

## Verified CV0-004 &As - Provide CV0-004 with Correct Answers [Q21-Q39]



Verified CV0-004 Exam Dumps Q&As - Provide CV0-004 with Correct Answers  
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**NO.21** Which of the following technologies should be used by a person who is visually impaired to access data from the cloud?

- \* Object character recognition
- \* Text-to-voice
- \* Sentiment analysis
- \* Visual recognition

Text-to-voice (or text-to-speech) technology should be used by a person who is visually impaired to access data from the cloud. It converts text data into audible speech, allowing visually impaired individuals to receive the information audibly.

**NO.22** 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).

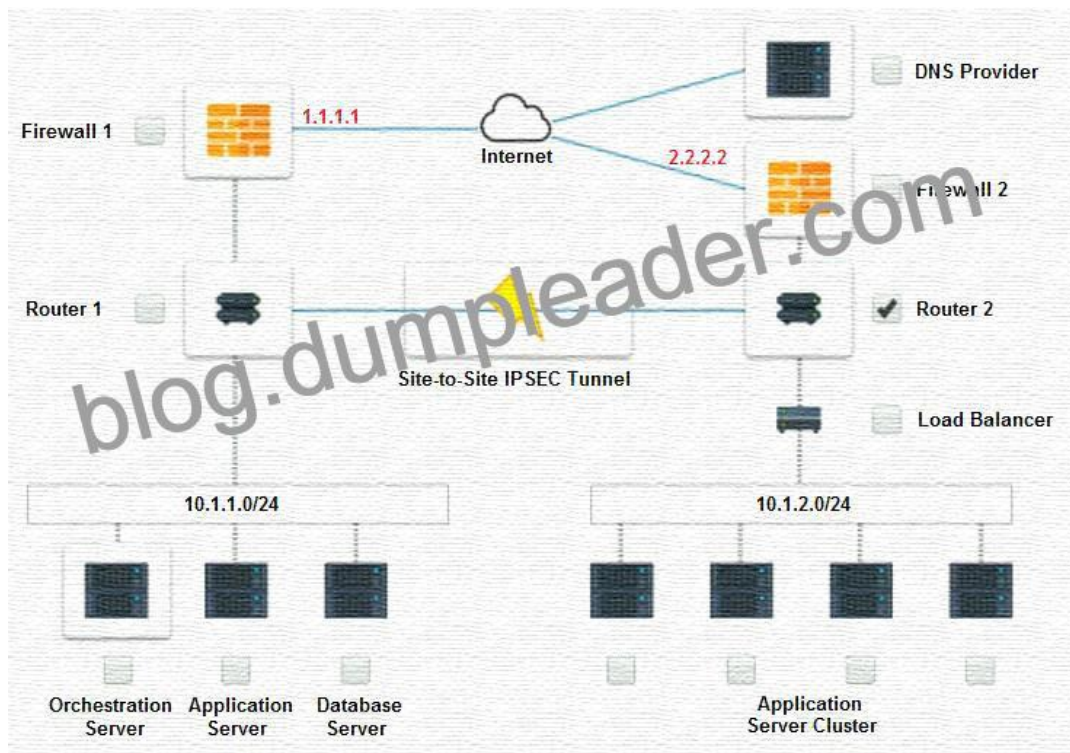
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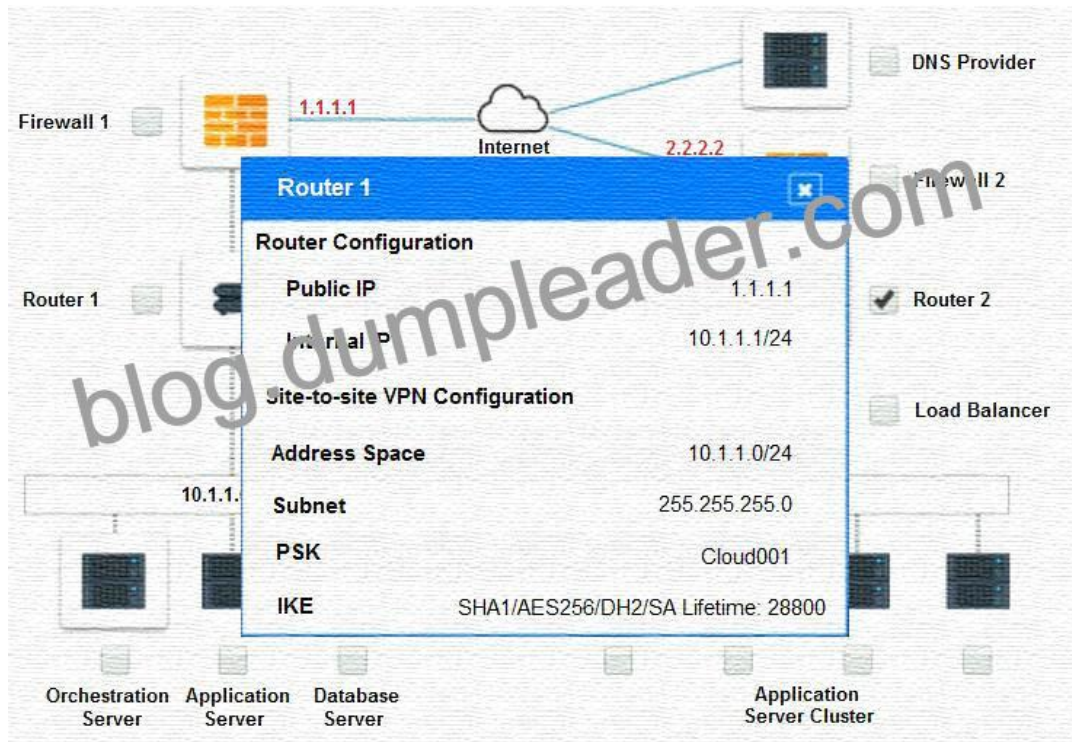
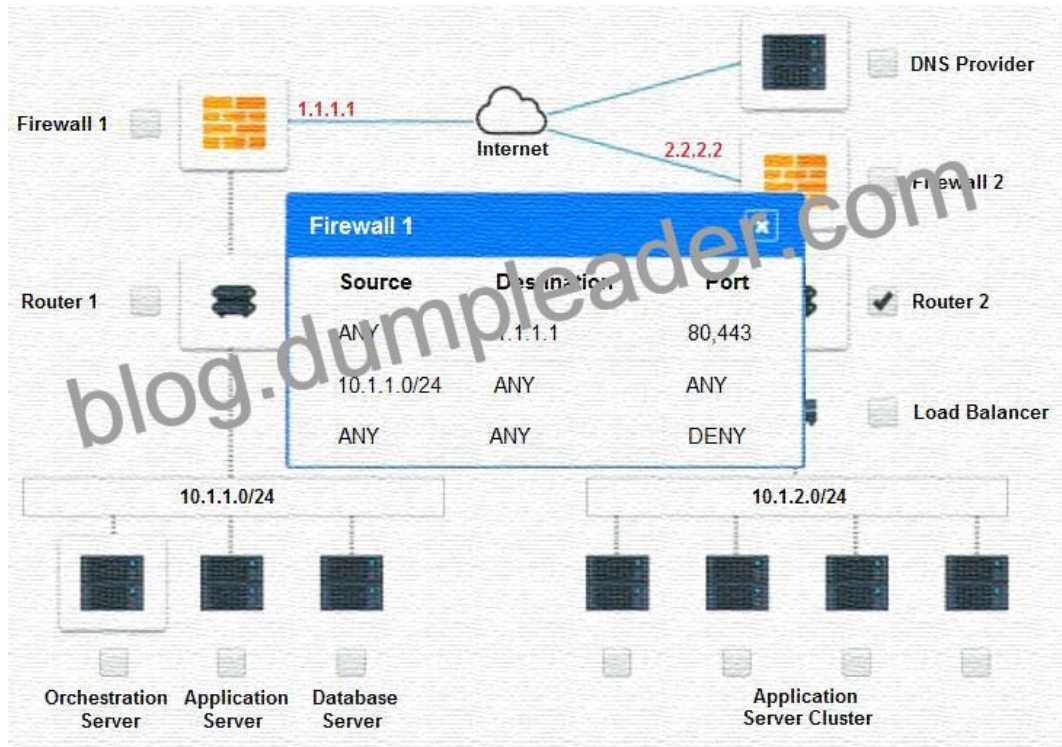
Identify the correct options to provide adequate configuration for hybrid cloud architecture.

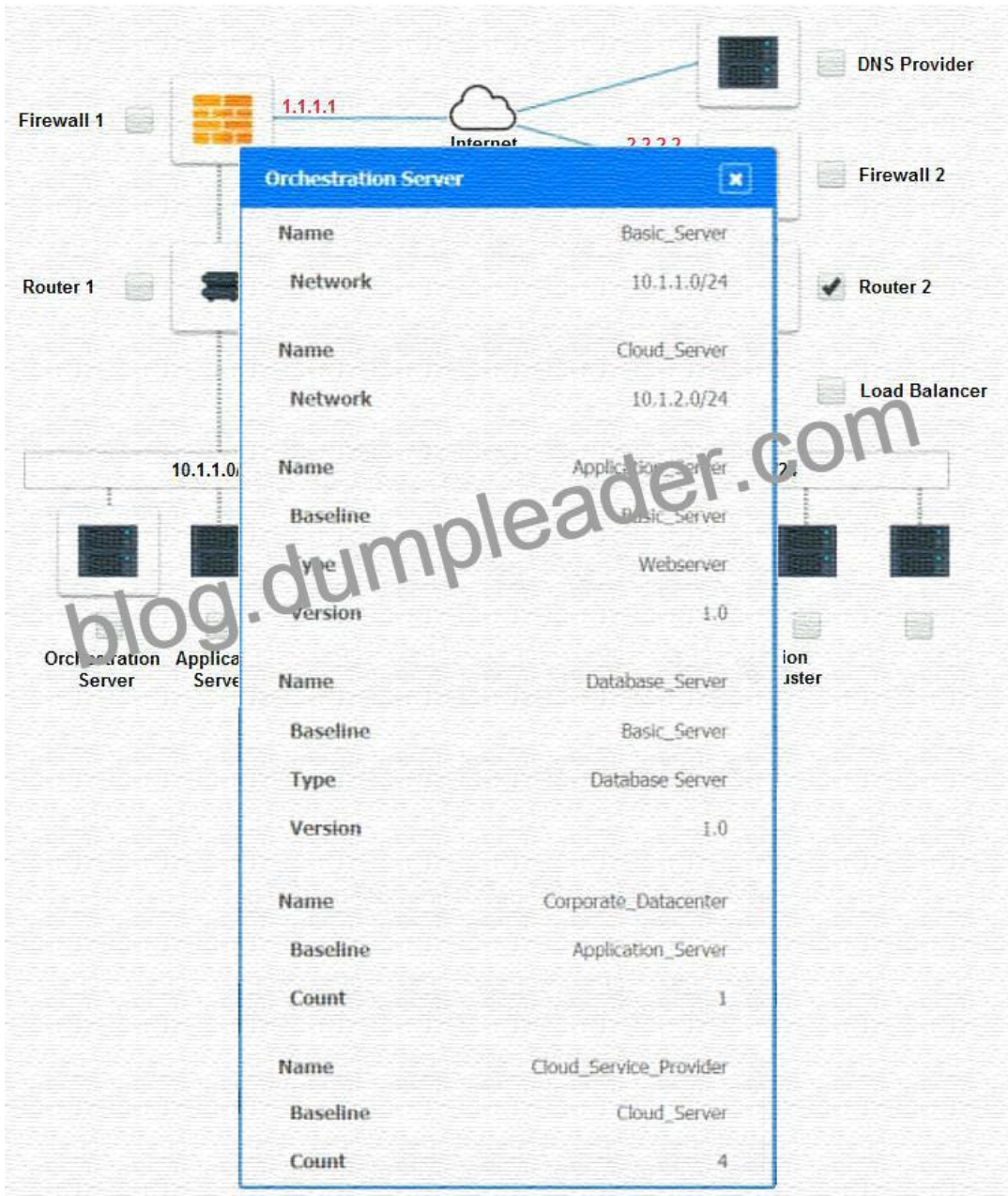
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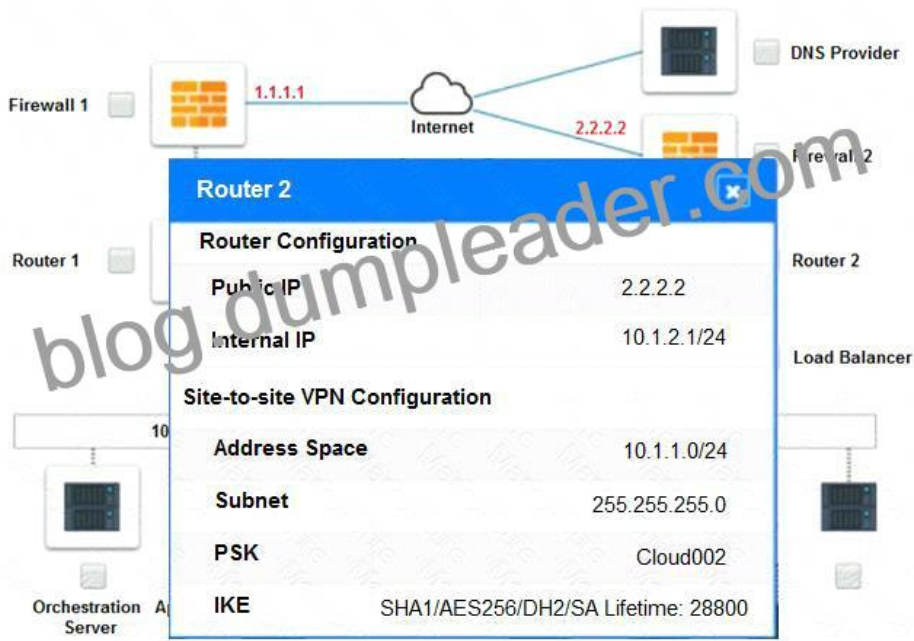
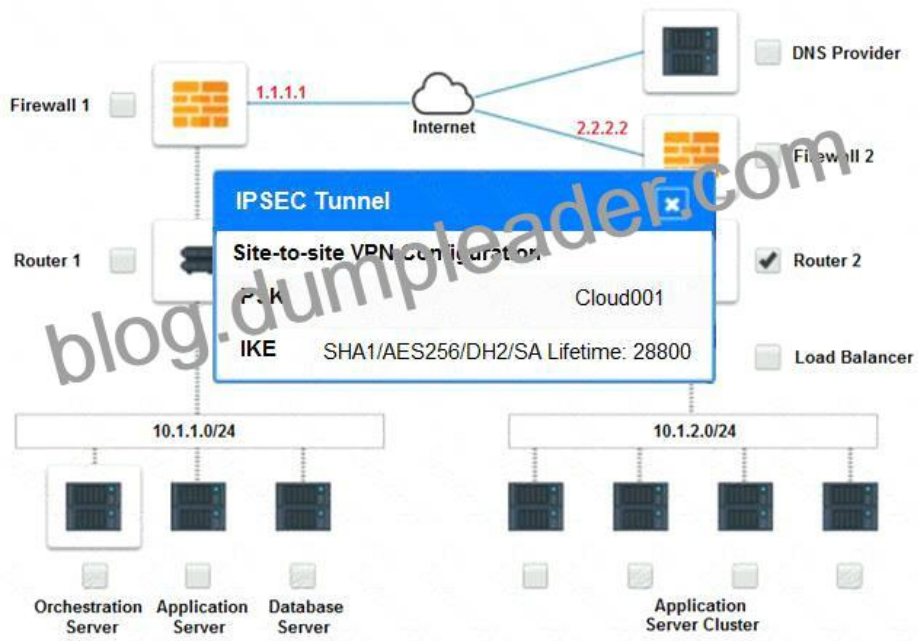
Part 1:

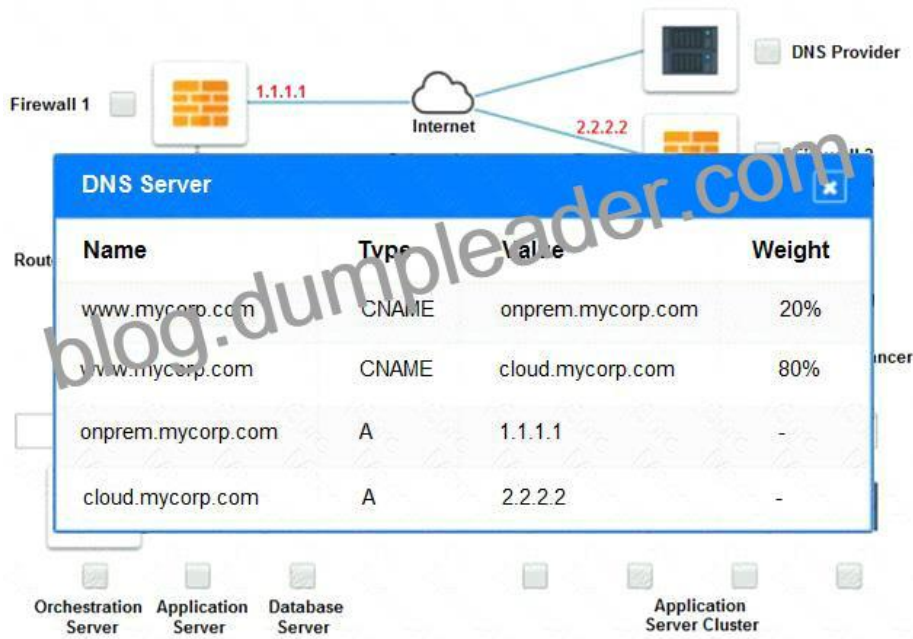
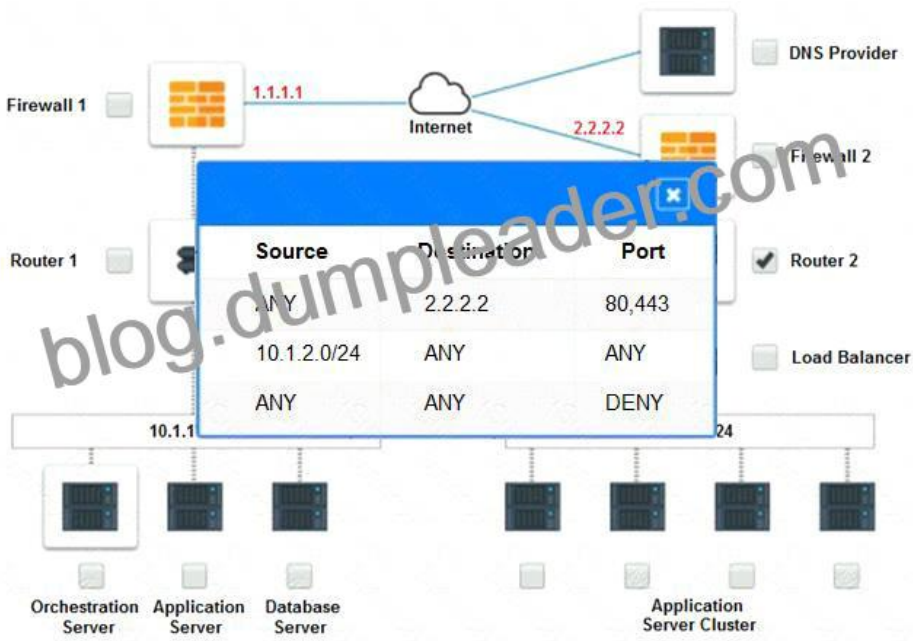
Cloud Hybrid Network Diagram











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 2.2.2.6 to 192.168.0.1.
- 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.

See explanation below.

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 `!234567890!`, while Router 1 has a PSK of

`!0987654321!`. Router 2 has an address space of 10.0.0/8, while Router 1 has an address space of

192.168.0/16. 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 192.168.0/16.

B. Update the PSK (Pre-shared key in Router2)

E. Change the Address Space on Router2

**NO.23** A cloud administrator needs to collect process-level, memory-usage tracking for the virtual machines that are part of an autoscaling group. Which of the following is the best way to accomplish the goal by using cloud-native monitoring services?

- \* Configuring page file/swap metrics
- \* Deploying the cloud-monitoring agent software
- \* Scheduling a script to collect the data
- \* Enabling memory monitoring in the VM configuration

To collect process-level, memory-usage tracking for virtual machines, deploying cloud-monitoring agent software is the best approach. The agent can gather detailed system metrics and send them to the cloud-native monitoring services for analysis and visualization.

**NO.24** A junior cloud administrator was recently promoted to cloud administrator and has been added to the cloud administrator group. The cloud administrator group is the only one that can access the engineering VM. The new administrator unsuccessfully attempts to access the engineering VM. However, the other administrators can access it without issue. Which of the following is the best way to identify the root cause?

- \* Rebooting the engineering VM
- \* Reviewing the administrator's permissions to access the engineering VM
- \* Allowing connections from 0.0.0.0/0 to the engineering VM
- \* Performing a packet capture on the engineering VM

The best way to identify the root cause of why the new cloud administrator cannot access the engineering VM is by reviewing the administrator's permissions. It is possible that, despite being added to the cloud administrator group, the specific permissions to access the engineering VM were not properly configured. References: Permission issues are a common problem in cloud environments, and troubleshooting such issues is part of the cloud management skills discussed in the CompTIA Cloud+ certification

**NO.25** A cloud engineer is troubleshooting a connectivity issue. The application server with IP 192.168.1.10 in one subnet is not connecting to the MySQL database server with IP 192.168.2.20 in a different subnet. The cloud engineer reviews the following information:

Application Server Stateful Firewall

Inbound rules	Outbound rules
PERMIT ANY 443	PERMIT ANY 443
DENY ANY ANY	PERMIT ANY 3306
	PERMIT ANY 53
	DENY ANY ANY



#### Application Server Subnet Routing Table

Destination	Gateway
default	192.168.1.1
192.168.1.0/24	local

#### MySQL Server Stateful Firewall

Inbound rules	Outbound rules
PERMIT 192.168.1.0/32 3306	DENY ANY ANY
DENY ANY ANY	

#### MySQL Server Subnet Routing Table

Destination	Gateway
192.168.2.0/24	192.168.1.1
192.168.1.0/24	local

Which of the following should the cloud engineer address to fix the communication issue?

- \* The Application Server Stateful Firewall
- \* The Application Server Subnet Routing Table
- \* The MySQL Server Stateful Firewall
- \* The MySQL Server Subnet Routing Table

The connectivity issue between the application server and the MySQL database server in different subnets is likely due to the MySQL Server Stateful Firewall's inbound rules. The application server has an IP of

192.168.1.10, but the MySQL server's inbound rules only permit IP 192.168.1.10/32 on port 3306. This rule allows only a single IP address (192.168.1.10) to communicate on port 3306, which is typical for MySQL.

However, if the application server's IP is not 192.168.1.10 or the application is trying to communicate on a different port, it would be blocked. To fix the communication issue, the cloud engineer should address the inbound rules on the MySQL Server Stateful Firewall to ensure that the application server's IP address and the required port are allowed. References: Based on the information provided in the question and general networking principles.

**NO.26** A healthcare organization must follow strict compliance requirements to ensure that PII is not leaked.

The cloud administrator needs to ensure the cloud email system can support this requirement.

Which of the following should the organization enable?

- \* IPS
- \* OLP
- \* ACL
- \* WAF

To ensure that Personally Identifiable Information (PII) is not leaked and to comply with strict healthcare regulations, the organization should enable Data Loss Prevention (DLP). DLP systems are designed to detect and prevent unauthorized access or sharing of sensitive data, making them ideal for securing PII in cloud email systems and ensuring compliance with healthcare industry standards.

Reference: CompTIA Cloud+ content covers governance, risk, compliance, and security aspects of cloud computing, highlighting the role of DLP in safeguarding sensitive information and maintaining compliance in regulated industries like healthcare.

**NO.27** A high-usage cloud resource needs to be monitored in real time on specific events to guarantee its availability. Which of the

following actions should be used to meet this requirement?

- \* Configure a ping command to identify when the cloud instance is out of service.
- \* Create a dashboard with visualizations to filter the status of critical activities.
- \* Collect all the daily activity from the cloud instance and create a dump file for analysis.
- \* Schedule an hourly scan of the network to check for the availability of the resource.

To guarantee real-time monitoring of a high-usage cloud resource, creating a dashboard with visualizations to filter the status of critical activities is effective. This allows for a quick visual assessment of the system's health and performance, enabling immediate action if specific events indicate potential issues with availability.

Reference: Real-time monitoring and the use of dashboards for tracking critical cloud resources are part of the cloud management best practices covered under the CompTIA Cloud+ objectives.

**NO.28** A SaaS provider introduced new software functionality for customers as part of quarterly production enhancements. After an update is implemented, users cannot locate certain transactions from an inbound integration. During the investigation, the application owner finds the following error in the logs:

Error: REST API &#8211; Deprecated call is no longer supported in this release.

Which of the following is the best action for the application owner to take to resolve the issue?

- \* Update the custom integration to use a supported function.
- \* Include the custom integration in the quarterly testing scope.
- \* Ask the users to monitor the quarterly updates.
- \* Revert the application to the last stable quarterly release.

The error message indicates that the SaaS provider has deprecated a function that was previously called by the custom integration. The best action for the application owner to take is to update the custom integration to use a function that is supported in the current release. This is a direct solution to the problem and ensures the custom integration conforms to the updated SaaS provider's API. References: Based on the error message provided and standard practices for dealing with deprecated API calls in a SaaS environment.

**NO.29** A systems administrator wants the VMs on the hypervisor to share CPU resources on the same core when feasible. Which of the following will BEST achieve this goal?

- \* Configure CPU passthrough.
- \* Oversubscribe CPU resources.
- \* Switch from a Type 1 to a Type 2 hypervisor.
- \* Increase instructions per cycle.
- \* Enable simultaneous multithreading.

Simultaneous multithreading (SMT) is a technique that allows a single CPU core to execute multiple threads simultaneously. This can improve the performance of VMs by allowing them to share CPU resources on the same core.

**NO.30** Users have been reporting that a remotely hosted application is not accessible following a recent migration. However, the cloud administrator is able to access the application from the same site as the users. Which of the following should the administrator update?

- \* Cipher suite
- \* Network ACL
- \* Routing table
- \* Permissions

Since the cloud administrator can access the application from the same site but users cannot, it suggests a possible issue with the network routing. The routing table may need to be updated to ensure that traffic from the users' location is correctly directed to the new location of the remotely hosted application after the migration. Reference: CompTIA Network+ Certification Study Guide by Glen E. Clarke.

**NO.31** A cloud administrator deploys new VMs in a cluster and discovers they are getting IP addresses in the range of

169.254.0.0/16. Which of the following is the most likely cause?

- \* The scope has been exhausted.
- \* The network is overlapping.
- \* The VLAN is missing.
- \* The NAT is Improperly configured.

IP addresses in the range of 169.254.0.0/16 are Automatic Private IP Addressing (APIPA) addresses, which devices assign themselves when they are configured to obtain an IP automatically but are unable to reach a DHCP server to get one. The most likely cause for VMs in a cluster to receive APIPA addresses is the exhaustion of the DHCP scope, meaning there are no more available IP addresses in the DHCP range to be assigned.

**NO.32** A cloud service provider requires users to migrate to a new type of VM within three months.

Which of the following is the best justification for this requirement?

- \* Security flaws need to be patched.
- \* Updates could affect the current state of the VMs.
- \* The cloud provider will be performing maintenance of the infrastructure.
- \* The equipment is reaching end of life and end of support.

The best justification for a cloud service provider requiring users to migrate to a new type of VM within a specific time frame is that the equipment is reaching end of life and end of support (EOL/EOS). This means that the older type of VM will no longer receive updates or support, which could include important security patches, so it is necessary to move to newer VM types to maintain security and performance.

**NO.33** Which of the following cloud deployment strategies is best for an organization that wants to run open-source workloads with other organizations that are sharing the cost?

- \* Community
- \* Public
- \* Hybrid
- \* Private

A community cloud deployment strategy is best for an organization that wants to run open-source workloads with other organizations while sharing the cost. Community clouds are collaborative efforts where infrastructure is shared between several organizations with common concerns, which could be regulatory, security, or compliance-related.

Reference: The concept of community clouds is discussed in the domain of Cloud Concepts within the CompTIA Cloud+ exam objectives.

**NO.34** A company's main web application is no longer accessible via the internet. The cloud administrator investigates and discovers the application is accessible locally and only via an IP access. Which of the following was misconfigured?

- \* IP
- \* DHCP
- \* NAT
- \* DNS

When a web application is accessible locally via an IP address but not via the internet, the issue likely lies with the Domain Name System (DNS). DNS is responsible for translating domain names into IP addresses. A misconfiguration in DNS records or failure in DNS resolution can prevent users from accessing the application through its domain name, even though the application itself is running and accessible via its direct IP address. References: In the CompTIA Cloud+ curriculum, understanding cloud concepts and networking fundamentals, including DNS, is crucial for troubleshooting and ensuring applications are accessible and perform optimally in cloud environments.

**NO.35** A cloud engineer needs to deploy a new version of a web application to 100 servers. In the past, new version deployments have caused outages. Which of the following deployment types should the cloud engineer implement to prevent the outages from happening this time?

- \* Rolling
- \* Blue-green
- \* Canary
- \* Round-robin

A canary deployment is a pattern that reduces the risk of introducing a new software version in production by slowly rolling out the change to a small subset of users before rolling it out to the entire infrastructure. It's an effective strategy to prevent outages since it allows for monitoring and quick rollback if issues arise without affecting all users.

Reference: Canary releases are part of deployment strategies that can help mitigate the risk of outages during updates, a concept included in the CompTIA Cloud+ curriculum.

**NO.36** A security engineer identifies a vulnerability in a containerized application. The vulnerability can be exploited by a privileged process to read the content of the host's memory. The security engineer reviews the following Dockerfile to determine a solution to mitigate similar exploits:

```
FROM alpine:3.17
RUN apk update && apk upgrade
COPY . /myapp
ENTRYPOINT ["/myapp/app"]
```

Which of the following is the best solution to prevent similar exploits by privileged processes?

- \* Adding the USER myappuser instruction
- \* Patching the host running the Docker daemon
- \* Changing FROM alpine:3.17 to FROM alpine:latest
- \* Running the container with the read-only filesystem configuration

Adding the USER myappuser instruction to the Dockerfile is the best solution to prevent similar exploits by privileged processes. This instruction ensures that the container runs as a non-privileged user instead of the root user, significantly reducing the risk of privileged exploits. Running containers with least privilege principles minimizes the potential impact of vulnerabilities, enhancing the overall security posture of the containerized environment.

Reference: The CompTIA Cloud+ framework includes security concerns, measures, and concepts for cloud operations, highlighting the importance of container security practices, such as running containers as non-root users to prevent unauthorized access and exploitation.

**NO.37** Which of the following strategies requires the development of new code before an application can be successfully migrated to a cloud provider?

- \* Refactor
- \* Re-architect
- \* Rehost
- \* Replatform

Refactoring requires the development of new code before an application can be successfully migrated to a cloud provider. It often involves restructuring and optimizing the existing code without changing its external behavior to fit into the new cloud environment.

Reference: Application migration strategies and the requirements for each, like refactoring, are included in cloud migration best practices covered in CompTIA Cloud+.

**NO.38** A cloud engineer is troubleshooting an application that consumes multiple third-party REST APIs. The application is randomly experiencing high latency. Which of the following would best help determine the source of the latency?

- \* Configuring centralized logging to analyze HTTP requests
- \* Running a flow log on the network to analyze the packets
- \* Configuring an API gateway to track all incoming requests
- \* Enabling tracing to detect HTTP response times and codes

Enabling tracing in the application can help determine the source of high latency by providing detailed information on HTTP request and response times, as well as response codes. This can identify which API calls are experiencing delays and contribute to overall application latency, allowing for targeted troubleshooting and optimization.

**NO.39** A company's engineering department is conducting a month-long test on the scalability of an in-house-developed software that requires a cluster of 100 or more servers. Which of the following models is the best to use?

- \* PaaS
- \* SaaS
- \* DBaaS
- \* IaaS

For testing the scalability of an in-house-developed software that requires a cluster of 100 or more servers, Infrastructure as a Service (IaaS) is the best model. IaaS provides the necessary compute resources and allows the engineering department to configure the environment as needed for their specific test without the constraints that might be present in PaaS or SaaS offerings.

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