Number: NCS-CORE
Passing Score: 800
Time Limit: 120
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Exam Code: NCS-CORE
Exam Name: Nutanix Certified Services Core Infrastructure Professional

Exam A

QUESTION 1
Over the period of 2 to 3 weeks, a cluster displays the following:
* Periods where Warning Alerts of memory usage over 75% are asserted
* Periods where Critical Warnings of memory usage over 90% are asserted
* Periods of slow of frozen VDI desktops have caused work stoppage or slowdown
* VDI clones have periodically not powered up when called, causing work stoppage
Which steps should be used to prioritize the administrator's troubleshooting efforts?

A. * Assess resource health on Hardware page * Review the Analysis page for memory usage demand * Determine the VDI workload-to-host affinity across the cluster
B. * Analyze Alert Pages for a root cause of memory problem * Analyze VM table page to access the VM functionality * Analyze the VDI Clone properties for possible VDI Workload stress
C. * Check Analysis page for CPU demand * Verify VDI workload property for memory subscription * Review the Hardware page to determine if the cluster has sufficient RAM
D. * Review Analysis Page for memory use pattern * Alert with VDI workload demand * Analyze current and future workload in the Capacity Runaway tab for sufficient resources

Correct Answer: D
Section:
Explanation:
For the scenario with memory usage warnings and VDI performance issues, the best approach is to analyze and understand the memory usage patterns and demands on the system. Option D focuses on reviewing the Analysis page to monitor memory use trends and patterns, which is crucial for identifying peak usage times or processes consuming excessive memory. The mention of alerting with VDI workload demand implies the need to monitor and possibly adjust the VDI workload to better fit within available resources. Finally, analyzing current and future workload in the Capacity Runaway tab helps in understanding if the cluster resources are sufficient for the demand, which is critical in planning for capacity management and ensuring that such issues are mitigated moving forward.
Reference: Nutanix Prism User Guide, Nutanix Community resources, VDI performance troubleshooting practices.

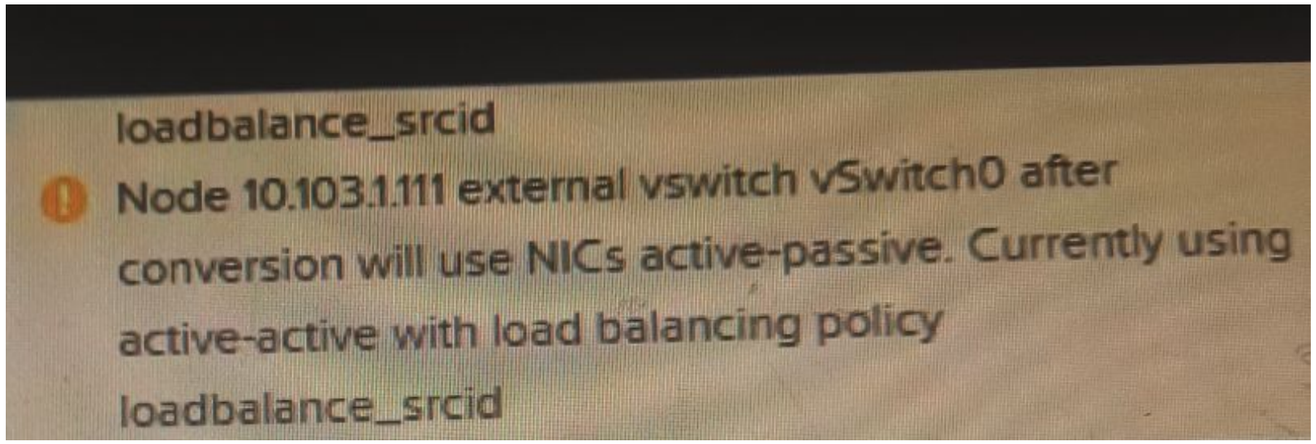
QUESTION 2
After the migration, some SQL queries take longer to execute than prior to migration.
The following SQL best practices were applied while creating the SQL VM on Nutanix:
* 8 vDisks per SQL server VM
* Database and Log files on separate vDisk
* 2 TempDB database drives and 1 TempDB log drive
What should the administrator to do improve the SQL Server performance?

A. Redistribute existing data by creating additional database file and enable autogrowth
B. Create multiple TempDB data files and enable autogrowth
C. Create multiple SQL log files and disable autogrowth
D. Redistribute existing data by creating additional database files and disable autogrowth

Correct Answer: B
Section:
Explanation:
In the scenario where SQL queries are running slower post-migration, creating multiple TempDB data files is a recognized best practice for optimizing SQL Server performance, especially when dealing with high transaction rates or complex queries. This approach helps in distributing the I/O load across multiple files and drives, reducing the contention and wait times associated with TempDB, which is a common bottleneck in SQL Server environments. Enabling autogrowth ensures that these files can dynamically grow as needed, which helps in handling unexpected increases in database activity without manual intervention.
Reference: Nutanix Best Practices for SQL Server, SQL Server performance tuning guidelines.

QUESTION 3

Refer to the exhibit.



An administrator receive the warning massages shown in the exhibit while validating cluster conversion from EXSi to AHV.
What should the administrator do to address this warning in v Center Server?

A. Keep active adapters od different speeds as active standby
B. Remove adapters that are active but not homogeneous.
C. Keep homogeneous adapter as active and standby
D. Remove the standby adapters under Teaming and Failover.

Correct Answer: C
Section:
Explanation:
When converting a cluster from ESXi to AHV and encountering warnings about network adapter configurations in VMware vCenter, it is crucial to ensure that the network adapters are homogeneous to avoid issues with network performance and reliability. Keeping homogeneous adapters as active and standby ensures that all active and standby adapters operate at the same speed and capabilities, which is essential for maintaining consistent network performance and failover capabilities. This setup helps in avoiding conflicts or performance penalties that can arise from using mixed adapter types under the same virtual switch environment.
Reference: VMware vCenter documentation, Nutanix AHV Networking Guide.

QUESTION 4
An administrator configure Active Directory (AD) authentication for their Nutanix environment. When login in using an AD user account, the login process takes more than one minute to complete. No delay occurs when logging a local account.
What should the administrator confirm to resolve this issue?

A. The user search base for the group is configured correctly
B. The domain controller being used is configured as a global catalog server.
C. Active directory lookups are configured to use Non-Recursive mode.
D. The service Account Username is correct for the domain.

Correct Answer: C
Section:
Explanation:
In a Nutanix environment, if the login process using an Active Directory (AD) user account takes more than a minute to complete, it could be due to the configuration of the AD lookups.
Active Directory lookups can be configured to use either Recursive or Non-Recursive mode. In Recursive mode, the system will look up each group that a user is a member of, then each group that those groups are members of, and so on.This can lead to a large number of lookups and potentially slow down the login process1.
On the other hand, in Non-Recursive mode, the system only looks up the direct groups that a user is a member of.This can significantly reduce the number of lookups and speed up the login process1.
Therefore, the administrator should confirm that Active Directory lookups are configured to use Non-Recursive mode to resolve this issue.

Active Directory Authentication is slow - Takes minutes to Logon | Nutanix Community
Configuring Authentication | Nutanix Community
Solving Slow Logon Issues in Active Directory Environments

QUESTION 5
A customer has the following requirement for a Nutanix cluster:
Must support high-performance Nutanix Volumes iSCSI workloads
Must utilize AHV nodes
Must use 10 GbE interface
How should the customer optimize networking?

A. Enable Jumbo Frame on just the Host
B. Convert Cluster to ESXi and enable Jumbo Frame on Host and CVM
C. Enable Jumbo Frames on just the CVM
D. Enable the use of Jumbo Frame on Host and CVM

Correct Answer: D
Section:
Explanation:
For high-performance iSCSI workloads, especially in a Nutanix environment using AHV nodes and a 10 GbE interface, enabling Jumbo Frames on both the Host and the Controller Virtual Machine (CVM) is recommended. Jumbo Frames allow for a larger payload per network packet, which reduces the overhead required to send large amounts of data. Enabling Jumbo Frames on both the host and the CVM ensures that both ends of the communication channel can handle larger packets, thereby optimizing throughput and reducing latency for high-performance workloads.
Nutanix Bible: Networking Best Practices
Nutanix University: Nutanix Network Optimization

QUESTION 6
An administrator is planning to deploy a Nutanix cluster to support a few high-performance VMs. This deployment will have the following considerations:
* Individual VMs will likely generate network throughputs in the range of 90-100Mbps
* Due to the configuration of the VMs, it is unlikely that a node will host more than one or two of them at a time
* Individual VMs will communicate with only a few (one or two) remote hosts at a time
* Multicast will not be used in the environment
* The hosts are connected via two 1GbE network connections
How should the administrator configure the network bonds to meet this requirement while maintaining the simplest switch configuration?

A. Configure bond0 as balance-sib
B. Configure bond0 as active-backup
C. Configure bond0 as balance-tcp
D. Configure bond0 as balance-lacp

Correct Answer: A
Section:
Explanation:
Ref: https://portal.nutanix.com/page/documents/solutions/details?targetId=BP-2071-AHV-Networking:top_ahv_networking_best_practices.html

QUESTION 7
An administrator is deploying an application using Nutanix Volumes. After configuring the volume group and connecting the guest's iSCSI initiator to the volume group, they begin performance testing.
The administrator learns that performance on the virtual disk attached to the iSCSI initiator is far less than that of a virtual disk connected directly to the VM.
Which situation is causing this condition?

A. The VM's iSCSI traffic is being routed to the data services IP subnet
B. The performance test is generating small block random 10.
C. The duster data services IP address is a bottleneck, shared with other iSCSI traffic
D. Data Locality ensures that VM attached disks are always faster than iSCSI volumes.

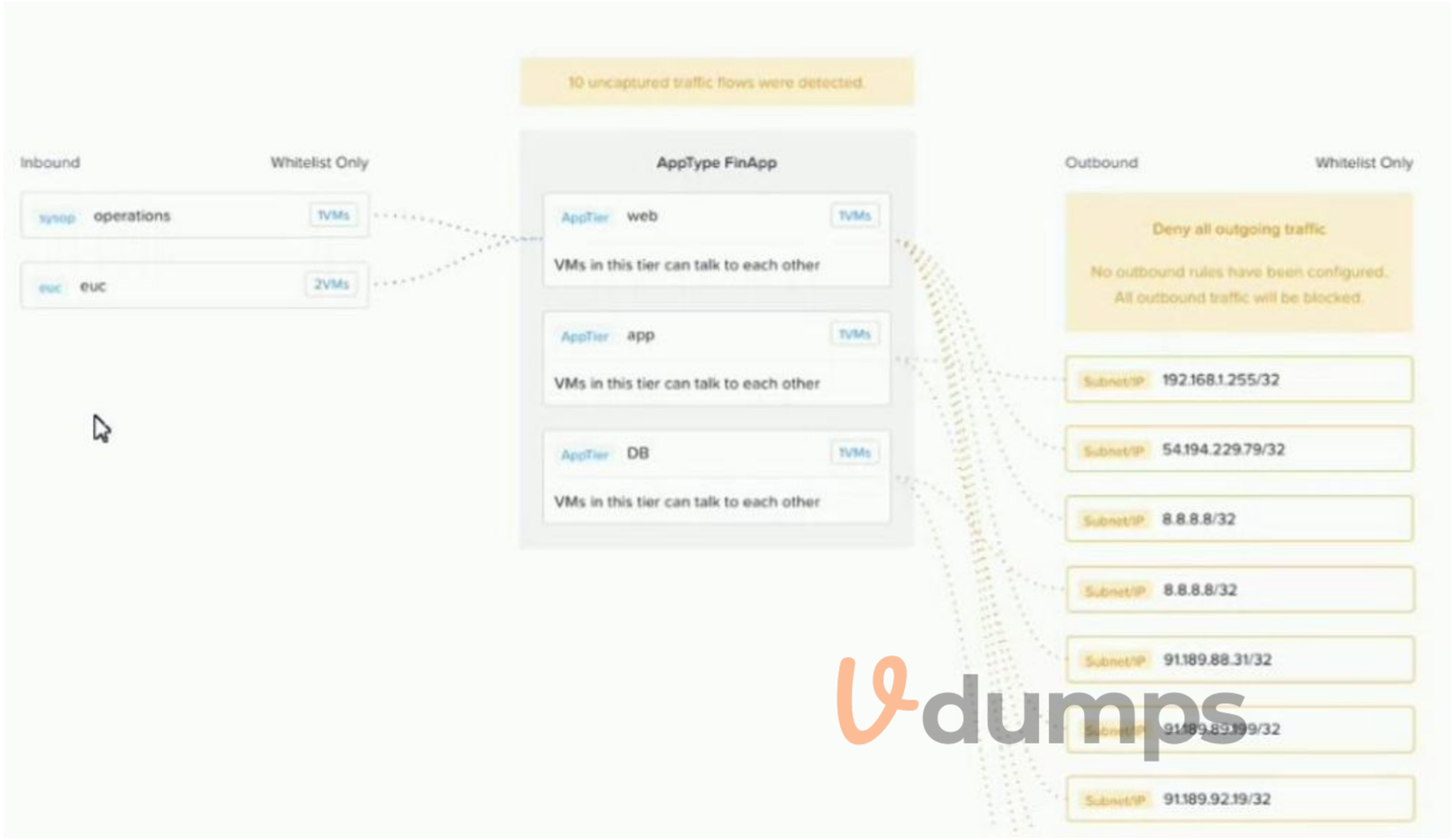
Correct Answer: C
Section:

QUESTION 8
An administrator needs to replace an aging SAN and move to a hyper-converged infrastructure. The existing environment consists of the following hosts that are connected to the SAN:
* 5xAIX hosts
* 3x Hyper-V hosts
* 9xESXi hosts
* 2x physical SQL Clusters (Windows Server 2012R2 hosts)
After deploying a Nutanix AHV cluster, which two actions should the administrator take to meet the requirements? (Choose two.)

A. Deploy Volumes to support the AIX and SQL workloads.
B. Migrate the ESXI workloads to AHV using Move.
C. Deploy Files to support the AIX hosts.
D. Migrate the ESXi and Hyper-V workloads using Move.

Correct Answer: A, D
Section:
Explanation:
Ref: https://portal.nutanix.com/#page/kbs/details?targetId=kA00e000000Cr7GCAS

QUESTION 9
Refer to the exhibit.



An administrator creates a security policy that isolates their financial application from accessing the Internet When viewing the policy in Prism Central, several connections from the application are outbound to the Internet.
What is causing this issue with the policy?

A. The 0.0.0.0 address was not specified in the outbound rule.
B. The blocked connections are illustrated for information only.
C. The Activate box was not checked in the rule, so it is not enforcing.
D. The policy has been left in monitor mode instead of enforcing mode.

Correct Answer: D
Section:
Explanation:
https://portal.nutanix.com/page/documents/details?targetId=Prism-Central-Guide-Prism-v510:mul-security-policy-management-pc-c.html

QUESTION 10
An administrator is updating disk firmware using LCM and receives the following message:
''there have been 10 or more cluster services restarts within 15 minutes in the Controller VM''
The message appears as each drive is upgraded.
What is the reason this message is being generated?

A. A node has been rebalanced
B. A drive has been reformatted
C. A node has been rebooted
D. A drive has been ejected

Correct Answer: C
Section:
Explanation:
Ref: https://portal.nutanix.com/page/documents/kbs/details?targetId=kA032000000TT8DCAW

QUESTION 11
A new Nutanix cluster is ready for production on a remote site with no IT staff. Changes to the infrastructure will cost money and probably cause a cluster stop. The administrator needs to perform a health check on the environment that should include:
* Network connectivity checks
* Network performance status
* Storage performance status
Which tool should be used to perform this test?

A. X-Ray
B. clurator_cli
C. NCC
D. diagnostic, py

Correct Answer: C
Section:

QUESTION 12
An administrator is managing multiple Windows and Linux VMs connected to Nutanix Volumes. The Linux VMs are experiencing intermittent connectivity issues. The Windows VMs do not experience the same issue.
Which option should the administrator use to resolve this issue?

A. Utilize Jumbo Frames
B. Add additional disks to the Volume Group
C. Set the SCSI timeout value to 60
D. Utilize a separate subnet for the Linux VMs

Correct Answer: C
Section:
Explanation:
Ref: https://kb.vmware.com/s/article/1009465

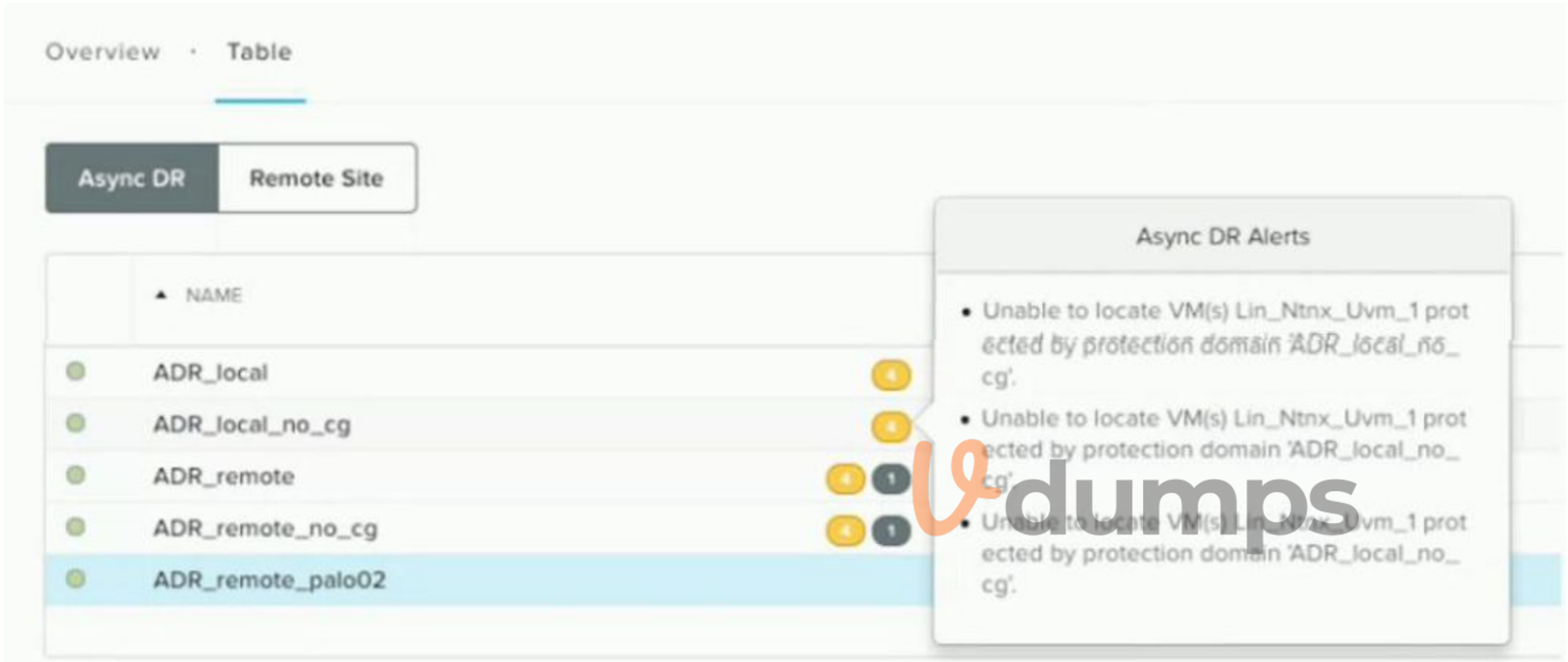
QUESTION 13
An administrator is managing multiple Windows and Linux VMs connected to Nutanix Volumes. The Linux VMs are experiencing intermittent connectivity issues. The Windows VMs do not experience the same issue.
Which option should the administrator use to resolve this issue?

A. Utilize Jumbo Frames
B. Add additional disks to the Volume Group
C. Set the SCSI timeout value to 60

D. Utilize a separate subnet for the Linux VMs

Correct Answer: C
Section:
Explanation:
Ref: https://kb.vmware.com/s/article/1009465

QUESTION 14
Refer to the exhibit.



After performing ESXi to AHV conversion on a cluster, the alerts shown in the exhibit display on Prism. What should the administrator do to resolve this issue efficiently?

A. Remove the VMs. create a new Protection Domain, and add VMs to it
B. Remove VMs from the Protection Domain and add them back in.
C. Delete the Protection Domain, create a new Protection Domain, and add the VMs to it
D. Create a new Protection Domain and add the VMs to rt.

Correct Answer: B
Section:

QUESTION 15
An administrator responsible for a VDI environment needs to investigate reports of slow logins. The administrator finds that increasing the number of vCPUs from 2 to 4 will reduce the login times. Production workloads are consuming 75% of the host CPU on the cluster. The administrator increases the vCPU count on all of the VDI VMs.
What are two impacts on the cluster? (Choose two.)

A. Increase CPU utilization%
B. Increase CPU ready%
C. Increase memory utilization%

D. Increasing CPU counts will decrease memory utilization

Correct Answer: A, B
Section:
Explanation:
Increasing the number of vCPUs from 2 to 4 can indeed reduce login times by providing more processing power to handle the login requests. However, this action will have two main impacts on the cluster:
A .Increase CPU utilization%: By increasing the number of vCPUs, you are effectively increasing the demand for CPU resources. This will result in a higher percentage of the CPU being utilized.
B .Increase CPU ready%: CPU Ready is a measure of the amount of time a virtual machine is ready to run against the pCPU, but is waiting to be scheduled on the physical CPU. By increasing the number of vCPUs, you are increasing the number of virtual machines that are ready to run, which can increase the CPU Ready percentage.
Increasing the vCPU count does not directly affect memory utilization, so options C and D are not correct.
The conclusions above are based on general virtualization principles covered in resources like the Nutanix Bible (https://www.nutanixbible.com/) and the Nutanix University training materials for NCS-Core certification (https://university.nutanix.com/). These sources explain the impact of CPU allocation and utilization in detail, particularly in the context of cluster performance and virtual desktop infrastructure.
Additionally, practical insights into these dynamics are discussed in various video tutorials from the Nutanix official YouTube playlist for NCS-Core learning (https://www.youtube.com/playlist?list=PLAHgaS9IrJecs_AcQT3Y7vSsKT2mjz3Iu), which provide visual and step-by-step breakdowns of how CPU resources are managed in a Nutanix environment.

QUESTION 16
An administrator is using Nutanix Move to migrate a Windows VM from ESXi to AHV. Automated guest preparation is failing with an error:
Account has UAC enabled error
The administrator is using the local built-in administrator account for the Windows VM Admin approval mode must remain enabled.
What should the administrator do to continue with the migration with Nutanix Move?

A. Use a Domain Admin account for the Windows VM
B. Reboot the Windows VM and try the migration again
C. Follow manual VM preparation guidelines
D. Place Windows VM in Maintenance Mode

Correct Answer: C
Section:
Explanation:
https://next.nutanix.com/move-application-migration-19/nutanix-xtract-validation-failed-user-must-belong-in-a-group-with-restore-files-and-directories-security-policy-31303

QUESTION 17
A VM is exhibiting one or more of the following baseline values based on the past 30 days:
* CPU usage < 20%
* CPU ready time < 5%
* Memory usage < 50% (moderately) or < 20% (severely)
* Memory swap rate = 0 Kbps
Which type of VM is being described?

A. Constrained VM
B. Inactive VM
C. Bully VM
D. Over-Provisioned VM

Correct Answer: D
Section:
Explanation:

Finding Waste and Right-Sizing VMs

The VM efficiency features in Prism Pro recommend VMs within the environment that are candidates for reclaiming unused resources that you can then return to the cluster. Click each tab to learn more.

Overprovisioned

- ➔ An overprovisioned VM is the opposite of a constrained VM, meaning it is a VM that is over-sized and wasting resources which are not needed. A VM is considered over-provisioned when it exhibits one or more of the following baseline values, based on the past 30 days: CPU usage < 50% (moderate) or < 20% (severe) and CPU ready time <5%, Memory usage < 50% (moderate) or < 20% (severe), and memory swap rate = 0 Kbps.

Inactive

- ➔ A VM is inactive in either of the following states:A VM is considered dead when it has been powered off for at least 30 days.A VM is considered a zombie when it is powered on but does fewer than 30 read or write I/Os (total), and receives or transfers fewer than 1000 bytes per day for the past 30 days.

Constrained

- ➔ A constrained VM is one that does not have enough resources for the demand and can lead to performance bottlenecks. A VM is considered constrained when it exhibits one or more of the following baseline values, based on the past 30 days: CPU usage > 90% (moderate), 95% (severe) CPU ready time > 5% , 10% Memory usage > 90%, 95%, Memory swap rate > 0 Kbps (no moderate value).

Bully

- ➔ A bully VM is one that consumes too many resources and causes other VMs to starve. A VM is considered a bully when it exhibits one or more of the following conditions for over an hour: CPU ready time > 5%, memory swap rate > 0 Kbps, host I/O Stargate CPU usage >85%.

QUESTION 18

The networking team makes changes to the Top of Rack switches to which the Nutanix cluster are attached. A few VMs are able to communicate with each other on the same node but are unable to connect to other parts of the network.

What is the likely cause of this issue?

A. There is a VLAN misconfiguration on the VMs.
B. The vNIC port is disconnected on the affected VMs.
C. There is a VLAN misconfiguration on the switch.
D. Jumbo Frame are misconfigured across ports.

Correct Answer: C
Section:
Explanation:
When VMs on the same node can communicate but fail to connect to other parts of the network following changes made to Top of Rack switches, the issue often stems from a VLAN configuration error on the switches. VMs on the same node communicating successfully indicates that the local switch configuration is intact, but inability to reach external network segments points to an incorrect VLAN setup on the broader network, likely introduced during the recent changes to the Top of Rack switches.
Reference: Nutanix Networking Guide, Troubleshooting Network Connectivity in Nutanix.

QUESTION 19

An administrator has a 32-node hybrid cluster with CPU, RAM and storage utilization of 80%. A database VM is configured with VM Flash.
What is causing this IO latency?

A. Controller VM is experiencing high CPU ready time.
B. Curator scans causes by ILM constantly moving data.
C. VM Flash Mode reduces SSD tier capacity for VMs.
D. Database VM is experiencing high CPU ready time.

Correct Answer: B
Section:
Explanation:
In a Nutanix cluster, I/O latency can be affected by several factors. Given the scenario where a 32-node hybrid cluster is experiencing I/O latency, one possible cause could be the Information Life Cycle Management (ILM) constantly moving data due to curator scans1.
In a Nutanix cluster, ILM is responsible for managing data placement across different storage tiers. It promotes frequently accessed data to higher-performance tiers (like SSDs) and demotes less frequently accessed data to lower-performance tiers (like HDDs)1. This process involves moving data around, which can cause I/O operations to take longer, leading to increased latency1.
If the working set size (WSS) exceeds the SSD tier capacity, ILM will have to constantly move data between the SSD and HDD tiers to accommodate new data. This constant data movement can lead to increased I/O latency1.
Therefore, if curator scans caused by ILM are constantly moving data, it could be the reason for the observed I/O latency in this scenario.
Disk I/O Latency on a Nutanix Cluster | Nutanix Community
Nutanix Volumes - Recommendations And Best Practices
Nutanix Support & Insights
Expand Cluster with Nodes with Higher NIC SPEED (25 GBPS) | Nutanix ...
[Scaling Up VM Storage Performance on AHV -- Volume Group ... - Nutanix]
[About support for Nutanix segmented iSCSI network | Managing AHV ...]

QUESTION 20
An administrator is deploying a new application to a Nutanix Enterprise Cloud. The application requires a security to prevent unauthorized access. The application also uses many non-standard ports that are unique to it.
Security should not be changed for existing applications.
What should the administrator do to meet these requirement?

A. Use existing categories for the VMs. and create new security policies to use the existing categories.
B. Use existing categories for the VMs and modify existing security policies to include the specific port.
C. Create new categories for the VMs, and create new security policies that include the new categories.
D. Create new categories for the VMs, and modify existing security policies to include the new categories.

Correct Answer: C
Section:
Explanation:
To ensure the new application is securely deployed without affecting existing applications, the administrator should create new categories for the VMs hosting the new application. This approach allows for targeted application of security policies without impacting other applications. After creating these new categories, the administrator should then create new security policies that incorporate these categories and specify the unique, non-standard ports used by the application, ensuring that security is tailored specifically to the new application's needs.
Reference: Nutanix Prism Central Guide, Nutanix Security Configuration Best Practices.

QUESTION 21
A CEO asks the IT administrator to provide a list of required resources to protect current workloads and the two new SQL servers from a disaster. The Nutanix environment is managed by Prism Central.
Which option explains how to meet the CEO's request?

A. In Capacity Runway, select Optimize Resources and select all VMs that must be protected.
B. Create a new project and assign the VMs to it to get compute and storage requirements.

C. Create a new scenario based on a new cluster based on a VM Profile and select Recommend.
D. Create a new Recovery policy by selecting the VM that needs to be protected and get hardware requirements.

Correct Answer: D
Section:
Explanation:
In a Nutanix environment managed by Prism Central, protecting workloads and SQL servers from a disaster involves creating a recovery policy. A recovery policy in Nutanix is a set of rules that define how data is protected and recovered in the event of a disaster1.
Creating a new recovery policy involves selecting the virtual machines (VMs) that need to be protected and specifying the hardware requirements for the recovery environment1. This includes the compute and storage resources needed to run the protected VMs in the recovery site1.
Once the recovery policy is created, Nutanix's built-in data protection and disaster recovery capabilities can ensure that the protected VMs can be quickly and efficiently recovered in the event of a disaster2. This includes capabilities such as efficient snapshot, cloning, and replication capabilities to provide a higher level of protection at a lower cost2.
Therefore, to meet the CEO's request, the IT administrator should create a new Recovery policy by selecting the VM that needs to be protected and get hardware requirements.
Designing, Optimizing and Scaling Microsoft SQL Server - Nutanix
Nutanix Data Disaster Recovery - Protect Apps & Data | Nutanix
Recommendations For Leap And Supported Service-level ... - Nutanix
Cloud Disaster Recovery Services | Nutanix
Nutanix -- High Availability and Data Protection

QUESTION 22
An administrator receives reports that VDI desktop performance in an 8-node Nutanix VDI environment is poor. Opening applications takes between 1 and 2 minutes.
When investigating the issue, the following conditions are found:
* Cluster memory utilization: 80%
* Cluster SSD utilization: 70%
* Average VM CPU Wait Time: 11%
* CVM CPU utilization: 75%
Which action should be taken to improve VDI performance?

A. Increase the amount of SSD storage in the cluster.
B. Add memory to the nodes in the cluster.
C. Add CPU resources to the cluster.
D. Increase the number of vCPU cores allocated to the CVM.

Correct Answer: C
Section:

QUESTION 23
An administrator has a custom backup application that requires a 2TB disk and runs in Windows. Throughput is considerably lower than expected.
The application was installed on a VM with the following configuration:
* Four vCPUs with one core/vCPU
* 4GB of Memory
* One 50GB vDisk for the Windows installation
* One 2TB vDisk for the application
What is the recommended configuration change to improve throughput?

A. Increase the number of cores per vCPU
B. Increase the vCPUs assigned to the VM
C. Span the 2TB disk across four vDisks

D. Add 4GB of memory to the VM

Correct Answer: C
Section:

QUESTION 24
A customer recently set up Async Replication between Site A and Site B. The customer wants to conduct a planned failover and clicks Activate on Site B.
The customer then runs the following command on Site A:
ncli pd deactivate_and__destroy_vms name=
What does this do to the customer environment?

A. VMs get deleted from Site B. and the protection domain is now Active.
B. VMs are powered off on Site A and must be manually powered on at Site B.
C. VMs get deleted from Site A and the protection domain is no longer active.
D. Customer must then manually power off VMs at Site A and power them on at Site B.

Correct Answer: C
Section:
Explanation:
https://portal.nutanix.com/page/documents/details?targetId=Web-Console-Guide-Prism-v5_10:wc-protection-domain-failback-disaster.html
The command ncli pd deactivate_and__destroy_vms name= is a critical operation in managing Nutanix environments, particularly in scenarios involving disaster recovery and replication.
This command deactivates the protection domain and deletes all VMs associated with that protection domain from the source site (Site A in this case). This operation is generally part of a planned migration or failover process where the VMs are intended to be run from the remote site (Site B).
After this operation, the protection domain at Site A is no longer active, meaning it has been effectively removed along with its associated VMs, thus clearing the way for Site B to take over operations without conflict from the original site.
Reference:
This action and its implications are covered under Nutanix disaster recovery and high availability strategies, detailed in both the Nutanix Bible and official Nutanix NCS-Core training materials, which discuss the management of protection domains and replication processes.

QUESTION 25
An administrator needs to forecast infrastructure requirements for a new program and its associated applications. Prior to the projected start of the new program, all existing applications will be decommissioned.
How should the administrator perform this task?

A. Check the Disregard Existing Workloads radio button in the Runway scenario.
B. Check the Disregard Existing Nodes radio button in the Runway scenario.
C. Add up the recovered workloads and manually remove from the Runway configuration.
D. Power down the workloads during a maintenance window and run the Capacity Runway.

Correct Answer: A
Section:
Explanation:
When forecasting infrastructure requirements for a new program in a Nutanix environment where all existing applications will be decommissioned, the most straightforward method is to disregard any workload calculations that include existing applications. This ensures that the analysis focuses solely on the needs of the new program.
Option A, 'Check the Disregard Existing Workloads radio button in the Runway scenario,' is the correct choice. Nutanix Runway is a tool designed to help administrators forecast and plan infrastructure requirements based on upcoming needs without being skewed by current utilizations that are scheduled to be decommissioned.
This method allows for a cleaner, more accurate projection of resources needed for the new applications, disregarding any resources currently in use that will no longer be relevant.
Reference: This approach is detailed in Nutanix planning and forecasting documentation, ensuring administrators can plan accurately for infrastructure changes and needs without the interference of outgoing workloads.

QUESTION 26

A customer has a primary datacenter with 12 Nutanix blocks distributed across three racks. The customer wants to achieve the most resiliency possible. They also have a datacenter in a branch office that is 400 kilometers away from the primary datacenter.
Which two solutions should be used? (Choose two.)

A. Time Stream to a remote site
B. Async DR to a remote site
C. Rack awareness
D. Block awareness

Correct Answer: B, C
Section:
Explanation:
For a customer with 12 Nutanix blocks distributed across three racks and an additional datacenter 400 kilometers away, achieving the highest level of resiliency involves ensuring both local and remote data protection.
Option B, 'Async DR to a remote site,' is essential for protecting against site failures by asynchronously replicating data to a branch office. This method is suitable for long-distance replication where latency and bandwidth are concerns.
Option C, 'Rack awareness,' is crucial in a multi-rack setup to ensure that data is distributed in such a way that a failure of a single rack does not lead to data loss or significant downtime. Rack awareness configures the placement of data replicas across different racks, improving fault tolerance within the primary datacenter.
Reference: Nutanix documentation on disaster recovery and data resilience strategies, such as those found in the Nutanix Bible and official Nutanix training materials, supports these recommendations, emphasizing the importance of both remote site replication and local redundancy configurations.

QUESTION 27
An administrator inherits a new Nutanix environment and logs in to a CVM to check the network configuration. The configuration is as follows:

```
nutanix@NTNX-16xxxxxxxx5-A-CVM:xx.xx.xx.76:~$ manage_ovs show_uplinks

Bridge: br0
  Bond: br0-up
      bond_mode: active-backup
      interfaces: eth3 eth2
      lacp: off
      lacp-fallback: True
      lacp_speed: slow
  Bridge: br1
    Bond: eth0
       bond_mode: active-backup
       interfaces: eth0
       lacp: off
       lacp-fallback: false
       lacp_speed: slow
Bridge: br2
Bridge: br5

nutanix@NTNX-16xxxxxxxx5-A-CVM:xx.xx.xx.76:~$ manage_ovs show_interfaces
name    mode  link   speed
eth0    1000  True    1000
eth1    1000  True    1000
eth2   10000  True   10000
eth3   10000  True   10000
       :             :
nutanix@NTNX-16xxxxxxxx5-A-CVM:xx.xx.xx.76:~$
```

Which action should the administrator take to improve network performance?

A. Configure VLAN tagging both on br0 and br1 and their physical interfaces.
B. Add eth0 and eth1 to the br0-up bond
C. Configure balance-sib or balance-tcp mode for br0-up if switch configuration allows
D. Remove one 10 Gbs interface from br0-up to make sure all 10 Gbs can be used.

Correct Answer: C
Section:
Explanation:
Upon reviewing the network configuration in the provided image and considering the setup in a Nutanix environment, the best action to improve network performance is to adjust the bonding mode for the bridge that includes multiple high-bandwidth interfaces.
Option C, 'Configure balance-sib or balance-tcp mode for br0-up if switch configuration allows,' is the most effective choice. The bonding mode 'balance-sib' (source IP-based load balancing) or 'balance-tcp' (TCP/IP layer balancing) can optimize the distribution of network traffic across multiple interfaces, thereby enhancing throughput and redundancy.
This approach utilizes the capabilities of multiple network interfaces more efficiently, distributing the load to prevent any one interface from becoming a bottleneck while providing failover redundancy.
Reference: This configuration strategy aligns with best practices for network setup in high-performance virtualized environments, as detailed in Nutanix's networking configuration guides and the Nutanix Bible, ensuring optimal performance and reliability.

QUESTION 28

An administrator is concerned that Prism will be inaccessible if Active Directory is unable to process logins. Which method should the administrator use to access the cluster in the event of this type of outage?

A. Manage the cluster by using the 'nutanix' user on the Prism leader CVM
B. Create and use an emergency local account on the cluster
C. Deploy an Active Directory server locally on the cluster
D. Manage the cluster remotely by downloading ncli to a remote workstation

Correct Answer: B
Section:
Explanation:
In the event of an Active Directory outage that prevents login to Prism, the recommended approach is to have a contingency plan that allows for local management of the cluster. Option B, 'Create and use an emergency local account on the cluster,' is the correct choice. This approach ensures that administrators can still access and manage the cluster even if external authentication services are down.
An emergency local account provides a direct, reliable means to access Prism and perform necessary administrative tasks without depending on external systems. This is a critical backup strategy for maintaining access control and managing the cluster during outages.
Reference: This method is in line with best practices for system availability and disaster recovery, ensuring administrators retain access to manage and troubleshoot without interruption, as detailed in Nutanix's documentation and security configuration guidelines.

QUESTION 29
A customer has NearSync configured. When the administrator tries to restore a snapshot from 3 minutes ago, it is not available. The snapshots are happening at 15-minute intervals instead of at the 5-minute configured interval. When the protection domain was initially set up, the snapshots were happening at the expected 5-minute interval.
What should the customer do to enable the snapshots to happen at the expected interval?

A. Utilize Metro Availability to meet this requirement
B. Change the protection domain to use Async DR
C. Fix a connectivity issue because the protection domain reverted to Async
D. Configure the protection domain to take snapshots on 15-minute intervals

Correct Answer: C
Section:
Explanation:
If the administrator observes that the snapshot intervals have changed from the initially configured 5-minute intervals to 15-minute intervals, it indicates a potential issue with the setup. Option C, 'Fix a connectivity issue because the protection domain reverted to Async,' addresses the likely cause---a connectivity problem that caused the system to revert to longer, asynchronous DR snapshot intervals.
NearSync typically allows for very frequent snapshots, but if there is a connectivity or configuration issue, it might fall back to less frequent asynchronous DR settings. Identifying and resolving any connectivity issues would allow the NearSync configuration to operate as initially intended.
Reference: The mechanics of NearSync and its behavior under connectivity issues are discussed in detail in Nutanix's documentation and troubleshooting guides, which describe how the system handles fallback scenarios and how to rectify them.

QUESTION 30
An administrator deploys Exchange on a Nutanix cluster. The administrator creates two containers with RF2 configuration:
* One container for Exchange
* One container for the other VMs
The Exchange VM is experiencing I/O performance issues.
Which changes to Storage Optimization should be used on the Exchange container to enhance I/O performance?

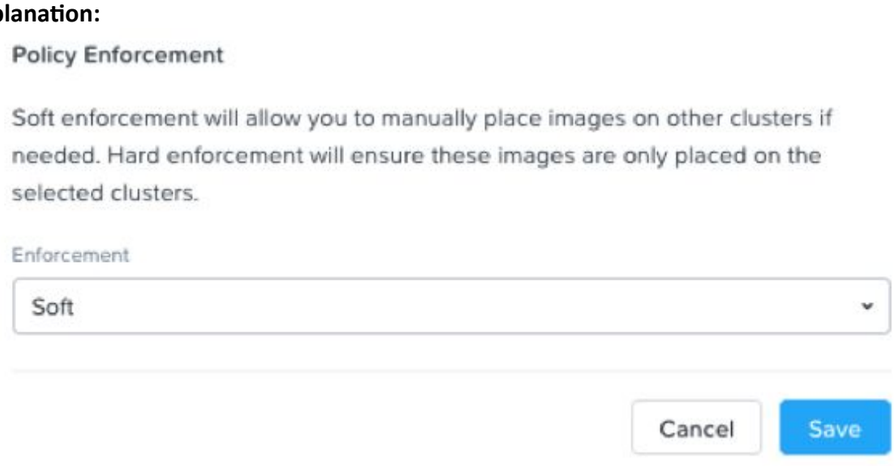
A. No data reduction
B. Post process Deduplication only
C. Inline compression and EC-X
D. Inline compression and Deduplication

Correct Answer: A
Section:
Explanation:
For the Exchange VM experiencing I/O performance issues, the recommended storage optimization change is Option A, 'No data reduction.' Exchange, as an application, is highly sensitive to latency and typically does not benefit significantly from data reduction technologies like deduplication or compression, which can introduce additional processing overhead and potentially worsen performance issues.
By configuring the container for Exchange with no data reduction, the system maximizes I/O performance by eliminating any additional processing that could delay data access. This setup ensures that Exchange has the fastest possible access to its data, which is crucial for its performance.
Reference: This recommendation aligns with best practices for Exchange storage on Nutanix, as detailed in the Nutanix best practices guide for deploying Microsoft Exchange, where it advises against using data reduction features for databases requiring high I/O throughput.

QUESTION 31
While creating an image placement policy on the organizations AOS 5.15-based Nutanix cluster, the administrator wants to ensure there are no restrictions on using the selected images on clusters outside of the identified set.
What type of Policy Enforcement must the administrator choose?

A. Soft
B. Internal
C. Hard
D. External

Correct Answer: A
Section:
Explanation:



QUESTION 32
An alert about RX errors on eth2 on a node is reported in the cluster. The administrator logs in to the CVM in question, checks the ping_* files in the data/logs/syststats folder, and notices intermittent ping loss.
The node in question has the following network configuration:

```
nutanix@NTNX-16xxxxxxxx5-A-CVM:xx.xx.xx.76:~$ manage_ovs show_uplinks

Bridge: br0
  Bond: br0-up
    bond_mode: active-backup
    interfaces: eth3 eth2
    lacp: off
    lacp-fallback: True
    lacp_speed: slow
Bridge: br1
  Bond: eth0
    bond_mode: active-backup
    interfaces: eth0
    lacp: off
    lacp-fallback: True
    lacp_speed: slow
Bridge: br1
  Bond: eth0
    bond_mode: active-backup
    interfaces: eth0
    lacp: off
    lacp-fallback: false
    lacp_speed: slow
Bridge: br2
Bridge: br5
nutanix@NTNX-16xxxxxxxx5-A-CVM:xx.xx.xx.76:~$ manage_ovs show_interfaces
name  mode link speed
eth0  1000 True  1000
eth1  1000 True  1000
eth2 10000 True 10000
eth3 10000 True 10000

nutanix@NTNX-16xxxxxxxx5-A-CVM:xx.xx.xx.76:~$
```

Which action should be used to troubleshoot without disrupting the VMs running on this node?

A. Replace the cable from eth2 to the switch
B. Remove eth3 from br0-up and monitor for new alerts
C. Check the port on the switch side for any errors
D. Enable balance-s1b on br0-up and monitor if a problem persists

Correct Answer: C
Section:
Explanation:
Given the reported RX errors on eth2 and the intermittent ping loss as observed from the CVM logs, the best initial troubleshooting step that avoids VM disruption is to inspect the switch port for errors. Option C, 'Check the port on the switch side for any errors,' is the most direct and non-invasive approach to determining if the issue lies with the network infrastructure rather than the server hardware itself or the configuration.
This action helps identify whether the problem is related to the physical connection (e.g., port issues, switch configuration errors) without altering the current active network setup on the Nutanix node. If errors are found on the switch port, adjustments or repairs can be made accordingly, potentially resolving the RX errors without impacting the running VMs.
Reference: This recommendation follows Nutanix's best practices for network troubleshooting, focusing first on external network components before altering host configurations.

QUESTION 33

An administrator protected a DB VM running on a Nutanix cluster with NearSync Replication, which schedules to repeat every 15 minutes to a second site. The daily change rate is low. During nightly backups, the replication window is missed due to write volume.
Which two options describe the expected behavior? (Choose two.)

A. NearSync stops working and fails over to the remote site.
B. Protection Domain transitions back to the hourly schedule.
C. The Administrator needs to re-enable it manually.
D. The system continuously tries to get to the NearSync schedule.

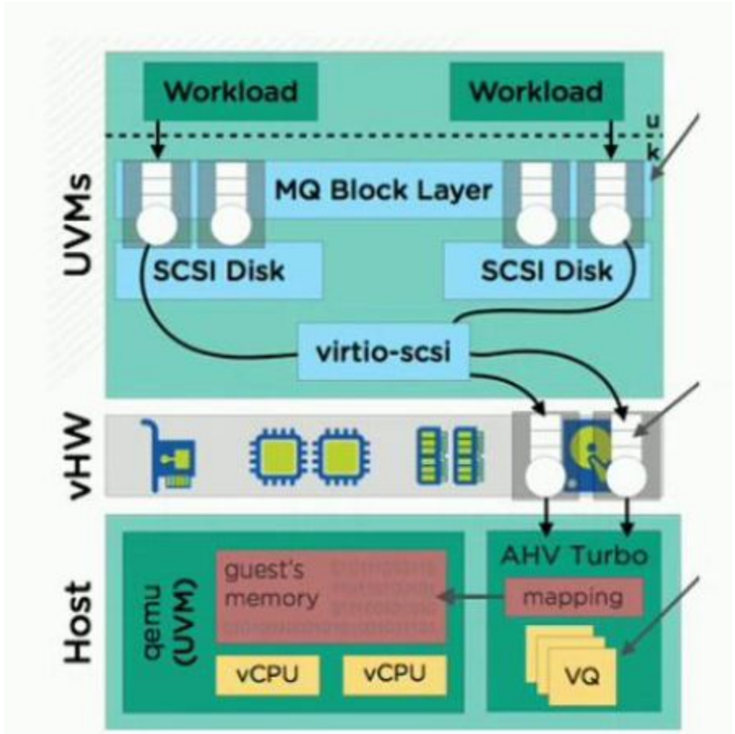
Correct Answer: B, D
Section:
Explanation:
When a NearSync Replication window is missed due to high write volume during nightly backups, the expected behavior of the system is to adjust the replication schedule temporarily and continuously attempt to return to the configured NearSync schedule. The correct answers are:
Option B, 'Protection Domain transitions back to the hourly schedule.' If the NearSync cannot maintain the 15-minute schedule due to excessive write volume, it may temporarily fall back to a less frequent schedule, such as hourly, to stabilize.
Option D, 'The system continuously tries to get to the NearSync schedule.' NearSync is designed to handle transient high-load situations by trying to catch up and revert to the pre-set NearSync schedule as conditions allow.
Reference: These behaviors are outlined in the Nutanix documentation for NearSync, which describes how the system manages periods of high I/O and missed replication windows.

QUESTION 34
An administrator is deploying a three-tier application on a Nutanix Enterprise Cloud consisting of web, application, and database VMs. Traffic between the servers must be limited to specific services/ports. There is an application layer firewall VM deployed on one host in the cluster.
In which way should the administrator meet this requirement?

A. Create a network for each type of VM, and use policy-based routing to control the traffic flow
B. Configure a security policy and service chain redirecting the server traffic through the firewall
C. Separate the web. application and database VMs on to dedicated VLANs
D. Categorize the VMs in Prism Central and utilize Flow to set a security policy

Correct Answer: D
Section:
Explanation:
For a multi-tier application where traffic must be limited to specific services and ports across web, application, and database VMs, the optimal approach is to use microsegmentation features provided by Nutanix. Option D, 'Categorize the VMs in Prism Central and utilize Flow to set a security policy,' is the correct choice.
Nutanix Flow allows for detailed security policies that control VM-to-VM traffic within the same cluster, effectively managing access and communication based on specified criteria like VM category, service, or application type. This solution enables precise control over traffic flows, enhancing security without requiring additional physical or virtual network segmentation.
Reference: Nutanix Flow capabilities are detailed in Nutanix Prism Central's documentation, which explains how to implement microsegmentation and security policies for application-specific traffic management.

QUESTION 35
Refer to the exhibit.



An administrator has an existing cluster and needs to improve performance using AHV Turbo. Which two items are required to achieve even greater performance? (Choose two.)

A. Workloads are multi-threaded.
B. VMs have one vCPU configured.
C. VMs have multi-queue disabled.
D. VMs have more than one vCPU.

Correct Answer: A, D
Section:
Explanation:
To maximize the performance benefits of AHV Turbo, which is designed to optimize network and storage I/O operations for VMs, certain VM configurations are advantageous. The correct answers are:
Option A, 'Workloads are multi-threaded.' Multi-threaded applications can better utilize the improvements in I/O processing efficiency provided by AHV Turbo, leading to better overall performance.
Option D, 'VMs have more than one vCPU.' This configuration allows VMs to handle multiple processes or threads simultaneously, which is particularly beneficial when combined with AHV Turbo's enhanced I/O operations.
Reference: The benefits of configuring VMs with multiple vCPUs and supporting multi-threaded applications are discussed in Nutanix's documentation on AHV and performance optimization, where AHV Turbo is highlighted for its ability to accelerate VM operations in a Nutanix environment.

AHV Turbo technology recommendations

AHV Turbo technology is transparent to the VMs, but you can achieve even greater performance if:

- The VM has multiqueue enabled. Consult your Linux distribution documentation to make sure that the guest operating system fully supports multiqueue before you enable it, as well as for instructions on how to enable it. One common method for enabling multiqueue is to add one of the following lines to the kernel command line:

```
scsi_mod.use_blk_mq=y
```

```
scsi_mod.use_blk_mq=1
```

- You have installed virtIO 1.1.2 or newer for Windows-based VMs. No additional configuration is required.
- The VM has more than one vCPU.
- The workloads are multi-threaded.

QUESTION 36
An administrator is performing a set of routine checks and notes that Prism Central is running with 4 vCPUs and 21 GB RAM. The organizations environment is based on two Nutanix clusters with 170 VMs plus a Legacy vSphere infrastructure. No manual changes have been done on Prism Central VM.
Which configuration justifies the current Prism Central configuration?

A. Nutanix Move is running on Prism Central to import VMs from the Legacy Cluster.
B. Prism Central was installed for Large Deployment environments.
C. Prism Central is running on the legacy duster and requires more RAM.
D. Nutanix Leap and Nutanix Flow have been enabled on Prism Central

Correct Answer: D
Section:

QUESTION 37
An administrator finds that home shares cannot be configured in a new Files 3.5 deployment. Why is this happening?

A. NFS default access is set to Read Only.
B. Multi-protocol access is not configured.
C. Access Based Enumeration is not enabled.
D. The system is deployed as a single FSVM.

Correct Answer: D
Section:

QUESTION 38

Refer to the exhibit.

A Microsoft SQL 2016 deployment is shown in the exhibit. The administrator receives user reports that database queries take too long to return.
Which optimization should be made to this configuration to improve performance?

A. Combine both of the OS and SQL Binaries disks
B. Add a second SCSI controller for the Database.
C. TempDB, and Logs disk Separate the Database. TempDB, and Logs onto their own disks
D. Configure the VM to use a PCI disk controller

Correct Answer: C
Section:

QUESTION 39
An administrator of a Nutanix Enterprise Cloud has microsegmentation enabled and a firewall VM installed. The security team notifies the administrator that one of the VMs hosted in the environment has been exhibiting suspect network activity. The administrator wants to isolate the VM from the production network, but must still be able to access it to perform diagnostics.
What should the administrator do to meet the requirement?

A. Disable the vNIC on the affected VM
B. Quarantine the VM using the Forensic Method
C. Create a firewall rule that blocks VM traffic but permits diagnostic access
D. Create a security policy with a service chain directing that VMs traffic to the firewall VM

Correct Answer: B
Section:
Explanation:
Ref https://portal.nutanix.com/page/documents/kbs/details?targetId=kA00e000000LIelCAG

QUESTION 40
An administrator migrates a VM onto a new Nutanix cluster. After the migration, the administrator observes the following conditions:
* Cluster memory utilization: 64%
* Cluster CPU utilization: 19%
* Cluster storage utilization: 32%
* Average VM CPU utilization: 25%

* Average VM CPU ready%: 24%
* Average VM memory utilization: 60%
Which two changes should the administrator make to improve VM performance? (Choose two.)

A. Add more memory to the VMs.
B. Reduce the number of vCPUs assigned to VMs.
C. Replace high core count CPUs with high clock rate CPUs. (also can be but is physical invas)
D. Reduce the number of VMs on the hosts.

Correct Answer: B, D
Section:
Explanation:
ref http://www.joshodgers.com/tag/cpu-ready/

QUESTION 41
An administrator is supporting a business critical environment and deploys metro availability to achieve a zero data loss configuration. The two clusters are connected by a 1GbE connection. A new workload is going to be deployed to this cluster. This workload requires a sustained 150MB/S of write throughput and 20MB/s of read throughput.
Which change must be made to deploy the workload successfully on this cluster?

A. The bandwidth must be increased to support this workload.
B. The workload must be configured to read at greater than 12.5MB/S.
C. The replication frequency must be less than 60 minutes.
D. Zero data loss nearsync must be used to support this workload.

Correct Answer: A
Section:
Explanation:
Ref:

6.3. Nutanix Recommendations

- Redundant remote replication links between clusters.
- Similar performance characteristics between the clusters used for Metro Availability:
  - Similar number of nodes.
  - Similar server memory configuration.
  - Similarly sized oplog.
  - Similar dive count for oplog draining to the extent store.
- Adequate bandwidth to support peak write workloads.

QUESTION 42
A systems administrator needs to add more VMs to their Nutanix cluster.
Which two actions should the administrator perform to determine if the current cluster can accommodate the new VMs? (Choose two.)

A. Perform an Inventory with Life Cycle Management.
B. Determine utilization with Cluster Runway.
C. Enable Deduplication and Erasure Coding.

D. Utilize Optimize Resources for VM efficiency.

Correct Answer: B, D
Section:
Explanation:
Ref:

QUESTION 43
A guest VM is reported to have poor storage performance. It has an I/O profile of 80% read. 20% write, and the HDDs form more than 50% of the read source.
What should an administrator do to resolve this issue?

A. Increase SSD capacity
B. Increase the OPLOG
C. Increase the write cache
D. Use HDDs with higher RPM

Correct Answer: A
Section:
Explanation:
Ref: https://portal.nutanix.com/page/documents/solutions/details?targetId=BP-2126-SAS-on-Nutanix:BP-2126-SAS-on-Nutanix

QUESTION 44
An administrator receives an alert in Prism indicating that interface eth2, on an AHV host is receiving many CRC errors. After togging into the problematic host, the following command is run to show the indicated output:

```
[root@AHV-Host ~]# ethtool -S eth2 | grep error
rx_errors: 0
tx_errors: 0
rx_over_errors: 0
rx_crc_errors: 478593
rx_frame_errors: 0
rx_fifo_errors: 0
rx_missed_errors: 0
tx_aborted_errors: 0
tx_carrier_errors: 0
tx_fifo_errors: 0
tx_heartbeat_errors: 0
rx_long_length_errors: 0
rx_short_length_errors: 0
rx_csum_offload_errors: 0
```

What is causing this issue?

A. Incorrect link speeds on the switch
B. The interface is incorrectly configured with Jumbo Frames
C. A misconfigured bond
D. A physical layer network problem

Correct Answer: B
Section:
Explanation:
Ref:
rx_crc_errorsare caused either by faults in layer 1 (in the past, we have seen failed twinax cables and incorrect types of fibre being used), or issues with jumbo frames on the network. In an environment with 10 Gig switches that use cut-through forwarding (Cisco Nexus, Arista, Cisco devices using IOS default to Store and Forward switching), any packets that come into the switch will get forwarded out the destination interface once the switch has read the destination MAC address. If that packet has an MTU over what is configured on the interface, it will cut off the packet at the designated MTU, causing the server to receive a malformed packet, which will throw a CRC error.
If you have a layer 1 issue, you will seerx_crc_errors,not on all but one or two nodes.

QUESTION 45
An administrator deletes a large amount of data from a Volume Group presented to a Linux VM. The administrator notices that the deleted data has not been reclaimed as usable storage.
What action should be taken to reclaim the storage capacity?

A. Shrink the Volume Group that is associated with the Linux VM
B. Unmount the Volume Group and then Remount the Volume Group
C. Enable the unman operation on the Linux VM
D. Run Defrag on the Linux VM

Correct Answer: B

Section:
Explanation:
https://next.nutanix.com/how-it-works-22/vm-capacity-and-prism-capacity-are-different-33134

QUESTION 46
A customer has two mission-critical applications and needs to have them backed up to a remote location. The remote location is connected using a leased line and has an average latency of 7 ms.
Which Nutanix technology will provide the shortest RPO possible?

A. NearSync
B. Leap
C. Metro Availability
D. Asyn&DR

Correct Answer: B
Section:
Explanation:
Ref: https://portal.nutanix.com/page/documents/solutions/details?targetId=BP-2005_Data_Protection:BP-2005_Data_Protection

QUESTION 47
An administrator needs to deploy an application with a large amount of data connected via Nutanix Volumes.
Which two actions should the administrator take when designing the Volume Group? (Choose two.)

A. Use multiple subnets for iSCSI traffic
B. Enable RSS (Receive Side Scaling)
C. Enable thick provisioning on the Volume Group(s)
D. Distribute workload across multiple virtual disks

Correct Answer: B, D
Section:
Explanation:

9. Recommendations

- Use the Data Services IP method for external host connectivity to VGs.
- For backward compatibility, you can upgrade existing environments nondisruptively and continue to use MPIO for load balancing and path resiliency.
- For security, use at least one-way CHAP.
- Leave ADS enabled. (Enabled is the default setting.)
- Use multiple disks rather than a single large disk for an application. Consider using a minimum of one disk per Nutanix node to distribute the workload across all nodes in a cluster. Multiple disks per Nutanix node may also improve an application's performance.
- For performance-intensive environments, we recommend using between four and eight disks per CVM for a given workload.
- Use dedicated network interfaces for iSCSI traffic in your hosts.
- Place hosts that use Nutanix Volumes on the same subnet as the iSCSI data services IP.
- Use a single subnet (broadcast domain) for iSCSI traffic. Avoid routing between the client initiators and CVM targets.
- Receive-side scaling (RSS) allows the system to use multiple CPUs for network activity. With RSS enabled, multiple CPU cores process network traffic, preventing a single CPU core from becoming a bottleneck. Enabling RSS within hosts can be beneficial for heavy iSCSI workloads. For VMs running in ESXi environments, RSS requires VMXNET3 VNICs. For Hyper-V environments, enable VMQ to take full advantage of Virtual RSS.

QUESTION 48
Microsegmentation was recently enabled in a Nutanix environment. The administrator wants to leverage Prism Central to create a policy that will block all traffic, regardless of direction, between two groups of VMs identified by their category.
Which policy should be used to meet this requirement?

A. A Quarantine Policy
B. An Isolation Environment Policy
C. An Application Security Policy
D. A Whitehst-Based Policy

Correct Answer: B
Section:
Explanation:

Creating an Isolation Environment Policy

An isolation environment policy identifies two groups of VMs and blocks communications between the groups. The two groups are identified by category. You can specify an additional category to restrict the scope of the policy to that category.

About this task

To create an isolation environment, do the following:

Procedure

1. On the **Explore** tab of the main menu, click **Security Policies** from the entities list (left column). See Security Policies Summary View.
2. Click **Create Security Policy**, and then click **Isolate Environments**.

QUESTION 49
An administrator configures authentication in Prism Central (PC) for the NTNX-Admins group. Users report that they are unable to log in. The administrator confirms that the Active Directory (AD) settings in PC are correct. Which condition could result in this behavior?

A. A role mapping needs to be associated with the AD group.
B. The users must be added to the Domain Admins AD group.
C. The Local authentication type must also be selected in PC.
D. A client chap certificate must also be added in PC.

Correct Answer: B
Section:
Explanation:
Ref: https://portal.nutanix.com/page/documents/details?targetId=Prism-Central-Guide-Prism-v5_10:mul-security-role-permissions-pc-t.html

QUESTION 50
A three-node cluster has a Nutanix Files instance with three FSVMs.
What happens after a node failure?

A. The affected FSVM will get live-migrated to another node.
B. The affected FSVM will not be restarted on another node due to its agent VM setting.
C. The affected FSVM will not be restarted on another node due to its VM-to-VM anti-affinity settings.
D. The affected FSVM will be restarted on another node.

Correct Answer: D
Section:
Explanation:
Ref: https://portal.nutanix.com/page/documents/details?targetId=Files-v3_6:fil-files-high-availability-c.html

QUESTION 51
A VDI environment based on AHV Cluster is not performing well. The current environment is using only one bridge (Bridge0). The administrator needs to verify if nodes are using all network cards associated to Bridge0.

Which two menus should be used to check the current configuration? (Choose two.)

A. Network Configuration item in Settings menu
B. Host view in Network menu
C. Host NICs tab in Hardware menu
D. I/O Metrics tab in VM menu

Correct Answer: B, C
Section:

QUESTION 52
An administrator needs to create and start five new VMs for a Data Analytics Project (OLAP). The VM Profile is as follows:
* vCPU:4
* vRAM: 64 GB
* vDisk: 1.5 TB
Each of the four nodes of the Nutanix cluster has the following:
* 24 vCPU. 20% overall usage
* 192 GB RAM, 60% overall usage
* 2xl920GBSSD
* 4x 2 TB HDD
At cluster level, there is a single RF2 container that is 30% utilized and has an extent store capacity of 13.5 TB.
Which component requires administrator attention?

A. Physical RAM, because it is not enough to power on all of the new VMs.
B. Physical Cores, because they are not enough to power on all of the new VMs.
C. Storage, because the capacity is not enough to create VMs.
D. Flash Tier because it is not enough to accommodate the workloads.

Correct Answer: A
Section:

QUESTION 53
Refer to the exhibits.
An administrator has reported that a new VM is not performing well.

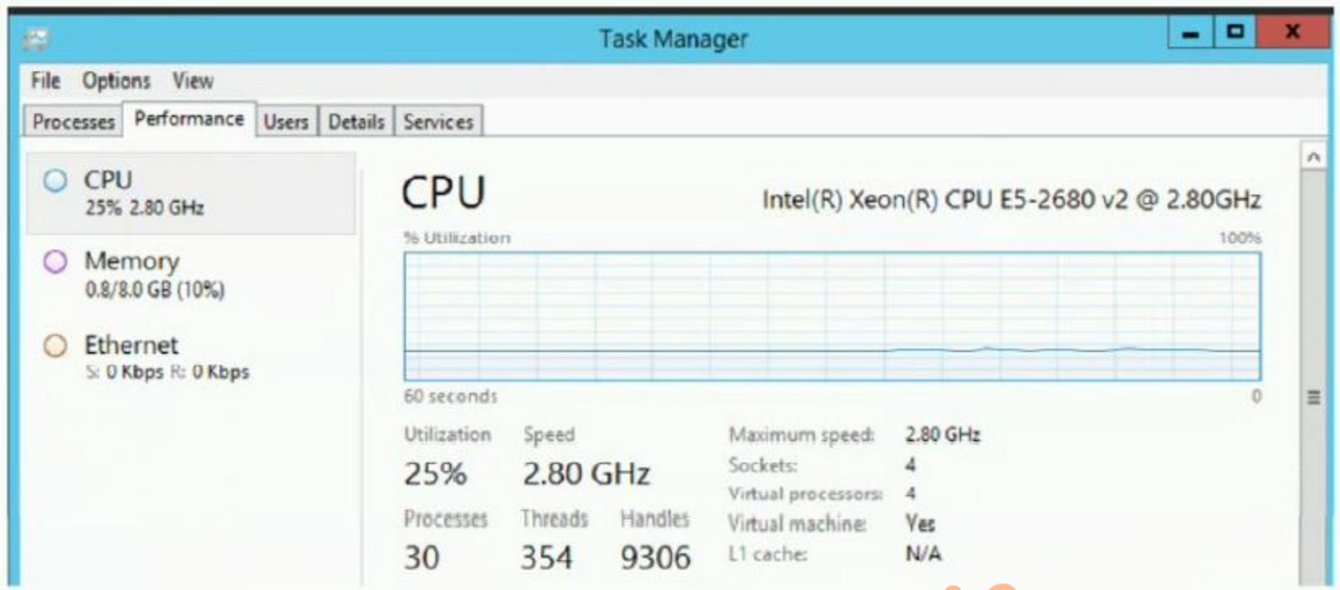
Prism Element, VM Table Metrics

VM Name: NCNCAPVM
Cores: 4
Memory Capacity: 8GiB
Storage: 9.86 GiB / 40 GiB
CPU Usage: 25.85%
Memory Usage: 0%
Controller Read IOPS: 0
Controller Write IOPS: 0
Controller I/O Bandwidth: 13 KBps
Controller Avg IO Latency: 2.33ms
Backup ...: Yes
Flash Mode: No

Prism Element, Analysis Chart

Hypervisor CPU Usage: 25%
Hypervisor CPU Ready Time: 0%

VM Task Manager



After analyzing the information presented in the exhibits, which option shows the best conclusion regarding this workload?

A. VM is CPU constrained since the hypervisor cannot provide the required resources.
B. VM is CPU constrained because more CPU needs to be added to the VM.
C. VM is Storage constrained, because the workload is waiting for storage access.
D. VM is not CPU constrained, because the VM is not running, a multithreaded application.

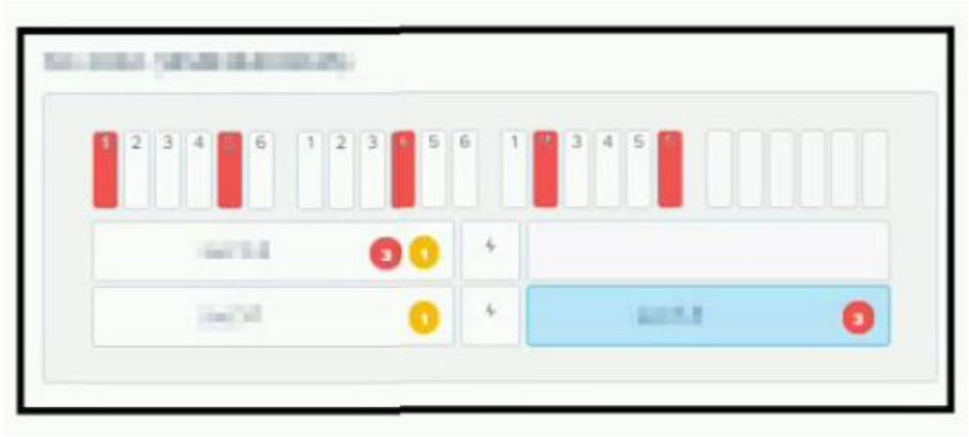
Correct Answer: C
Section:

QUESTION 54
An administrator is notified that a bare metal database server is down. This database server is being served storage using a Nutanix Volume Group. Upon investigating, the administrator finds that the disks in the database server that map to the vDisks in the volume group have gone offline.
What is causing this issue?

A. The Volume Group Load Balancer has been disabled.
B. Port 9443 is blocked in the server firewall.
C. Port 3260 has been blocked in the server firewall.
D. A CVM serving the Volume Group has gone offline.

Correct Answer: D
Section:

QUESTION 55
Refer to the exhibit.



An administrator logs in to Prism and sees the status shown in the exhibit within the Hardware Diagram section.
What should the administrator do?

A. Resolve all alerts and re-import the disks to make sure there is no service disruption.
B. Restart all CVMs for the cluster to check, confirm health and repartition and add the disks.
C. Reseat all disks immediately. If this does not help, reseat the nodes.
D. Check status of applications running on the cluster and call support

Correct Answer: D
Section:

QUESTION 56
An administrator needs to migrate workloads from a Nutanix cluster running VMware ESXi to Nutanix AHV. The migration process needs to be completed in multiple VM groups and support roll back in case any problems are found during user acceptance testing.
Which action should the administrator perform?

A. Use Cross Hypervisor DR to replicate VMs from ESXi to AHV
B. Use VMware Converter
C. Use Nutanix one-click cluster conversion from ESXi to AHV
D. Use storage live migration

Correct Answer: C
Section:
Explanation:
Ref: https://next.nutanix.com/installation-configuration-23/convert-existing-nutanix-vmware-cluster-to-nutanix-only-37600

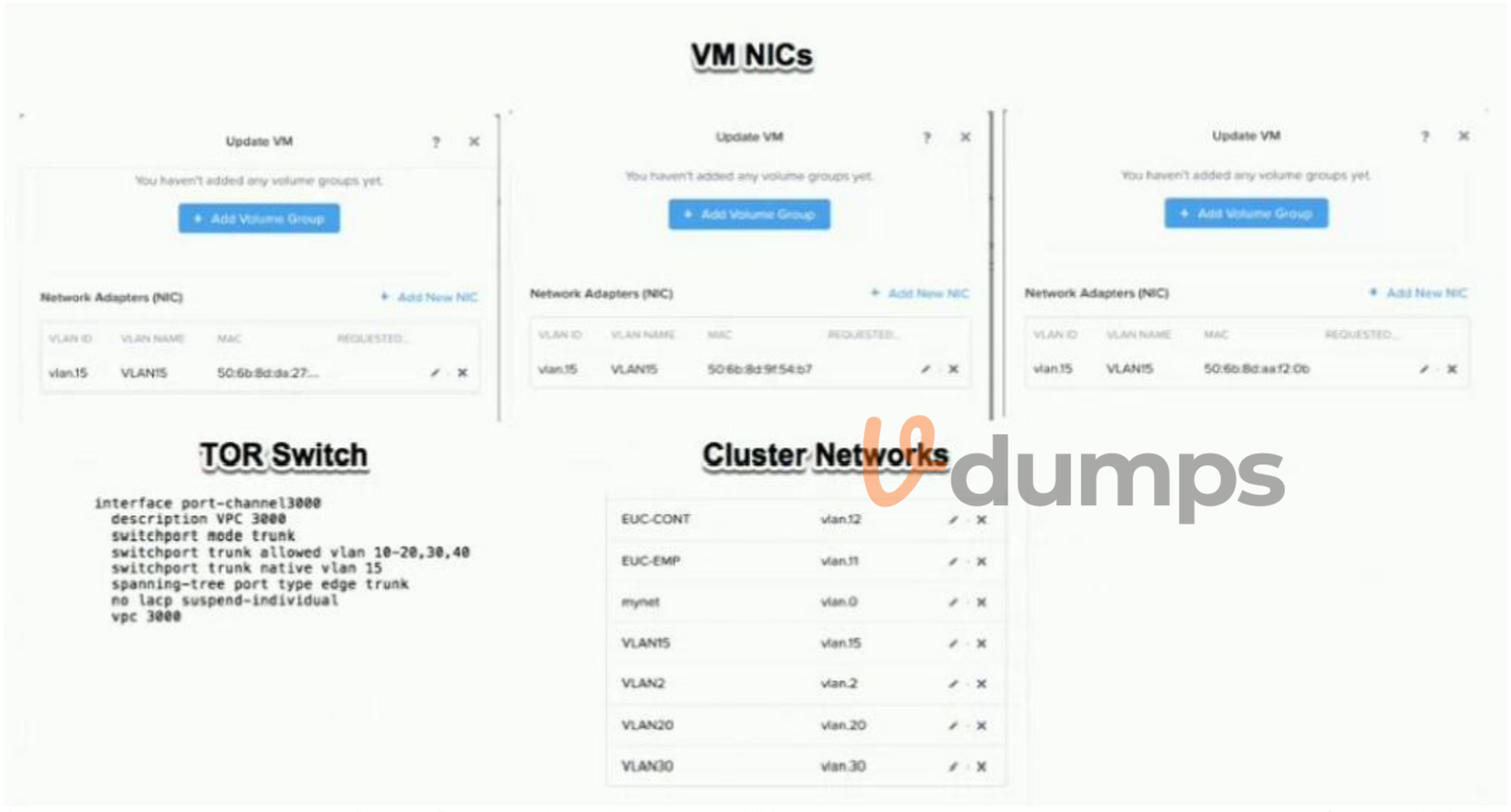
QUESTION 57
An administrator needs to expand a cluster based on AHV and running on Nutanix G5 hardware with a new Nutanix G7 system. The cluster is running AOS 5.10 but the operation fails when expanding the cluster. AOS is running on the new system. There are no issues discovering the node.
Why is the operation failing?

A. AOS version running on G7 is older than the version on the cluster.
B. Foundation software has not been updated on the cluster.
C. G7 hardware cannot be added to a G5 cluster.

D. EVC needs to be configured before cluster expansion

Correct Answer: A
Section:
Explanation:
Ref: https://next.nutanix.com/installation-configuration-23/product-mixing-restrictions-37231

QUESTION 58
Refer to the exhibit.



An administrator is commissioning a Nutanix Enterprise Cloud. Once the user VMs have been deployed and are running, the administrator finds that VMs on the same host are able to communicate, but are unable to communicate between hosts.
What must be changed to enable full inter-VM communications?

A. Change the network the VMs are connected to
B. Change the spanning-tree port type on the switch
C. The VMs need to have static IP addresses
D. Update the switch to specifically allow VLAN 15

Correct Answer: D
Section:
Explanation:

Ref: https://hyperhci.com/2019/11/09/nutanix-ahv-enable-vlan-trunk-mode-on-guest-vm/

QUESTION 59
An administrator is deploying Nutanix Files 3.5 and needs to configure the sizing of the FSVMs for an increased number of concurrent SMB connections over the default 750.
What should the administrator do?

A. Deploy the Files VMs. power down the three FSVMs. change the CPU and RAM via Prism, and then power the three FSVMs back up
B. During installation, click Customize on the File Server Installation screen, change the number of connections, and finish the installation
C. Complete the default installation change the CPU and RAM m Prism, and then log into the File Server dashboard and change the Filer Server Properties
D. During installation, input the correct number of connections in the File Server Installation screen and complete the installation

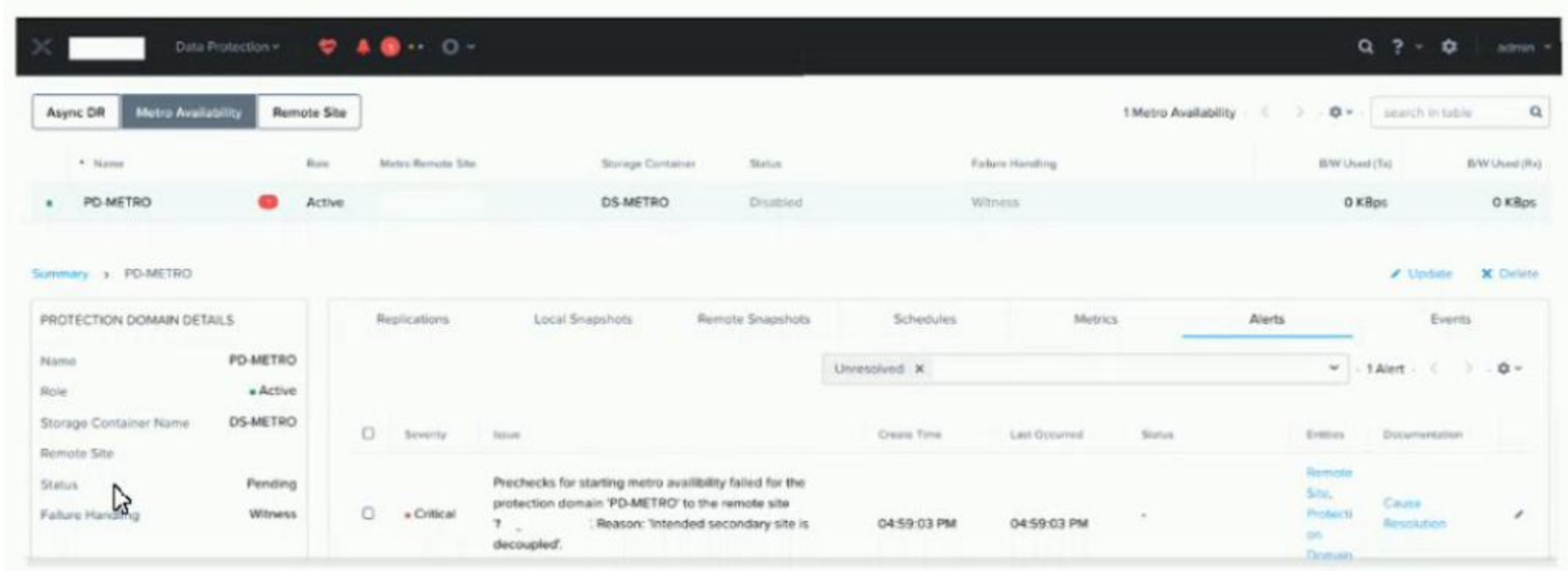
Correct Answer: B
Section:
Explanation:
Ref: https://portal.nutanix.com/page/documents/details?targetId=Files-v3_6:fil-file-server-manage-c.html

QUESTION 60
An administrator receives a notification that storage in a Nutanix cluster is unavailable. The cluster consists of five nodes and is configured with a Fault-Tolerance level of 1 (FT-1).
Upon investigation, the administrator finds the following:
* All AHV hosts are powered on and the CVMs are running
* Nodes A, B, and C are connected to one top of rack switch
* Nodes D and E are connected to a second top of rack switch
* The cluster status command run on Node A shows that CVM services on nodes D and E are down
Which issue is causing the storage outage?

A. The default gateway for the CVMs and AHV hosts is down.
B. The switch connecting Nodes D and E is down.
C. The genesis process is down on both Nodes D and E.
D. Nodes D and E are in maintenance mode.

Correct Answer: B
Section:
Explanation:
https://hyperhci.com/2020/07/29/nutanix-cluster-services-down-troubleshooting/

QUESTION 61
Refer to the exhibit.



An administrator notices a critical alert on the Metro Availability Protection Domain What is causing this alert?

A. Metro Availability Protection domain is active on the remote site.
B. VMware Site Recovery Manager is handling a failover event
C. Metro Availability did not fail over and caused an outage.
D. vSphere moved VMs to the remote container, and the VMs must be moved back.

Correct Answer: A
Section:
Explanation:
Ref: https://www.vvlsystems.com/wp-content/uploads/2016/11/BP-2009_Metro_Availability.pdf

QUESTION 62
A customer wants to know the details of network validation testing.
Where can the consultant find this information?

A. Handover checklist
B. Test plan
C. Operations Guides
D. As-Built Guide

Correct Answer: B
Section:
Explanation:
The Test Plan is the most appropriate resource for detailed information on network validation testing. This document typically outlines the specific tests to be conducted to ensure the network meets the required specifications and performance standards necessary for a stable and efficient Nutanix environment. The Test Plan provides a structured approach to validate each network component and interaction, ensuring all aspects are tested and meet design and operational requirements.
Reference: Nutanix Installation and validation procedures as described in Nutanix official documentation and training modules from Nutanix University.

QUESTION 63
A customer has an ESXi Cluster with two 10GbE NICs on each node with the following requirements:
* Solution must follow Nutanix Best Practices
* Network configuration should be redundant
* A vSphere Standard Switch must be utilized
Which load balancing method should be used?

A. Route based on originating port ID
B. Route based on physical NIC load
C. Route based on IP hash
D. Route based on source MAC hash

Correct Answer: A
Section:
Explanation:
According to Nutanix best practices for ESXi clusters, using a vSphere Standard Switch with 'Route based on originating port ID' is recommended for load balancing. This method ensures that the same virtual port ID within a vSwitch uses the same uplink from the vSwitch. This load balancing policy provides an even distribution of traffic and redundancy by utilizing both NICs effectively without requiring any specific physical switch configurations, such as EtherChannel or LACP.
Reference: The Nutanix Bible, NCS-Core 6.8 course content, and VMware's documentation on vSphere Standard Switch load balancing methods.

QUESTION 64
A consultant creates three storage containers (container-1, container-2, container-3). The customer requires that only container-1, which will be utilized as an NFS datastore, be presented to external hosts.
However, users are able to mount all three containers.
What is causing this problem?

A. Compression was turned on for all containers.
B. A Container-level whitelist entry was configured.
C. Deduplication was turned on for all containers.
D. A Global whitelist entry was configured.

Correct Answer: D
Section:
Explanation:
The issue where users can mount all three storage containers despite the intention to restrict access to just container-1 typically stems from a Global whitelist entry. A global whitelist allows all entities to access all containers unless more specific restrictions are applied at the container level. To correct this, specific whitelist entries need to be configured for each container to define and restrict access appropriately.
Reference: Nutanix NCS-Core 6.8 training resources, the Nutanix Bible, and Nutanix technical documentation on storage container management.

QUESTION 65
What reference materials should be provided to the customer during the Knowledge Transfer?

A. Questionnaire, technical slides and checklist, links to documentation and resources
B. As-Built Guide, technical slides and checklist, Network Diagram
C. As-Built Guide, Project Plan, links to documentation and resources
D. As-Built Guide, technical slides and checklist, links to documentation and resources

Correct Answer: D
Section:
Explanation:

During the Knowledge Transfer phase, providing the customer with the As-Built Guide, technical slides and checklists, along with links to documentation and resources, is optimal. This set of materials ensures the customer receives both detailed and high-level information, supporting a thorough understanding of the deployment and operational procedures, and it allows for easy reference to official resources for ongoing needs.
Reference: The Nutanix Bible, NCS-Core 6.8 learning documentation, and best practices in IT project documentation.

QUESTION 66
A consultant is planning a new cluster installation and needs to locate the Shared IPMI port for each of the specific nodes that the customer has bought.
Which Support Portal location contains the document that would identify the port?

A. Solutions Documentation
B. Hardware Replacement Documentation
C. Software Documentation
D. Knowledge Base

Correct Answer: B
Section:
Explanation:
When looking for documents that identify specific ports such as the Shared IPMI port on nodes, the best location within the Nutanix Support Portal is the Hardware Replacement Documentation. This section specifically deals with physical components and their configurations, making it the most appropriate resource for identifying physical port locations and specifications related to specific Nutanix hardware models.
Reference: Nutanix Support Portal, Nutanix Bible, and NCS-Core 6.8 materials specifically mentioning hardware documentation.

QUESTION 67
An organization is planning an upgrade to AOS 5.15 and wants to understand which cluster products and/or services are supported for physical traffic isolation.
Which Nutanix component supports its network traffic being isolated onto its own virtual network?

A. Volumes
B. Objects
C. Containers
D. Files

Correct Answer: A
Section:

QUESTION 68
A customer has Metro Availability configured in Automatic Resume Mode between Site A and Site B What happens to VMs if Primary Site A has full network failure?

A. Automatic protection domain promotion in Site B. VMs automatically restart in Site B
B. VMs continue to run on Site A following an automatic disable of protection domains.
C. An administrator must unwitness in Site B and promote protection domains in Site B for VMs to restart
D. An administrator must promote protection domains in Site B for VMs to restart.

Correct Answer: A
Section:
Explanation:
Ref: https://support-portal.nutanix.com/page/documents/details/?targetId=Web-Console-Guide-Prism-v55:sto-metro-availability-witness-c.html

QUESTION 69
An administrator is responsible for the following Nutanix Enterprise Cloud environment:
* A central datacenter with a 20-node cluster with 1.5PB of storage

* Five remote sites each with a 4-node cluster with 200TB storage
The remote sites are connected to the datacenter via 1GB links with an average latency of 6 ms RTT. What is the minimum RPO the administrator can achieve for this environment?

A. 0 minutes
B. 15 minutes
C. 1 hour
D. 6 hours

Correct Answer: B
Section:
Explanation:
Ref: https://support-portal.nutanix.com/page/documents/details?targetId=Web-Console-Guide-Prism-v5_10:wc-protection-domain-wc-c.html

QUESTION 70
An administrator learns that some security settings in a cluster have been changed. The environment is out of compliance with required policies.
Which function should be used to revert any settings that have changed from the defaults and prevent further violations?

A. Cluster Lockdown with strong password enforcement
B. Advanced Intrusion Detection Environment (AIDE)
C. Security Configuration Management Automation (SCMA)
D. Defense Information Systems Agency STIG enforcement

Correct Answer: C
Section:
Explanation:
Ref: http://myvirtualcloud.net/nutanix-scma-the-security-feature-that-could-save-your-organization/

QUESTION 71
An administrator receives reports about a Nutanix environment. The investigation finds the following;
* VMs are experiencing very high latency
* Each node is equipped with a single SSD, utilized at 95%
* Each node is equipped with three HDDs, utilized at 40%
Why are the guest VMs experiencing high latency?

A. CVMs are overwhelmed by disk balancing operations.
B. All VM write operations are going to HDD.
C. All VM read operations are coming from HDD.
D. VMs are unable to perform write operations.

Correct Answer: C
Section:
Explanation:
Ref: https://next.nutanix.com/prism-infrastructure-management-26/disk-space-usage-high-alert-in-prism-38199

QUESTION 72
An administrator has an existing Nutanix seven-node cluster running at RF2 that must be changed to have the following capabilities:
* RF3 set for the cluster
* Performance tier deduplication

What is the minimum memory needed on the CVMs to allow for these capabilities?

A. 24GB
B. 28GB
C. 32GB
D. 20G?

Correct Answer: B
Section:
Explanation:
Ref: https://next.nutanix.com/how-it-works-22/rf2-rf3-requirements-37206#:~:text=Controller%20VMs%20must%20be%20configured,for%20the%20feature)%20of%20memory.

QUESTION 73
A VM does not have enough resources for the demand, which leads to performance bottlenecks. The VM is exhibiting one or more of following baseline values, based on the past 30 days:
* CPU usage > 90% (moderate), 95% (high)
* CPU ready time > 5%, 10%
* Memory usage > 90%, 95%
* Memory swap rate > 0 Kbps (no moderate value)
Which type of VM is being described?

A. Constrained VM
B. Bully VM
C. Inactive VM
D. Over-provisioned VM

Correct Answer: A
Section:

QUESTION 74
A Nutanix cluster is deployed with the following configuration:
* Three four-node blocks (A, B, and C)
* All Flash Redundancy Factor 2
What is the effect of simultaneous disk failures on two nodes located in block A?

A. VMs are migrated off of the nodes with disk failures.
B. Each node with a failed disk is marked as degraded.
C. VM read and write operations continue normally.
D. VMs on the nodes with failed disks are unable to write data

Correct Answer: C
Section:
Explanation:
Ref: https://next.nutanix.com/how-it-works-22/redundancy-factor-vs-replication-factor-37486

QUESTION 75
An administrator has a VM that consumes large amounts of storage and has the following characteristics:
* Create large / sequential writes
* Data must be kept for years

* Data is normally only accessed at the end of the year to run report
The administrator decides to use Erasure Coding to save space.
Which feature should the administrator utilize to save space for this VM?

A. Inline Compression
B. Flash Mode
C. Cache Dedup
D. Post-Process Compression

Correct Answer: D
Section:
Explanation:
Erasure coding is a method of data protection in which data is broken into fragments, expanded and encoded with redundant data pieces, and stored across a set of different locations or storage media. The goal of erasure coding is to enable data that becomes corrupted at some point in the disk storage process to be reconstructed by using information about the data that's stored elsewhere in the array1.
In the context of Nutanix, erasure coding increases the usable capacity on a cluster. Instead of replicating data, erasure coding uses parity information to rebuild data in the event of a disk failure1. The capacity savings of erasure coding is in addition to deduplication and compression savings1.
Given the characteristics of the VM in the question (large/sequential writes, data kept for years, data accessed only at the end of the year), Post-Process Compression would be the most suitable feature to utilize to save space. This is because Post-Process Compression, as the name suggests, compresses data after it has been written to the storage, which is suitable for data that is not accessed frequently2.
Erasure Coding | Nutanix Community
Nutanix Support & Insights
Introducing AOS 6.6: Enhanced data services and simplified ... - Nutanix

QUESTION 76
An administrator needs to make sure an RF2 cluster can survive a complete rack failure without negatively effecting workload performance. The current cluster configuration consists of the following:
* 30 nodes: distributed 10 nodes per rack across three 42U rack
* Each nodes is configured with 40TB usable storage all flash (Cluster Total 1.2 PB Usable)
* Current cluster utilization is 900TB storage
Which configuration changes should be made to make sure that the cluster meets the requirements?

A. Expanse the cluster by adding 3 additional nodes per rack, 9 nodes total.
B. Expanse the cluster by adding 2 additional nodes per rack, 6 nodes total.
C. Expanse the cluster by adding 9 nodes to a new 42U rack
D. Expanse the cluster by adding 8 nodes to a new 42U rack

Correct Answer: A
Section:
Explanation:
In Nutanix, a cluster with RF2 (Redundancy Factor 2) can tolerate the failure of a single node or drive1. However, to ensure that the cluster can survive a complete rack failure without negatively affecting workload performance, we need to consider rack awareness. When rack fault tolerance is enabled, the cluster has rack awareness and the guest VMs can continue to run with failure of one rack (RF2) or two racks (RF3).The redundant copies of guest VM data and metadata exist on other racks when one rack fails2.
Given the current cluster configuration (30 nodes distributed 10 nodes per rack across three 42U racks), adding 3 additional nodes per rack (9 nodes total) would increase the redundancy of the cluster and improve its ability to withstand a complete rack failure. This is because the additional nodes would provide more storage capacity and compute resources, allowing the cluster to continue running workloads even if one rack fails.
Understanding Fault Domains and Rack Awareness | Nutanix Community
RF2 -> RF3 | Requirements | Nutanix Community

QUESTION 77
An administrator needs to maximize storage potential in a six-node cluster. The container is configured with the following:
Post-process compression
Capacity deduplication

What should the administrator configure to increase space savings?

A. Erasure coding
B. Inline compression
C. Reserve capacity
D. Cache dedupe

Correct Answer: A
Section:
Explanation:
The administrator's goal is to maximize storage potential in a cluster already configured with post-process compression and capacity deduplication. Erasure Coding (EC-X) is an effective method to further increase space savings by reducing the amount of redundancy data required for fault tolerance. It splits data into multiple chunks, which are distributed across the cluster, and parity is calculated and stored. This method is more space-efficient compared to traditional RAID or mirroring techniques, especially in environments where large data volumes need efficient storage.
Nutanix Bible: Storage Efficiency
Nutanix University: Storage Configuration and Optimization

QUESTION 78
An administrator is currently using both 10g uplink with LACP and balance-tcp. A single VM should not be allowed to use more than a single 10G uplink, and both uplinks should be utilized.
Which two command should be used to configure the bond? (choose two)

A. Ovs-vsctl set port br0-up bond_mode=balance-slb
B. Ovs-vsctl set port br0-up bond_mode=balance-tcp
C. Ovs-vsctl set port br0-up bond_mode=active-backup
D. Ovs-vsctl set port br0-up other_config: bond-rebalance-interval=30000

Correct Answer: A, D
Section:
Explanation:
For a configuration where a single VM should not exceed the bandwidth of a single 10G uplink and both uplinks need to be utilized, the correct bonding mode is balance-slb (Source Load Balancing). This mode allows both uplinks to be utilized while ensuring that a single VM will not exceed the capacity of one uplink, as traffic from each VM or 'source' is assigned to one of the links in the bond. The other_config: bond-rebalance-interval=30000 command is used to set the interval at which the bonding driver will rebalance the assignment of sources to links in the bond. This helps in maintaining optimal distribution of load across the links as network conditions change.
Nutanix Bible: Network Configuration
Nutanix University: Advanced Network Configuration

QUESTION 79
An organization is running a Nutanix Cluster based on AOS 5.10.x and VMware vSphere 6.7. Currently, the CVM network is segmented and Storage only nodes not present.
A new security project based on NSX is coming. VMware Distributed Virtual Switches are required. The administrator needs to prepare the environment for the new project.
Which step should the administrator use to initiate the project?

A. Enable Nutanix Flow at the Prism Central Level
B. Manually disable CVM network Segmentation
C. Convert storage only nodes into vSphere nodes
D. Enable Jumbo Frames to accommodate network frames

Correct Answer: B
Section:
Explanation:

In preparing for the VMware NSX security project, the administrator should consider the network infrastructure and how the NSX will interact with the existing Nutanix environment. VMware NSX requires the use of VMware Distributed Virtual Switches. In the given scenario, where the CVM (Controller Virtual Machine) network is segmented and storage-only nodes are not present, the key step is to ensure that the network settings are compatible with NSX. Disabling the CVM network segmentation allows for a unified network that supports the requirements of NSX for network virtualization and security, making it the crucial first step before any further NSX-specific configurations are applied.
Reference: Nutanix Bible, Nutanix Community discussions, VMware NSX documentation.

QUESTION 80
A customer has a four-node cluster and is using Volume Groups to provide storage services to a SQL cluster.
In the event of a CVM failure in the cluster, what is the expected IO path of the volume group's iSCSI targets?

A. vDisk directed at failure CVM are redirected to Data Services IP until CVM is reconnected
B. vDisk directed to CVM that failed to disconnect and will not reconnect without manual intervention
C. vDisk directed to failed CVM are redirected to another CVM and automatically reconnect
D. vDisk directed at failed CVM will disconnect and reconnect when the failed CVM comes back online

Correct Answer: C
Section:
Explanation:
In a Nutanix cluster, when a Controller Virtual Machine (CVM) fails, the iSCSI targets for the volume groups managed by that CVM are not left inoperable. Instead, the volume group's iSCSI targets (vDisks) are automatically redirected to another operational CVM in the cluster. This failover mechanism ensures that there is no interruption in service or data availability. The redirection is seamless and does not require manual intervention, allowing for continuous access to the volume group by the SQL cluster.
Nutanix Bible: Data Protection and High Availability
Nutanix University: Resiliency and Disaster Recovery