

CompTIA

Exam Questions CV0-004

CompTIA Cloud+



NEW QUESTION 1

A systems administrator needs to configure backups for the company's on-premises VM cluster. The storage used for backups will be constrained on free space until the company can implement cloud backups. Which of the following backup types will save the most space, assuming the frequency of backups is kept the same?

- A. Snapshot
- B. Full
- C. Differential
- D. Incremental

Answer: D

Explanation:

An incremental backup strategy saves space because it only backs up data that has changed since the last backup. Compared to full and differential backups, incremental backups are smaller and save more space, which is essential when storage is constrained. References: CompTIA Cloud+ Guide to Cloud Computing (ISBN: 978-1-64274-282-2)

NEW QUESTION 2

A cloud administrator recently created three servers in the cloud. The goal was to create ACLs so the servers could not communicate with each other. The servers were configured with the following IP addresses:

	Server 1	Server 2	Server 3
IP address	172.16.12.7	172.16.12.14	172.16.13.4
Subnet mask	255.255.255.240	255.255.255.240	255.255.255.240
Default gateway	172.16.12.1	172.16.12.17	172.16.13.15

After implementing the ACLs, the administrator confirmed that some servers are still able to reach the other servers. Which of the following should the administrator change to prevent the servers from being on the same network?

- A. The IP address of Server 1 to 172.16.12.36
- B. The IP address of Server 1 to 172.16.12.2
- C. The IP address of Server 2 to 172.16.12.18
- D. The IP address of Server 2 to 172.16.14.14

Answer: B

Explanation:

To prevent the servers from being on the same network and communicating with each other, the administrator should change the IP address of Server 1 to 172.16.12.2. This IP address is outside the subnet defined by the subnet mask 255.255.255.240, which would place Server 1 on a different subnet, preventing direct communication without routing. References: CompTIA Cloud+ Study Guide (Exam CV0-004) by Todd Montgomery and Stephen Olson

NEW QUESTION 3

A cross-site request forgery vulnerability exploited a web application that was hosted in a public IaaS 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 IaaS 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

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 6

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 7

A critical security patch is required on a network load balancer in a public cloud. The organization has a major sales conference next week, and the Chief Executive Officer does not want any interruptions during the demonstration of an application behind the load balancer. Which of the following approaches should the cloud security engineer take?

- A. Ask the management team to delay the conference.
- B. Apply the security patch after the event.
- C. Ask the upper management team to approve an emergency patch window.
- D. Apply the security patch immediately before the conference.

Answer: C

Explanation:

Given the critical nature of the patch and the upcoming major sales conference, the cloud security engineer should seek approval for an emergency patch window. This approach balances the need for security with the business requirement of no interruptions during the conference. References: The strategy of managing critical updates in alignment with business operations is part of the governance and risk management topics in the CompTIA Cloud+ certification material.

NEW QUESTION 8

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 9

A customer's facility is located in an area where natural disasters happen frequently. The customer requires the following:

- Data resiliency due to exposure to frequent natural disasters
- Data localization because of privacy regulations in the country
- High availability

Which of the following cloud resources should be provisioned to meet these requirements?

- A. Storage in a separate data center located in same region
- B. An on-premises private cloud carrying duplicate data
- C. Storage in an availability zone outside the region
- D. Storage in the same availability zone as the primary data

Answer: C

Explanation:

To meet the requirements of data resiliency, data localization, and high availability in a region prone to natural disasters, the customer should provision storage in an availability zone outside the region. This ensures that data is not affected by regional disasters and complies with data localization by remaining within the country's borders, while also providing high availability. References: Disaster recovery and high availability strategies, including the use of multiple availability zones, are discussed in the CompTIA Cloud+ certification material.

NEW QUESTION 10

A company experienced a data leak through its website. A security engineer, who is investigating the issue, runs a vulnerability scan against the website and receives the following output:

```
Nmap scan report for www.example.com (93.184.216.34)
Host is up (0.020s latency).
```

```
PORT STATE SERVICE
21/tcp open  ftp
443/tcp open  ssl/https
1119/tcp closed bnetgame
1935/tcp closed rtmp
```

Which of the following is the most likely cause of this leak?

- A. RTMP port open
- B. SQL injection
- C. Privilege escalation
- D. Insecure protocol

Answer: D

Explanation:

The data leak is most likely caused by the use of an insecure protocol. The vulnerability scan output shows that port 21/tcp for FTP (File Transfer Protocol) is open. FTP is known for transmitting data unencrypted, which could allow sensitive data to be intercepted during transfer. References: The security risks associated with the use of insecure or unencrypted protocols are covered under cloud security best practices in the CompTIA Cloud+ curriculum.

NEW QUESTION 10

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 13

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 18

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%.
- NetworkIn 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 21

Which of the following requirements are core considerations when migrating a small business's on-premises applications to the cloud? (Select two).

- A. Availability
- B. Hybrid
- C. Testing
- D. Networking
- E. Compute
- F. Logs

Answer: AD

Explanation:

When migrating on-premises applications to the cloud for a small business, availability and networking are core considerations. Ensuring that applications are available and that the network is capable of handling the new cloud traffic are pivotal for a successful transition. References: The migration process and its core considerations, including availability and networking, are topics within the Business Principles of Cloud Environments in the CompTIA Cloud+ material.

NEW QUESTION 23

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 fix vulnerabilities, 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 0.0.0.0/70 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, and troubleshooting such issues is part of the cloud management skills discussed in the CompTIA Cloud+ certification

NEW QUESTION 31

A technician receives an email from a vendor who is requesting payment of an invoice for human resources services. The email contains a request for bank account numbers. Which of the following types of attacks does this behavior most likely indicate?

- A. Malware
- B. Cryptojacking
- C. Ransomware
- D. Phishing

Answer: D

Explanation:

The behavior described in the question indicates a phishing attack. Phishing typically involves an attacker masquerading as a legitimate entity to trick individuals into providing sensitive information, such as bank account numbers, through seemingly trustworthy communication channels like email. References: Understanding security concerns and measures is part of the Governance, Risk, Compliance, and Security domain of the CompTIA Cloud+ objectives.

NEW QUESTION 35

Which of the following is the most cost-effective and efficient strategy when migrating to the cloud?

- A. Retire
- B. Replatform
- C. Retain
- D. Refactor

Answer: A

Explanation:

The most cost-effective and efficient strategy when migrating to the cloud can often be to 'retire' or turn off legacy systems that are no longer useful or necessary. This avoids spending resources on migrating and maintaining systems that do not provide value in a cloud environment. References: Cloud migration strategies, including retiring outdated systems, are part of the decision-making process for cloud adoption in the CompTIA Cloud+ certification material.

NEW QUESTION 39

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. IaaS
- 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 43**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).

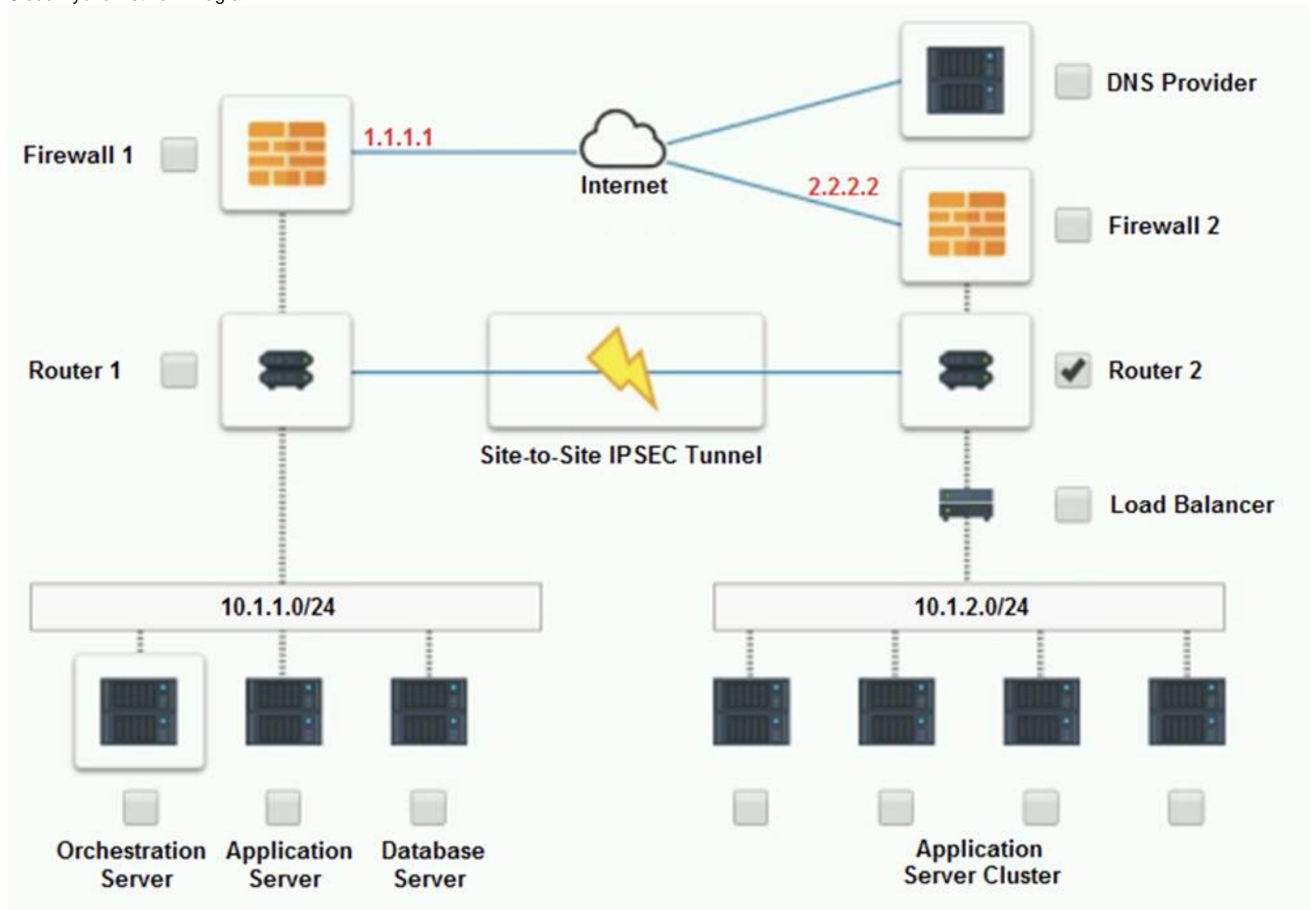
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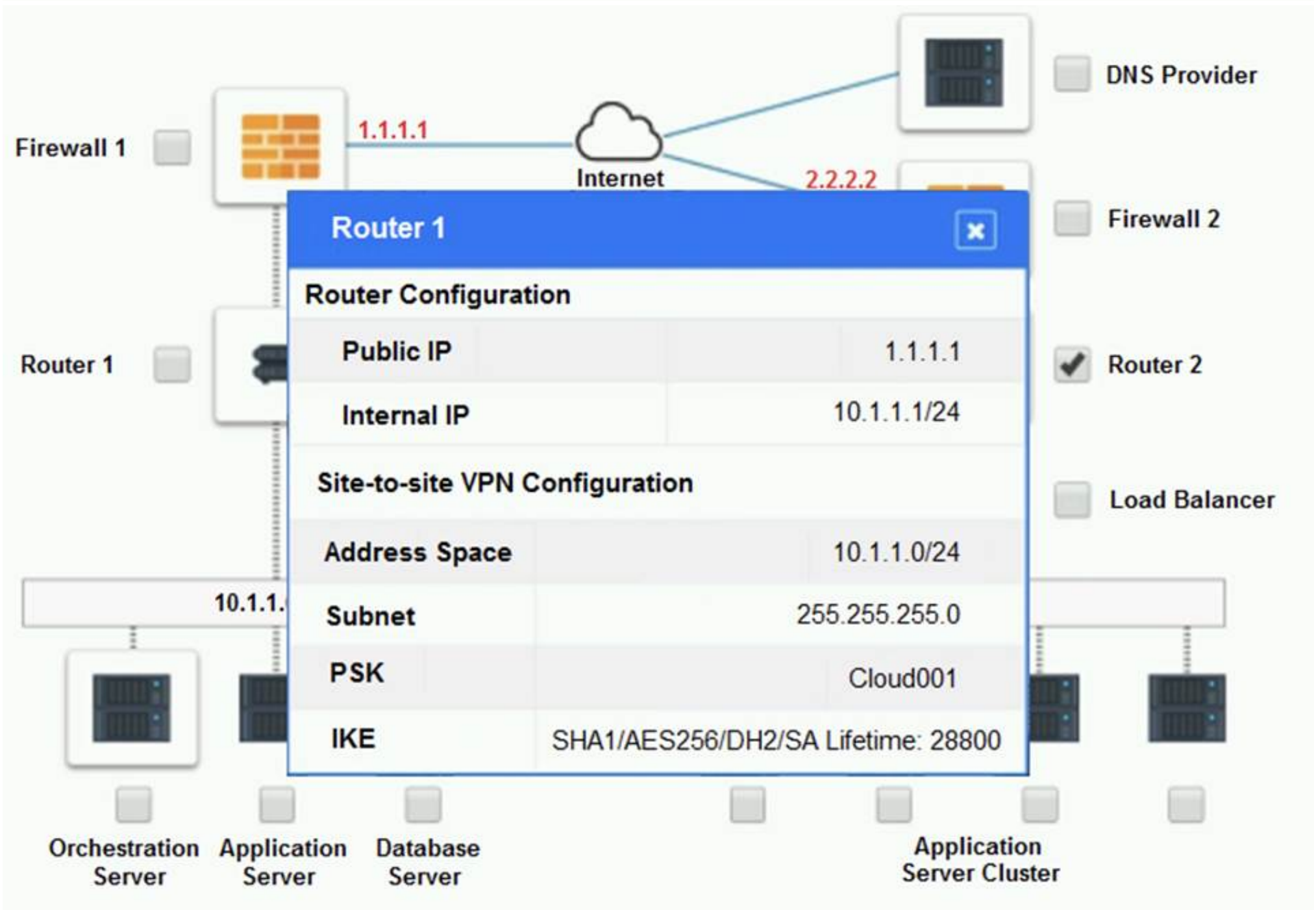
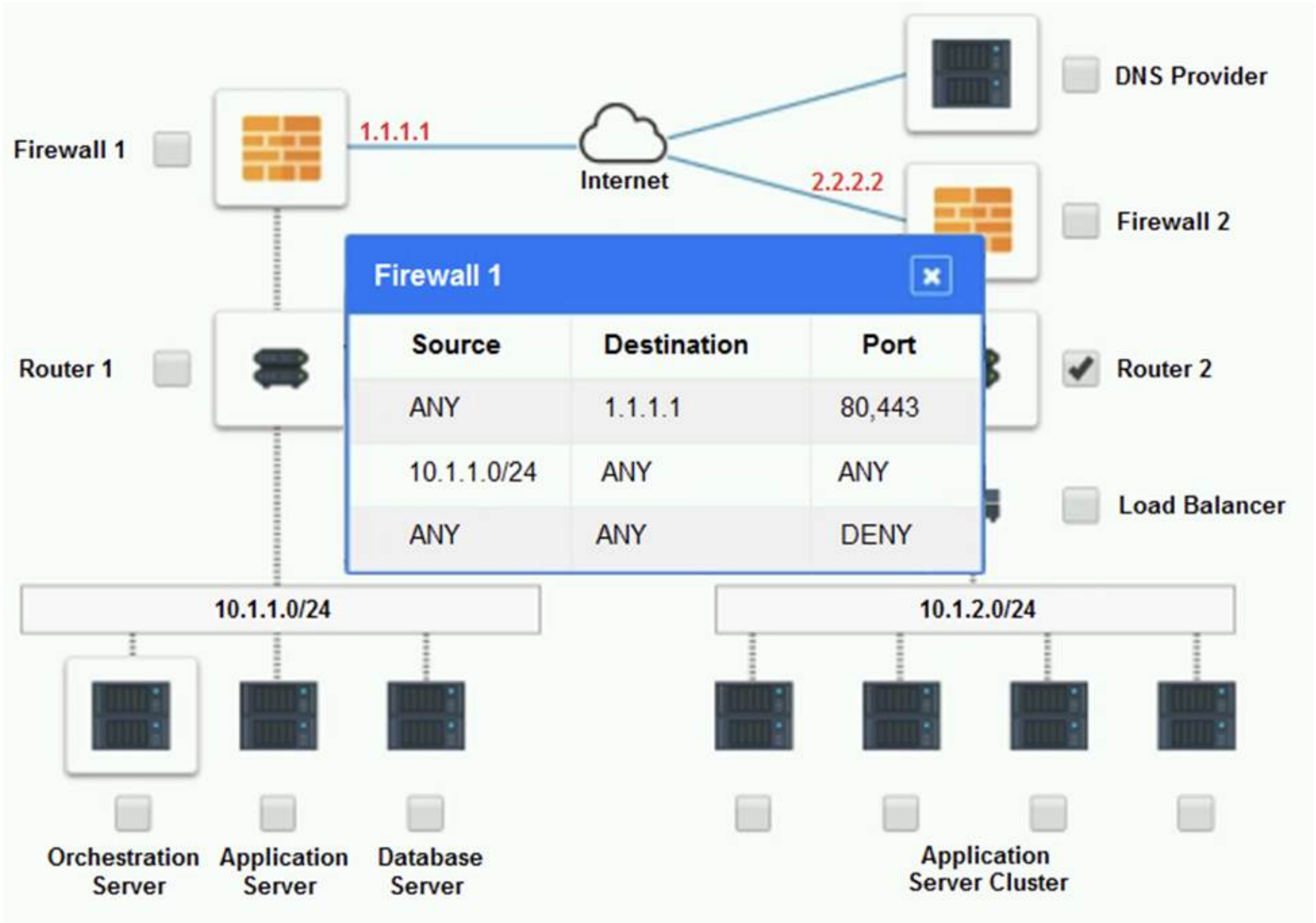
- Identify the correct options to provide adequate configuration for hybrid cloud architecture.

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

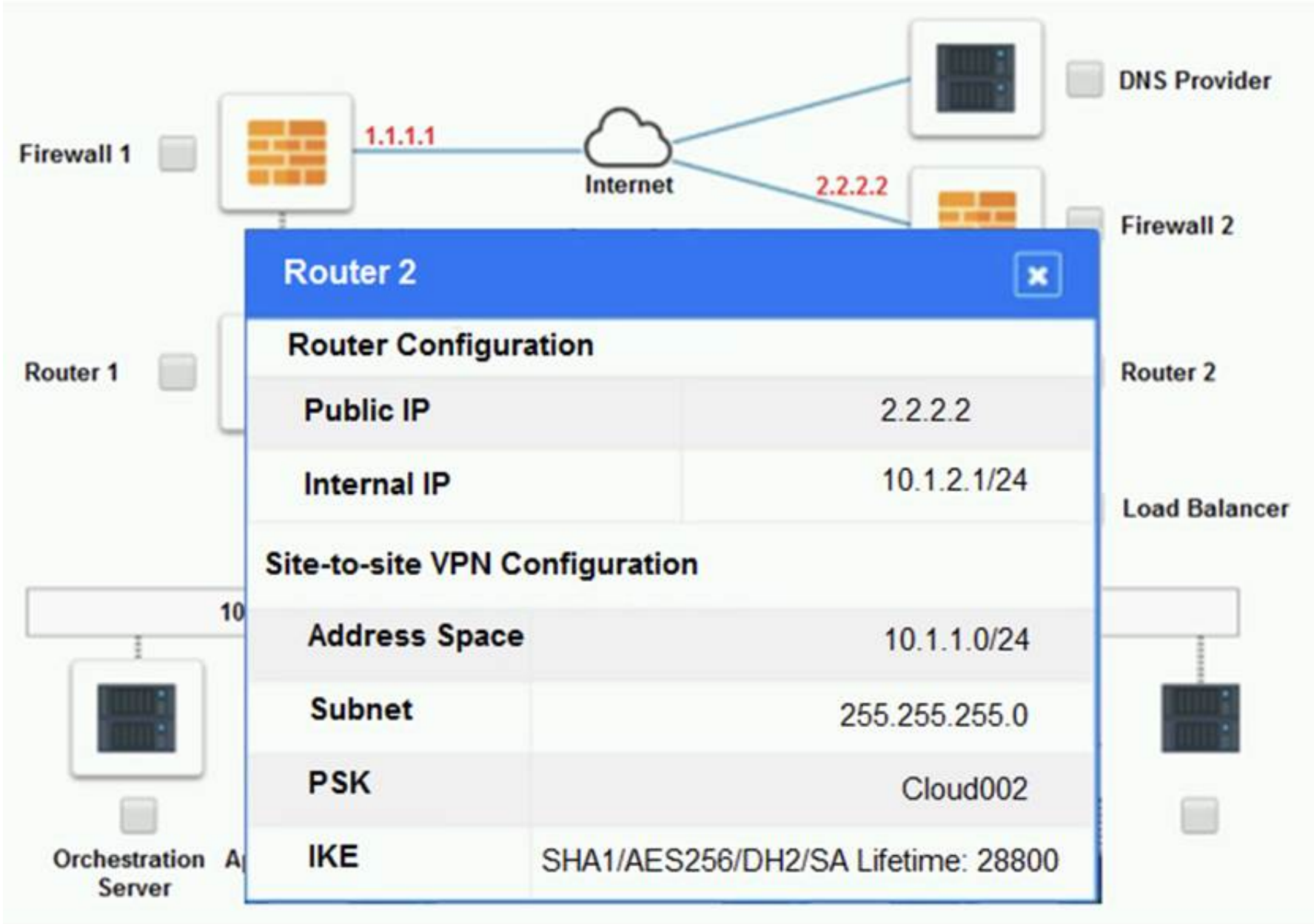
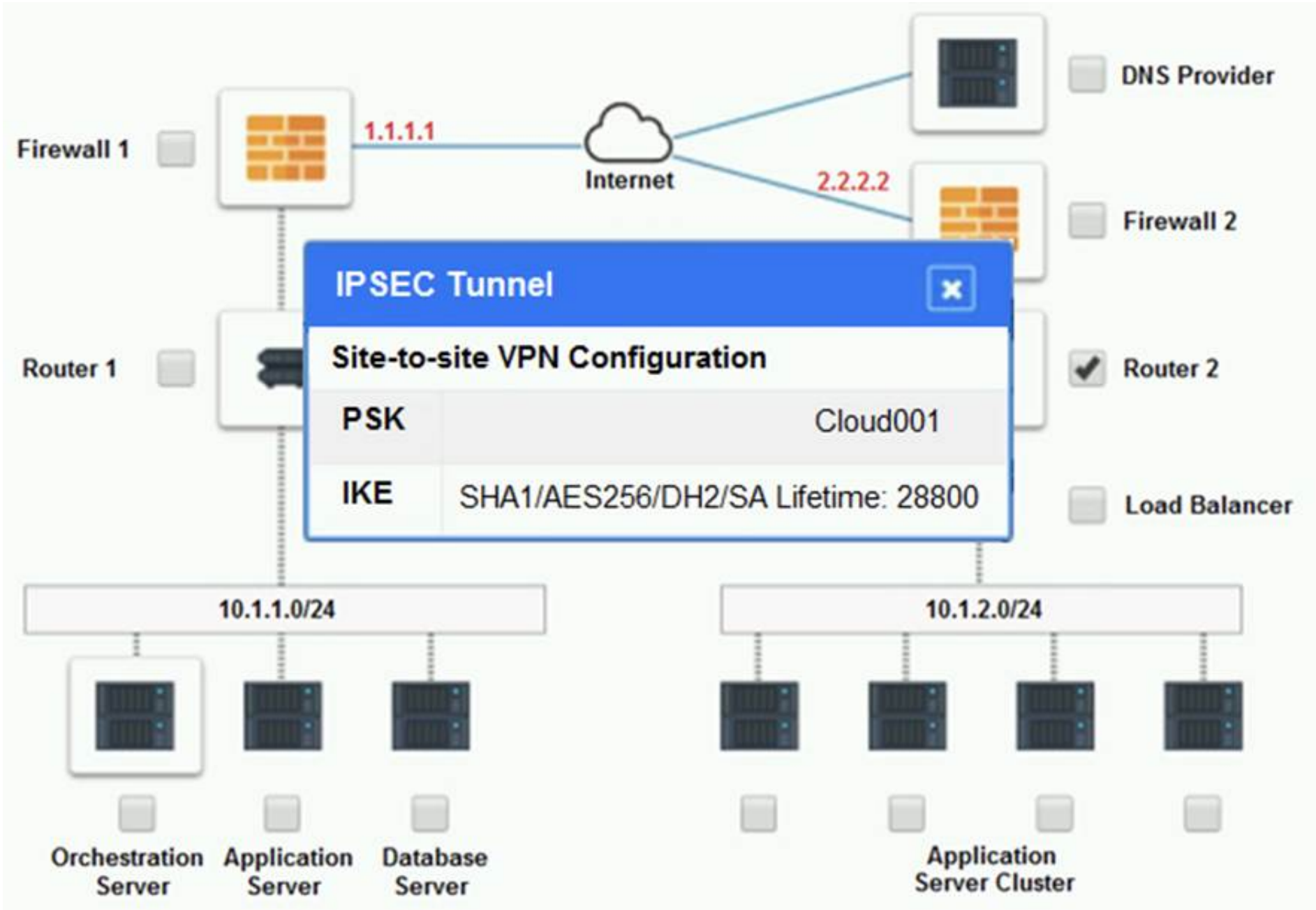
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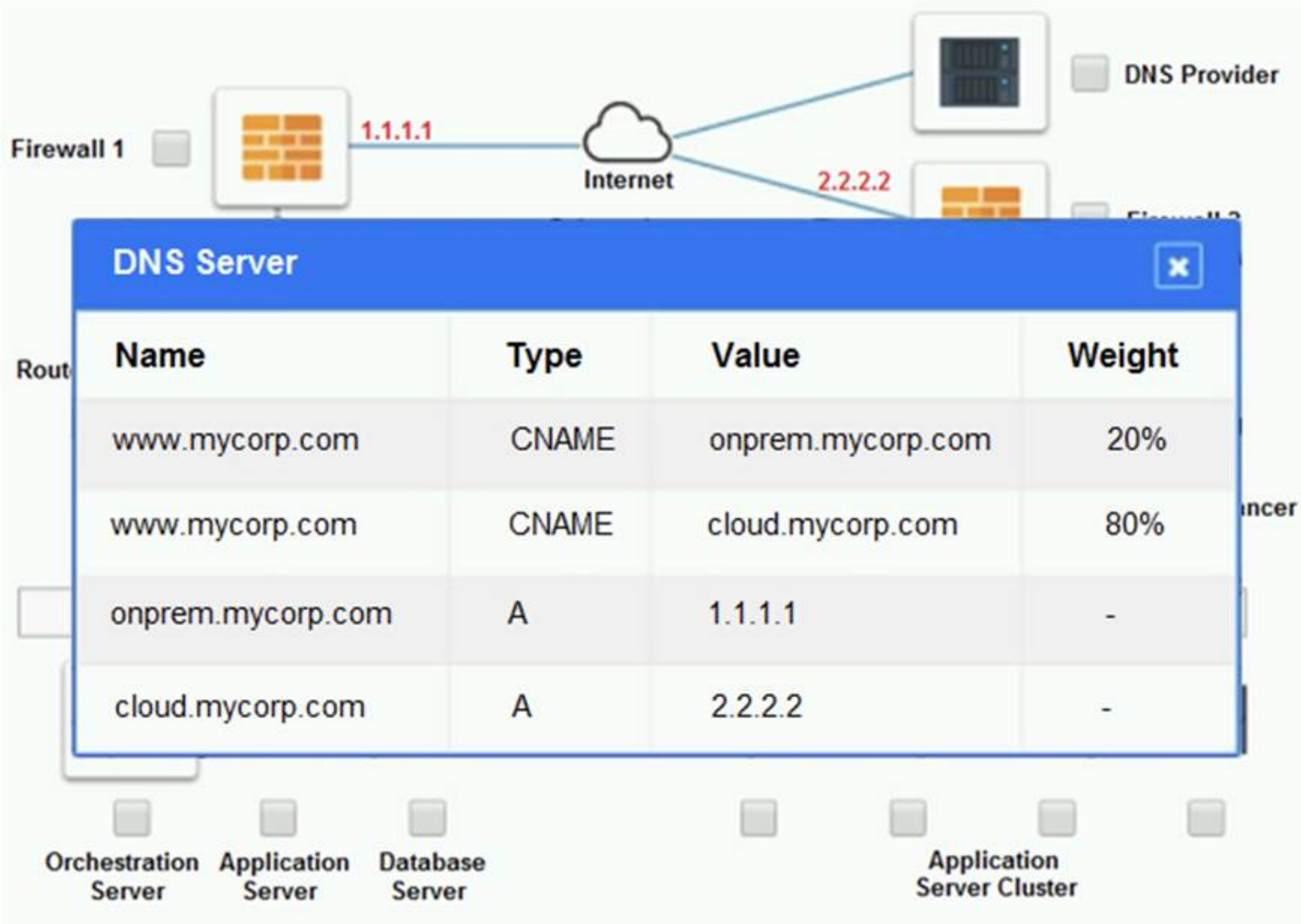
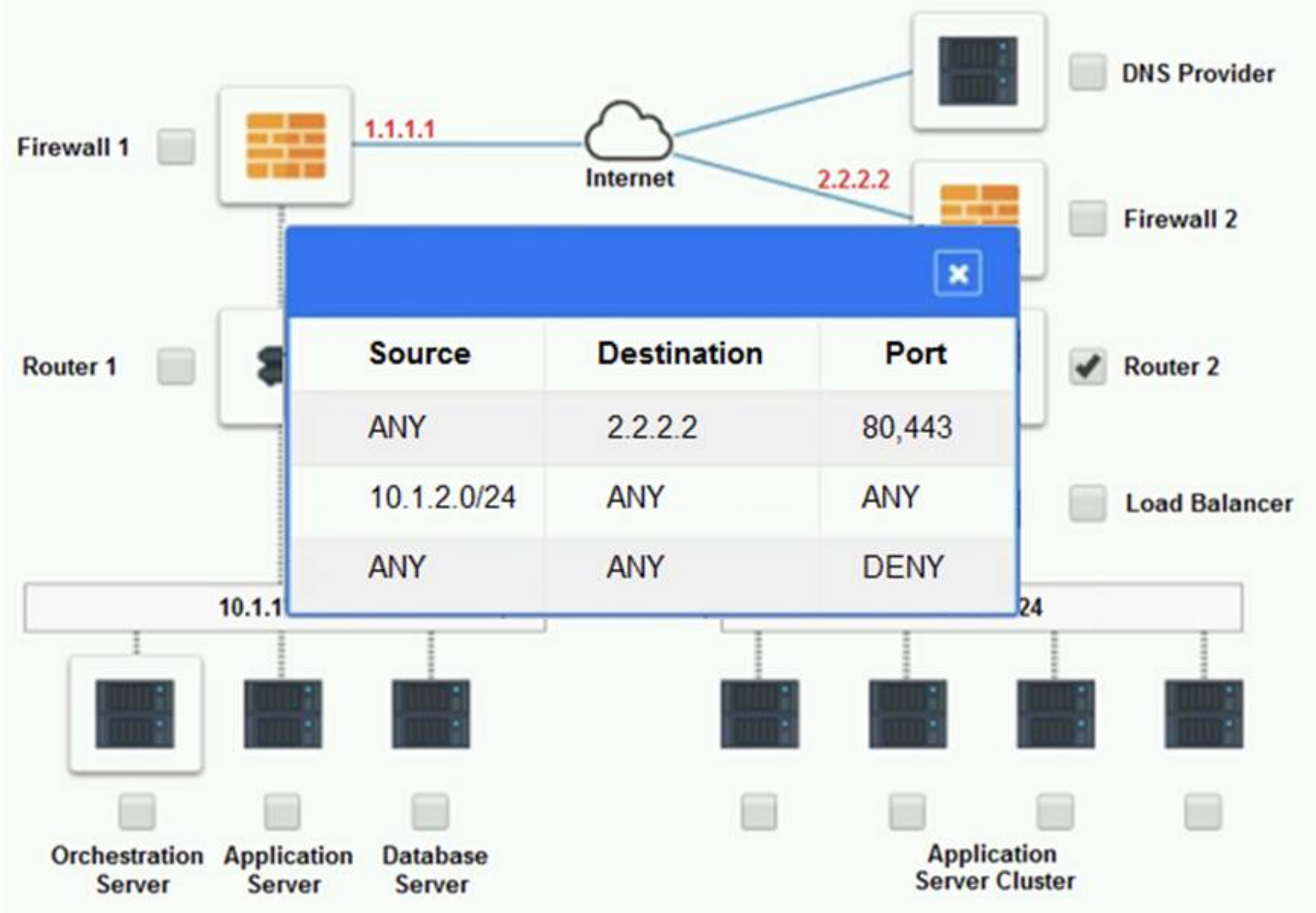
Cloud Hybrid Network Diagram











Part 2:
Only select a maximum of TWO options from the multiple choice question

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

- A. Mastered
B. Not Mastered

Answer: A

Explanation:

Part 1: Router 2

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

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

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

Part 2:

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

? Update the PSK in Router 2.

? Change the address space on Router 2.

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

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

* E. Change the Address Space on Router2

NEW QUESTION 46

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" "user1" "File transfer completed successfully."

"2022/10/21 11:21:05" "10. 25.2. 35" "104. 210.233.225" "user1" "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 51

A company is developing a new web application that requires a relational database management system with minimal operational overhead. Which of the following should the company choose?

- A. A database installed on a virtual machine
- B. A managed SQL database on the cloud
- C. A database migration service
- D. A hybrid database setup

Answer: B

Explanation:

For a new web application that requires a relational database management system with minimal operational overhead, the company should choose a managed SQL database on the cloud. Managed databases provide automated backups, patching, and other management tasks, reducing the administrative burden. References: The use of managed services, like managed databases, to minimize operational overhead is a strategic decision in cloud computing covered in CompTIA Cloud+.

NEW QUESTION 55

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 57

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 60

An e-commerce store is preparing for an annual holiday sale. Previously, this sale has increased the number of transactions between two and ten times the normal level of transactions. A cloud administrator wants to implement a process to scale the web server seamlessly. The goal is to automate changes only when necessary and with minimal cost.

Which of the following scaling approaches should the administrator use?

- A. Scale horizontally with additional web servers to provide redundancy.
- B. Allow the load to trigger adjustments to the resources.
- C. When traffic increases, adjust the resources using the cloud portal.
- D. Schedule the environment to scale resources before the sale begins.

Answer: B

Explanation:

To seamlessly scale the web server for an e-commerce store during an annual sale, it's best to allow the load to trigger adjustments to the resources. This approach uses autoscaling to automatically adjust the number of active servers based on the current load, ensuring an automated change that is cost-effective. References: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Cloud Scalability

NEW QUESTION 63

Which of the following migration types is best to use when migrating a highly available application, which is normally hosted on a local VM cluster, for usage with an external user population?

- A. Cloud to on-premises
- B. Cloud to cloud
- C. On-premises to cloud
- D. On-premises to on-premises

Answer: C

Explanation:

When migrating a highly available application normally hosted on a local VM cluster for usage with an external user population, the best migration type would be on-premises to cloud. This allows the application to leverage the cloud's scalability and reach, providing better access to the external users. References: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Cloud Migration

NEW QUESTION 64

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 68

A company wants to optimize cloud resources and lower the overhead caused by managing multiple operating systems. Which of the following compute resources would be best to help to achieve this goal?

- A. VM
- B. Containers
- C. Remote desktops
- D. Bare-metal servers

Answer: B

Explanation:

Containers are the best compute resources to optimize cloud resources and lower the overhead caused by managing multiple operating systems. Containers encapsulate applications and their dependencies into a single executable package, running on a shared OS kernel, which reduces the need for separate operating systems for each application and simplifies resource management. References: CompTIA Cloud+ materials discuss management and technical operations in cloud environments, including the use of containers to improve resource utilization and operational efficiency by minimizing the overhead associated with traditional VMs.

NEW QUESTION 72

A company that has several branches worldwide needs to facilitate full access to a specific cloud resource to a branch in Spain. Other branches will have only read access. Which of the following is the best way to grant access to the branch in Spain?

- A. Set up MFA for the users working at the branch.
- B. Create a network security group with required permissions for users in Spain.
- C. Apply a rule on the WAF to allow only users in Spain access to the resource.
- D. Implement an IPS/IDS to detect unauthorized users.

Answer: B

Explanation:

The best way to grant full access to a specific cloud resource to a branch in Spain, while other branches have only read access, is to create a network security group with the required permissions. This group can be configured to allow full access to users within the branch's IP range while restricting others to read-only access. References: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Security Configuration

NEW QUESTION 73

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 74

A company wants to use a solution that will allow for quick recovery from ransomware attacks, as well as intentional and unintentional attacks on data integrity and availability. Which of the following should the company implement that will minimize administrative overhead?

- A. Object versioning
- B. Data replication
- C. Off-site backups
- D. Volume snapshots

Answer: D

Explanation:

Implementing volume snapshots is an effective solution for quick recovery from ransomware attacks and protecting data integrity and availability. Snapshots capture the state of a storage volume at a point in time and can be used to restore data quickly with minimal administrative overhead. References: Data protection strategies like volume snapshots are discussed under cloud data management and protection in the CompTIA Cloud+ objectives.

NEW QUESTION 76

A cloud engineer is provisioning a new application that requires access to the organization's public cloud resources. Which of the following is the best way for the cloud engineer to authenticate the application?

- A. Access key
- B. API
- C. MFA token
- D. Username and Password

Answer: A

Explanation:

The best way to authenticate an application requiring access to an organization's public cloud resources is through the use of an access key. Access keys provide a secure means of authentication for applications and services without the need for interactive login credentials. This method is particularly useful for automated processes or applications that need to interact with cloud services programmatically, ensuring secure and efficient access control. References: CompTIA Cloud+ content emphasizes the importance of secure authentication mechanisms, such as access keys, in managing and securing access to cloud resources, aligning with best practices for cloud security and application deployment.

NEW QUESTION 79

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

Web app 3 ×			
SVC_Host	SVC_Name	SVC IP	SVC_Port
webapp3	API	10.22.10.31	443

Web app 4			
SVC_Host	SVC_Name	SVC IP	SVC_Port
webapp4	CHAT	10.22.10.41	443

WAF				
Edit config		WAF logs		
Rule ID	Description	Service	Action	Availability zone
1001	Brute force attempt	<input type="text" value="^https://webapp[.]comptia[.]org/\$"/>	Block	A
1002	Botnet	<input type="text" value="^https://webapp[.]compha[.]org/\$"/>	Block	A
1003	API web server	<input type="text" value="^https://webapp3[.]compha[.]org/([0-9A-Za-z]([0-9A-Za-z_?]*))?\$"/>	Allow	B
1004	Chat web traffic	<input type="text" value="^https://webapp4[.]comptia[.]org/chat/request[.]php\$"/>	Allow	B
1005	Finance application 1	<input type="text" value="^https://webapp1[.]comptia[.]org/([0-9A-Za-z]([0-9A-Za-z_?]*))?\$"/>	Allow	B
1006	Finance application 2	<input type="text" value="^https://webapp1[.]comptia[.]org/login[.]html\$"/>	Block	A
1007	Video application	<input type="text" value="^https://webapp2[.]comptia[.]org/video/stream\$"/>	Allow	A

- 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 updated to ensure legitimate traffic is not being blocked while still protecting against unauthorized access.

NEW QUESTION 84

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 computer resources and allows the engineering department to configure the environment as needed for their specific test without the constraints that might be present in PaaS or SaaS offerings. References: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Cloud Service Models

NEW QUESTION 88

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 90

A cloud engineer needs to integrate a new payment processor with an existing e-commerce website. Which of the following technologies is the best fit for this integration?

- A. RPC over SSL
- B. Transactional SQL
- C. REST API over HTTPS
- D. Secure web socket

Answer: C

Explanation:

The best technology for integrating a new payment processor with an existing e-commerce website is a REST API over HTTPS. This method is widely used for web services, allowing secure communication over the internet and a standardized way for applications to communicate with each other. References: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Cloud Integration

NEW QUESTION 94

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 96

A cloud engineer is exploring options to reduce the management overhead of the servers and network. Which of the following cloud service models should the engineer implement?

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

Answer: C

Explanation:

Platform as a Service (PaaS) provides a platform allowing customers to develop, run, and manage applications without the complexity of building and maintaining the infrastructure typically associated with developing and launching an app. Adopting PaaS can significantly reduce the management overhead of servers and networks. References: CompTIA Cloud Essentials+ Certification Study Guide (Exam CLO-002) by Scott Wilson.

NEW QUESTION 101

A company operates a website that allows customers to upload, share, and retain full ownership of their photographs. Which of the following could affect image ownership as the website usage expands globally?

- A. Sovereignty
- B. Data classification
- C. Litigation holds
- D. Retention

Answer: A

Explanation:

Data sovereignty refers to the legal implications of storing data in a country, subject to that country's laws. As the website's usage expands globally, data sovereignty becomes a critical concern because laws governing data ownership, privacy, and rights can vary significantly from one jurisdiction to another, potentially affecting the users' ownership rights over their photographs.

NEW QUESTION 105

SIMULATION

You are a cloud engineer working for a cloud service provider that is responsible for an IaaS offering.

Your customer, who creates VMs and manages virtual storage, has noticed I/O bandwidth issues and low IOPS (under 9000).

Your manager wants you to verify the proper storage configuration as dictated by your service level agreement (SLA).

The SLA specifies:

. Each SFP on the hypervisor host must be set to the maximum link speed

allowed by the SAN array. . All SAN array disk groups must be configured in a RAID 5.

. The SAN array must be fully configured for redundant fabric paths. . IOPS should not fall below 14000

INSTRUCTIONS

Click on each service processor to review the displayed information. Then click on the drop-down menus to change the settings of each device as necessary to conform to the SLA requirements.

Hypervisor

Slot A fiber channel card

Port 1 link speed: 16 Gbps

Port 2 link speed: 16 Gbps

Slot B fiber channel card

Port 1 link speed: 4 Gbps

Port 2 link speed: 8 Gbps

Fabric switch A

(WWPN pool: 50:00:00:25:B5:A0:23:00 - 50:00:00:25:B5:A0:23:09)

Initiator table:

- 50:00:00:25:B5:A0:23:02
- 50:00:00:25:B5:B0:23:05

Fabric switch B

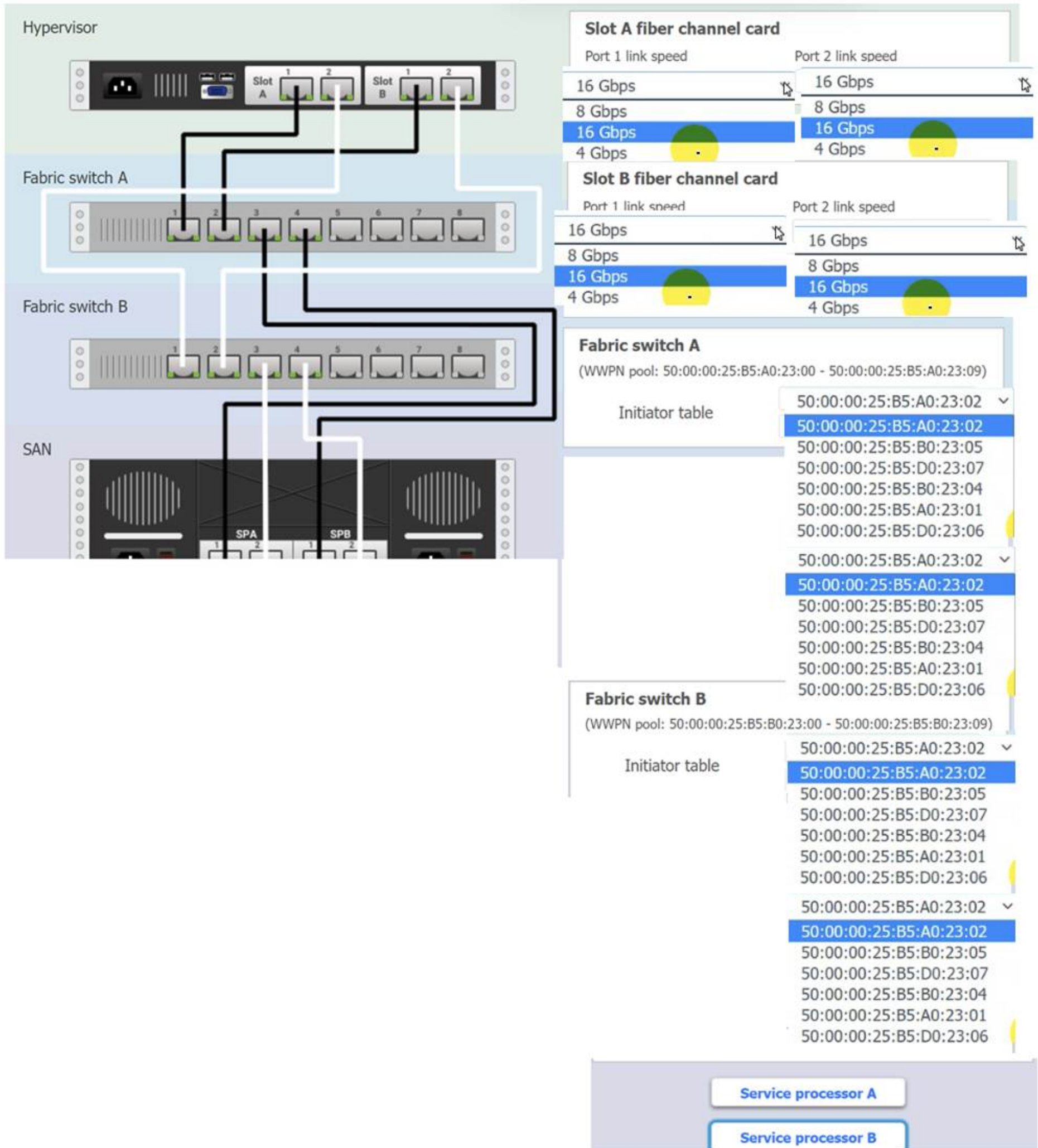
(WWPN pool: 50:00:00:25:B5:B0:23:00 - 50:00:00:25:B5:B0:23:09)

Initiator table:

- 50:00:00:25:B5:B0:23:04
- 50:00:00:25:B5:A0:23:01

Service processor A

Service processor B



Service processor A details

"no initiators currently logged in"

SP-A module 0 Port 0	8 Gbps
SP-A module 0 Port 1	8 Gbps

Disk groups	1
RAID level	5

Service processor B details

"50:00:00:25:B5:A0:23:02 - logged in"

"50:00:00:25:B5:B0:23:04 - logged in"

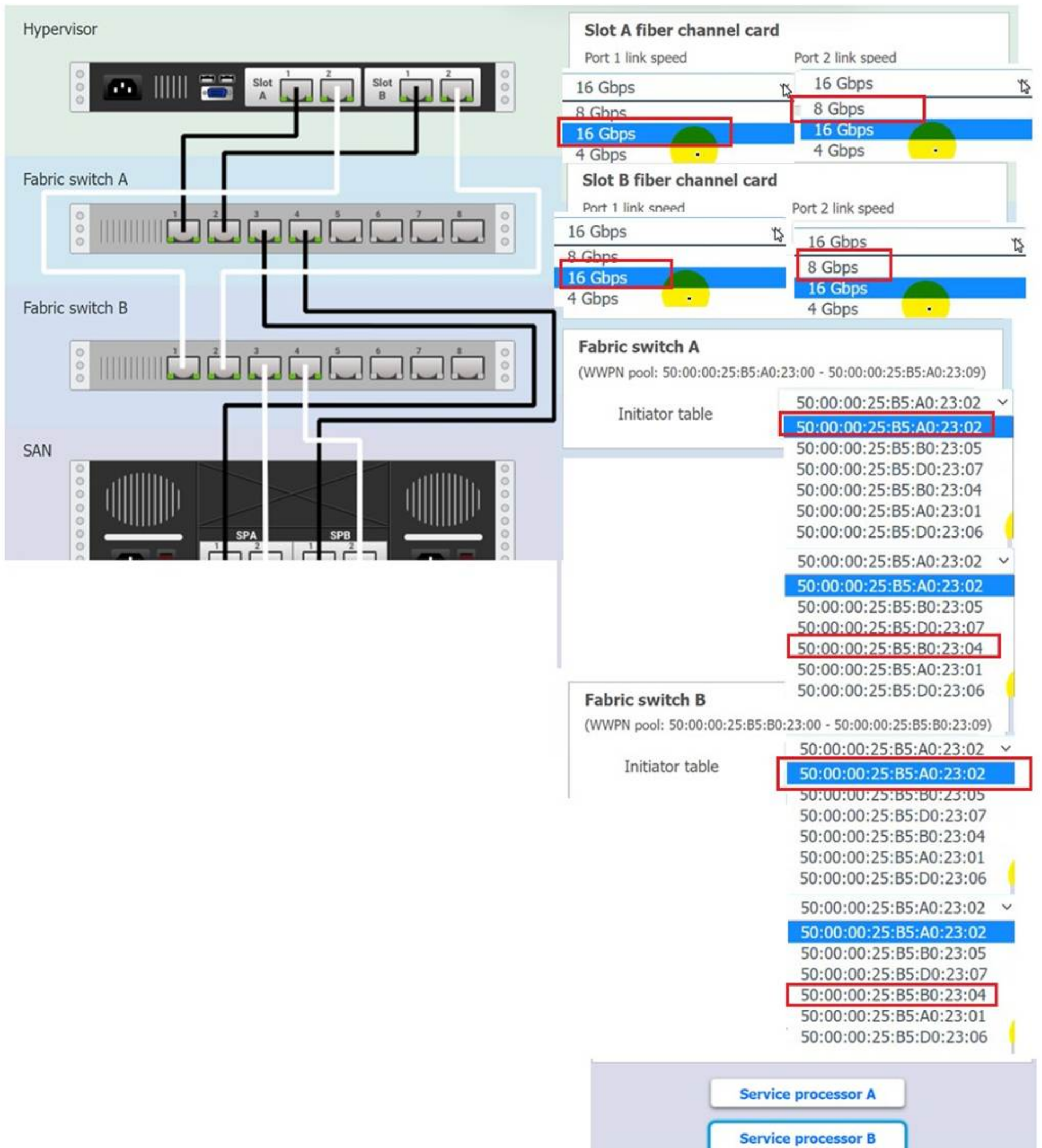
SP-B module 0 Port 0	8 Gbps
SP-B module 0 Port 1	8 Gbps

Disk groups	1
RAID level	5

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:
Based on the SLA requirements and the information provided in the diagram: For the Hypervisor:
Slot A fiber channel card:
? Port 1 link speed should be set to 16 Gbps since it's connected to Fabric switch A which supports 16 Gbps.
? Port 2 link speed should be set to 8 Gbps because it's connected to Fabric switch B which supports up to 8 Gbps.
Slot B fiber channel card:
? Port 1 link speed should be set to 16 Gbps since it's connected to Fabric switch A which supports 16 Gbps.
? Port 2 link speed should be set to 8 Gbps because it's connected to Fabric switch B which supports up to 8 Gbps.



NEW QUESTION 110

An engineer wants to scale several cloud workloads on demand. Which of the following approaches is the most suitable?

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

Answer: A

Explanation:

Load scaling is the most suitable approach for scaling several cloud workloads on demand. It automatically adjusts the number of active servers in a cloud environment based on the current load or traffic, ensuring that resources are efficiently utilized to meet demand without manual intervention. This approach helps maintain optimal performance and availability, particularly during unexpected surges in workload or traffic. References: Understanding cloud management and technical operations, including scaling strategies, is crucial for optimizing resource utilization and performance in cloud environments, as outlined in the CompTIA Cloud+ objectives.

NEW QUESTION 113
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 1			
SVC_Host	SVC_Name	SVC IP	SVC_Port
webapp1	FIN	10.22.10.11	443

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	

Client app

Client laptop

App config

Host

client142

IP

192.168.10.142

WAF

Edit config

WAF logs

Rule ID	Description	Service	Action	Availability zone
1001	Brute-force attempt	<input type="text" value="^https://webapp[.]comptia[.]org/\$"/>	Block	A
1002	Botnet	<input type="text" value="^https://webapp[.]comptia[.]org/\$"/>	Block	A
1003	API web server	<input type="text" value="^https://webapp3[.]comptia[.]org/([0-9A-Za-z][0-9A-Za-z_?]*)*\$"/>	Allow	B
1004	Chat web traffic	<input type="text" value="^https://webapp4[.]comptia[.]org/chat/request[.]php\$"/>	Allow	B
1005	Finance application 1	<input type="text" value="^https://webapp1[.]comptia[.]org/([0-9A-Za-z][0-9A-Za-z_?]*)*\$"/>	Allow	B
1006	Finance application 2	<input type="text" value="^https://webapp1[.]comptia[.]org/login[.]html\$"/>	Block	A
1007	Video application	<input type="text" value="^https://webapp2[.]comptia[.]org/video/stream\$"/>	Allow	A

WAF

Edit config

WAF logs

...

Dec 12 21:50:45 10.1.105.1 CEF:0|Sec|Gateway|1.0|WAF|WAF_INSPECT|5|src=192.168.11.129 spt=39110 method=POST request="PASS991!!" msg=Unauthorized content. cn1=2002 cn2=104 cs1= cs2= cs3= cs4=ALERT cs5=2020 act=blocked

Dec 12 22:20:17 10.1.105.1 CEF:0|Sec|Gateway|1.0|WAF|WAF_STARTURL|6|src=192.168.10.142 spt=48909 method=GET request=https://webapp1.comptia.org/FIN/login.html msg=Start URL Check Failed. cn1=1005 cn2=248 cs1= cs2= cs3= cs4=ALERT cs5=2020 act=blocked

Dec 12 22:23:20 10.1.105.1 CEF:0|Sec|Gateway|1.0|WAF|WAF_STARTURL|1|src=192.168.11.129 spt=38995 method=GET request=https://webapp2.comptia.org/VIDEO/stream msg=Start URL Check Passed. cn1=1007 cn2=106 cs1= cs2= cs3= cs4=INFO cs5=2020 act=allow

Dec 12 22:23:20 10.1.105.1 CEF:0|Sec|Gateway|1.0|WAF|WAF_STARTURL|1|src=192.168.10.142 spt=49015 method=GET request=https://webapp4.comptia.org/CHAT/request.php msg=Start URL Check Passed. cn1=1004 cn2=332 cs1= cs2= cs3= cs4=INFO cs5=2020 act=allow

Dec 12 22:25:01 10.1.105.1 CEF:0|Sec|Gateway|1.0|WAF|WAF_URIINSPECT|2|src=192.168.10.142 spt=49117 method=GET request=https://webapp3.comptia.org/api?reqStatus=1 msg=Log sensitive request. cn1=1003 cn2=432 cs1= cs2= cs3= cs4=INFO cs5=2020 act=allow

...

Reset to Default

Save

Close

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.html> are 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 118

A customer relationship management application, which is hosted in a public cloud IaaS network, is vulnerable to a remote command execution vulnerability. Which of the following is the best solution for the security engineer to implement to prevent the application from being exploited by basic attacks?

- A. IPS
- B. ACL
- C. DLP
- D. WAF

Answer: D

Explanation:

A Web Application Firewall (WAF) is the best solution to implement for a public cloud IaaS hosted customer relationship management application vulnerable to remote command execution attacks. WAFs are designed to monitor, filter, and block malicious HTTP/S traffic to and from a web application to protect against various application layer attacks, including remote command execution. References: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Security in the Cloud

NEW QUESTION 121

An IT security team wants to ensure that the correct parties are informed when a specific user account is signed in. Which of the following would most likely allow an administrator to address this concern?

- A. Creating an alert based on user sign-in criteria
- B. Aggregating user sign-in logs from all systems
- C. Enabling the collection of user sign-in logs
- D. Configuring the retention of all sign-in logs

Answer: A

Explanation:

To ensure that the correct parties are informed when a specific user account is signed in, the best action is to create an alert based on user sign-in criteria. This alert can notify administrators or security personnel when the specified event occurs. References: Security monitoring and alerting are critical components of managing cloud environments securely, as discussed in the CompTIA Cloud+ certification.

NEW QUESTION 124

A cloud engineer is collecting web server application logs to troubleshoot intermittent issues. However, the logs are piling up and causing storage issues. Which of the following log mechanisms should the cloud engineer implement to address this issue?

- A. Splicing
- B. Rotation
- C. Sampling
- D. Inspection

Answer: B

Explanation:

Log rotation is the mechanism the cloud engineer should implement to address the issue of logs piling up and causing storage issues. Log rotation involves automatically archiving old log files and creating new ones after a certain size or time period, preventing storage issues. References: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Cloud Monitoring and Management

NEW QUESTION 125

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 130

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 131

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 135

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 138

A systems engineer is migrating a batch of 25 VMs from an on-premises compute cluster to a public cloud using the public cloud's migration agent. The migration job shows data copies at a rate of 250Mbps. After five servers migrate, the data copies at a rate of 25Mbps. Which of the following should the engineer review first to troubleshoot?

- A. The on-premises VM host hardware utilization
- B. The on-premises ISP throttling rate
- C. The IOPS on the SAN backing the on-premises cluster
- D. The compute utilization of the VMs being migrated

Answer: A

Explanation:

The engineer should review the on-premises VM host hardware utilization first. A decrease in transfer rate after a batch of migrations could suggest that the host hardware resources (like CPU, RAM, or network bandwidth) are becoming saturated, which would slow down additional migrations. References: CompTIA Cloud+ Certification Study Guide (Exam CV0-004) by Scott Wilson and Eric Vanderburg.

NEW QUESTION 141

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 143

HOTSPOT


An e-commerce company is migrating from an on-premises private cloud environment to a public cloud IaaS environment. You are tasked with right-sizing the environment to

save costs after the migration. The company's requirements are to provide a 20% overhead above the average resource consumption, rounded up.

INSTRUCTIONS

Review the specifications and graphs showing resource usage for the web and database servers. Determine the average resource usage and select the correct specifications from the available drop-down options.





Web Server

Current Specifications
 CPU: 4vCPU
 RAM: 16GB
 Disk Speed: 20MB/s

Target Specifications
 CPU:

Select

2 vCPUs

6 vCPUs

4 vCPUs

8 vCPUs

1 vCPU

RAM:

Select

32GB

16GB

128GB

1GB

8GB

4GB

64GB

2GB

Disk Speed:

Select

Select

120MBps

70MBps

110MBps

5MBps

80MBps

100MBps

90MBps

30MBps

10MBps

15MBps

25MBps

Processor Usage (%)

Day	Usage (%)
1	11
2	5
3	31
4	23
5	16
6	9
7	21

October 2020

RAM Usage (%)


Day	Usage (%)
1	15
2	15
3	15
4	15
5	15
6	15
7	15

October 2020

Disk Throughput (MBps)

Day	Throughput (MBps)
1	2
2	8
3	5
4	11
5	4
6	6
7	3

October 2020



Database Server

Current Specifications
 CPU: 4vCPU
 RAM: 16GB
 Disk Speed: 20MB/s

Target Specifications
 CPU:

Select

2 vCPUs

6 vCPUs

4 vCPUs

8 vCPUs

1 vCPU

RAM:

Select

32GB

16GB

128GB

1GB

8GB

4GB

64GB

2GB

Disk Speed:

Select

Select

120MBps

70MBps

110MBps

5MBps

80MBps

100MBps

90MBps

30MBps

10MBps

15MBps

25MBps

Processor Usage (%)

Day	Usage (%)
1	65
2	55
3	68
4	72
5	63
6	69
7	67

October 2020

RAM Usage (%)

Day	Usage (%)
1	80
2	80
3	80
4	80
5	80
6	80
7	80

October 2020

Disk Throughput (MBps)

Day	Throughput (MBps)
1	86
2	95
3	74
4	79
5	91
6	95
7	87

October 2020

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

For the Web Server:
? CPU: 2 vCPUs
? RAM: 2GB
? Disk Speed: 10MBps
For the Database Server:
? CPU: 6 vCPUs
? RAM: 128GB
? Disk Speed: 110MBps

These selections are based on maintaining a 20% overhead above the average resource consumption and rounding up to the next available option in the dropdowns provided.

NEW QUESTION 146

Which of the following integration systems would best reduce unnecessary network traffic by allowing data to travel bidirectionally and facilitating real-time results for developers who need to display critical information within applications?

- A. REST API
- B. RPC
- C. GraphQL
- D. Web sockets

Answer: D

Explanation:

Web sockets provide a full-duplex communication channel over a single, long-lived connection, allowing data to flow bidirectionally between a client and a server. This is ideal for real-time applications where developers need to display critical information without unnecessary network overhead, as it reduces the need for repetitive HTTP requests and allows for more efficient, instantaneous data updates and interactions.

NEW QUESTION 149

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 153

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

NEW QUESTION 156

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 159

A cloud administrator learns that a major version update, 4.6.0, is available for a business-critical application. The application is currently on version 4.5.2, with additional minor versions 3, 4, and 5 available. The administrator needs to perform the update while minimizing downtime. Which of the following should the administrator do first?

- A. Apply the minor updates and then restart the machine before applying the major update.
- B. During off hours, decommission the machine and create a new one directly on major update 4.6.0.
- C. Stop the service and apply the major updates directly.
- D. Create a test environment and apply the major update

Answer: D

Explanation:

The first step the administrator should take is to create a test environment and apply the major update there. This allows for testing the new version without impacting the production environment, thus minimizing downtime and the potential for unexpected issues. References: Creating test environments and conducting thorough testing before applying updates in production is a risk mitigation strategy covered under cloud deployment and operations in the CompTIA Cloud+ certification.

NEW QUESTION 164

A cloud deployment uses three different VPCs. The subnets on each VPC need to communicate with the others over private channels. Which of the following will achieve this objective?

- A. Deploying a load balancer to send traffic to the private IP addresses
- B. Creating peering connections between all VPCs
- C. Adding BGP routes using the VPCs' private IP addresses
- D. Establishing identical routing tables on all VPCs

Answer: B

Explanation:

To allow subnets on different VPCs to communicate with each other over private channels, the cloud engineer should create peering connections between all the VPCs. VPC Peering allows networks to connect and route traffic using private IP addresses without the need for gateways, VPN connections, or separate physical hardware. References: CompTIA Cloud+ Study Guide (Exam CV0-004) by Todd Montgomery and Stephen Olson

NEW QUESTION 165

An organization has been using an old version of an Apache Log4j software component in its critical software application. Which of the following should the organization use to calculate the severity of the risk from using this component?

- A. CWE
- B. CVSS
- C. CWSS
- D. CVE

Answer: B

Explanation:

The Common Vulnerability Scoring System (CVSS) is what the organization should use to calculate the severity of the risk from using an old version of Apache Log4j software component. CVSS provides an open framework for communicating the characteristics and impacts of IT vulnerabilities. References: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Risk Management

NEW QUESTION 170

A cloud engineer is reviewing a disaster recovery plan that includes the following requirements:

- System state, files, and configurations must be backed up on a weekly basis.
- The system state, file, and configuration backups must be tested annually.

Which of the following backup methods should the engineer implement for the first week the plan is executed?

- A. Differential
- B. Incremental
- C. Snapshot
- D. Full

Answer: D

Explanation:

A full backup method should be implemented for the first week the disaster recovery plan is executed. This will ensure that a complete copy of the system state, files, and configurations are backed up. Subsequent backups can be differential or incremental as per the plan. References: Backup methodologies, including the importance of full backups, are part of the data management strategies in cloud computing covered in the CompTIA Cloud+ certification.

NEW QUESTION 172

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 174

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 177

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 179

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 180

A government agency in the public sector is considering a migration from on premises to the cloud. Which of the following are the most important considerations for this cloud migration? (Select two).

- A. Compliance
- B. IaaS v
- C. SaaS
- D. Firewall capabilities
- E. Regulatory
- F. Implementation timeline
- G. Service availability

Answer: AD

Explanation:

For a government agency considering cloud migration, compliance and regulatory considerations are of utmost importance. The agency must ensure that the migration aligns with legal requirements, industry standards, and government regulations specific to the public sector. References: Compliance and regulatory considerations are crucial factors in the cloud migration process for government entities, as emphasized in the CompTIA Cloud+ certification.

NEW QUESTION 185

A company uses containers stored in Docker Hub to deploy workloads (or its IaaS infrastructure). The development team releases changes to the containers several times per hour. Which of the following should a cloud engineer do to prevent the proprietary code from being exposed to third parties?

- A. Use IaC to deploy the IaaS infrastructure.
- B. Convert the containers to VMs.
- C. Deploy the containers over SSH.
- D. Use private repositories for the containers.

Answer: D

Explanation:

To prevent proprietary code from being exposed to third parties, a cloud engineer should use private repositories for the containers. Private repositories ensure that access to container images is restricted and controlled, unlike public repositories where images are accessible to anyone. References: The concept of using private repositories for protecting proprietary code is part of cloud security best practices, which is covered under the Governance, Risk, Compliance, and Security domain of the CompTIA Cloud+ certification.

NEW QUESTION 190

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 191

A cloud engineer is designing a high-performance computing cluster for proprietary software. The software requires low network latency and high throughput between cluster nodes.

Which of the following would have the greatest impact on latency and throughput when designing the HPC infrastructure?

- A. Node placement
- B. Node size
- C. Node NIC
- D. Node OS

Answer: A

Explanation:

Node placement is critical in high-performance computing (HPC) clusters where low network latency and high throughput are required. Proper placement of nodes within the network infrastructure, including proximity to each other and to key network components, can significantly reduce latency and increase throughput. Ensuring that nodes are physically close and well-connected can facilitate faster data transfer rates between them. References: CompTIA Cloud+ Certification Study Guide (Exam CV0-004) by Scott Wilson and Eric Vanderburg

NEW QUESTION 194

An organization's critical data was exfiltrated from a computer system in a cyberattack. A cloud analyst wants to identify the root cause and is reviewing the following security logs of a software web application:

```
"2021/12/18 09:33:12" "10. 34. 32.18" "104. 224. 123. 119" "POST /  
login.php?u=administrator&p=or%201%20=1"  
"2021/12/18 09:33:13" "10.34. 32.18" "104. 224. 123.119" "POST /login.  
php?u=administrator&p=%27%0A"  
"2021/12/18 09:33:14" "10. 34. 32.18" "104. 224. 123. 119" "POST /login.  
php?u=administrator&p=%26"  
"2021/12/18 09:33:17" "10.34. 32.18" "104. 224. 123.119" "POST /  
login.php?u=administrator&p=%3B"  
"2021/12/18 09:33:12" "10.34. 32. 18" "104. 224. 123. 119" "POST / login.  
php?u=admin&p=or%201%20=1"  
"2021/12/18 09:33:19" "10.34.32.18" "104. 224. 123.119" "POST / login.  
php?u=admin&p=%27%0A"  
"2021/12/18 09:33:21" "10. 34. 32.18" "104.224. 123.119" "POST / login.  
php?u=admin&p=%26"  
"2021/12/18 09:33:23" "10. 34. 32.18" "104. 224. 123.119" "POST / login.  
php?u=admin&p=%3B"
```

Which of the following types of attacks occurred?

- A. SQL injection
- B. Cross-site scripting
- C. Reuse of leaked credentials
- D. Privilege escalation

Answer: A

Explanation:

The security logs of the software web application show patterns that are typical of an SQL injection attack. This is evidenced by the inclusion of SQL syntax in the user input fields in an attempt to manipulate the database. References: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Cloud Security Threats

NEW QUESTION 199

The performance of an e-commerce website decreases dramatically during random periods. The IT team is evaluating available resources to mitigate the situation. Which of the following is the best approach to effectively manage this scenario?

- A. Migrating to a dedicated host
- B. Purchasing additional servers
- C. Scheduling resource allocation
- D. Configuring automatic elasticity

Answer: D

Explanation:

Configuring automatic elasticity is the best approach to manage an e-commerce website that experiences random performance drops due to variable traffic. Automatic elasticity enables the cloud resources to scale up or down automatically based on the current load, ensuring consistent performance even during unexpected traffic surges. References: The concept of automatic elasticity is part of the cloud management and technical operations content in the CompTIA Cloud+ curriculum.

NEW QUESTION 200

An organization needs to retain its data for compliance reasons but only when required. Which of the following would be the most cost-effective type of tiered storage?

- A. Warm
- B. Hot
- C. Archive
- D. Cold

Answer: C

Explanation:

Archive storage is the most cost-effective type of tiered storage for retaining data that is infrequently accessed and only when required for compliance reasons. It is designed for long-term storage and offers lower storage costs compared to hot, cold, or warm storage tiers. References: Understanding data storage and the various tiers, including archival storage, is part of cloud storage strategies covered in the CompTIA Cloud+ certification.

NEW QUESTION 204

A cloud engineer needs to determine a scaling approach for a payroll-processing solution that runs on a biweekly basis. Given the complexity of the process, the deployment to each new VM takes about 25 minutes to get ready. Which of the following would be the best strategy?

- A. Horizontal
- B. Scheduled
- C. Trending
- D. Event

Answer: B

Explanation:

For a biweekly payroll-processing solution that takes a significant amount of time to deploy to each new VM, the best scaling strategy is Scheduled scaling. This strategy involves preparing new instances in advance of when they are needed based on a known schedule, which in this case is the biweekly payroll process. By scheduling the scaling actions in advance, the cloud engineer ensures that the resources are ready when needed without incurring extra costs for running them all the time. References: CompTIA Cloud+ Study Guide (Exam CV0-004) by Todd Montgomery and Stephen Olson

NEW QUESTION 205

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 210

A company recently set up a CDN for its photography and image-sharing website. Which of the following is the most likely reason for the company's action?

- A. To eliminate storage costs
- B. To improve site speed
- C. To enhance security of static assets
- D. To prevent unauthorized access

Answer: B

Explanation:

The most likely reason for setting up a Content Delivery Network (CDN) is to improve site speed, especially for a photography and image-sharing website. CDNs cache content at edge locations closer to end-users, significantly reducing load times for static assets like images and videos. This enhancement in speed can improve user experience and site performance.

References: CompTIA Cloud+ resources and CDN functionality

NEW QUESTION 215

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 218

A developer is testing code that will be used to deploy a web farm in a public cloud. The main code block is a function to create a load balancer and a loop to create 1.000 web servers, as shown below:

```
my_load_balancer()
for x in range(1000):
    my_web_server()
```

The developer runs the code against the company's cloud account and observes that the load balancer is successfully created, but only 100 web servers have been created. Which of the following should the developer do to fix this issue?

- A. Request an increase of Instance quota.
- B. Run the code multiple times until all servers are created.
- C. Check the my_web_server () function to ensure it is using the right credentials.
- D. Place the my_load_balancer () function after the loop.

Answer: A

Explanation:

The developer should request an increase of the instance quota from the cloud provider. Cloud services often have a limit on the number of instances that can be created, which is known as an instance quota. If the load balancer is successfully created but the number of web servers is limited to 100, it suggests that the quota has been reached. Increasing the quota will allow the creation of additional web server instances up to the desired number. References: The scenario reflects an understanding of cloud resource management and limitations, which is a part of the CompTIA Cloud+ curriculum, specifically under the domain of Management and Technical Operations.

NEW QUESTION 222

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 225

A cloud networking engineer is troubleshooting the corporate office's network configuration. Employees in the IT and operations departments are unable to resolve IP addresses on all devices, and the IT department cannot establish a connection to other departments' subnets. The engineer identifies the following configuration currently in place to support the office network:

Subnet	Department	Employees
10.1.20.1/24	Finance	50
10.1.30.1/24	IT	90
10.1.40.1/24	Legal	30
10.1.50.1/24	Operations	100

Each employee needs to connect to the network with a maximum of three hosts. Each subnet must be segregated, but the IT department must have the ability to communicate with all subnets. Which of the following meet the IP addressing and routing requirements? (Select two).

- A. Modifying the subnet mask to 255 255 254.0 for IT and operations departments
- B. Configuring static routing to allow access from each subnet to 10.1.40.1
- C. Modifying the BYOD policy to reduce the volume of devices that are allowed to connect to the corporate network
- D. Configuring static routing to allow access from 10.1.30.1 to each subnet
- E. Combining the subnets and increasing the allocation of IP addresses available to support three hosts for each employee
- F. Modifying the subnet mask to 255.255.255.128 for the IT and operations departments

Answer: DF

Explanation:

To meet the requirements of allowing the IT department to communicate with all subnets while keeping each department segregated and ensuring a maximum of three hosts per employee, two actions are required. First, configuring static routing from the IT subnet (10.1.30.1) to each of the other subnets would establish the necessary connectivity. Second, modifying the subnet mask to 255.255.255.128 for the IT and operations departments would provide the needed number of host addresses while maintaining subnet segregation. References: This solution is based on networking and subnetting principles, which are part of the foundational knowledge for cloud networking within the CompTIA Cloud+ framework.

NEW QUESTION 228

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 233

A developer is building a new application version using a CI/CD pipeline. The developer receives the following error message log when the build fails:

```
Traceback (most recent call last):
File "app.py", line 4, in <module>
import requests
ModuleNotFoundError: No module named 'requests'
```

Which of the following is the most likely cause of this failure?

- A. Incorrect version
- B. Test case failure
- C. Broken build pipeline
- D. Dependency issue

Answer: D

Explanation:

The error message indicates that the 'requests' module, which is a dependency, is not found. The failure is most likely due to the 'requests' library not being installed or not included in the environment where the application is running. References: Dependency management is a crucial part of maintaining a CI/CD pipeline, a topic included in the CompTIA Cloud+ examination objectives.

NEW QUESTION 234

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 238

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 240

A cloud administrator needs to distribute workloads across remote data centers for redundancy reasons. Which of the following deployment strategies would eliminate downtime, accelerate deployment, and remain cost efficient?

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

Answer: C

Explanation:

Blue-green deployment is the strategy that can eliminate downtime, accelerate deployment, and remain cost-efficient. It involves running two identical production environments, only one of which is live at any given time (blue or green). When it's time to deploy, the new version is released to the inactive environment (green), which is then thoroughly tested. Once ready, the traffic is switched over, making the green environment live. References: Deployment strategies and their impact on operations are a significant topic within the CompTIA Cloud+ examination objectives.

NEW QUESTION 245

Users have been reporting that a remotely hosted application is not accessible following a recent migration. However, the cloud administrator is able to access the application from the same site as the users. Which of the following should the administrator update?

- A. Cipher suite
- B. Network ACL
- C. Routing table
- D. Permissions

Answer: C

Explanation:

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

NEW QUESTION 248

Which of the following technologies should be used by a person who is visually impaired to access data from the cloud?

- A. Object character recognition
- B. Text-to-voice
- C. Sentiment analysis
- D. Visual recognition

Answer: B

Explanation:

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

NEW QUESTION 251

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 256

A cloud administrator is building a company-standard VM image, which will be based on a public image. Which of the following should the administrator implement to secure the image?

- A. ACLs
- B. Least privilege
- C. Hardening
- D. Vulnerability scanning

Answer: C

Explanation:

Hardening a VM image involves implementing security measures to reduce vulnerabilities and protect against threats. This process includes removing unnecessary software, services, and permissions, ensuring that the remaining software is updated with the latest security patches, and configuring settings to enhance security. Starting with a public image, the administrator should apply hardening techniques to ensure the custom company-standard VM image is secure and resilient against attacks.

NEW QUESTION 260

Five thousand employees always access the company's public cloud-hosted web application on a daily basis during the same time frame. Some users have been reporting performance issues while attempting to connect to the web application. Which of the following is the best configuration approach to resolve this issue?

- A. Scale vertically based on a trend.
- B. Scale horizontally based on a schedule.
- C. Scale vertically based on a load.
- D. Scale horizontally based on an event.

Answer: B

Explanation:

For a web application accessed by a large number of employees daily during the same time frame, the best configuration approach to resolve performance issues is to scale horizontally based on a schedule. This means adding more server instances to handle the load during known peak times. References: Cloud resource scaling strategies, including scheduled horizontal scaling, are discussed in the CompTIA Cloud+ curriculum under cloud management and optimization.

NEW QUESTION 264

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 to the file to improve container security?

- A. Add the instruction "USER nonroot."
- B. Change the version from latest to 3.11.
- C. Remove the ENTRYPOINT instruction.
- D. Ensure myapp/main.py is 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 265

Which of the following vulnerability management concepts is best defined as the process of discovering vulnerabilities?

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

Answer: D

Explanation:

In vulnerability management, 'Identification' is the concept best defined as the process of discovering vulnerabilities. This step is crucial as it involves detecting vulnerabilities in systems, software, and networks, which is the first step in the vulnerability management process before moving on to assessment, remediation, and reporting.

NEW QUESTION 267

A cloud engineer wants to replace the current on-premises. unstructured data storage with a solution in the cloud. The new solution needs to be cost-effective and highly scalable. Which of the following types of storage would be best to use?

- A. File
- B. Block
- C. Object
- D. SAN

Answer: C

Explanation:

Object storage is ideal for cost-effective and highly scalable unstructured data. It allows for the storage of massive amounts of unstructured data in a flat namespace and is not constrained by the rigid structures of file or block storage. Object storage is highly durable and designed for high levels of scalability and accessibility. References: The suitability of object storage for unstructured data and scalability is a part of cloud storage technologies covered in CompTIA Cloud+ materials.

NEW QUESTION 268

A company recently migrated to a public cloud provider. The company's computer incident response team needs to configure native cloud services for detailed logging. Which of the following should the team implement on each cloud service to support root cause analysis of past events? (Select two).

- A. Log retention
- B. Tracing
- C. Log aggregation
- D. Log rotation
- E. Hashing
- F. Encryption

Answer: AC

Explanation:

For detailed logging to support root cause analysis of past events, the team should implement log retention to ensure logs are kept for the necessary amount of time and log aggregation to compile logs from various sources for easier analysis and correlation. References: Log management practices, including retention and aggregation, are part of the cloud management strategies covered in the CompTIA Cloud+ curriculum, particularly in the domain of technical operations.

NEW QUESTION 273

A cloud service provider requires users to migrate to a new type of VM within three months. Which of the following is the best justification for this requirement?

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

Answer: D

Explanation:

The best justification for a cloud service provider requiring users to migrate to a new type of VM within a specific time frame is that the equipment is reaching end of life and end of support (EOL/EOS). This means that the older type of VM will no longer receive updates or support, which could include important security patches, so it is necessary to move to newer VM types to maintain security and performance. References: CompTIA Cloud+ Study Guide (Exam CV0-004) by Todd Montgomery and Stephen Olson

NEW QUESTION 277

A company receives files daily from a bank. The company requires that the files must be copied from the cloud storage resource to another cloud storage resource for further processing. Which of the following methods requires the least amount of effort to achieve the task?

- A. Remote procedure call
- B. SOAP
- C. Event-driven architecture
- D. REST

Answer: C

Explanation:

An event-driven architecture is the most efficient method for automating the task of copying files from one cloud storage resource to another upon their arrival. This architecture allows systems to automatically trigger actions based on specific events, such as the arrival of new files, minimizing manual effort and ensuring timely processing. References: CompTIA Cloud+ resources and cloud service architectures

NEW QUESTION 280

A company's content management system (CMS) service runs on an IaaS 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 284

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 288

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. Re-architect
- 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 291

A company uses containers to implement a web application. The development team completed internal testing of a new feature and is ready to move the feature to the production environment. Which of the following deployment models would best meet the company's needs while minimizing cost and targeting a specific subset of its users?

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

Answer: A

Explanation:

The canary deployment model is an approach where a new feature or service is rolled out to a small subset of users before being deployed widely. This method allows the company to test the impact of the new feature in the production environment with a limited scope, minimizing risk and potential cost implications if issues arise. This approach contrasts with blue-green deployments, which involve switching between two identical environments; rolling deployments, which gradually update all instances; and in-place deployments, which update the current environment. The canary model is particularly suited for targeting specific user groups and gathering feedback before a full rollout.

NEW QUESTION 292

Once a change has been made to templates, which of the following commands should a cloud architect use next to deploy an IaaS platform?

- A. git pull
- B. git fetch
- C. git commit
- D. git push

Answer: D

Explanation:

After making changes to templates, a cloud architect should use the `git push` command to deploy an IaaS platform. This command is used to upload the local repository content to a remote repository, making the new or changed templates available for the next deployment. References: Version control practices and commands, such as using git for IaaS template management, are covered under the best practices for cloud deployments in the CompTIA Cloud+ certification.

NEW QUESTION 295

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