

# CompTIA

## Exam Questions CV0-003

CompTIA Cloud+ Certification Exam



**NEW QUESTION 1**

- (Topic 1)

A cloud administrator checked out the deployment scripts used to deploy the sandbox environment to a public cloud provider. The administrator modified the script to add an application load balancer in front of the web-based front-end application. The administrator next used the script to recreate a new sandbox environment successfully, and the application was then using the new load balancer.

The following week, a new update was required to add more front-end servers to the sandbox environment. A second administrator made the necessary changes and checked out the deployment scripts. The second administrator then ran the script, but the application load balancer was missing from the new deployment.

Which of the following is the MOST likely reason for this issue?

- A. The license limit on the number of server deployments allowed per month was exceeded
- B. The deployment script changes made by the first administrator were not checked in and committed
- C. The new server images were incompatible with the application load-balancer configuration
- D. The application load balancer exceeded the maximum number of servers it could use

**Answer: B**

**Explanation:**

Checking in and committing are actions that save and update the changes made to a file or code in a version control system or repository. Checking in and committing can help track and synchronize the changes made by different users or developers working on the same file or code. The deployment script changes made by the first administrator were not checked in and committed is the most likely reason for the issue of the application load balancer being missing from the new deployment after a second administrator made some changes and ran the script. If the first administrator did not check in and commit the changes made to add an application load balancer to the script, then those changes would not be reflected or available in the latest version of the script used by the second administrator. References: CompTIA Cloud+ Certification Exam Objectives, page 13, section 2.5

**NEW QUESTION 2**

- (Topic 1)

An organization has two businesses that are developing different software products. They are using a single cloud provider with multiple IaaS instances. The organization identifies that the tracking of costs for each business are inaccurate.

Which of the following is the BEST method for resolving this issue?

- A. Perform segregation of the VLAN and capture egress and ingress values of each network interface
- B. Tag each server with a dedicated cost and sum them based on the businesses
- C. Split the total monthly invoice equally between the businesses
- D. Create a dedicated subscription for the businesses to manage the costs

**Answer: B**

**Explanation:**

Tagging each server with a dedicated cost and summing them based on the businesses is the best method for resolving the issue of inaccurate cost tracking for different businesses that use multiple IaaS instances within a single cloud provider. Tagging can help identify and organize the servers based on various criteria, such as name, purpose, owner, or cost center. Tagging can also enable granular and accurate billing and reporting based on the tags. Summing the costs based on the businesses can help allocate and distribute the costs correctly and fairly among the different businesses. References: CompTIA Cloud+ Certification Exam Objectives, page 13, section 2.5

**NEW QUESTION 3**

- (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 4**

- (Topic 1)

An SQL injection vulnerability was reported on a web application, and the cloud platform

team needs to mitigate the vulnerability while it is corrected by the development team. Which of the following controls will BEST mitigate the risk of exploitation?

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

**Answer: D**

**Explanation:**

A web application firewall (WAF) is a type of network security device or software that monitors and filters HTTP traffic between a web application and the Internet.

A WAF can help mitigate the risk of exploitation of an SQL injection vulnerability reported on a web application while it is corrected by the development team, as it can detect and block any malicious requests or queries that attempt to inject SQL commands into the web application's database. A WAF can also help protect the web application from other common web-based attacks, such as cross-site scripting (XSS), remote file inclusion (RFI), or denial-of-service (DoS). References: CompTIA Cloud+ Certification Exam Objectives, page 14, section 2.7

**NEW QUESTION 5**

- (Topic 1)

A SAN that holds VM files is running out of storage space.

Which of the following will BEST increase the amount of effective storage on the SAN?

- A. Enable encryption
- B. Increase IOPS
- C. Convert the SAN from RAID 50 to RAID 60
- D. Configure deduplication

**Answer:** D

**Explanation:**

Deduplication is a type of data compression technique that eliminates redundant or duplicate data blocks or segments in a storage system or device. Configuring deduplication can help increase the amount of effective storage on a SAN that holds VM files and is running out of storage space, as it can reduce the storage space consumption and increase the storage space utilization by storing only unique data blocks or segments. Configuring deduplication can also improve performance and efficiency, as it can speed up data transfer and backup processes and save network bandwidth and power consumption. References: CompTIA Cloud+ Certification Exam Objectives, page 9, section 1.4

**NEW QUESTION 6**

- (Topic 1)

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

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

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

**Answer:** D

**Explanation:**

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

**NEW QUESTION 7**

- (Topic 1)

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 8**

- (Topic 1)

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

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

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

**Answer:** C

**Explanation:**

Reference: [https://access.redhat.com/documentation/en-us/red\\_hat\\_openshift\\_platform/13/html/network\\_functions\\_virtualization\\_planning\\_and\\_configuration\\_guide/part-sriov-nfv-configuration](https://access.redhat.com/documentation/en-us/red_hat_openshift_platform/13/html/network_functions_virtualization_planning_and_configuration_guide/part-sriov-nfv-configuration)

#### NEW QUESTION 9

- (Topic 1)

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

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

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

**Answer: B**

#### Explanation:

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

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

#### NEW QUESTION 10

- (Topic 1)

A 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 10

- (Topic 1)

A company has developed a cloud-ready application. Before deployment, an administrator needs to select a deployment technology that provides a high level of portability and is lightweight in terms of footprint and resource requirements.

Which of the following solutions will be BEST to help the administrator achieve the requirements?

- A. Containers
- B. Infrastructure as code
- C. Desktop virtualization
- D. Virtual machines

**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 provide a high level of portability and are lightweight in terms of footprint and resource requirements, as they do not need a full operating system or hypervisor to run. Containers can also enable faster and easier deployment, scaling, and management of cloud-based applications.

Containers are the best solution to help the administrator achieve the requirements for deploying a cloud-ready application. References: CompTIA Cloud+ Certification Exam Objectives, page 11, section 1.6

Reference: <https://blog.netapp.com/blogs/containers-vs-vms/>

#### NEW QUESTION 15

- (Topic 1)

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

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

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

**Answer: C**

#### Explanation:

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

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

**NEW QUESTION 17**

- (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 21**

- (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 23**

- (Topic 1)

A company has deployed a new cloud solution and is required to meet security compliance.

Which of the following will MOST likely be executed in the cloud solution to meet security requirements?

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

**Answer: C**

**Explanation:**

Vulnerability testing is a type of security testing that identifies and evaluates the weaknesses or flaws in a system or service that could be exploited by attackers. Vulnerability testing can help meet security compliance requirements when deploying a new cloud solution, as it can reveal any potential security risks or gaps in the cloud environment and provide recommendations for remediation or mitigation. Vulnerability testing can also help improve security posture and performance, as it can prevent or reduce the impact of cyberattacks, data breaches, or service disruptions.

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

**NEW QUESTION 25**

- (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 29**

- (Topic 1)

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

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

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

**Answer: D**

**Explanation:**

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

**NEW QUESTION 31**

- (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 36**

- (Topic 1)

A cloud administrator is building a new VM for a network security appliance. The security appliance installer says the CPU clock speed does not meet the requirements.

Which of the following will MOST likely solve the issue?

- A. Move the VM to a host with a faster CPU
- B. Add more vCPUs to the VM
- C. Enable CPU masking on the VM
- D. Enable hyperthreading on the virtual host

**Answer: A**

**Explanation:**

Moving the VM to a host with a faster CPU is the best way to solve the issue of the security appliance installer saying the CPU clock speed does not meet the requirements when building a new VM for a network security appliance. Moving the VM to a host with a faster CPU can ensure that the VM meets the minimum CPU clock speed requirement for the security appliance, as it can use the physical CPU resources of the host. Moving the VM to a host with a faster CPU can also improve the performance and reliability of the security appliance, as it can reduce latency, contention, and overhead.

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

**NEW QUESTION 39**

- (Topic 1)

A media company has made the decision to migrate a physical, internal file server to the cloud and use a web-based interface to access and manage the files. The users must be able to use their current corporate logins.

Which of the following is the MOST efficient way to achieve this goal?

- A. Deploy a VM in a cloud, attach storage, and copy the files across
- B. Use a SaaS service with a directory service federation
- C. Deploy a fileshare in a public cloud and copy the files across
- D. Copy the files to the object storage location in a public cloud

**Answer: B**

**Explanation:**

Software as a service (SaaS) is a type of cloud service model that provides software applications over the Internet that are hosted and managed by a cloud service provider. Directory service federation is a type of authentication mechanism that allows users to access multiple systems or applications across different domains or organizations with a single login credential. Using a SaaS service with a directory service federation can help migrate an internal file server to the cloud and use a web-based interface to access and manage the files, as it can eliminate the need for maintaining an on-premises file server and enable seamless and secure access to cloud-based files using the same corporate logins. References: CompTIA Cloud+ Certification Exam Objectives, page 8, section 1.2

**NEW QUESTION 42**

- (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 43**

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

**NEW QUESTION 47**

- (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 52**

- (Topic 1)

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

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

**Answer: A**

**Explanation:**

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

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

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

**NEW QUESTION 54**

- (Topic 1)

A systems administrator is provisioning VMs in a cloud environment and has been told to select an OS build with the furthest end-of-life date. Which of the following OS builds would be BEST for the systems administrator to use?

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

**Answer: B**

**Explanation:**

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

**NEW QUESTION 58**

- (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 62**

- (Topic 2)

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

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

**Answer: D**

**Explanation:**

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

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

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

**NEW QUESTION 63**

- (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 64**

- (Topic 2)

Which of the following definitions of serverless computing BEST explains how it is different from using VMs?

- A. Serverless computing is a cloud-hosting service that utilizes infrastructure that is fully managed by the CSP.
- B. Serverless computing uses predictable billing and offers lower costs than VM compute services.
- C. Serverless computing is a scalable, highly available cloud service that uses SDN technologies.
- D. Serverless computing allows developers to focus on writing code and organizations to focus on business.

**Answer:** D

**Explanation:**

This is the best definition of serverless computing that explains how it is different from using VMs (Virtual Machines). Serverless computing is a cloud service model that provides customers with a platform to run applications or functions without having to manage or provision any underlying infrastructure or resources, such as servers, storage, network, OS, etc. Serverless computing is different from using VMs in the following ways:

? Serverless computing allows developers to focus on writing code and organizations to focus on business, rather than spending time and effort on managing or scaling VMs or other infrastructure components.

? Serverless computing is event-driven and pay-per-use, which means that applications or functions are executed only when triggered by a specific event or request, and customers are charged only for the resources consumed during the execution time.

? Serverless computing is more scalable and flexible than using VMs, as it can automatically adjust the capacity and performance of applications or functions according to demand or workload, without requiring any manual intervention or configuration.

**NEW QUESTION 69**

- (Topic 2)

After announcing a big sales promotion, an e-commerce company starts to experience a slow response on its platform that is hosted in a public cloud. When checking the resources involved, the systems administrator sees the following consumption:

| VM          | Memory used | CPU used | Network used |
|-------------|-------------|----------|--------------|
| webserver01 | 89%         | 98%      | 12%          |
| appserver01 | 45%         | 43%      | 13%          |
| appserver02 | 43%         | 44%      | 15%          |
| database01  | 55%         | 50%      | 60%          |

Considering all VMs were built from the same templates, which of the following actions should the administrator perform FIRST to speed up the response of the e-commerce platform?

- A. Spin up a new web server
- B. Spin up a new application server
- C. Add more memory to the web server
- D. Spin up a new database server

**Answer:** D

**Explanation:**

Spinning up a new web server is what the administrator should perform first to speed up the response of the e-commerce platform that is hosted in a public cloud and starts to experience a slow response after announcing a big sales promotion. A web server is a system or service that hosts and delivers web content, such as web pages, images, videos, etc., to clients over a network or internet connection. A web server can affect the response of an e-commerce platform by determining how fast it can process and serve web requests or responses from clients. Spinning up a new web server can speed up the response of an e-commerce platform by providing benefits such as:

? Scalability: Spinning up a new web server can increase the scalability of the e-commerce platform by adding more capacity or resources to handle the increased demand or load caused by the sales promotion, without affecting the existing web servers.

? Performance: Spinning up a new web server can improve the performance of the e-commerce platform by reducing the latency or overhead of processing and serving web requests or responses from clients, which may cause delays or errors.

**NEW QUESTION 73**

- (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 74**

- (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 75**

- (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 79**

- (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 84**

- (Topic 2)

Some VMs that are hosted on a dedicated host server have each been allocated with 32GB of memory. Some of VMs are not utilizing more than 30% of the allocation. Which of the following should be enabled to optimize the memory utilization?

- A. Auto-scaling of compute
- B. Oversubscription
- C. Dynamic memory allocations on guests
- D. Affinity rules in the hypervisor

**Answer:** C

**Explanation:**

Enabling dynamic memory allocations on guests is the best option to optimize memory utilization for VMs that have been allocated with 32GB of memory but are not utilizing more than 30% of it. Dynamic memory allocation is a feature that allows a VM to adjust its memory usage according to its workload and demand, without requiring a reboot or manual intervention. Dynamic memory allocation can help to improve memory utilization and efficiency by allocating more memory to VMs that need it and releasing memory from VMs that do not need it.

**NEW QUESTION 85**

- (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 89**

- (Topic 2)

A company has an in-house-developed application. The administrator wants to utilize cloud services for additional peak usage workloads. The application has a very unique stack of dependencies.

Which of the following cloud service subscription types would BEST meet these requirements?

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

**Answer:** D

**Explanation:**

IaaS (Infrastructure as a Service) is a cloud service model that provides basic computing resources such as servers, storage, network, etc., to the customers. The customers have full control and flexibility over these resources and can install and configure any software they need on them. IaaS is suitable for applications that have a unique stack of dependencies that may not be supported by other cloud service models.

**NEW QUESTION 90**

- (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 95**

- (Topic 2)

Which of the following cloud services is fully managed?

- A. IaaS
- B. GPU in the cloud
- C. IoT
- D. Serverless compute
- E. SaaS

**Answer:** E

**Explanation:**

SaaS (Software as a Service) is a cloud service model that provides fully managed applications to the end users. The users do not have to worry about installing, updating, or maintaining the software, as the cloud provider handles all these tasks. Examples of SaaS are Gmail, Office 365, Salesforce, etc.

**NEW QUESTION 100**

- (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 101**

- (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 105**

- (Topic 2)

A systems administrator is configuring network management but is concerned about confidentiality. Which of the following should the administrator configure to address this concern?

- A. SNMPv3
- B. Community strings
- C. IPSec tunnels
- D. ACLs

**Answer:** A

**Explanation:**

SNMPv3 is the protocol that the administrator should configure to address the concern about confidentiality for network management. SNMP (Simple Network Management Protocol) is a standard protocol that allows network devices and systems to exchange information and perform management tasks. SNMPv3 is the latest version of SNMP that provides security enhancements, such as authentication, encryption, and access control, to protect the confidentiality, integrity, and availability of network data.

**NEW QUESTION 106**

- (Topic 2)

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

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

**Answer:** B

**Explanation:**

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

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

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

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



**NEW QUESTION 108**

- (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 112**

- (Topic 2)

A VDI administrator has received reports from the drafting department that rendering is slower than normal. Which of the following should the administrator check FIRST to optimize the performance of the VDI infrastructure?

- A. GPU
- B. CPU
- C. Storage
- D. Memory

**Answer:** A

**Explanation:**

Checking the GPU (Graphics Processing Unit) is the first thing that the VDI administrator should do to optimize the performance of the VDI infrastructure for rendering tasks. GPU is a specialized hardware device that accelerates graphics processing and rendering. GPU can improve the user experience and performance of VDI applications that require intensive graphics processing, such as drafting, gaming, video editing, etc.

**NEW QUESTION 113**

- (Topic 2)

A systems administrator is troubleshooting performance issues with a VDI environment. The administrator determines the issue is GPU related and then increases the frame buffer on the virtual machines. Testing confirms the issue is solved, and everything is now working correctly. Which of the following should the administrator do NEXT?

- A. Consult corporate policies to ensure the fix is allowed
- B. Conduct internal and external research based on the symptoms
- C. Document the solution and place it in a shared knowledge base
- D. Establish a plan of action to resolve the issue

**Answer:** C

**Explanation:**

Documenting the solution and placing it in a shared knowledge base is what the administrator should do next after troubleshooting performance issues with a VDI (Virtual Desktop Infrastructure) environment, determining that the issue is GPU (Graphics Processing Unit) related, increasing the frame buffer on the virtual machines, and testing that confirms that the issue is solved and everything is now working correctly. Documenting the solution is a process of recording and describing what was done to fix or resolve an issue, such as actions, steps, methods, etc., as well as why and how it worked. Placing it in a shared knowledge base is a process of storing and organizing documented solutions in a central location or repository that can be accessed and used by others. Documenting the solution and placing it in a shared knowledge base can provide benefits such as:

? Learning: Documenting the solution and placing it in a shared knowledge base can help to learn from past experiences and improve skills and knowledge.

? Sharing: Documenting the solution and placing it in a shared knowledge base can help to share information and insights with others who may face similar issues or situations.

? Reusing: Documenting the solution and placing it in a shared knowledge base can help to reuse existing solutions for future issues or situations.

**NEW QUESTION 114**

- (Topic 2)

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

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

**Answer:** A

**Explanation:**

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



**NEW QUESTION 116**

- (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 117**

- (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 121**

- (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 126**

- (Topic 2)

A systems administrator is creating a VM and wants to ensure disk space is not allocated to the VM until it is needed. Which of the following techniques should the administrator use to ensure?

- A. Deduplication
- B. Thin provisioning
- C. Software-defined storage
- D. iSCSI storage

**Answer: B**

**Explanation:**

Thin provisioning is the technique that ensures disk space is not allocated to the VM until it is needed. 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 131**

- (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 132**

- (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 133**

- (Topic 2)

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

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

**Answer:** A

**Explanation:**

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

**NEW QUESTION 135**

- (Topic 2)

A cloud provider wants to make sure consumers are utilizing its IaaS platform but prevent them from installing a hypervisor on the server. Which of the following will help the cloud provider secure the environment and limit consumers' activity?

- A. Patch management
- B. Hardening
- C. Scaling
- D. Log and event monitoring

**Answer:** B

**Explanation:**

Hardening is the best option to help the cloud provider secure the environment and limit consumers' activity on its IaaS platform. Hardening is a process of reducing the attack surface and vulnerabilities of a system or device by applying security configurations, patches, updates, policies, rules, etc. Hardening can prevent consumers from installing unauthorized or unsupported software on their cloud servers, such as hypervisors.

**NEW QUESTION 140**

- (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](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 142**

- (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 146**

- (Topic 2)

A company had a system compromise, and the engineering team resolved the issue after 12 hours. Which of the following information will MOST likely be requested by the Chief Information Officer (CIO) to understand the issue and its resolution?

- A. A root cause analysis
- B. Application documentation
- C. Acquired evidence
- D. Application logs

**Answer:** A

**Explanation:**

A root cause analysis is what will most likely be requested by the Chief Information Officer (CIO) to understand the issue and its resolution after a system compromise that was resolved by the engineering team after 12 hours. A root cause analysis is a technique of investigating and identifying the underlying or fundamental cause or reason for an incident or issue that affects or may affect the normal operation or performance of a system or service. A root cause analysis can help to understand the issue and its resolution by providing information such as:

? What happened: This describes what occurred during the incident or issue, such as symptoms, effects, impacts, etc.

? Why it happened: This explains why the incident or issue occurred, such as triggers, factors, conditions, etc.

? How it was resolved: This details how the incident or issue was fixed or mitigated, such as actions, steps, methods, etc.

? How it can be prevented: This suggests how the incident or issue can be avoided or reduced in the future, such as recommendations, improvements, changes, etc.

**NEW QUESTION 151**

- (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 153**

- (Topic 2)

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

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

**Answer:** A

**Explanation:**

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

**NEW QUESTION 154**

- (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 155**

- (Topic 2)

Which of the following actions should a systems administrator perform during the containment phase of a security incident in the cloud?

- A. Deploy a new instance using a known-good base image.
- B. Configure a firewall rule to block the traffic on the affected instance.
- C. Perform a forensic analysis of the affected instance.
- D. Conduct a tabletop exercise involving developers and systems administrators.

**Answer:** B

**Explanation:**

Configuring a firewall rule to block the traffic on the affected instance is what the administrator should perform during the containment phase of a security incident in the cloud. A security incident is an event or situation that affects or may affect the confidentiality, integrity, or availability of cloud resources or data. A security incident response is a process of managing and resolving a security incident using various phases, such as identification, containment, eradication, recovery, etc. The containment phase is where the administrator tries to isolate and prevent the spread or escalation of the security incident. Configuring a firewall rule to block the traffic on the affected instance can help to contain a security incident by cutting off any communication or interaction between the instance and other systems or networks, which may stop any malicious or unauthorized activity or access.

**NEW QUESTION 160**

- (Topic 1)

Company A has acquired Company B and is in the process of integrating their cloud resources. Company B needs access to Company A's cloud resources while retaining its IAM solution.

Which of the following should be implemented?

- A. Multifactor authentication
- B. Single sign-on
- C. Identity federation
- D. Directory service

**Answer:** C

**Explanation:**

Identity federation is a type of authentication mechanism that allows users to access multiple systems or applications across different domains or organizations with a single login credential. Identity federation can help integrate the cloud resources of Company A and Company B after Company A has acquired Company B, as it can enable seamless and secure access to both companies' cloud resources using the same IAM solution. Identity federation can also improve user convenience, productivity, and security, as it can simplify the login process, reduce login errors, and enhance password management. References: CompTIA Cloud+ Certification Exam Objectives, page 14, section 2.7

Reference: <https://medium.com/@dinika.15/identity-federation-a-brief-introduction-f2f823f8795a>

**NEW QUESTION 163**

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).

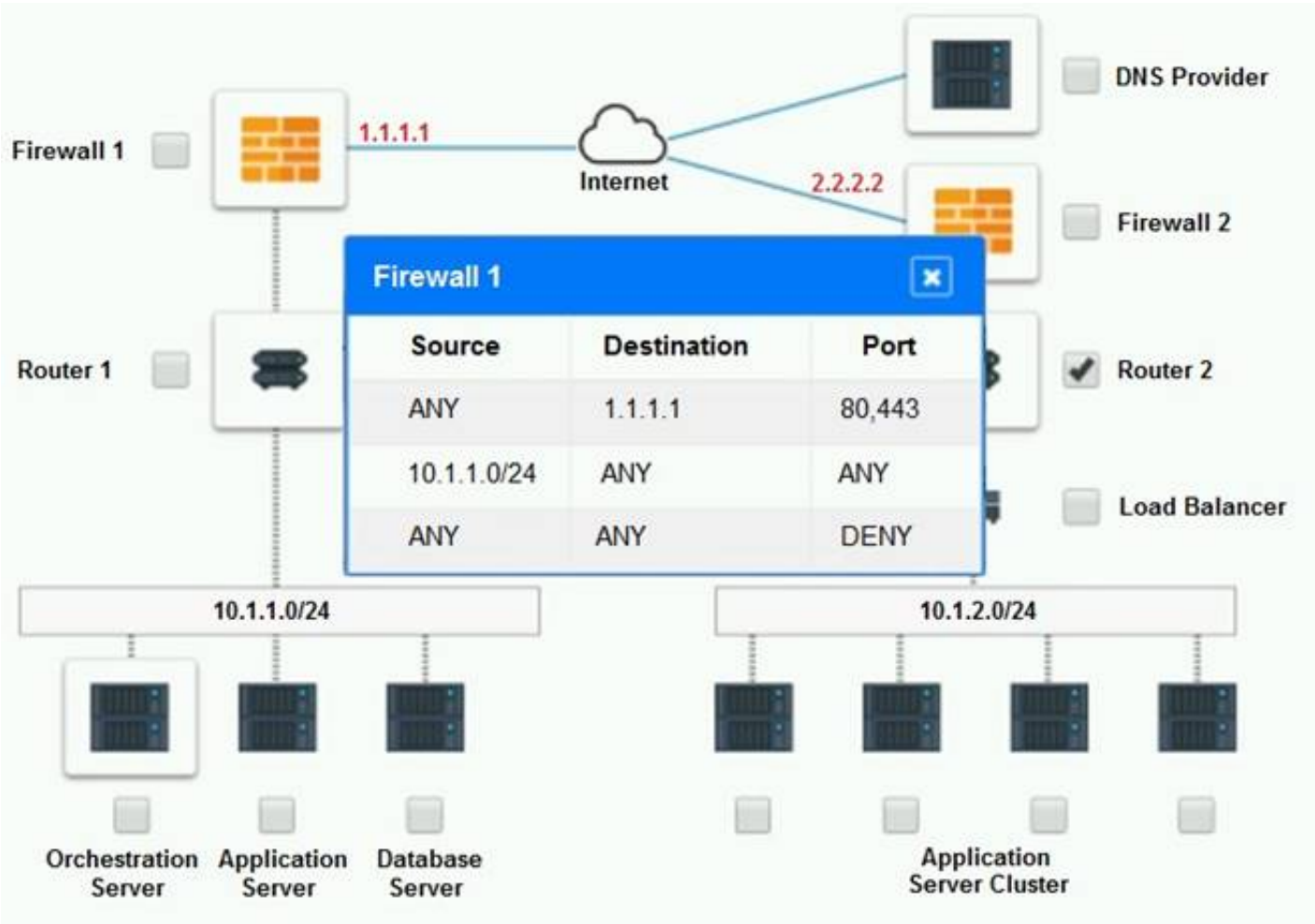
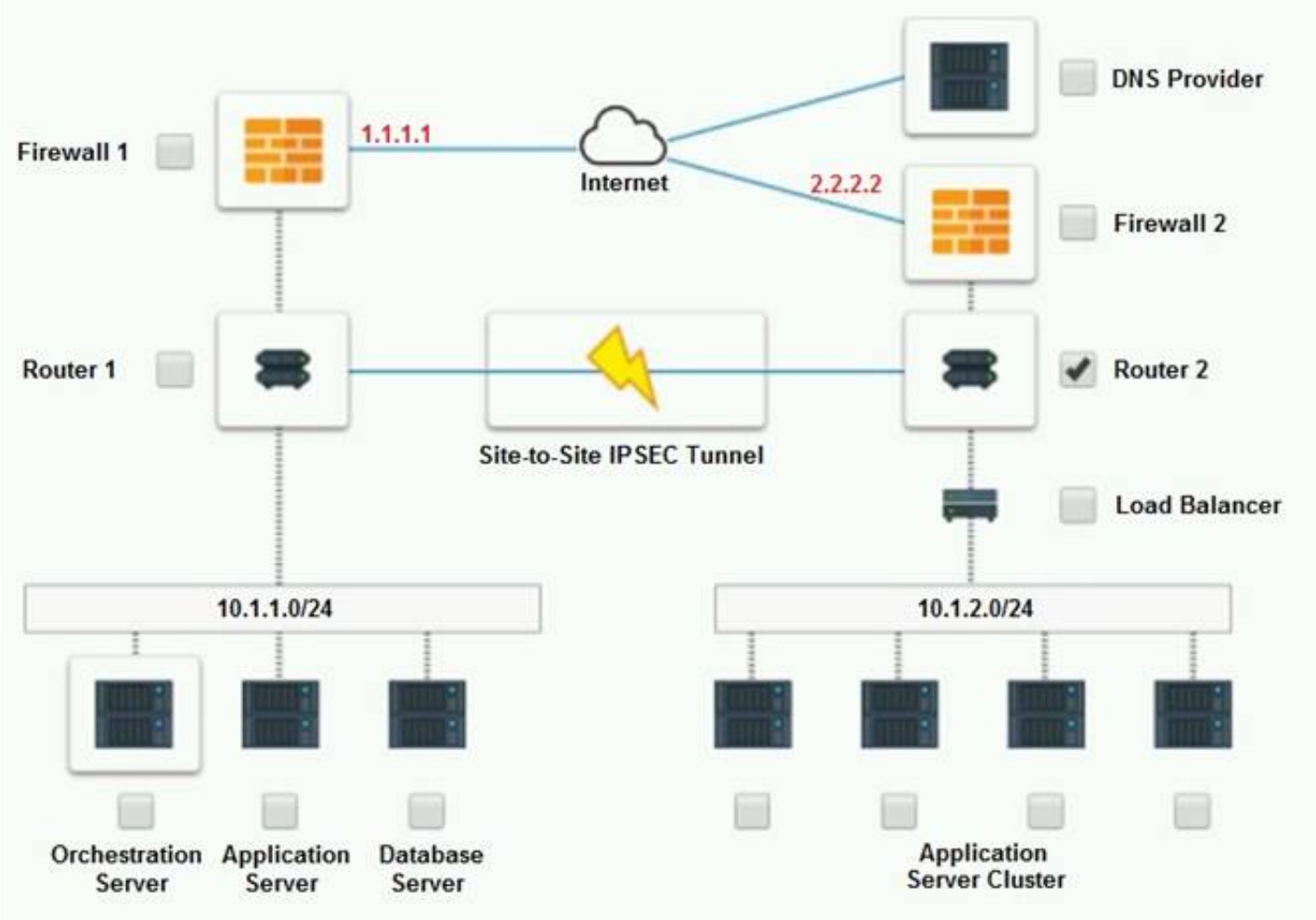
Part 2:

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

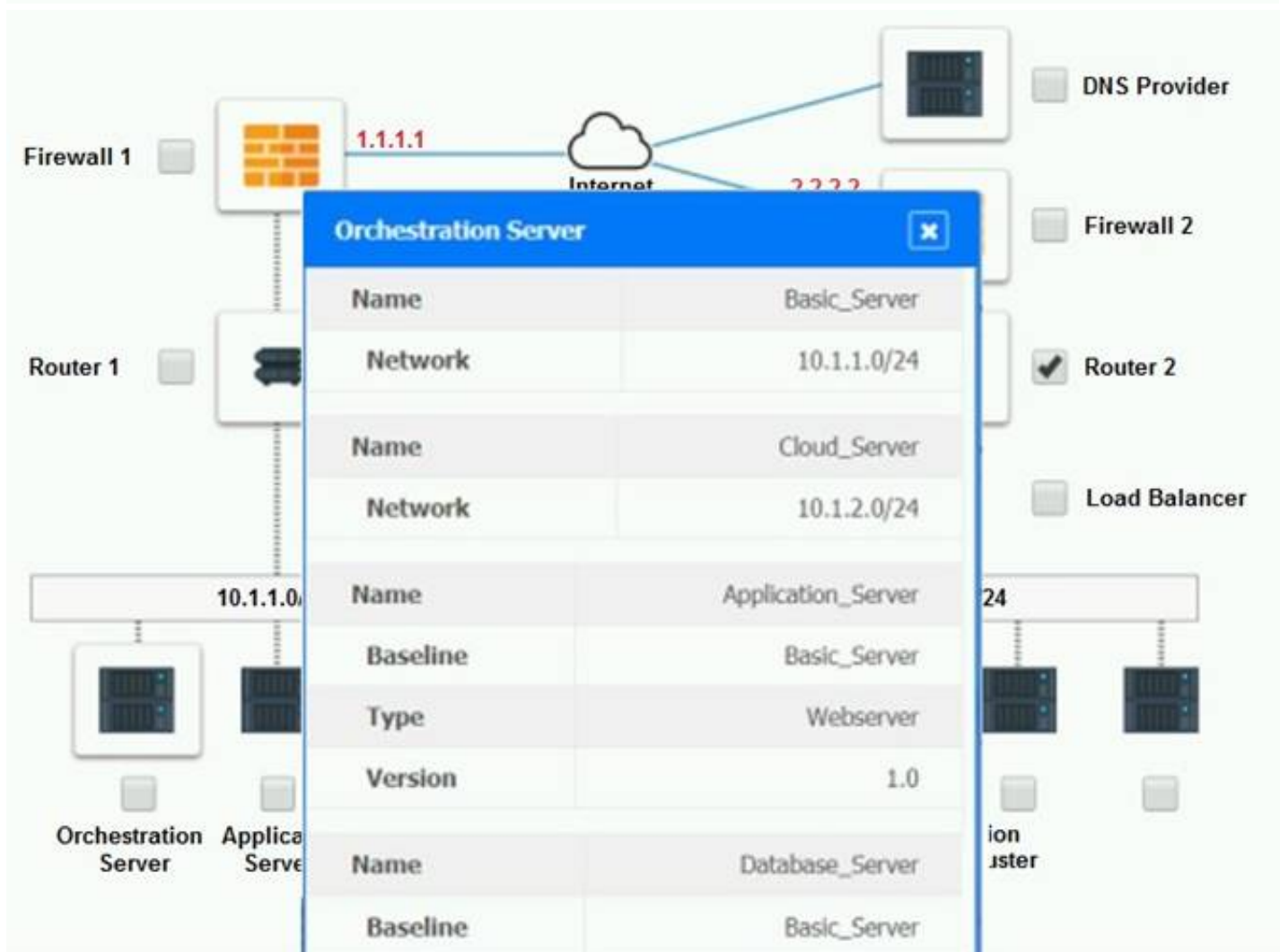
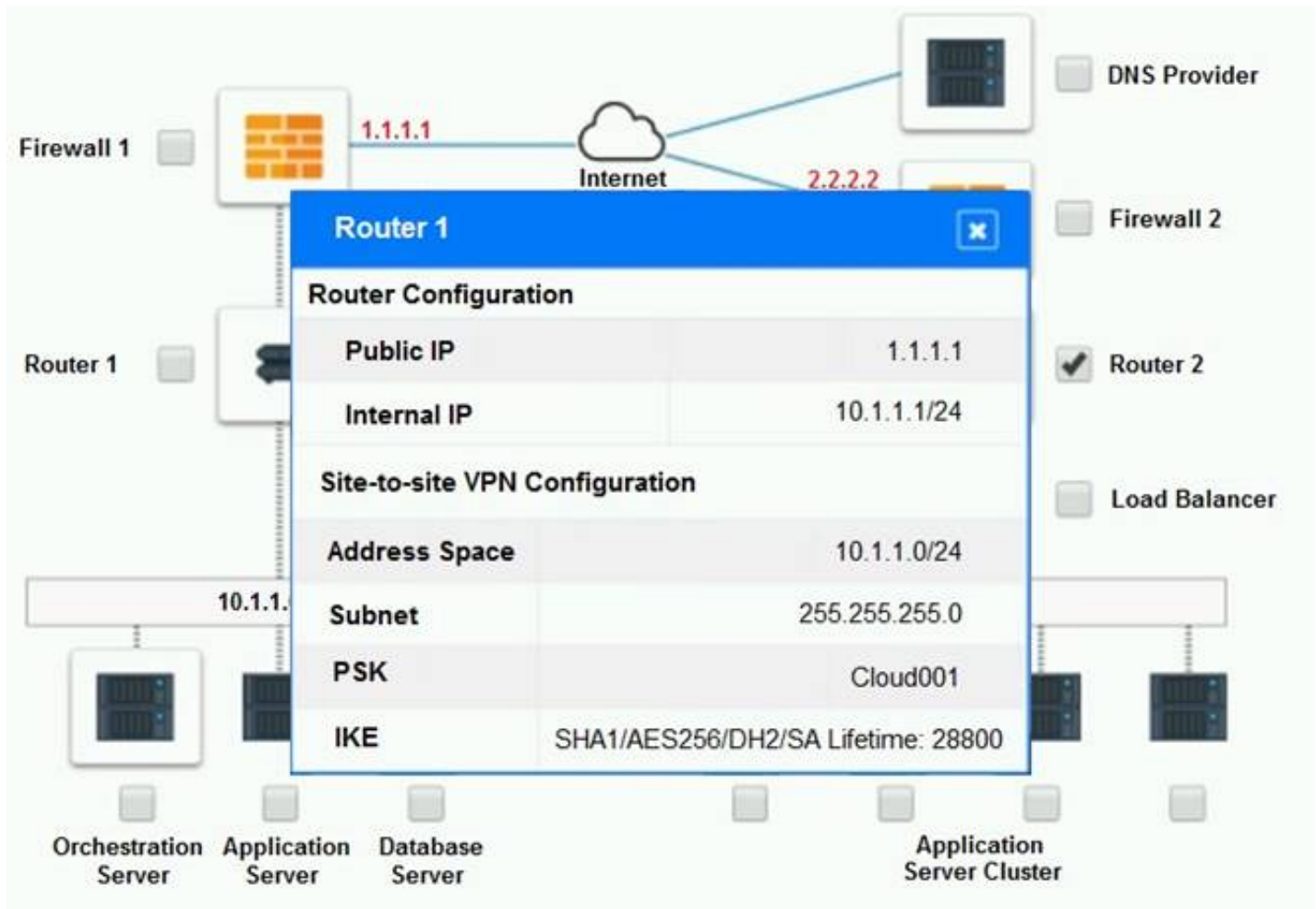
If at any time you would like to bring back the initial state of the simulation, please click the Reset All button.

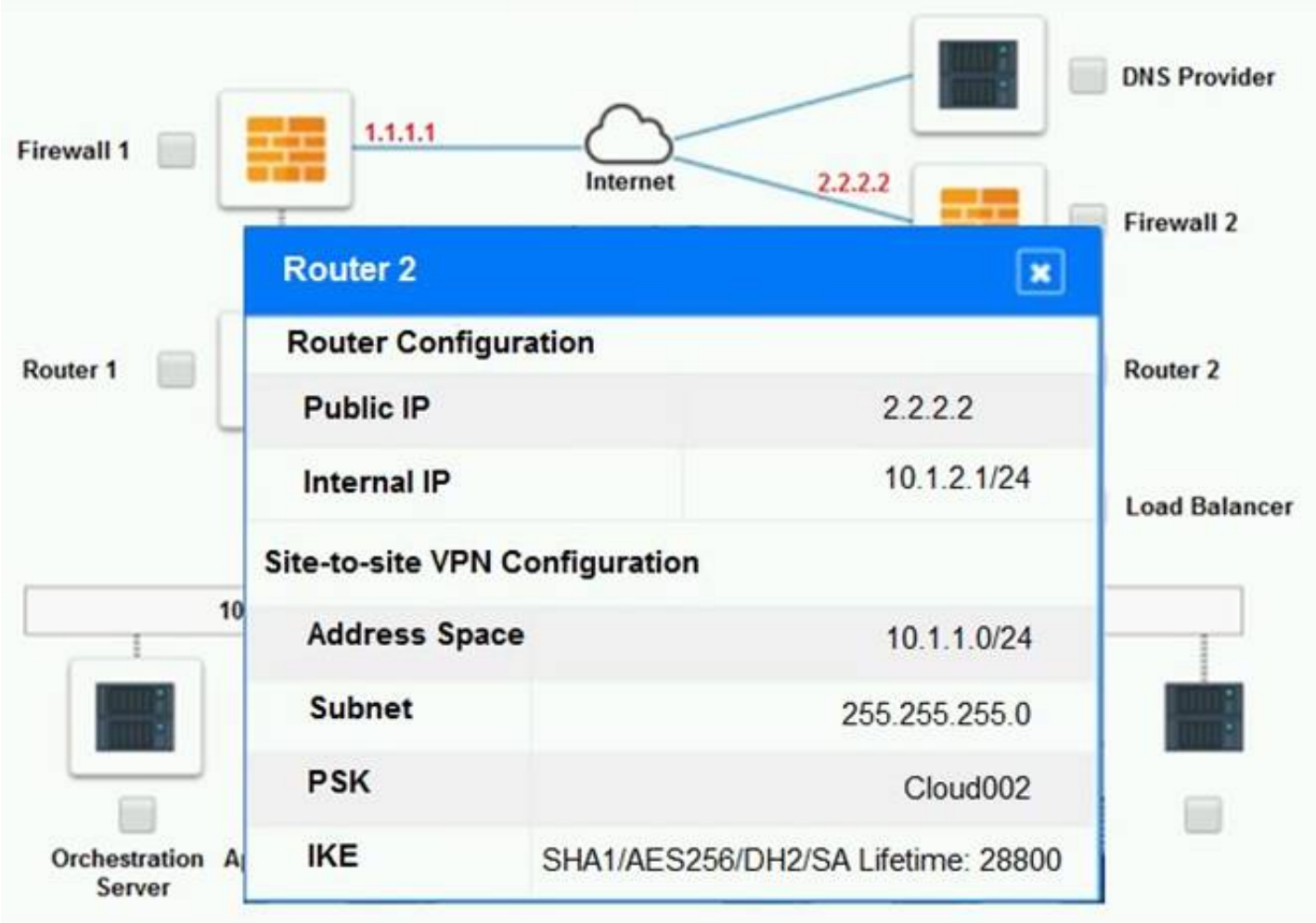
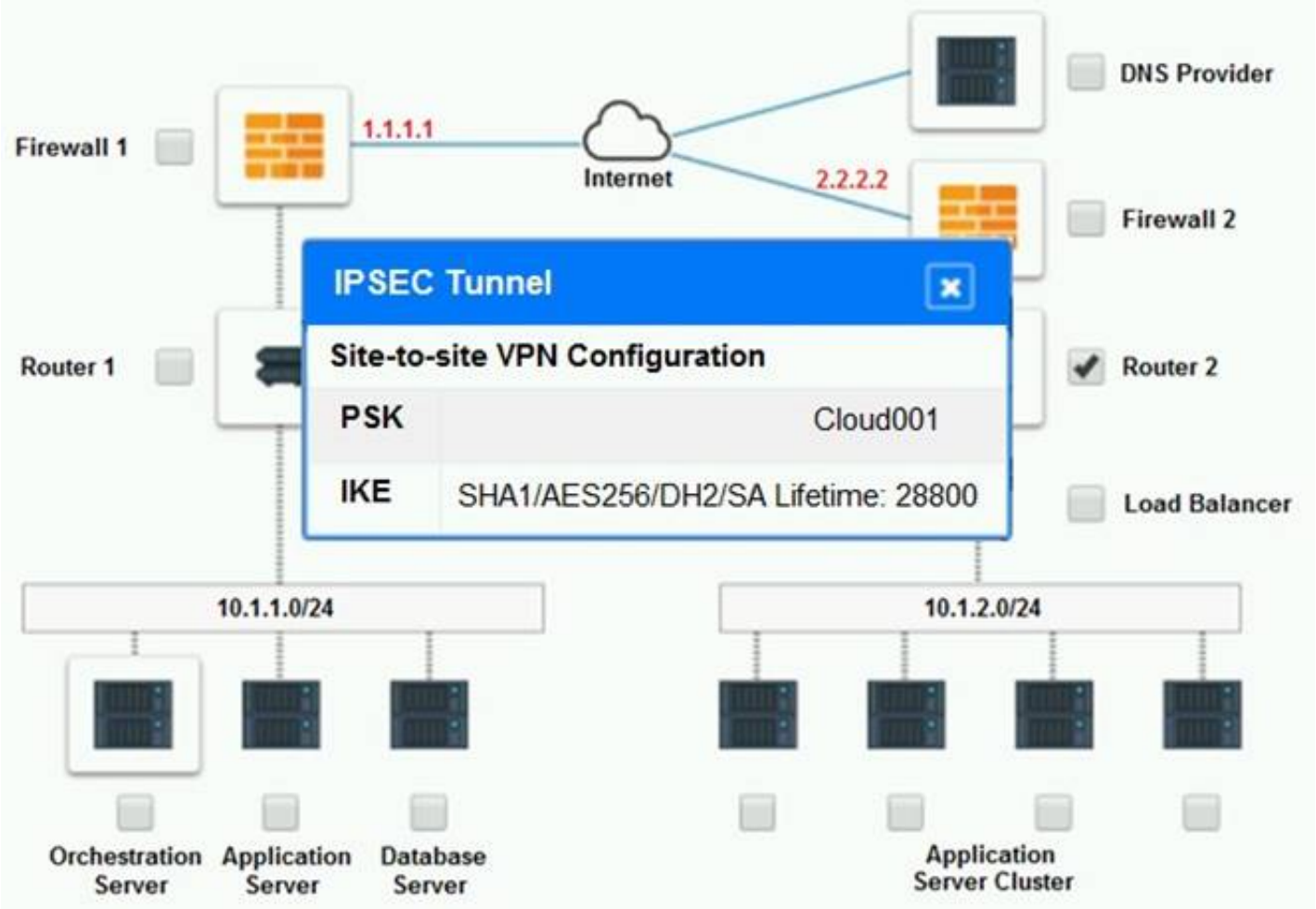
Part 1:

Cloud Hybrid Network Diagram

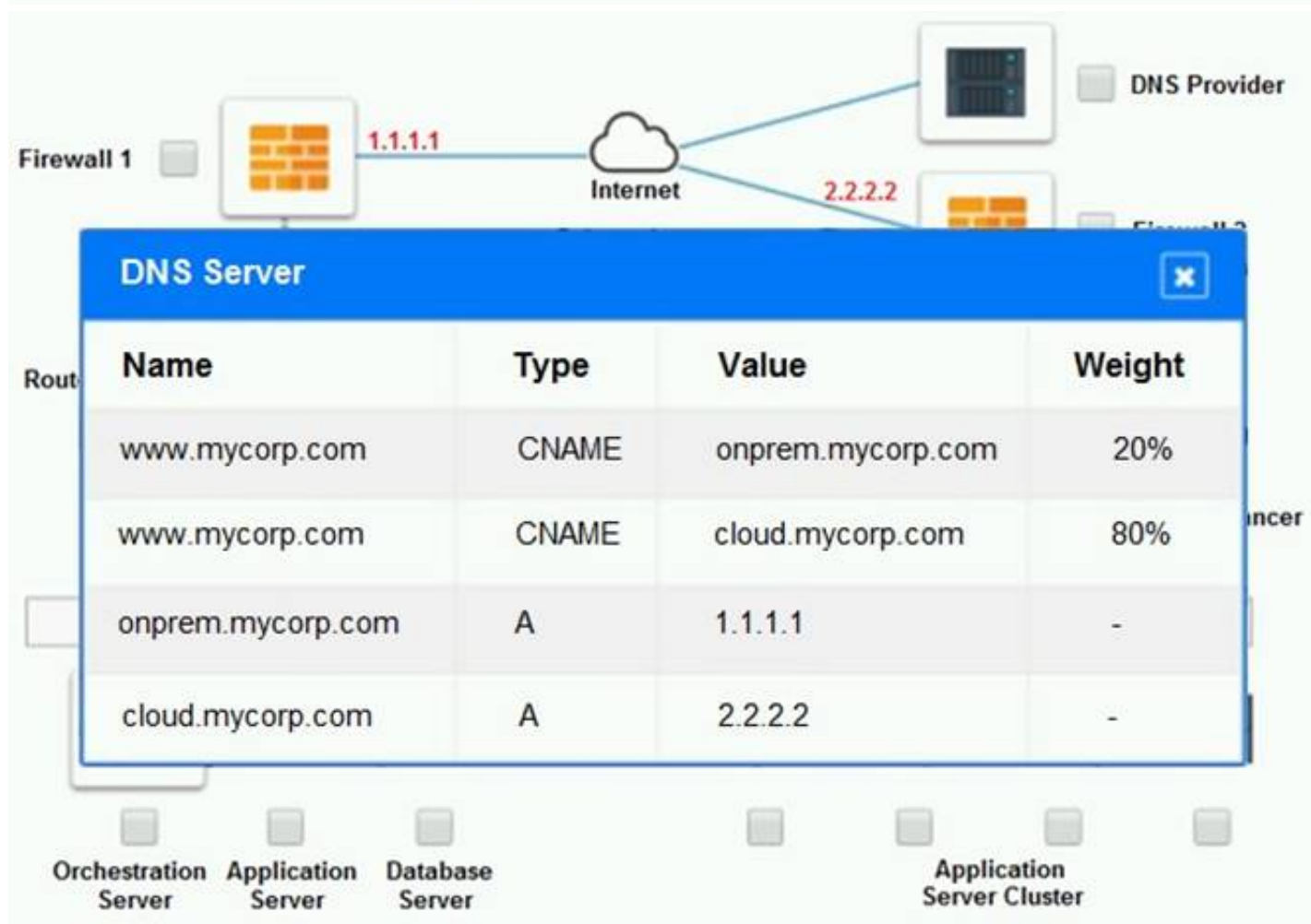
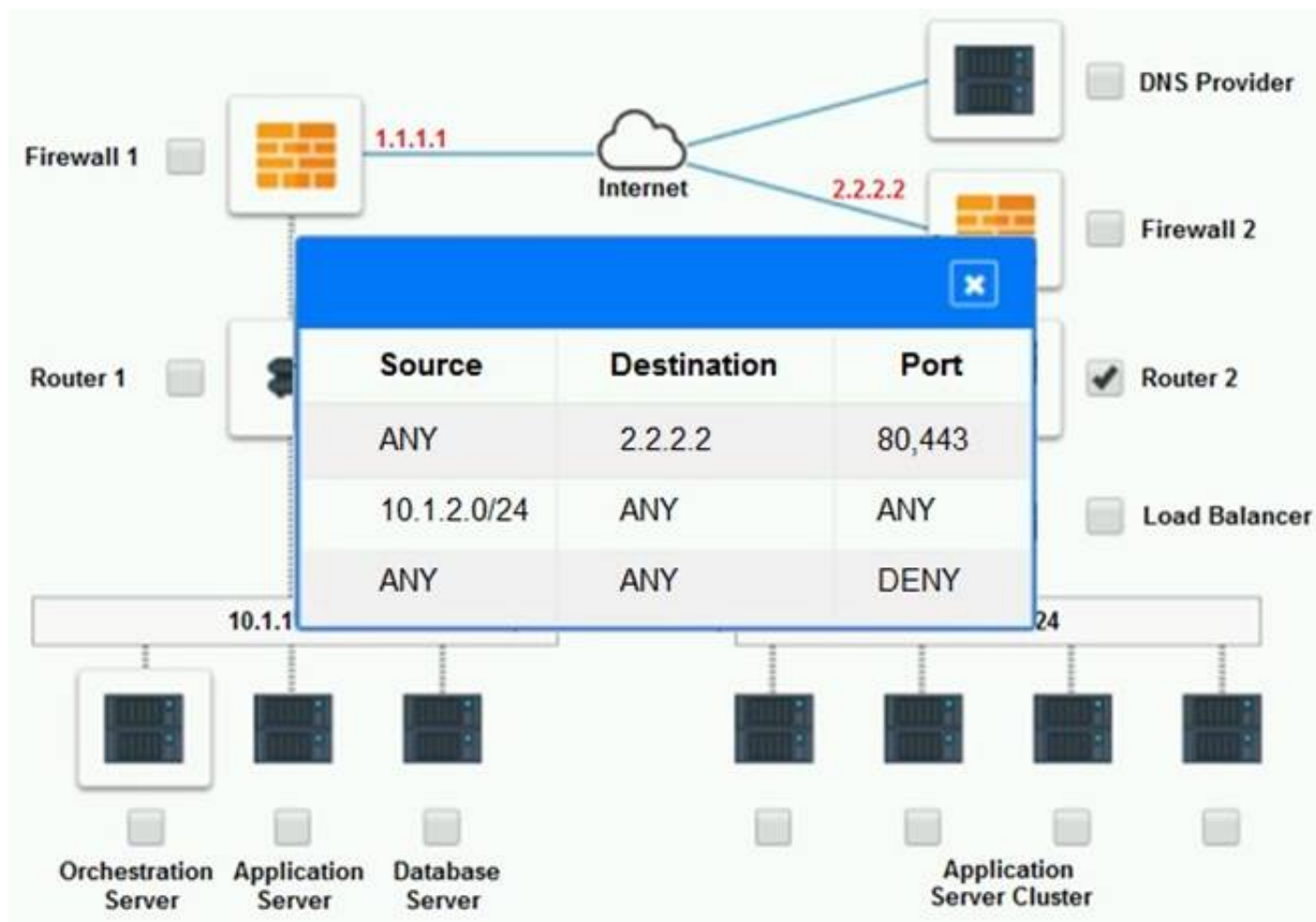












Part 2:

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 165**

- (Topic 1)

A systems administrator is informed that a database server containing PHI and PII is unencrypted. The environment does not support VM encryption, nor does it have a key management system. The server needs to be able to be rebooted for patching without manual intervention.

Which of the following will BEST resolve this issue?

- A. Ensure all database queries are encrypted
- B. Create an IPSec tunnel between the database server and its clients
- C. Enable protocol encryption between the storage and the hypervisor
- D. Enable volume encryption on the storage
- E. Enable OS encryption

**Answer:** D

**Explanation:**

Volume encryption is a type of encryption that protects data at the storage level by encrypting an entire disk or partition. Volume encryption can provide strong security for data at rest, as it prevents unauthorized access to the data even if the storage device is lost, stolen, or compromised. Volume encryption can also support automatic booting without manual intervention, as it can use a pre-boot authentication mechanism that does not require user input. Enabling volume encryption on the storage is the best way to resolve the issue of having an unencrypted database server containing PHI and PII, as it can protect the sensitive data without relying on VM encryption or a key management system. References: CompTIA Cloud+ Certification Exam Objectives, page 14, section 2.7

**NEW QUESTION 167**

- (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 170**

- (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 174**

- (Topic 1)

An IaaS application has a two-hour RTO and a four-hour RPO. The application takes one hour to back up its data or restore from a local backup file. A systems administrator is tasked with configuring the backup policy.

Which of the following should the administrator configure to achieve the application requirements with the LEAST cost?

- A. Back up to long-term storage every night
- B. Back up to object storage every three hours
- C. Back up to long-term storage every four hours
- D. Back up to object storage every hour

**Answer: B**

**Explanation:**

Object storage is a type of storage service that stores data as objects with unique identifiers and metadata in a flat namespace or structure. Backing up to object storage every three hours can help achieve the application requirements with the least cost for an IaaS application that has a two-hour RTO and a four-hour RPO, as it can provide scalable, durable, and cost-effective storage for backup data while meeting the recovery time and point objectives. Backing up to object storage every three hours can ensure that the backup data is no more than four hours old and can be restored within two hours in case of a disaster or failure. References: CompTIA Cloud+ Certification Exam Objectives, page 9, section 1.4

**NEW QUESTION 177**

- (Topic 1)

A systems administrator is deploying a solution that requires a virtual network in a private cloud environment. The solution design requires the virtual network to transport multiple payload types.

Which of the following network virtualization options would BEST satisfy the requirement?

- A. VXLAN
- B. STT
- C. NVGRE
- D. GENEVE

**Answer: D**

**Explanation:**

Generic Network Virtualization Encapsulation (GENEVE) is a type of network virtualization technology that creates logical networks or segments that span across multiple physical networks or locations. GENEVE can satisfy the requirement of transporting multiple payload types in a virtual network in a private cloud environment, as it can support various network protocols and services by using a flexible and extensible header format that can encapsulate different types of payloads within UDP packets. GENEVE can also provide interoperability and compatibility, as it can integrate with existing network virtualization technologies such as VXLAN, STT, or NVGRE. References: CompTIA Cloud+ Certification Exam Objectives, page 15, section 2.8

**NEW QUESTION 178**

- (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](https://en.wikipedia.org/wiki/Central_processing_unit)

**NEW QUESTION 179**

- (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 184**

- (Topic 1)

A systems administrator would like to reduce the network delay between two servers.

Which of the following will reduce the network delay without taxing other system resources?

- A. Decrease the MTU size on both servers
- B. Adjust the CPU resources on both servers
- C. Enable compression between the servers
- D. Configure a VPN tunnel between the servers

**Answer:** A

**Explanation:**

The maximum transmission unit (MTU) is the largest size of a packet or frame that can be sent over a network. Decreasing the MTU size on both servers can reduce the network delay between them, as it can reduce the fragmentation and reassembly of packets, improve the transmission efficiency, and avoid packet loss or errors. Decreasing the MTU size can also avoid taxing other system resources, as it does not require additional CPU, memory, or disk resources. References: CompTIA Cloud+ Certification Exam Objectives, page 16, section 3.2

Reference: <https://cseweb.ucsd.edu/~calder/papers/HPDC-01-DynComp.pdf>

**NEW QUESTION 185**

- (Topic 1)

A systems administrator in a large enterprise needs to alter the configuration of one of the finance department's database servers.

Which of the following should the administrator perform FIRST?

- A. Capacity planning
- B. Change management
- C. Backups
- D. Patching

**Answer:** B

**Explanation:**

The SA would do the other three regardless of the need to alter configurations. In this situation, the SA would have to present the change to the CCB in order to do the alteration.

There is no clarification on whether the change management process has been gone

through. Any changes, regardless of how small or big, must go through the change management process. This allows proposals to be heard by end-users, management, and possibly stockholders. From there, it will be reviewed and either approved or denied, with reasons specified. From there, the administrator(s) can do whatever processes are necessary.

Change management is a process or procedure that defines the steps, roles, and responsibilities for implementing, documenting, and communicating any changes or updates to a system or service. Change management can help ensure that any changes or updates are done in a controlled and consistent manner, minimizing any risks or impacts to the system or service. Performing change management is the first thing that a systems administrator should do before altering the configuration of one of the finance department's database servers, as it can ensure that the change request is approved, authorized, tested, and verified before applying it to the database server. References: CompTIA Cloud+ Certification Exam Objectives, page 13, section 2.5

**NEW QUESTION 190**

- (Topic 1)

Which of the following will mitigate the risk of users who have access to an instance modifying the system configurations?

- A. Implement whole-disk encryption
- B. Deploy the latest OS patches
- C. Deploy an anti-malware solution
- D. Implement mandatory access control

**Answer:** D

**Explanation:**

Mandatory access control (MAC) is a type of access control model that enforces strict security policies based on predefined rules and labels. MAC assigns security labels to subjects (users or processes) and objects (files or resources) and allows access only if the subject has the appropriate clearance and need-to-know for the object. MAC can mitigate the risk of users who have access to an instance modifying the system configurations, as it can prevent unauthorized or accidental changes to critical files or settings by restricting access based on predefined rules and labels. References: CompTIA Cloud+ Certification Exam Objectives, page 14, section 2.7

**NEW QUESTION 193**

- (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 197**

- (Topic 1)

A systems administrator recently deployed a VDI solution in a cloud environment; however, users are now experiencing poor rendering performance when trying to display 3-D content on their virtual desktops, especially at peak times.

Which of the following actions will MOST likely solve this issue?

- A. Update the quest graphics drivers from the official repository
- B. Add more vGPU licenses to the host
- C. Instruct users to access virtual workstations only on the VLAN
- D. Select vGPU profiles with higher video RAM

**Answer:** D

**Explanation:**

A vGPU profile is a configuration option that defines the amount of video RAM (vRAM) and other resources that are allocated to a virtual machine (VM) that uses a virtual graphics processing unit (vGPU). A vGPU profile can affect the rendering performance of a VM, as it determines how much graphics memory and processing power are available for displaying complex graphics content. Selecting vGPU profiles with higher video RAM can most likely solve the issue of poor rendering performance when trying to display 3-D content on virtual desktops, especially at peak times, as it can provide more graphics resources and improve the quality and speed of rendering. References: CompTIA Cloud+ Certification Exam Objectives, page 11, section 1.6

**NEW QUESTION 199**

- (Topic 1)

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

Which of the following will BEST address this requirement?

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

**Answer:** B

**Explanation:**

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

**NEW QUESTION 203**

- (Topic 1)

The human resources department was charged for a cloud service that belongs to another department. All other cloud costs seem to be correct.

Which of the following is the MOST likely cause for this error?

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

**Answer:** D

**Explanation:**

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

**NEW QUESTION 208**

- (Topic 1)

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

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

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

**Answer:** A

**Explanation:**

Regions are geographical locations or areas where cloud service providers have data centers or facilities that host their cloud resources or services. Regions can

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

**NEW QUESTION 210**

- (Topic 4)

A cloud engineer is deploying a server in a cloud platform. The engineer reviews a security scan report. Which of the following recommended services should be disabled? (Select two).

- A. Telnet
- B. FTP
- C. Remote log-in
- D. DNS
- E. DHCP
- F. LDAP

**Answer:** AB

**Explanation:**

Telnet and FTP are recommended services to be disabled when deploying a server in a cloud platform, as they are insecure protocols that transmit data in plain text and expose credentials and sensitive information to potential attackers<sup>12</sup>. Remote log-in, DNS, DHCP, and LDAP are not necessarily recommended to be disabled, as they may provide useful functionality for the server and the cloud environment. However, they should be configured properly and secured with encryption, authentication, and authorization mechanisms<sup>34</sup>.

References: CompTIA Cloud+ CV0-003 Exam Objectives, Objective 4.2: Given a scenario, apply security configurations and compliance controls ; CompTIA Quick Start Guide to Tackling Cloud Security Concerns<sup>3</sup>

**NEW QUESTION 214**

- (Topic 4)

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

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

**Answer:** C

**Explanation:**

The upgrade method that is being implemented by the systems administrator is rolling. A rolling upgrade is a type of upgrade that applies the new version of a software or service to a subset of nodes or instances at a time, while the rest of the nodes or instances continue to run the old version. This way, the upgrade can be performed gradually and incrementally, without causing downtime or disruption to the entire system. A rolling upgrade can also help to monitor and test the new version for any issues or errors, and roll back to the old version if needed<sup>12</sup>.

A canary upgrade is a type of upgrade that applies the new version of a software or service to a small and selected group of users or customers, before rolling it out to the rest of the population. This way, the upgrade can be evaluated for its performance, functionality, and feedback, and any problems or bugs can be fixed before affecting the majority of users or customers<sup>34</sup>.

A blue-green upgrade is a type of upgrade that involves having two identical environments, one running the old version (blue) and one running the new version (green) of a software or service. The traffic is switched from the blue environment to the green environment once the new version is ready and tested. This way, the upgrade can be performed quickly and seamlessly, without any downtime or risk of failure. The blue environment can also serve as a backup in case of any issues with the green environment<sup>5</sup>.

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

**NEW QUESTION 215**

- (Topic 4)

A cloud administrator created a developer desktop image and added it to the VDI farm in a private cloud environment. One of the developers opened a VDI session and noticed that compiling the code was taking up to one hour to complete. However, when the developer compiles the code on a local machine, the job completes in less than five minutes. Which of the following sizing techniques would be best to use to improve the performance of the compile job?

- A. Add more servers to the VDI environment.
- B. Increase the CPU and the memory on the VDI template.
- C. Configure the VDI environment to increase sessions automatically.
- D. Migrate code compile jobs to a public cloud provider.

**Answer:** B

**Explanation:**

The most likely cause of the poor performance of the compile job is that the VDI template does not have enough CPU and memory resources to handle the task efficiently. Compiling code is a CPU-intensive and memory-intensive process that requires sufficient computing power to run smoothly. By increasing the CPU and memory on the VDI template, the cloud administrator can improve the performance of the compile job and reduce the time it takes to complete. Adding more servers to the VDI environment or configuring the VDI environment to increase sessions automatically would not help, as they would only affect the scalability and availability of the VDI farm, not the performance of individual sessions. Migrating code compile jobs to a public cloud provider would incur additional costs and complexity, and may not be feasible or desirable for the organization. References: The Official CompTIA Cloud+ Self-Paced Study Guide (CV0-003) eBook, Chapter 3, Section 3.3, page 971

**NEW QUESTION 220**

- (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 prices<sup>1</sup>. 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 222**

- (Topic 4)

A cloud administrator must ensure all servers are in compliance with the company's security policy Which of the following should the administrator check FIRST?

- A. The application version
- B. The OS version
- C. Hardened baselines
- D. Password policies

**Answer: C**

**Explanation:**

Hardened baselines are a set of security best practices that reduce the vulnerability of a system to exploits by reducing its attack surface<sup>1</sup>. They are also known as security configurations or benchmarks, and they provide a standard level of system hardening for an organization<sup>23</sup>.

Checking the hardened baselines of the servers is the first step that a cloud administrator should take to ensure compliance with the company's security policy.

This is because hardened baselines can help to:

Identify and eliminate common vulnerabilities and exposures (CVEs) that attackers can exploit<sup>1</sup>.

Remove unnecessary or unused services, accounts, software, and ports that can increase the attack surface<sup>23</sup>.

Apply appropriate settings and controls for encryption, authentication, authorization, firewall, and logging<sup>23</sup>.

Streamline audits and testing by reducing complexity and providing a reliable benchmark<sup>23</sup>.

**NEW QUESTION 226**

- (Topic 4)

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

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

**Answer: C**

**Explanation:**

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

**NEW QUESTION 231**

- (Topic 4)

A systems administrator audits a cloud application and discovers one of the key regulatory requirements has not been addressed. The requirement states that if a physical breach occurs and hard drives are stolen, the contents of the drives should not be readable. Which of the following should be used to address the requirement?

- A. Obfuscation
- B. Encryption
- C. EDR
- D. HIPS

**Answer: B**

**Explanation:**

Encryption is the process of transforming data into an unreadable format using a secret key or algorithm. Encryption can be used to protect data at rest or in transit from unauthorized access or theft. If a physical breach occurs and hard drives are stolen, encryption can prevent the contents of the drives from being



readable by anyone who does not have the decryption key or algorithm.  
References: [CompTIA Cloud+ Study Guide], page 236.

**NEW QUESTION 236**

- (Topic 4)

A company is concerned it will run out of VLANs on its private cloud platform in the next couple months, and the product currently offered to customers requires the company to allocate three dedicated, segmented tiers. Which of the following can the company implement to continue adding new customers and to maintain the required level of isolation from other tenants?

- A. GRE
- B. SR-IOV
- C. VXLAN
- D. IPSec

**Answer:** C

**Explanation:**

One possible solution for the company to continue adding new customers and to maintain the required level of isolation from other tenants is to implement VXLAN. VXLAN is a network virtualization technology that can extend VLAN by adding a 24-bit segment ID, which allows up to 16 million unique virtual segments. VXLAN can encapsulate layer 2 Ethernet frames within layer 3 IP packets, and tunnel them across the underlying network. VXLAN can provide logical isolation and security for different tenants, as well as scalability and flexibility for large cloud computing environments<sup>1</sup>.

**NEW QUESTION 241**

- (Topic 4)

A cloud administrator who is troubleshooting DNS issues discovers zone transfers are not occurring between the primary and secondary name servers due to an error in the serial numbers. Which of the following records should the administrator query for the serial number?

- A. PTR
- B. TXT
- C. SOA
- D. SRV

**Answer:** C

**Explanation:**

SOA stands for Start of Authority, and it is a type of DNS record that contains information about a DNS zone, such as the name of the primary name server, the email address of the zone administrator, the serial number of the zone, and other parameters. The serial number is used to indicate when a zone has been updated, and it is incremented by the primary name server whenever a change is made to the zone data. The secondary name servers use the serial number to determine if they need to request a zone transfer from the primary name server to synchronize their data.

References: [CompTIA Cloud+ Study Guide], page 207.

**NEW QUESTION 244**

- (Topic 4)

A systems administrator needs to connect the companys network to a public cloud services provider. Which of the following will BEST ensure encryption in transit for data transfers?

- A. Identity federation
- B. A VPN tunnel
- C. A proxy solution
- D. A web application firewall

**Answer:** B

**Explanation:**

The answer is A. SAML. SAML (Security Assertion Markup Language) is a standard for exchanging authentication and authorization data between different parties, such as a user and a service provider. In a federated cluster, SAML can be used to enable single sign-on (SSO) for users across multiple clusters or cloud providers. SAML relies on the exchange of XML-based assertions that contain information about the user's identity, attributes, and entitlements. If the users' API access tokens have become invalid, it could be because the SAML assertions have expired, been revoked, or corrupted. The administrator should check the SAML configuration and logs to determine the cause of this issue.

Some possible sources of information about SAML and federated clusters are:

? Authenticating | Kubernetes: This page provides an overview of authenticating users in Kubernetes, including using SAML for federated identity.

? Authenticating to the Kubernetes API server - Google Cloud: This page explains how to authenticate to the Kubernetes API server on Google Cloud, including using SAML for federated identity with Google Cloud Identity Platform.

? Error 403 User not authorized when trying to access Azure Databricks API through Active Directory - Stack Overflow: This page discusses a similar issue of users getting an error when trying to access Azure Databricks API using SAML and Active Directory.

**NEW QUESTION 247**

- (Topic 4)

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: B**

**Explanation:**

The correct answer is B. Remove rules 1, 3, and 4.

The objective is to ensure the web servers in the public subnet allow only secure communications. This means that only HTTPS traffic should be allowed on port 443, which is the standard port for secure web connections. HTTPS traffic uses the TCP protocol and encrypts the data between the client and the server.

Rule 1 allows all TCP traffic on any port from any source. This is too permissive and exposes the web servers to potential attacks or unauthorized access. Rule 1 should be removed to restrict the TCP traffic to only port 443.

Rule 3 allows all UDP traffic on any port from any source. UDP is a connectionless protocol that does not guarantee reliable or secure delivery of data. UDP is typically used for streaming media, voice over IP (VoIP), or online gaming, but not for web servers. Rule 3 should be removed to prevent unnecessary or malicious UDP traffic.

Rule 4 allows all ICMP traffic from any source. ICMP is a protocol that is used for diagnostic or control purposes, such as ping or traceroute. ICMP traffic can be used by attackers to scan or probe the network for vulnerabilities or information. Rule 4 should be removed to block ICMP traffic and reduce the attack surface.

Rule 2 allows TCP traffic on port 443 from any source. This is the desired rule that allows secure web communications using HTTPS. Rule 2 should be kept.

Rule 5 denies all other traffic that does not match any of the previous rules. This is the default rule that provides a catch-all protection for the web servers. Rule 5 should be kept. Therefore, the analyst should remove rules 1, 3, and 4 to accomplish the objective.

**NEW QUESTION 251**

- (Topic 4)

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

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

**Answer: C**

**Explanation:**

The correct answer is C. NTP.

NTP stands for Network Time Protocol, which is a standard protocol for synchronizing the clocks of computers over a network. NTP uses a hierarchical, client-server architecture, where a client requests the current time from a server, and the server responds with a timestamp. The client then adjusts its own clock to match the server's time, taking into account the network delay and clock drift. NTP can achieve sub-millisecond accuracy over local area networks and a few milliseconds over the internet<sup>12</sup>.

NTP can help maintain time synchronization between all the resources in a distributed cloud environment, as it allows each resource to get the accurate time from a reliable source. This can help with correlating logs, auditing, security, and other time-sensitive operations. NTP can also handle different time zones, as it uses Coordinated Universal Time (UTC) as the reference time, and each resource can convert UTC to its local time zone<sup>12</sup>.

DNS stands for Domain Name System, which is a protocol for resolving domain names into IP addresses. DNS does not provide any functionality for time synchronization<sup>3</sup>.

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

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

**NEW QUESTION 255**

- (Topic 4)

A company would like to move all its on-premises platforms to the cloud. The company has enough skilled Linux and web-server engineers but only a couple of skilled database administrators. It also has little expertise in managing email services. Which of the following solutions would BEST match the skill sets of available personnel?

- A. Run the web servers in PaaS, and run the databases and email in SaaS.
- B. Run the web servers, databases, and email in SaaS.
- C. Run the web servers in IaaS, the databases in PaaS, and the email in SaaS.

D. Run the web servers, databases, and email in IaaS.

**Answer:** C

**Explanation:**

To answer this question, we need to understand the different types of cloud computing models and how they suit the skill sets of the available personnel. According to Google Cloud, there are three main models for cloud computing: Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS). Each model provides different levels of control, flexibility, and management over the cloud resources and services<sup>1</sup>.

? IaaS: This model provides access to networking features, computers (virtual or on dedicated hardware), and data storage space. It gives the highest level of flexibility and management control over the IT resources and is most similar to existing IT resources that many IT departments and developers are familiar with<sup>2</sup>.

? PaaS: This model provides a complete cloud platform for developing, running, and managing applications without the cost, complexity, and inflexibility of building and maintaining the underlying infrastructure. It removes the need for organizations to manage the hardware and operating systems and allows them to focus on the deployment and management of their applications<sup>2</sup>.

? SaaS: This model provides a completed product that is run and managed by the service provider. It does not require any installation, maintenance, or configuration by the customers. It is typically used for end-user applications that are accessed through a web browser or a mobile app<sup>2</sup>.

Based on these definitions, we can evaluate each option:

? Option A: Run the web servers in PaaS, and run the databases and email in SaaS. This option is not the best match for the skill sets of the available personnel because it does not leverage their expertise in Linux and web-server engineering. Running the web servers in PaaS means that they will have less control and customization over the web server environment and will have to rely on the service provider's platform features. Running the databases and email in SaaS means that they will not need any database administration or email management skills, but they will also have less flexibility and security over their data and communication.

? Option B: Run the web servers, databases, and email in SaaS. This option is not a good match for the skill sets of the available personnel because it does not utilize their skills at all. Running everything in SaaS means that they will have no control or responsibility over any aspect of their cloud environment and will have to depend entirely on the service provider's products. This option may be suitable for some small businesses or non-technical users who do not have any IT skills or resources, but not for a company that has skilled Linux and web-server engineers.

? Option C: Run the web servers in IaaS, the databases in PaaS, and the email in SaaS. This option is the best match for the skill sets of the available personnel because it balances their strengths and weaknesses. Running the web servers in IaaS means that they can use their Linux and web-server engineering skills to configure, manage, and optimize their web server infrastructure according to their needs. Running the databases in PaaS means that they can leverage the service provider's platform features to simplify their database development and administration tasks without having to worry about the underlying hardware and operating systems. Running the email in SaaS means that they can outsource their email services to a reliable and secure service provider without having to invest in or manage their own email infrastructure.

? Option D: Run the web servers, databases, and email in IaaS. This option is not a good match for the skill sets of the available personnel because it puts too much burden on them. Running everything in IaaS means that they will have to handle all aspects of their cloud environment, including networking, computing, storage, security, backup, scaling, patching, etc. This option may be suitable for some large enterprises or highly technical users who have full control and customization over their cloud environment, but not for a company that has only a couple of skilled database administrators and little expertise in managing email services.

Therefore, option C is the correct answer.

**NEW QUESTION 258**

- (Topic 4)

A systems administrator is responsible for upgrading operating systems on VMs that are hosted in a cloud environment. The systems administrator wants to ensure the VMs receive updates for as long as possible. Which of the following should the systems administrator choose?

- A. Stable
- B. Nightly
- C. LTS
- D. Canary
- E. EDR

**Answer:** C

**Explanation:**

LTS stands for Long Term Support, and it is a term that refers to a version of an operating system that receives updates and security patches for a longer period of time than other versions. LTS versions are usually more stable and reliable than other versions, and they are suitable for users who want to avoid frequent changes or compatibility issues. By choosing LTS versions for the VMs that are hosted in a cloud environment, the systems administrator can ensure that the VMs receive updates for as long as possible, and benefit from the enhanced security and performance of the operating system. LTS versions are typically released every few years, and they are supported for several years after their release. For example, Ubuntu 20.04 LTS is supported until April 2025, while Ubuntu 21.04 is supported until January 2022. References: CompTIA Cloud+ CV0-003 Certification Study Guide, Chapter 5, Objective 5.2: Given a scenario, troubleshoot common cloud resource and service issues.

**NEW QUESTION 262**

- (Topic 4)

A cloud engineer is deploying a server in a cloud platform. The engineer reviews a security scan report. Which of the following recommended services should be disabled? (Select TWO).

- A. Telnet
- B. FTP
- C. Remote login
- D. DNS
- E. DHCP
- F. LDAP

**Answer:** AB

**Explanation:**

Telnet and FTP are two services that should be disabled on a cloud server because they are insecure and vulnerable to attacks. Telnet and FTP use plain text to transmit data over the network, which means that anyone who can intercept the traffic can read or modify the data, including usernames, passwords, commands, files, etc. This can lead to data breaches, unauthorized access, or malicious actions on the server<sup>1</sup>.

Instead of Telnet and FTP, more secure alternatives should be used, such as SSH (Secure Shell) and SFTP (Secure File Transfer Protocol). SSH and SFTP use encryption to protect the data in transit and provide authentication and integrity checks for the communication. SSH and SFTP can prevent eavesdropping, tampering, or spoofing of the data and ensure the confidentiality and privacy of the server<sup>2</sup>.

The other options are not services that should be disabled on a cloud server:

? Option C: Remote login. Remote login is a service that allows users to access a remote server from another location using a network connection. Remote login can be useful for managing, configuring, or troubleshooting a cloud server without having to physically access it. Remote login can be secured by using encryption, authentication, authorization, and logging mechanisms<sup>3</sup>.

? Option D: DNS (Domain Name System). DNS is a service that translates human- friendly domain names into IP addresses that can be used to communicate over the Internet. DNS is essential for resolving the names of the cloud resources and services that are hosted on the cloud platform. DNS can be secured by using DNSSEC (DNS Security Extensions), which add digital signatures to DNS records to verify their authenticity and integrity.

? Option E: DHCP (Dynamic Host Configuration Protocol). DHCP is a service that assigns IP addresses and other network configuration parameters to devices on a network. DHCP can simplify the management of IP addresses and avoid conflicts or errors in the network. DHCP can be secured by using DHCP snooping, which filters out unauthorized DHCP messages and prevents rogue DHCP servers from assigning IP addresses.

? Option F: LDAP (Lightweight Directory Access Protocol). LDAP is a service that stores and organizes information about users, devices, and resources on a network. LDAP can provide identity management and access control for the cloud environment. LDAP can be secured by using LDAPS (LDAP over SSL/TLS), which encrypts the LDAP traffic and provides authentication and integrity checks.

#### **NEW QUESTION 266**

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