayKC&externalId=1004382

Question 4
What action should the administrator take next?
An ESXi 6.x host in the vCenter Server inventory has disconnected due to an All Paths Down (APD) situation. An administrator has corrected the APD issue on the host, but it still remains disconnected. What action should the administrator take next?
A. Select Restart Management Agents from the DCUI.
B. Execute exccli system settings advanced set -d /Scsi/Fail/VMOmAPD.
C. Modify the advanced parameter /Disk/ApdTokenRetryCount.
D. Enable the advanced parameter /Misc/APDHandlingEnable.
Correct Answer: A
Explanation/Reference:
All-Paths-Down (APD)
A datastore is shown as unavailable in the Storage view.

A storage adapter indicates the Operational State of the device as Dead or Error.

All paths to the device are marked as Dead.

You are unable to connect directly to the ESXi host using the vSphere Client.

The ESXi host shows as Disconnected in vCenter Server.

In the /var/log/vmkernel.log file, you see entries similar to:

cpu1:2049)WARNING: NMP: nmp_IssueCommandToDevice:2954:I/O could not be issued to device "naa.60a98000572d54724a34642d71325763" due to Not found

cpu1:2049)WARNING: NMP: DeviceRetryCommand:133:Device "naa.60a98000572d54724a34642d71325763": awaiting fast path state update for failover with I/O blocked. No prior reservation exists on the device.

cpu2:2049)WARNING: NMP: DeviceStartLoop:721:NMP Device "naa.60a98000572d54724a34642d71325763" is blocked. Not starting I/O from device.

cpu2:2642)WARNING: NMP: nmpDeviceAttemptFailover:599:Retry world failover device "naa.60a98000572d54724a34642d71325763" – issuing command

cpu2:2642)WARNING: NMP: nmpDeviceAttemptFailover:658:Retry world failover device "naa.60a98000572d54724a34642d71325763" – failed to issue command
due to Not found (APD), try again...

cpu2:2642)WARNING: NMP: nmpDeviceAttemptFailover:708:Logical device "naa.60a98000572d54724a34642d71325763": awaiting fast path state update...

cpu2:2642)WARNING: NMP: nmpDeviceAttemptFailover:599:Retry world failover device "naa.60a98000572d54724a34642d71325763" – issuing command

cpu2:2642)WARNING: NMP: nmpDeviceAttemptFailover:658:Retry world failover device "naa.60a98000572d54724a34642d71325763" – failed to issue command
due to Not found (APD), try again...

cpu2:2642)WARNING: NMP: nmpDeviceAttemptFailover:708:Logical device "naa.60a98000572d54724a34642d71325763": awaiting fast path state update...

A restart of the management agents may show these errors:

Not all VMFS volumes were updated; the error encountered was 'No connection'.

Errors:

- Rescan complete, however some dead paths were not removed because they were in use by the system. Please use the 'storage core device world list' command to see the VMkernel worlds still using these paths.
- Error while scanning interfaces, unable to continue. Error was Not all VMFS volumes were updated; the error encountered was 'No connection'.
- You may also see that the device is no longer listed.

Correct Answer: B

Explanation/Reference:

Explanation: The vCenter Server installation or uninstallation process might fail or stop responding on Windows Server 2008 R1 SP2.

The Windows Installer on Windows Server 2008 R1 SP2 has a bug that can cause problems when installing multiple packages. Because of these issues the vCenter Server installation might stop responding, or if you attempt to install and uninstall vCenter Server a few times, the process might fail.

Workaround: Apply the patch from Microsoft KB 981669 which addresses the Windows Installer issue.


Question 5

Which condition would cause a vCenter Server installation to fail when installing on a Windows virtual machine?

Which condition would cause a vCenter Server installation to fail when installing on a Windows virtual machine?

A. The virtual machine does not have at least four vCPUs.
C. The virtual machine has an E1000 network device.
D. The virtual machine does not have 16GB of RAM.

Correct Answer: B

Explanation/Reference:

Explanation: The vCenter Server installation or uninstallation process might fail or stop responding on Windows Server 2008 R1 SP2.

The Windows Installer on Windows Server 2008 R1 SP2 has issues with handling multiple packages. Because of these issues the vCenter Server installation might stop responding, or if you attempt to install and uninstall vCenter Server a few times, the process might fail.

Workaround: Apply the patch from Microsoft KB 981669 which addresses the Windows Installer issue.


Question 6

Which three ports are used by the vSphere Web Client when connecting directly to an ESXi 6.x host?

Which three ports are used by the vSphere Web Client when connecting directly to an ESXi 6.x host? (Choose three.)

A. 443 TCP
B. 902 TCP and UDP
C. 903 TCP
D. 5480 TCP
E. 9443 TCP and UDP

Correct Answer: ABC

Explanation/Reference:

Explanation:
Question 7
Which two actions can be taken to correct this problem?

After deploying a vSphere Platform Services Controller (PSC), an administrator is unable to install vCenter Server. The error displayed is:

Could not contact Lookup Service. Please check VM_ssoreg.log.

Which two actions can be taken to correct this problem? (Choose two.)

A. Verify that the clocks on the host machines running the PSC, vCenter Server, and the vSphere Web Client are synchronized.
B. Configure a valid Identity Source for the Platform Services Controller in the vSphere Web Client.
C. Ensure that there is no firewall blocking port 7444 between the PSC and vCenter Server.
D. Uninstall and reinstall the Platform Services Controller software.

Correct Answer: AC

Explanation/Reference:


Question 8
What is preventing the start of the service?

An administrator is unable to start the vCenter Server service. The vpxd.log file shows this service failure:

CoreDump: Unable to write minidump

There is not enough space on the disk.

What is preventing the start of the service?
A. Insufficient space on the vCenter Server
B. Insufficient space on the Database Server
C. Insufficient space on the VMFS volume
D. Insufficient space on the ESXi ramdisk

Correct Answer: A

Explanation/Reference:
Symptoms
Cannot start VMware VirtualCenter Server service
In the vpxd.log file located at C:\ProgramData\VMware\VMware VirtualCenter\Logs, you see backtraces similar to:

```
[VpxdClientAdapter] Got vmacore exception: An operation on a socket could not be performed because the system lacked sufficient buffer space or because a queue was full
```

```
<YYYY-MM-DD><TIME> [18244 error 'vpxdvpxdVmomi' [email protected]] [VpxdClientAdapter] Backtrace:
--> backtrace[0] rip 000000018018cd7a
--> backtrace[0] rip 0000000180106c48
--> backtrace[0] rip 000000018010803e
--> backtrace[0] rip 000000018009
```

Cause
This issue occurs because vCenter Server does not have sufficient hard disk space to be allocated for the buffer.
Reference: https://kb.vmware.com/selfservice/search.do?cmd=displayKC&docType=kc&docTypeID=DT_KB_1_1&externalId=2083927

Question 9
What will be created upon completion of the steps in this wizard?
Refer to the Exhibit.
A. 100GB VMFS5 datastore with free space available for expansion
B. 100GB VMFS5 datastore with free space available for a second datastore
C. 100GB VMFS3 datastore
D. 200.01 GB VMFS5 datastore

Correct Answer: A

Explanation/Reference:
The datastore size selected is 100GB. On completion of this step, 100 GB VMFS datastore will be created.

Question 10
Which condition would explain the error?
Refer to the Exhibit.
A. The ESXi hosts are not licensed for EVC.
B. The administrator does not have privileges to enable EVC.
C. The ESXi host CPU has the Intel No-Execute feature disabled.
D. The administrator has turned on Intel Virtualization Technology.

An administrator is attempting to enable Enhanced vMotion Compatibility (EVC), but receives the error shown in the Exhibit.
Which condition would explain the error?
A. The ESXi hosts are not licensed for EVC.
B. The administrator does not have privileges to enable EVC.
C. The ESXi host CPU has the Intel No-Execute feature disabled.
D. The administrator has turned on Intel Virtualization Technology.
Correct Answer: C
Explanation/Reference:
Explanation: To resolve the issue, you must enable both No-Execute Memory Protection and Virtualization Technology features in order for EVC to function. Consult the documentation for your hardware for more information.

To resolve this issue:
1. Enter the BIOS setup (F9 on most systems at boot).
2. Select Advanced Options.
3. Select Processor Options.
4. Change No-Execute Memory Protection to Enabled, if necessary.
5. Change Intel Virtualization Technology to Enabled, if necessary.
6. Reboot the host.
7. Enable EVC in the cluster settings.
Notes:
Hardware Virtualization is called Intel VT on Intel processors and AMD-V on AMD processors.
Execute Protection is called Intel eXecute Disable (XD) on Intel processors and AMD No eXecute (NX) on AMD processors.

Question 11
Which two combinations of devices should be used to create Disk Group(s)?
Refer to the Exhibit.

Refer to the Exhibit. The list of devices attached to vmhba1 will be the basis for configuring a VMware Virtual SAN using Manual Mode.
Based on the exhibit, which two combinations of devices should be used to create Disk Group(s)? (Choose two.)
A. One Disk Group with one Flash Drive and three HDDs
B. Two Disk Groups with one Flash Drive and two HDDs each
C. One Disk Group with one Flash Drive and four HDDs
D. Two Disk Groups with two Flash Drives and four HDDs each

Correct Answer: AB
Explanation/Reference:
Explanation:
Virtual SAN claims all available and usable disks and organizes them into default groups with one SSD and one or multiple HDDs (magnetic disks). Virtual SAN uses an aggregation of disk groups to back up a single datastore that is created when you enable Virtual SAN. In the disk group, the SSD primarily serves as a read cache write buffer, while the HDDs are used for permanent storage. Typically, a higher SSD to HDD ratio, both in size and quantity, improves performance.
Depending on the mode you select when enabling Virtual SAN on a cluster, you can use different ways to organize disks into groups.
Automatic Mode
Virtual SAN claims all available and usable disks and organizes them into default groups with one SSD and one or multiple HDDs. If you add more disks to hosts or add new hosts to the Virtual SAN cluster, all applicable disks are claimed by Virtual SAN. Virtual SAN in automatic mode claims only local disks on the ESXi hosts in the cluster. You can add any remote nonshared disks manually.
Manual Mode
You must specify hosts and disks on the hosts to be used for the Virtual SAN datastore. You have two methods of organizing disks into disk groups, semi-automatic and manual. When you use the semi-automatic method, Virtual SAN organizes the disks that you specify into default disk groups. Another option is to manually create user-defined disk groups and select disks for each group. When you create a disk group manually, your main consideration should be the ratio of SSD to Raw HDD capacity. Although the ratios depend on use cases and workloads, the best practice is to use SSD capacity of at least 10 percent of the total consumed HDD capacity in each disk group, without counting the protection copies. For example, if the size of your Raw HDD capacity on the disk group is 4TB, the recommended SSD capacity is 400GB.

Question 12
What is the maximum number of snapshot instances in vSphere Replication that can be configured to recover a virtual machine at a specific point in time?

A. 16
B. 24
C. 48
D. 72

Correct Answer: B
Explanation/Reference:
Explanation: When you configure replication of a virtual machine, you can enable multiple point in time (PIT) instances in the recovery settings in the Configure
Replication wizard. vSphere Replication retains a number of snapshot instances of the virtual machine on the target site based on the retention policy that you specify. vSphere Replication supports maximum of 24 snapshot instances. After you recover a virtual machine, you can revert it to a specific snapshot.


Question 13
What is the compression algorithm used by vSphere Replication to compress data at the source?

A. FastLZ
B. Lz4
C. Lzr
D. Lzx

Correct Answer: A

Explanation/Reference:
Explanation: vSphere Replication 6.0 utilizes the FastLZ compression library. This provides a nice balance of speed, minimal CPU overhead, and compression efficiency. When using vSphere 6.0 and vSphere Replication 6.0 at both the source and target locations, updates are compressed at the source and stay compressed until they are written to storage at the target. In cases where there is a mixed configuration, packets may be decompressed at some point in the replication path. For example, if a vSphere 6.0 host is connecting to a vSphere Replication 5.8 virtual appliance, packets will not be compressed over the network. Another example: vSphere 6.0 replicating to a vSphere Replication 6.0 virtual appliance, which is writing to vSphere 5.5 host storage – packets are compressed from the source to the vSphere Replication 6.0 virtual appliance, but are decompressed in the appliance before being written to the vSphere 5.5 storage at the target. Performing this decompression in the vSphere Replication virtual appliance will cause higher vCPU utilization in the appliance. As you can imagine, the most benefit from compression will be realized when running vSphere 6.0 and vSphere Replication 6.0 at both the source and target locations.


Question 14
Which option is used to create a VVOL on an existing VVOL container?

Refer to the Exhibit.

A vSphere 6.x environment is configured with VMware Virtual Volumes (VVOLs). An administrator accesses the cluster Actions menu, as shown in the Exhibit. Which option is used to create a VVOL on an existing VVOL container?

A. Storage
B. Deploy OVF Template
C. New vApp
D. Settings

Correct Answer: A

Explanation/Reference:
Explanation: Virtual Volumes is an integration and management framework for external storage that provides finer control at the VM-level, streamlines storage operation and offers flexibility of choice.

Virtual Volumes implements the core tenets of the VMware SDS vision to enable a fundamentally more efficient operational model for storage in virtualized environments, centering it around the VM rather than on the physical infrastructure. – See more at: http://www.vmware.com/in/products/vsphere/features/virtual-volumes/#hash=tx9IzQrQ.dpuf

Question 15
Which three parameters should be considered when calculating the bandwidth for vSphere Replication?

Which three parameters should be considered when calculating the bandwidth for vSphere Replication? (Choose three.)

A. Data change rate
B. Traffic rates
C. Link speed
D. Application type
E. Hardware type

Correct Answer: ABC

Explanation/Reference:
Explanation: The amount of network bandwidth that vSphere Replication requires to replicate virtual machines efficiently depends on several factors in your environment.

- Network-based storage
- Size of dataset
- Data change rate
- Recovery point objective (RPO)
- Link speed


Question 16
When importing an existing SSL certificate into vSphere Replication Server, which file format is required?

A. PKCS#12  
B. DER  
C. PEM  
D. PKCS#7

Correct Answer: A

Explanation: Converting the signed certificate to PKCS#12 format

After you receive the certificate (ending in .cer or .crt) from your certificate authority, it must be converted to the PKCS#12 format. To convert it requires key files you generated while generating the certificate request and the signed certificate:

1. Copy the signed certificate file to the server where you generated the certificate signing request.
2. Use OpenSSL to generate the PKCS#12 certificate:
   ```
   openssl pkcs12 -export -in protected.cer -inkey protected.key -name "vrprot" -passout pass:replication55 -out protected.p12
   ```

Question 17
Which keystore would a vSphere Replication administrator use to manually add an additional Certificate Authority certificate?

A. hms-truststore.jks  
B. hms-keystore.jks  
C. certificates.ks  
D. cacerts.ks

Correct Answer: A

Explanation: vSphere Replication can verify remote server certificates either by verifying the validity of the certificate and the thumbprint or by verifying the thumbprint only. By default, vSphere Replication trusts all certificate authorities that the Java Virtual Machine trusts. You can import additional trusted CA certificates in /opt/vmware/hms/security/hms-truststore.jks on the vSphere Replication appliance. To import these certificates, perform these steps:

1. Locate the root certificate authority certificate that was used when generating the vCenter server certificates (usually Root64.cer). If you use a Microsoft certificate authority, this can be re-generated by performing the mentioned in Creating certificate requests and certificates for vCenter Server 5.1 components (2037432). Otherwise, you may be able to export the root certificate using the MMC on a Windows system.
2. Copy the certificate to your replication appliance.
   
   For example, /home directory. A utility such as WinSCP can be used for this.
3. Run this command to import the certificate into the HMS truststore:
   ```
   /usr/java/default/bin/keytool -import -trustcacerts -alias root -file /home/Root64.cer -keystore /opt/vmware/hms/security/hms-truststore.jks -storepass vmware
   ```
4. Type yes at the prompt and press enter to complete the certificate import process:
   ```
   Trust this certificate? [no]: yes
   ```
5. You see the this text which confirms the import was successful:
   ```
   Certificate was added to keystore
   ```
6. Use this command to verify the certificate is now present in the HMS truststore:
   ```
   /usr/java/default/bin/keytool -list -keystore /opt/vmware/hms/security/hms-truststore.jks -storepass vmware
   ```


Question 18
Which two capabilities does the vSphere Replication Client Plug-In provide? (Choose two.)

A. Configure connections between vSphere Replication Sites.  
B. Deploy and register additional vSphere Replication Servers.  
C. Reconfigure the vSphere Replication Server.  
D. Configure an external database for a vSphere Replication Site.

Correct Answer: AB

Explanation: vSphere Replication Client Plug-In

The vSphere Replication appliance adds a plug-in to the vSphere Web Client.

You use the vSphere Replication client plug-in to perform all vSphere Replication actions.

- Configure connections between vSphere Replication sites.
- View all vCenter Server instances that are registered with the same SSO and status of each vSphere Replication extension.
- Deploy and register additional vSphere Replication servers.
- Configure the replication of individual or multiple virtual machines.
- View incoming and outgoing replications.
- Monitor and manage the status of the replications.
- Recover virtual machines.

Question 19
What privilege is needed at both sites?
A vSphere Replication user needs to connect a source site to a target site.
What privilege is needed at both sites?
A. VRM remote.Manage VRM
B. VRM datastore mapper.Manage
C. Host.vSphere Replication.Manage replication
D. Virtual machine.vSphere Replication.Manage replication

Correct Answer: A
Explanation/Reference:
Reference:

Question 20
Which statement is true?
Refer to the Exhibit.

-- Exhibit --
An administrator has created the DRS cluster shown in the Exhibit.
Based on the exhibit, which statement is true?
A. Under CPU contention, Prod-VM1 receives four times the CPU resources than Test-VM1.
B. The Prod-VM1 will always have more CPU resources than all other virtual machines.
C. The Test-VM2 will always have less CPU resources than all other virtual machines.
D. Under CPU contention, Test-VM1 will receive 25% of the total CPU resources.

Correct Answer: A
Explanation/Reference:
Explanation:
To understand limits and theory check the information given below:
CPU is calculated like this: [Cluster CPU Cores] * [ 2,000 for High, 1,000 for Normal, 500 for Low ]
For an example, Our DRS cluster has 100 CPU cores (see the blue section) and thus the math is: 100 * 2,000 = 200,000 for High and 100 * 500 = 50,000 for Low.
That’s why PROD-VM1 : CPU shares High.

Question 21
Which three sites?
VMware vSphere Replication protects virtual machines from partial or complete site failures by replicating the virtual machines between which three sites? (Choose three.)

A. From a source site to a target site.
B. From within a single site from one cluster to another.
C. From multiple source sites to a shared remote target site.
D. From a single source site to multiple remote target sites.
E. From multiple source sites to multiple remote target sites.

Correct Answer: ABC

Explanation/Reference:
Overview of VMware vSphere Replication
VMware vSphere Replication is an extension to VMware vCenter Server that provides hypervisor-based virtual machine replication and recovery. vSphere
Replication is an alternative to storage-based replication. It protects virtual machines from partial or complete site failures by replicating the virtual machines
between the following sites:
■ From a source site to a target site
■ Within a single site from one cluster to another
■ From multiple source sites to a shared remote target site
Reference:
thttps://pubs.vmware.com/vsphere55/index.jsp?topic=%2Fcom.vmware.vsphere.replication_admin.doc%2FGUID-C987AD18-7C2D-4FA6-B6E4-6B0DDA91547A.html

Question 22
What would happen if all three virtual machines are powered on?
An administrator has created a resource pool named Marketing HTTP with a Memory Limit of 24 GB and a CPU Limit of 10,000 MHz.
The Marketing HTTP resource pool contains three virtual machines:
Mktg-SQL has a memory reservation of 16 GB.
Mktg-App has a memory reservation of 6 GB.
Mktg-Web has a memory reservation of 4 GB.
What would happen if all three virtual machines are powered on?
A. All three virtual machines can power on, but will have memory contention.
B. All three virtual machines can power on without memory contention.
C. Only two of the three virtual machines can power on.
D. Only one of the virtual machines can power on.

Correct Answer: C

Explanation/Reference:
Explanation:
Applying a limit on a vCPU and memory will slow your VM down no matter what because of distribution of resources. Even if there are no other VMs running on
that 4 socket quad core host. Powering on all the virtual machine will enables 100% resources to be used by VM hence, only few required VM’s will powered “On,”
which requires the maximum utilization from the available resources.
Example: When a single(or two) VM has a limit of 5000MHz and 16GB, 6 GB Memory ~ 22gb utilization will be high and is the only VM running on a host than it
will run it full speed as it will be constantly rescheduled for 5000MHz and maximum memory(22-24 GB)
Check: https://kb.vmware.com/selfservice/microsites/search.do?language=en_US&cmd=displayKC&externalId=2032906

Question 23
Which statement is true?
Refer to the Exhibit.

An administrator has configured a vSphere 6.x DRS cluster as shown in the Exhibit.
Based on the exhibit, which statement is true?
A. A virtual machine can be powered on in the Test Resource Pool with a 6 GB Memory Reservation.
B. A virtual machine can be powered on in the Dev Resource Pool with a 8 GB Memory Reservation.
C. A virtual machine from both the Test Resource Pool and the Dev Resource Pool can be powered on with a 4 GB Memory Reservation.
D. No more virtual machines can be powered on due to insufficient resources.

Correct Answer: A

Explanation/Reference:
Explanation:
A virtual machine can be powered on in the Test Resource Pool with a 6 GB Memory Reservation because:
1GB used by test resource pool VM which is powered on and 2gb by Test dev pool VM powered on hence distribution is less and expandable memory quota is
more/left.
To understand limits and theory check the information given below:
Memory Maximums
The ESXi host maximums represents the limits for ESXi host memory.
Table 3-2. ESXi Host Memory Maximums
Item Maximum
RAM per host 6 TB
12 TB is supported on specific OEM certified platform. See VMware Hardware

Compatibility Limits for guidance on the platforms that support vSphere 6.0 with 12 TB of physical memory.

Number of swap files 1 per virtual machine.

And:

Resource Pool
Resource pools per host 1600
Children per resource pool 1100

Resource pool tree depth 8
Additional 4 resource pools are used by system internals.

Resource pools per cluster 1600

Configuration Maximums – vSphere 6.0 – VMware

Question 24
Which three statements are true when restoring a Resource Pool Tree?

Which three statements are true when restoring a Resource Pool Tree? (Choose three.)
A. Distributed Resource Scheduler must be set to manual.
B. Restoring a snapshot can only be done on the same cluster from which it was taken.
C. No other resource pools can be present in the cluster.
D. Restoring a resource pool tree must be done in the vSphere Web Client.
E. Enabling Enhanced vMotion Compatibility on the cluster is required.

Correct Answer: BCD
Explanation/Reference:
Restore a Resource Pool Tree in the vSphere Web Client
You can restore a previously saved resource pool tree snapshot.

Prerequisites
- vSphere DRS must be turned ON.
- You can restore a snapshot only on the same cluster that it was taken.
- No other resource pools are present in the cluster.

Reference:

Question 25
Which log file would you examine to identify an issue which occurred during the pre-upgrade phase of a vCenter Server upgrade process?

Which log file would you examine to identify an issue which occurred during the pre-upgrade phase of a vCenter Server upgrade process?
A. vcdb_req.out
B. vcdb_export.out
C. vcdb_import.out
D. vcdb_inplace.out

Correct Answer: A
Explanation/Reference:
Example: Database Upgrade Locations
For pre-upgrade checks, review the
%TEMP%\vcsUpgrade\vcdb_req.out file.
The vcdb_req.err file tracks any errors that were identified during the pre-upgrade phase.
Reference:
https://pubs.vmware.com/vsphere60/index.jsp?topic=%2Fcom.vmware.vsphere.upgrade.doc%2FGUID-5EAC8B84-0A95-41EC-AAF4-6CB83A5152A.html

Question 26
What command line utility can be used to upgrade an ESXi host?

What command line utility can be used to upgrade an ESXi host?
A. esxcli
B. esxupdate
C. vihostupdate
D. esxcfg

Correct Answer: A
Explanation/Reference:
ESXi Command-line interface – esxcli
Using the vSphere Command Line Interface (CLI), you can upgrade ESXi 5.x hosts to version 6.0.
For more information about upgrading ESXi 5.x hosts using esxcli commands, see the Upgrading Hosts by Using esxcli Commands

Question 27
Which two vCenter Server services are migrated automatically as part of an upgrade from a Distributed vCenter Server running 5.x?

Which two vCenter Server services are migrated automatically as part of an upgrade from a Distributed vCenter Server running 5.x? (Choose two.)
A. vCenter Single Sign-On Service
B. vSphere Web Client
C. vSphere Inventory Service
D. Storage Policy Based Management

Correct Answer: BC
Explanation/Reference:
Explanation: vCenter Server 5.x for Windows services that are migrated to become part of the vCenter Server group of services during the upgrade process include:
- Inventory Services
- vCenter Web Client
- vSphere Auto Deploy
- vSphere Syslog Collector
- vSphere ESXi Dump Collector vCenter Server and vCenter Single Sign-On are the only services that are not migrated. vCenter Single Sign-On instances are upgraded in place to become part of an external Platform Services Controller if they are deployed on a system other than the system where the vCenter Server resides.
Reference:

Question 28
What action must be taken before upgrading the vCenter Server Appliance?
An administrator is upgrading a vCenter Server Appliance and wants to ensure that all the prerequisites are met. What action must be taken before upgrading the vCenter Server Appliance?
A. Install the Client Integration Plug-in.
B. Install the database client.
C. Install the ODBC connector.
D. Install the Update Manager Plug-in.
Correct Answer: A
Explanation/Reference:
Explanation:
Prerequisites
- Verify that the clocks of all machines on the vSphere network are synchronized. See Synchronizing Clocks on the vSphere Network.
- Verify that you have sufficient free disk space on the vCenter Server Appliance that you want to upgrade to accommodate the data for the upgrade.
- Verify that port 22 is open on the vCenter Server Appliance that you want to upgrade. The upgrade process establishes an inbound SSH connection to download the exported data from existing appliance.
- Verify that port 443 is open on the source ESXi host on which the vCenter Server Appliance that you want to upgrade resides. The upgrade process establishes an HTTPS connection to the source ESXi host to verify that the vCenter Server Appliance is ready for upgrade and to set up an SSH connection between the new and the existing appliance.
- Verify that the vCenter Server SSL certificate for your existing vCenter Server Appliance is configured correctly. See VMware Knowledge Base article 2057223.
- If you use an external database, back up the vCenter Server Appliance database.
- Create a snapshot of the vCenter Server Appliance that you want to upgrade.
- Install the new version of the Client Integration Plug-In. See Install the Client Integration Plug-In.

Question 29
Which two statements explain this error?
An administrator is upgrading vCenter Server and sees this error:
The DB User entered does not have the required permissions needed to install and configure vCenter Server with the selected DB. Please correct the following error(s): %s
Which two statements explain this error? (Choose two.)
A. The database is set to an unsupported compatibility mode.
B. The permissions for the database are incorrect.
C. The permissions for vCenter Server are incorrect.
D. The database server service has stopped.
Correct Answer: AB
Explanation/Reference:
Explanation: Cause
This issue occurs when the vCenter Server instance being upgraded is connected to a SQL server which was upgraded and the vCenter Server database compatibility level is not changed to match the SQL server version.
Resolution
To resolve this issue, change the database compatibility level to match the SQL Servers level.
1. Right-click the vCenter Server database and click Properties.
2. Click Options.
3. Change the compatibility level that matches the SQL server version.

Question 30
What is the next step that should be taken?
An administrator has upgraded a Distributed vCenter Server environment from 5.5 to 6.0. What is the next step that should be taken?
A. vCenter Inventory Service must be manually stopped and removed.
B. vCenter Inventory Service must be changed from manual to automatic.
C. vCenter Inventory Service must be manually stopped and restarted.
D. vCenter Inventory Service must be changed from automatic to manual.
Correct Answer: A
Explanation/Reference:
Explanation:
Question 31
What must be done to allow the upgrade to complete?
When upgrading vCenter Server, an administrator notices that the upgrade fails at the vCenter Single Sign-On installation. What must be done to allow the upgrade to complete?
A. Verify that the VMware Directory service can stop by manually restarting it.
B. Verify that the vCenter Single Sign-On service can stop by manually restarting it.
C. Uninstall vCenter Single Sign-On service.
D. Uninstall the VMware Directory service.
Correct Answer: A
Explanation/Reference:

Question 32
Which statement is true?
During a vCenter Server upgrade, an ESXi 6.x host in a High Availability (HA) cluster fails. Which statement is true?
A. HA will fail the virtual machines over to an available host during the vCenter Server upgrade process.
B. HA is unavailable during the vCenter Server upgrade process.
C. HA will fail the virtual machines over to an available host after the vCenter Server upgrade completes.
D. HA will successfully vMotion the virtual machines during the host failure.
Correct Answer: A
Explanation/Reference:
During a vCenter Upgrade the VMware HA Agent on all of the ESXi hosts will be updated. … it’s very likely that the HA agent will fail to initialize the first time when the host restarts.

Question 33
Why does the vCenter Server not meet the minimum requirements?
An administrator wants to upgrade to vCenter Server 6.x. The vCenter Server:
Is hosted on a virtual machine server running Microsoft Windows Server 2008 R2, with 8 vCPUs and 16GB RAM.
Will have an embedded Platform Services Controller.
Hosts a Large Environment with 1,000 ESXi hosts and 10,000 Virtual Machines.
Why does the vCenter Server not meet the minimum requirements?
A. Windows Server 2008 R2 is not a supported Operating System for vCenter Server.
B. The virtual machine has insufficient resources for the environment size.
C. The environment is too large to be managed by a single vCenter Server.
D. The Platform Services Controller must be changed to an External deployment.
Correct Answer: B
Explanation/Reference:

Question 34
Which two supported tools can be used to upgrade virtual machine hardware?
Which two supported tools can be used to upgrade virtual machine hardware? (Choose two.)
A. vSphere Web Client
B. vSphere Update Manager
C. vmware-vmupgrade.exe
D. esxcli vm hardware upgrade
Correct Answer: AB
Explanation/Reference:
Explanation: Upgrade Virtual Hardware
You can upgrade the hardware version of virtual machines to the latest version of ESXi. For virtual machines that are running on ESXi 5.x, VMware recommends that you upgrade the virtual hardware to version 8.
Consider the following points:
■ When you upgrade from virtual hardware version 4 to version 8 the upgrade is reversible if you take a virtual machine backup or snapshot before performing the upgrade.
■ Upgraded virtual machines cannot be powered on by an ESX 2.x host, even if relocated to a VMFS2 datastore.
■ To automate this process, consider using Update Manager for virtual machine upgrades. See the Installing and Administering VMware vSphere Update Manager documentation. Update Manager takes automatic snapshots before performing virtual machine upgrades. See Perform an Orchestrated Upgrade of Virtual Machines with vSphere Update Manager:
■ When you upgrade virtual hardware, no downtime is required for vCenter Server or ESX/ESXi hosts. For virtual machines, the only significant downtime is the time to reboot the guest operating systems.

Question 35
What are three recommended prerequisites before upgrading virtual machine hardware?
What are three recommended prerequisites before upgrading virtual machine hardware? (Choose three.)
A. Create a backup or snapshot of the virtual machine.
B. Upgrade VMware Tools to the latest version.
C. Verify that the virtual machine is stored on VMFS3, VMFS5, or NFS datastores.
D. Detach all CD-ROM/ISO images from the virtual machines.
E. Set the Advanced Parameter virtualHW.version = 11
Correct Answer: ABC
Explanation/Reference:
Explanation: Before you upgrade the virtual hardware:
1. Create a backup or snapshot of the virtual machine. For more information, see:
   Take a Snapshot in the vSphere Web Client section in the vSphere 5.1 Virtual Machine Administration guide.
Take a Snapshot in the vSphere Client section in the vSphere 5.1 Virtual Machine Administration guide.
2. Upgrade VMware Tools. On Microsoft Windows virtual machines, if you upgrade the virtual hardware before you upgrade VMware Tools, the virtual machine might lose its network settings.
3. Verify that all .vmdk files are available to the ESXi/ESX hosts on a VMFS 3, VMFS 5, or NFS datastore.
4. Verify that the virtual machines are stored on VMFS 3, VMFS 5 or NFS datastores.
5. Determine the version of the virtual hardware by selecting the virtual machine from the vSphere Client or vSphere Web Client and clicking the Summary tab. The VM Version label in the Compatibility field displays the virtual hardware version.

Question 36
Which file determines the location of the installation script during a scripted upgrade?
Which file determines the location of the installation script during a scripted upgrade?
A. boot.cfg
B. ks.cfg
C. script.cfg
D. upgrade.cfg
Correct Answer: A
Explanation/Reference:
Explanation: About the boot.cfg File
The boot loader configuration file boot.cfg specifies the kernel, the kernel options, and the boot modules that the mboot.c32 boot loader uses in an ESXi installation. The boot.cfg file is provided in the ESXi installer. You can modify the kernelopt line of the boot.cfg file to specify the location of an installation script or to pass other boot options.
The boot.cfg file has the following syntax:
# boot.cfg — mboot configuration file
# Any line preceded with '#' is a comment.
title=STRING
kernel=FILEPATH
kernelopt=STRING
modules=FILEPATH1 — FILEPATH2 ... — FILEPATHn
# Any other line must remain unchanged.
The commands in boot.cfg configure the boot loader.

Question 37
What three supported methods can be used to upgrade a host from ESXi 5.x to ESXi 6.x?
What three supported methods can be used to upgrade a host from ESXi 5.x to ESXi 6.x? (Choose three.)
A. vSphere Update Manager

B. vihostupdate
C. esxcli
D. vSphere Auto Deploy
E. esxupdate
Correct Answer: ACD
Explanation/Reference:
Explanation: Upgrade Options for ESXi 6.0
VMware provides several ways to upgrade ESXi 5.x hosts to ESXi 6.0 hosts. The details and level of support for an upgrade to ESXi 6.0 depend on the host to be upgraded and the upgrade method that you use. Verify support for the upgrade path from your current version of ESXi to the version to which you are upgrading. See VMware Product Interoperability Matrices at http://www.vmware.com/resources/compatibility/sim/interop_matrix.php.
You can upgrade a ESXi 5.x host, asynchronously released driver or other third-party customizations, interactive upgrade from CD or DVD, scripted upgrade, or upgrade with vSphere Update Manager. When you upgrade an ESXi 5.x host that has custom VIBs to version 6.0, the custom VIBs are migrated. See Upgrading Hosts That Have Third-Party Custom VIBs.
Methods supported for direct upgrade to ESXi 6.0 are:
- vSphere Update Manager.
- Interactive upgrade from CD, DVD, or USB drive.
- Scripted upgrade.
- vSphere Auto Deploy. If the ESXi 5.x host was deployed by using vSphere Auto Deploy, you can use vSphere Auto Deploy to reprovision the host with an ESXi 6.0 image.
- The esxcli command.

Question 38
What syntax needs to be entered into the Advanced Options box?
An administrator is performing a silent automatic update of VMware Tools on a Windows virtual machine. What syntax needs to be entered into the Advanced Options box?
A. /s /v "/qn" /l "c:\Windowsfilename.log"
B. /prefix=/usr/local,/usr/lib,/usr/doc /silent
C. --prefix=c:\Windows,c:\Vmtools /silent
D. /fs /v "/qn+" /l "c:\Windowsfilename.log"
Correct Answer: A
Explanation/Reference:
Explanation: Procedure

The VMware Tools label on the Summary tab changes to OK.

Question 39
Which three locations can the script reside?
An administrator is writing a kickstart script to upgrade an ESXi 6.x host. In which three locations can the script reside? (Choose three.)
A. NFS
B. USB
C. HTTP
D. TFTP
E. PXE
Correct Answer: ABC
Explanation/Reference:
Explanation: Scripted ESXi installation
Running a script is an efficient way to deploy multiple ESXi hosts with an unattended installation.
The installation script contains the configuration data for the ESXi hosts that you want to install. You can apply the script to all hosts that you want to have a similar configuration.

Notes:
The script must be created using supported commands. Ensure you consider all disks that are connected to the host at the time of installation to avoid inadvertently overwriting data. Disk names can vary from machine to machine, one of the settings that you may want to configure and double check in a script is the disk selection for the ESXi installation. The host installation script must be stored in a location that the host can access by FTP, HTTP, HTTPS, NFS, USB flash drive, or CD-ROM drive. The installation media can be mounted on the host locally, remotely, or through PXE boot.


Question 40
What does this command show?
An administrator is upgrading an ESXi host from 5.5 to 6.0 and runs the following command:
esxcli software vib list –rebooting-image
What does this command show?
A. VIBs active after a reboot.
B. VIBs that require a reboot.
C. VIBs that are in the boot image.
D. VIBs that are third-party.
Correct Answer: A
Explanation/Reference:
Install vCLI or deploy the vSphere Management Assistant (vMA) virtual machine. See Getting Started with vSphere Command-Line Interfaces. For troubleshooting, run esxcli commands in the ESXi Shell.
Procedure


Question 41
What is the expected effect on the stated device after running the command?
Refer to the Exhibit.

An administrator is configuring a storage device as shown in the Exhibit. What is the expected effect on the stated device after running the command?
A. I/O will rotate on all storage targets regardless of port group state.
B. I/O will rotate on all storage targets that are Active Optimized state only.
C. I/O will rotate on all storage targets that are Active Unoptimized state only.
D. I/O will rotate on all storage targets that are on Available Nodes only.
Correct Answer: B
Explanation/Reference:
Explanation:
Question 42
What does this indicate?
An administrator is upgrading an ESXi 5.5 host to ESXi 6.x and gets the following error:

MEMORY_SIZE

What does this indicate?
A. Insufficient memory on the ESXi host to complete the upgrade.
B. Insufficient memory for Auto Deploy to complete the upgrade.
C. Insufficient memory in vCenter Server to complete the upgrade.
D. Insufficient memory for Update Manager to complete the upgrade.

Correct Answer: A

Explanation/Reference:

A-) ESXi 6.0 requires the NX/XD bit to be enabled for the CPU in the BIOS.

ESXi requires a minimum of 4GB of physical RAM. It is recommended to provide at least 8 GB of RAM to run virtual machines in typical production environments.


Question 43
Which setting should be changed?
Refer to the Exhibit.

An administrator wishes to provide Load Balanced I/O for the device shown in the Exhibit.

To meet this requirement, which setting should be changed?
A. Storage Array Type Policy = VMW_NMP_RR
B. Path Selection Policy = Round Robin (VMware)
C. Storage Array Type Policy = VMW_SATP_RR
**I/O Control has several requirements and limitations.**

Datstores that are Storage I/O Control-enabled must be managed by a single vCenter Server system. Storage I/O Control is supported on Fibre Channel-connected and iSCSI-connected storage. NFS datastores and Raw Device Mapping (RDM) are not supported. Storage I/O Control does not support datastores with multiple extents. Before using Storage I/O Control on datastores that are backed by arrays with automated storage tiering capabilities, check the VMware Storage/SAN Compatibility Guide to verify whether your automated tiered storage array has been certified to be compatible with Storage I/O Control. Automated storage tiering is the ability of an array (or group of arrays) to migrate LUNs/volumes or parts of LUNs/volumes to different types of storage media (SSD, FC, SAS, SATA) based on user-set policies and current I/O patterns. No special certification is required for arrays that do not have these automatic migration/tiering features, including those that provide the ability to manually migrate data between different types of storage media.

**Explanation/Reference:**

Correct Answer: A

Correct Answer: ABC

Correct Answer: A

Correct Answer: A

Correct Answer: A

Correct Answer: A

Correct Answer: A

Correct Answer: A

Correct Answer: A

Correct Answer: A

Correct Answer: A

Correct Answer: A

Correct Answer: A

Correct Answer: A

Correct Answer: A

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Correct Answer: A

Correct Answer: A

Correct Answer: A

Correct Answer: A

Correct Answer: A
Question 47
What will be the result of selecting the highlighted device?
Refer to the Exhibit.

What will be the result of selecting the highlighted device?
A. Datastore will grow up to 200.01GB using the remaining free space on the device.
B. Datastore will add 200.01GB by adding the device as a second extent.
C. The device size can be expanded to be larger than 200.01 GB in size.
D. The device is not suitable for this operation.

Correct Answer: A
Explanation/Reference:
When you need to create new virtual machines on a datastore, or when the virtual machines running on this datastore require more space, you can dynamically increase the capacity of a VMFS datastore.(200 GB)
Use one of the following methods:
- Add a new extent. An extent is a partition on a storage device, or LUN. You can add up to 32 new extents of the same storage type to an existing VMFS datastore.
The spanned VMFS datastore can use any of all its extents at any time. It does not need to fill up a particular extent before using the next one.
- Grow an extent in an existing VMFS datastore, so that it fills the available adjacent capacity. Only extents with free space immediately after them are expandable.
https://kb.vmware.com/kb/1017662

Question 48
Which action would mitigate the issue?
An administrator observes that virtual machine storage activity on an ESXi 6.x host is negatively affecting virtual machine storage activity on another host that is accessing the same VMFS Datatstore.
Which action would mitigate the issue?
A. Enable Storage I/O Control.
B. Configure Storage DRS.
C. Enable the Dynamic Queue Depth Throttling option.
D. Configure the Disk.SchedNumReq Outstanding parameter.

Correct Answer: A
Explanation/Reference:
Enable Storage I/O Control. When you enable Storage I/O Control, ESX/ESXi monitors datastore latency and adjusts the I/O load sent to it, if datastore average latency exceeds the threshold. Select a datastore in the vSphere Client inventory and click the Configuration tab.
https://kb.vmware.com/kb/1022091

Question 49
Which two tasks does the Pluggable Storage Architecture (PSA) perform?
Which two tasks does the Pluggable Storage Architecture (PSA) perform? (Choose two.)
A. Handles I/O queueing to the logical devices.
B. Handles physical path discovery, but is not involved in the removal.
C. Handles physical path discovery and removal.
D. Handles I/O queueing to FC storage HBAs.

Correct Answer: AC
Explanation/Reference:
the PSA performs the following tasks:
- Loads and unloads multipathing plug-ins.
- Hides virtual machine specifics from a particular plug-in.
- Routes I/O requests for a specific logical device to the MPP managing that device.
- Handles I/O queueing to the logical devices.
- Implements logical device bandwidth sharing between virtual machines.
- Handles I/O queueing to the physical storage HBAs.
- Handles physical path discovery and removal.
- Provides logical device and physical path I/O statistics.

Question 50
Which two statements are true regarding Storage Multipathing Plug-Ins?
Which two statements are true regarding Storage Multipathing Plug-Ins? (Choose two.)
A. The default Path Selection Policy is VMW_PSP_MRU for iSCSI or FC devices.
B. The default Path Selection Policy is VMW_PSP_FIXED for iSCSI or FC devices.
C. VMW_PSP_MRU is typically selected for ALUA arrays by default.

D. VMW_PSP_FIXED is typically selected for ALUA arrays by default.

Correct Answer: BC

Explanation/Reference:

VMW_PSP_MRU

The host selects the path that it used most recently. When the path becomes unavailable, the host selects an alternative path. The host does not revert back to the original path when that path becomes available again. There is no preferred path setting with the MRU policy. MRU is the default policy for most active-passive storage devices.

VMW_PSP_FIXED

The host uses the designated preferred path, if it has been configured. Otherwise, it selects the first working path discovered at system boot time. If you want the host to use a particular preferred path, specify it manually. Fixed is the default policy for most active-active storage devices.

Note

If the host uses a default preferred path and the path's status turns to Dead, a new path is selected as preferred. However, if you explicitly designate the preferred path, it will remain preferred even when it becomes inaccessible.

Reference: https://pubs.vmware.com/vsphere-51/index.jsp?topic=%2Fcom.vmware.vsphere.storage.doc%2FGUID-B7AD0CA0-CBE2-4DB4-A22C-AD3232264257.html

Question 51

What is the command to list multipathing modules on an ESXi 6.x host?

A. esxcli storage core list plugin –plugin-class=MP
B. esxcli storage core list plugin –class-plugin=MP
C. esxcli storage core plugin list –plugin-class=MP
D. esxcli storage core plugin list –class-plugin=MP

Correct Answer: C

Explanation/Reference:


Question 52

Which two solutions require Physical Mode Raw Device Mapping (RDM)?

A. Direct access to the storage array device
B. Virtual Machine Snapshots
C. Hardware Acceleration
D. Guest Clustering across ESXi hosts

Correct Answer: AD

Explanation/Reference:

A - Note: RDM is not available for direct-attached block devices or certain RAID devices. You cannot map a disk partition as RDM. RDMs require the mapped device to be a whole LUN (storage array device)

D - Guest Clustering—— Physical mode is useful while running SAN management agents or other SCSI target-based software in the virtual machine. Physical mode also allows virtual-to-physical clustering for cost-effective high availability. Virtual Machine Snapshots are not available when the RDM is used in physical compatibility mode.


Question 53

Which statement is true for the Path Selection Plug-In VMW_PSP_MRU?

A. VMW_PSP_MRU is default for a majority of active-active and active-passive arrays.
B. VMW_PSP_MRU will remain on the selected path even if the state were to change.
C. VMW_PSP_MRU is recommended for Virtual SAN.
D. VMW_PSP_MRU will have no preferred path setting for the Plug-In.

Correct Answer: D

Explanation/Reference:

VMW_PSP_MRU

The host selects the path that it used most recently. When the path becomes unavailable, the host selects an alternative path. The host does not revert back to the original path when that path becomes available again. There is no preferred path setting with the MRU policy. MRU is the default policy for most active-passive storage devices.

Question 54

What is the expected result?
An administrator created a six node Virtual SAN cluster, created a fault domain, and moved three of the six nodes into that domain.
A node that is a member of the fault domain fails.
What is the expected result?
A. The remaining two fault domain members are treated as failed.
B. The remaining two fault domain members stay protected by the domain.
C. One of the non-member nodes will be automatically added to the fault domain.
D. VMware High Availability will restart virtual machines on remaining nodes in the domain.

Correct Answer: A
Explanation/Reference:

Definition: The number of host and device failures a virtual machine object can tolerate. For n failures tolerated, n+1 copies of the virtual machine object are created and 2*n+1 hosts contributing storage are required. When provisioning a virtual machine, if you do not choose a storage policy, Virtual SAN assigns this policy as the default virtual machine storage policy.

Default value is 1. Maximum value is 3. If fault domains are configured, 2*n+1 fault domains with hosts contributing capacity are required. A host, which is not part of any fault domain is considered as its own single host fault domain.

Default value is 1. Maximum value is 3. If you do not want Virtual SAN to tolerate a single mirror copy of virtual machine objects, you can specify the Number of failures to tolerate=0.

However, the host might experience unusual delays when entering maintenance mode. The delay occurs because Virtual SAN has to evacuate the host from the host for the maintenance operation to complete successfully. Setting the Number of failures to tolerate=0 means that your data is unprotected, and you might lose data when the Virtual SAN cluster encounters a device failure.

NOTE: When creating a new storage policy, if you do not specify any value for Number of failures to tolerate, by default, Virtual SAN creates a single mirror copy of the virtual machine objects and tolerates only one failure. However, in the event of a multiple component failures your data might be at risk.


Question 55

Where is a Virtual SAN Fault Domain configured?
Where is a Virtual SAN Fault Domain configured?
A. VMware Virtual SAN Cluster configuration
B. VMware High Availability Cluster configuration
C. Distributed Resource Scheduler configuration
D. Datacenter Advanced Settings configuration

Correct Answer: A
Explanation/Reference:

Procedure:
1. Navigate to the Virtual SAN cluster in the vSphere Web Client.
2. Click the Manage tab and click Settings.
3. Under Virtual SAN, click Fault Domains and Stretched Cluster.
4. Click the Create a new fault domain icon ( ).
5. Type the fault domain name.
6. From the Show drop-down menu, select Hosts not in fault domain to view the list of hosts that are not assigned to a fault domain or select Show All Hosts to view all hosts in the cluster.
7. Select one or more hosts to add to the fault domain.
8. Click OK.

The selected hosts appear in the fault domain


Question 56

Which two statements are true regarding Virtual SAN Fault Domains?
Which two statements are true regarding Virtual SAN Fault Domains? (Choose two.)
A. They enable Virtual SAN to tolerate the failure of an entire physical rack.
B. Virtual SAN ensures that no two replicas are provisioned on the same domain.
C. Virtual SAN ensures that all replicas are provisioned on the same domain.
D. They require VMware High Availability (HA) to ensure component distribution across domains.

Correct Answer: AB
Explanation/Reference:

Procedure: Managing Fault Domains in Virtual SAN Clusters
If your Virtual SAN cluster spans across multiple racks or blade server chassis in a data center and you want to make sure that your hosts are protected against rack or chassis failure, you can create fault domains and add one or more hosts to each fault domain.

A fault domain consists of one or more Virtual SAN hosts grouped together according to their physical location in the data center. When configured, fault domains enable Virtual SAN to tolerate failures of entire physical racks as well as failures of a single host, capacity device, network link or a network switch dedicated to a fault domain.


Question 57

Which two statements are true regarding iSCSI adapters?
Which two statements are true regarding iSCSI adapters? (Choose two.)
A. Software iSCSI adapters require vmkernel networking.
B. Independent Hardware iSCSI adapters offload processing from the ESXi host.
C. Dependent Hardware iSCSI adapters do not require vmkernel networking.
D. Independent Hardware iSCSI adapters require vmkernel networking.

Correct Answer: AB
Explanation/Reference:

Procedure: Software iSCSI Adapter
A software iSCSI adapter is a VMware code built into the VMkernel. It allows your host to connect to the iSCSI storage device through standard network adapters. The software iSCSI adapter handles iSCSI processing while communicating with the network adapter. With the software iSCSI adapter, you can use iSCSI technology without purchasing specialized hardware.
Hardware iSCSI Adapter

A hardware iSCSI adapter is a third-party adapter that offloads iSCSI and network processing from your host. Hardware iSCSI adapters are divided into categories.

Dependent Hardware iSCSI Adapter

Depends on VMware networking, and iSCSI configuration and management interfaces provided by VMware. This type of adapter can be a card that presents a standard network adapter and iSCSI offload functionality for the same port. The iSCSI offload functionality depends on the host’s network configuration to obtain the IP, MAC, and other parameters used for iSCSI sessions. An example of a dependent adapter is the iSCSI licensed Broadcom 5709 NIC.

Independent Hardware iSCSI Adapter

Implements its own networking and iSCSI configuration and management interfaces. An example of an independent hardware iSCSI adapter is a card that either presents only iSCSI offload functionality or iSCSI offload functionality and standard NIC functionality. The iSCSI offload functionality has independent configuration management that assigns the IP, MAC, and other parameters used for the iSCSI sessions. An example of a independent adapter is the QLogic QLA4052 adapter.

Hardware iSCSI adapters might need to be licensed. Otherwise, they will not appear in the client or vSphere CLI. Contact your vendor for licensing information.


Question 58

Which two conditions are required?

An administrator is configuring virtual machines to use Worldwide Port Names (WWPNs) to access the storage. Which two conditions are required? (Choose two.)

A. The switches in the fabric must be N-Port ID Virtualization aware.
B. The virtual machines must be using passthrough Raw Disk Mapping (RDMp).
C. The virtual machines must be using Virtual Machine Disk (VMDK).
D. The switches in the fabric must be Storage I/O Control aware.

Correct Answer: AB

Explanation/Reference:

Explanation: N-Port ID Virtualization

N-Port ID Virtualization (NPIV) is an ANSI T11 standard that describes how a single Fibre Channel HBA port can register with the fabric using several worldwide port names (WWPNs). This allows a fabric-attached N-port to claim multiple fabric addresses. Each address appears as a unique entity on the Fibre Channel fabric. How NPIV-Based LUN Access Works

NPIV enables a single FC HBA port to register several unique WWNs with the fabric, each of which can be assigned to an individual virtual machine. SAN objects, such as switches, HBAs, storage devices, or virtual machines can be assigned World Wide Name (WWN) identifiers. WWNs uniquely identify such objects in the Fibre Channel fabric. When virtual machines have WWN assignments, they use them for all RDM traffic, so the LUNs pointed to by any of the RDMs on the virtual machine must not be masked against its WWNs. When virtual machines do not have WWN assignments, they access storage LUNs with the WWNs of their host’s physical HBAs. By using NPIV, however, a SAN administrator can monitor and route storage access on a per virtual machine basis. The following section describes how this works.


Question 59

Which two statements are true regarding VMFS3 volumes in ESXi 6.x?

Which two statements are true regarding VMFS3 volumes in ESXi 6.x? (Choose two.)

A. Creation of VMFS3 volumes is unsupported.
B. Upgrading VMFS3 volumes to VMFS5 is supported.
C. Existing VMFS3 volumes are unsupported.
D. Upgrading VMFS3 volumes to VMFS5 is unsupported.

Correct Answer: AB

Explanation/Reference:

Explanation:
Question 60
Which three statements are correct regarding Fibre Channel over Ethernet (FCoE)?
A. The network switch must have Priority-based Flow Control (PFC) set to AUTO.
B. Each port on the FCoE card must reside on the same vSwitch.
C. Each port on the FCoE card must reside on a separate vSwitch.
D. The ESXi host will require a reboot after moving an FCoE card to a different vSwitch.

Correct Answer: ADE

Explanation/Reference:

Question 61
What are two use cases for Fibre Channel Zoning in a vSphere environment?
A. Increases the number of targets presented to an ESXi host.
B. Controls and isolates paths in a fabric.
C. Controls and isolates paths to an NFS share.
D. Can be used to separate different environments.

Correct Answer: BD

Explanation/Reference:
Zoning provides access control in the SAN topology. Zoning defines which HBAs can connect to which targets. When you configure a SAN by using zoning, the devices outside a zone are not visible to the devices inside the zone.

Zoning has the following effects:
- Reduces the number of targets and LUNs presented to a host.
- Controls and isolates paths in a fabric.
- Can prevent non-ESXi systems from accessing a particular storage system, and from possibly destroying VMFS data.
- Can be used to separate different environments, for example, a test from a production environment.


Question 62
Which two considerations should an administrator keep in mind when booting from Software Fiber Channel over Ethernet (FCoE)?
A. Software FCoE boot configuration can be changed from within ESXi.
B. Software FCoE boot firmware cannot export information in FBFT format.
C. Multipathing is not supported at pre-boot.
D. Boot LUN cannot be shared with other hosts even on shared storage.

Correct Answer: CD

Explanation/Reference:
You cannot change software FCoE boot configuration from within ESXi.
Accommodates vMotion. A VMkernel adapter for vMotion is required both on the source and the target hosts. The VMkernel adapters for vMotion should handle only vMotion traffic.

ESXi software, a vSphere Standard switch is created on the host together with a VMkernel adapter for management traffic. To provide redundancy, you can connect the vMotion traffic. For better performance, you can configure multiple NIC vMotion. To have multi NIC vMotion, you can dedicate two or more port groups to the vMotion traffic, respectively every port group must have a vMotion VMkernel adapter associated with it. Then you can connect one or more physical NICs to every port group. In this way, multiple physical NICs are used for vMotion, which results in greater bandwidth.

Promiscuous, so that ports on a private VLAN can communicate with ports configured as the primary VLAN. Ports on a secondary VLAN can be either Isolated, communicating only with promiscuous ports, or Community, communicating with both promiscuous ports and other ports on the same secondary VLAN.

Correct Answer: C

Follow these guidelines when you configure a network switch for software FCoE environment:

- When setting up your network environment to work with ESXi software FCoE, follow the guidelines and best practices that VMware offers.
- Network Switch Guidelines

- On the ports that communicate with your ESXi host, disable the Spanning Tree Protocol (STP). Having the STP enabled might delay the FCoE Initialization Protocol (FIP) response at the switch and cause an all paths down (APD) condition. The FIP is a protocol that FCoE uses to discover and initialize FCoE entities on the Ethernet.

Turn on Priority-based Flow Control (PFC) and set it to AUTO.

Make sure that you have a compatible firmware version on the FCoE switch.

Booting from FCoE LUNs is not supported. A boot LUN cannot be shared with other hosts even on shared storage.

Multipathing is not supported at pre-boot.

Coredump is not supported on any software FCoE LUNs, including the boot LUN.

Note

- vMotion network traffic is not encrypted. You should provision secure private networks for use by vMotion only.
- Provisioning traffic
- Handles the data that is transferred for virtual machine cold migration, cloning, and snapshot creation.
- IP storage traffic and discovery
- Handles the connection for storage types that use standard TCP/IP networks and depend on the VMkernel networking. Such storage types are software iSCSI, and NFS. If you have two or more physical NICs for iSCSI, you can configure iSCSI multi-pathing.

- vMotion traffic
- Accommodates vMotion. A VMkernel adapter for vMotion is required both on the source and the target hosts. The VMkernel adapters for vMotion should handle only the vMotion traffic. For better performance, you can configure multiple NIC vMotion. To have multi NIC vMotion, you can dedicate two or more port groups to the vMotion traffic, respectively every port group must have a vMotion VMkernel adapter associated with it. Then you can connect one or more physical NICs to every port group. In this way, multiple physical NICs are used for vMotion, which results in greater bandwidth.

- vSphere Custom traffic
- Handles the connection for storage types that use standard TCP/IP networks and depend on the VMkernel networking. Such storage types are software iSCSI, and NFS.
Question 66
What are two limitations of Link Aggregation Control Protocol (LACP) on a vSphere Distributed Switch?
A. IP Hash load balancing is not supported.
B. Software iSCSI multipathing is not compatible.
C. Link Status Network failover detection must be disabled.
D. It does not support configuration through Host Profiles.
Correct Answer: BD
Explanation/Reference:
LACP limitations on a vSphere Distributed Switch
Link Aggregation Control Protocol (LACP) on a vSphere distributed switch allows network devices to negotiate automatic bundling of links by sending LACP packets to a peer. However, there are some limitations when using LACP with a vSphere distributed switch.
- LACP only works with IP Hash load balancing and Link Status Network failover detection.
- LACP is not compatible with iSCSI software multipathing.
- LACP only supports one LACP group per distributed switch, and only one LACP group per host.
- LACP settings do not exist in host profiles.
- LACP between two nested ESXi hosts is not possible.
- LACP does not work with port mirroring.
Reference:

Question 67
Which two features are deprecated in Network I/O Control 3 (NIOC3)?
A. Class Of Service (COS) Tagging
B. Bandwidth Allocation
C. User-defined network resource pools
D. Admission control
Correct Answer: AC
Explanation/Reference:
Explanation: The upgrade of a NIOC to version 3 is disruptive. Certain functionality is available only in NIOC v2 and is removed during the upgrade to version 3:
- User-defined network resource pools including all associations between them and existing distributed port groups
You can preserve certain resource allocation settings by transferring the shares from the user-defined network resource pools to shares for individual network adapters.
- Existing associations between ports and user-defined network resource pools
In Network I/O Control version 3, you cannot associate an individual distributed port to a network resource pool that is different from the pool assigned to the parent port group.
- CoS tagging of the traffic that is associated with a network resource pool
Network I/O Control version 3 does not support marking traffic that has higher QoS demands with CoS tags. After the upgrade, to restore CoS tagging of traffic that was associated with a user-defined network resource pool, use the traffic filtering and marking networking policy.
Reference: http://www.virten.net/2015/09/vcp6-delta-part-7-network-enhancements/

Question 68
What can be determined by this output?
An administrator runs the command esxcli storage core device list and sees the following output:

mpx.vmhba1:C0:T0:L0 Display Name: RAID 5 (mpx.vmhba1:C0:T0:L0) Has Settable Display Name: false SizeE: 40960 Device Type: Direct-Access
Multipath Plugin: NMP Devfs Path: /vmfs/devices/disks/mpx.vmhba1:C0:T0:L0 Status: off Is Local: true

Correct Answer: B
Explanation/Reference:
Explanation: Symptoms
Correct Answer: BD
Correct Answer: AC
Explanation/Reference:
Explanation: The upgrade of a NIOC to version 3 is disruptive. Certain functionality is available only in NIOC v2 and is removed during the upgrade to version 3:
- LACP does not work with port mirroring.
- LACP settings do not exist in host profiles.
- LACP between two nested ESXi hosts is not possible.
- LACP does not work with port mirroring.
Reference:

Question 69
What are two limitations of Link Aggregation Control Protocol (LACP) on a vSphere Distributed Switch?
A. It does not support configuration through Host Profiles.
B. Software iSCSI multipathing is not compatible.
C. Link Status Network failover detection must be disabled.
D. It does not support load balancing through Host Profiles.
Correct Answer: BD
Explanation/Reference:
Link Aggregation Control Protocol (LACP) on a vSphere distributed switch allows network devices to negotiate automatic bundling of links by sending LACP packets to a peer. However, there are some limitations when using LACP with a vSphere distributed switch.
- LACP only works with IP Hash load balancing and Link Status Network failover detection.
- LACP is not compatible with iSCSI software multipathing.
- LACP only supports one LACP group per distributed switch, and only one LACP group per host.
- LACP settings do not exist in host profiles.
- LACP between two nested ESXi hosts is not possible.
- LACP does not work with port mirroring.
Reference:
Possible sense data: 0x5 0x25 0x0

cpu2:854568) WARNING: ScsiDeviceIO: 7330: READ CAPACITY on device "naa.60a98000572d54724a34642d71325763" from Plugin "NMP" failed. I/O error

cpu2:854568) ScsiDevice: 1238: Permanently inaccessible device :naa.60a98000572d54724a34642d71325763 has no more open connections. It is now safe to

umount datastores (if any) and delete the device.

cpu2:854577) WARNING: NMP: nmpDeviceAttemptFailover:562: Retry world restore device "naa.60a98000572d54724a34642d71325763" -- no more commands to
retry


Question 69
What is the most likely outcome of this action?
Refer to the Exhibit.

An administrator is changing the settings on a vSphere Distributed Switch (vDS). During this process, the ESXi Management IP address is set to an address which

A. The host will disconnect from the vCenter Server and remain disconnected.
B. The host will automatically detect the communication issue and revert the change.
C. The host will stay connected with the change, but show an alert.
D. The host will disconnect and migrate the vDS portgroup to a standard switch.

Correct Answer: B

Explanation/Reference:

Procedure
1. Connect to the DCUI of the host.
2. From the Network Restore Options menu, select Restore vDS.
3. Configure the uplinks and optionally the VLAN for the management network.
4. Apply the configuration.

The DCUI creates a local ephemeral port and applies the values you provided for the VLAN and uplinks. The DCUI moves the VMkernel adapter for the management

Next Steps:
After the connection of the host to vCenter Server is restored, correct the configuration of the distributed port group and re-add the VMkernel adapter to the group.

For information about networking rollback, recovery, and restore, see the vSphere Networking documentation: Wait until vCenter Server applies the settings within

the next 24 hours.

Question 70
What is a possible solution?
A user notifies an administrator that Content Libraries are not visible.
What is a possible solution?
A. Assign the user the read-only role at the global permission level.
B. Assign the user the read-only role at the vCenter Server root level.
C. Assign the user the read-only role at the vCenter Server data center level.
D. Assign the user the read-only role at the vCenter Server cluster level.

Correct Answer: A

Explanation/Reference:

Explanation:
When a Content Library is deleted, what happens to the files contained on the backing storage?

A. The files will be unchanged.
B. The files will be deleted.
C. The files will remain and be marked as orphaned.
D. The containing folder will be marked as orphaned.

Correct Answer: B

Explanation/Reference:
Delete a Content Library
When you no longer need a content library, you can invoke the delete method on either the LocalLibrary or the SubscribedLibraryService depending on the library type.
Procedure
1. Access the SubscribedLibrary or the LocalLibrary service by using the vCloud Suite Endpoint.
2. Retrieve the library ID you want to delete.
3. Call the delete function on the library service and pass the library ID as argument.
All library items cached on the storage backing are removed asynchronously. If this operation fails, you must manually remove the content of the library.

Which three connection types are supported between a remote site and vCloud Air?

A. Secure Internet Connectivity
B. Private Connect
C. Direct Connect
D. Internet Connectivity
E. Secure VPN

Correct Answer: ACE

Explanation/Reference:
VPN and Remote Networks

Another aspect of network security is the connectivity you establish between your on-premise data center and the vCloud Air cloud. Based on the workload, a virtual machine can have various connectivity needs.

vCloud Air supports Internet, secure VPN, and Direct Connect secure connections between your remote site and the vCloud Air cloud.

Each type of connection has different security features:
- Secure Internet connectivity with firewall rules (a gateway service)
  See “About Firewall Rules,” on page 31 in this guide for information.
- Secure VPN:
  - IPsec VPN—secure inter-site VPN
  See “About IPsec VPN,” on page 33 and “Set up an IPsec VPN Connection to a Remote Site,” on page 35 in this guide for information.
  - SSL VPN (Data Center Extension)—extension of your existing IP address range from your on-premise data center into the cloud with Layer 2 extension
  See “SSL VPN for Data Center Extension,” on page 36 in this guide for information.
- Direct Connect—private connectivity providing a dedicated, connection (ideal for regulated applications)

Question 73
Which replicated objects can be directly monitored and managed?

An administrator subscribes to the vCloud Air Disaster Recovery service. Which replicated objects can be directly monitored and managed?

A. Virtual machine Snapshots
B. vApps
C. Virtual machines
D. ESXi Hosts

Correct Answer: C

Explanation/Reference:
VMware provides a disaster recovery service that lets you protect your workloads from a disaster or disruptive event by replicating them to the cloud. You can replicate virtual machines from your vSphere-based source site to vCloud Air, and recover and use the replicated virtual machines in the cloud if the source site is unavailable.

The Disaster Recovery service is based on vSphere Replication, an extension to VMware vSphere that provides hypervisor-based virtual machine replication and recovery.

You use vSphere Replication at your source site to configure your environment and replicate virtual machines to vCloud Air. You can use vSphere Replication, the vCloud Air portal, or the vCloud Air plug-in to monitor and manage the replicated virtual machines in the cloud.

Reference:

Question 74
What is the correct value to configure for the Domain alias?

Refer to the Exhibit.

An administrator is adding an Active Directory over LDAP Identity Source for vCenter Single Sign-On, as indicated in the Exhibit. What is the correct value to configure for the Domain alias?

A. The domain’s NetBIOS name.
B. The fully qualified domain name.
C. vsphere.local
D. A user defined label.

Correct Answer: A
**Question 75**

Which two actions will accomplish this?

An administrator needs to create an Integrated Windows Authentication (IWA) Identity Source on a newly deployed vCenter Server Appliance (VCSA).

Which two actions will accomplish this? (Choose two.)

A. Use a Service Principal Name (SPN) to configure the Identity Source.
B. Use a Domain administrator to configure the Identity Source.
C. Join the VCSA to Active Directory and configure the Identity Source with a Machine Account.
D. Create a computer account in Active Directory for the VCSA and configure the Identity Source.

**Correct Answer:** AC

**Explanation/Reference:**

A) Configuring Active Directory as Identity Source for use with SSO 6.0 can be done in 2 ways
   
a. Use the Machine Account (Any AD Account) b. Use with Service Principal Name
   
b. Prerequisites: 1. A domain account with domain administrator privileges is required when assigning a SPN to an account. 2. A domain account with domain user privileges is a minimum requirement for the account to be used as the SPN account.


C) VCSA- If you want to configure permissions for users and groups from an Active Directory domain to access the vCenter Server components, you must join its associated embedded or external Platform Services Controller instance to the Active Directory domain.


**Question 76**

What advanced feature can be added to the VM configuration file to reduce memory overhead?

An administrator wants to reduce the memory overhead for a 3D graphics enabled virtual machine (VM).

What advanced feature can be added to the VM configuration file to reduce memory overhead?

A. vga.vgaOnly=TRUE
B. vga.vgaEnable=FALSE
C. svmEnabled=FALSE
D. svmDisable=TRUE

**Correct Answer:** A

**Explanation/Reference:**

Reduce Memory Overhead for Virtual machines with 3D graphics Option

Virtual machines with the 3D graphics option enabled can have higher memory consumption than other virtual machines. You can reduce the memory overhead by editing the configuration file (.vmx file) of your virtual machines and disabling certain memory related settings. Reducing the memory overhead of virtual machines can help you increase the number of virtual machines per host.

Prerequisites

Verify that your virtual machines are using hardware version 10 or later.

Procedure

1. Shut down the virtual machine on which the 3D graphics option is enabled.
2. Disable the Accelerate 3D Graphics option.
3. Upgrade your ESXi host to use the features available in hardware version 10 or later.
4. Set the maximum size of your display to the size you need.
5. Locate the configuration file (.vmx) of your virtual machine.
6. Open the virtual machine configuration file in a text editor and add the line, vga.vgaOnly=TRUE.
7. Save the changes and exit the text editor.
8. Power on your virtual machine and check the display console.

**Reference:**


**Question 77**

What is the maximum number of virtual CPUs that the virtual machine can be allocated?

An administrator is building a large virtual machine that will require as many vCPUs as the host can support. An ESXi 6.x host has these specifications:

Six 32-core Intel Xeon Processors
256 GB of Memory
512 GB Local disk space using VMFS5

What is the maximum number of virtual CPUs that the virtual machine can be allocated?

A. 64
B. 128
C. 192
D. 256

**Correct Answer:** B

**Explanation/Reference:**

The virtual machine maximums represent limits applicable to compute, memory, storage virtual adapters and devices, network virtual adapters, virtual peripheral ports, and graphics video device.

**Table 2.1: Virtual Machine Maximums**

<table>
<thead>
<tr>
<th>Item</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPUs</td>
<td>128</td>
</tr>
</tbody>
</table>

**Reference:**

Question 78
Which two features are available for virtual machines configured with DirectPath I/O?
Which two features are available for virtual machines configured with DirectPath I/O? (Choose two.)
A. Fault Tolerance  
B. Suspend and Resume  
C. Virtual Symmetric Multi-Processing (vSMP)  
D. Virtual Non-Uniform Memory Access (vNUMA)
Correct Answer: CD
Explanation/Reference:
DirectPath I/O allows virtual machine access to physical PCI functions on platforms with an I/O Memory Management Unit. The following features are unavailable for virtual machines configured with DirectPath:
- Hot adding and removing of virtual devices
- Suspend and resume
- Record and replay
- Fault tolerance
- High availability
- DRS (limited availability. The virtual machine can be part of a cluster, but cannot migrate across hosts)
- Snapshots

Question 79
What information from the published library will they need in order to complete the subscription?
An administrator is creating a new Content Library. It will subscribe to another remote Content Library without authentication enabled.
What information from the published library will they need in order to complete the subscription?
A. Subscription URL  
B. A security password from the publishing Content Library  
C. Publisher's Items.json file  
D. Username from the publishing Content Library
Correct Answer: A
Explanation/Reference:
Subscribed content library
Creates a content library, which is subscribed to a published content library. You can only sync the subscribed library with the published library to see up-to-date content, but you cannot add or remove content from the subscribed library. Only an administrator of the published library can add, modify, and remove contents from the published library.

Question 80
What is the lowest level of the permission hierarchy that this role can be granted to the user and still allow them to create a Content Library?
An administrator is assigning a user the Content Library administrator role. The user will only be creating the library for a single vCenter Server.
What is the lowest level of the permission hierarchy that this role can be granted to the user and still allow them to create a Content Library?
A. Global  
B. Datacenter Folder  
C. Virtual Center  
D. Datacenter
Correct Answer: A
Explanation/Reference:

Question 81
Which VMware Single Sign-On component issues Security Assertion Markup Language (SAML) tokens?
Which VMware Single Sign-On component issues Security Assertion Markup Language (SAML) tokens?
A. VMware Security Token Service  
B. Administration Server  
C. VMware Directory Service  
D. Identity Management Service
Correct Answer: A
Explanation/Reference:
The STS service issues Security Assertion Markup Language (SAML) tokens. These security tokens represent the identity of a user in one of the identity source types supported by vCenter Single Sign-On. The SAML tokens allow both human users and solution users who authenticate successfully to vCenter Single Sign-On to use any vCenter service that vCenter Single Sign-On supports without authenticating again to each service.

Question 82
Which two are valid Identity Sources when configuring vCenter Single Sign-On?
Which two are valid Identity Sources when configuring vCenter Single Sign-On? (Choose two.)
A. Radius  
B. NIS  
C. OpenID.DAP  
D. LocalOS
Correct Answer: CD
Question 83
Which Platform Service Controller Password Policy determines the number of days a password can exist before the user must change it?
A. Maximum Lifetime
B. Password Age
C. Maximum Days
D. Password Lifetime
Correct Answer: A

Explanation/Reference:
Configure SSO policies:
- Password Policy: You can configure the following parameters:
  - Description – Password policy description. Required.
  - Maximum lifetime – Maximum number of days that a password can exist before it has to be changed.
  - Minimum length – Minimum number of characters required in the password.
  - Character requirements – Minimum number of different character types required in the password.
  - Identical adjacent characters – Maximum number of identical adjacent characters allowed in the password.
Reference:

Question 84
Which time measurement is used for the value?
An administrator is configuring the clock tolerance for the Single Sign-On token configuration policy and wants to define the time skew tolerance between a client and the domain controller clock.
Which time measurement is used for the value?
A. Milliseconds
B. Seconds
C. Minutes
D. Hours
Correct Answer: A

Explanation/Reference:
Time difference, in milliseconds, that vCenter Single Sign-On tolerates between a client clock and the domain controller clock. If the time difference is greater than the specified value, vCenter Single Sign-On declares the token invalid.
Reference:

Question 85
Which three options are available for replacing vCenter Server Security Certificates?
Which three options are available for replacing vCenter Server Security Certificates? (Choose three.)
A. Replace with Certificates signed by the VMware Certificate Authority.
B. Make VMware Certificate Authority an Intermediate Certificate Authority.
C. Do not use VMware Certificate Authority, provision your own Certificates.
D. Use SSL Thumbprint mode.
E. Replace all VMware Certificate Authority issued Certificates with self-signed Certificates.
Correct Answer: ABD

Explanation/Reference:
ESXi Certificate Replacement
For ESXi hosts, you can change certificate provisioning behavior from the vSphere Web Client.
Question 86
Which two statements would explain why users cannot login to the vSphere Web Client?

When attempting to log in with the vSphere Web Client, users have reported the error:
Incorrect Username/Password

The administrator has configured the Platform Services Controller Identity Source as:
Type: Active Directory as an LDAP Server
Domain: vmware.com
Alias: VMWARE
Default Domain: Yes

Which two statements would explain why users cannot login to the vSphere Web Client? (Choose two.)

A. Users are typing the password incorrectly.
B. Users are in a forest that has 1-way trust.
C. Users are in a forest that has 2-way trust.
D. Users are logging into vCenter Server with incorrect permissions.

Correct Answer: AB

Explanation/Reference:
A-) As written in the KB 2034608 (Unlocking and resetting the VMware vCenter Single Sign-On administrator password) you can have this problem also in a case of multiple login failure (by default the account get locked if the password is incorrectly entered three times).

For VMware Platform Services Controller 6.0, if you want just to unlock the password:
FAQ'S: VMware Platform Services Controller (PSC) for vSphere 6.0. The PSC contains common infrastructure services such as vCenter Single Sign-On (SSO), VMware Certificate Authority (VMCA), licensing, and server reservations and registrations services. https://kb.vmware.com/selfservice/microsites/search.do?language=en_US&cmd=displayKC&externalId=2113115

B-) Depending on the type of Microsoft Active Directory trusts used in an environment, some features, such as Active Directory user querying and user authentication, may be limited from the vSphere Client and vSphere Web Client. For more info: https://kb.vmware.com/selfservice/microsites/search.do?language=en_US&cmd=displayKC&externalId=2064250

Question 87
Which group in the vsphere.local domain will have administrator privileges for the VMware Certificate Authority (VMCA)?

Which group in the vsphere.local domain will have administrator privileges for the VMware Certificate Authority (VMCA)?

A. SolutionUsers
B. CAAdmins
C. DCAAdmins
D. SystemConfiguration.Administrators

Correct Answer: B

Explanation/Reference:
Members of the CAAdmins group have administrator privileges for VMCA. Adding members to these groups is not usually recommended.

Reference:

Question 88
Which advanced parameter should be applied to the virtual machines?

An administrator has recently audited the environment and found numerous virtual machines with sensitive data written to the configuration files.

To prevent this in the future, which advanced parameter should be applied to the virtual machines?

A. isolation.tools.setinfo.disable = true
B. isolation.tools.setinfo.enable = true
C. isolation.tools.setinfo.disable = false
D. isolation.tools.setinfo.enable = false

Correct Answer: A

Explanation/Reference:
Limit SETINFO Messages

Now if you read through the hardening guide, you'll come across a section that covers informational messages, otherwise known as SETINFO messages. Now my understanding is that currently there is no limitation on the amount of data that can be sent from VMware tools to the host, so you can imagine it wouldn't be hard to write some code to continuously send huge amounts of data. So lets looks at how to limit this to something more acceptable as per the hardening guide.

tools.setinfo.sizeLimit = "1048576"

Now you can actually totally disable this using the following

isolation.tools.setinfo disable = "true"

But this stops the Virtual Center client from displaying any information about the Virtual Machine, e.g. IP Address, DNS information. So for a production environment I would recommend setting a limit rather than totally disabling.

Reference:

Question 89
Which two statements are correct regarding vSphere certificates?

Which two statements are correct regarding vSphere certificates? (Choose two.)

A. ESXi host upgrades do not preserve the SSL certificate and reissue one from the VMware Certificate Authority (VMCA).
B. ESXi host upgrades preserve the existing SSL certificate.
C. ESXi hosts have assigned SSL certificates from the VMware Certificate Authority (VMCA) during install.
D. ESXi hosts have self-signed SSL certificates by default.

Correct Answer: BC

Explanation/Reference:

B-) ESXi hosts that are upgraded from vSphere 5.x to vSphere 6.0 will continue using their Certificate Authority signed certificates if they were replaced in the previous versions. However, ESXi 5.x hosts that were running self-signed certificates and then upgraded to vSphere 6.0 will have their certificates regenerated using VMware-signed.

For more info link:

C-) In vSphere 6.0, VMware tried to address SSL certificates in a different manner. It introduced a new component called the "Platform Services Controller." The Platform Services Controller includes a fully-functional certificate authority, called the VMware Certification Authority (VMCA), that automatically manages the certificates used in vCenter and the ESXi hosts.

There are two steps to complete. First, you need to retrieve the root certificate from vCenter and convert it into something usable. Once you've done that, you need to deploy it as a Trusted Root Certificate. The easiest way to do this with multiple computers is to use Group Policy. Here are the steps to retrieve the certificate:

1. Open your Web browser.
3. In the lower right-hand corner, click the Download Trusted Root CA link.—— for more:
https://pubs.vmware.com/vsphere-60/index.jsp?doc/GUID-C91AFFAD-A830-4BBE-BF7C-F775A34D03F1.html?resultof=%2522%2520%2573%2573%256c%2522%2520%252522%252522%252520

Question 90

Which two actions should the administrator take to secure these virtual machines?
An administrator has been instructed to secure existing virtual machines in vCenter Server.

Which two actions should the administrator take to secure these virtual machines? (Choose two.)
A. Disable native remote management services
B. Restrict Remote Console access
C. Use Independent Non-Persistent virtual disks
D. Prevent use of Independent Non-Persistent virtual disks

Correct Answer: BD

Explanation/Reference:

Reference:

Question 91

Which Advanced Setting should be created for the vCenter Server to change the expiration policy of the vpxuser password?

Which Advanced Setting should be created for the vCenter Server to change the expiration policy of the vpxuser password?
A. VimPasswordExpirationInDays
B. VimExpirationPasswordDays

Reference:
C. VimPassExpirationInDays
D. VimPasswordRefreshDays

Correct Answer: A

Explanation/Reference:

Reference:

Question 92
Which password meets ESXi 6.x host password requirements?

A. 8kMVnn2x!
B. zNgtnJBA2
C. Nvgt34kn44
D. !b74wr

Correct Answer: A

Explanation/Reference:

ESXi Passwords

By default, ESXi enforces requirements for user passwords. Your user password must meet the following length requirements.

- Passwords containing characters from one or two character classes must be at least eight characters long.
- Passwords containing characters from three character classes must be at least seven characters long.
- Passwords containing characters from all four character classes must be at least six characters long.

When you create a password, include a mix of characters from four character classes: lowercase letters, uppercase letters, numbers, and special characters such as underscore or dash.

The password cannot contain the words root, admin, or administrator in any form.

Reference:

Question 93
Which advanced options must be set to allow this passphrase configuration to be used?

An administrator would like to use a passphrase for their ESXi 6.x hosts which has these characteristics:

Minimum of 21 characters
Minimum of 2 words
Which advanced options must be set to allow this passphrase configuration to be used?

A. retry=3 min=disabled, disabled, 7, 21, 7 passphrase=2
B. retry=3 min=disabled, disabled, 21, 7, 7 passphrase=2
C. retry=3 min=disabled, disabled, 2, 21, 7
D. retry=3 min=disabled, disabled, 21, 21, 2

Correct Answer: B

Explanation/Reference:

B-) ESXi Passwords and Account Lockout

For ESXi hosts, you have to use a password with predefined requirements. You can change the required length and character class requirement or allow pass phrases using the Security.PasswordQualityControl advanced option. ESXi uses the Linux PAM module pam_passwdqc for password management and control. See the manpages for pam_passwdqc for detailed information.

ESXi Passwords: ESXi enforces password requirements for direct access from the Direct Console User Interface, the ESXi Shell, SSH, or the vSphere Client. When you create a password, include a mix of characters from four character classes: lowercase letters, uppercase letters, numbers, and special characters such as underscore or dash. (link: https://pubs.vmware.com/vsphere-60/index.jsp?topic=%2Fcom.vmware.vsphere.security.doc%2FGUID-DC96FFDB-F3F2-43EC-8C73-05ACDAE6BE43.html)

Question 94
Which two advanced features should be disabled for virtual machines that are only hosted on a vSphere system?

Which two advanced features should be disabled for virtual machines that are only hosted on a vSphere system? (Choose two.)

A. isolation.tools.unify.push.update.disable
B. isolation.tools.ghi.launchmenu.change
C. isolation.tools.blv.disable
D. isolation.tools.hgfsServerSet.enable

Correct Answer: AB

Explanation/Reference:
Disable Unexposed Features
VMware virtual machines are designed to work on both vSphere systems and hosted virtualization platforms such as Workstation and Fusion. Certain VMX parameters do not need to be enabled when you run a virtual machine on a vSphere system. Disable these parameters to reduce the potential for vulnerabilities.

Prerequisites
Turn off the virtual machine.

Procedure

Reference:

Question 95
Which two settings should an administrator set to false?
To reduce the attack vectors for a virtual machine, which two settings should an administrator set to false? (Choose two.)
A. ideX:Y.present
B. serial.present
C. ideX:Y.enabled
D. serial.enabled

Correct Answer: AB

Explanation/Reference:
Removing Unnecessary Hardware Devices
Any enabled or connected device represents a potential attack channel. Users and processes without privileges on a virtual machine can connect or disconnect hardware devices, such as network adapters and CD-ROM drives. Attackers can use this capability to breach virtual machine security.

Removing unnecessary hardware devices can help prevent attacks.
Use the following guidelines to increase virtual machine security:
Ensure that unauthorized devices are not connected and remove any unneeded or unused hardware devices.
Disable unnecessary virtual devices from within a virtual machine. An attacker with access to a virtual machine can connect a disconnected CD-ROM drive and access sensitive information on the media left in the drive, or disconnect a network adapter to isolate the virtual machine from its network, resulting in a denial of service.
Ensure that no device is connected to a virtual machine if it is not required. Serial and parallel ports are rarely used for virtual machines in a datacenter environment, and CD/DVD drives are usually connected only temporarily during software installation.
For less commonly used devices that are not required, either the parameter should not be present or its value must be false. Ensure that the following parameters are either not present or set to false unless the device is required.
Question 96
Which two groups of settings should be reviewed when attempting to increase the security of virtual machines (VMs)?
A. Disable hardware devices
B. Disable unexposed features
C. Disable VMtools devices
D. Disable VM Template features
Correct Answer: AB
Explanation/Reference:
Securing Virtual Machines
The guest operating system that runs in the virtual machine is subject to the same security risks as a physical system. Secure virtual machines as you would secure physical machines.

Question 97
Which two conditions should be considered when planning this configuration?
An administrator wants to configure an ESXi 6.x host to use Active Directory (AD) to manage users and groups. The AD domain group ESX Admins is planned for administrative access to the host.
A. If administrative access for ESX Admins is not required, this setting can be altered.
B. The users in ESX Admins are not restricted by Lockdown Mode.
C. An ESXi host provisioned with Auto Deploy cannot store AD credentials.
D. The users in ESX Admins are granted administrative privileges in vCenter Server.
Correct Answer: AC
Explanation/Reference:
Configure a Host to Use Active Directory
You can configure a host to use a directory service such as Active Directory to manage users and groups. When you add an ESXi host to Active Directory the DOMAINS group ESX Admins is assigned full administrative access to the host if it exists. If you do not want to make full administrative access available, see VMware Knowledge Base article 1025569 for a workaround.

Question 98
Which two steps should be taken to mitigate security risks associated with this configuration?
A common root user account has been configured for a group of ESXi 6.x hosts.
A. Remove the root user account from the ESXi host.
B. Set a complex password for the root account and limit its use.
C. Use ESXi Active Directory capabilities to assign users the administrator role.
D. Use Lockdown mode to restrict root account access.
Correct Answer: BC
Explanation/Reference:
root User Privileges
By default each ESXi host has a single root user account with the Administrator role. That root user account can be used for local administration and to connect the host to vCenter Server. This common root account can make it easier to break into an ESXi host and make it harder to match actions to a specific administrator.
Set a highly complex password for the root account and limit the use of the root account, for example, for use when adding a host to vCenter Server. Do not remove the root account. In vSphere 5.1 and later, only the root user and no other named user with the Administrator role is permitted to add a host to vCenter Server.
**Best practice is to ensure that any account with the Administrator role on an ESXi host is assigned to a specific user with a named account.**

Use ESXi Active Directory capabilities, which allow you to manage Active Directory credentials if possible.


**Question 99**

Which two statements are true given this configuration?

Lockdown Mode has been enabled on an ESXi 6.x host and users are restricted from logging into the Direct Console User Interface (DCUI).

Which two statements are true given this configuration? (Choose two.)

A. A user granted administrative privileges in the Exception User list can login.
B. A user defined in the DCUI.Access without administrative privileges can login.
C. A user defined in the ESXi Admins domain group can login.
D. A user set to the vCenter Administrator role can login.

Correct Answer: AB

Explanation/Reference:

- **Explanation:**
  - In normal lockdown mode the DCUI service is not stopped. If the connection to the vCenter Server is lost and access through the vSphere Web Client is no longer available, privileged accounts can log in to the ESXi host’s Direct Console Interface and exit lockdown mode. Only these accounts can access the Direct Console User Interface:
    - Accounts in the Exception User list for lockdown mode who have administrative privileges on the host. The Exception Users list is meant for service accounts that perform very specific tasks. Adding ESXi administrators to this list defeats the purpose of lockdown mode.
    - Users defined in the DCUI.Access advanced option for the host. This option is for emergency access to the Direct Console Interface in case the connection to vCenter Server is lost. These users do not require administrative privileges on the host.


**Question 100**

Which action should an administrator perform to allow ESXi Shell or SSH access for users with administrator privileges?

Strict Lockdown Mode has been enabled on an ESXi host.

Which action should an administrator perform to allow ESXi Shell or SSH access for users with administrator privileges?

A. Grant the users the administrator role and enable the service.
B. Add the users to Exception Users and enable the service.
C. No action can be taken, Strict Lockdown Mode prevents direct access.
D. Add the users to vsphere.local and enable the service.

Correct Answer: B

Explanation/Reference:

- **Explanation:**
  - In strict lockdown mode the DCUI service is stopped. If the connection to the vCenter Server is lost and the vSphere Web Client is no longer available, the ESXi host becomes unavailable unless the ESXi Shell and SSH services are enabled and Exception Users are defined. If you cannot restore the connection to the vCenter Server system, you have to reinstall the host.


**Question 101**

Which three options are available for ESXi Certificate Replacement?

Which three options are available for ESXi Certificate Replacement? (Choose three.)

A. VMware Certificate Authority mode
B. Custom Certificate Authority mode
C. Thumbprint mode
D. Hybrid Deployment
E. VMware Certificate Endpoint Authority Mode

Correct Answer: ABC

Explanation/Reference:

**Explanation:**

**ESXi Certificate Replacement**

For ESXi hosts, you can change certificate provisioning behavior from the vSphere Web Client.


**Question 102**

Which three services can be enabled/disabled in the Security Profile for an ESXi host?

Which three services can be enabled/disabled in the Security Profile for an ESXi host? (Choose three.)

A. CIM Server
B. Single Sign-On
C. Direct Console UI
D. Syslog Server
E. vSphere Web Access
**Question 103**

Which two steps would need to be performed next?

An administrator would like to use the VMware Certificate Authority (VMCA) as an Intermediate Certificate Authority (CA). The first two steps performed are:

1. Replace the Root Certificate
2. Replace Machine Certificates (Intermediate CA)

Which two steps would need to be performed next? (Choose two.)

A. Replace Solution User Certificates (Intermediate CA)
B. Replace the VMware Directory Service Certificate (Intermediate CA)
C. Replace the VMware Directory Service Certificate
D. Replace Solution User Certificates

Correct Answer: AC

**Explanation/Reference:**

Use VMCA as an Intermediate Certificate Authority

You can replace the VMCA root certificate with a third-party CA-signed certificate that includes VMCA in the certificate chain. Going forward, all certificates that VMCA generates include the full chain. You can replace existing certificates with newly generated certificates. This approach combines the security of third-party CA-signed certificate with the convenience of automated certificate management.

**Procedure**

1. **Replace the Root Certificate (Intermediate CA)**
   - The first step in replacing the VMCA certificates with custom certificates is generating a CSR and adding the certificate that is returned to VMCA as a root certificate.

2. **Replace Machine SSL Certificates (Intermediate CA)**
   - After you have received the signed certificate from the CA and made it the VMCA root certificate, you can replace all machine SSL certificates.

3. **Replace Solution User Certificates (Intermediate CA)**
   - After you replace the machine SSL certificates, you can replace the solution user certificates.

4. **Replace the VMware Directory Service Certificate**
   - If you decide to use a new VMCA root certificate, and you unpublish the VMCA root certificate that was used when you provisioned your environment, you must replace the machine SSL certificates, solution user certificates, and certificates for some internal services.

5. **Replace the VMware Directory Service Certificate in Mixed Mode Environments**
   - During upgrade, your environment might temporarily include both vCenter Single Sign-On version 5.5 and vCenter Single Sign-On version 6.0, you have to perform additional steps to replace the VMware Directory Service SSL certificate if you replace the SSL certificate of the node on which the vCenter Single Sign-On service is running.

**Reference:**

Question 104
What are two sample roles that are provided with vCenter Server by default?
Choose two.
A. Virtual machine User
B. Network Administrator
C. Content Library Administrator
D. Storage Administrator
Correct Answer: AB
Explanation/Reference:
http://pubs.vmware.com/vsphere-4-ess-vccenter/index.jsp?
topic=com.vmware.vsphere.dadmin.doc_41/vsp_de_admin_guide/managing_users_groups_roles_and_permissions/r_default_roles_for_esx_esxi_and_vcenter_servers

Question 105
Which two methods are recommended for managing the VMware Directory Service?
Choose two.
A. Utilize the vmdir command.
B. Manage through the vSphere Web Client.
C. Manage using the VMware Directory Service.
D. Utilize the dc rep command.
Correct Answer: AB
Explanation/Reference:
A) dir-cli Command Reference
The dir-cli utility allows you to create and update solution users, create other user accounts, and manage certificates and passwords in vmdir. (link to see vmdir commands- https://pubs.vmware.com/vsphere-60/index.jsp?topic=%2Fcom.vmware.vsphere.security.doc%2FGUID-4FBEA58E-9492-409B-B584-C18477F941D8.html)
B) Directory service associated with the vsphere.local domain. This service is a multi-tenanted, multi-mastered directory service that makes an LDAP directory available on port 1171. In multi-site mode, an update of VMware Directory Service content in one VMware Directory Service instance results in the automatic update of the VMware Directory Service instances associated with all other vCenter Single Sign-On nodes via VSphere Web Client.

Question 106
Which statement best describes how the administrator would accomplish this?
An administrator has configured three vCenter Servers and vRealize Orchestrator within a Platform Services Controller domain, and needs to grant a user privileges that span all environments.
Which statement best describes how the administrator would accomplish this?
A. Assign a Global Permission to the user.
B. Assign a vCenter Permission to the user.
C. Assign vsphere.local membership to the user.
D. Assign an ESXi Permission to the user.
Correct Answer: A
Explanation/Reference:
Global Permissions
Global permissions are applied to a global root object that spans solutions, for example, both vCenter Server and vCenter Orchestrator. Use global permissions to give a user or group privileges for all objects in all object hierarchies.
Each solution has a root object in its own object hierarchy. The global root object acts as a parent object to each solution object. You can assign global permissions
to users or groups, and decide on the role for each user or group. The role determines the set of privileges. You can assign a predefined role or create custom roles. See Using Roles to Assign Privileges. It is important to distinguish between vCenter Server permissions and global permissions.

Reference:

Question 107
Which three components should an administrator select when configuring vSphere permissions?

A. Inventory Object
B. Role
C. User/Group
D. Privilege
E. Password

Correct Answer: ABC

Explanation/Reference:
To manage permissions from the vSphere Web Client, you need to understand the following concepts:

Reference:

Question 108
Which two vsphere.local groups should an administrator avoid adding members?

In which two vsphere.local groups should an administrator avoid adding members? (Choose two.)

A. SolutionUsers
B. Administrators
C. DCAdmins
D. ExternalPDUsers

Correct Answer: AB

Explanation/Reference:

Reference:

Question 109
Which three Authorization types are valid in vSphere?

Which three Authorization types are valid in vSphere? (Choose three.)

A. Group Membership in vsphere.local
B. Global
C. Forest
D. vCenter Server

Reference:
E. Group Membership in system-domain

Correct Answer: ABD

Explanation/Reference:
The primary way of authorizing a user or group in vSphere is the vCenter Server permissions. Depending on the task you want to perform, you might require other authorization.

vSphere 6.0 and later allows privileged users to give other users permissions to perform tasks in the following ways. These approaches are, for the most part, mutually exclusive; however, you can assign use global permissions to authorize certain users for all solution, and local vCenter Server permissions to authorize other users for individual vCenter Server systems.

Reference:

Global Permissions
Groups in the vsphere.local Domain

Question 110
What is the highest object level from which a virtual machine can inherit privileges?
A. Host Folder
B. Data Center
C. Data Center Folder
D. VM Folder

Correct Answer: C

Explanation/Reference:
**Reference:**
http://pubs.vmware.com/vsphere-4-ess-vcenter/index.jsp?

**Question 111**
What is true about the permissions on the object?
A. The common permissions between the two are applied and the rest are discarded.
B. The permissions are combined from both parent objects.
C. No permissions are applied from the parent objects.
D. The permission is randomly selected from either of the two parent objects.

Correct Answer: B

**Explanation/Reference:**
If an object inherits permissions from two parent objects, the permissions on one object are added to the permissions on the other object. For example, if a virtual machine is in a virtual machine folder and also belongs to a resource pool, that virtual machine inherits all permission settings from both the virtual machine folder and the resource pool.

Reference:

**Question 112**
Which privilege does the administrator need to assign to the user?
An administrator wishes to give a user the ability to manage snapshots for virtual machines.
Which privilege does the administrator need to assign to the user?
A. Datastore.Allocate Space
B. Virtual machine.Configuration.create snapshot
C. Virtual machine.Configuration.manage snapshot
D. Datastore.Browse Datastore

Correct Answer: A

**Explanation/Reference:**
Question 113
Which two privileges would the custom role have?
An administrator with global administrator privileges creates a custom role but fails to assign any privileges to it.
Which two privileges would the custom role have? (Choose two.)
A. System.View
B. System.Anonymous
C. System.User
D. System.ReadOnly
Correct Answer: AB
Explanation/Reference:
When you add a custom role and do not assign any privileges to it, the role is created as a Read Only role with three system-defined privileges:
Reference:

Question 114
Which two roles can be modified?
Which two roles can be modified? (Choose two.)
A. Administrator
B. Network Administrator
C. Datastore Consumer
D. Read-Only
Correct Answer: BC
Explanation/Reference:
Three of the pre-established roles are permanent, meaning that the privileges associated with that role cannot be modified. These permanent roles are available to a stand-alone ESX or ESXi server, or to vCenter Server. The remaining eight are sample roles which can be modified as needed. These eight roles are exclusive to vCenter Server.
Below are the pre-established roles:
No Access: A permanent role that is assigned to new users and groups. Prevents a user or group from viewing or making changes to an object
Read-Only: A permanent role that allows users to check the state of an object or view its details, but not make changes to it
Administrator: A permanent role that enables a user complete access to all of the objects on the server. The root user is assigned this role by default, as are all of the users who are part of the local Windows Administrators group associated with vCenter Server. At least one user must have administrative permissions in VMware.
Virtual Machine Administrator: A sample role that allows a user complete and total control of a virtual machine or a host, up to and including removing that VM or host.
Virtual Machine Power User: A sample role that grants a user access rights only to virtual machines; can alter the virtual hardware or create snapshots of the VM
Virtual Machine User: Grants user access rights exclusively to VMs. The user can power on, power off, and reset the virtual machine, as well as run media from the virtual discs.
Resource Pool Administrator: Allows the user to create resource pools (RAM and CPU reserved for use) and assign these pools to virtual machines
Datacenter Administrator: Allows a user to create and modify virtual machines
Datacenter Consumer: Allows the user to consume space on a datastore
Virtual Machine Consolidated Backup User: A user who can run VMware Consolidated Backup
Datastore Consumer: Allows the user to consume space on a datastore
Network Consumer: Allows the user to assign a network to a virtual machine or a host

Question 115
Which default role in vCenter Server would meet the administrator’s requirements for the users?
An administrator wants to provide users restricted access. The users should only be able to perform the following tasks:
Create and consolidate virtual machine snapshots
Add/Remove virtual disks
Snapshot Management
Which default role in vCenter Server would meet the administrator’s requirements for the users?
A. Virtual machine user
B. Virtual machine power user
C. Virtual Datacenter administrator
D. VMware Consolidated Backup user
Correct Answer: B
Explanation/Reference:
Virtual Machine Power User: A sample role that grants a user access rights only to virtual machines; can alter the virtual hardware or create snapshots of the VM
Reference:
https://communities.vmware.com/thread/480179?start=0&tsstart=0
https://www.pluralsight.com/blog/tutorials/vmware-access-control-101-roles-and-permissions