



CompTIA

Exam Questions CV0-003

CompTIA Cloud+ Certification Exam

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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

SIMULATION - (Topic 1)

The QA team is testing a newly implemented clinical trial management (CTM) SaaS application that uses a business intelligence application for reporting. The UAT users were instructed to use HTTP and HTTPS.

Refer to the application dataflow:

1A – The end user accesses the application through a web browser to enter and view clinical data.

2A – The CTM application server reads/writes data to/from the database server.

1B – The end user accesses the application through a web browser to run reports on clinical data.

2B – The CTM application server makes a SOAP call on a non-privileged port to the BI application server.

3B – The BI application server gets the data from the database server and presents it to the CTM application server.

When UAT users try to access the application using <https://ctm.app.com> or <http://ctm.app.com>, they get a message stating: "Browser cannot display the webpage." The QA team has raised a ticket to troubleshoot the issue.

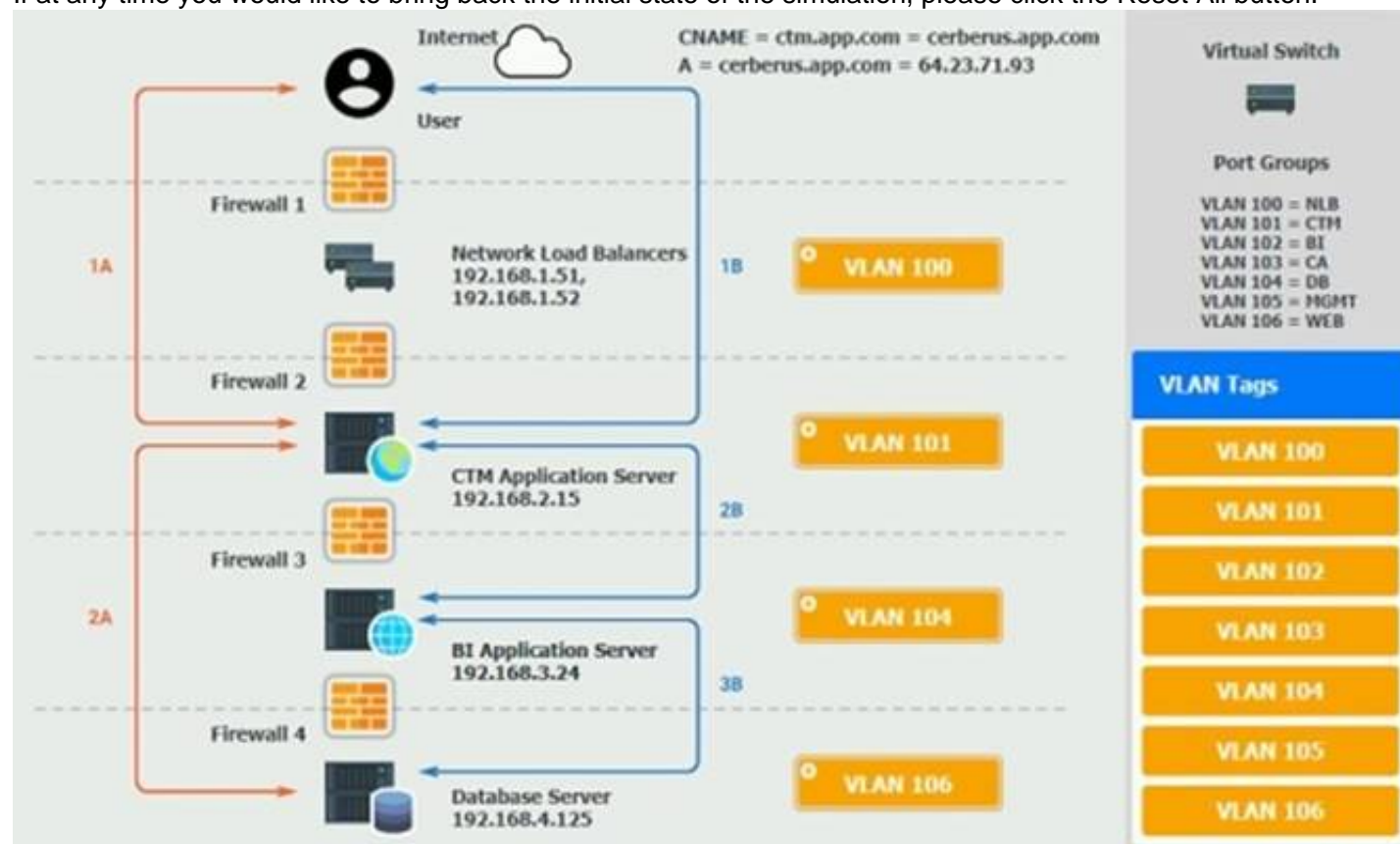
INSTRUCTIONS

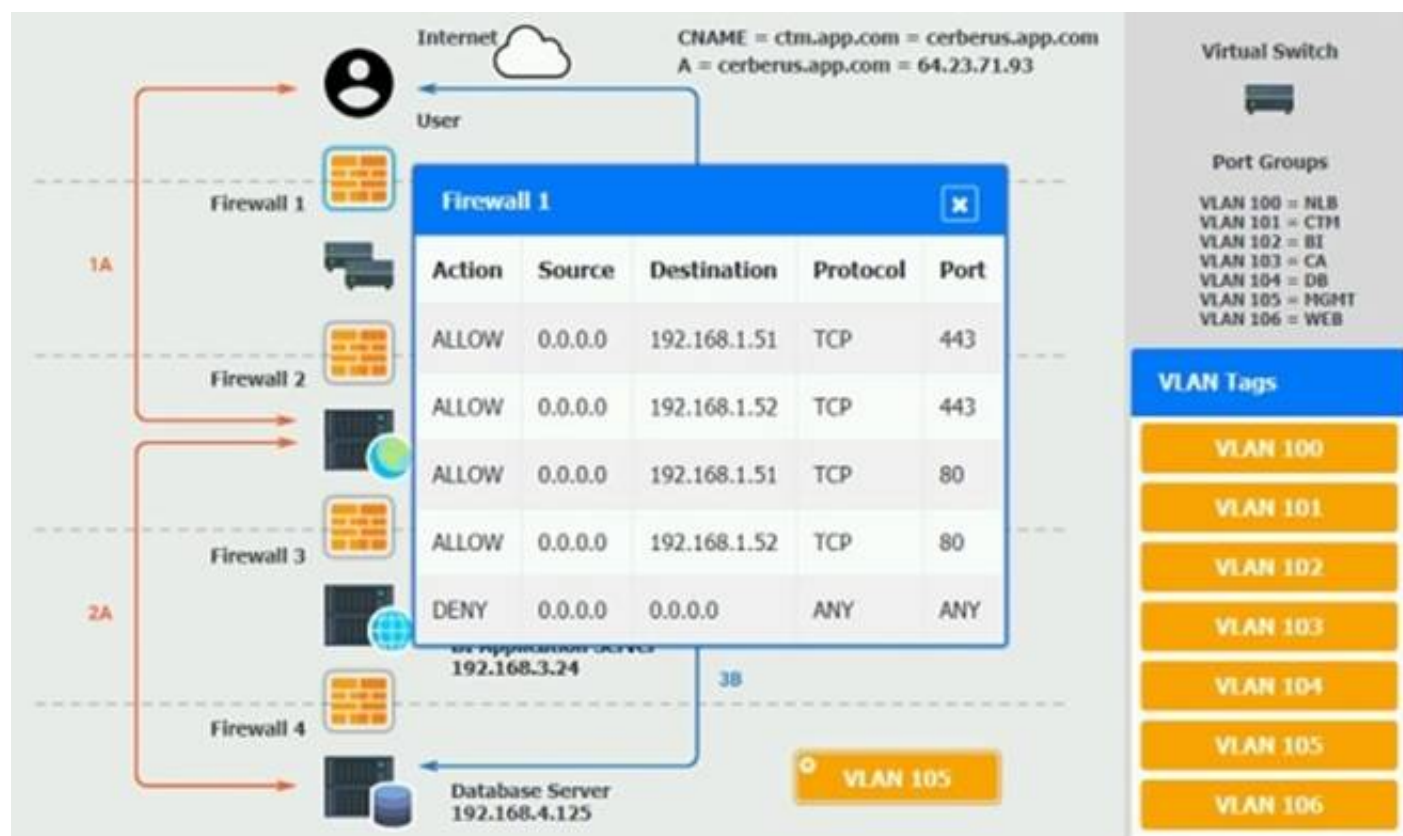
You are a cloud engineer who is tasked with reviewing the firewall rules as well as virtual network settings.

You should ensure the firewall rules are allowing only the traffic based on the dataflow. You have already verified the external DNS resolution and NAT are working.

Verify and appropriately configure the VLAN assignments and ACLs. Drag and drop the appropriate VLANs to each tier from the VLAN Tags table. Click on each Firewall to change ACLs as needed.

If at any time you would like to bring back the initial state of the simulation, please click the Reset All button.







- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

On firewall 3, change the DENY 0.0.0.0 entry to rule 3 not rule 1.

NEW QUESTION 3

- (Topic 1)

Which of the following strategies will mitigate the risk of a zero-day vulnerability MOST efficiently?

- A. Using only open-source technologies
- B. Keeping all resources up to date
- C. Creating a standby environment with a different cloud provider
- D. Having a detailed incident response plan

Answer: D

Explanation:

An incident response plan is a document or procedure that defines the roles, responsibilities, and actions to be taken in the event of a security incident or breach. Having a detailed incident response plan can help mitigate the risk of a zero-day vulnerability most efficiently, as it can provide a clear and consistent framework for identifying, containing, analyzing, and resolving any potential threats or exploits related to the unknown or unpatched vulnerability. Having a detailed incident response plan can also help minimize the impact and damage of a security incident or breach, as it can enable timely and effective recovery and restoration processes. References: CompTIA Cloud+ Certification Exam Objectives, page 14, section 2.7

NEW QUESTION 4

- (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 5

- (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 6

- (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 7

- (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 8

- (Topic 1)

The security team for a large corporation is investigating a data breach. The team members are all trying to do the same tasks but are interfering with each other's work. Which of the following did the team MOST likely forget to implement?

- A. Incident type categories
- B. A calling tree
- C. Change management
- D. Roles and responsibilities

Answer: D

Explanation:

Roles and responsibilities are definitions or descriptions of what each team member or stakeholder is expected to do or perform in a project or process. Roles and responsibilities can help clarify the scope, authority, and accountability of each team member or stakeholder and avoid any confusion or duplication of work. The security team most likely forgot to implement roles and responsibilities when investigating a data breach, as they are all trying to do the same tasks but are interfering with each other's work. Implementing roles and responsibilities can help improve efficiency and effectiveness, as it can ensure that each team member or stakeholder knows what tasks they need to do and how they need to coordinate with others. References: CompTIA Cloud+ Certification Exam Objectives, page 13, section 2.5

NEW QUESTION 9

- (Topic 1)

An organization has the following requirements that need to be met when implementing cloud services:

- ? SSO to cloud infrastructure
- ? On-premises directory service

? RBAC for IT staff

Which of the following cloud models would meet these requirements?

- A. Public
- B. Community
- C. Hybrid
- D. Multitenant

Answer: C

Explanation:

A hybrid cloud is a type of cloud deployment model that combines two or more different types of clouds, such as public, private, or community clouds, into a single integrated environment. A hybrid cloud can meet the requirements for implementing cloud services with SSO to cloud infrastructure, on-premises directory service, and RBAC for IT staff, as it can provide flexibility, scalability, and security for cloud-based and on-premises resources. A hybrid cloud can also enable seamless and secure access to cloud infrastructure using SSO with directory service federation, as well as granular and consistent control over IT staff permissions using RBAC across different cloud environments. References: CompTIA Cloud+ Certification Exam Objectives, page 8, section 1.2

NEW QUESTION 10

- (Topic 1)

A systems administrator needs to configure an email client to ensure data integrity of the email messages.

Which of the following provides the BEST mechanism to achieve this goal?

- A. Cyclic redundancy check
- B. SHA-1 hashes
- C. SHA-256 hashes
- D. Digital signature

Answer: D

Explanation:

A digital signature is a type of cryptographic technique that verifies the authenticity, integrity, and non-repudiation of an electronic message or document. A digital signature can help configure an email client to ensure data integrity of the email messages, as it can prove that the email message has not been altered or tampered with during transmission by using a mathematical algorithm to generate a unique code (signature) based on the content and identity of the sender. A digital signature can also help prevent spoofing, phishing, or impersonation attacks, as it can confirm that the email message originates from a legitimate source. References: CompTIA Cloud+ Certification Exam Objectives, page 14, section 2.7
Reference: <https://www.fsl.cs.sunysb.edu/docs/integrity-storagess05/integrity.html>

NEW QUESTION 10

- (Topic 1)

A company wants to implement business continuity, and the cloud solution architect needs to design the correct solution.

Which of the following will provide the data to measure business continuity? (Choose two.)

- A. A service-level agreement
- B. Automation scripts
- C. Playbooks
- D. A network diagram
- E. A backup and restore
- F. A recovery time objective

Answer: AF

Explanation:

A service-level agreement (SLA) is a contract or document that defines the level of service and performance expected from a service provider or vendor. A recovery time objective (RTO) is a metric that specifies the maximum acceptable time for restoring a system or service after a disruption or outage. Both SLA and RTO can provide the data to measure business continuity, as they can indicate the availability, reliability, and recoverability of a system or service in case of a failure or disaster. SLA and RTO can also help evaluate the effectiveness and efficiency of the business continuity plan and solution. References: CompTIA Cloud+ Certification Exam Objectives, page 20, section 4.2

NEW QUESTION 13

- (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 14

- (Topic 1)

A cloud administrator has built a new private cloud environment and needs to monitor all computer, storage, and network components of the environment. Which of the following protocols would be MOST useful for this task?

- A. SMTP
- B. SCP
- C. SNMP
- D. SFTP

Answer: C

Explanation:

Simple Network Management Protocol (SNMP) is a protocol that enables monitoring and managing network devices and components in an IP network. SNMP can help monitor all computer, storage, and network components of a private cloud environment, as it can collect and report information about their status, performance, configuration, and events. SNMP can also help troubleshoot and optimize the private cloud environment, as it can detect and alert any issues or anomalies related to the network devices and components. References: CompTIA Cloud+ Certification Exam Objectives, page 15, section 2.8

NEW QUESTION 16

- (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 19

- (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 23

- (Topic 1)

A company wants to check its infrastructure and application for security issues regularly. Which of the following should the company implement?

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

Answer: C

Explanation:

Vulnerability testing is a type of testing that identifies and evaluates the weaknesses or flaws in a system or application that could be exploited by attackers. Vulnerability testing can help check the infrastructure and application for security issues regularly, as it can reveal the potential risks and exposures that may compromise the confidentiality, integrity, or availability of the system or application. Vulnerability testing can also help remediate or mitigate the vulnerabilities by providing recommendations or solutions to fix or reduce them. References: CompTIA Cloud+ Certification Exam Objectives, page 19, section 4.1
Reference: <https://pure.security/services/technical-assurance/external-penetration-testing/>

NEW QUESTION 26

- (Topic 1)

A systems administrator is creating a playbook to run tasks against a server on a set schedule.

Which of the following authentication techniques should the systems administrator use within the playbook?

- A. Use the server's root credentials
- B. Hard-code the password within the playbook

- C. Create a service account on the server
- D. Use the administrator's SSO credentials

Answer: C

Explanation:

A service account is a type of user account that is created for a specific service or application to run on a server or system. Creating a service account on the server is the best authentication technique to use within the playbook to run tasks against the server on a set schedule, as it can provide secure and consistent access to the server without exposing or hard-coding any sensitive credentials within the playbook. Creating a service account can also help manage and monitor the tasks and activities performed by the service or application on the server. References: CompTIA Cloud+ Certification Exam Objectives, page 14, section 2.7

NEW QUESTION 31

- (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 36

- (Topic 1)

A company that utilizes an IaaS service provider has contracted with a vendor to perform a penetration test on its environment. The vendor is able to exploit the virtualization layer and obtain access to other instances within the cloud provider's environment that do not belong to the company. Which of the following BEST describes this attack?

- A. VM escape
- B. Directory traversal
- C. Buffer overflow
- D. Heap spraying

Answer: A

Explanation:

VM escape is a type of attack that allows an attacker to break out of a virtual machine (VM) and access the host system or other VMs within the same cloud provider's environment. VM escape can exploit the vulnerabilities in the virtualization layer or hypervisor that separates and isolates the VMs from each other and from the host system. VM escape can result in serious consequences, such as compromising the security and privacy of other customers' data or resources, gaining unauthorized access to the cloud provider's infrastructure or services, or launching further attacks on other systems or networks. VM escape best describes the attack that was performed by a vendor who was able to exploit the virtualization layer and obtain access to other instances within the cloud provider's environment that do not belong to the company. References: CompTIA Cloud+ Certification Exam Objectives, page 19, section 4.1

Reference: <https://whatis.techtarget.com/definition/virtual-machine-escape>

NEW QUESTION 38

- (Topic 1)

A systems administrator needs to configure a set of policies to protect the data to comply with mandatory regulations.

Which of the following should the administrator implement to ensure DLP efficiently prevents the exposure of sensitive data in a cloud environment?

- A. Integrity
- B. Versioning
- C. Classification
- D. Segmentation

Answer: C

Explanation:

Classification is a process of assigning labels or categories to data based on its sensitivity, value, or risk level. Classification can help implement data loss prevention (DLP) policies by identifying which data needs to be protected and how to protect it according to its classification level. Classification can also help comply with mandatory regulations by ensuring that data is handled and stored appropriately based on its legal or contractual requirements. Classification is essential for DLP to efficiently prevent the exposure of sensitive data in a cloud environment. References: CompTIA Cloud+ Certification Exam Objectives, page 14, section 2.7

NEW QUESTION 43

- (Topic 1)

An organization requires the following to be achieved between the finance and marketing departments:

? Allow HTTPS/HTTP.

? Disable FTP and SMB traffic.

Which of the following is the MOST suitable method to meet the requirements?

- A. Implement an ADC solution to load balance the VLAN traffic

- B. Configure an ACL between the VLANs
- C. Implement 802.1X in these VLANs
- D. Configure on-demand routing between the VLANs

Answer: B

Explanation:

An access control list (ACL) is a set of rules that defines which traffic is allowed or denied between different network segments or devices. An ACL can be used to filter traffic based on various criteria, such as source and destination addresses, ports, protocols, and applications. Configuring an ACL between the VLANs of the finance and marketing departments is the most suitable method to meet the requirements of allowing HTTPS/HTTP and disabling FTP and SMB traffic. An ACL can specify which ports and protocols are permitted or blocked between the VLANs, such as allowing port 80 (HTTP) and port 443 (HTTPS), and denying port 21 (FTP) and port 445 (SMB). References: [CompTIA Cloud+ Certification Exam Objectives], page 15, section 2.8

NEW QUESTION 45

- (Topic 1)

In an existing IaaS instance, it is required to deploy a single application that has different versions. Which of the following should be recommended to meet this requirement?

- A. Deploy using containers
- B. Install a Type 2 hypervisor
- C. Enable SR-IOV on the host
- D. Create snapshots

Answer: A

Explanation:

Containers are a type of deployment technology that packages an application and its dependencies into a lightweight and portable unit that can run on any platform or environment. Containers can help deploy a single application that has different versions in an existing IaaS instance, as they can isolate and run multiple versions of the same application without any conflicts or interference. Containers can also enable faster and easier deployment, scaling, and management of cloud-based applications. References: CompTIA Cloud+ Certification Exam Objectives, page 11, section 1.6

NEW QUESTION 47

- (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 52

- (Topic 1)

Which of the following is relevant to capacity planning in a SaaS environment?

- A. Licensing
- B. A hypervisor
- C. Clustering
- D. Scalability

Answer: D

Explanation:

Scalability is the ability of a system or service to handle increased workload or demand by adding or removing resources or capacity as needed. Scalability is relevant to capacity planning in a SaaS environment, as it can affect the performance, availability, and cost of the SaaS service. Scalability can help optimize the capacity planning process by ensuring that the SaaS service has enough resources or capacity to meet the current and future needs of the customers without wasting or underutilizing resources or capacity. References: CompTIA Cloud+ Certification Exam Objectives, page 12, section 2.2

NEW QUESTION 56

- (Topic 1)

A cloud administrator is setting up a DR site on a different zone of the same CSP. The application servers are replicated using the VM replication, and the database replication is set up using log shipping. Upon testing the DR site, the application servers are unable to access the database servers. The administrator has verified the systems are running and are accessible from the CSP portal.

Which of the following should the administrator do to fix this issue?

- A. Change the database application IP
- B. Create a database cluster between the primary site and the DR site
- C. Update the connection string

D. Edit the DNS record at the DR site for the application servers

Answer: C

Explanation:

A connection string is a parameter that specifies how to connect to a database server or instance. A connection string typically includes information such as the server name, database name, user name, password, and other options. Updating the connection string is the best way to fix the issue of application servers being unable to access the database servers after setting up a DR site on a different zone of the same CSP and replicating the application and database servers using VM replication and log shipping. Updating the connection string can ensure that the application servers can connect to the correct database server or instance in the DR site, as the server name or IP address may have changed after the replication. References: CompTIA Cloud+ Certification Exam Objectives, page 10, section 1.5

NEW QUESTION 61

- (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 64

- (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 69

- (Topic 1)

A cloud architect wants to minimize the risk of having systems administrators in an IaaS compute instance perform application code changes. The development group should be the only group allowed to modify files in the directory.

Which of the following will accomplish the desired objective?

- A. Remove the file write permissions for the application service account.
- B. Restrict the file write permissions to the development group only.
- C. Add access to the fileshare for the systems administrator's group.
- D. Deny access to all development user accounts

Answer: B

Explanation:

File write permissions are permissions that control who can modify or delete files in a directory or system. Restricting the file write permissions to the development group only can help minimize the risk of having systems administrators in an IaaS compute instance perform application code changes, as it can prevent anyone other than the development group from altering or removing any files in the directory where the application code is stored. Restricting the file write permissions can also help maintain consistency and integrity, as it can ensure that only authorized and qualified users can make changes to the application code. References: CompTIA Cloud+ Certification Exam Objectives, page 14, section 2.7

NEW QUESTION 73

- (Topic 2)

A cloud administrator is managing an organization's infrastructure in a public cloud. All servers are currently located in a single virtual network with a single firewall that all traffic must pass through. Per security requirements, production, QA, and development servers should not be able to communicate directly with each other. Which of the following should an administrator perform to comply with the security requirement?

- A. Create separate virtual networks for production, QA, and development server

- B. Move the servers to the appropriate virtual network. Apply a network security group to each virtual network that denies all traffic except for the firewall.
- C. Create separate network security groups for production, QA, and development server
- D. Apply the network security groups on the appropriate production, QA, and development servers. Peer the networks together.
- E. Create separate virtual networks for production, QA, and development server
- F. Move the servers to the appropriate virtual network. Peer the networks together.
- G. Create separate network security groups for production, QA, and development server
- H. Peer the networks together. Create static routes for each network to the firewall.

Answer: A

Explanation:

These are the actions that the administrator should perform to comply with the security requirement of isolating production, QA, and development servers from each other in a public cloud environment:

? Create separate virtual networks for production, QA, and development servers: A virtual network is a logical isolation of network resources or systems within a cloud environment. Creating separate virtual networks for different types of servers can help to segregate them from each other and prevent direct communication or interference.

? Move the servers to the appropriate virtual network: Moving the servers to the appropriate virtual network can help to assign them to their respective roles and functions, as well as ensure that they follow the network policies and rules of their virtual network.

? Apply a network security group to each virtual network that denies all traffic except for the firewall: A network security group is a set of rules or policies that control and filter inbound and outbound network traffic for a virtual network or system. Applying a network security group to each virtual network that denies all traffic except for the firewall can help to enforce security and compliance by blocking any unauthorized or unwanted traffic between different types of servers, while allowing only necessary traffic through the firewall.

NEW QUESTION 78

- (Topic 2)

A systems administrator is using a configuration management tool to perform maintenance tasks in a system. The tool is leveraging the target system's API to perform these maintenance tasks. After a number of features and security updates are applied to the target system, the configuration management tool no longer works as expected. Which of the following is the MOST likely cause of the issue?

- A. The target system's API functionality has been deprecated
- B. The password for the service account has expired
- C. The IP addresses of the target system have changed
- D. The target system has failed after the updates

Answer: A

Explanation:

The target system's API (Application Programming Interface) functionality has been deprecated is what will most likely cause the issue of configuration management tool no longer working as expected after using it to perform maintenance tasks in a system using its API, and applying features and security updates to it. An API is a set of rules or specifications that defines how different software components or systems can communicate and interact with each other. An API functionality is a feature or function that an API provides or supports, such as methods, parameters, responses, etc. An API functionality can be deprecated when it is no longer maintained or supported by the API provider or developer, and is replaced or removed by a newer or better functionality. The target system's API functionality has been deprecated can cause the issue by making the configuration management tool unable to use or access the API functionality that it relies on to perform maintenance tasks in the system, which may result in errors or failures.

NEW QUESTION 81

- (Topic 2)

Which of the following should be considered for capacity planning?

- A. Requirements, licensing, and trend analysis
- B. Laws and regulations
- C. Regions, clusters, and containers
- D. Hypervisors and scalability

Answer: A

Explanation:

These are the factors that should be considered for capacity planning in a cloud environment. Capacity planning is a process of estimating and allocating the necessary resources and performance to meet the current and future demands of cloud applications or services. Capacity planning can help to optimize costs, efficiency, and reliability of cloud resources or services. The factors that should be considered for capacity planning are:

? Requirements: These are the specifications or expectations of the cloud applications or services, such as functionality, availability, scalability, security, etc. Requirements can help to determine the type, amount, and quality of resources or services needed to meet the objectives and goals of the cloud applications or services.

? Licensing: This is the agreement or contract that grants customers the right to use or access certain cloud resources or services for a specific period or fee. Licensing can affect the cost, availability, and compliance of cloud resources or services. Licensing can help to determine the budget, duration, and scope of using or accessing cloud resources or services.

? Trend analysis: This is the technique of analyzing historical and current data to identify patterns, changes, or fluctuations in demand or usage of cloud resources or services. Trend analysis can help to predict and anticipate future demand or usage of cloud resources or services, as well as identify any opportunities or challenges that may arise.

NEW QUESTION 83

- (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 85

- (Topic 2)

A systems administrator adds servers to a round-robin, load-balanced pool, and then starts receiving reports of the website being intermittently unavailable. Which of the following is the MOST likely cause of the issue?

- A. The network is being saturated.
- B. The load balancer is being overwhelmed.
- C. New web nodes are not operational.
- D. The API version is incompatible.
- E. There are time synchronization issues.

Answer: C

Explanation:

New web nodes are not operational is the most likely cause of the issue of website being intermittently unavailable after adding servers to a round-robin, load-balanced pool. A round-robin, load-balanced pool is a method of distributing network traffic evenly and sequentially among multiple servers or nodes that provide the same service or function. A round-robin, load-balanced pool can help to improve performance, availability, and scalability of network applications or services by ensuring that no server or node is overloaded or underutilized. New web nodes are not operational if they are not configured properly or functioning correctly to provide web service or function. New web nodes are not operational can cause website being intermittently unavailable by disrupting the round-robin, load-balanced pool and creating inconsistency or unreliability in web service or function.

NEW QUESTION 86

- (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 87

- (Topic 2)

A cloud solutions architect needs to determine the best strategy to deploy an application environment in production, given the following requirements:

No downtime

Instant switch to a new version using traffic control for all users

Which of the following deployment strategies would be the BEST solution?

- A. Hot site
- B. Blue-green
- C. Canary
- D. Rolling

Answer: B

Explanation:

Reference: <https://thenewstack.io/deployment-strategies/>

Blue-green is the best deployment strategy to deploy an application environment in production, given the requirements of no downtime and instant switch to a new version using traffic control for all users. Blue-green is a deployment strategy that involves having two identical environments, one running the current version of the application (blue) and one running the new version of the application (green). The traffic is directed to the blue environment by default, while the green environment is tested and verified. When the new version is ready to go live, the traffic is switched to the green environment using a router or load balancer, without any downtime or interruption. The blue environment can be kept as a backup or updated with the new version for future deployments.

NEW QUESTION 91

- (Topic 2)

A database analyst reports it takes two hours to perform a scheduled job after onboarding 10,000 new users to the system. The analyst made no changes to the scheduled job before or after onboarding the users. The database is hosted in an IaaS instance on a cloud provider. Which of the following should the cloud administrator evaluate to troubleshoot the performance of the job?

- A. The IaaS compute configurations, the capacity trend analysis reports, and the storage IOPS
- B. The hypervisor logs, the memory utilization of the hypervisor host, and the network throughput of the hypervisor
- C. The scheduled job logs for successes and failures, the time taken to execute the job, and the job schedule
- D. Migrating from IaaS to on premises, the network traffic between on-premises users and the IaaS instance, and the CPU utilization of the hypervisor host

Answer: A

Explanation:

To troubleshoot the performance of a scheduled job that takes two hours to run after onboarding 10,000 new users to a cloud-based system, the administrator should evaluate the IaaS compute configurations, the capacity trend analysis reports, and the storage IOPS. These factors can affect the performance of a database job in an IaaS instance on a cloud provider. The IaaS compute configurations include the CPU, memory, and network resources assigned to the instance. The capacity trend analysis reports show the historical and projected usage and demand of the resources. The storage IOPS (Input/Output Operations Per Second) measure the speed and performance of the disk storage. The administrator should check if these factors are sufficient, optimal, or need to be adjusted to improve the performance of the job.

NEW QUESTION 96

- (Topic 2)

A cloud administrator is reviewing the annual contracts for all hosted solutions. Upon review of the contract for the hosted mail solution, the administrator notes the monthly subscription rate has increased every year. The provider has been in place for ten years, and there is a large amount of data being hosted. Which of the following is a barrier to switching providers?

- A. Service-level agreement
- B. Vendor lock-in
- C. Memorandum of understanding
- D. Encrypted data

Answer: B

Explanation:

Vendor lock-in is a barrier to switching providers for a hosted mail solution that has increased its monthly subscription rate every year. Vendor lock-in is a situation where a customer becomes dependent on a vendor or provider for a product or service and faces difficulties or costs in switching to another vendor or provider. Vendor lock-in can occur due to various factors, such as proprietary technology, contractual obligations, data migration challenges, compatibility issues, etc. In this case, the customer may face vendor lock-in due to the large amount of data being hosted by the mail provider and the potential challenges or costs of transferring or migrating the data to another provider.

NEW QUESTION 98

- (Topic 2)

A cloud administrator has been using a custom VM deployment script. After three months of use, the script no longer joins the LDAP domain. The cloud administrator verifies the account has the correct permissions. Which of the following is the MOST likely cause of the failure?

- A. Incorrect encryption ciphers
- B. Broken trust relationship
- C. Invalid certificates
- D. Expired password

Answer: D

Explanation:

An expired password is the most likely cause of the failure of a custom VM deployment script that no longer joins the LDAP domain. LDAP (Lightweight Directory Access Protocol) is a protocol that allows access and management of directory services, such as user accounts, groups, permissions, etc., over a network. LDAP can be used to authenticate and authorize users or devices to access network resources or systems. An expired password is a password that has reached its validity period and needs to be changed or renewed. An expired password can prevent users or devices from joining or accessing an LDAP domain, as it may indicate that the account is inactive, compromised, or outdated.

NEW QUESTION 101

- (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 105

- (Topic 2)

Users of an enterprise application, which is configured to use SSO, are experiencing slow connection times. Which of the following should be done to troubleshoot the issue?

- A. Perform a memory dump of the O
- B. Analyze the memory dump.Upgrade the host CPU to a higher clock speed CPU.
- C. Perform a packet capture during authenticatio
- D. Validate the load-balancing configuration.Analyze the network throughput of the load balancer.
- E. Analyze the storage system IOP
- F. Increase the storage system capacit
- G. Replace the storage system disks to SS
- H. Evaluate the OS ACL
- I. Upgrade the router firmware.Increase the memory of the router.

Answer: B

Explanation:

These are the steps that should be done to troubleshoot the issue of slow connection times for users of an enterprise application that is configured to use SSO (Single Sign-On). SSO is a feature that allows users to access multiple applications or services with one login credential, without having to authenticate separately for each application or service. SSO can improve user experience and security, but it may also introduce performance issues if not configured properly. To troubleshoot the issue, the administrator should perform a packet capture during authentication to analyze the network traffic and identify any delays or errors in the SSO process. The administrator should also validate the load-balancing configuration to ensure that the SSO requests are distributed evenly and efficiently among the available servers or instances. The administrator should also analyze the network throughput of the load balancer to check if there is any congestion or bottleneck that may affect the SSO performance.

NEW QUESTION 107

- (Topic 2)

Users are experiencing slow response times from an intranet website that is hosted on a cloud platform. There is a site-to-site VPN connection to the cloud provider over a link of 100Mbps.

Which of the following solutions will resolve the issue the FASTEST?

- A. Change the connection to point-to-site VPN
- B. Order a direct link to the provider
- C. Enable quality of service
- D. Upgrade the link to 200Mbps

Answer: B

Explanation:

Ordering a direct link to the provider is the fastest solution to resolve the issue of slow response times from an intranet website that is hosted on a cloud platform. A direct link is a dedicated, high-bandwidth, low-latency connection between the customer's network and the cloud provider's network. It bypasses the public internet and provides better performance, security, and reliability. Examples of direct links are AWS Direct Connect, Azure ExpressRoute, Google Cloud Interconnect, etc.

NEW QUESTION 111

- (Topic 2)

A systems administrator is configuring updates on a system. Which of the following update branches should the administrator choose to ensure the system receives updates that are maintained for at least four years?

- A. LTS
- B. Canary
- C. Beta
- D. Stable

Answer: A

Explanation:

LTS (Long Term Support) is the update branch that the administrator should choose to ensure the system receives updates that are maintained for at least four years. An update branch is a category or group of updates that have different characteristics or features, such as frequency, stability, duration, etc. An update branch can help customers to choose the type of updates that suit their needs and preferences. LTS is an update branch that provides updates that are stable, reliable, and secure, and are supported for a long period of time, usually four years or more. LTS can help customers who value stability and security over new features or functions, and who do not want to change or upgrade their systems frequently.

NEW QUESTION 116

- (Topic 2)

An update is being deployed to a web application, and a systems administrator notices the cloud SQL database has stopped running. The VM is responding to pings, and there were not any configuration changes scheduled for the VM. Which of the following should the administrator check NEXT?

- A. Logs on the VM
- B. Firewall on the VM
- C. Memory on the VM
- D. vGPU performance on the VM

Answer: A

Explanation:

Checking the logs on the VM is the next step that the administrator should take if the cloud SQL database has stopped running after an update deployment. Logs are records of events and activities that occur on a system or application. Logs can provide useful information for troubleshooting and identifying the root cause of an issue. The administrator should look for any errors, warnings, or messages that indicate what happened to the SQL database service and why it stopped running.

NEW QUESTION 117

- (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 118

- (Topic 2)

A company is currently running a website on site. However, because of a business requirement to reduce current RTO from 12 hours to one hour, and the RPO from one day to eight hours, the company is considering operating in a hybrid environment. The website uses mostly static files and a small relational database. Which of the following should the cloud architect implement to achieve the objective at the LOWEST cost possible?

- A. Implement a load-balanced environment in the cloud that is equivalent to the current on-premises setup and use DNS to shift the load from on-premises to cloud.
- B. Implement backups to cloud storage and infrastructure as code to provision the environment automatically when the on-premises site is down.
- C. Restore the data from the backups.
- D. Implement a website replica in the cloud with auto-scaling using the smallest possible footprint.
- E. Use DNS to shift the load from on-premises to the cloud.
- F. Implement a CDN that caches all requests with a higher TTL and deploy the IaaS instances manually in case of disaster.
- G. Upload the backup on demand to the cloud to restore on the new instances.

Answer: C

Explanation:

This is the best solution to achieve the objective of reducing current RTO (Recovery Time Objective) from 12 hours to one hour, and RPO (Recovery Point Objective) from one day to eight hours, at the lowest cost possible, for a website that uses mostly static files and a small relational database. RTO is a metric that measures how quickly a system or service can be restored after a disruption or disaster. 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. To reduce RTO and RPO, the administrator should implement a website replica in the cloud with auto-scaling using the smallest possible footprint. A website replica is a copy or backup of a website that can be used for recovery or failover purposes. Auto-scaling is a feature that allows cloud resources or systems to adjust their capacity and performance according to demand or workload. Using auto-scaling with the smallest possible footprint can minimize costs by using only the necessary resources and scaling up or down as needed. The administrator should also use DNS (Domain Name System) to shift the load from on-premises to the cloud. DNS is a service that translates domain names into IP addresses and vice versa. Using DNS, the administrator can redirect traffic from the on-premises website to the cloud replica in case of a disruption or disaster, and vice versa when recovery is complete.

NEW QUESTION 119

- (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 124

- (Topic 2)

A cloud administrator would like to deploy a cloud solution to its provider using automation techniques. Which of the following must be used? (Choose two.)

- A. Auto-scaling
- B. Tagging
- C. Playbook
- D. Templates

E. Containers
F. Serverless

Answer: CD

Explanation:

Playbook and templates are two things that must be used to deploy a cloud solution to its provider using automation techniques. A playbook is a file or script that defines a set of tasks or actions to be executed on one or more cloud resources or systems. A playbook can automate and standardize the deployment and configuration of cloud solutions using tools such as Ansible, Chef, Puppet, etc. A template is a preconfigured image or blueprint of a cloud resource or system that contains an OS, applications, settings, etc., that can be used to create new resources or systems quickly and consistently. A template can simplify and speed up the deployment of cloud solutions using tools such as AWS CloudFormation, Azure Resource Manager, Google Cloud Deployment Manager, etc.

NEW QUESTION 125

- (Topic 2)

A systems administrator swapped a failed hard drive on a server with a RAID 5 array. During the RAID resynchronization, a second hard drive failed. Which of the following actions will make the server fully operational?

- A. Restart the RAID resynchronization process
- B. Perform a P2V migration of the server
- C. Swap the failed hard drive with a fresh one
- D. Restore the server from backup

Answer: D

Explanation:

RAID 5 is a disk array configuration that uses parity to provide fault tolerance and data recovery. RAID 5 can tolerate the failure of one disk, but not two or more disks. If a second disk fails during the resynchronization process, the data on the RAID 5 array will be lost and unrecoverable. The only way to make the server fully operational is to restore the data from a backup source.

NEW QUESTION 126

- (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 128

- (Topic 2)

A cloud administrator is responsible for managing a cloud-based content management solution. According to the security policy, any data that is hosted in the cloud must be protected against data exfiltration. Which of the following solutions should the administrator implement?

- A. HIDS
- B. FIM
- C. DLP
- D. WAF

Answer: C

Explanation:

DLP (Data Loss Prevention) is what the administrator should implement to protect data against data exfiltration in a cloud-based content management solution. Data exfiltration is a process of transferring or stealing data from a system or network without authorization or permission. Data exfiltration can cause data breaches, leaks, or losses that may affect confidentiality, integrity, or availability of data. DLP is a tool or service that monitors and controls data movement and usage within a system or network. DLP can help to prevent data exfiltration by detecting and blocking any unauthorized or suspicious data transfers or activities, as well as enforcing policies and rules for data classification, encryption, access, etc.

NEW QUESTION 131

- (Topic 2)

A systems administrator is performing upgrades to all the hypervisors in the environment. Which of the following components of the hypervisors should be upgraded? (Choose two.)

- A. The fabric interconnects
- B. The virtual appliances
- C. The firmware
- D. The virtual machines
- E. The baselines
- F. The operating system

Answer: CF

Explanation:

These are the components of the hypervisors that should be upgraded by the administrator who is performing upgrades to all the hypervisors in the environment. A hypervisor is a software or hardware that allows multiple VMs (Virtual Machines) to run on a single physical host or server. A hypervisor consists of various components, such as:

? The firmware: This is the software that controls the basic functions and operations of the hardware or device. The firmware can affect the performance, compatibility, and security of the hypervisor and the VMs. The firmware should be upgraded to ensure that it supports the latest features and functions of the hardware or device, as well as fix any bugs or vulnerabilities.

? The operating system: This is the software that manages the resources and activities of the hypervisor and the VMs. The operating system can affect the functionality, reliability, and efficiency of the hypervisor and the VMs. The operating system should be upgraded to ensure that it supports the latest applications and services of the hypervisor and the VMs, as well as improve stability and performance.

NEW QUESTION 133

- (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 136

- (Topic 2)

A systems administrator is working in a globally distributed cloud environment. After a file server VM was moved to another region, all users began reporting slowness when saving files. Which of the following is the FIRST thing the administrator should check while troubleshooting?

- A. Network latency
- B. Network connectivity
- C. Network switch
- D. Network peering

Answer: A

Explanation:

Network latency is the first thing that the administrator should check while troubleshooting slowness when saving files after a file server VM was moved to another region in a globally distributed cloud environment. Network latency is a measure of how long it takes for data to travel from one point to another over a network or connection. Network latency can affect performance and user experience of cloud applications or services by determining how fast data can be transferred or processed between clients and servers or vice versa. Network latency can vary depending on various factors, such as distance, bandwidth, congestion, interference, etc. Network latency can increase when a file server VM is moved to another region in a globally distributed cloud environment, as it may increase the distance and decrease the bandwidth between clients and servers, which may result in delays or errors in data transfer or processing.

NEW QUESTION 140

- (Topic 2)

A cloud administrator is assigned to establish a connection between the on-premises data center and the new CSP infrastructure. The connection between the two locations must be secure at all times and provide service for all users inside the organization. Low latency is also required to improve performance during data transfer operations. Which of the following would BEST meet these requirements?

- A. A VPC peering configuration
- B. An IPSec tunnel
- C. An MPLS connection
- D. A point-to-site VPN

Answer: B

Explanation:

An IPSec tunnel is what would best meet the requirements of establishing a connection between the on-premises data center and the new CSP infrastructure that is secure at all times and provides service for all users inside the organization with low latency. IPSec (Internet Protocol Security) is a protocol that encrypts and secures network traffic over IP networks. IPSec tunnel is a mode of IPSec that creates a virtual private network (VPN) tunnel between two endpoints, such as routers, firewalls, gateways, etc., and encrypts and secures all traffic that passes through it. An IPSec tunnel can meet the requirements by providing:

? Security: An IPSec tunnel can protect network traffic from interception, modification, spoofing, etc., by using encryption, authentication, integrity, etc., mechanisms.

? Service: An IPSec tunnel can provide service for all users inside the organization by allowing them to access and use network resources or services on both ends of the tunnel, regardless of their physical location.

? Low latency: An IPSec tunnel can provide low latency by reducing the number of hops or devices that network traffic has to pass through between the endpoints of the tunnel.

NEW QUESTION 144

- (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 145

- (Topic 2)

A resource pool in a cloud tenant has 90 GB of memory and 120 cores. The cloud administrator needs to maintain a 30% buffer for resources for optimal performance of the hypervisor. Which of the following would allow for the maximum number of two-core machines with equal memory?

- A. 30 VMs, 3GB of memory
- B. 40 VMs, 1.5GB of memory
- C. 45 VMs, 2 GB of memory
- D. 60 VMs, 1 GB of memory

Answer: C

Explanation:

To calculate the maximum number of two-core machines with equal memory, we need to consider the resource pool capacity and the buffer requirement. The resource pool has 90 GB of memory and 120 cores, but the cloud administrator needs to maintain a 30% buffer for optimal performance. This means that only 70% of the resources can be used for VM allocation. Therefore, the available memory is $90 \text{ GB} \times 0.7 = 63 \text{ GB}$, and the available cores are $120 \times 0.7 = 84 \text{ cores}$. To allocate two-core machines with equal memory, we need to divide the available memory by the available cores and multiply by two. This gives us the memory size per VM: $(63 \text{ GB} / 84 \text{ cores}) \times 2 = 1.5 \text{ GB}$. However, this is not a valid answer option, so we need to find the closest option that does not exceed the available resources. The best option is C, which allocates 45 VMs with 2 GB of memory each. This uses up $45 \times 2 = 90 \text{ GB}$ of memory and $45 \times 2 = 90 \text{ cores}$, which are within the available limits.

NEW QUESTION 146

- (Topic 2)

A company needs a solution to find content in images. Which of the following technologies, when used in conjunction with cloud services, would facilitate the BEST solution?

- A. Internet of Things
- B. Digital transformation
- C. Artificial intelligence
- D. DNS over TLS

Answer: C

Explanation:

Artificial intelligence (AI) is the technology that, when used in conjunction with cloud services, would facilitate the best solution for finding content in images. AI is a branch of computer science that aims to create machines or systems that can perform tasks that normally require human intelligence, such as reasoning, learning, decision making, etc. AI can be used to analyze images and extract information such as objects, faces, text, emotions, etc., using techniques such as computer vision, machine learning, natural language processing, etc. AI can help to find content in images faster, more accurately, and more efficiently than manual methods.

NEW QUESTION 151

- (Topic 2)

A disaster situation has occurred, and the entire team needs to be informed about the situation. Which of the following documents will help the administrator find the details of the relevant team members for escalation?

- A. Chain of custody
- B. Root cause analysis
- C. Playbook
- D. Call tree

Answer: D

Explanation:

A call tree is what will help the administrator find the details of the relevant team members for escalation after a disaster situation has occurred and the entire team needs to be informed about the situation. A call tree is a document or diagram that shows the hierarchy or sequence of communication or notification among team members in case of an emergency or incident, such as a disaster situation. A call tree can help to find the details of the relevant team members for escalation by providing information such as:

? Name: This indicates who is involved in the communication or notification process, such as team members, managers, stakeholders, etc.

? Role: This indicates what is their function or responsibility in the communication or notification process, such as initiator, receiver, sender, etc.

? Contact: This indicates how they can be reached or contacted in the communication or notification process, such as phone number, email address, etc.

NEW QUESTION 152

- (Topic 2)

A systems administrator wants to ensure two VMs remain together on the same host. Which of the following must be set up to enable this functionality?

- A. Affinity
- B. Zones
- C. Regions
- D. A cluster

Answer: A

Explanation:

Affinity is what must be set up to ensure two VMs remain together on the same host. Affinity is a feature that allows customers to specify preferences or requirements for placing VMs on certain hosts or clusters within a cloud environment. Affinity can help to improve performance, availability, compatibility, or security of VMs by ensuring they are located on optimal hosts or clusters. Affinity can also help to keep two VMs together on the same host by creating an affinity rule that binds them together.

NEW QUESTION 156

- (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 158

- (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 163

- (Topic 2)

An organization suffered a critical failure of its primary datacenter and made the decision to switch to the DR site. After one week of using the DR site, the primary datacenter is now ready to resume operations.

Which of the following is the MOST efficient way to bring the block storage in the primary datacenter up to date with the DR site?

- A. Set up replication.
- B. Copy the data across both sites.
- C. Restore incremental backups.
- D. Restore full backups.

Answer: A

Explanation:

Reference: <https://www.ibm.com/docs/en/cloud-pak-system-w3550/2.3.3?topic=system-administering-block-storage-replication>

Setting up replication is the most efficient way to bring the block storage in the primary datacenter up to date with the DR site after a critical failure. Replication is a process of copying data from one location to another in real-time or near real-time. Replication can be synchronous or asynchronous, depending on the latency and bandwidth requirements. Replication can ensure data consistency and availability across multiple sites and facilitate faster recovery.

NEW QUESTION 168

- (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 169

- (Topic 2)

An engineer is responsible for configuring a new firewall solution that will be deployed in a new public cloud environment. All traffic must pass through the firewall. The SLA for the firewall is 99.999%. Which of the following should be deployed?

- A. Two load balancers behind a single firewall
- B. Firewalls in a blue-green configuration
- C. Two firewalls in a HA configuration
- D. A web application firewall

Answer: C

Explanation:

Deploying two firewalls in a HA (High Availability) configuration is the best option to ensure all traffic passes through the firewall and meets the SLA (Service Level Agreement) of 99.999%. HA is a design principle that aims to minimize downtime and ensure continuous operation of a system or service. HA can be achieved by using redundancy, failover, load balancing, clustering, etc. Two firewalls in a HA configuration can provide redundancy and failover in case one firewall fails or becomes overloaded.

NEW QUESTION 171

- (Topic 2)

Which of the following would be the BEST option for discussion of what individuals should do in an incident response or disaster recovery scenario?

- A. A business continuity plan
- B. Incident response/disaster recovery documentation
- C. A tabletop exercise
- D. A root cause analysis

Answer: C

Explanation:

A tabletop exercise is the best option for discussion of what individuals should do in an incident response or disaster recovery scenario. A tabletop exercise is a simulated scenario that involves key stakeholders and decision-makers who review and discuss their roles and responsibilities in response to an emergency situation or event. A tabletop exercise can help to test and evaluate plans, procedures, policies, training, and communication.

NEW QUESTION 172

- (Topic 2)

A system administrator supports an application in the cloud, which includes a restful API that receives an encrypted message that is passed to a calculator system. The administrator needs to ensure the proper function of the API using a new automation tool. Which of the following techniques would be BEST for the administrator to use to accomplish this requirement?

- A. Functional testing
- B. Performance testing
- C. Integration testing
- D. Unit testing

Answer: C

Explanation:

Integration testing is the best technique to use to ensure the proper function of an API that receives an encrypted message that is passed to a calculator system. Integration testing is a type of testing that verifies and validates the functionality, performance, and reliability of different components or modules of a system or application when they are combined or integrated together. Integration testing can help to ensure the API can communicate and interact with the calculator system correctly and securely, as well as identify any errors or issues that may arise from the integration.

NEW QUESTION 177

- (Topic 2)

A systems administrator is deploying a VM and would like to minimize storage utilization by ensuring the VM uses only the storage if needs. Which of the following will BEST achieve this goal?

- A. Compression
- B. Deduplication
- C. RAID
- D. Thin provisioning

Answer: D

Explanation:

Reference: https://docs.vmware.com/en/VMware-vSphere/7.0/com.vmware.vsphere.vm_admin.doc/GUID-4C0F4D73-82F2-4B81-8AA7-1DD752A8A5AC.html
Thin provisioning is the technique that will minimize storage utilization by ensuring the VM uses only the storage it needs. Thin provisioning is a storage allocation method that assigns disk space to a VM on demand, rather than in advance. Thin provisioning can improve storage utilization and efficiency by avoiding overprovisioning and wasting disk space. Thin provisioning can also allow for more flexibility and scalability of storage resources.

NEW QUESTION 182

- (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 187

- (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 190

- (Topic 2)

A company needs to migrate the storage system and batch jobs from the local storage system to a public cloud provider. Which of the following accounts will MOST likely be created to run the batch processes?

- A. User
- B. LDAP
- C. Role-based
- D. Service

Answer: D

Explanation:

A service account is what will most likely be created to run the batch processes that migrate the storage system and batch jobs from the local storage system to a public cloud provider. A service account is a special type of account that is used to perform automated tasks or operations on a system or service, such as running scripts, applications, or processes. A service account can provide benefits such as:

? Security: A service account can have limited or specific permissions and roles that are required to perform the tasks or operations, which can prevent unauthorized or malicious access or actions.

? Efficiency: A service account can run the tasks or operations without any human intervention or interaction, which can save time and effort.

? Reliability: A service account can run the tasks or operations consistently and accurately, which can reduce errors or failures.

NEW QUESTION 191

- (Topic 2)

An administrator recently provisioned a file server in the cloud. Based on financial considerations, the administrator has a limited amount of disk space. Which of

the following will help control the amount of space that is being used?

- A. Thick provisioning
- B. Software-defined storage
- C. User quotas
- D. Network file system

Answer: C

Explanation:

User quotas are what will help control the amount of space that is being used by a file server in the cloud that has a limited amount of disk space due to financial considerations. User quotas are the limits or restrictions that are imposed on the amount of space that each user can use or consume on a file server or storage device. User quotas can help to control the amount of space that is being used by:

- ? Preventing or reducing wastage or overuse of space by users who may store unnecessary or redundant files or data on the file server or storage device.
- ? Ensuring fair and equal distribution or allocation of space among users who may have different needs or demands for space on the file server or storage device.
- ? Monitoring and managing the usage or consumption of space by users who may need to be notified or alerted when they reach or exceed their quota on the file server or storage device.

NEW QUESTION 192

- (Topic 2)

A company recently experienced a power outage that lasted 30 minutes. During this time, a whole rack of servers was inaccessible, even though the servers did not lose power.

Which of the following should be investigated FIRST?

- A. Server power
- B. Rack power
- C. Switch power
- D. SAN power

Answer: C

Explanation:

If a whole rack of servers was inaccessible during a power outage, even though the servers did not lose power, it is likely that the switch that connects them to the network lost power. Without network connectivity, the servers would not be able to communicate with other devices or services. The administrator should investigate the switch power source and ensure it has a backup power supply or UPS.

NEW QUESTION 193

- (Topic 2)

A company needs to access the cloud administration console using its corporate identity. Which of the following actions would MOST likely meet the requirements?

- A. Implement SSH key-based authentication.
- B. Implement cloud authentication with local LDAP.
- C. Implement multifactor authentication.
- D. Implement client-based certificate authentication.

Answer: D

Explanation:

Implementing client-based certificate authentication is what the administrator should do to access the cloud administration console using corporate identity. Client-based certificate authentication is a method of verifying and authenticating users or devices based on digital certificates issued by a trusted authority. Digital certificates are electronic 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. Client-based certificate authentication can allow users or devices to access cloud resources or services using their corporate identity without requiring passwords or other credentials.

NEW QUESTION 197

- (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 198

- (Topic 2)

A cloud security analyst needs to ensure the web servers in the public subnet allow only secure communications and must remediate any possible issue. The stateful configuration for the public web servers is as follows:

ID	Direction	Protocol	Port	Source	Action
1	inbound	TCP	80	any	allow
2	inbound	TCP	443	any	allow
3	inbound	TCP	3306	any	allow
4	inbound	TCP	3389	any	allow
5	outbound	UDP	53	any	allow
*	both	any	any	any	deny

Which of the following actions should the analyst take to accomplish the objective?

- A. Remove rules 1, 2, and 5.
- B. Remove rules 1, 3, and 4.
- C. Remove rules 2, 3, and 4.
- D. Remove rules 3, 4, and 5.

Answer: A

Explanation:

To ensure the web servers in the public subnet allow only secure communications and remediate any possible issue, the analyst should remove rules 1, 2, and 5 from the stateful configuration. These rules are allowing insecure or unnecessary traffic to or from the web servers, which may pose security risks or performance issues. The rules are:

? Rule 1: This rule allows inbound traffic on port 80 (HTTP) from any source to any destination. HTTP is an unencrypted and insecure protocol that can expose web traffic to interception, modification, or spoofing. The analyst should remove this rule and use HTTPS (port 443) instead, which encrypts and secures web traffic.

? Rule 2: This rule allows outbound traffic on port 25 (SMTP) from any source to any destination. SMTP is a protocol that is used to send email messages. The web servers in the public subnet do not need to send email messages, as this is not their function. The analyst should remove this rule and block outbound SMTP traffic, which may prevent spamming or phishing attacks from compromised web servers.

? Rule 5: This rule allows inbound traffic on port 22 (SSH) from any source to any destination. SSH is a protocol that allows remote access and management of systems or devices using a command-line interface. The web servers in the public subnet do not need to allow SSH access from any source, as this may expose them to unauthorized or malicious access. The analyst should remove this rule and restrict SSH access to specific sources, such as the administrator's workstation or a bastion host.

NEW QUESTION 200

- (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 202

- (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 205

SIMULATION - (Topic 1)

A company has decided to scale its e-commerce application from its corporate datacenter to a commercial cloud provider to meet an anticipated increase in demand during an upcoming holiday.

The majority of the application load takes place on the application server under normal conditions. For this reason, the company decides to deploy additional application servers into a commercial cloud provider using the on-premises orchestration engine that installs and configures common software and network configurations.

The remote computing environment is connected to the on-premises datacenter via a site-to-site IPsec tunnel. The external DNS provider has been configured to use weighted round-robin routing to load balance connections from the Internet.

During testing, the company discovers that only 20% of connections completed successfully.

INSTRUCTIONS

Review the network architecture and supporting documents and fulfill these requirements: Part 1:

- _ Analyze the configuration of the following components: DNS, Firewall 1, Firewall 2, Router 1, Router 2, VPN and Orchestrator Server.
- _ Identify the problematic device(s).

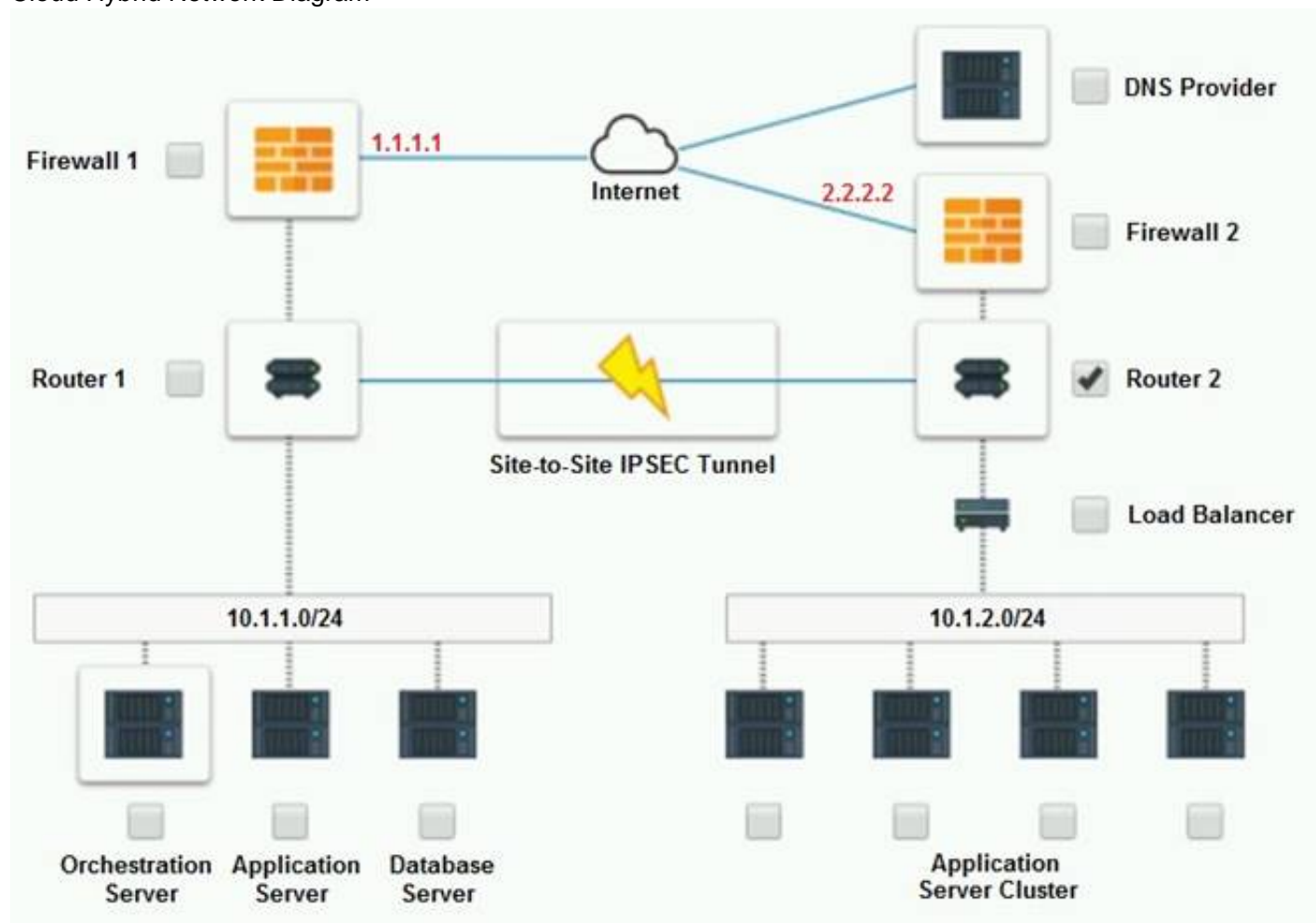
Part 2:

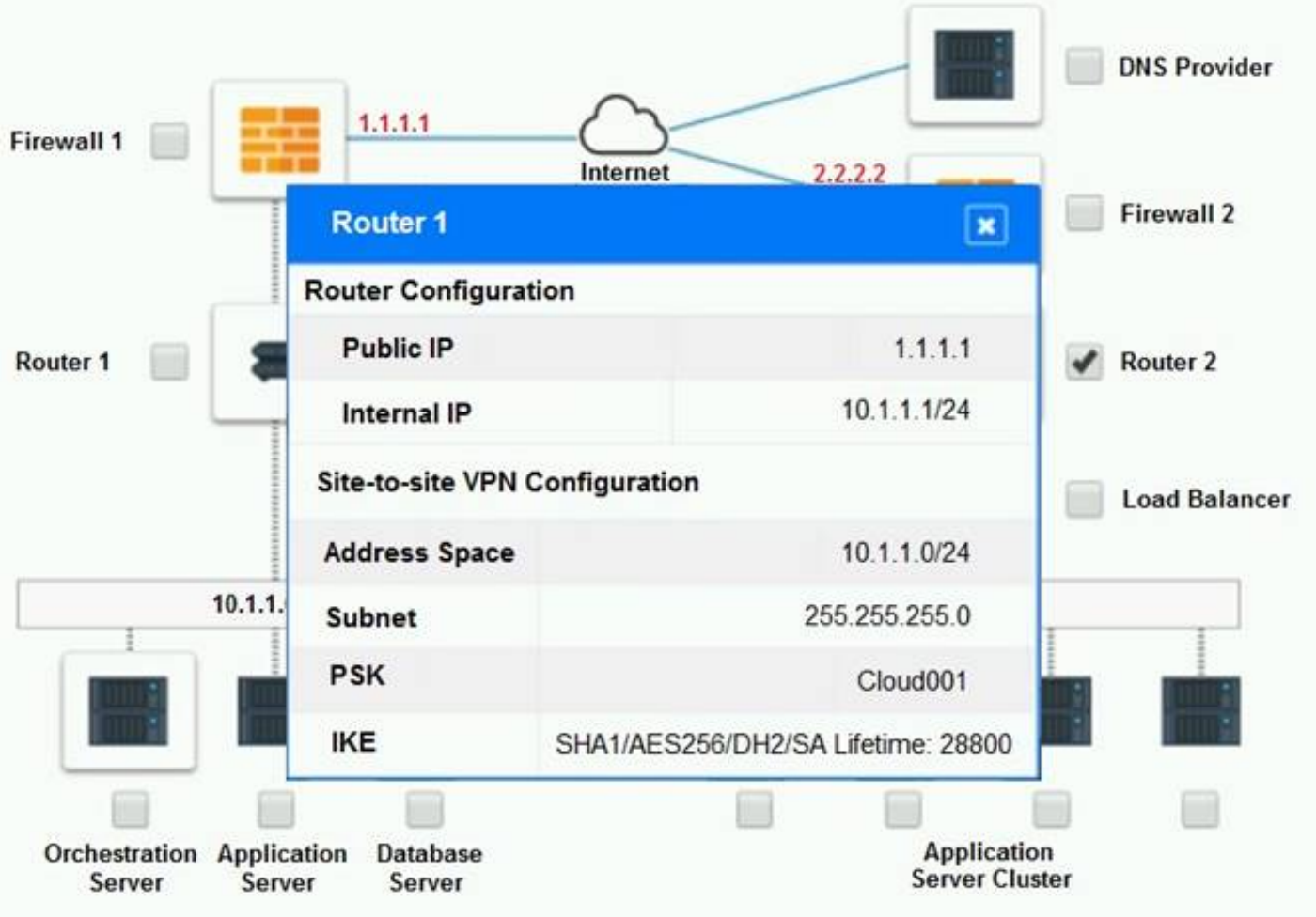
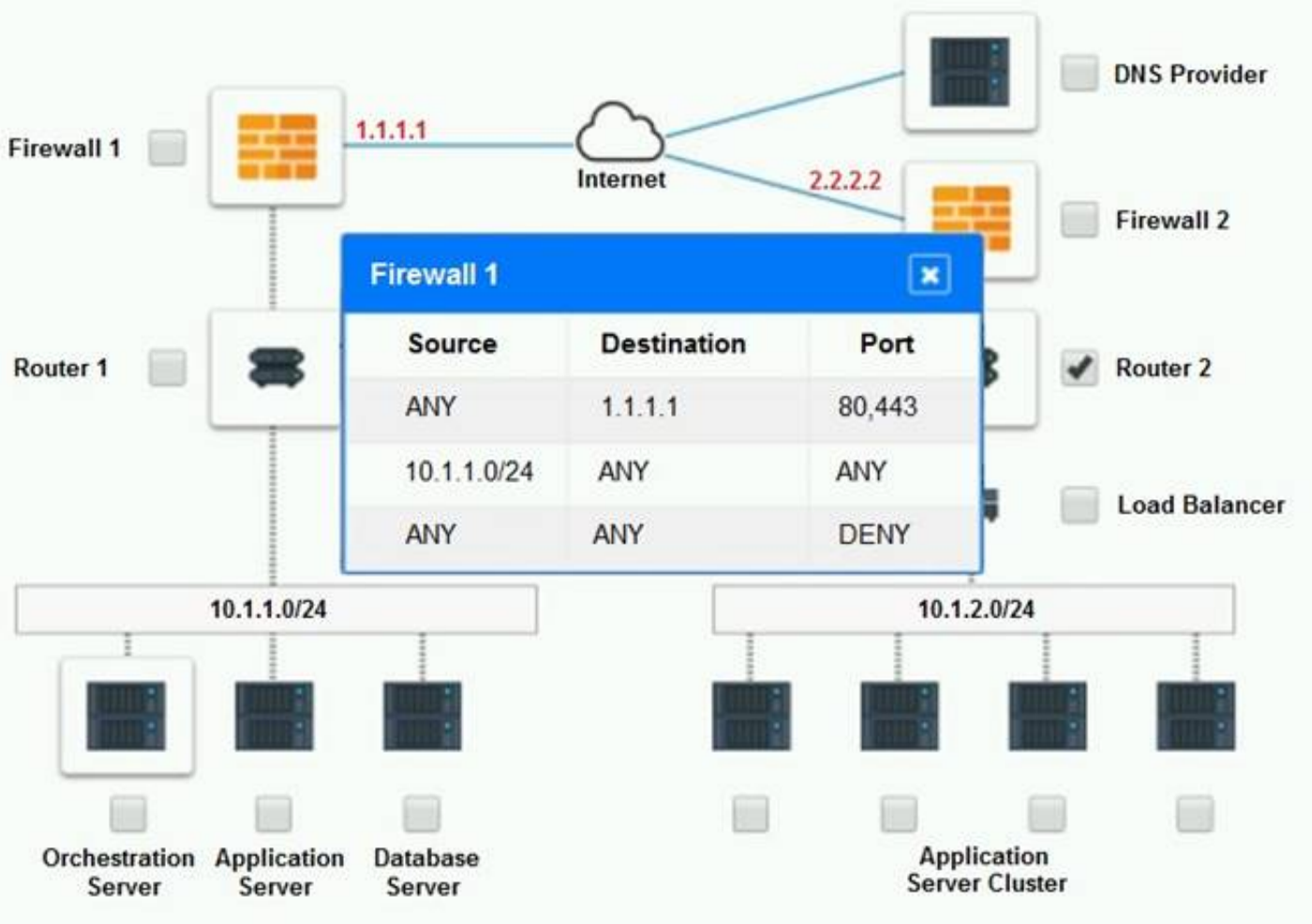
- _ Identify the correct options to provide adequate configuration for hybrid cloud architecture.

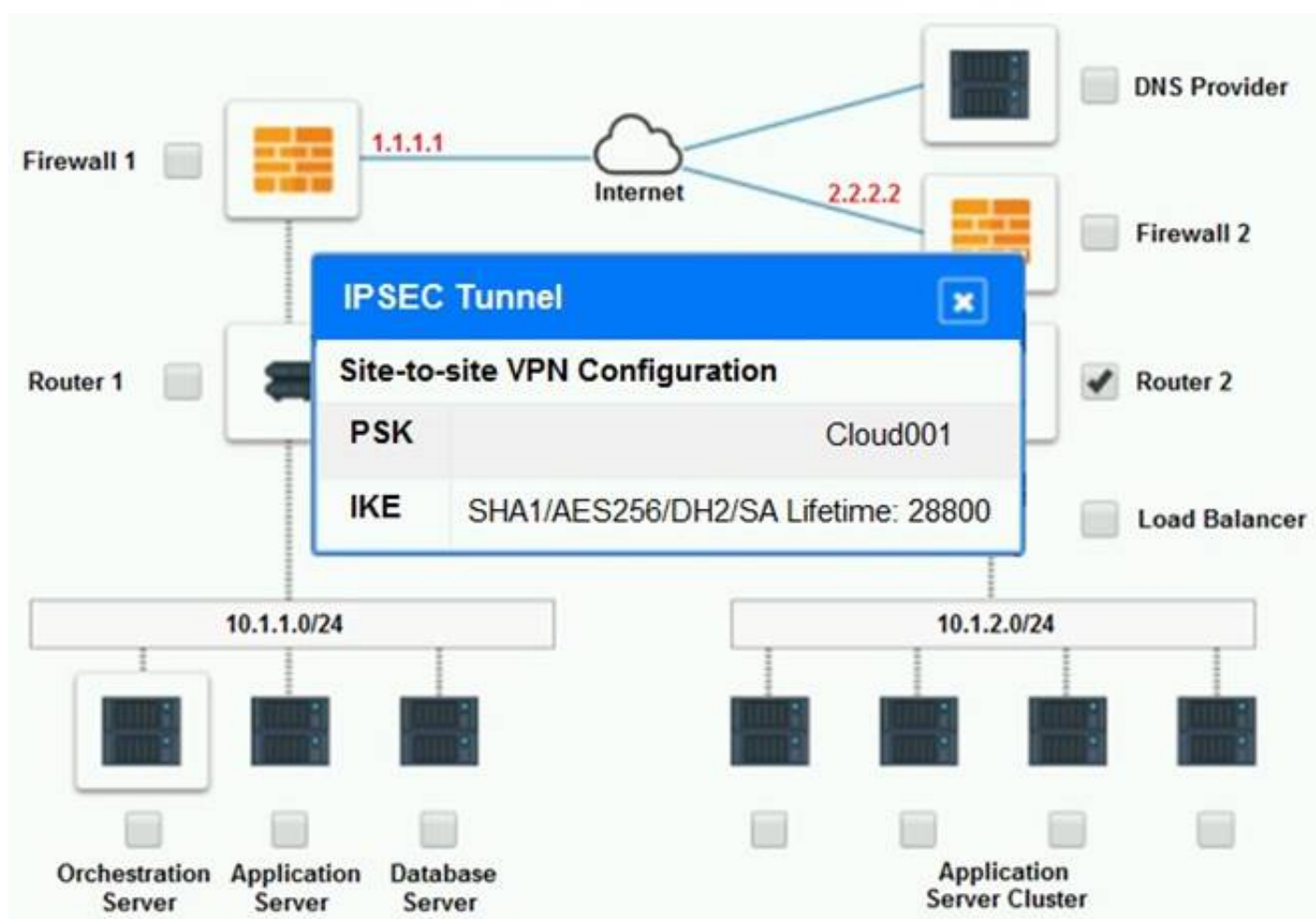
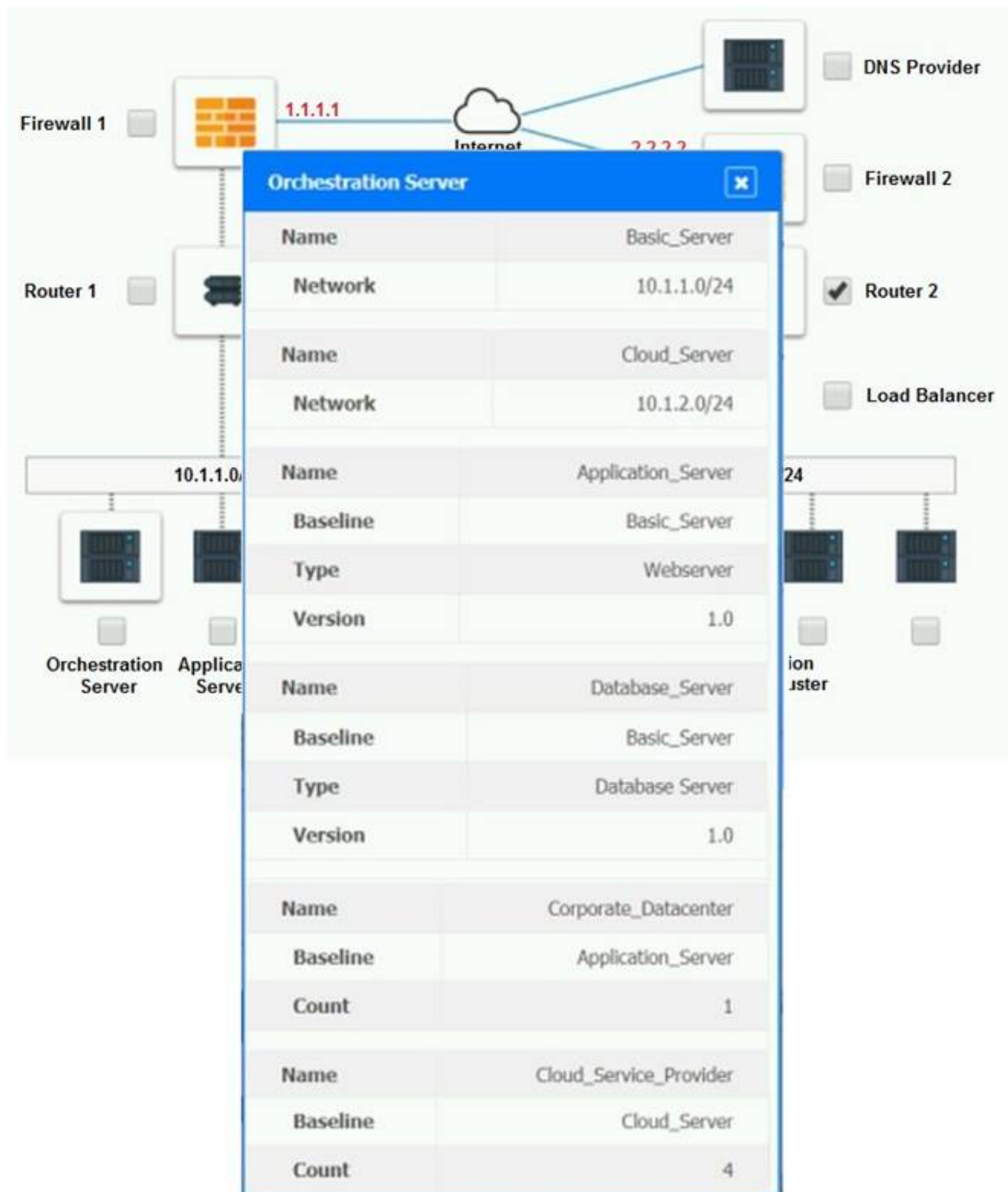
If at any time you would like to bring back the initial state of the simulation, please click the Reset All button.

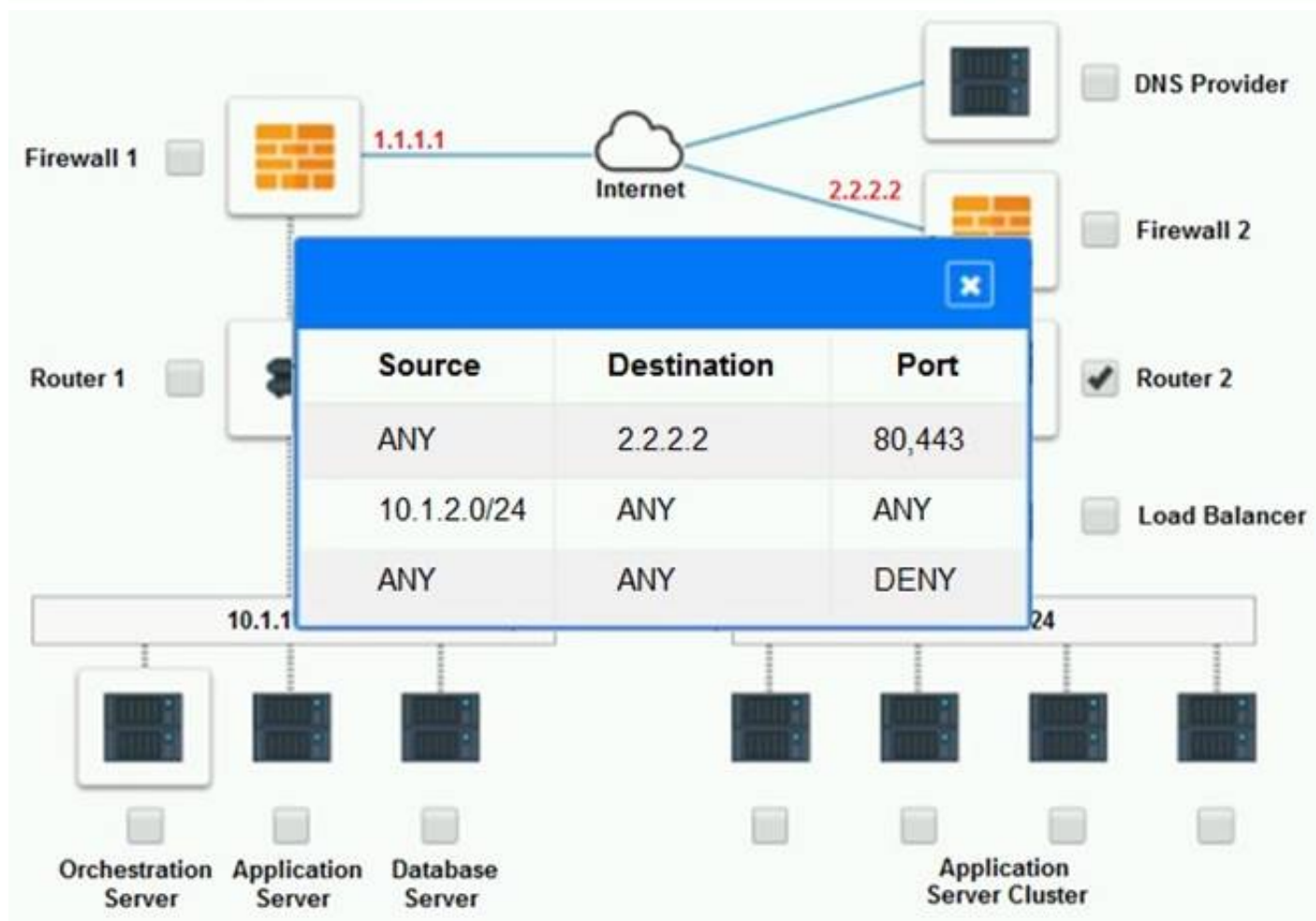
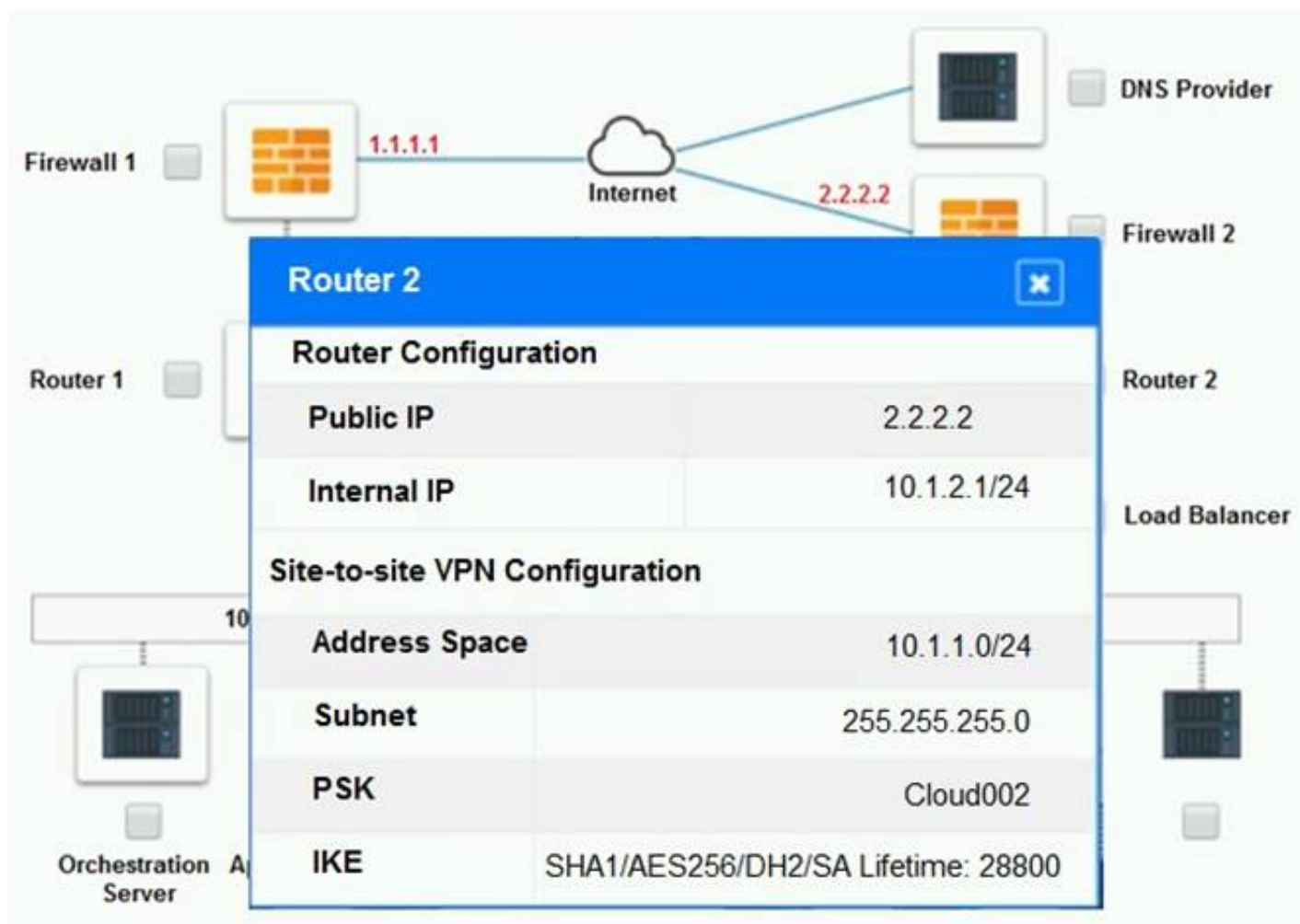
Part 1:

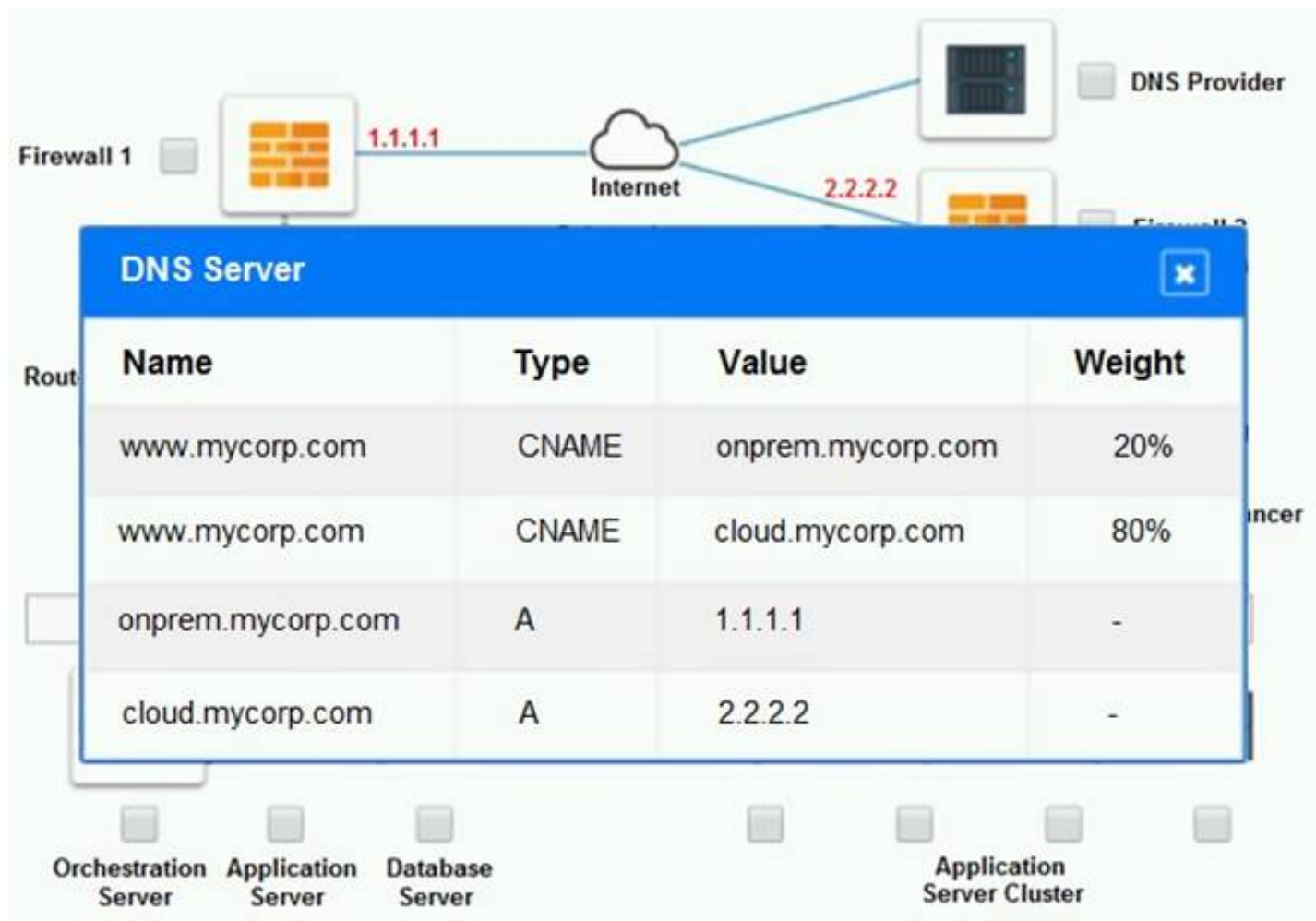
Cloud Hybrid Network Diagram











Part 2:

Only select a maximum of TWO options from the multiple choice question

- ☐ Deploy a Replica of the Database Server in the Cloud Provider.
- ☐ Update the PSK (Pre-shared key) in Router 2.
- ☐ Update the A record on the DNS from 2.2.2.2 to 1.1.1.1.
- ☐ Promote deny All to allow All in Firewall 1 and Firewall 2.
- ☐ Change the Address Space on Router 2.
- ☐ Change internal IP Address of Router 1.
- ☐ Reverse the Weight property in the two CNAME records on the DNS.
- ☐ Add the Application Server at on-premises to the Load Balancer.

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

Part 1: Router 2

The problematic device is Router 2, which has an incorrect configuration for the IPsec tunnel. The IPsec tunnel is a secure connection between the on-premises datacenter and the cloud provider, which allows the traffic to flow between the two networks. The IPsec tunnel requires both endpoints to have matching parameters, such as the IP addresses, the pre-shared key (PSK), the encryption and authentication algorithms, and the security associations (SAs).

According to the network diagram and the configuration files, Router 2 has a different PSK and a different address space than Router 1. Router 2 has a PSK of "1234567890", while Router 1 has a PSK of "0987654321". Router 2 has an address space of 10.0.0.0/8, while Router 1 has an address space of 192.168.0.0/16. These mismatches prevent the IPsec tunnel from establishing and encrypting the traffic between the two networks.

The other devices do not have any obvious errors in their configuration. The DNS provider has two CNAME records that point to the application servers in the cloud provider, with different weights to balance the load. The firewall rules allow the traffic from and to the application servers on port 80 and port 443, as well as the traffic from and to the VPN server on port 500 and port 4500. The orchestration server has a script that installs and configures the application servers in the cloud provider, using the DHCP server to assign IP addresses.

Part 2:

The correct options to provide adequate configuration for hybrid cloud architecture are:

- ? Update the PSK in Router 2.
- ? Change the address space on Router 2.

These options will fix the IPsec tunnel configuration and allow the traffic to flow between the on-premises datacenter and the cloud provider. The PSK should match the one on Router 1, which is "0987654321". The address space should also match the one on Router 1, which is 192.168.0.0/16.

- * B. Update the PSK (Pre-shared key in Router2)
- * E. Change the Address Space on Router2

NEW QUESTION 206

- (Topic 1)

A cloud engineer is responsible for managing two cloud environments from different MSPs. The security department would like to inspect all traffic from the two cloud environments.

Which of the following network topology solutions should the cloud engineer implement to reduce long-term maintenance?

- A. Chain
- B. Star
- C. Mesh
- D. Hub and spoke

Answer: D

Explanation:

Hub and spoke is a type of network topology that consists of a central node or device (hub) that connects to multiple peripheral nodes or devices (spokes). Hub and spoke can help reduce long-term maintenance for managing two cloud environments from different MSPs, as it can simplify and centralize the network configuration and management by using the hub as a single point of contact and control for the spokes. Hub and spoke can also improve network performance and security, as it can reduce latency, bandwidth consumption, and network congestion by routing traffic through the hub. References: CompTIA Cloud+ Certification Exam Objectives, page 15, section 2.8

NEW QUESTION 207

- (Topic 1)

A developer is no longer able to access a public cloud API deployment, which was working ten minutes prior.

Which of the following is MOST likely the cause?

- A. API provider rate limiting
- B. Invalid API token
- C. Depleted network bandwidth
- D. Invalid API request

Answer: A

Explanation:

API provider rate limiting is a restriction on the number of requests that can be made to a web service or application programming interface (API) within a certain time period. API provider rate limiting can cause a failure to access a public cloud API deployment, as it can reject or block any requests that exceed the limit. API provider rate limiting can be used by cloud providers to control the usage and traffic of their customers and prevent overloading or abuse of their resources. API provider rate limiting is the most likely cause for the developer being unable to access a public cloud API deployment that was working ten minutes prior. References: CompTIA Cloud+ Certification Exam Objectives, page 13, section 2.5

NEW QUESTION 208

- (Topic 1)

A systems administrator is troubleshooting network throughput issues following a deployment. The network is currently being overwhelmed by the amount of traffic between the database and the web servers in the environment.

Which of the following should the administrator do to resolve this issue?

- A. Set up affinity rules to keep web and database servers on the same hypervisor
- B. Enable jumbo frames on the gateway
- C. Move the web and database servers onto the same VXLAN
- D. Move the servers onto thick-provisioned storage

Answer: C

Explanation:

A virtual extensible local area network (VXLAN) is a type of network virtualization technology that creates logical networks or segments that span across multiple physical networks or locations. Moving the web and database servers onto the same VXLAN can help resolve the network throughput issues following a deployment, as it can reduce the network traffic between the database and the web servers by using a common virtual network identifier (VNI) and encapsulating the traffic within UDP packets. Moving the web and database servers onto the same VXLAN can also improve performance and security, as it can provide higher scalability, isolation, and encryption for the network traffic. References: CompTIA Cloud+ Certification Exam Objectives, page 15, section 2.8

NEW QUESTION 212

- (Topic 1)

A systems administrator wants to have near-real-time information on the volume of data being exchanged between an application server and its clients on the Internet.

Which of the following should the systems administrator implement to achieve this objective?

- A. A stateful firewall
- B. DLP
- C. DNSSEC
- D. Network flows

Answer: D

Explanation:

Network flows are records of network traffic that capture information such as source and destination IP addresses, ports, protocols, timestamps, and byte and packet counts. Network flows can provide near-real-time information on the volume of data being exchanged between a system and its clients on the Internet, as they can measure and monitor the amount and rate of network traffic for each connection or session. Network flows can also help analyze network performance, troubleshoot network issues, and detect network anomalies or security incidents. A systems administrator should implement network flows to achieve the objective of having near-real-time information on the volume of data being exchanged between an application server and its clients on the Internet. References: CompTIA Cloud+ Certification Exam Objectives, page 16, section 3.2

NEW QUESTION 217

- (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 221

- (Topic 1)

A cloud administrator needs to implement a mechanism to monitor the expense of the company's cloud resources.

Which of the following is the BEST option to execute this task with minimal effort?

- A. Ask the cloud provider to send a daily expense report
- B. Set custom notifications for exceeding budget thresholds
- C. Use the API to collect expense information from cloud resources
- D. Implement a financial tool to monitor cloud resource expenses

Answer: B

Explanation:

Setting custom notifications for exceeding budget thresholds is the best option to execute the task of monitoring the expense of the company's cloud resources with minimal effort, as it can automate and simplify the process of tracking and alerting the cloud administrator about any overspending or wastage of cloud resources. Setting custom notifications can also help optimize the cost and performance of cloud resources, as it can enable timely and proactive actions to adjust or optimize the resource allocation or consumption based on the budget limits. References: CompTIA Cloud+ Certification Exam Objectives, page 13, section 2.5

NEW QUESTION 226

- (Topic 1)

A systems administrator is deploying a new storage array for backups. The array provides 1PB of raw disk space and uses 14TB nearline SAS drives. The solution must tolerate at least two failed drives in a single RAID set.

Which of the following RAID levels satisfies this requirement?

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

Answer: D

Explanation:

RAID 6 is a type of RAID level that uses block-level striping with two parity blocks distributed across all member disks. RAID 6 can provide redundancy and fault tolerance, as it can survive the failure of up to two disks without losing any data. RAID 6 can also support large data sets and high-capacity disks, as it can offer more usable space and better performance than other RAID levels with similar features, such as RAID 5 or RAID 10. RAID 6 is the best RAID level for a systems administrator to use when deploying a new storage array for backups that provides 1PB of raw disk space and uses 14TB nearline SAS drives and must tolerate at least two failed drives in a single RAID set. References: CompTIA Cloud+ Certification Exam Objectives, page 9, section 1.4

NEW QUESTION 231

- (Topic 1)

A cloud administrator recently noticed that a number of files stored at a SaaS provider's file-sharing service were deleted. As part of the root cause analysis, the administrator noticed the parent folder permissions were modified last week. The administrator then used a test user account and determined the permissions on the files allowed everyone to have write access.

Which of the following is the best step for the administrator to take NEXT?

- A. Identify the changes to the file-sharing service and document
- B. Acquire a third-party DLP solution to implement and manage access
- C. Test the current access permissions to the file-sharing service
- D. Define and configure the proper permissions for the file-sharing service

Answer: D

Explanation:

Permissions are rules or settings that determine what actions users can perform on files or resources in a system or service. Permissions can help control and restrict access to files or resources based on various criteria, such as user identity, role, group, or ownership. Defining and configuring the proper permissions for the file-sharing service is the best step for the administrator to take next after discovering that sales group members can access the financial application due to being part of the finance group and having write access to all files in the file-sharing service. Defining and configuring the proper permissions can prevent

unauthorized or accidental access or modification of files or resources by limiting or granting access based on specific criteria.
References: CompTIA Cloud+ Certification Exam Objectives, page 14, section 2.7

NEW QUESTION 235

- (Topic 1)

A cloud administrator has finished setting up an application that will use RDP to connect. During testing, users experience a connection timeout error. Which of the following will MOST likely solve the issue?

- A. Checking user passwords
- B. Configuring QoS rules
- C. Enforcing TLS authentication
- D. Opening TCP port 3389

Answer: D

Explanation:

TCP port 3389 is the default port used by Remote Desktop Protocol (RDP) to connect to a remote system or application over a network. Opening TCP port 3389 on the firewall or network device will most likely solve the issue of users experiencing a connection timeout error when trying to use RDP to connect to an application, as it will allow RDP traffic to pass through. If TCP port 3389 is closed or blocked, RDP traffic will be denied or dropped, resulting in a connection timeout error. References: CompTIA Cloud+ Certification Exam Objectives, page 15, section 2.8

Reference: <https://docs.microsoft.com/en-us/windows-server/remote/remote-desktop-services/troubleshoot/rdp-error-general-troubleshooting>

NEW QUESTION 239

- (Topic 1)

A SaaS provider wants to maintain maximum availability for its service. Which of the following should be implemented to attain the maximum SLA?

- A. A hot site
- B. An active-active site
- C. A warm site
- D. A cold site

Answer: B

Explanation:

An active-active site is a type of disaster recovery (DR) site that runs simultaneously with the primary site and handles part of the normal workload or traffic. An active-active site can help maintain maximum availability for a SaaS service, as it can provide load balancing, redundancy, and failover capabilities for the SaaS service in case of an outage or disruption at the primary site. An active-active site can also improve performance and scalability, as it can distribute the workload or traffic across multiple sites and handle increased demand or peak periods. References: CompTIA Cloud+ Certification Exam Objectives, page 10, section 1.5

NEW QUESTION 244

- (Topic 1)

An organization's web server farm, which is hosted in the cloud with DNS load balancing, is experiencing a spike in network traffic. This has caused an outage of the organization's web server infrastructure.

Which of the following should be implemented to prevent this in the future as a mitigation method?

- A. Enable DLP
- B. Configure microsegmentation
- C. Enable DNSSEC
- D. Deploy a vADC appliance

Answer: D

Explanation:

A virtual application delivery controller (vADC) is a type of network device or software that provides load balancing, security, and optimization for web applications or services. Deploying a vADC appliance can help prevent an outage of the organization's web server infrastructure due to a spike in network traffic, as it can distribute the traffic across multiple web servers and improve the performance and availability of web applications or services. Deploying a vADC appliance can also provide mitigation methods such as DDoS protection, SSL offloading, and caching to enhance the security and efficiency of web traffic delivery. References: CompTIA Cloud+ Certification Exam Objectives, page 15, section 2.8

NEW QUESTION 249

- (Topic 1)

Lateral-moving malware has infected the server infrastructure.

Which of the following network changes would MOST effectively prevent lateral movement in the future?

- A. Implement DNSSEC in all DNS servers
- B. Segment the physical network using a VLAN
- C. Implement microsegmentation on the network
- D. Implement 802.1X in the network infrastructure

Answer: C

Explanation:

Microsegmentation is a type of network security technique that divides a network into smaller logical segments or zones based on workload or application characteristics and applies granular policies and rules to control and isolate traffic within each segment or zone. Implementing microsegmentation on the network can help prevent lateral movement in the future after lateral-moving malware has infected the server infrastructure, as it can limit the exposure and spread of malware by restricting access and communication between different segments or zones based on predefined criteria such as identity, role, or behavior.

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

NEW QUESTION 252

- (Topic 1)

An organization is required to set a custom registry key on the guest operating system. Which of the following should the organization implement to facilitate this requirement?

- A. A configuration management solution
- B. A log and event monitoring solution
- C. A file integrity check solution
- D. An operating system ACL

Answer: A

Explanation:

A configuration management solution is a type of tool or system that automates and standardizes the configuration and deployment of cloud resources or services according to predefined policies or rules. A configuration management solution can help set a custom registry key on the guest operating system in an IaaS instance, as it can apply the desired registry setting to one or more virtual machines (VMs) without manual intervention or scripting. A configuration management solution can also help maintain consistency, compliance, and security of cloud configurations by monitoring and enforcing the desired state. References: CompTIA Cloud+ Certification Exam Objectives, page 13, section 2.5

NEW QUESTION 253

- (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 SH

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 255

- (Topic 4)

A security analyst is investigating a recurring alert. The alert is reporting an insecure firewall configuration state after every cloud application deployment. The process of identifying the issue, requesting a fix, and waiting for the developers to manually patch the environment is being repeated multiple times. In an effort to identify the root issue, the following logs were collected:

Deploying template app prod. •yaml Instance DB successfully created DB keys successfully stored on vault

Instance WebApp successfully created Access rules successfully applied Access—keys successfully created

Which of the following options will provide a permanent fix for the issue?

- A. Validate the IaC code used during the deployment.
- B. Avoid the use of a vault to store database passwords.
- C. Rotate the access keys that were created during deployment.
- D. Recommend that the developers do not create multiple resources at once.

Answer: A

Explanation:

The issue of an insecure firewall configuration state after every cloud application deployment is likely caused by a flaw in the IaC code used during the deployment. IaC stands for Infrastructure as Code, which is a method of managing and provisioning IT infrastructure using code, rather than manual configuration¹. IaC allows teams to automate the setup and management of their infrastructure, making it more efficient and consistent. However, if the IaC code contains errors, vulnerabilities, or misconfigurations, it can result in security issues or compliance violations in the deployed infrastructure². Therefore, to provide a permanent fix for the issue, the IaC code used during the deployment should be validated and tested to ensure that it meets the security requirements and best practices for firewall configuration. The IaC code can be validated using tools such as Azure Resource Manager Template Toolkit, AWS CloudFormation Linter, or Terraform Validate. These tools can check the syntax and semantics of the IaC code, and identify any potential errors or inconsistencies before deployment.

NEW QUESTION 259

- (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 260

- (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 265

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