CompTIA

Exam Questions CV0-004

CompTIA Cloud+

NEW QUESTION 1
A banking firm's cloud server will be decommissioned after a successful proof of concept using mirrored data. Which of the following is the best action to take regarding the storage used on the decommissioned server?

A. Keep it temporarily.
B. Archive it.
C. Delete it.
D. Retain it permanently

Answer: B

Explanation:
When a cloud server is decommissioned after a proof of concept, the best action to take regarding the storage used on the server is to archive it. Archiving ensures that the data is keptin a less accessible but secure storage service, which may be required for regulatory or compliance reasons, especially for a banking firm.References: Data management strategies, including archiving decommissioned data, are covered in the CompTIA Cloud+ examination objectives, particularly within the domain of management and technical operations.

NEW QUESTION 2
A cloud solutions architect needs to have consistency between production, staging, and development environments. Which of the following options will best achieve this goal?

A. Using Terraform templates with environment variables
B. Using Grafana in each environment
C. Using the ELK stack in each environment
D. Using Jenkins agents in different environments

Answer: A

Explanation:
Terraform templates with environment variables can ensure consistency across different environments such as production, staging, and development. Terraform allows for infrastructure as code, which can be used to define and maintain infrastructure with consistency.References: CompTIA Cloud+ Certification Study Guide (Exam CV0-004) by Scott Wilson and Eric Vanderburg.

NEW QUESTION 3
A cross-site request forgery vulnerability exploited a web application that was hosted in a public laaS network. A security engineer determined that deploying a WAF in blocking mode at a CDN would prevent the application from being exploited again. However, a week after implementing the WAF, the application was exploited again. Which of the following should the security engineer do to make the WAF control effective?

A. Configure the DDoS protection on the CDN.
B. Install endpoint protection software on the VMs
C. Add an ACL to the VM subnet.
D. Deploy an IDS on the laaS network.

Answer: C

Explanation:
After a WAF deployment fails to prevent an exploit, adding an Access Control List (ACL) to the Virtual Machine (VM) subnet can be an effective control. ACLs provide an additional layer of security by explicitly defining which traffic can or cannot enter a network segment. By setting granular rules based on IP addresses, protocols, and ports, ACLs help to restrict access to resources, thereby mitigating potential exploits and enhancing the security of the IaaS network.References: CompTIA Cloud+ materials cover
governance, risk, compliance, and security for the cloud, including the implementation of network security controls like ACLs, to protect cloud environments from unauthorized access and potential security threats.

NEW QUESTION 4
Between 11:00 a.m. and 1:00 p.m. on workdays, users report that the sales database is either not accessible, sluggish, or difficult to connect to. A cloud administrator discovers that during the impacted time, all hypervisors are at capacity. However, when 70% of the users are using the same database, those issues are not reported. Which of the following is the most likely cause?

A. Oversubscription
B. Resource allocation
C. Sizing issues
D. Service quotas

Answer: A

Explanation:
The most likely cause of accessibility and performance issues during specific times is oversubscription. This happens when more users are trying to access the database than the hypervisors can handle, due to their resources being allocated to more virtual machines or processes than they can efficiently support.References: Resource management concepts such as avoiding oversubscription are covered under the Management and Technical Operations domain of the CompTIA Cloud+ exam objectives.

NEW QUESTION 5
A manager wants information about which users signed in to a certain VM during the past month. Which of the following can the cloud administrator use to obtain this information?

A. Retention
B. Alerting

C. Aggregation
D. Collection

Answer: D

Explanation:
To obtain information about which users signed in to a certain VM during the past month, a cloud administrator can use log collection. Log collection involves gathering and storing logs from various sources, including VMs, to provide historical data on system access and activity, which can then be analyzed to identify user login instances.References: The CompTIA Cloud+ certification emphasizes the importance of monitoring and visibility in cloud environments, which includes log collection and analysis as key components of operational management and security monitoring.

NEW QUESTION 6
A cloud engineer is running a latency-sensitive workload that must be resilient and highly available across multiple regions. Which of the following concepts best addresses these
requirements?

A. Cloning
B. Clustering
C. Hardware passthrough
D. Stand-alone container

Answer: B

Explanation:
Clustering refers to the use of multiple servers/computers to form what appears to be a single system. This concept is key for achieving high availability and resilience, especially for latency-sensitive workloads. By distributing the workload across a cluster that spans multiple regions, the system can continue to operate even if one or more nodes fail, thus maintaining performance and availability. References: CompTIA Cloud+ Guide to Cloud Computing (ISBN: 978-1-64274-282-2)

NEW QUESTION 7
Which of the following is a difference between a SAN and a NAS?

A. A SAN works only with fiber-based networks.
B. A SAN works with any Ethernet-based network.
C. A NAS uses a faster protocol than a SAN
D. A NAS uses a slower protocol than a SAN.

Answer: D

Explanation:
A NAS (Network Attached Storage) typically uses file-level protocols such as NFS or SMB, which are generally considered slower and less efficient than the block-level protocols used by SANs (Storage Area Networks), such as iSCSI or Fibre Channel. SANs are designed for high performance and low latency, making them more suitable for applications requiring fast and efficient storage access.

NEW QUESTION 8
Which of the following network types allows the addition of new features through the use of network function virtualization?

A. Local area network
B. Wide area network
C. Storage area network
D. Software-defined network

Answer: D

Explanation:
A Software-Defined Network (SDN) is a network approach that allows the addition of new features through software configurations rather than hardware updates, making use of network function virtualization (NFV). NFV decouples network functions from proprietary hardware appliances, so they can run in software, which aligns with the flexibility offered by SDN. References: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Network Management

NEW QUESTION 9
A cloud engineer is troubleshooting an application that consumes multiple third-party REST APIs. The application is randomly expenenang high latency. Which of the following would best help determine the source of the latency?

A. Configuring centralized logging to analyze HTTP requests
B. Running a flow log on the network to analyze the packets
C. Configuring an API gateway to track all incoming requests
D. Enabling tracing to detect HTTP response times and codes

Answer: D

Explanation:
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.

NEW QUESTION 10
A cloud architect is preparing environments to develop a new application that will process sensitive data. The project team consists of one internal developer, two

external consultants, and three testers. Which of the following is the most important security control for the cloud architect to consider implementing?

A. Setting up private development, public development, and testing environments
B. Segregating environments for internal and external teams
C. Configuring DDoS protection to mitigate the risk of downtime
D. Using IAM and ACL in order to bolster DLP

Answer: D

Explanation:
In a project handling sensitive data with a mix of internal and external team members, implementing Identity and Access Management (IAM) and Access Control Lists (ACL) is crucial for Data Loss Prevention (DLP). These controls ensure that only authorized individuals have access to specific resources, and actions are governed according to the principle of least privilege, minimizing the risk of data leakage or unauthorized access.

NEW QUESTION 10
The change control board received a request to approve a configuration change 10 deploy in the cloud production environment. Which of the following should have already been competed?

A. Penetration test
B. End-to-end security testing
C. Cost benefit analysis
D. User acceptance testing

Answer: D

Explanation:
Before a configuration change is deployed in the cloud production environment, it is crucial to conduct User Acceptance Testing (UAT). UAT involves testing the system by the end-users or clients to ensure it can handle required tasks in real-world scenarios, according to specifications. This testing is the final stage before the change is approved for production, ensuring that all functionalities meet user requirements and the system is ready for deployment.References: The CompTIA Cloud+ certification highlights the significance of various testing phases, including UAT, as part of the cloud deployment process to validate the system's readiness and functionality for end-users.

NEW QUESTION 11
An organization wants to ensure its data is protected in the event of a natural disaster. To support this effort, the company has rented a colocation space in another part of the country. Which of the following disaster recovery practices can be used to best protect the data?

A. On-site
B. Replication
C. Retention
D. Off-site

Answer: D

Explanation:
For an organization looking to protect its data in the event of a natural disaster, the best disaster recovery practice would be off-site replication. By renting a colocation space in another part of the country, the company can maintain copies of their data and critical systems in a geographically separate location, ensuring they are not affected by the same disaster. References: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Disaster Recovery

NEW QUESTION 13
Servers in the hot site are clustered with the main site.

A. Network traffic is balanced between the main site and hot site servers.
B. Offline server backups are replicated hourly from the main site.
C. All servers are replicated from the main site in an online status.
D. Which of the following best describes a characteristic of a hot site?

Answer: C

Explanation:
When servers in a hot site are clustered with the main site, it indicates that all servers are replicated from the main site in an online status. This means that the hot site maintains a live, real-time copy of data and applications, ensuring immediate availability in the event of a failure at the main site. Unlike options A and B, which describe load balancing and backup strategies respectively, clustering with a hot site as described in option C ensures that the hot site can take over with minimal downtime, maintaining business continuity.
References: CompTIA Cloud+ CV0-004 Study Guide and Official CompTIA Content

NEW QUESTION 15
A systems administrator notices a surge of network traffic is coming from the monitoring server. The administrator discovers that large amounts of data are being downloaded to an external source. While investigating, the administrator reviews the following logs:

Protocol	Local address	Foreign address	State
TCP	10.181.12.5:20	172.17.250.12	ESTABLISHED
TCP	10.181.12.5:22	172.32.58.39	ESTABLISHED
TCP	10.181.12.5:443	172.30.252.204	ESTABLISHED
TCP	10.181.12.5:4443	10.11.15.82	ESTABLISHED
TCP	10.181.12.5:8048	172.24.255.192	TIME_WAIT

Which of the following ports has been compromised?

A. Port 20
B. Port 22
C. Port 443
D. Port 4443
E. Port 8048

Answer: E

Explanation:
Based on the logs provided, the port that has been compromised is Port 8048. The state "TIME_WAIT" indicates that this port was recently used to establish a connection that has now ended. This could be indicative of the recent activity where large amounts of data were downloaded to an external source, suggesting a potential security breach. References: CompTIA Cloud+ Study Guide (Exam CV0-004) by Todd Montgomery and Stephen Olson

NEW QUESTION 17
An DevOps engineer is receiving reports that users can no longer access the company's web application after hardening of a web server. The users are receiving the following error:
ERR_SSLJ/ERSION_OR_CIPHER_MISMATCH.
Which of the following actions should the engineer take to resolve the issue?

A. Restart the web server.
B. Configure TLS 1.2 or newer.
C. Update the web server.
D. Review logs on the WAF

Answer: B

Explanation:
To resolve the ERR_SSL_VERSION_OR_CIPHER_MISMATCH error after hardening a web server, the engineer should configure the server to use TLS 1.2 or newer. This error often occurs when the server or client supports an outdated version of SSL/TLS or incompatible cipher suites. Updating to a modern, secure version of TLS ensures compatibility and enhances security.References: The CompTIA Cloud+ certification includes governance, risk, compliance, and security for the cloud, emphasizing the importance of implementing up-to-date security protocols like TLS to protect data in transit and ensure secure communications in cloud environments.

NEW QUESTION 21
Which of the following would allow a cloud engineer to flatten a deeply nested JSON log to improve readability for analysts?

A. Grafana
B. Kibana
C. Elasticsearch
D. Logstash

Answer: D

Explanation:
Logstash can be used to flatten a deeply nested JSON log, which would improve readability for analysts. Logstash is a data processing pipeline that ingests data from various sources, transforms it, and then sends it to a "stash" like Elasticsearch. References: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Cloud Data Management

NEW QUESTION 23
A cloud engineer has provisioned a VM for a high-frequency trading application. After the VM is put into production, users report high latency in trades. The engineer checks the last six hours of VM metrics and sees the following:
• CPU utilization is between 30% to 60%.
• Networkln is between 50Kbps and 70Kbps.
• NetworkOut is between 3.000Kpbs and 5.000Kbps.
• DiskReadOps is at 30.
• DiskWriteOps is at 70
• Memory utilization is between 50% and 70%.
Which of the following steps should the engineer take next to solve the latency issue?

A. Move to a network-optimized instance type as the network throughput is not enough.
B. Modify the disk IOPS to a higher value as the disk IO is being bottlenecked at 100 IOPS.
C. Increase the memory of the instance as the high-frequency trading application requires more RAM.
D. Increase the instance size to allocate more vCPUs as the CPU utilization is very high.

Answer: A

Explanation:
Since the NetworkOut is significantly higher than NetworkIn and considering the nature of a high-frequency trading application, the issue most likely lies with network throughput. Moving to a network-optimized instance type would provide higher network bandwidth, which can reduce latency in trades.References: This solution is derived from the Management and Technical Operations domain of the CompTIA Cloud+ objectives, focusing on performance optimization for cloud services.

NEW QUESTION 25
Which of the following are best practices when working with a source control system? (Select two).

A. Merging code often
B. Pushing code directly to production
C. Performing code deployment
D. Maintaining one branch for all features
E. Committing code often
F. Initiating a pull request

Answer: AE

Explanation:
Best practices when working with a source control system include merging code often to ensure that changes from different team members are integrated regularly, reducing integration issues. Committing code often is also recommended to save small changes frequently, which helps in tracking changes and resolving issues more effectively.References: Source control system best practices are part of the software development and deployment guidelines discussed in the CompTIA Cloud+ examination objectives.

NEW QUESTION 27
A cloud infrastructure administrator updated the IP tables to block incoming connections and outgoing responses to 104.225.110.203. Which of the following vulnerability
management steps is this an example of?

A. Scanning scope
B. Remediation
C. Identification
D. Assessment

Answer: B

Explanation:
Updating the IP tables to block connections to a specific IP address as a response to vulnerabilities is an example of remediation. Remediation involves taking direct action to fixvulnerabilities, such as by applying patches, changing configurations, or, in this case, updating firewall rules to block potentially harmful traffic. References: CompTIA Cloud+ resources and vulnerability management processes

NEW QUESTION 28
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?

A. Rebooting the engineering VM
B. Reviewing the administrator's permissions to access the engineering VM
C. Allowing connections from 0.0.0.070 to the engineering VM
D. Performing a packet capture on the engineering VM

Answer: B

Explanation:
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, andtroubleshooting such issues is part of the cloud management skills discussed in the CompTIA Cloud+ certification

NEW QUESTION 30
A company wants to implement a work environment that will have low operational overhead and highly accessible enterprise resource planning, email, and data resources. Which of the following cloud service models should the company implement?

A. laaS
B. PaaS
C. DBaaS
D. SaaS

Answer: D

Explanation:

A company that requires low operational overhead and highly accessible enterprise resources would benefit from implementing Software as a Service (SaaS). SaaS provides access to applications hosted in the cloud, eliminating the need for internal infrastructure or application development, which aligns with the requirement of having low operational overhead. References: CompTIA Cloud+ Study Guide (Exam CV0-004) by Todd Montgomery and Stephen Olson

NEW QUESTION 33

SIMULATION

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).

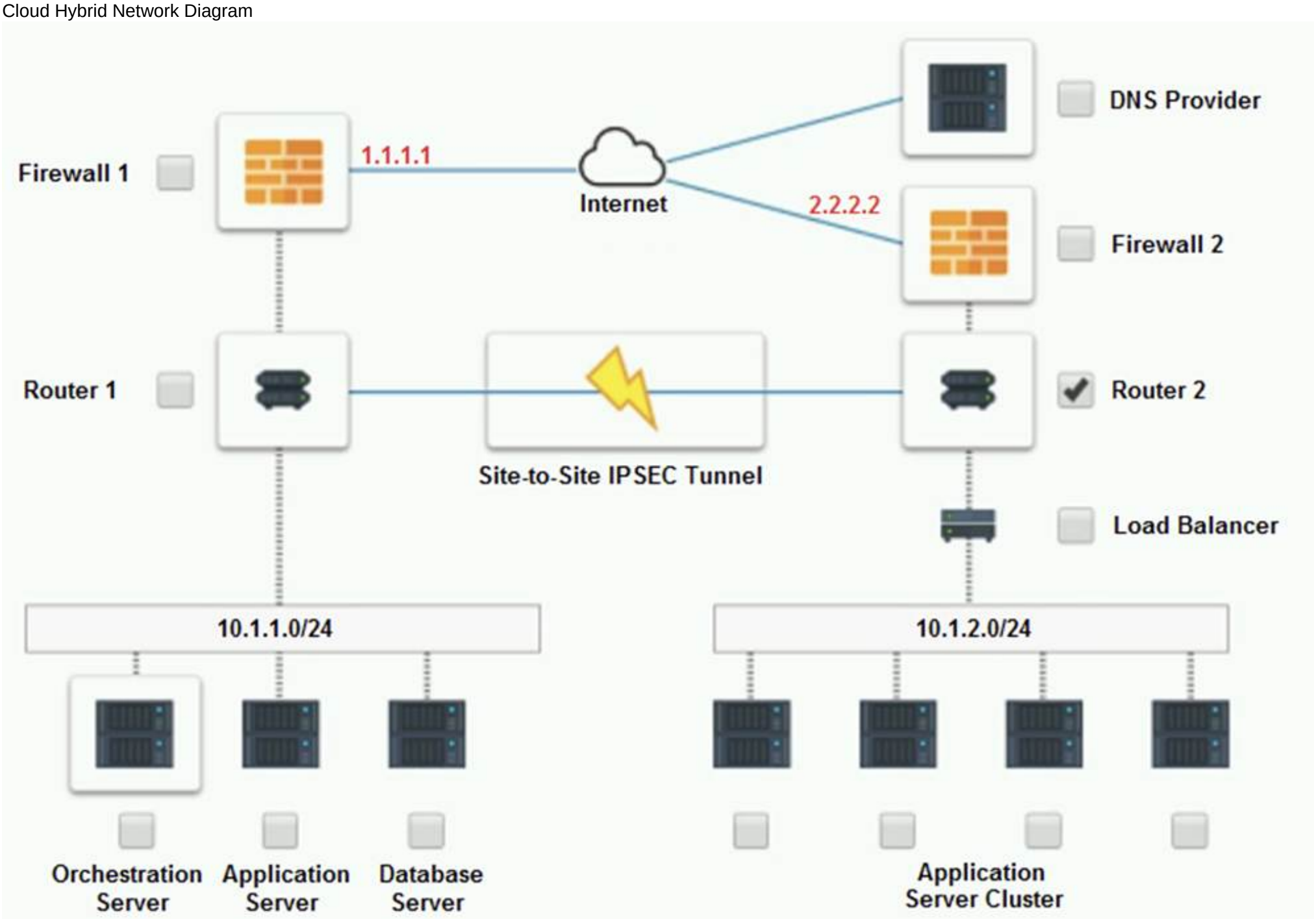
Part 2:

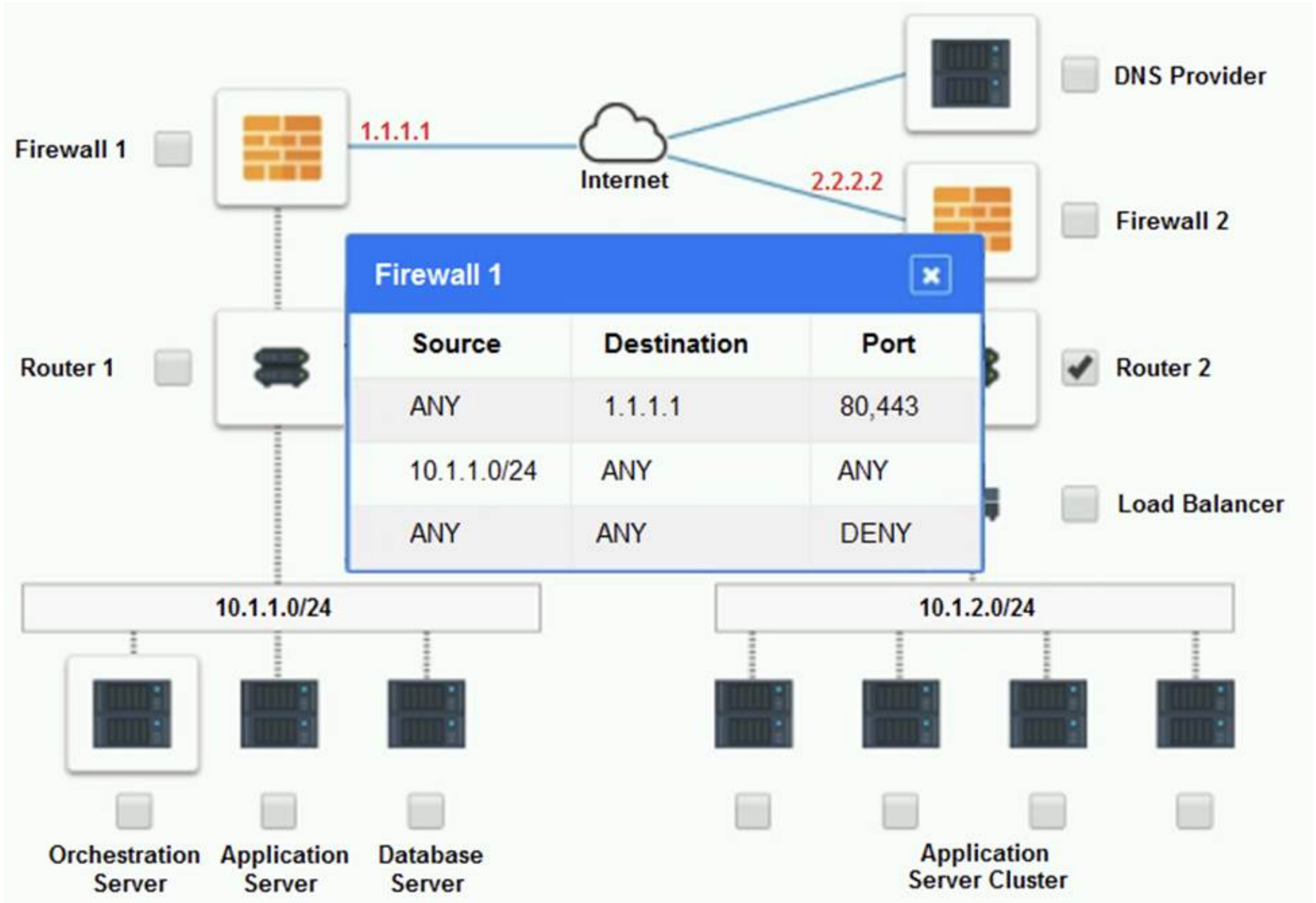
- Identify the correct options to provide adequate configuration for hybrid cloud architecture.

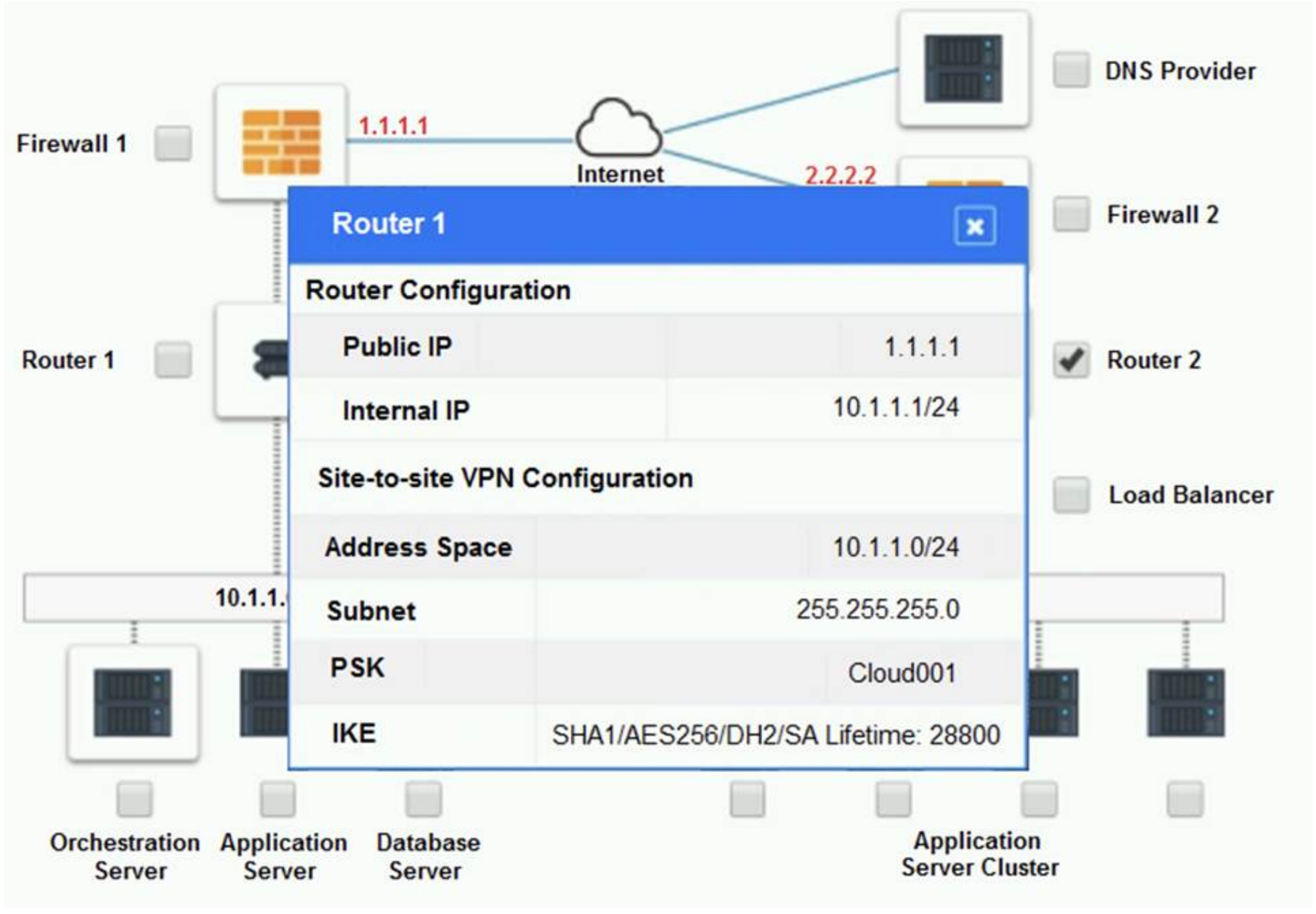
If at any time you would like to bring back the initial state of the simulation, please click the Reset All button.

Part 1:

Cloud Hybrid Network Diagram




Firewall 1
1.1.1.1
Internet
2.2.2.2
DNS Provider
Firewall 2
Router 1
Router 2
Load Balancer
Firewall 1
Source
Destination
Port
ANY
1.1.1.1
80,443
10.1.1.0/24
ANY
ANY
ANY
ANY
DENY
10.1.1.0/24
10.1.2.0/24
Orchestration Server
Application Server
Database Server
Application Server Cluster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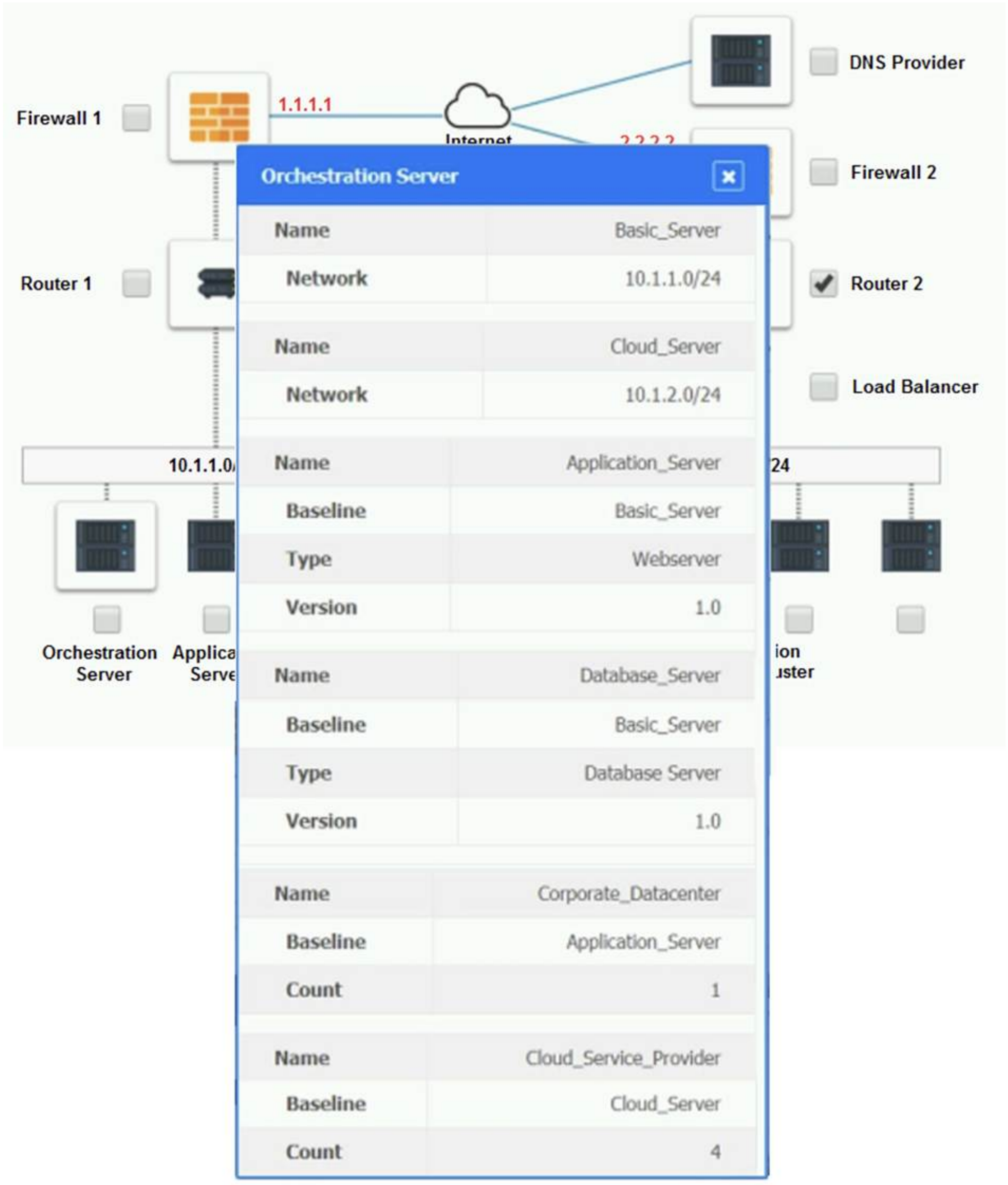
1.1.1.1
Internet
2.2.2.2
DNS Provider
Firewall 2
Router 1
Router 2
Load Balancer
Router 1
Router Configuration
Public IP
1.1.1.1
Internal IP
10.1.1.1/24
Site-to-site VPN Configuration
Address Space
10.1.1.0/24
Subnet
255.255.255.0
PSK
Cloud001
IKE
SHA1/AES256/DH2/SA Lifetime: 28800
Orchestration Server
Application Server
Database Server
Application Server Cluster


DNS Provider
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1.1.1.1
Internet
2.2.2.2
Firewall 2
Router 1
Router 2
Load Balancer
10.1.1.0/
24
Orchestration Server
Applica
Serve
ion
uster
Orchestration Server
Name Basic_Server
Network 10.1.1.0/24
Name Cloud_Server
Network 10.1.2.0/24
Name Application_Server
Baseline Basic_Server
Type Webserver
Version 1.0
Name Database_Server
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Baseline Application_Server
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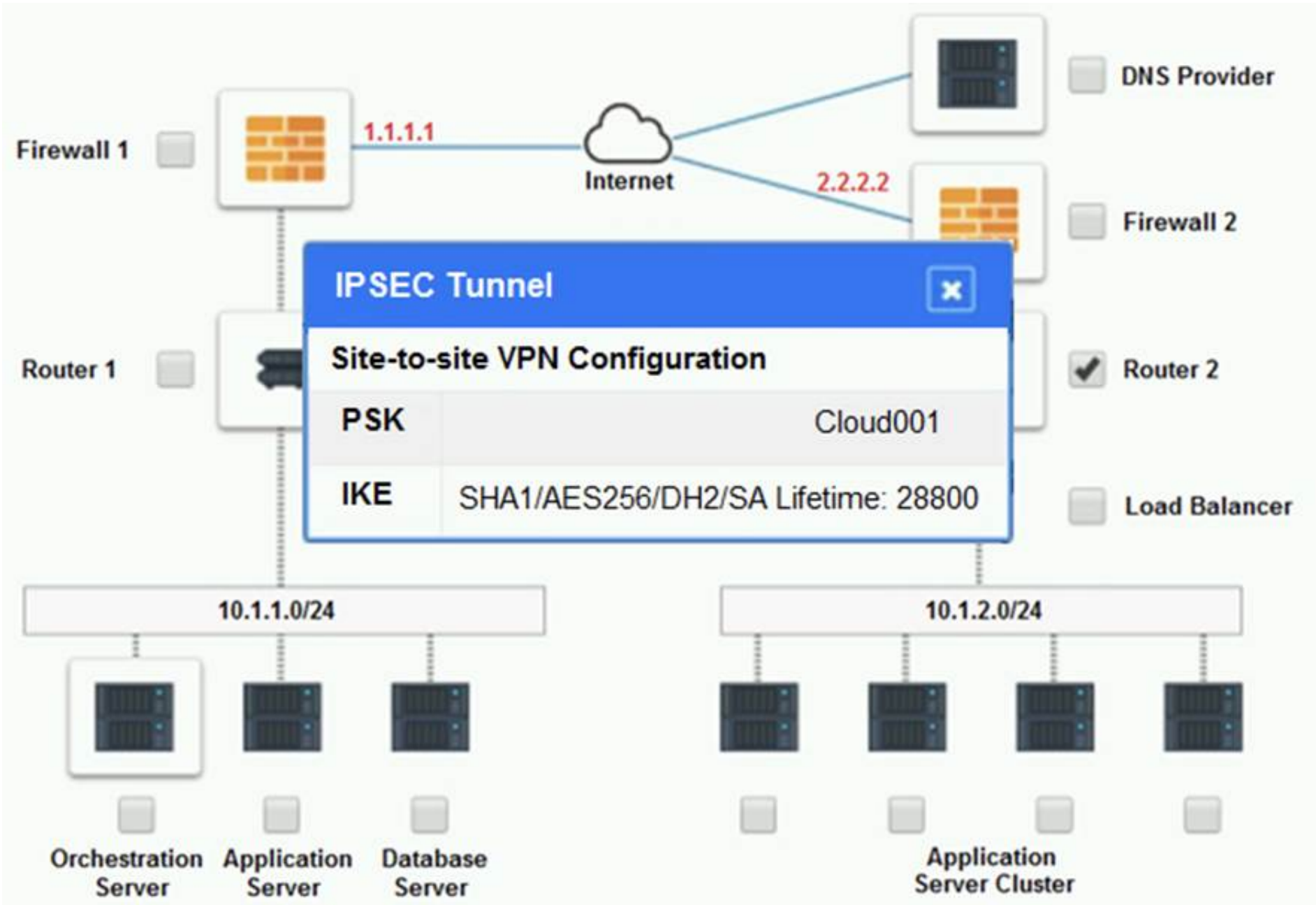
Name Cloud_Service_Provider
Baseline Cloud_Server
Count 4


DNS Provider
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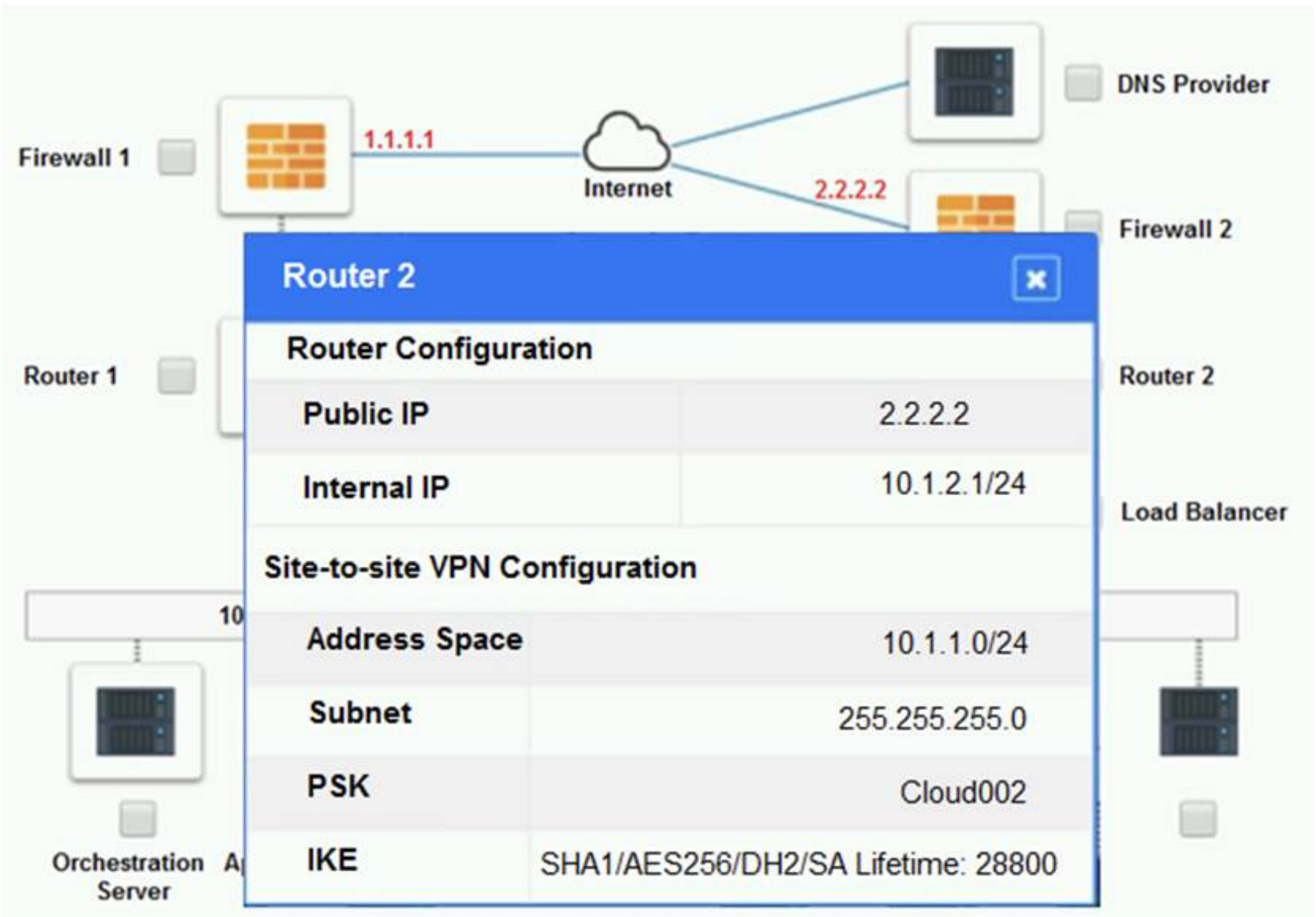
Internet
2.2.2.2
Firewall 2
IPSEC Tunnel
Site-to-site VPN Configuration
PSK
Cloud001
IKE
SHA1/AES256/DH2/SA Lifetime: 28800
Router 1
Router 2
Load Balancer
10.1.1.0/24
10.1.2.0/24
Orchestration Server
Application Server
Database Server
Application Server Cluster


DNS Provider
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1.1.1.1
Internet
2.2.2.2
Firewall 2
Router 2
Router Configuration
Public IP
2.2.2.2
Internal IP
10.1.2.1/24
Site-to-site VPN Configuration
Address Space
10.1.1.0/24
Subnet
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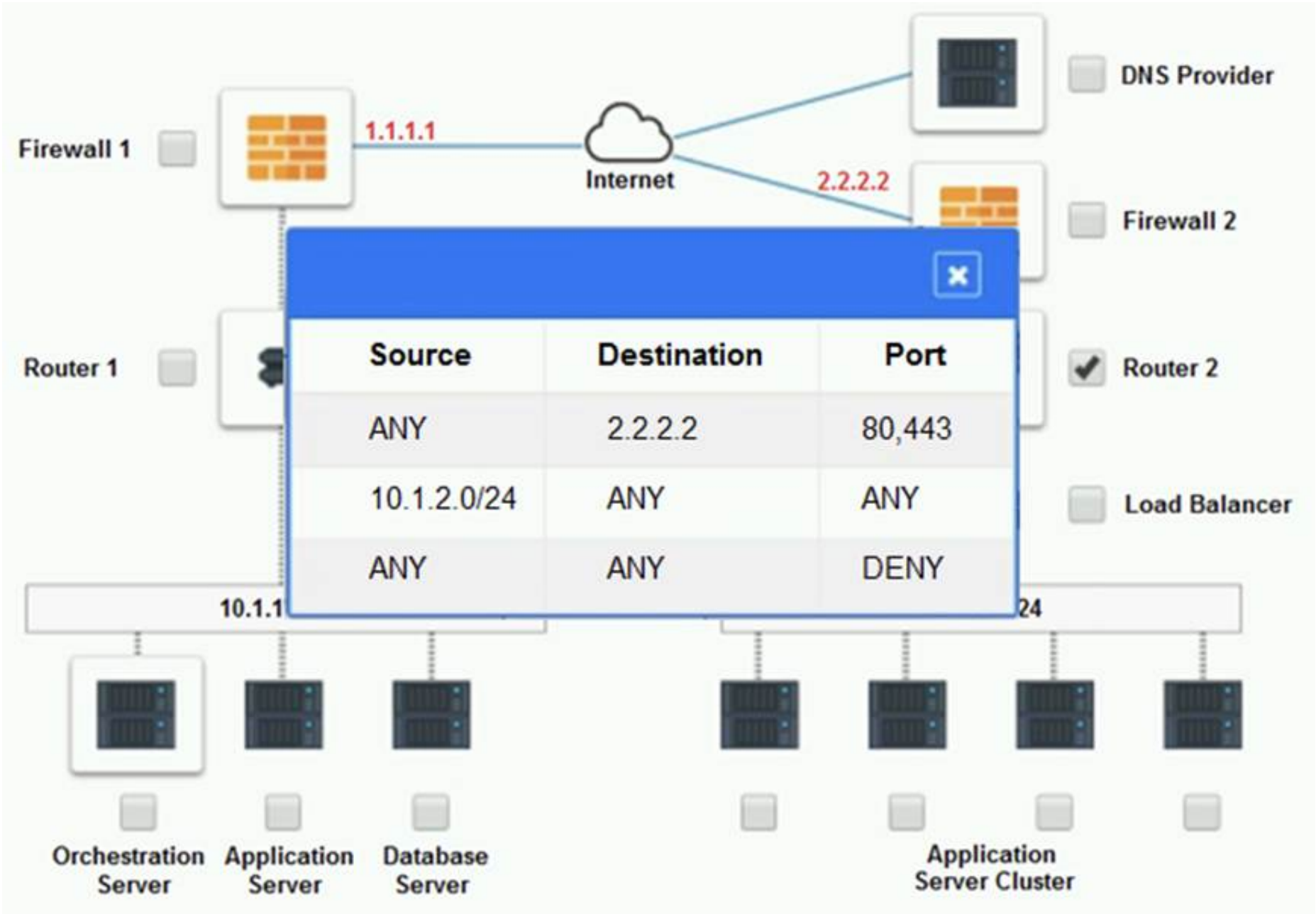
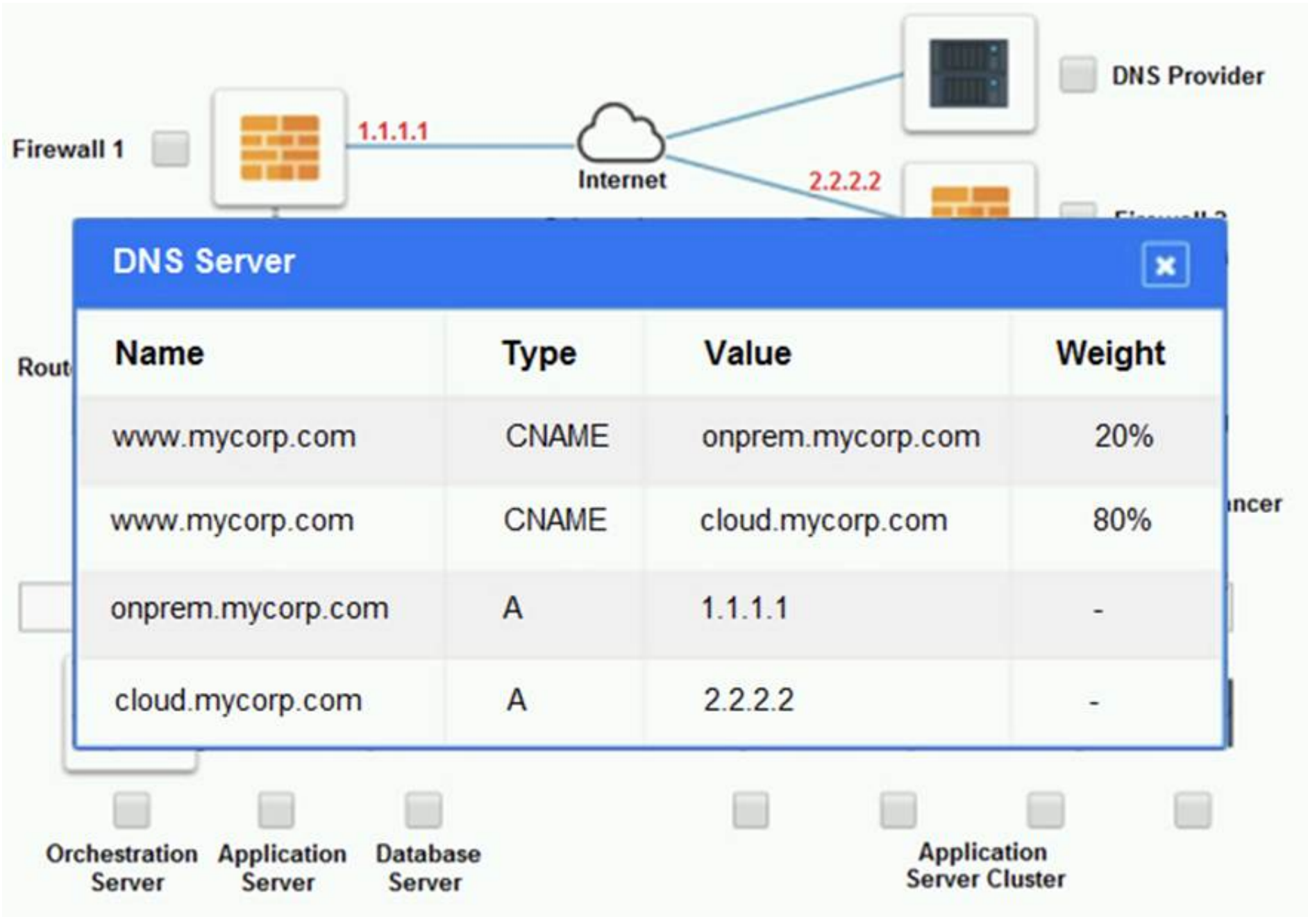
PSK
Cloud002
IKE
SHA1/AES256/DH2/SA Lifetime: 28800
Router 1
Router 2
Load Balancer
Orchestration Server





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 36
A cloud security analyst is investigating the impact of a recent cyberattack. The analyst is reviewing the following information:
Web server access log:
* 104.210.233.225 - - [21/10/2022:11:17: 40] "POST /uploadfile.html?f=myfile.php" 200 1638674
* 45.32.10.66 - - [21/10/2022:11:19:12] "GET /welcome.html" 200 5812
* 104.210.233.225 - - [21/10/2022:11:21:19] "GET / .. / .. / .. / .. /conf/server.xml HTTP/1.1" 200 74458
* 45.32.10.66 - - [21/10/22:11:22:32] "GET /admin.html HTTP/1.1" 200 9518
Web application firewall log:
"2022/10/21 11:17:33" "10.25.2.35" "104. 210.233.225" "userl" "File transfer completed successfully."
"2022/10/21 11:21:05" "10. 25.2. 35" "104. 210.233.225" "userl" "Accessed application page."
"2022/10/21 11:22:13" "10.25.2.35" "45. 32. 10. 66" "user2" "Accessing admin page. " Which of the following has occurred?

A. The corporate administration page was defaced by the attacker.
B. A denial-of-service attack was successfully performed on the web server.
C. A new user was created on the web server by the attacker.
D. Sensitive information from the corporate web server was leaked.

Answer: D

Explanation:
The logs indicate that the IP address 104.210.233.225 made a GET request that appears to traverse directories (as indicated by the '/../../') to access 'server.xml',

which is a configuration file for the server. This type of request is indicative of a directory traversal attack, which can lead to unauthorized access to sensitive files on the server. The successful 200 response code suggests that the file was accessed, implying that sensitive configuration data could have been leaked. References: CompTIA Cloud+ Certification Study Guide (Exam CV0-004) by Scott Wilson and Eric Vanderburg

NEW QUESTION 37
A software engineer at a cybersecurity company wants to access the cloud environment. Per company policy, the cloud environment should not be directly accessible via the internet. Which of the following options best describes how the software engineer can access the cloud resources?

A. SSH
B. Bastion host
C. Token-based access
D. Web portal

Answer: B

Explanation:
A bastion host is the best option described for accessing cloud resources without direct internet access. It acts as a secure gateway to access internal networks from external sources and is often used in conjunction with other security measures such as SSH for secure connections.References: The use of bastion hosts as a secure access point to cloud resources is a security best practice covered in the CompTIA Cloud+ certification's domain on cloud security.

NEW QUESTION 39
A company has decided to adopt a microservices architecture for its applications that are deployed to the cloud. Which of the following is a major advantage of this type of architecture?

A. Increased security
B. Simplified communication
C. Reduced server cost
D. Rapid feature deployment

Answer: D

Explanation:
A major advantage of adopting a microservices architecture is rapid feature deployment. Microservices allow for independent development, deployment, and scaling of individual service components, enabling teams to bring new features to market more quickly and efficiently compared to monolithic architectures.References: The CompTIA Cloud+ certification covers cloud design aspects, including architectural models like microservices, emphasizing their role in facilitating agile development practices and rapid feature release cycles in cloud environments.

NEW QUESTION 42
An administrator is creating a cron job that shuts down the virtual machines at night to save on costs. Which of the following is the best way to achieve this task?
A)

```
for X in list_vms() do
if [ describe_vm_status(X) || running]
     shutdown_vm(X)
else
     echo "vm $X stopped"
done
```

B)

```
for X in list_vms() do
if [ describe_vm_status(X) > running]
     shutdown_vm(X)
else
     echo "vm $X stopped"
done
```

C)

```
for X in list_vms() do
if [ describe_vm_status(X) == running]
     shutdown_vm(X)
else
     echo "vm $X stopped"
done
```

D)

```
for X in list_vms() do
if [ describe_vm_status(X) != running]
     shutdown_vm(X)
else
     echo "vm $X is stopped"
done
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: C

Explanation:
Option C is the correct script for shutting down virtual machines that are currently running. It iterates through a list of VMs, checks if the status of each VM is 'running', and if so, proceeds to shut down the VM. The script then prints a message stating that the VM has been stopped. This approach ensures that only VMs that are actively running are targeted for shutdown, optimizing resource utilization and cost savings.

NEW QUESTION 44
A company needs to deploy its own code directly in the cloud without provisioning additional infrastructure. Which of the following is the best cloud service model for the company to use?

A. PaaS
B. SaaS
C. IaaS
D. XaaS

Answer: A

Explanation:
Platform as a Service (PaaS) is the best cloud service model for deploying code directly in the cloud without provisioning additional infrastructure. PaaS provides a platform allowing customers to develop, run, and manage applications without the
complexity of building and maintaining the infrastructure.References: The PaaS model and its benefits for application deployment are covered under the Cloud Concepts domain in the CompTIA Cloud+ certification.

NEW QUESTION 49
Which of the following is the most cost-effective way to store data that is infrequently accessed?

A. Cold site
B. Hot site
C. Off-site
D. Warm site

Answer: C

Explanation:
The most cost-effective way to store data that is infrequently accessed is typically an off-site storage service, often referred to as cold or archival storage. This

type of storage is designed for data that is rarely accessed, providing lower storage costs.References: Data storage solutions and their cost implications, including off-site (cold or archival) storage for infrequently accessed data, are part of the cloud storage options discussed in CompTIA Cloud+.

NEW QUESTION 51
An organization is hosting a seminar with eight individuals who need to connect to their own dedicated VM. The technician used the following VM configurations:
IP address: DHCP NIC: 1Gbps
Network: 10.1.10.0/29
Several users are unable to access their VMs. Which of the following best describes the reason?

A. Not enough addresses are available.
B. The routes are misconfigured.
C. Too much traffic is on the network.
D. DHCP is not working correctly on the VM.

Answer: A

Explanation:
The network is configured with a subnet of /29, which provides only 6 usable IP addresses after accounting for the network and broadcast addresses. With eight individuals needing to connect to their own dedicated VMs, there are not enough IP addresses available to assign to each VM, leading to several users being unable to access their VMs. This issue is not related to misconfigured routes, network traffic, or DHCP functionality, but rather the limited number of IP addresses available in the given subnet.

NEW QUESTION 56
Which of the following is the best type of database for storing different types of unstructured data that may change frequently?

A. Vector
B. Relational
C. Non-relational
D. Graph

Answer: C

Explanation:
Non-relational (NoSQL) databases are best for storing different types of unstructured data that may change frequently. They are designed to handle a wide variety of data types and are not constrained by the fixed schema of relational databases, making them more flexible and scalable for unstructured data.References: The distinction between relational and non-relational databases and their use cases is part of the foundational knowledge for cloud databases discussed in the CompTIA Cloud+ certification.

NEW QUESTION 60
A cloud developer needs to update a REST API endpoint to resolve a defect. When too many users attempt to call the API simultaneously, the following message is displayed:
Error: Request Timeout - Please Try Again Later
Which of the following concepts should the developer consider to resolve this error?

A. Server patch
B. TLS encryption
C. Rate limiting
D. Permission issues

Answer: C

Explanation:
To resolve the issue of a REST API endpoint timing out when too many users attempt to call the API simultaneously, the developer should consider implementing rate limiting. Rate limiting controls the number of requests a user can submit in a given amount of time, preventing overuse of the API resources and ensuring availability for all users. References: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Cloud Service Maintenance and Management

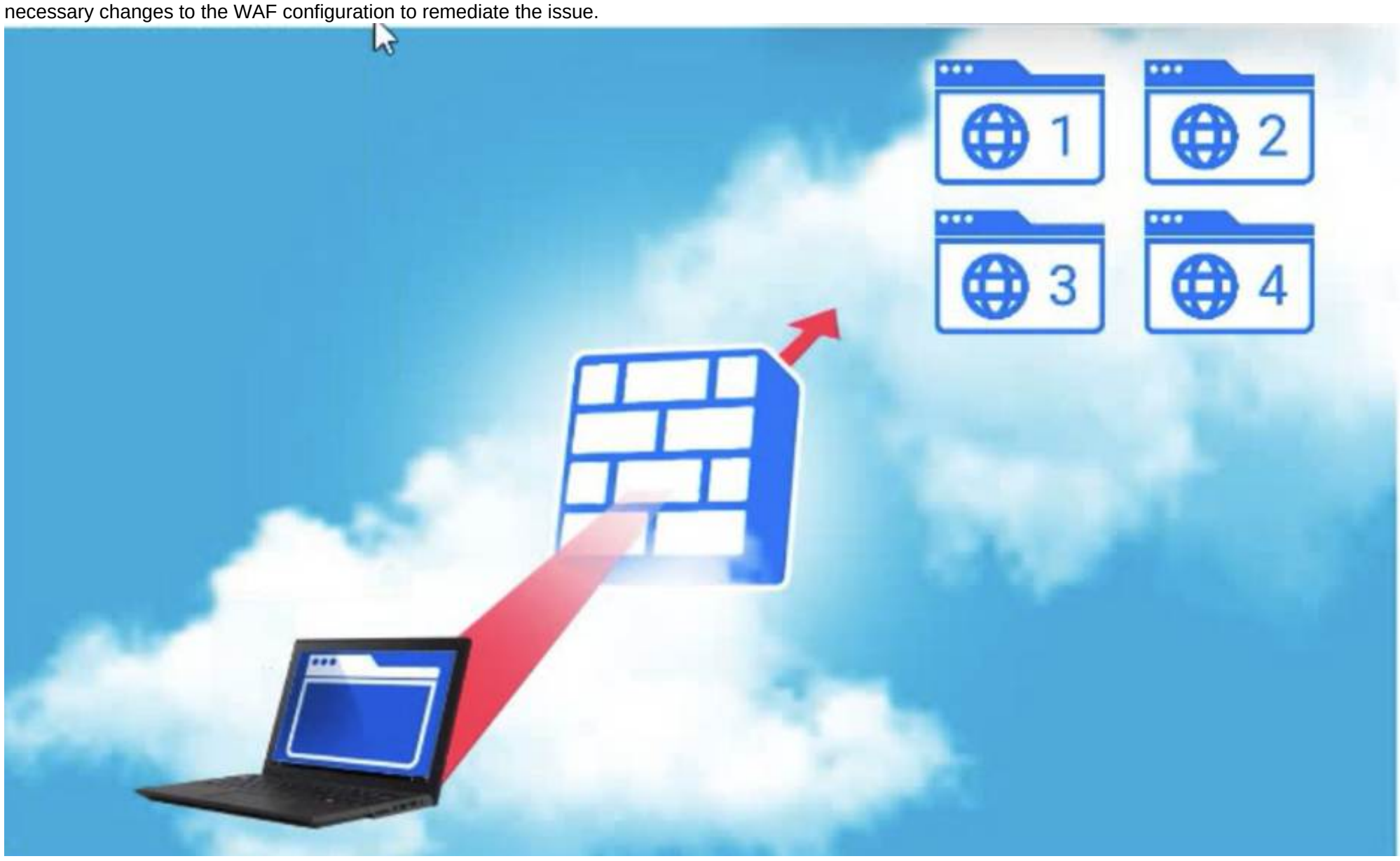
NEW QUESTION 61
A network administrator is budding a site-to-site VPN tunnel from the company's headquarters office 10 the company's public cloud development network. The network administrator confirms the following:
The VPN tunnel is established on the headquarter office firewall.
While inside the office, developers report that they cannot connect to the development network resources.
While outside the office on a client VPN, developers report that they can connect to the development network resources.
The office and the client VPN have different IP subnet ranges.
The firewall flow logs show VPN traffic is reaching the development network from the office. Which of the following is the next step the next network administrator should take to troubleshoot the VPN tunnel?

A. Review the development network routing table.
B. Change the ciphers on the site-to-site VPN.
C. Restart the site-to-site VPN tunnel.
D. Check the ACLS on the development workloads

Answer: A

Explanation:
The next step in troubleshooting the VPN tunnel issue is to review the development network routing table. This action will help determine if the routing configurations are correctly directing traffic from the headquarters office through the VPN tunnel to the development network resources. Proper routing ensures that data packets find their way to the correct destinationwithin the cloud environment, which is critical for establishing successful communication between different network segments.References: CompTIA Cloud+ materials stress the importance of networking fundamentals in cloud environments, including VPN configurations and routing, to ensure secure and efficient connectivity between on-premises infrastructure and cloud resources.

NEW QUESTION 64
SIMULATION
A company hosts various containerized applications for business uses. A client reports that one of its routine business applications fails to load the web-based login prompt hosted in the company cloud.
Click on each device and resource. Review the configurations, logs, and characteristics of each node in the architecture to diagnose the issue. Then, make the necessary changes to the WAF configuration to remediate the issue.

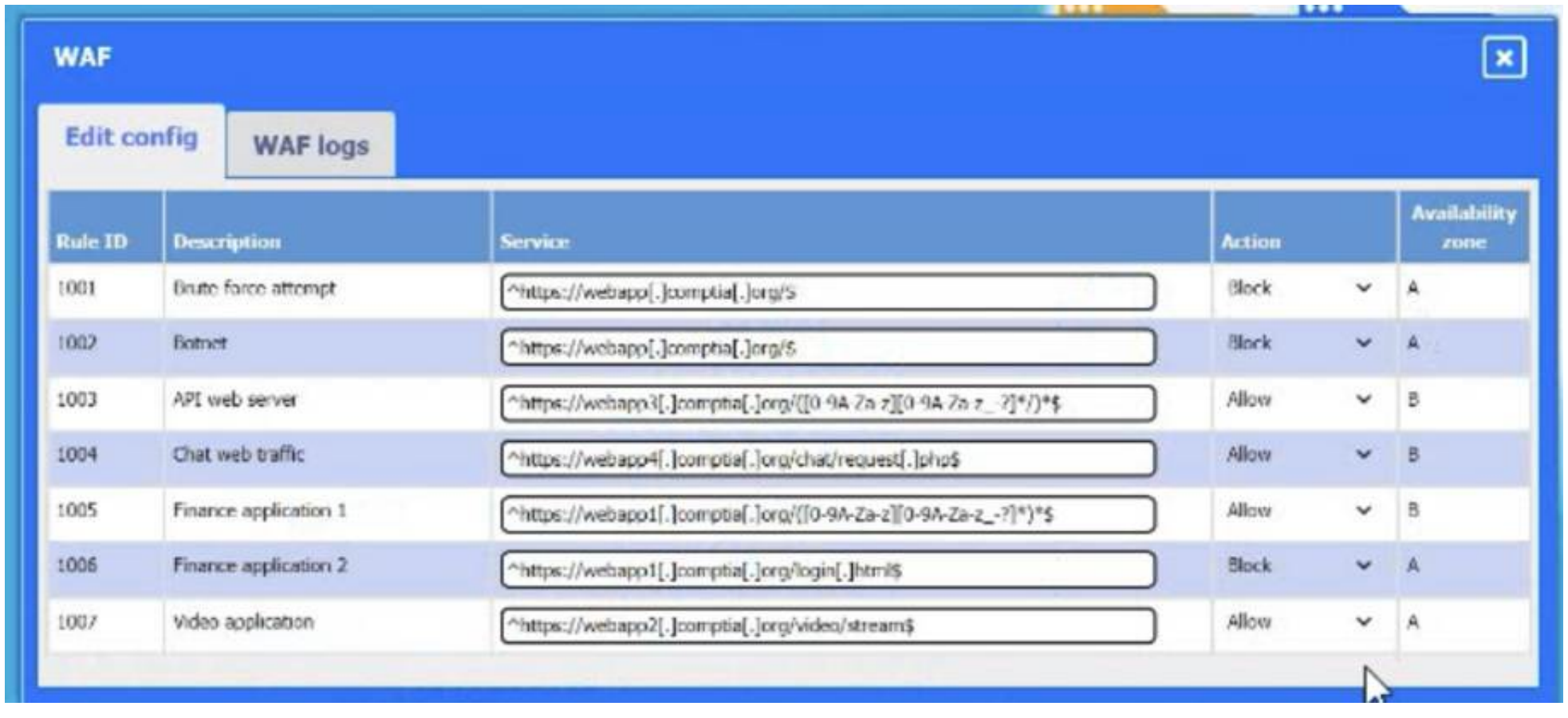


Web app 1

SVC_Host	SVC_Name	SVC IP	SVC_Port
webapp1	FIN	10.22.10.11	443

Web app 2

SVC_Host	SVC_Name	SVC IP	SVC_Port
webapp2	VIDEO	10.22.10.21	443



A. Mastered
B. Not Mastered

Answer: A

Explanation:
From the image, it's noticeable that some finance application rules are set to "Block" traffic. If the client's issue is with a finance-related application not loading the login prompt, these rules could be the cause.
The rule with ID 1005, labeled "Finance application 1", is configured to allow access to "webapp1" for finance-related paths. However, rule 1006, labeled "Finance application 2", is set to block access to "webapp1" for login-related paths.
To remediate the issue based on the WAF configuration you have provided, you would want to:
? Ensure that the correct paths to the finance application are allowed through the WAF.
? Modify any rules that are incorrectly blocking access to the application.
If the client's problem is specifically with the login prompt, then rule 1006 seems the most likely culprit. Changing the action from "Block" to "Allow" for rule 1006 could potentially resolve the client's issue. The rule should be carefully reviewed and updatedto ensure legitimate traffic is not being blocked while still protecting against unauthorized access.

NEW QUESTION 67
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?

A. PaaS
B. SaaS
C. DBaaS

D. IaaS

Answer: D

Explanation:
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 computeresources 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. References: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Cloud Service Models

NEW QUESTION 68
Which of the following is a customer be responsible for in a provider-managed database service? (Select two).

A. Operating system patches
B. Table-level permissions
C. Minor database engine updates
D. Cluster configuration
E. Row-level encryption
F. Availability of hardware for scaling

Answer: BE

Explanation:
In a provider-managed database service, the cloud provider typically manages the infrastructure, operating system, and database engine updates. However, the customer is responsible for the data and its security within the database, which includes setting table- level permissions and row-level encryption to ensure that data access and security is managed appropriately. References: CompTIA Cloud+ Guide to Cloud Computing (ISBN: 978-1-64274-282-2)

NEW QUESTION 73
A cloud consultant needs to modernize a legacy application that can no longer address user demand and is expensive to maintain. Which of the following is the best migration
strategy?

A. Retain
B. Rehost
C. Refactor
D. Replatform

Answer: C

Explanation:
Refactoring is the process of restructuring existing computer code without changing its external behavior. In cloud computing, it often means modifying the application to better leverage cloud-native features and services. This can address user demand and reduce maintenance costs by making the application more scalable, resilient, and manageable. References: CompTIA Cloud+ Certification Study Guide (Exam CV0-004) by Scott Wilson and Eric Vanderburg

NEW QUESTION 77
Which of the following best describes a system that keeps all different versions of a software separate from each other while giving access to all of the versions?

A. Code documentation
B. Code control
C. Code repository
D. Code versioning

Answer: D

Explanation:
A system that keeps all different versions of software separate from each other while providing access to all of the versions is best described by Code versioning. Code versioning systems, such as Git, allow developers to keep track of changes, revert to previous states, and manage multiple versions of codebases.References: CompTIA Cloud+ Study Guide (Exam CV0-004) by Todd Montgomery and Stephen Olson

NEW QUESTION 79
A cloud engineer is extending on-premises services to a public cloud. The following design requirements must be considered in the overall solution:
" The ability to remotely connect systems from both environments
• No IP address conflicts or overlap
• Cost-effectiveness
Which of the following cloud network concepts best meets these requirements?

A. Dedicated connection
B. VPN
C. VLAN
D. ACL

Answer: B

Explanation:
A Virtual Private Network (VPN) is the most cost-effective solution for extending on-premises services to a public cloud while ensuring secure remote connectivity. VPNs can be configured to avoid IP address conflicts and overlap by using IP address translation and tunneling techniques, making them suitable for connecting disparate environments without significant changes to the existing network infrastructure.

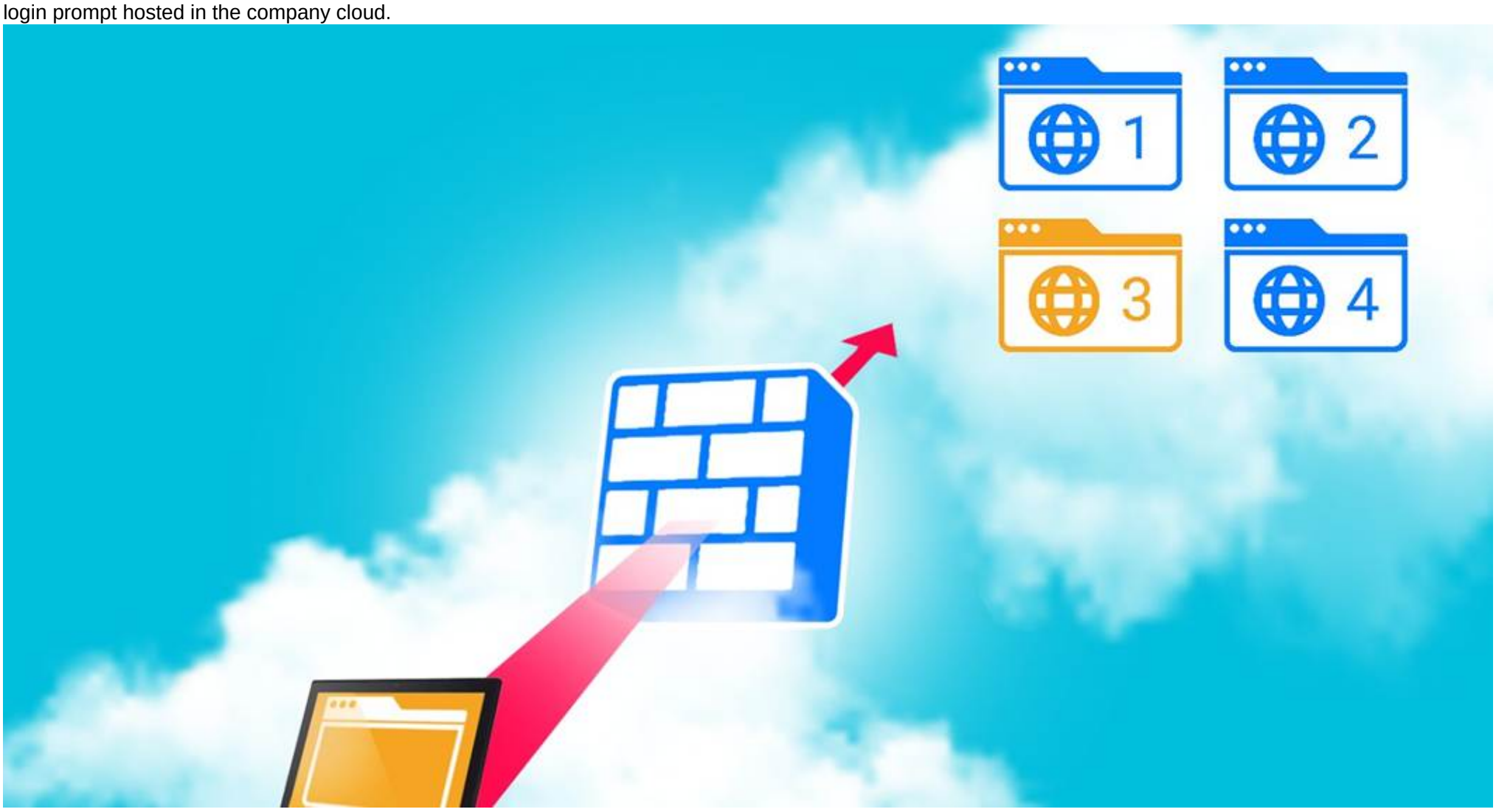
NEW QUESTION 81
A company has one cloud-based web server that is prone to downtime during maintenance. Which ot the following should the cloud engineer add to ensure high availability?

A. A redundant web server behind a load balancer
B. A backup cloud web server
C. A secondary network link to the web server
D. An autoscaling feature on the web server

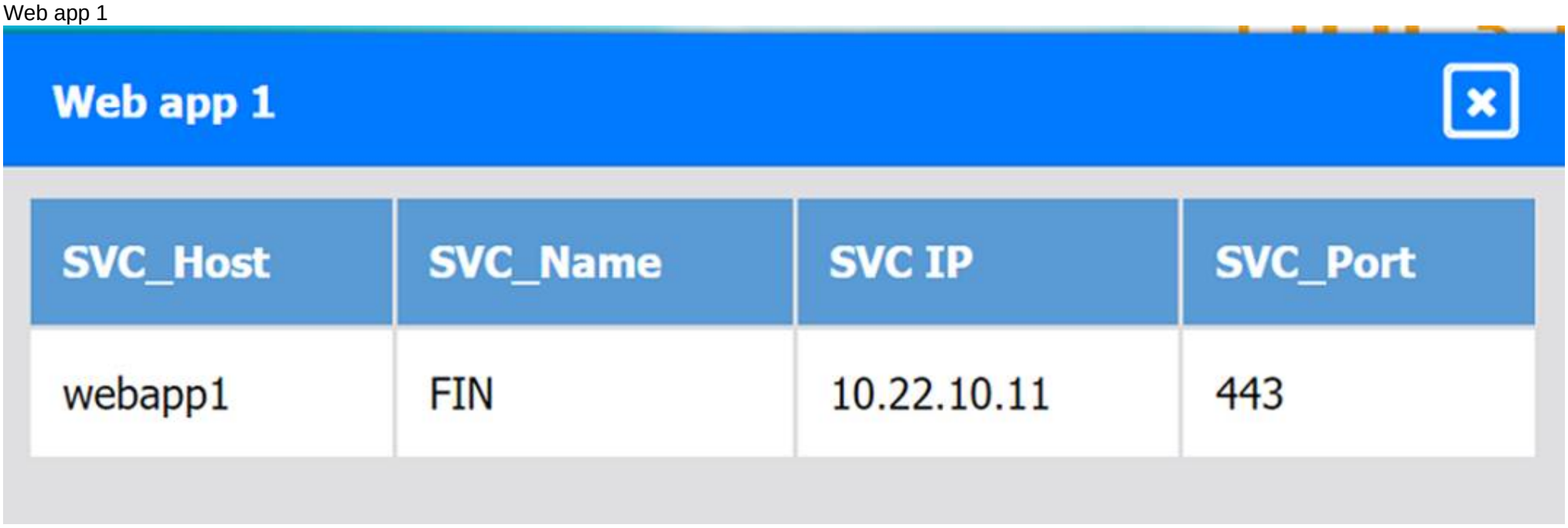
Answer: A

Explanation:
Adding a redundant web server behind a load balancer is the solution that will ensure high availability. If one server goes down for maintenance, the other can take over, ensuring that the web service remains available without interruption.References: High availability concepts, including the use of load balancers and redundant servers, are part of cloud infrastructure design as per CompTIA Cloud+.

NEW QUESTION 83
SIMULATION
A company hosts various containerized applications for business uses. A client reports that one of its routine business applications fails to load the web-based login prompt hosted in the company cloud.



INSTRUCTIONS
Click on each device and resource. Review the configurations, logs, and characteristics of each node in the architecture to diagnose the issue. Then, make the necessary changes to the WAF configuration to remediate the issue.
Web app 1



Web app 2

Web app 2

SVC_Host	SVC_Name	SVC IP	SVC_Port
webapp2	VIDEO	10.22.10.21	443

Web app 3

Web app 3

SVC_Host	SVC_Name	SVC IP	SVC_Port
webapp3	API	10.22.10.31	443

Web app 4

Web app 4

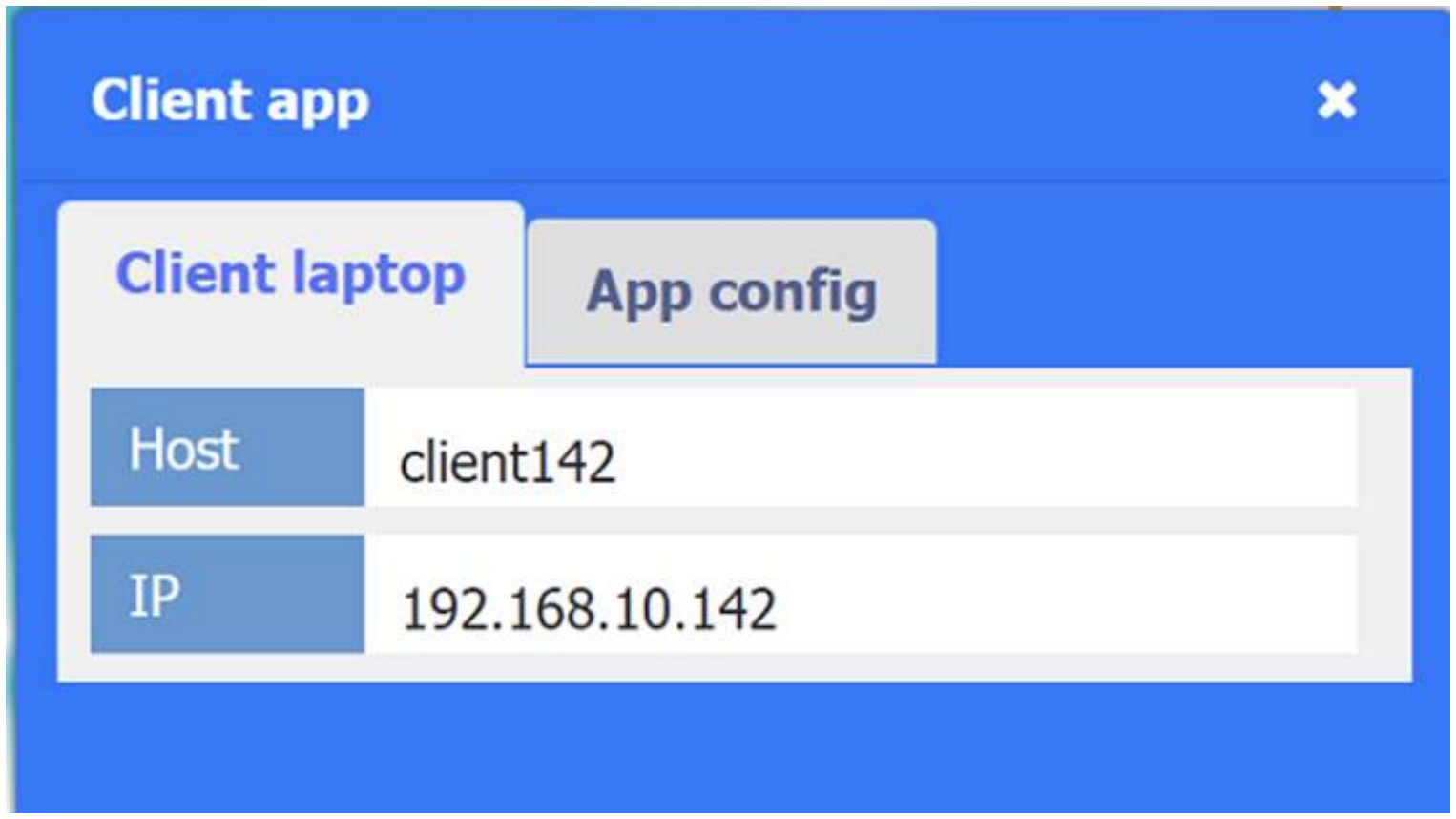
SVC_Host	SVC_Name	SVC IP	SVC_Port
webapp4	CHAT	10.22.10.41	443

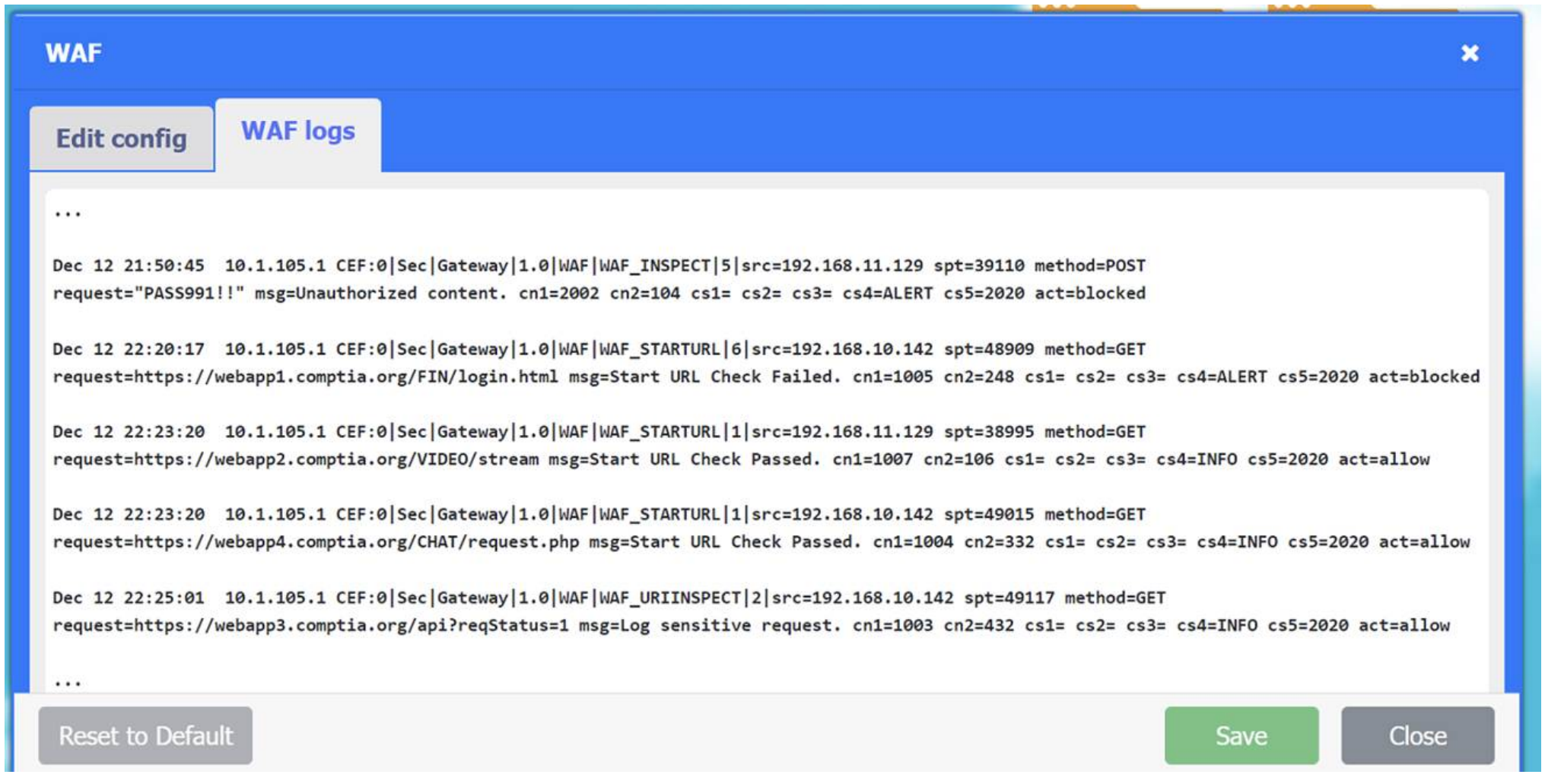
Client app

Client app

Client laptop | App config

https_enabled	true
cert_status	valid
start	login





A. Mastered
B. Not Mastered

Answer: A

Explanation:
The issue is with Web app 1 (Finance application).
From the WAF logs, we can see that requests to https://webapp1.comptia.org/FIN/login.htmlare being blocked (Rule ID 1006). The rule is configured to block access to the finance application's login page. This corresponds to the reported issue of the web-based login prompt not loading.
To remediate the issue, the WAF configuration for Rule ID 1006 should be changed from "Block" to "Allow". This will enable the web-based login prompt to load for the client. Additionally, the client app configuration indicates that the client laptop (IP 192.168.10.142) is trying to access the service, and the WAF logs show that requests from this IP are being blocked due to the current rule set. Changing the action for Rule ID 1006 will also ensure that legitimate attempts to access the login page from this IP are not blocked.
Steps for remediation:
? Go to the WAF configuration.
? Find Rule ID 1006 for the Finance application 1.
? Change the action from "Block" to "Allow".
? Save the changes.
References:
? Web application firewall (WAF) configurations typically include rules that define which traffic should be allowed or blocked. Blocking legitimate traffic to login pages can prevent users from accessing the application, which seems to be the case here.
? Client application configurations and WAF logs provide valuable insights into the source of the traffic and the rules that are affecting it. It's important to ensure that the rules align with the intended access policies for the application.

NEW QUESTION 88
An administrator needs to provide a backup solution for a cloud infrastructure that enables the resources to run from another data center in case of a outage. Connectivity to the backup data center is via a third-party, untrusted network. Which of the following is the most important feature required for this solution?

A. Deduplication
B. Replication
C. Compression
D. Encryption
E. Labeling

Answer: D

Explanation:
When backing up data that will traverse a third-party, untrusted network, encryption is the most important feature to ensure the confidentiality and integrity of the data. Encryption will protect the data from potential interception or tampering during transit to the backup data center. References: CompTIA Cloud+ Guide to Cloud Computing (ISBN: 978-1-64274-282-2)

NEW QUESTION 92
Given the following command:
Sdocker pull images.comptia.org/user1/myimage:latest
Which of the following correctly identifies images.comptia.org?

A. Image registry
B. Image creator
C. Image version
D. Image name

Answer: A

Explanation:
In the Docker pull command given,images.comptia.orgrepresents the image registry. A Docker image registry is a collection of repositories that host Docker images. It is where images arestored and organized, and from where they can be pulled for deployment.References: Docker and container management concepts, including image registries, are part of the cloud services understanding in the CompTIA Cloud+ curriculum.

NEW QUESTION 95
A cloud engineer is deploying a cloud solution that will be used on premises with need-to- know access. Which of the following cloud deployment models best meets this requirement?

A. Community
B. Public
C. Private
D. Hybrid

Answer: C

Explanation:
A private cloud deployment model is the most appropriate when the requirement is for 'need-to-know' access, as it offers a more secure environment with resources dedicated to a single organization. It can be hosted on-premises or off-premises but is maintained on a private network, ensuring greater control over the data, security, and compliance when compared to other cloud models. References: CompTIA Cloud+ Certification Study Guide (Exam CV0-004) by Scott Wilson and Eric Vanderburg

NEW QUESTION 97
Which of the following types of storage provides the greatest performance advantage for a traditional relational database?

A. File
B. Object
C. Block
D. Ephemeral

Answer: C

Explanation:
Block storage provides the greatest performance advantage for traditional relational databases due to its high performance and low-latency characteristics. Block storage allows databases to rapidly manage data in fixed-sized blocks, which is ideal for databases that require frequent read/write operations.References: Understanding different storage types and their use cases, including block storage for databases, is part of the cloud computing knowledge base covered in CompTIA Cloud+.

NEW QUESTION 99
An administrator received a report that company data has been compromised. The compromise occurred on a holiday, and no one in the organization was working. While reviewing
the logs from the holiday, the administrator noted the following details:

Account	Access	Details
Cloud administrator	Granted	Log-in granted
Software developer	Granted	Log-in granted
Software developer	Denied	Denied access to human resources folder
Security engineer	Granted	Log-in granted
Security engineer	Denied	Denied access to personnel files
Human resources manager	Granted	Log-in granted
Human resources manager	Granted	Access granted to human resources folder

The most appropriate action for the cloud security analyst to recommend is using CIS- hardened images. These images are pre-configured by the Center for Internet Security to provide security benchmark standards that help in mitigating vulnerabilities in publicly available container images.References: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Cloud Security Posture
Which of the following accounts should the administrator disable to prevent a further breach?

A. Cloud administrator
B. Human resources manager
C. Security engineer
D. Software developer

Answer: D

Explanation:
Based on the provided log details, the account of the Software Developer was used to gain unauthorized access. This account should be disabled to prevent further breaches, especially considering no one from the organization was working during the holiday, suggesting a compromised account. References: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Cloud Security

NEW QUESTION 102
A cloud engineer was deploying the company's payment processing application, but it failed with the following error log:
ERFOR:root: Transaction failed http 429 response, please try again Which of the following are the most likely causes for this error? (Select two).

A. API throttling
B. API gateway outage
C. Web server outage
D. Oversubscription
E. Unauthorized access
F. Insufficient quota

Answer: AF

Explanation:
The error "http 429 response, please try again" typically indicates API throttling, where the number of requests exceeds the rate limit set by the API provider, and insufficient quota, where the allowed number of API calls within a given timeframe has been exceeded.References: API throttling and quota management are key concepts in the management of cloud resources, as highlighted in the CompTIA Cloud+ curriculum.

NEW QUESTION 106
A developer is building an application that has multiple microservices that need to communicate with each other. The developer currently manually updates the IP address of each service. Which of the following best resolves the communication issue and automates the process?

A. Service discovery

B. Fan-out
C. Managed container services
D. DNS

Answer: A

Explanation:
Service discovery is a key component in microservices architectures, allowing services to dynamically discover and communicate with each other. By implementing service discovery, the developer can automate the process of updating service addresses, resolving the communication issue without manual updates to IP addresses, thus ensuring seamless interaction between the microservices. References: CompTIA Cloud+ resources and microservices architecture principles

NEW QUESTION 108
An organization's security policy states that software applications should not exchange sensitive data in cleartext. The security analyst is concerned about a software application that uses Base64 to encode credit card data. Which of the following would be the best algorithm to replace Base64?

A. 3DES
B. AES
C. RC4
D. SHA-3

Answer: B

Explanation:
AES (Advanced Encryption Standard) is the best algorithm to replace Base64 for secure data exchange. Base64 is an encoding method that is not secure by itself, as it's easily reversible. AES, on the other hand, is a widely used encryption standard that ensures data is protected and is not readable without the correct encryption key.References: Encryption standards and practices, including the use of AES for securing data, are essential knowledge in cloud security covered in CompTIA Cloud+.

NEW QUESTION 109
Which of the following is a direct effect of cloud migration on an enterprise?

A. The enterprise must reorganize the reporting structure.
B. Compatibility issues must be addressed on premises after migration.
C. Cloud solutions will require less resources than on-premises installations.
D. Utility costs will be reduced on premises.

Answer: D

Explanation:
Cloud migration typically results in a reduction of on-premises utility costs because the physical infrastructure requirements, such as power and cooling, are transferred to the cloud provider. This shift can lead to significant savings in utility expenses for the enterprise. References: CompTIA Cloud+ Guide to Cloud Computing (ISBN: 978-1-64274- 282-2)

NEW QUESTION 114
A user's assigned cloud credentials are locked, and the user is unable to access the project's application. The cloud administrator reviews the logs and notices several attempts to log in with the user's account were made to a different application after working hours. Which of the following is the best approach for the administrator to troubleshoot this issue?

A. Create new credentials for the user and restrict access to the authorized application.
B. Track the source of the log-in attempts and block the IP address of the source in the WAR
C. Reset the user's account and implement a stronger lock-out policy.
D. Install an IDS on the network to monitor suspicious activity

Answer: B

Explanation:
The administrator should track the source of the log-in attempts and block the IP address in the Web Application Firewall (WAF). This will prevent further unauthorized attempts from that source. It is also advisable to reset the user's account credentials as a precautionary measure.References: Incident response and addressing unauthorized access attempts, including tracking and blocking IP addresses, are security measures addressed in the CompTIA Cloud+ material.

NEW QUESTION 116
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?

A. Configuring page file/swap metrics
B. Deploying the cloud-monitoring agent software
C. Scheduling a script to collect the data
D. Enabling memory monitoring in the VM configuration

Answer: B

Explanation:
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. References: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Cloud Monitoring

NEW QUESTION 118
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 192.168.1.10/32 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 lo fix the communication issue?

A. The Application Server Stateful Firewall
B. The Application Server Subnet Routing Table
C. The MySQL Server Stateful Firewall
D. The MySQL Server Subnet Routing Table

Answer: C

Explanation:
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 therequired port are allowed.References: Based on the information provided in the question and general networking principles.

NEW QUESTION 119
A video surveillance system records road incidents and stores the videos locally before uploading them to the cloud and deleting them from local storage. Which of the following best describes the nature of the local storage?

A. Persistent
B. Ephemeral
C. Differential
D. Incremental

Answer: B

Explanation:
The nature of the local storage in a video surveillance system that records road incidents and stores the videos locally before uploading them to the cloud and deleting them from local storage is ephemeral. Ephemeral storage is temporary and is designed to provide short-term storage for information that changes frequently or is not meant to be persistent. References: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Cloud Storage Options

NEW QUESTION 124
A bank informs an administrator that changes must be made to backups for long-term reporting purposes. Which of the following is the most important change the administrator
should make to satisfy these requirements?

A. Location of the backups
B. Type of the backups
C. Retention of the backups
D. Schedule of the backups

Answer: C

Explanation:
For long-term reporting purposes, the most critical aspect to consider is the retention period of the backups. This is because the bank will likely require access to historical data for audit, compliance, and reporting purposes. The retention policy will need to ensure that backups are kept for the required duration, which may be several years depending on regulatory and business needs. Adjusting the retention policy will help ensure that the necessary data is preserved for as long as it is needed, without unnecessary data accumulation that could lead to higher costs and management complexity.References: CompTIA Cloud+ Certification Study Guide (Exam CV0-004) by Scott Wilson and Eric Vanderburg

NEW QUESTION 128
A cloud security analyst is concerned about security vulnerabilities in publicly available container images. Which of the following is the most appropriate action for the analyst to recommend?

A. Using CIS-hardened images
B. Using watermarked images
C. Using digitally signed images
D. Using images that have an application firewall

Answer: A

NEW QUESTION 130
A cloud engineer hardened the WAF for a company that operates exclusively in North America. The engineer did not make changes to any ports, and all protected applications have continued to function as expected. Which of the following configuration changes did the engineer most likely apply?

A. The engineer implemented MFA to access the WAF configurations.
B. The engineer blocked all traffic originating outside the region.
C. The engineer installed the latest security patches on the WAF.
D. The engineer completed an upgrade from TLS version 1.1 to version 1.3.

Answer: B

Explanation:
Given that the WAF was hardened without changing any ports and all protected applications continued to function as expected, it is most likely that the engineer blocked all traffic originating outside of North America, which is the company's operating region. References: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Cloud Security Best Practices

NEW QUESTION 132
A software engineer needs to transfer data over the internet using programmatic access while also being able to query the data. Which of the following will best help the engineer to complete this task?

A. SQL
B. Web sockets
C. RPC
D. GraphQL

Answer: D

Explanation:
GraphQL is the best option for transferring data over the internet with programmatic access and querying capabilities. It is a query language for APIs and a runtime for executing those queries with existing data, providing a more efficient, powerful, and flexible alternative to the REST API.References: Data transfer and querying methods are part of the technical knowledge associated with cloud computing, as included in CompTIA Cloud+.

NEW QUESTION 133
Which of the following service options would provide the best availability for critical applications in the event of a disaster?

A. Edge computing
B. Cloud bursting
C. Availability zones
D. Multicloud tenancy

Answer: C

Explanation:
Availability zones provide the best availability for critical applications in the event of a disaster. They are distinct locations within a cloud region that are engineered to be isolated from failures in other availability zones, thus providing redundancy and failover capabilities, which is essential for maintaining high availability of critical applications.References: The concept of availability zones and their importance in disaster recovery and high availability is covered under the domain of Management and Technical Operations in the CompTIA Cloud+ objectives.

NEW QUESTION 138
A system surpasses 75% to 80% of resource consumption. Which of the following scaling approaches is the most appropriate?

A. Trending
B. Manual
C. Load
D. Scheduled

Answer: C

Explanation:
Load scaling is the most appropriate approach when a system surpasses 75% to 80% of resource consumption. This method involves adjusting resources dynamically in response to the current load, ensuring the system can handle increased demand without performance degradation. Load scaling can be automatic, allowing systems to scale up or down based on predefined metrics like CPU usage, memory, or network traffic, providing an efficient way to manage resources and maintain optimal performance.References: The CompTIA Cloud+ exam objectives include understanding cloud management and technical operations, which encompass knowledge of various scaling approaches, including load scaling, to ensure efficient resource utilization in cloud environments.

NEW QUESTION 140
Which of the following is used to detect signals and measure physical properties, such as the temperature of the human body?

A. Beacon
B. Transmission protocols
C. Sensors
D. Gateways

Answer: C

Explanation:
Sensors are used to detect signals and measure physical properties, such as temperature. They are devices that respond to a physical stimulus (like heat, light, sound, pressure, magnetism, or a particular motion) and transmit a resulting impulse for detection and measurement.References: The use of sensors in cloud environments, particularly in IoT (Internet of Things) applications, is included in the technical domains of the CompTIA Cloud+ material.

NEW QUESTION 142
A log-parsing application requires significant processing power to ingest the logs streaming from web servers. The engineering team presents the cloud architect with four proposals using the same underlying hardware. Which of the following should the cloud architect select in order to minimize the impact of an instance failure while keeping the cost as low as possible?

A. Four instances of 4vCPU, 8GB RAM, 80GB SSD
B. Four instances of 4vCPU, 8GB RAM, 80GB HDD
C. Two instances of 8vCPU, 16GB RAM, 80GB SSD
D. Two instances of 8vCPU, 16GB RAM, 80GB HDD

Answer: A

Explanation:
Choosing four instances with the given specifications would distribute the load and reduce the impact of any single instance failure. Using SSDs over HDDs would provide faster data processing capabilities which is crucial for a log-parsing application. This setup also retains cost efficiency by not over-provisioning resources.
References: CompTIA Cloud+ Certification Study Guide (Exam CV0-004) by Scott Wilson and Eric Vanderburg.

NEW QUESTION 143
A cloud security analyst is looking for existing security vulnerabilities on software applications. Which of the following describes this vulnerability management phase?

A. Analyze
B. Report
C. Remediation
D. identification

Answer: D

Explanation:
The phase of vulnerability management that involves looking for existing security vulnerabilities on software applications is known as 'Identification'. This step precedes analysis, reporting, and remediation, focusing on discovering known and unknown vulnerabilities within the system or software to assess the security posture effectively.

NEW QUESTION 148
Which of the following container storage types loses data after a restart?

A. Object
B. Persistent volume
C. Ephemeral
D. Block

Answer: C

Explanation:
In the context of container storage, ephemeral storage types are designed to be temporary, losing their data when the container is restarted or deleted. This is in contrast to persistent volumes, which retain data across container restarts and lifecycle, and object and block storage, which are used for specific types of data storage but not inherently temporary. Ephemeral storage is often used for temporary computation data, caching, or any data that doesn't need to persist beyond the lifecycle of the container instance.
References: CompTIA Cloud+ CV0-004 Study Guide and Official CompTIA Content

NEW QUESTION 150
Which of the following compute resources is the most optimal for running a single scripted task on a schedule?

A. Bare-metal server
B. Managed container

C. Virtual machine
D. Serverless function

Answer: D

Explanation:
Serverless functions are ideal for running scripted tasks on a schedule because they can be triggered by events, run the task, and then shut down, incurring costs only for the actual compute time used. This eliminates the need for a continuously running server and is optimal for sporadic or scheduled tasks. References: CompTIA Cloud+ Certification Study Guide (Exam CV0-004) by Scott Wilson and Eric Vanderburg.

NEW QUESTION 155
A cloud architect attempts to modify a protected branch but is unable to do so. The architect receives an error indicating the action cannot be completed. Which of the following should the architect try instead"

A. Adding a new remote
B. Creating a pull request
C. Merging the branch
D. Rebasing the branch

Answer: B

Explanation:
When unable to modify a protected branch directly, the recommended approach is to create a pull request. This allows changes to be reviewed and approved by authorized personnel before being merged into the protected branch, maintaining code integrity and compliance with the project's workflow and policies.

NEW QUESTION 156
An administrator used a script that worked in the past to create and tag five virtual machines. All of the virtual machines have been created: however, the administrator sees the following results:
{ tags: [ ] }
Which of the following is the most likely reason for this result?

A. API throttling
B. Service quotas
C. Command deprecation
D. Compatibility issues

Answer: C

Explanation:
The most likely reason for the script creating virtual machines without tags, despite working in the past, is command deprecation. Cloud service providers update their APIs and CLI commands over time, and a previously used command to tag resources might no longer be valid.References: Understanding cloud service APIs and the importance of keeping up with updates is part of cloud technical operations covered in CompTIA Cloud+.

NEW QUESTION 160
A developer is deploying a new version of a containerized application. The DevOps team wants:
• No disruption
• No performance degradation
* Cost-effective deployment
• Minimal deployment time
Which of the following is the best deployment strategy given the requirements?

A. Canary
B. In-place
C. Blue-green
D. Rolling

Answer: C

Explanation:
The blue-green deployment strategy is the best given the requirements for no disruption, no performance degradation, cost-effective deployment, and minimal deployment time. It involves maintaining two identical production environments (blue and green), where one hosts the current application version and the other is used to deploy the new version. Once testing on the green environment is complete, traffic is switched from blue to green, ensuring a seamless transition with no downtime.References: Understanding various cloud deployment strategies, such as blue-green deployments, is essential for managing cloud environments effectively, as highlighted in the CompTIA Cloud+ objectives, to ensure smooth and efficient application updates.

NEW QUESTION 163
Which of the following describes what CRUD is typically used for?

A. Relational databases
B. Time series databases
C. Graph databases
D. NoSQL databases

Answer: A

Explanation:
CRUD stands for Create, Read, Update, Delete, and it is most commonly used for interacting with relational databases. These operations form the basis of persistent storage manipulation in most applications that use a database to store data. References: CompTIA Cloud+ Guide to Cloud Computing (ISBN:

978-1-64274-282-2)

NEW QUESTION 165
A systems administrator is provisioning VMs according to the following requirements:
· A VM instance needs to be present in at least two data centers.
. During replication, the application hosted on the VM tolerates a maximum latency of one second.
· When a VM is unavailable, failover must be immediate.
Which of the following replication methods will best meet these requirements?

A. Snapshot
B. Transactional
C. Live
D. Point-in-time

Answer: C

Explanation:
Live replication is the process of continuously copying data in real-time to ensure that an exact copy is available in another location. Given the requirement for immediate failover and the presence of the VM instance in at least two data centers, live replication is the best method to meet the one-second maximum latency tolerance and ensure immediate availability in the event of a VM becoming unavailable. References: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Disaster Recovery and Replication Methods

NEW QUESTION 167
A cloud solutions architect is designing a VM-based solution that requires reducing the cost as much as possible. Which of the following solutions will best satisfy this requirement?

A. Using ephemeral storage on replicated VMs
B. Creating Spot VMs in one availability zone
C. Spreading the VMs across different regions
D. Using provisioned IOPS storage

Answer: B

Explanation:
Using Spot VMs is a cost-effective solution as these are available at significantly reduced prices compared to standard instances. Spot VMs are ideal for workloads that can tolerate interruptions and are a way to take advantage of unused cloud capacity.References: The concept of Spot VMs and their cost benefits are included in the financial aspects of managing cloud resources, as per the CompTIA Cloud+ certification guidelines.

NEW QUESTION 171
Which of the following industry standards mentions that credit card data must not be exchanged or stored in cleartext?

A. CSA
B. GDPR
C. SOC2
D. PCI-DSS

Answer: D

Explanation:
The Payment Card Industry Data Security Standard (PCI-DSS) is the industry standard that mandates that credit card data must not be stored or transmitted in cleartext. It includes requirements for encryption, access control, and other security measures to protect cardholder data. References: Official PCI Security Standards Council Site.

NEW QUESTION 172
A security team recently hired multiple interns who all need the same level of access. Which of the following controls should the security team implement to provide access to the cloud environment with the least amount of overhead?

A. MFA
B. Discretionary access
C. Local user access
D. Group-based access control

Answer: D

Explanation:
Implementing group-based access control is the most efficient way to provide access to multiple interns who require the same level of access. This method allows the security team to assign permissions to a group rather than to individual user accounts, thereby reducing the administrative overhead involved in managing access rights for each intern individually. References: CompTIA Cloud+ Certification Study Guide (Exam CV0-004) by Scott Wilson and Eric Vanderburg

NEW QUESTION 174
Which of the following best explains the concept of migrating from on premises to the cloud?

A. The configuration of a dedicated pipeline to transfer content to a remote location
B. The creation of virtual instances in an external provider to transfer operations of selected servers into a ne
C. remotely managed environment
D. The physical transportation, installation, and configuration of company IT equipment in a cloud services provider's facility
E. The extension of company IT infrastructure to a managed service provider

Answer: B

Explanation:
Migrating from on-premises to the cloud generally involves creating virtual instances in an external provider's environment and transferring the operations of selected servers to this new, remotely managed setup. This process allows organizations to leverage the cloud provider's resources and services.References: The migration process and strategies are topics included in the Business Principles of Cloud Environments within the CompTIA Cloud+ curriculum.

NEW QUESTION 177
A group of cloud administrators frequently uses the same deployment template to recreate a cloud-based development environment. The administrators are unable to go back and review the history of changes they have made to the template. Which of the following cloud resource deployment concepts should the administrator start using?

A. Drift detection
B. Repeatability
C. Documentation
D. Versioning

Answer: D

Explanation:
Versioning is a concept that allows cloud administrators to keep track of the history of changes made to deployment templates or any other configuration file. By using version control systems, they can review previous versions, roll back to earlier configurations if necessary, and understand the evolution of the deployment template over time. References: CompTIA Cloud+ Guide to Cloud Computing (ISBN: 978-1-64274-282-2)

NEW QUESTION 182
A company's website suddenly crashed. A cloud engineer investigates the following logs:

```
webbapp_access.log
...
2023-04-03 16:45:00 GET /home?x=213
2023-04-03 16:45:01 GET /home?x=6544
2023-04-03 16:45:02 GET /home?x=52455
2023-04-03 16:45:03 GET /home?x=56
2023-04-03 16:45:04 GET /home?x=7895
...
2023-04-03 16:47:00 GET /home?x=3986 502
2023-04-03 16:47:01 GET /home?x=2461 502
```

Which of the following is the most likely cause of the issue?

A. SQL injection
B. Cross-site scripting
C. Leaked credentials
D. DDoS

Answer: D

Explanation:
The logs indicate a sudden surge in access requests to the website's homepage, followed by 502 errors, which are indicative of server overload or failure to handle incoming requests. This pattern is typical of a Distributed Denial of Service (DDoS) attack, where multiple compromised systems flood the target with traffic, exceeding its capacity to handle requests, leading to service disruption.

NEW QUESTION 187
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?

A. Rolling
B. Blue-green
C. Canary
D. Round-robin

Answer: C

Explanation:
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.References: 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.

NEW QUESTION 189
Users report being unable to access an application that uses TLS 1.1. The users are able to access other applications on the internet. Which of the following is the most likely reason for this issue?

A. The security team modified user permissions.
B. Changes were made on the web server to address vulnerabilities.
C. Privileged access was implemented.
D. The firewall was modified.

Answer: B

Explanation:
If users are unable to access an application that uses TLS 1.1 but can access other internet applications, it is likely that changes were made on the web server to address vulnerabilities, such as disabling outdated and less secure protocols like TLS 1.1. References: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Cloud Security

NEW QUESTION 194
A company has developed an online trading platform. The engineering team selected event-based scaling for the platform's underlying resources. The platform resources scale up with every 2,000 subscribed users. The engineering team finds out that although compute utilization is low, scaling is still occurring. Which of the following statements best explains why this is the case?

A. Event-based scaling does not scale down resources.
B. Event-based scaling should not be triggered at the 2,000-user frequency.
C. Event-based scaling should not track user subscriptions.
D. Event-based scaling does not take resource load into account.

Answer: D

Explanation:
Event-based scaling triggers based on specific events, such as the number of user subscriptions in this case. It does not necessarily account for the actual load or utilization of compute resources. This is why the platform's resources continue to scale up even though compute utilization is low; the scaling decision is being made based on the number of subscribed users rather than the current resource usage. References: CompTIA Cloud+ Certification Study Guide (Exam CV0-004) by Scott Wilson and Eric Vanderburg

NEW QUESTION 198
Which of the following describes the main difference between public and private container repositories?

A. Private container repository access requires authorization, while public repository access does not require authorization.
B. Private container repositories are hidden by default and containers must be directly referenced, while public container repositories allow browsing of container images.
C. Private container repositories must use proprietary licenses, while public container repositories must have open-source licenses.
D. Private container repositories are used to obfuscate the content of the Dockerfile, while public container repositories allow for Dockerfile inspection.

Answer: A

Explanation:
The main difference between public and private container repositories lies in access control. Public repositories allow users to download and use container images without requiring any authorization, making them accessible to anyone. On the other hand, private repositories require users to have proper authorization, usually through credentials, to access the container images, thus providing a level of privacy and security control. References: CompTIA Cloud+ Guide to Cloud Computing (ISBN: 978-1-64274-282-2)

NEW QUESTION 203
A cloud engineer is reviewing the following Dockerfile to deploy a Python web application:

```
FROM cgr.dev/chainguard/python:latest
WORKDIR /myapp
COPY main.py ./
ENTRYPOINT ["python", "/myapp/main.py"]
```

Which of the following changes should the engineer make lo the file to improve container security?

A. Add the instruction "JSER nonroot.
B. Change the version from latest to 3.11.
C. Remove the EHTRYPOIKT instruction.
D. Ensure myapp/main.pyls owned by root.

Answer: A

Explanation:

To improve container security, the engineer should add the instruction "USER nonroot" to the Dockerfile. This change ensures that the container does not run as the root user, which reduces the risk of privilege escalation attacks. Running containers as a non-root user is a best practice for enhancing security in containerized environments.References: CompTIA Cloud+ content includes security concerns, measures, and concepts for cloud operations, highlighting container security best practices such as running containers with least privilege to mitigate security risks.

NEW QUESTION 207
A security analyst confirms a zero-day vulnerability was exploited by hackers who gained access to confidential customer data and installed ransomware on the server Which of the following steps should the security analyst take? (Select two).

A. Contact the customers to inform them about the data breach.
B. Contact the hackers to negotiate payment lo unlock the server.
C. Send a global communication to inform all impacted users.
D. Inform the management and legal teams about the data breach
E. Delete confidential data used on other servers that might be compromised.
F. Modify the firewall rules to block the IP addresses and update the ports.

Answer: AD

Explanation:
After a zero-day exploit resulting in a data breach and ransomware installation, it is critical to inform affected customers about the breach and the potential impact on their data. Additionally, the management and legal teams should be notified to handle the situation in compliance with regulatory requirements and to coordinate an appropriate response.References: Handling security incidents and communication strategies after a data breach are crucial elements of the governance and risk compliance domains in CompTIA Cloud+.

NEW QUESTION 208
A cloud engineer is developing an operating expense report that will be used to purchase various cloud billing models for virtual machine instances. The cloud billing model must meet the following requirements:
• The instance cannot be ephemeral.
• The minimum life cycle of the instance is expected to be five years.
• The software license is charged per physical CPU count.
Which of the following models would best meet these requirements?

A. Dedicated host
B. Spot instance
C. Pay-as-you-go
D. Reserved resources

Answer: D

Explanation:
Reserved resources, or Reserved Instances, are ideal for workloads with predictable usage and a long-term commitment, such as a minimum lifecycle of five years. This model allows for significant cost savings compared to on-demand pricing, and the instance is not ephemeral, meaning it persists and is dedicated to the user for the duration of the reservation. The licensing charged per physical CPU count aligns with dedicated host or reserved instance models, but the long-term commitment points more towards reserved resources.

NEW QUESTION 211
A DevOps engineer is performing maintenance on the mail servers for a company's web application. Part of this maintenance includes checking core operating system updates. The servers are currently running version 3.2 of the operating system. The engineer has two update options—one to version 4.1 and the other to version 3.7. Both versions are fully supported by the operating system manufacturer. Which of the following best describes the action the engineer should take?

A. Upgrade to 3.7 in the development environment.
B. Upgrade to 4.1 on one production server at a time.
C. Read the release notes on version 4.1.
D. Schedule a maintenance window and upgrade to 3.7 in the production environment.

Answer: A

Explanation:
Before making any updates to the production environment, the best course of action is to perform the update in a development or testing environment. Upgrading to version 3.7, which is a minor update, is generally less risky and should be tested first to ensure compatibility and stability before considering the major update to version 4.1.References: The process of updating and maintaining servers, including the validation ofupdates in a non-production environment, is part of the technical operations management covered in CompTIA Cloud+.

NEW QUESTION 212
A company's content management system (CMS) service runs on an laaS cluster on a public cloud. The CMS service is frequently targeted by a malicious threat actor using DDoS.
Which of the following should a cloud engineer monitor to identify attacks?

A. Network flow logs
B. Endpoint detection and response logs
C. Cloud provider event logs
D. Instance syslog

Answer: A

Explanation:
To identify DDoS attacks against a CMS service, a cloud engineer should monitor network flow logs. These logs provide data about the IP traffic going to and from network interfaces in a public cloud, which is essential for detecting the increased traffic volumes typically associated with DDoS attacks. References: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Security in the Cloud

NEW QUESTION 215
Which of the following application migration strategies will best suit a customer who wants to move a simple web application from an on-premises server to the cloud?

A. Rehost
B. Rearchitect
C. Refactor
D. Retain

Answer: A

Explanation:
Rehosting, often referred to as a "lift and shift" strategy, is the best suit for a customer who wants to move a simple web application from an on-premises server to the cloud. It involves moving the application to the cloud without making significant changes, which can be a quick and cost-effective migration approach for straightforward applications.References: The various cloud migration strategies, including rehosting, are part of the knowledge base for cloud migration in the CompTIA Cloud+ certification.

NEW QUESTION 217
A company implements a web farm with 100 servers behind an application load balancer. Dunng scaling events, new web servers that are placed in service have not loaded all their modules, which causes some requests to the web farm to fail. Which of the following should the cloud engineer implement to address the scaling issue?

A. Instance warm-up
B. Scheduled scaling
C. Event-based scaling
D. Load balancer passthrough

Answer: A

Explanation:
Implementing an instance warm-up period can address the issue of new web servers not having all modules loaded during scaling events. This warm-up period allows new instances to fully initialize and start serving traffic only when they are ready, preventing failed requests.References: Scaling strategies and their operational impact, including the concept of instance warm-up, are covered under cloud infrastructure management in the CompTIA Cloud+ curriculum.

NEW QUESTION 219
Which of the following cloud deployment models is the best way to replicate a workload non-disruptively between on-premises servers and a public cloud?

A. Public
B. Community
C. Private
D. Hybrid

Answer: D

Explanation:
A hybrid cloud deployment model is the best way to replicate workloads non- disruptively between on-premises servers and a public cloud. This model integrates on- premises infrastructure, or private clouds with public clouds, allowing data and applications to be shared between them. References: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Cloud Deployment Models

NEW QUESTION 222
Which of the following refers to the idea that data should stay within certain borders or territories?

A. Data classification
B. Data retention
C. Data sovereignty
D. Data ownership

Answer: C

Explanation:
Data sovereignty refers to the concept that data is subject to the laws and governance structures within the nation it is collected or stored. It implies that regardless of where a company's data is stored, the data must comply with the laws of the country where it is physically located.References: The principle of data sovereignty is a critical consideration in international cloud services and is included in the governance, risk, and compliance domain of CompTIA Cloud+.

NEW QUESTION 224
A cloud server needs to automatically allocate more resources during sudden peak times. This allocation does not need to occur in regular intervals. Which of the following scaling
approaches should be used?

A. Event
B. Manual
C. Trending
D. Scheduled

Answer: A

Explanation:

Event-based scaling is designed to allocate more resources automatically in response to specific events, such as sudden peak times that are not regular or predictable. This type of scaling ensures that resources are available when needed without the need to schedule them in advance or adjust them manually.
References: CompTIA Cloud+ Guide to Cloud Computing (ISBN: 978-1-64274-282-2)

NEW QUESTION 227
A cloud engineer needs to migrate an application from on premises to a public cloud. Due to timing constraints, the application cannot be changed prior to migration. Which of the following migration strategies is best approach for this use case?

A. Retire
B. Rearchitect
C. Refactor
D. Rehost

Answer: D

Explanation:
Rehosting, often referred to as "lift-and-shift," is the process of migrating an application or workload to the cloud without modifying it. This approach is suitable when there are timing constraints that prevent making changes to the application prior to migration. Rehosting can be the quickest migration strategy since it involves moving the existing applications to the cloud with minimal changes.
References: CompTIA Cloud+ resources and cloud migration strategies

NEW QUESTION 229
A company is required to save historical data for seven years. A cloud administrator implements a script that automatically deletes data older than seven years. Which of the following concepts best describes why the historical data is being deleted?

A. End of life
B. Data loss prevention
C. Cost implications
D. Tiered storage for archiving

Answer: A

Explanation:
Deleting historical data older than seven years as described is an example of data end of life (EOL) policies in action. These policies dictate when data is no longer needed or relevant and should be securely disposed of, often for compliance, legal, or cost- saving reasons.
References: CompTIA Cloud+ resources and data management strategies

NEW QUESTION 232
A social networking company operates globally. Some users from Brazil and Argentina are reporting the following error: website address was not found. Which of the following is the most likely cause of this outage?

A. Client DNS misconfigutation
B. Regional DNS provider outage
C. DNS server misconfiguration
D. DNS propagation issues

Answer: B

Explanation:
The most likely cause of the outage, with users from specific regions like Brazil and Argentina reporting an error that the website address was not found, is a regional DNS provider outage. This type of outage would affect users in particular areas, preventing domain name resolution and leading to the reported error.References: Regional outages and their impact on service availability are discussed within the Cloud Concepts domain, which includes understanding the importance of DNS in cloud services, as per the CompTIA Cloud+ objectives.

NEW QUESTION 235
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