

CompTIA

Exam Questions CV0-003

CompTIA Cloud+ Certification Exam



NEW QUESTION 1

- (Topic 1)

An organization is running a database application on a SATA disk, and a customer is experiencing slow performance most of the time. Which of the following should be implemented to improve application performance?

- A. Increase disk capacity
- B. Increase the memory and network bandwidth
- C. Upgrade the application
- D. Upgrade the environment and use SSD drives

Answer: D

Explanation:

Upgrading the environment and using solid state drives (SSDs) can improve application performance for a database application that is running on a serial advanced technology attachment (SATA) disk and experiencing slow performance most of the time. Upgrading the environment can involve updating or replacing the hardware, software, or network components that support the application to enhance their functionality, capacity, or compatibility. Using SSDs can provide faster and more reliable data access and storage than SATA disks, as they use flash memory instead of spinning disks to store data. SSDs can also reduce latency, power consumption, and heat generation. References: CompTIA Cloud+ Certification Exam Objectives, page 9, section 1.4

NEW QUESTION 2

- (Topic 1)

A systems administrator disabled TLS 1.0 and 1.1, as well as RC4, 3DES, and AES-128 ciphers for TLS 1.2, on a web server. A client now reports being unable to access the web server, but the administrator verifies that the server is online, the web service is running, and other users can reach the server as well. Which of the following should the administrator recommend the user do FIRST?

- A. Disable antivirus/anti-malware software
- B. Turn off the software firewall
- C. Establish a VPN tunnel between the computer and the web server
- D. Update the web browser to the latest version

Answer: D

Explanation:

Updating the web browser to the latest version is the first action that the user should do when experiencing a connection timeout error after the administrator configured a redirect from HTTP to HTTPS on the web server. Updating the web browser can ensure that it supports the latest security protocols and standards, such as TLS 1.2 or 1.3, which are required for HTTPS connections. If the web browser is outdated or incompatible with the security protocols or standards used by the web server, it may fail to establish a secure connection and result in a connection timeout error. References: CompTIA Cloud+ Certification Exam Objectives, page 15, section 2.8

NEW QUESTION 3

- (Topic 1)

A DevOps administrator is automating an existing software development workflow. The administrator wants to ensure that prior to any new code going into production, tests confirm the new code does not negatively impact existing automation activities. Which of the following testing techniques would be BEST to use?

- A. Usability testing
- B. Regression testing
- C. Vulnerability testing
- D. Penetration testing

Answer: B

Explanation:

Regression testing is a type of testing that ensures that new code or changes to existing code do not break or degrade the functionality of the software. Regression testing is often used in software development workflows to verify that new features or bug fixes do not introduce new errors or affect the performance of the software. Regression testing can help prevent negative impacts on existing automation activities by checking that the new code is compatible with the existing code and does not cause any unexpected failures or errors. References: CompTIA Cloud+ Certification Exam Objectives, page 19, section 4.1
Reference: <https://www.softwaretestinghelp.com/regression-testing-tools-and-methods/>

NEW QUESTION 4

- (Topic 1)

Due to a policy change, a few of a customer's application VMs have been migrated to synchronously replicated storage. The customer now reports that performance is lower. The systems administrator checks the resource usage and discovers CPU utilization is at 60% and available memory is at 30%. Which of the following is the MOST likely cause?

- A. There is not enough vCPU assigned
- B. The application is not compatible with the new settings
- C. The new configuration is adding latency
- D. The memory of the VM is underallocated

Answer: C

Explanation:

Latency is the delay or time taken for data to travel from one point to another in a network or system. Latency can affect the performance of applications and processes that depend on fast and reliable data transfer. Synchronous replication is a method of data replication that ensures that data is written to two or more storage devices at the same time, providing high availability and consistency. However, synchronous replication can also introduce latency, as the write operation has to wait for the confirmation from all the replicated devices before completing. The new configuration of migrating some application VMs to synchronously replicated storage is most likely adding latency, which can lower the performance of the applications. References: [CompTIA Cloud+ Certification Exam

Objectives], page 10, section 1.5

NEW QUESTION 5

- (Topic 1)

An administrator is performing an in-place upgrade on a guest VM operating system.

Which of the following can be performed as a quick method to roll back to an earlier state, if necessary?

- A. A configuration file backup
- B. A full backup of the database
- C. A differential backup
- D. A VM-level snapshot

Answer: D

Explanation:

A VM-level snapshot is a point-in-time copy of the state and data of a virtual machine (VM). A VM-level snapshot can be used as a quick method to roll back to an earlier state, if necessary, as it can restore the VM to the exact condition it was in when the snapshot was taken. A VM-level snapshot can be useful for performing an in-place upgrade

on a guest VM operating system, as it can allow the administrator to revert to the previous operating system version in case of any issues or errors. References:

CompTIA Cloud+ Certification Exam Objectives, page 10, section 1.5

Reference: <https://cloud.google.com/compute/docs/tutorials/performing-in-place-upgrade-windows-server>

NEW QUESTION 6

- (Topic 1)

A systems administrator is deploying a GPU-accelerated VDI solution. Upon requests from several users, the administrator installs an older version of the OS on their virtual workstations. The majority of the VMs run the latest LTS version of the OS.

Which of the following types of drivers will MOST likely ensure compatibility with all virtual workstations?

- A. Alternative community drivers
- B. Legacy drivers
- C. The latest drivers from the vendor's website
- D. The drivers from the OS repository

Answer: D

Explanation:

The drivers from the OS repository are the drivers that are included or available in the official software repository or package manager of the operating system.

The drivers from the OS repository are most likely to ensure compatibility with all virtual workstations that use a GPU-accelerated VDI solution, as they are tested and verified to work with different versions of the operating system and the hardware. The drivers from the OS repository can also provide stability and security, as they are regularly updated and patched by the operating system vendor or community. References: CompTIA Cloud+ Certification Exam Objectives, page 11, section 1.6

NEW QUESTION 7

- (Topic 1)

An organization is hosting a DNS domain with private and public IP ranges. Which of the following should be implemented to achieve ease of management?

- A. Network peering
- B. A CDN solution
- C. A SDN solution
- D. An IPAM solution

Answer: D

Explanation:

An IP address management (IPAM) solution is a type of tool or system that automates and standardizes the allocation, tracking, and management of IP addresses in an IP network. An IPAM solution can help achieve ease of management for hosting a DNS domain with private and public IP ranges, as it can simplify and centralize the process of assigning and updating IP addresses for different DNS records or zones without manual intervention or errors. An IPAM solution can also help optimize DNS performance and security, as it can monitor and report any issues or conflicts related to IP addresses or DNS

records. References: CompTIA Cloud+ Certification Exam Objectives, page 15, section 2.8

Reference: <https://www.infoblox.com/glossary/ipam-ip-address-management/>

NEW QUESTION 8

- (Topic 1)

An organization is implementing a new requirement to facilitate users with faster downloads of corporate application content. At the same time, the organization is also expanding cloud regions.

Which of the following would be suitable to optimize the network for this requirement?

- A. Implement CDN for overall cloud application
- B. Implement auto-scaling of the compute resources
- C. Implement SR-IOV on the server instances
- D. Implement an application container solution

Answer: C

Explanation:

Reference: https://access.redhat.com/documentation/en-us/red_hat_openshift_platform/13/html/network_functions_virtualization_planning_and_configuration_guide/part-sriov-nfv-configuration

NEW QUESTION 9

- (Topic 1)

A systems administrator needs to convert ten physical servers to virtual.

Which of the following would be the MOST efficient conversion method for the administrator to use?

- A. Rebuild the servers from scratch
- B. Use the vendor's conversion tool
- C. Clone the hard drive
- D. Restore from backup

Answer: B

Explanation:

A vendor's conversion tool is a type of software or utility that automates and simplifies the process of converting physical servers to virtual machines by capturing the configuration and data of the physical servers and creating virtual disks and files for the virtual machines. Using the vendor's conversion tool can be the most efficient conversion method for a systems administrator to use to convert ten physical servers to virtual, as it can save time and effort by avoiding manual steps or errors involved in rebuilding, cloning, or restoring the physical servers to virtual machines. Using the vendor's conversion tool can also ensure compatibility and consistency, as it can match the hardware and software requirements and settings of the physical servers to the virtual machines.

References: CompTIA Cloud+ Certification Exam Objectives, page 10, section 1.5

NEW QUESTION 10

- (Topic 1)

A cloud administrator is switching hosting companies and using the same script that was previously used to deploy VMs in the new cloud. The script is returning errors that the command was not found.

Which of the following is the MOST likely cause of the script failure?

- A. Account mismatches
- B. IP address changes
- C. API version incompatibility
- D. Server name changes

Answer: C

Explanation:

An application programming interface (API) is a set of rules or protocols that defines how different systems or applications can communicate or interact with each other. An API version is a specific iteration or release of an API that may have different features or functionalities than previous or subsequent versions. API version incompatibility is the most likely cause of the script failure when switching hosting companies and using the same script that was previously used to deploy VMs in the new cloud, as it can result in errors or failures when trying to execute commands or functions that are not supported or recognized by the new cloud provider's API version. The issue can be resolved by updating or modifying the script to match the new cloud provider's API version.

References: CompTIA Cloud+ Certification Exam Objectives, page 13, section 2.5

NEW QUESTION 10

- (Topic 1)

A systems administrator is configuring RAID for a new server. This server will host files for users and replicate to an identical server. While redundancy is necessary, the most important need is to maximize storage.

Which of the following RAID types should the administrator choose?

- A. 5
- B. 6
- C. 10
- D. 50

Answer: C

Explanation:

RAID 50 is a type of RAID level that combines RAID 5 and RAID 0 to create a nested RAID configuration. RAID 50 consists of two or more RAID 5 arrays that are striped together using RAID 0. RAID 50 can provide redundancy, fault tolerance, and high performance for large data sets. RAID 50 can also maximize storage, as it has a higher usable capacity than other RAID levels with similar features, such as RAID 6 or RAID 10. The administrator should choose RAID 50 to configure a new server that will host files for users and replicate to an identical server, as it can meet the needs of redundancy and storage maximization. References:

CompTIA Cloud+ Certification Exam Objectives, page 9, section 1.4

NEW QUESTION 14

- (Topic 1)

A technician is working with an American company that is using cloud services to provide

video-based training for its customers. Recently, due to a surge in demand, customers in Europe are experiencing latency.

Which of the following services should the technician deploy to eliminate the latency issue?

- A. Auto-scaling
- B. Cloud bursting
- C. A content delivery network
- D. A new cloud provider

Answer: C

Explanation:

<https://www.cloudflare.com/learning/cdn/what-is-a-cdn/>

"A content delivery network (CDN) refers to a geographically distributed group of servers which work together to provide fast delivery of Internet content."

NEW QUESTION 18

- (Topic 1)

A cloud administrator recently deployed an update to the network drivers of several servers. Following the update, one of the servers no longer responds to remote login requests. The cloud administrator investigates the issue and gathers the following information:

- ? The cloud management console shows the VM is running and the CPU and memory utilization is at or near 0%.
- ? The cloud management console does not show an IP address for that server.
- ? A DNS lookup shows the hostname resolves to an IP address.
- ? The server is a member of the same security group as the others.
- ? The cloud administrator is able to log in remotely to the other servers without issue.

Which of the following is the MOST likely cause of the server being unavailable?

- A. The network driver updates did not apply successfully, and the interface is in a down state.
- B. The ACL policy for the server was updated as part of the server reboot, preventing login access.
- C. The server was assigned a new IP address, and DNS entry for the server name was not updated.
- D. The update caused an increase in the output to the logs, and the server is too busy to respond.

Answer: A

NEW QUESTION 21

- (Topic 1)

A company is switching from one cloud provider to another and needs to complete the migration as quickly as possible.

Which of the following is the MOST important consideration to ensure a seamless migration?

- A. The cost of the environment
- B. The I/O of the storage
- C. Feature compatibility
- D. Network utilization

Answer: C

Explanation:

Feature compatibility is the degree to which the features or functionalities of a system or application are compatible or interoperable with another system or application. Feature compatibility is the most important consideration to ensure a seamless migration from one cloud provider to another, as it can affect the performance, reliability, and security of the system or application in the new cloud environment. Feature compatibility can also help complete the migration as quickly as possible, as it can reduce or eliminate the need for reconfiguration, customization, or testing of the system or application after the migration. References: CompTIA Cloud+ Certification Exam Objectives, page 18, section 3.5

NEW QUESTION 24

- (Topic 1)

A systems administrator notices that a piece of networking equipment is about to reach its end of support.

Which of the following actions should the administrator recommend?

- A. Update the firmware
- B. Migrate the equipment to the cloud
- C. Update the OS
- D. Replace the equipment

Answer: D

Explanation:

Replacing the equipment is the best action to take when a piece of networking equipment is about to reach its end of support. End of support means that the vendor or manufacturer will no longer provide technical assistance, updates, patches, or fixes for the equipment, which can affect its functionality, performance, security, and compatibility. Replacing the equipment with a newer model that has ongoing support can prevent any issues or risks associated with using outdated equipment.

References: CompTIA Cloud+ Certification Exam Objectives, page 18, section 3.5

NEW QUESTION 29

- (Topic 1)

A company needs to rehost its ERP system to complete a datacenter migration to the public cloud. The company has already migrated other systems and configured VPN connections.

Which of the following MOST likely needs to be analyzed before rehosting the ERP?

- A. Software
- B. Licensing
- C. Right-sizing
- D. The network

Answer: D

Explanation:

The network is the set of devices, connections, protocols, and configurations that enable communication and data transfer between different systems and applications. The network can affect the rehosting of an ERP system to complete a datacenter migration to the public cloud, as it can influence factors such as bandwidth, latency, availability, security, and compatibility. The network needs to be analyzed before rehosting the ERP system to ensure that the network requirements and specifications are met, the network performance and reliability are maintained or improved, and the network security and integrity are preserved or enhanced. References: CompTIA Cloud+ Certification Exam Objectives, page 18, section 3.5

NEW QUESTION 30

- (Topic 1)

A cloud administrator is reviewing a new application implementation document. The administrator needs to make sure all the known bugs and fixes are applied, and unwanted

ports and services are disabled.

Which of the following techniques would BEST help the administrator assess these business requirements?

- A. Performance testing
- B. Usability testing
- C. Vulnerability testing
- D. Regression testing

Answer: D

Explanation:

Regression testing is a type of software testing that verifies that existing features or functionalities of a system or application are not affected by any changes or updates made to it. Regression testing can help assess whether all the known bugs and fixes are applied and unwanted ports and services are disabled when reviewing a new application implementation document for a cloud deployment, as it can detect any errors or defects that may have been introduced or re-introduced after applying patches, updates, or configurations to the application. References: CompTIA Cloud+ Certification Exam Objectives, page 19, section 4.1

NEW QUESTION 35

- (Topic 1)

A company recently subscribed to a SaaS collaboration service for its business users. The company also has an on-premises collaboration solution and would like users to have a seamless experience regardless of the collaboration solution being used.

Which of the following should the administrator implement?

- A. LDAP
- B. WAF
- C. VDI
- D. SSO

Answer: D

Explanation:

Single sign-on (SSO) is a type of authentication mechanism that allows users to access multiple systems or applications with a single login credential. SSO can help users have a seamless experience regardless of the collaboration solution being used, as it can eliminate the need for multiple logins and passwords for different systems or applications. SSO can also improve user convenience, productivity, and security, as it can simplify the login process, reduce login errors, and enhance password management. References: CompTIA Cloud+ Certification Exam Objectives, page 14, section 2.7

NEW QUESTION 37

- (Topic 1)

A systems administrator recently upgraded the processors in a web application host. Upon the next login, the administrator sees a new alert regarding the license being out of compliance.

Which of the following licensing models is the application MOST likely using?

- A. Per device
- B. Per user
- C. Core-based
- D. Volume-based

Answer: C

Explanation:

Core-based licensing is a type of licensing model that charges based on the number of processor cores in a system or server. Core-based licensing is often used by software vendors to align their pricing with the performance and capacity of modern hardware. Core-based licensing can also enable customers to optimize their licensing costs by choosing the appropriate hardware configuration for their needs. Upgrading the processors in a web application host can affect the core-based licensing of the application, as it may increase the number of cores that need to be licensed. This can result in an alert regarding the license being out of compliance if the license is not updated accordingly. References: CompTIA Cloud+ Certification Exam Objectives, page 20, section 4.2

Reference: https://download.microsoft.com/download/3/d/4/3d42bdc2-6725-4b29-b75a-a5b04179958b/percorelicensing_definitions_vlbrief.pdf

NEW QUESTION 41

- (Topic 1)

A VDI administrator has received reports of poor application performance. Which of the following should the administrator troubleshoot FIRST?

- A. The network environment
- B. Container resources
- C. Client devices
- D. Server resources

Answer: A

Explanation:

The network environment is the set of network devices, connections, protocols, and configurations that enable communication and data transfer between different systems and applications. The network environment can affect the performance of a virtual desktop infrastructure (VDI) by influencing factors such as bandwidth, latency, jitter, packet loss, and congestion. Poor network performance can result in slow or unreliable application delivery, degraded user experience, and reduced productivity.

Therefore, troubleshooting the network environment should be the first step for a VDI administrator who receives reports of poor application performance.

References: CompTIA Cloud+ Certification Exam Objectives, page 17, section 3.4

NEW QUESTION 46

- (Topic 1)

A systems administrator is provisioning VMs in a cloud environment and has been told to select an OS build with the furthest end-of-life date.

Which of the following OS builds would be BEST for the systems administrator to use?

- A. Open-source
- B. LTS
- C. Canary
- D. Beta
- E. Stable

Answer: B

Explanation:

Long-term support (LTS) is a type of release cycle that provides extended support and maintenance for software products or operating systems. LTS releases typically have longer end-of-life dates than regular releases, as they receive security updates, bug fixes, and patches for several years after their initial release date. LTS releases can also offer higher stability, reliability, and compatibility than regular releases, as they undergo more testing and quality assurance processes before being released. LTS is the best OS build for a systems administrator to use when provisioning VMs in a cloud environment and being told to select an OS build with the furthest end-of-life date. References: CompTIA Cloud+ Certification Exam Objectives, page 11, section 1.6

NEW QUESTION 48

- (Topic 2)

A systems administrator is troubleshooting a performance issue with a virtual database server. The administrator has identified the issue as being disk related and believes the cause is a lack of IOPS on the existing spinning disk storage. Which of the following should the administrator do NEXT to resolve this issue?

- A. Upgrade the virtual database server.
- B. Move the virtual machine to flash storage and test again.
- C. Check if other machines on the same storage are having issues.
- D. Document the findings and place them in a shared knowledge base.

Answer: B

Explanation:

Moving the virtual machine to flash storage and testing again is what the administrator should do next to resolve the issue of disk-related performance issue with a virtual database server that has been identified as being caused by a lack of IOPS on the existing spinning disk storage. IOPS (Input/Output Operations Per Second) is a measure of how fast a storage device can read and write data. IOPS can affect performance of a virtual database server by determining how quickly it can access and process data from storage. Spinning disk storage is a type of storage device that uses rotating magnetic disks to store data. Spinning disk storage has lower IOPS than flash storage, which is a type of storage device that uses solid-state memory chips to store data. Flash storage has higher IOPS than spinning disk storage, which means that it can read and write data faster and more efficiently than spinning disk storage. Moving the virtual machine to flash storage and testing again can help to resolve the issue by increasing the IOPS and improving the performance of the virtual database server.

NEW QUESTION 52

- (Topic 2)

A systems administrator is deploying a new cloud application and needs to provision cloud services with minimal effort. The administrator wants to reduce the tasks required for maintenance, such as OS patching, VM and volume provisioning, and autoscaling configurations. Which of the following would be the BEST option to deploy the new application?

- A. A VM cluster
- B. Containers
- C. OS templates
- D. Serverless

Answer: D

Explanation:

Serverless is what would be the best option to deploy a new cloud application and provision cloud services with minimal effort while reducing the tasks required for maintenance such as OS patching, VM and volume provisioning, and autoscaling configurations. Serverless is a cloud service model that provides customers with a platform to run applications or functions without having to manage or provision any underlying infrastructure or resources, such as servers, storage, network, OS, etc. Serverless can provide benefits such as:

? Minimal effort: Serverless can reduce the effort required to deploy a new cloud application and provision cloud services by automating and abstracting away all the infrastructure or resource management or provisioning tasks from customers, and allowing them to focus only on writing code or logic for their applications or functions.

? Reduced maintenance: Serverless can reduce the tasks required for maintenance by handling all the infrastructure or resource maintenance tasks for customers, such as OS patching, VM and volume provisioning, autoscaling configurations, etc., and ensuring that they are always up-to-date and optimized.

NEW QUESTION 54

- (Topic 2)

A cloud administrator wants to have a central repository for all the logs in the company's private cloud. Which of the following should be implemented to BEST meet this requirement?

- A. SNMP
- B. Log scrubbing
- C. CMDB
- D. A syslog server

Answer: D

Explanation:

Reference: <https://www.itpro.com/infrastructure/network-internet/355174/how-to-build-a-dedicated-syslog-server>

A syslog server is what the administrator should implement to have a central repository for all the logs in the company's private cloud. Syslog is a standard protocol that allows network devices and systems to send log messages to a centralized server or collector. Syslog can help to consolidate and manage logs from different sources in one place, which can facilitate monitoring, analysis, troubleshooting, auditing, etc.

NEW QUESTION 55

- (Topic 2)

A system administrator has provisioned a new web server. Which of the following, in combination, form the best practice to secure the server's OS? (Choose three.)

- A. Install TLS certificates on the server.
- B. Forward port 80 traffic to port 443.
- C. Disable TLS 1.0/1.1 and SSL.
- D. Disable password authentication.
- E. Enable SSH key access only.
- F. Provision the server in a separate VPC.
- G. Disable the superuser/administrator account.
- H. Restrict access on port 22 to the IP address of the administrator's workstation.

Answer: ADE

Explanation:

These are the best practices to secure the OS of a new web server that has been provisioned in a cloud environment:

? Install TLS certificates on the server: TLS (Transport Layer Security) certificates are digital documents that contain information such as identity, public key, expiration date, etc., that can be used to prove one's identity and establish secure communication over a network. Installing TLS certificates on the web server can encrypt and secure web traffic between the server and the clients, as well as prevent spoofing or impersonation attacks.

? Disable password authentication: Password authentication is a method of verifying and authenticating users or devices based on passwords or other credentials. Password authentication can be insecure or vulnerable to attacks such as brute force, dictionary, phishing, etc., especially if passwords are weak, reused, or compromised. Disabling password authentication can enhance security by preventing unauthorized or malicious access to the web server using passwords.

? Enable SSH key access only: SSH key access is a method of verifying and authenticating users or devices based on digital keys issued by a trusted authority. SSH key access can provide more security and convenience than password authentication, as it does not require users or devices to remember or enter passwords every time they access the web server. Enabling SSH key access only can ensure that only authorized or trusted users or devices can access the web server using keys.

NEW QUESTION 57

- (Topic 2)

A cloud administrator is building a new VM for machine-learning training. The developer requesting the VM has stated that the machine will need a full GPU dedicated to it.

Which of the following configuration options would BEST meet this requirement?

- A. Virtual GPU
- B. External GPU
- C. Passthrough GPU
- D. Shared GPU

Answer: C

Explanation:

Reference: <https://blogs.vmware.com/apps/2018/09/using-gpus-with-virtual-machines-on-vsphere-part-2-vmdirectpath-i-o.html>

Passthrough GPU is a configuration option that allows a VM to access a physical GPU directly without any virtualization layer or sharing mechanism. This provides the VM with full and exclusive access to the GPU resources and performance. Passthrough GPU is suitable for applications that require intensive graphics processing or machine learning training.

NEW QUESTION 61

- (Topic 2)

A systems administrator has been asked to restore a VM from backup without changing the current VM's operating state. Which of the following restoration methods would BEST fit this scenario?

- A. Alternate location
- B. Rolling
- C. Storage live migration
- D. In-place

Answer: C

Explanation:

Storage live migration is the best restoration method to restore a VM from backup without changing the current VM's operating state. Storage live migration is a process of moving or transferring storage resources or data from one location to another without affecting or interrupting the operation or performance of the VMs that use them. Storage live migration can help to restore a VM from backup by copying the backup data to a new storage location and switching the VM's storage configuration to point to the new location, without requiring any downtime or reboot.

NEW QUESTION 62

- (Topic 2)

All of a company's servers are currently hosted in one cloud MSP. The company created a new cloud environment with a different MSP. A cloud engineer is now tasked with preparing for server migrations and establishing connectivity between clouds. Which of the following should the engineer perform FIRST?

- A. Peer all the networks from each cloud environment.
- B. Migrate the servers.
- C. Create a VPN tunnel.
- D. Configure network access control lists.

Answer: C

Explanation:

Creating a VPN tunnel is the first action that the engineer should perform to

prepare for server migrations and establish connectivity between clouds. A VPN (Virtual Private Network) tunnel is a secure and encrypted connection that allows

data to be transferred between two networks or locations over the public internet. Creating a VPN tunnel can enable communication and interoperability between different cloud environments, as well as protect data from interception or modification during migration.

NEW QUESTION 65

- (Topic 2)

A company is planning to migrate applications to a public cloud, and the Chief Information Officer (CIO) would like to know the cost per business unit for the applications in the cloud. Before the migration, which of the following should the administrator implement FIRST to assist with reporting the cost for each business unit?

- A. An SLA report
- B. Tagging
- C. Quotas
- D. Showback

Answer: B

Explanation:

Tagging is what the administrator should implement first to assist with reporting the cost for each business unit for applications in a public cloud environment. Tagging is a technique that allows customers to assign metadata or labels to their cloud resources, such as applications, instances, volumes, etc., based on their attributes or criteria. Tagging can help customers to organize, manage, monitor, and report their cloud resources and costs by business unit, project, owner, environment, etc.

NEW QUESTION 69

- (Topic 2)

A private IaaS administrator is receiving reports that all newly provisioned Linux VMs are running an earlier version of the OS than they should be. The administrator reviews the automation scripts to troubleshoot the issue and determines the scripts ran successfully. Which of the following is the MOST likely cause of the issue?

- A. API version incompatibility
- B. Misconfigured script account
- C. Wrong template selection
- D. Incorrect provisioning script indentation

Answer: C

Explanation:

The wrong template selection is the most likely cause of the issue of newly provisioned Linux VMs running an earlier version of OS than they should be in a private IaaS environment. A template is a preconfigured image or blueprint of a VM that contains an OS, applications, settings, etc., that can be used to create new VMs quickly and consistently. A template may have different versions or updates depending on when it was created or modified. If a template is selected incorrectly or not updated properly, it may result in creating VMs with an older or different version of OS than expected.

NEW QUESTION 71

- (Topic 2)

A cloud administrator is setting up a new coworker for API access to a public cloud environment. The administrator creates a new user and gives the coworker access to a collection of automation scripts. When the coworker attempts to use a deployment script, a 403 error is returned. Which of the following is the MOST likely cause of the error?

- A. Connectivity to the public cloud is down.
- B. User permissions are not correct.
- C. The script has a configuration error.
- D. Oversubscription limits have been exceeded.

Answer: B

Explanation:

User permissions are not correct is the most likely cause of the error 403 (Forbidden) that is returned when a coworker attempts to use a deployment script after being set up for API access to a public cloud environment by an administrator. API (Application Programming Interface) is a set of rules or specifications that defines how different software components or systems can communicate and interact with each other. API access is the ability to use or access an API to perform certain actions or tasks on a software component or system. User permissions are the settings or policies that control and restrict what users can do or access on a software component or system. User permissions can affect API access by determining what actions or tasks users can perform using an API on a software component or system. User permissions are not correct if they do not match or align with the intended or expected actions or tasks that users want to perform using an API on a software component or system. User permissions are not correct can cause error 403 (Forbidden), which means that the user does not have the necessary permission or authorization to perform the requested action or task using an API on a software component or system.

NEW QUESTION 74

- (Topic 2)

A systems administrator has received an email from the virtualized environment's alarms indicating the memory was reaching full utilization. When logging in, the administrator notices that one out of a five-host cluster has a utilization of 500GB out of 512GB of RAM. The baseline utilization has been 300GB for that host. Which of the following should the administrator check NEXT?

- A. Storage array
- B. Running applications
- C. VM integrity
- D. Allocated guest resources

Answer: D

Explanation:

Allocated guest resources is what the administrator should check next after receiving an email from the virtualized environment's alarms indicating the memory

was reaching full utilization and noticing that one out of a five-host cluster has a utilization of 500GB out of 512GB of RAM. Allocated guest resources are the amount of resources or capacity that are assigned or reserved for each guest system or device within a host system or device. Allocated guest resources can affect performance and utilization of host system or device by determining how much resources or capacity are available or used by each guest system or device. Allocated guest resources should be checked next by comparing them with the actual usage or demand of each guest system or device, as well as identifying any overallocation or underallocation of resources that may cause inefficiency or wastage.

NEW QUESTION 75

- (Topic 2)

An organization is using multiple SaaS-based business applications, and the systems administrator is unable to monitor and control the use of these subscriptions. The administrator needs to implement a solution that will help the organization apply security policies and monitor each individual SaaS subscription. Which of the following should be deployed to achieve these requirements?

- A. DLP
- B. CASB
- C. IPS
- D. HIDS

Answer: B

Explanation:

CASB (Cloud Access Security Broker) is what should be deployed to monitor and control the use of multiple SaaS-based business applications in a cloud environment. SaaS (Software as a Service) is a cloud service model that provides customers with access to software applications hosted on remote servers over a network or internet connection. SaaS can provide customers with convenience, flexibility, and scalability, but it may also introduce security risks such as data breaches, leaks, losses, etc., especially if customers have multiple SaaS subscriptions from different providers. CASB is a tool or service that acts as an intermediary between customers and SaaS providers. CASB can help to monitor and control the use of multiple SaaS subscriptions by providing features such as:

? Visibility: CASB can provide visibility into what SaaS applications are being used, by whom, when, where, how, etc., as well as identify any unauthorized or suspicious activities.

? Compliance: CASB can provide compliance with various laws, regulations, standards, policies, etc., that apply to SaaS applications and data, such as GDPR, HIPAA, PCI DSS, etc., as well as enforce them using rules or actions.

? Security: CASB can provide security for SaaS applications and data by detecting and preventing any threats or attacks, such as malware, phishing, ransomware, etc., as well as protecting them using encryption, authentication, authorization, etc.

NEW QUESTION 79

- (Topic 2)

A cloud administrator needs to reduce the cost of cloud services by using the company's off-peak period. Which of the following would be the BEST way to achieve this with minimal effort?

- A. Create a separate subscription.
- B. Create tags.
- C. Create an auto-shutdown group.
- D. Create an auto-scaling group.

Answer: C

Explanation:

Creating an auto-shutdown group is the best way to reduce the cost of cloud services by using the company's off-peak period with minimal effort. An auto-shutdown group is a feature that allows customers to automatically turn off or shut down certain cloud resources or services during a specified time period or schedule. An auto-shutdown group can help to reduce the cost of cloud services by minimizing the consumption of resources or services during off-peak periods, when they are not needed or used. An auto-shutdown group can also help to reduce the effort of managing cloud resources or services by automating the shutdown process, without requiring any manual intervention or configuration.

NEW QUESTION 80

- (Topic 2)

A DevOps administrator is designing a new machine-learning platform. The application needs to be portable between public and private clouds and should be kept as small as possible. Which of the following approaches would BEST meet these requirements?

- A. Virtual machines
- B. Software as a service
- C. Serverless computing
- D. Containers

Answer: D

Explanation:

Containers are the best approach to design a new machine-learning platform that needs to be portable between public and private clouds and should be kept as small as possible. Containers are isolated environments that can run applications and their dependencies without interfering with other processes or systems. Containers are lightweight, portable, and scalable, which makes them ideal for machine-learning applications. Containers can be moved easily between public and private clouds without requiring any changes or modifications. Containers can also reduce the size and complexity of applications by using only the necessary components and libraries.

NEW QUESTION 83

- (Topic 2)

A systems administrator is trying to reduce storage consumption. Which of the following file types would benefit the MOST from compression?

- A. System files
- B. User backups
- C. Relational database
- D. Mail database

Answer: B

Explanation:

User backups are the file type that would benefit the most from compression to reduce storage consumption. Compression is a process of reducing the size of data by removing redundant or unnecessary information or using algorithms to encode data more efficiently. Compression can save storage space and bandwidth, but it may also affect the quality or performance of data depending on the compression method and ratio. User backups are typically large files that contain various types of data, such as documents, images, videos, etc., that can be compressed without significant loss of quality or functionality.

NEW QUESTION 86

- (Topic 2)

A cloud administrator is upgrading a cloud environment and needs to update the automation script to use a new feature from the cloud provider. After executing the script, the deployment fails. Which of the following is the MOST likely cause?

- A. API incompatibility
- B. Location changes
- C. Account permissions
- D. Network failure

Answer: A

Explanation:

API incompatibility is the most likely cause of the failure of an automation script to use a new feature from the cloud provider. API (Application Programming Interface) is a set of rules or specifications that defines how different software components or systems can communicate and interact with each other. API incompatibility is a situation where an API does not work or function properly with another software component or system due to differences or changes in versions, formats, parameters, etc. API incompatibility can cause errors or issues when using an automation script to deploy or configure cloud resources or services, especially if the script is not updated or modified according to the new API specifications.

NEW QUESTION 90

- (Topic 2)

A systems administrator is trying to establish an RDP session from a desktop to a server in the cloud. However, the connection appears to be refused even though the VM is responding to ICMP echo requests. Which of the following should the administrator check FIRST?

- A. The firewall
- B. The subnet
- C. The gateway
- D. The services

Answer: A

Explanation:

The firewall is the first thing that the administrator should check if an RDP (Remote Desktop Protocol) session from a desktop to a server in the cloud is refused even though the VM is responding to ICMP echo requests. A firewall is a device or software that controls the incoming and outgoing network traffic based on predefined rules or policies. A firewall may block RDP connections by default or require specific ports or rules to be opened or configured.

NEW QUESTION 93

- (Topic 2)

A systems administrator wants to verify the word "qwerty" has not been used as a password on any of the administrative web consoles in a network. Which of the following will achieve this goal?

- A. A service availability scan
- B. An agent-based vulnerability scan
- C. A default and common credentialed scan
- D. A network port scan

Answer: C

Explanation:

A default and common credentialed scan is what the administrator should use to verify the word "qwerty" has not been used as a password on any of the administrative web consoles in a network. A credentialed scan is a type of vulnerability scan that uses valid credentials or accounts to access and scan target systems or devices. A credentialed scan can provide more accurate and detailed results than a non-credentialed scan, as it can perform more actions and tests on target systems or devices. A default and common credentialed scan is a type of credentialed scan that uses default or common credentials or accounts, such as admin/admin, root/root, etc., to access and scan target systems or devices. A default and common credentialed scan can help to identify weak or insecure passwords on administrative web consoles, such as "qwerty", and recommend stronger passwords.

NEW QUESTION 94

- (Topic 2)

Which of the following service models would be used for a database in the cloud?

- A. PaaS
- B. IaaS
- C. CaaS
- D. SaaS

Answer: A

Explanation:

PaaS (Platform as a Service) is a cloud service model that provides a platform for developing, testing, deploying, and managing applications in the cloud. PaaS includes the underlying infrastructure (servers, storage, network, etc.) as well as the middleware, databases, tools, frameworks, and APIs that are required for

application development and delivery. Examples of PaaS are AWS Elastic Beanstalk, Azure App Service, Google App Engine, etc.

NEW QUESTION 99

- (Topic 2)

A software development manager is looking for a solution that will allow a team of developers to work in isolated environments that can be spun up and torn down quickly.

Which of the following is the MOST appropriate solution?

- A. Containers
- B. File subscriptions
- C. Ballooning
- D. Software-defined storage

Answer: A

Explanation:

Containers are isolated environments that can run applications and their dependencies without interfering with other processes or systems. Containers are lightweight, portable, and scalable, which makes them ideal for development and testing purposes. Containers can be spun up and torn down quickly using tools such as Docker, Kubernetes, etc.

NEW QUESTION 104

- (Topic 2)

A systems administrator is examining a managed hosting agreement and wants to determine how much data would be lost if a server had to be restored from backups. To which of the following metrics should the administrator refer?

- A. RTO
- B. MTBF
- C. RPO
- D. MTTR

Answer: C

Explanation:

RPO (Recovery Point Objective) is the metric that the administrator should refer to determine how much data would be lost if a server had to be restored from backups. RPO is a metric that measures how much data can be lost or how far back in time a recovery point can be without causing significant impact or damage. RPO can help to determine how much data would be lost by comparing the time of the disruption or disaster with the time of the last backup or snapshot. RPO can also help to determine how frequently backups or snapshots should be performed to minimize data loss.

NEW QUESTION 105

- (Topic 2)

A systems administrator is deploying a solution that includes multiple network I/O-intensive VMs. The solution design requires that vNICs of the VMs provide low-latency, near-native performance of a physical NIC and data protection between the VMs. Which of the following would BEST satisfy these requirements?

- A. SR-IOV
- B. GENEVE
- C. SDN
- D. VLAN

Answer: A

Explanation:

SR-IOV (Single Root Input/Output Virtualization) is what would best satisfy the requirements of low-latency, near-native performance of a physical NIC and data protection between VMs for multiple network I/O-intensive VMs. SR-IOV is a technology that allows a physical NIC to be partitioned into multiple virtual NICs that can be assigned to different VMs. SR-IOV can provide the following benefits:

? Low-latency: SR-IOV can reduce latency by bypassing the hypervisor and allowing direct communication between the VMs and the physical NIC, without any overhead or interference.

? Near-native performance: SR-IOV can provide near-native performance by allowing the VMs to use the full capacity and functionality of the physical NIC, without any emulation or translation.

? Data protection: SR-IOV can provide data protection by isolating and securing the network traffic between the VMs and the physical NIC, without any exposure or leakage.

NEW QUESTION 107

- (Topic 2)

An administrator has been informed that some requests are taking a longer time to respond than other requests of the same type. The cloud consumer is using multiple network service providers and is performing link load balancing for bandwidth aggregation. Which of the following commands will help the administrator understand the possible latency issues?

- A. ping
- B. ipconfig
- C. traceroute
- D. netstat

Answer: A

Explanation:

Ping is the command that will help the administrator understand the possible latency issues between different network service providers and link load balancing for bandwidth aggregation. Ping is a network utility that sends packets of data to a specific IP address or hostname and measures the time it takes for them to be sent back (round-trip time). Ping can help to test connectivity, availability, and latency of network devices or systems. Ping can help to understand latency issues by comparing the round-trip times between different network service providers and link load balancing devices, and identifying any delays or variations in response

times.

NEW QUESTION 109

- (Topic 2)

A company is preparing a hypervisor environment to implement a database cluster. One of the requirements is to share the disks between the nodes of the cluster to access the same LUN. Which of the following protocols should the company use? (Choose two.)

- A. CIFS
- B. FTP
- C. iSCSI
- D. RAID 10
- E. NFS
- F. FC

Answer: CF

Explanation:

These are the protocols that should be used to share the disks between the nodes of a database cluster to access the same LUN (Logical Unit Number). A LUN is an identifier that represents a logical unit of storage, such as a disk, partition, volume, etc., that can be accessed by a host system or device. To share the disks between the nodes of a cluster, the following protocols can be used:

? iSCSI (Internet Small Computer System Interface): This is a protocol that allows SCSI commands to be sent over IP networks. iSCSI can enable block-level storage access over a network, which means that the host system or device can access the storage as if it were a local disk.

? FC (Fibre Channel): This is a protocol that provides high-speed and low-latency data transfer over optical fiber cables. FC can also enable block-level storage access over a network, which means that the host system or device can access the storage as if it were a local disk.

NEW QUESTION 114

- (Topic 2)

A development team recently completed testing changes to a company's web-based CMS in the sandbox environment. The cloud administrator deployed these CMS application changes to the staging environment as part of the next phase in the release life cycle. The deployment was successful, but after deploying the CMS application, the web page displays an error message stating the application is unavailable. After reviewing the application logs, the administrator sees an error message that the CMS is unable to connect to the database. Which of the following is the BEST action for the cloud administrator to perform to resolve the issue?

- A. Modify the deployment script to delete and recreate the database whenever the CMS application is deployed.
- B. Modify the ACL to allow the staging environment to access the database in the sandbox environment.
- C. Modify the CMS application deployment to use the previous version and redeploy the application.
- D. Modify the configuration settings of the CMS application to connect to the database in the current environment.

Answer: D

Explanation:

Modifying the configuration settings of the CMS (Content Management System) application to connect to the database in the current environment is what the cloud administrator should do to resolve the issue of web page displaying an error message stating the application is unavailable after deploying CMS application changes to the staging environment. A CMS is a software or platform that allows users to create, manage, and publish web content. A CMS may use a database to store and retrieve web content and information. A staging environment is a testing or pre-production environment that simulates the production environment and allows users to verify and validate changes or updates before deploying them to production. Modifying the configuration settings of the CMS application can help to resolve the issue by ensuring that the CMS application can access and communicate with the database in the current environment, rather than using the previous or default settings that may point to a different or non-existent database.

NEW QUESTION 119

- (Topic 2)

Users of a public website that is hosted on a cloud platform are receiving a message indicating the connection is not secure when landing on the website. The administrator has found that only a single protocol is opened to the service and accessed through the URL <https://www.comptiasite.com>. Which of the following would MOST likely resolve the issue?

- A. Renewing the expired certificate
- B. Updating the web-server software
- C. Changing the crypto settings on the web server
- D. Upgrading the users' browser to the latest version

Answer: A

Explanation:

Renewing the expired certificate is what would most likely resolve the issue of users receiving a message indicating the connection is not secure when landing on a website that is hosted on a cloud platform and accessed through <https://www.comptiasite.com>. A certificate is a digital document that contains information such as identity, public key, expiration date, etc., that can be used to prove one's identity and establish secure communication over a network. A certificate can expire when it reaches its validity period and needs to be renewed or replaced. An expired certificate can cause users to receive a message indicating the connection is not secure by indicating that the website's identity or security cannot be verified or trusted. Renewing the expired certificate can resolve the issue by extending its validity period and restoring its identity or security verification or trust.

NEW QUESTION 124

- (Topic 2)

A systems administrator is about to deploy a new VM to a cloud environment. Which of the following will the administrator MOST likely use to select an address for the VM?

- A. CDN
- B. DNS
- C. NTP
- D. IPAM

Answer: D

Explanation:

IPAM (IP Address Management) is what the administrator will most likely use to select an address for the new VM that is about to be deployed to a cloud environment. IPAM is a tool or service that allows customers to plan, track, and manage the IP addresses and DNS names of their cloud resources or systems. IPAM can help to select an address for the new VM by providing information such as available IP addresses, IP address ranges, subnets, domains, etc., as well as ensuring that the address is unique and valid.

NEW QUESTION 126

- (Topic 2)

A cloud engineer is responsible for managing a public cloud environment. There is currently one virtual network that is used to host the servers in the cloud environment. The environment is rapidly growing, and the network does not have any more available IP addresses. Which of the following should the engineer do to accommodate additional servers in this environment?

- A. Create a VPC and peer the networks.
- B. Implement dynamic routing.
- C. Enable DHCP on the networks.
- D. Obtain a new IPAM subscription.

Answer: A

Explanation:

Creating a VPC (Virtual Private Cloud) and peering the networks is the best option to accommodate additional servers in a public cloud environment that has run out of IP addresses. A VPC is a logically isolated section of a cloud provider's network that allows customers to launch and configure their own virtual network resources. Peering is a process of connecting two VPCs together so that they can communicate with each other as if they were in the same network.

NEW QUESTION 127

- (Topic 2)

A cloud administrator set up a link between the private and public cloud through a VPN tunnel. As part of the migration, a large set of files will be copied. Which of the following network ports are required from a security perspective?

- A. 22, 53, 445
- B. 22, 443, 445
- C. 25, 123, 443
- D. 137, 139, 445

Answer: B

Explanation:

These are the network ports that are required from a security perspective to copy a large set of files between the private and public cloud through a VPN tunnel. A VPN (Virtual Private Network) tunnel is a secure and encrypted connection that allows data to be transferred between two networks or locations over the public internet. To copy files between the private and public cloud, the following ports are needed:

? Port 22: This is the port used by SSH (Secure Shell) protocol, which is a method of remotely accessing and managing cloud resources or systems using a command-line interface. SSH can also be used to securely transfer files using SCP (Secure Copy Protocol) or SFTP (SSH File Transfer Protocol).

? Port 443: This is the port used by HTTPS (Hypertext Transfer Protocol Secure), which is a protocol that encrypts and secures web traffic. HTTPS can also be used to transfer files using web browsers or tools such as curl or wget.

? Port 445: This is the port used by SMB (Server Message Block) protocol, which is a protocol that allows file sharing and access over a network. SMB can also be used to transfer files using tools such as robocopy or rsync.

NEW QUESTION 131

- (Topic 2)

Which of the following will provide a systems administrator with the MOST information about potential attacks on a cloud IaaS instance?

- A. Network flows
- B. FIM
- C. Software firewall
- D. HIDS

Answer: D

Explanation:

HIDS (Host-based Intrusion Detection System) is the tool that will provide the administrator with the most information about potential attacks on a cloud IaaS instance. HIDS is a software or agent that monitors and analyzes the activities and events on a host system or device, such as a cloud instance. HIDS can detect and alert on any malicious or anomalous behavior, such as unauthorized access, malware infection, configuration changes, etc., that may indicate an attack or compromise.

NEW QUESTION 134

- (Topic 1)

A web server has been deployed in a public IaaS provider and has been assigned the public IP address of 72.135.10.100. Users are now reporting that when they browse to the website, they receive a message indicating the service is unavailable. The cloud administrator logs into the server, runs a netstat command, and notices the following relevant output:

```
TCP 17.3.130.3:0 72.135.10.100:5500 TIME_WAIT
TCP 17.3.130.3:0 72.135.10.100:5501 TIME_WAIT
TCP 17.3.130.3:0 72.135.10.100:5502 TIME_WAIT
TCP 17.3.130.3:0 72.135.10.100:5503 TIME_WAIT
TCP 17.3.130.3:0 72.135.10.100:5504 TIME_WAIT
```

Which of the following actions should the cloud administrator take to resolve the issue?

- A. Assign a new IP address of 192.168.100.10 to the web server
- B. Modify the firewall on 72.135.10.100 to allow only UDP
- C. Configure the WAF to filter requests from 17.3.130.3
- D. Update the gateway on the web server to use 72.135.10.1

Answer: D

Explanation:

Updating the gateway on the web server to use 72.135.10.1 is the best action to take to resolve the issue of the web server being unavailable after being deployed in a public IaaS provider and assigned the public IP address of 72.135.10.100. Updating the gateway can ensure that the web server can communicate with the Internet and other networks by using the correct router or device that connects the web server's network to other networks. Updating the gateway can also improve performance and reliability, as it can avoid any routing errors or conflicts that may prevent the web server from responding to remote login requests. References: CompTIA Cloud+ Certification Exam Objectives, page 15, section 2.8

NEW QUESTION 135

- (Topic 1)

A systems administrator needs to configure SSO authentication in a hybrid cloud environment.

Which of the following is the BEST technique to use?

- A. Access controls
- B. Federation
- C. Multifactor authentication
- D. Certificate authentication

Answer: B

Explanation:

Federation is a type of authentication mechanism that allows users to access multiple systems or applications across different domains or organizations with a single login credential. Federation can help configure SSO authentication in a hybrid cloud environment, as it can enable seamless and secure access to cloud-based and on-premises resources using the same identity provider and authentication method. Federation can also improve user convenience, productivity, and security, as it can simplify the login process, reduce login errors, and enhance password management.

References: CompTIA Cloud+ Certification Exam Objectives, page 14, section 2.7

NEW QUESTION 139

- (Topic 1)

An organization purchased new servers with GPUs for render farms. The servers have limited CPU resources.

Which of the following GPU configurations will be the MOST optimal for virtualizing this environment?

- A. Dedicated
- B. Shared
- C. Passthrough
- D. vGPU

Answer: C

Explanation:

Passthrough is a type of GPU configuration that allows a VM to directly access a physical GPU on the host system without any virtualization layer or sharing mechanism. Passthrough can provide optimal performance and compatibility for GPU-intensive applications, such as rendering or gaming, as it eliminates any overhead or contention caused by virtualization or sharing. Passthrough is also suitable for servers with limited CPU resources, as it reduces the CPU load and offloads the graphics processing to the GPU. Passthrough is the most optimal GPU configuration for virtualizing a new server with GPUs for render farms.

References: CompTIA Cloud+ Certification Exam Objectives, page 11, section 1.6

NEW QUESTION 143

- (Topic 1)

A cloud architect is designing the VPCs for a new hybrid cloud deployment. The business requires the following:

- ? High availability
- ? Horizontal auto-scaling
- ? 60 nodes peak capacity per region
- ? Five reserved network IP addresses per subnet
- ? /24 range

Which of the following would BEST meet the above requirements?

- A. Create two /25 subnets in different regions
- B. Create three /25 subnets in different regions
- C. Create two /26 subnets in different regions
- D. Create three /26 subnets in different regions
- E. Create two /27 subnets in different regions
- F. Create three /27 subnets in different regions

Answer: C

Explanation:

A /26 subnet is a subnet that has a network prefix of 26 bits and a host prefix of 6 bits. A /26 subnet can support up to 64 hosts (62 usable hosts) and has a subnet mask of 255.255.255.192. Creating two /26 subnets in different regions can best meet the business requirements for deploying a high availability, horizontally auto-scaling solution that has a peak capacity of 60 nodes per region and five reserved network IP addresses per subnet. Creating two /26 subnets can provide enough host addresses for the peak capacity and the reserved addresses, as well as allow for some growth or redundancy. Creating the subnets in different regions can provide high availability and horizontal auto-scaling, as it can distribute the workload across multiple locations and scale out or in based on demand. References: CompTIA Cloud+ Certification Exam Objectives, page 15, section 2.8

NEW QUESTION 145

- (Topic 1)

A storage array that is used exclusively for datastores is being decommissioned, and a new array has been installed. Now the private cloud administrator needs to migrate the data.

Which of the following migration methods would be the BEST to use?

- A. Conduct a V2V migration
- B. Perform a storage live migration
- C. Rsync the data between arrays
- D. Use a storage vendor migration appliance

Answer: B

Explanation:

A storage live migration is a process of moving or transferring data or files from one storage system or device to another without interrupting or affecting the availability or performance of the VMs or applications that use them. Performing a storage live migration can help migrate the data from a SAN that is being decommissioned to a new array, as it can ensure that there is no downtime or disruption for the VMs or applications that rely on the data or files stored on the SAN. Performing a storage live migration can also help maintain consistency and integrity, as it can synchronize and verify the data or files between the source and destination storage systems or devices.

References: CompTIA Cloud+ Certification Exam Objectives, page 10, section 1.5

NEW QUESTION 150

- (Topic 1)

A systems administrator is reviewing two CPU models for a cloud deployment. Both CPUs have the same number of cores/threads and run at the same clock speed.

Which of the following will BEST identify the CPU with more computational power?

- A. Simultaneous multithreading
- B. Bus speed
- C. L3 cache
- D. Instructions per cycle

Answer: D

Explanation:

Instructions per cycle (IPC) is a metric that measures how many instructions a CPU can execute in one clock cycle. IPC can help identify the CPU with more computational power when comparing two CPU models that have the same number of cores/threads and run at the same clock speed, as it indicates the efficiency and performance of the CPU architecture and design. A higher IPC means that the CPU can process more instructions in less time, resulting in faster and better performance. References: CompTIA Cloud+ Certification Exam Objectives, page 9, section 1.4

Reference: https://en.wikipedia.org/wiki/Central_processing_unit

NEW QUESTION 153

- (Topic 1)

An OS administrator is reporting slow storage throughput on a few VMs in a private IaaS cloud. Performance graphs on the host show no increase in CPU or memory. However, performance graphs on the storage show a decrease of throughput in both IOPS and MBps but not much increase in latency. There is no increase in workload, and latency is stable on the NFS storage arrays that are used by those VMs.

Which of the following should be verified NEXT?

- A. Application
- B. SAN
- C. VM GPU settings
- D. Network

Answer: D

Explanation:

The network is the set of devices, connections, protocols, and configurations that enable communication and data transfer between different systems and applications. The network can affect the performance of storage throughput by influencing factors such as bandwidth, latency, jitter, packet loss, and congestion. Poor network performance can result in low storage throughput in both IOPS and MBps, as it can limit the amount and speed of data that can be sent or received by the storage devices. Verifying the network should be the next step for troubleshooting the issue of slow storage throughput on a few VMs in a private IaaS cloud, as it can help identify and resolve any network-related problems that may be causing the issue. References: CompTIA Cloud+ Certification Exam Objectives, page 17, section 3.4

NEW QUESTION 157

- (Topic 1)

A systems administrator for an e-commerce company will be migrating the company's main website to a cloud provider. The principal requirement is that the website must be highly available.

Which of the following will BEST address this requirement?

- A. Vertical scaling
- B. A server cluster
- C. Redundant switches
- D. A next-generation firewall

Answer: B

Explanation:

A server cluster is a group of servers that work together to provide high availability, load balancing, and scalability for applications or services. A server cluster can help ensure the high availability requirement for migrating an e-commerce company's main website to a cloud provider, as it can prevent downtime or disruption in case of a server failure or outage by automatically switching the workload to another server in the cluster. A server cluster can also improve performance and reliability, as it can distribute the workload across multiple servers and handle increased traffic or demand. References: CompTIA Cloud+ Certification Exam Objectives, page 10, section 1.5

NEW QUESTION 160

- (Topic 1)

The human resources department was charged for a cloud service that belongs to another department. All other cloud costs seem to be correct. Which of the following is the MOST likely cause for this error?

- A. Misconfigured templates
- B. Misconfigured chargeback
- C. Incorrect security groups
- D. Misconfigured tags

Answer: D

Explanation:

Tags are metadata or labels that can be assigned to cloud resources or services to identify and organize them based on various criteria, such as name, purpose, owner, or cost center. Tags can help track the costs for each business unit or department that uses cloud services, as they can enable granular and accurate billing and reporting based on the tags. Misconfigured tags can cause the issue of inaccurate cost tracking for different businesses, as they can result in incorrect or missing billing information or reports. The issue can be resolved by configuring the tags properly to reflect the correct business unit or department for each cloud resource or service. References: CompTIA Cloud+ Certification Exam Objectives, page 13, section 2.5

NEW QUESTION 162

- (Topic 1)

A company developed a product using a cloud provider's PaaS platform and many of the platform-based components within the application environment. Which of the following would the company MOST likely be concerned about when utilizing a multicloud strategy or migrating to another cloud provider?

- A. Licensing
- B. Authentication providers
- C. Service-level agreement
- D. Vendor lock-in

Answer: D

Explanation:

Vendor lock-in is a situation where a customer becomes dependent on a specific vendor for products or services and faces high switching costs or barriers when trying to change vendors. Vendor lock-in is most likely to be a concern for a company that developed a product using a cloud provider's PaaS platform and many of the platform-based components within the application environment when utilizing a multicloud strategy or migrating to another cloud provider, as it can limit the flexibility, scalability, and portability of the product and increase the complexity, risk, and cost of moving or integrating with other cloud platforms or providers. References: CompTIA Cloud+ Certification Exam Objectives, page 8, section 1.2

NEW QUESTION 166

- (Topic 1)

An organization has multiple VLANs configured to segregate the network traffic. Following is the breakdown of the network segmentation:

? Production traffic (10.10.0.0/24)

? Network backup (10.20.0.0/25)

? Virtual IP network (10.20.0.128/25)

The following configuration exists on the server:

Server name	Interface	IP address	Gateway
COMPSRV01	Production	10.10.0.12/24	10.10.0.1
COMPSRV01	Network backup	10.20.0.12/25	10.10.0.1

The backup administrator observes that the weekly backup is failing for this server. Which of the following commands should the administrator run to identify the issue?

- A. ROUTE PRINT
- B. NETSTAT -A
- C. IPCONFIG /ALL
- D. NET SM

Answer: A

Explanation:

ROUTE PRINT is a command that displays the routing table of a system, which shows the destination network, the gateway, the interface, and the metric for each route. ROUTE PRINT can help identify the issue of the weekly backup failing for this server, as it can show if there is a valid route to the network backup segment (10.20.0.0/25) from the production traffic segment (10.10.0.0/24). If there is no route or an incorrect route, the backup will fail to reach the destination. The administrator can use ROUTE PRINT to verify and troubleshoot the routing configuration of the server. References: CompTIA Cloud+ Certification Exam Objectives, page 16, section 3.2

Reference: <https://www.toolbox.com/tech/operating-systems/blogs/using-the-route-print-command-in-windows-7-022310/>

NEW QUESTION 167

- (Topic 1)

A cloud administrator is planning to migrate a globally accessed application to the cloud.

Which of the following should the cloud administrator implement to BEST reduce latency for all users?

- A. Regions
- B. Auto-scaling
- C. Clustering
- D. Cloud bursting

Answer: A

Explanation:

Regions are geographical locations or areas where cloud service providers have data centers or facilities that host their cloud resources or services. Regions can help reduce latency for all users when deploying a globally accessed application to the cloud, as they can enable faster and closer access to the cloud resources or services based on the user's physical location. Regions can also improve performance and availability, as they can provide redundancy and load balancing by distributing the workload across multiple locations. References: CompTIA Cloud+ Certification Exam Objectives, page 15, section 2.8

NEW QUESTION 168

- (Topic 4)

A cloud administrator is evaluating a solution that will limit access to authorized individuals. The solution also needs to ensure the system that connects to the environment meets patching, antivirus, and configuration requirements. Which of the following technologies would BEST meet these requirements?

- A. NAC
- B. EDR
- C. IDS
- D. HIPS

Answer: A

Explanation:

NAC (Network Access Control) is a technology that will limit access to authorized individuals and ensure the system that connects to the environment meets patching, antivirus, and configuration requirements. NAC can enforce policies and rules that define who, what, when, where, and how a device or a user can access a network or a cloud environment. NAC can also inspect and evaluate the security posture and compliance status of a device or a user before granting or denying access. For example, NAC can check if the device has the latest patches, antivirus software, and configuration settings, and if not, it can quarantine, remediate, or reject the device. NAC can also monitor and audit the ongoing network activity and behavior of the devices and users, and take actions if any violations or anomalies are detected.

NEW QUESTION 172

- (Topic 4)

A systems administrator is trying to connect to a remote KVM host. The command line appears as follows:

```
serveradmin@localhost:~$ virsh remotehost
Error: daemon not running on remote host.
```

After logging in to the remote server, the administrator verifies the daemon is running. Which of the following should the administrator try NEXT?

- A. Opening port 22 on the firewall
- B. Running the command with elevated privileges
- C. Checking if the SSH password is correct
- D. Ensuring the private key was properly imported

Answer: B

Explanation:

The answer is B. Running the command with elevated privileges. According to the web search results, the error message "End of file while reading data: sh: 1: nc: not found: Input/output error" indicates that the remote host does not have the nc (netcat) command installed or available in the PATH. The nc command is used by libvirt to establish a connection between the client and the server. To fix this error, the administrator should install nc on the remote host or ensure that it is in the PATH. However, to do this, the administrator needs to have elevated privileges, such as sudo or root, on the remote host. Therefore, the administrator should try running the command with elevated privileges, such as sudo virsh remotehost or su -c 'virsh remotehost'. This will allow the administrator to install nc or modify the PATH on the remote host and then connect to it using libvirt.

NEW QUESTION 177

- (Topic 4)

As a result of an IT audit, a customer has decided to move some applications from an old legacy system to a private cloud. The current server location is remote with low bandwidth. Which of the following is the best migration strategy to use for this deployment?

- A. P2V with physical data transport
- B. P2P with remote data copy
- C. V2V with physical data transport
- D. V2P with physical data transport
- E. V2P with remote data copy

Answer: A

Explanation:

P2V stands for physical to virtual, which is the process of converting a physical server into a virtual machine. This is a common migration strategy for moving legacy systems to the cloud, as it preserves the existing configuration and data of the server. Physical data transport means using a physical device, such as a hard disk drive or a USB flash drive, to transfer the data from the source location to the destination location. This method is suitable for remote locations with low bandwidth, as it avoids the network latency and congestion that may occur with remote data copy. P2P, V2V, and V2P are other types of migration strategies, but they are not applicable for this scenario. P2P stands for physical to physical, which is the process of moving a physical server to another physical server. V2V stands for virtual to virtual, which is the process of moving a virtual machine to another virtual machine. V2P stands for virtual to physical, which is the process of converting a virtual machine into a physical server. Remote data copy means using a network connection, such as FTP or SCP, to transfer the data from the source location to the destination location. This method is suitable for locations with high bandwidth and reliable network connectivity. References: CompTIA Cloud+ CV0-003 Certification Study Guide, Chapter 21, Cloud Migration, page 3371.

NEW QUESTION 182

- (Topic 4)

A systems administrator is deploying a new version of a website. The website is deployed in the cloud using a VM cluster. The administrator must then deploy the new version into one VM first. After a period of time, if there are no issues detected, a second VM will be updated. This process must continue until all the VMS are updated. Which of the following upgrade methods is being implemented?

- A. Canary
- B. Blue-green
- C. Rolling
- D. Staging

Answer: C

Explanation:

The upgrade method that is being implemented by the systems administrator is rolling. A rolling upgrade is a type of upgrade that applies the new version of a software or service to a subset of nodes or instances at a time, while the rest of the nodes or instances continue to run the old version. This way, the upgrade can be performed gradually and incrementally, without causing downtime or disruption to the entire system. A rolling upgrade can also help to monitor and test the new version for any issues or errors, and roll back to the old version if needed¹².

A canary upgrade is a type of upgrade that applies the new version of a software or service to a small and selected group of users or customers, before rolling it out to the rest of the population. This way, the upgrade can be evaluated for its performance, functionality, and feedback, and any problems or bugs can be fixed before affecting the majority of users or customers³⁴.

A blue-green upgrade is a type of upgrade that involves having two identical environments, one running the old version (blue) and one running the new version (green) of a software or service. The traffic is switched from the blue environment to the green environment once the new version is ready and tested. This way, the upgrade can be performed quickly and seamlessly, without any downtime or risk of failure. The blue environment can also serve as a backup in case of any issues with the green environment⁵.

A staging upgrade is a type of upgrade that involves having a separate environment that mimics the production environment, where the new version of a software or service is deployed and tested before moving it to the production environment. This way, the upgrade can be verified and validated for its compatibility, security, and quality, and any defects or errors can be resolved before affecting the live system.

NEW QUESTION 187

- (Topic 4)

Which of the following enables CSPs to offer unlimited capacity to customers?

- A. Adequate budget
- B. Global data center distribution
- C. Economies of scale
- D. Agile project management

Answer: C

Explanation:

The correct answer is C. Economies of scale.

Economies of scale are the cost advantages that CSPs can achieve by increasing the size and scale of their operations. By spreading the fixed costs of infrastructure, software, and personnel over a larger customer base and data volume, CSPs can reduce the average cost per unit of service and offer unlimited capacity to customers at competitive prices¹. Adequate budget is not a sufficient condition for offering unlimited capacity, as CSPs still need to optimize their resource utilization and efficiency to meet the growing demand for data storage and processing.

Global data center distribution is a strategy that CSPs use to improve their service availability, reliability, and performance by locating their servers closer to their customers and reducing network latency. However, this does not necessarily imply unlimited capacity, as CSPs still need to manage the trade-offs between data center size, cost, and power consumption.

Agile project management is a methodology that CSPs use to deliver their services faster, better, and cheaper by adopting iterative, incremental, and collaborative approaches. However, this does not directly affect their capacity, as CSPs still need to scale their infrastructure and software to handle the increasing data load.

NEW QUESTION 192

- (Topic 4)

A web consultancy group currently works in an isolated development environment. The group uses this environment for the creation of the final solution, but also for showcasing it to customers, before commissioning the sites in production. Recently, customers of newly commissioned sites have reported they are not receiving the final product shown by the group, and the website is performing in unexpected ways. Which of the following additional environments should the group adopt and include in its process?

- A. Provide each web consultant a local environment on their device.
- B. Require each customer to have a blue-green environment.
- C. Leverage a staging environment that is tightly controlled for showcasing.
- D. Initiate a disaster recovery environment to fail to in the event of reported issues.

Answer: C

Explanation:

A staging environment is a type of development environment that is used to test and demonstrate the final product before deploying it to the production environment. A staging environment can help the web consultancy group avoid the issues of delivering a different or faulty product to the customers, as it can

ensure that the product is fully functional, compatible, and secure. A staging environment can also help the group showcase the product to the customers in a realistic and controlled way, as it can mimic the production environment and avoid any interference from other development activities. A staging environment can be leveraged by using cloud services that allow for easy provisioning, scaling, and deployment of web applications

NEW QUESTION 194

- (Topic 4)

A systems administrator is reviewing the logs from a company's IDS and notices a large amount of outgoing traffic from a particular server. The administrator then runs a scan on the server, which detects malware that cannot be removed. Which of the following should the administrator do first?

- A. Determine the root cause.
- B. Disconnect the server from the network.
- C. Perform a more intrusive scan.
- D. Restore the server from a backup.

Answer: B

Explanation:

The first step in any incident response procedure is to contain the incident and prevent it from spreading or causing more damage. In this scenario, the systems administrator is reviewing the logs from a company's IDS and notices a large amount of outgoing traffic from a particular server. The administrator then runs a scan on the server, which detects malware that cannot be removed. This indicates that the server is compromised and may be sending malicious or sensitive data to an external source. Therefore, the best thing to do first is to disconnect the server from the network, which will isolate it from the rest of the system and stop the data exfiltration. Determining the root cause, performing a more intrusive scan, and restoring the server from a backup are all important steps, but they should be done after the server is disconnected from the network. References: CompTIA Cloud+ CV0-003 Certification Study Guide, Chapter 10, Incident Response Procedures, page 1771.

NEW QUESTION 196

- (Topic 4)

A systems administrator is attempting to gather information about services and resource utilization on VMS in a cloud environment. Which of the following will BEST accomplish this objective?

- A. Syslog
- B. SNMP
- C. CMDB
- D. Service management
- E. Performance monitoring

Answer: E

Explanation:

Performance monitoring is the process of collecting and analyzing metrics related to the performance and availability of resources in a cloud environment¹. Performance monitoring can help a systems administrator to gather information about services and resource utilization on VMs in a cloud environment by providing the following benefits²:

? Identify and troubleshoot performance issues and bottlenecks before they affect the end users or business operations.

? Optimize the resource allocation and configuration to meet the performance requirements and SLAs of the services.

? Plan for future capacity and scalability needs based on the historical trends and patterns of resource utilization.

? Compare the performance and costs of different cloud service providers, regions, and SKUs.

Some of the tools and services that can help with performance monitoring in a cloud environment are³:

? Azure Monitor: A comprehensive service that provides a unified view of the health, performance, and availability of your Azure resources, applications, and services. Azure Monitor collects metrics, logs, and traces from various sources and provides analysis, visualization, alerting, and automation capabilities.

? Azure Advisor: A personalized service that provides recommendations to optimize your Azure resources for performance, security, cost, reliability, and operational excellence. Azure Advisor analyzes your resource configuration and usage data and suggests best practices to improve your cloud environment.

? Azure Application Insights: A service that monitors the performance and usage of your web applications and services. Application Insights collects telemetry data such as requests, dependencies, exceptions, page views, custom events, and metrics from your application code and provides powerful analytics, diagnostics, and alerting features.

? Azure Log Analytics: A service that collects and analyzes data from various sources such as Azure Monitor, Azure services, VMs, containers, applications, and other cloud or on-premises systems. Log Analytics enables you to query, visualize, and correlate log data using the Kusto Query Language (KQL) and create custom dashboards and reports.

Syslog is a standard protocol for sending log messages from network devices to a central server. Syslog can help with logging and auditing activities in a cloud environment, but it does not provide performance monitoring capabilities. Therefore, option A is incorrect. SNMP (Simple Network Management Protocol) is a protocol for collecting and organizing information about managed devices on a network. SNMP can help with network management and monitoring in a cloud environment, but it does not provide comprehensive performance monitoring for VMs and services. Therefore, option B is incorrect.

CMDB (Configuration Management Database) is a database that stores information about the configuration items (CIs) in an IT environment. CMDB can help with configuration management and change management in a cloud environment, but it does not provide performance monitoring capabilities. Therefore, option C is incorrect.

Service management is a set of processes and practices that aim to deliver value to customers by providing quality services that meet their needs and expectations. Service management can help with service design, delivery, support, and improvement in a cloud environment, but it does not provide performance monitoring capabilities. Therefore, option D is incorrect.

NEW QUESTION 197

- (Topic 4)

A cloud administrator is having difficulty correlating logs for multiple servers. Upon inspection, the administrator finds that the time-zone settings are mismatched throughout the deployment. Which of the following solutions can help maintain time synchronization between all the resources?

- A. DNS
- B. IPAM
- C. NTP
- D. SNMP

Answer: C

Explanation:

The correct answer is C. NTP.

NTP stands for Network Time Protocol, which is a standard protocol for synchronizing the clocks of computers over a network. NTP uses a hierarchical, client-server architecture, where a client requests the current time from a server, and the server responds with a timestamp. The client then adjusts its own clock to match the server's time, taking into account the network delay and clock drift. NTP can achieve sub-millisecond accuracy over local area networks and a few milliseconds over the internet¹².

NTP can help maintain time synchronization between all the resources in a distributed cloud environment, as it allows each resource to get the accurate time from a reliable source. This can help with correlating logs, auditing, security, and other time-sensitive operations. NTP can also handle different time zones, as it uses Coordinated Universal Time (UTC) as the reference time, and each resource can convert UTC to its local time zone¹².

DNS stands for Domain Name System, which is a protocol for resolving domain names into IP addresses. DNS does not provide any functionality for time synchronization³.

IPAM stands for IP Address Management, which is a method for planning, tracking, and managing the IP address space used in a network. IPAM does not provide any functionality for time synchronization.

SNMP stands for Simple Network Management Protocol, which is a protocol for collecting and organizing information about managed devices on a network. SNMP can be used to monitor the performance, availability, configuration, and security of network devices, but it does not provide any functionality for time synchronization.

NEW QUESTION 201

- (Topic 4)

A systems administrator is configuring a cloud solution for a vulnerability assessment to test the company's resources that are hosted in a public cloud. The solution must test the company's resources from an external user's perspective. Which of the following should the systems administrator configure?

- A. An agent-based scan
- B. A network-based scan
- C. A port scan
- D. A credentialed scan

Answer: B

Explanation:

A network-based scan is a type of vulnerability assessment that tests the security of a system or a network from an external user's perspective, without requiring any software or credentials on the target. A network-based scan can identify vulnerabilities such as open ports, misconfigured firewalls, outdated software, or exposed services .

NEW QUESTION 204

- (Topic 4)

An organization is implementing a new requirement to facilitate faster downloads for users of corporate application content. At the same time, the organization is also expanding cloud regions. Which of the following would be suitable to optimize the network for this requirement?

- A. Implement CDN for overall cloud application.
- B. Implement autoscaling of the compute resources.
- C. Implement SR-IOV on the server instances.
- D. Implement an application container solution.

Answer: A

Explanation:

CDN, or content delivery network, is a system of distributed servers that deliver web content to users based on their geographic location, the origin of the web page, and the content delivery server¹. A CDN can improve the performance, availability, and scalability of cloud applications by caching static and dynamic content at the edge of the network, reducing the latency and bandwidth consumption between the users and the cloud servers². A CDN can also provide security features such as encryption, authentication, and DDoS protection³.

Autoscaling, SR-IOV, and containerization are other techniques that can optimize the network for cloud applications, but they are not directly related to the requirement of faster downloads for users. Autoscaling is the process of automatically adjusting the number and size of compute resources based on the demand and workload of the application. SR-IOV, or single root I/O virtualization, is a technology that allows a physical network device to be partitioned into multiple virtual devices that can be assigned to different virtual machines or containers, bypassing the hypervisor and improving the network performance and efficiency.

Containerization is the process of packaging an application and its dependencies into a lightweight and portable unit that can run on any platform, providing isolation, consistency, and portability.

References:

? CompTIA Cloud+ CV0-003 Study Guide, Chapter 4: Network Optimization, Section 4.1: Content Delivery Networks, Page 17523

? CompTIA Cloud+ CV0-003 Study Guide, Chapter 4: Network Optimization, Section 4.2: Autoscaling, Page 180

? CompTIA Cloud+ CV0-003 Study Guide, Chapter 4: Network Optimization, Section 4.3: SR-IOV, Page 184

? CompTIA Cloud+ CV0-003 Study Guide, Chapter 4: Network Optimization, Section 4.4: Containerization, Page 187

? What is a CDN?

NEW QUESTION 205

- (Topic 4)

A systems administrator has a redundant backup system in place. Which of the following should the systems administrator perform to maintain efficient operation and comply with the global standard in the corporate backup policies?

- A. Modify RTO policies.
- B. Confirm completion of the backups.
- C. Test the backups.
- D. Modify RPO policies.

Answer: C

NEW QUESTION 206

- (Topic 4)

A new development team requires workstations hosted in a PaaS to develop a new website. Members of the team also require remote access to the workstations

using their corporate email addresses. Which of the following solutions will BEST meet these requirements? (Select TWO).

- A. Deploy new virtual machines.
- B. Configure email account replication.
- C. Integrate identity services.
- D. Implement a VDI solution.
- E. Migrate local VHD workstations.
- F. Create a new directory service.

Answer: AC

Explanation:

A Platform-as-a-Service (PaaS) is a cloud computing model that provides customers a complete cloud platform—hardware, software, and infrastructure—for developing, running, and managing applications without the cost, complexity, and inflexibility that often comes with building and maintaining that platform on-premises¹.

To develop a new website using a PaaS, the development team needs to deploy new virtual machines (VMs) on the cloud platform. VMs are software emulations of physical computers that can run different operating systems and applications. By deploying new VMs, the development team can create a scalable and flexible environment for their website project, without having to invest in or manage physical hardware².

To enable remote access to the workstations using their corporate email addresses, the development team needs to integrate identity services on the cloud platform. Identity services are services that provide authentication, authorization, and identity management for users and devices accessing cloud resources. By integrating identity services, the development team can use their corporate email addresses as single sign-on (SSO) credentials to access their workstations from any device and location, while ensuring security and compliance³.

The other options are not the best solutions for these requirements:

? Configuring email account replication is not necessary for remote access to the workstations. Email account replication is a process of synchronizing email accounts across different servers or locations. It can provide backup and redundancy for email services, but it does not provide authentication or identity management for remote access⁴.

? Implementing a Virtual Desktop Infrastructure (VDI) solution is not a PaaS solution.

VDI is a technology that allows users to access virtual desktops hosted on a centralized server. VDI can provide remote access to desktop environments, but it requires additional hardware, software, and management costs that are not included in a PaaS model⁵.

? Migrating local VHD workstations is not a PaaS solution. VHD stands for Virtual Hard Disk, which is a file format that represents a virtual hard disk drive.

Migrating local VHD workstations means moving the virtual hard disk files from local storage to cloud storage. This can provide backup and portability for the workstations, but it does not provide a complete cloud platform for developing and running applications⁶.

? Creating a new directory service is not necessary for remote access to the workstations. A directory service is a service that stores and organizes information about users, devices, and resources on a network. Creating a new directory service means setting up a new database and schema for storing this information. This can provide identity management and access control for the network, but it does not provide authentication or SSO for remote access.

NEW QUESTION 210

- (Topic 4)

A cloud engineer recently set up a container image repository. The engineer wants to ensure that downloaded images are not modified in transit. Which of the following is the best method to achieve this goal?

- A. SHA-256
- B. IPSec
- C. AES-256
- D. MD5
- E. serpent-256

Answer: A

Explanation:

SHA-256 is the best method to ensure that downloaded images are not modified in transit. SHA-256 is a type of cryptographic hash function that can generate a unique and fixed-length digest for any input data. The digest can be used to verify the integrity and authenticity of the data, as any modification or tampering of the data would result in a different digest. SHA-256 is more secure and reliable than MD5, which is an older and weaker hash function that has been proven to be vulnerable to collisions and attacks¹². AES-256 and serpent-256 are types of encryption algorithms, not hash functions, and they are used to protect the confidentiality of the data, not the integrity. IPSec is a network security protocol that can use encryption and hashing to secure data in transit, but it is not a method by itself

NEW QUESTION 212

- (Topic 4)

A web consultancy group currently works in an isolated development environment. The group uses this environment for the creation of the final solution, but also for showcasing it to customers, before commissioning the sites in production. Recently, customers of newly commissioned sites have reported they are not receiving the final product shown by the group, and the website is performing in unexpected ways. Which of the following additional environments should the group adopt and include in its process?

- A. Provide each web consultant a local environment on their device.
- B. Require each customer to have a blue-green environment.
- C. Leverage a staging environment that is tightly controlled for showcasing
- D. Initiate a disaster recovery environment to fail to in the event of reported issues.

Answer: C

Explanation:

The answer is C. Leverage a staging environment that is tightly controlled for showcasing. A staging environment is a replica of the production environment that is used for testing and demonstrating the final product before deployment. A staging environment can help the web consultancy group avoid the issues reported by the customers, such as mismatched expectations and unexpected behavior, by ensuring that the product is shown in a realistic and consistent setting. A staging environment can also help the group catch and fix any bugs or errors before they affect the live site.

Some possible sources of information about web development environments are:

? 7 Web Development Best Practices: This page provides some general tips and best practices for web development, such as planning, accessibility, UX/UI, standards, code quality, compatibility, and security.

? Web Development Best Practices (Building Real-World Cloud Apps with Azure):

This page explains some specific best practices for web development in the cloud environment, such as stateless web tier, session state management, CDN

caching, and async programming.

? Web Development Best Practices: This page lists some resources for learning web

development best practices in ASP.NET, such as async and await, building real- world cloud apps with Azure, and hands-on labs.

NEW QUESTION 215

- (Topic 4)

A company is preparing a hypervisor environment to implement a database cluster. One of the requirements is to share the disks between the nodes of the cluster to access the same LUN. Which of the following protocols Should the company use? (Select TWO)

- A. CIFS
- B. FTP
- C. Iscsi
- D. Raid 10
- E. Nfs
- F. fc

Answer: CF

Explanation:

The correct answer is C and F. iSCSI and FC.

iSCSI and FC are protocols that the company can use to share the disks between the nodes of the cluster to access the same LUN. A LUN, or logical unit number, is a unique identifier for a block of storage space that can be accessed by a host system or a cluster of systems. iSCSI and FC are both block-level protocols that allow transferring data between the storage device and the host system or cluster over a network.

iSCSI stands for Internet Small Computer System Interface, which is a protocol that uses TCP/IP to send SCSI commands over an Ethernet network. iSCSI can provide a low-cost and flexible solution for sharing disks between the nodes of the cluster, as it does not require any special hardware or cables, and can use existing network infrastructure. iSCSI can also support encryption and authentication for security purposes .

FC stands for Fibre Channel, which is a protocol that uses optical fiber cables to send SCSI commands over a dedicated network. FC can provide a high-performance and reliable solution for sharing disks between the nodes of the cluster, as it offers high bandwidth, low latency, and error correction. FC can also support zoning and masking for security purposes .

CIFS, or Common Internet File System, is a file-level protocol that allows sharing files and folders over a network. CIFS does not support sharing disks or accessing LUNs at the block level.

FTP, or File Transfer Protocol, is a protocol that allows transferring files between two systems over a network. FTP does not support sharing disks or accessing LUNs at the block level.

NFS, or Network File System, is a file-level protocol that allows sharing files and folders over a network. NFS does not support sharing disks or accessing LUNs at the block level. RAID 10, or Redundant Array of Independent Disks 10, is a storage configuration that combines mirroring and striping to provide high performance and fault tolerance. RAID 10 is not a protocol that allows sharing disks or accessing LUNs over a network.

NEW QUESTION 216

- (Topic 4)

A cloud engineer is responsible for a legacy web application that runs on an on-premises VM environment. The VM environment is approaching end of life. The engineer needs to migrate the web application to the cloud as quickly as possible because the VM environment has the following limitations:

- The VM environment has a single IOGB disk.
- The VM environment still uses 10Mbps, which leaves a 100Mbps WAN connection underutilized.
- No installation media is available.

Which of the following is the best way to migrate the web application to the cloud?

- A. Use the VM import connector to import the VM into the cloud.
- B. Use import/export to import the VM as a snapshot and attach it to a cloud instance.
- C. Use REST APIs to import an image of the VM into the cloud.
- D. Use object storage to create a backup of the VM and restore data into the cloud instance.

Answer: A

Explanation:

A VM import connector is a tool that allows you to import virtual machines from your on-premises environment into the cloud using a graphical user interface. This is the fastest and easiest way to migrate a legacy web application without requiring installation media or changing the configuration of the VM. The VM import connector can also handle the disk size and network bandwidth limitations of the on-premises VM environment. References: EC2 VM Import Connector | AWS News Blog, Import a VMware Virtual Machine to Oracle Cloud Infrastructure, CompTIA Cloud+ Certification Exam Objectives, Domain 2.0: Deployment, Objective 2.1: Given a scenario, execute and implement solutions using appropriate cloud migration tools and methods.

NEW QUESTION 221

- (Topic 4)

A company that performs passive vulnerability scanning at its transit VPC has detected a vulnerability related to outdated web-server software on one of its public subnets. Which of the following can the company use to verify if this is a true positive with the least effort and cost? (Select two).

- A. A network-based scan
- B. An agent-based scan
- C. A port scan
- D. A red-team exercise
- E. A credentialed scan
- F. A blue-team exercise
- G. Unknown environment penetration testing

Answer: AE

NEW QUESTION 222

FILL IN THE BLANK - (Topic 4)

?MISSING?

A.

Answer: D

Explanation:

This means that data is divided into blocks and written across multiple disks, and two additional disks are used to store parity information that can be used to reconstruct data in case of disk failure. RAID 6 can withstand the failure of up to two disks without losing any data or performance. RAID 6 also maximizes the storage capacity of its drives, as it only uses two disks for parity out of the total number of disks in the array. For example, if the array has 10 disks, RAID 6 will use 8 disks for data and 2 disks for parity, resulting in a storage capacity of 8/10 or 80% of the total disk space. RAID 6 is suitable for private cloud environments that require high availability, fault tolerance, and large storage capacity. References: CompTIA Cloud+ CV0-003 Study Guide, Chapter 3: Storage Technologies, Section 3.2: RAID Levels, Page 125

NEW QUESTION 224

- (Topic 4)

A Cloud administrator needs to reduce storage costs. Which of the following would BEST help the administrator reach that goal?

- A. Enabling compression
- B. Implementing deduplication
- C. Using containers
- D. Rightsizing the VMS

Answer: B

Explanation:

The correct answer is B. Implementing deduplication would best help the administrator reduce storage costs.

Deduplication is a technique that eliminates redundant copies of data and stores only one unique instance of the data. This can reduce the amount of storage space required and lower the storage costs. Deduplication can be applied at different levels, such as file-level, block-level, or object-level. Deduplication can also improve the performance and efficiency of backup and recovery operations.

Enabling compression is another technique that can reduce storage costs, but it may not be as effective as deduplication, depending on the type and amount of data. Compression reduces the size of data by applying algorithms that remove or replace redundant or unnecessary bits. Compression can also affect the quality and accessibility of the data, depending on the compression ratio and method.

Using containers and rightsizing the VMs are techniques that can reduce compute costs, but not necessarily storage costs. Containers are lightweight and portable units of software that run on a shared operating system and include only the necessary dependencies and libraries. Containers can reduce the overhead and resource consumption of virtual machines (VMs), which require a full operating system for each instance. Rightsizing the VMs means adjusting the CPU, memory, disk, and network resources of the VMs to match their workload requirements. Rightsizing the VMs can optimize their performance and utilization, and avoid overprovisioning or underprovisioning.

NEW QUESTION 228

- (Topic 4)

A systems administrator is planning to deploy a database cluster in a virtualization environment. The administrator needs to ensure the database nodes do not exist on the same physical host. Which of the following would best meet this requirement?

- A. Oversubscription
- B. Anti-affinity
- C. A firewall
- D. A separate cluster

Answer: B

Explanation:

Anti-affinity is the concept of ensuring that certain virtual machines or workloads do not run on the same physical host. This can improve the availability and performance of the system, as well as prevent a single point of failure. In this scenario, the systems administrator needs to ensure the database nodes do not exist on the same physical host, so anti-affinity would best meet this requirement. Oversubscription is the concept of allocating more resources to virtual machines than the physical host actually has, which can improve the utilization and efficiency of the system, but it does not guarantee the separation of the database nodes. A firewall is a device or software that controls the network traffic between different zones or segments, which can improve the security and isolation of the system, but it does not affect the placement of the database nodes. A separate cluster is a group of hosts that share common resources and policies, which can improve the scalability and manageability of the system, but it does not ensure the database nodes do not exist on the same physical host within the cluster. References: CompTIA Cloud+ CV0-003 Certification Study Guide, Chapter 1, Cloud Architecture and Design, page 131.

NEW QUESTION 231

- (Topic 4)

A systems administrator is selecting the appropriate RAID level to support a private cloud with the following requirements:

- . The storage array must withstand the failure of up to two drives.
- . The storage array must maximize the storage capacity of its drives.

Which of the following RAID levels should the administrator implement?

- A. RAID 0
- B. RAID 1
- C. RAID 5
- D. RAID 6
- E. RAID 10

Answer: D

Explanation:

RAID stands for Redundant Array of Independent Disks, which is a technology that combines multiple physical disks into a logical unit that provides improved performance, reliability, and storage capacity. RAID levels are different ways of organizing and distributing data across the disks in a RAID array. Each RAID level has its own advantages and disadvantages, depending on the requirements and trade-offs of the system.

RAID 6 is a RAID level that uses block-level striping with double parity. This means that data is divided into blocks and distributed across all the disks in the array, and two sets of parity information are calculated and stored on different disks. Parity is a method of error detection and correction that can reconstruct the data in

case of disk failure. RAID 6 can withstand the failure of up to two disks without losing any data, which makes it suitable for a private cloud that requires high fault tolerance. RAID 6 also maximizes the storage capacity of its drives, as it only uses two disks for parity and the rest for data. The storage capacity of a RAID 6 array is equal to $(n-2) \times S$, where n is the number of disks and S is the size of the smallest disk.

RAID 0, RAID 1, RAID 5, and RAID 10 are other RAID levels, but they do not meet the requirements of the private cloud. RAID 0 uses striping without parity, which improves performance but does not provide any redundancy or fault tolerance. RAID 0 cannot withstand any disk failure, as it would result in data loss. RAID 1 uses mirroring, which copies the same data to two or more disks. RAID 1 provides high reliability and fast read performance, but it wastes half of the storage capacity for redundancy. RAID 1 can only withstand the failure of one disk in each mirrored pair. RAID 5 uses striping with single parity, which distributes data and parity across all the disks in the array. RAID 5 provides a balance of performance, reliability, and storage capacity, but it can only withstand the failure of one disk. RAID 10 is a combination of RAID 1 and RAID 0, which creates a striped array of mirrored pairs. RAID 10 provides high performance and reliability, but it also wastes half of the storage capacity for redundancy. RAID 10 can withstand the failure of one disk in each mirrored pair, but not more than that.

For more information on RAID levels, you can refer to the following sources:

? CompTIA Cloud+ CV0-003 Certification Study Guide, Chapter 4, Storage Technologies, page 791

? Cloud+ (Plus) Certification | CompTIA IT Certifications2

NEW QUESTION 232

- (Topic 4)

A VDI administrator is enhancing the existing environment with a feature to allow users to connect devices to virtual workstations. Which of the following types of devices are most likely to be allowed in the upgrade? (Select two).

- A. Display monitors
- B. USB devices
- C. SATA devices
- D. PCIe devices
- E. PCI devices
- F. Printers

Answer: BF

Explanation:

B. USB devices and F. Printers are most likely to be allowed in the upgrade. USB devices are common peripherals that users may want to connect to their virtual workstations, such as flash drives, keyboards, mice, webcams, etc. Printers are also useful devices that users may need to print documents from their virtual desktops. VDI software can support USB redirection and printer redirection to enable these devices to work with virtual workstations¹².

Display monitors, SATA devices, PCIe devices, and PCI devices are less likely to be allowed in the upgrade, as they are either part of the physical hardware of the end device or the server, or they require direct access to the host system. VDI software typically does not support these types of devices, as they are not compatible with the virtualization layer or the remote display protocol³⁴.

1: What is VDI? | Virtual Desktop Infrastructure | VMware 2: What Is Virtual Desktop Infrastructure (VDI)? | Microsoft Azure 3: What Is Virtual Desktop Infrastructure (VDI)? - Cisco 4: Best Virtual Desktop Infrastructure (VDI) Software in 2023 | G2

NEW QUESTION 235

- (Topic 4)

A cloud solutions architect has an environment that must only be accessed during work hours. Which of the following processes should be automated to best reduce cost?

- A. Scaling of the environment after work hours
- B. Implementing access control after work hours
- C. Shutting down the environment after work hours
- D. Blocking external access to the environment after work hours

Answer: C

Explanation:

Shutting down the environment after work hours is the best process to automate to reduce cost, as it will stop incurring charges for the cloud resources that are not needed outside of work hours. Scaling, implementing access control, or blocking external access may still incur some costs for the cloud resources that are running or reserved, even if they are not fully utilized. Shutting down the environment can be automated using scripts, schedules, or triggers that can turn off or deallocate the cloud resources based on time or usage criteria¹².

NEW QUESTION 238

- (Topic 4)

A cloud administrator has deployed a website and needs to improve the site security to meet requirements. The website architecture is designed to have a DBaaS in the back end and autoscaling instances in the front end using a load balancer to distribute the request.

Which of the following will the cloud administrator most likely use?

- A. An API gateway
- B. An IPS/IDS
- C. A reverse proxy
- D. A WAF

Answer: D

Explanation:

A web application firewall (WAF) is a security solution that monitors and filters the traffic between a web application and the Internet. A WAF can help improve the site security by blocking malicious requests, preventing SQL injection attacks, mitigating cross-site scripting (XSS) attacks, and enforcing security policies. A WAF can be deployed as a cloud service or as a device in front of the load balancer. A WAF is more suitable than an API gateway, an IPS/IDS, or a reverse proxy for the website architecture described in the question. References: [CompTIA Cloud+ CV0-003 Certification Study Guide], Chapter 9, Objective 9.1: Given a scenario, apply security controls and techniques.

NEW QUESTION 242

- (Topic 4)

A company that performs passive vulnerability scanning at its transit VPC has detected a vulnerability related to outdated web-server software on one of its public

subnets. Which of the following can be used to verify if this is a true positive with the LEAST effort and cost? (Select TWO).

- A. A network-based scan
- B. An agent-based scan
- C. A port scan
- D. A red-team exercise
- E. A credentialed scan
- F. A blue-team exercise
- G. Unknown environment penetration testing

Answer: BE

Explanation:

The correct answer is B and E. An agent-based scan and a credentialed scan can help verify if the vulnerability related to outdated web-server software is a true positive with the least effort and cost.

An agent-based scan is a type of vulnerability scan that uses software agents installed on the target systems to collect and report data on vulnerabilities. This method can provide more accurate and detailed results than a network-based scan, which relies on network traffic analysis and probes¹. An agent-based scan can also reduce the network bandwidth and performance impact of scanning, as well as avoid triggering false alarms from intrusion detection systems².

A credentialed scan is a type of vulnerability scan that uses valid login credentials to access the target systems and perform a more thorough and comprehensive assessment of their configuration, patch level, and vulnerabilities. A credentialed scan can identify vulnerabilities that are not visible or exploitable from the network level, such as missing updates, weak passwords, or misconfigured services³. A credentialed scan can also reduce the risk of false positives and false negatives, as well as avoid causing damage or disruption to the target systems³.

A network-based scan, a port scan, a red-team exercise, a blue-team exercise, and unknown environment penetration testing are not the best options to verify if the vulnerability is a true positive with the least effort and cost. A network-based scan and a port scan may not be able to detect the vulnerability if it is not exposed or exploitable from the network level. A red-team exercise, a blue-team exercise, and unknown environment penetration testing are more complex, time-consuming, and costly methods that involve simulating real-world attacks or defending against them. These methods are more suitable for testing the overall security posture and resilience of an organization, rather than verifying a specific vulnerability⁴.

NEW QUESTION 247

- (Topic 3)

A cloud administrator would like to maintain file integrity checks through hashing on a cloud object store. Which of the following is MOST suitable from a performance perspective?

- A. SHA-256
- B. SHA-512
- C. MD5
- D. AES

Answer: C

Explanation:

The most suitable hashing algorithm from a performance perspective to maintain file integrity checks on a cloud object store is MD5 (Message Digest 5). MD5 is a hashing algorithm that generates a 128-bit hash value for any given input data. MD5 is faster and more efficient than other hashing algorithms, such as SHA-256 or SHA-512, which generate longer hash values and require more computational resources. MD5 can be used to verify the integrity of files by comparing their hash values before and after transmission or storage. Reference: CompTIA Cloud+ Certification Exam Objectives, Domain 2.0 Security, Objective 2.5 Given a scenario, apply data security techniques in the cloud.

NEW QUESTION 248

- (Topic 3)

A company wants to move to a multicloud environment and utilize the technology that provides the most portability. Which of the following technology solutions would BEST meet the company's needs?

- A. Bootstrap
- B. Virtual machines
- C. Clusters
- D. Containers

Answer: D

Explanation:

The technology that provides the most portability for a multicloud environment is containers. Containers are units of software that package an application and its dependencies into a standardized and isolated environment that can run on any platform or cloud service. Containers are lightweight, scalable, and portable, as they do not depend on the underlying infrastructure or operating system. Containers can also be managed by orchestration tools that automate the deployment, scaling, and networking of containerized applications across multiple clouds. Reference: [CompTIA Cloud+ Certification Exam Objectives], Domain 1.0 Configuration and Deployment, Objective 1.3 Given a scenario involving integration between multiple cloud environments, select an appropriate solution design.

NEW QUESTION 249

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