



CompTIA

Exam Questions CV0-004

CompTIA Cloud+

NEW QUESTION 1

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 2

A newly configured VM fails to run application updates despite having internet access. The updates download automatically from a third-party network. Given the following output:

```
$dig +short apac.updateserver.net
38.102.218.7
$dig +short na.updateserver.net
request timeout
```

Which of the following troubleshooting steps would be best to take?

- A. Checking DNS configurations
- B. Reconfiguring routing protocols
- C. Testing the IP address configuration
- D. Running a trace to the router

Answer: A

Explanation:

The best troubleshooting step to take given the output is to check DNS configurations. The failure to resolve the "na.updateserver.net" domain suggests a DNS resolution issue, which could be due to incorrect DNS settings, a failure in the DNS service, or an issue with the DNS server itself. References: Troubleshooting DNS issues is a crucial skill in cloud management, as DNS plays a fundamental role in network connectivity and access to resources. It is covered under Cloud Concepts in the CompTIA Cloud+ curriculum.

NEW QUESTION 3

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

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

Answer: B

Explanation:

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

NEW QUESTION 4

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

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

Answer: A

Explanation:

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

NEW QUESTION 5

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

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

Answer: D

Explanation:

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

NEW QUESTION 6

Which of the following strategies requires the development of new code before an application can be successfully migrated to a cloud provider?

- A. Refactor
- B. Re-architect
- C. Rehost
- D. Replatform

Answer: A

Explanation:

Refactoring requires the development of new code before an application can be successfully migrated to a cloud provider. It often involves restructuring and optimizing the existing code without changing its external behavior to fit into the new cloud environment. References: Application migration strategies and the requirements for each, like refactoring, are included in cloud migration best practices covered in CompTIA Cloud+.

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 systems administrator needs to configure a script that will monitor whether an application is healthy and stop the VM if an unsuccessful code is returned. Which of the following scripts should the systems administrator use to achieve this goal?

- A.

```
RESPONSE_CODE }string APP_URLbool RESPONSE_CODEstring VMhealth checker (APP_URL, VM) {if [ http_probe (APP_URL) == 200] { echo RESPONSE_CODE }else{ stop (VM) echo (RESPONSE_CODE)echo VM } stop (VM)RESPONSE CODE }
```
- B.

```
else{ echostring APP_URLfloat RESPONSE_CODE string VMhealth_checker (APP_URL, VM) {if [ http_probe (APP_URL) == 200] { stop (RESPONSE_CODE)echo VM } stop (VM)RESPONSE CODE }
```
- C.

```
else{ echostring APP_URLint RESPONSE_CODEstring VMhealth checker (APP_URL, VM) {if [ http_probe (APP_URL) == 200] { echo RESPONSE_CODE }stop (VM) RESPONSE_CODE }
```
- D.

```
else{ echostring APP_URLint RESPONSE_CODEstring VMhealth_checker (APP_URL, VM) { if [ http_probe (VM) == 200] { stop (VM)echo RESPONSE_CODE } RESPONSE CODE }
```

Answer: A

Explanation:

Script A is designed to monitor the health of an application by checking its response code. If the application returns a 200 (OK) status, it indicates that the application is healthy. Otherwise, the script will stop the VM to address the issue, which is a common approach to handle unhealthy application states in automated environments. This script effectively achieves the goal of monitoring application health and taking corrective action when an unsuccessful code is returned. References: CompTIA Cloud+ resources and general scripting practices for cloud environments

NEW QUESTION 10

A DevOps engineer is integrating multiple systems. Each system has its own API that exchanges data based on different application-level transactions. Which of the following delivery mechanisms would best support this integration?

- A. Enterprise service bus
- B. Socket
- C. RPC
- D. Queue

Answer: A

Explanation:

An Enterprise Service Bus (ESB) is designed to facilitate application integration by providing a centralized architecture for high-level, message-based, and event-driven communication between different systems. It is particularly well-suited for integrating multiple systems with their own APIs because it can handle various data formats and protocols, enabling different applications to communicate with each other seamlessly. References: CompTIA Cloud+ Certification Study Guide (Exam CV0-004) by Scott Wilson and Eric Vanderburg

NEW QUESTION 10

An DevOps engineer is receiving reports that users can no longer access the company's web application after hardening of a web server. The users are receiving the following error:

ERR_SSLJ/ERSION_OR_CIPHER_MISMATCH.

Which of the following actions should the engineer take to resolve the issue?

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

Answer: B

Explanation:

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

NEW QUESTION 12

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 0.0.0.0/0 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 16

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 17

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 22

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 25

A cloud engineer wants to implement a disaster recovery strategy that:

- . Is cost-effective.
- . Reduces the amount of data loss in case of a disaster.
- . Enables recovery with the least amount of downtime.

Which of the following disaster recovery strategies best describes what the cloud engineer wants to achieve?

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

Answer: D

Explanation:

A hot site is a disaster recovery strategy that is cost-effective, minimizes data loss, and allows for the fastest recovery time in case of a disaster. It is an exact replica of the original site of the organization, with full computer systems as well as near-complete backups of user data. Hot sites are operational 24/7 and can take over functionality from the primary site immediately or with minimal delay. References: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Disaster Recovery

NEW QUESTION 29

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 32

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

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

Answer: D

Explanation:

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

NEW QUESTION 35

Given the following command:

```
Sdocker pull images.comptia.org/user1/myimage:latest
```

Which of the following correctly identifies images.comptia.org?

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

Answer: A

Explanation:

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

NEW QUESTION 39

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 43

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

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

Answer: B

Explanation:

AES (Advanced Encryption Standard) is the best algorithm to replace Base64 for secure data exchange. Base64 is an encoding method that is not secure by

itself, as it's easily reversible. AES, on the other hand, is a widely used encryption standard that ensures data is protected and is not readable without the correct encryption key. References: Encryption standards and practices, including the use of AES for securing data, are essential knowledge in cloud security covered in CompTIA Cloud+.

NEW QUESTION 46

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 48

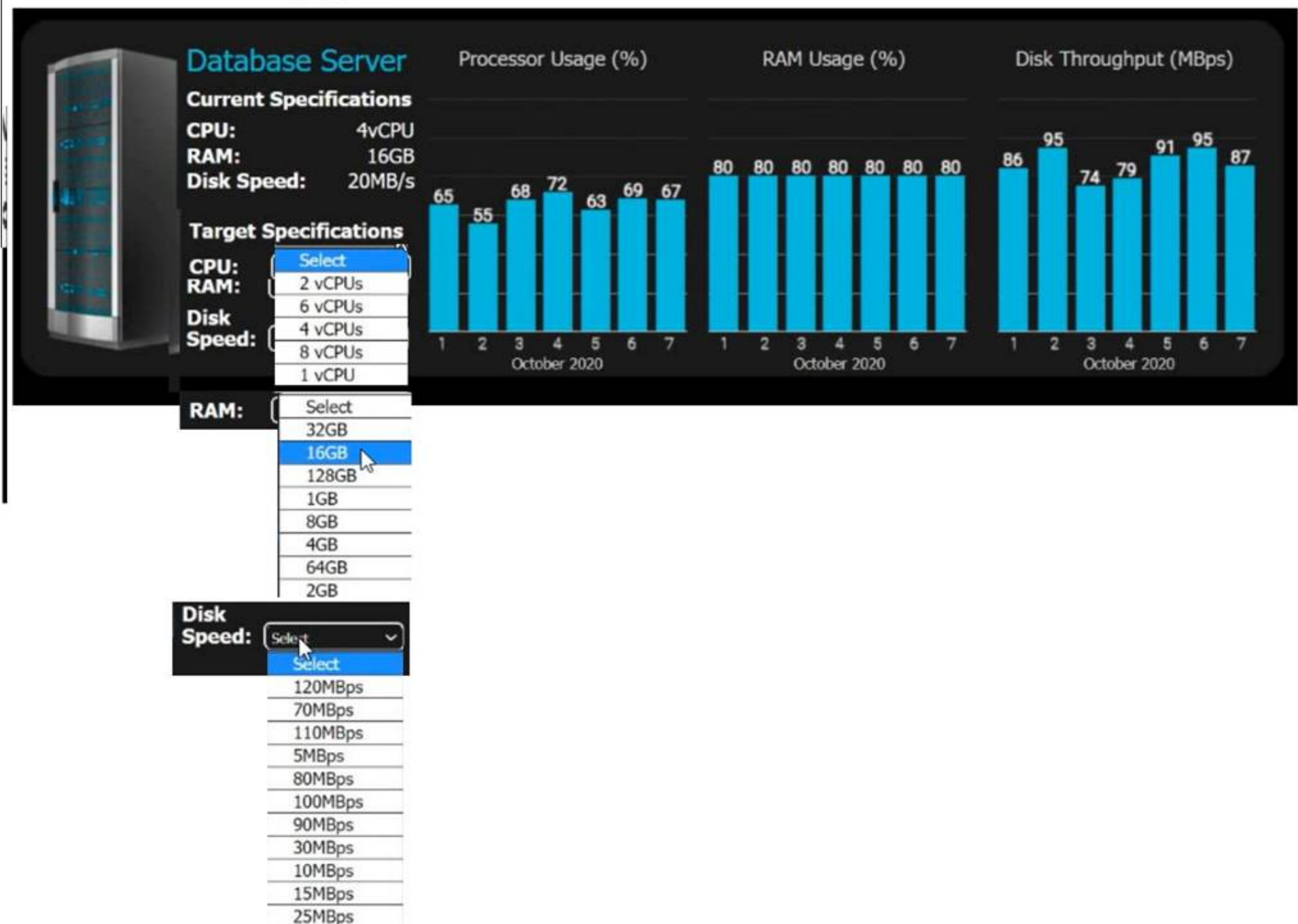
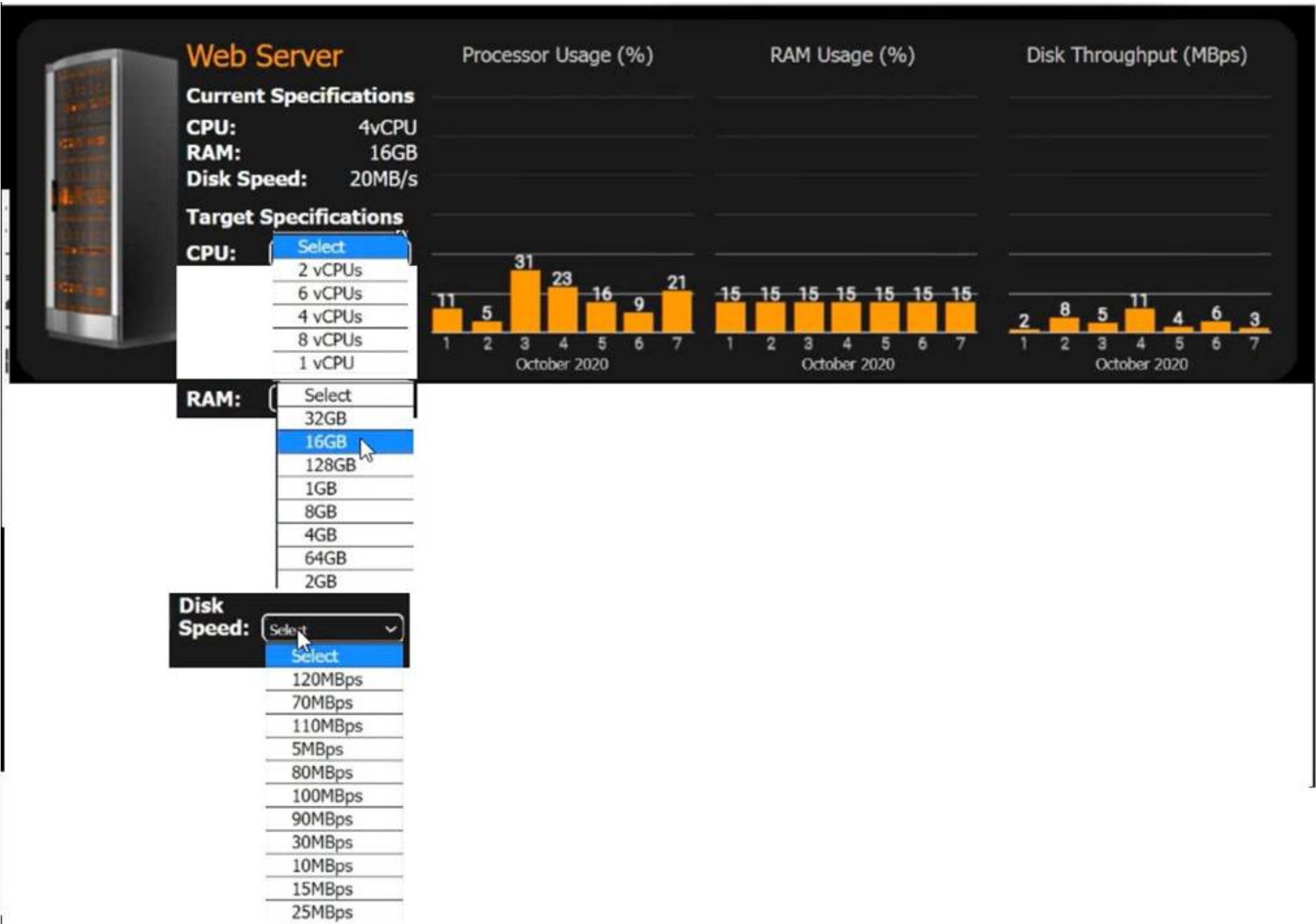
HOTSPOT

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.





- 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 49

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 54

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 58

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

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

Answer: C

Explanation:

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

NEW QUESTION 59

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 64

A cloud developer is creating a static website that customers will be accessing globally. Which of the following services will help reduce latency?

- A. VPC
- B. Application load balancer
- C. CDN
- D. API gateway

Answer: C

Explanation:

A Content Delivery Network (CDN) is the service that will help reduce latency for a static website accessed globally. CDNs distribute content across multiple geographically dispersed servers, allowing users to connect to a server that is closer to them, thereby reducing the time it takes to load the website. References: The use of CDNs is a common practice to enhance global access and improve user experience, as covered under Cloud Concepts in the CompTIA Cloud+ certification.

NEW QUESTION 69

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 70

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 74

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 78

Which of the following cloud-native architecture designs is the most easily maintained, decentralized, and decoupled?

- A. Monolithic
- B. Hybrid cloud
- C. Mainframe
- D. Microservices

Answer: D

Explanation:

Microservices architecture is a design approach to build a single application as a suite of small services, each running in its own process and communicating with lightweight mechanisms, often an HTTP resource API. This design is decentralized and each service is fully decoupled, allowing for easier maintenance and scaling. Each microservice is built around a specific business capability and can be deployed independently, unlike monolithic architectures that are typically centralized and less flexible. References: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Designing a Cloud Environment

NEW QUESTION 80

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

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

Answer: C

Explanation:

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

References: CompTIA Cloud+ CV0-004 Study Guide and Official CompTIA Content

NEW QUESTION 85

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 89

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 94

A developer is deploying a new version of a containerized application. The DevOps team wants:

- No disruption
- No performance degradation
- * Cost-effective deployment
- Minimal deployment time

Which of the following is the best deployment strategy given the requirements?

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

Answer: C

Explanation:

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

NEW QUESTION 99

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 100

Which of the following is an auditing procedure that ensures service providers securely manage the data to protect the interests of the organization and the privacy of its clients?

- A. CIS
- B. ITIL
- C. SOC2

D. ISO 27001

Answer: C

Explanation:

SOC2 (Service Organization Control 2) is an auditing procedure that ensures service providers securely manage data to protect the interests of an organization and the privacy of its clients. SOC2 is specifically designed for service providers storing customer data in the cloud, making it pertinent for data management and privacy. References: SOC2 and its role in auditing and ensuring secure data management by cloud service providers are part of the compliance standards and regulations included in the CompTIA Cloud+ certification material.

NEW QUESTION 102

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

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

Answer: B

Explanation:

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

NEW QUESTION 105

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 109

An IT manager needs to deploy a cloud solution that meets the following requirements:

- Users must use two authentication methods to access resources.
- Each user must have 10GB of storage space by default.

Which of the following combinations should the manager use to provision these requirements?

- A. OAuth 2.0 and ephemeral storage
- B. OIDC and persistent storage
- C. MFA and storage quotas
- D. SSO and external storage

Answer: C

Explanation:

The combination that should be used to provision the requirements of two authentication methods and 10GB of storage space by default for each user is Multi-Factor Authentication (MFA) and storage quotas. MFA provides an additional layer of security beyond just a username and password, and storage quotas can be used to allocate a specific amount of storage space for each user. References: CompTIA Cloud+ Study Guide (Exam CV0-004) by Todd Montgomery and Stephen Olson

NEW QUESTION 112

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

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

Answer: D

Explanation:

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

NEW QUESTION 115

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 120

An engineer made a change to an application and needs to select a deployment strategy that meets the following requirements:

- Is simple and fast
- Can be performed on two Identical platforms

Which of the following strategies should the engineer use?

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

Answer: A

Explanation:

The blue-green deployment strategy is ideal for scenarios where simplicity and speed are crucial. It involves two identical production environments: one (blue) hosts the current application version, while the other (green) is used to deploy the new version. Once testing is completed on the green environment and it's ready to go live, traffic is switched from blue to green, ensuring a quick and efficient rollout with minimal downtime. This method allows for immediate rollback if issues arise, by simply redirecting the traffic back to the blue environment. References: CompTIA Cloud+ material emphasizes the importance of understanding various cloud deployment strategies, including blue-green, and their application in real-world scenarios to ensure efficient and reliable software deployment in cloud environments.

NEW QUESTION 121

A security analyst reviews the daily logs and notices the following suspicious activity:

Host	NA/US/John Smith
IP	10.150.71.151
Activity	A powershell process executed compressed, encoded command line content.

The analyst investigates the firewall logs and identities the following:

Operating system	Kali Linux
CPU	x64
Filesystem	ext4
User	John Smith
Category	Compromised - Unauthorized Access
Domain	NA/US
IP	201.101.25.121 (External)
Port	4444
Connection type	Inbound Connection

Which of the following steps should the security analyst take next to resolve this issue? (Select two).

- A. Submit an IT support ticket and request Kali Linux be uninstalled from John Smith's computer
- B. Block all inbound connections on port 4444 and block the IP address 201.101.25.121.
- C. Contact John Smith and request the Ethernet cable attached to the desktop be unplugged
- D. Check the running processes to confirm if a backdoor connection has been established.
- E. Upgrade the Windows x64 operating system on John Smith's computer to the latest version.
- F. Block all outbound connections from the IP address 10.150.71.151.

Answer: BD

Explanation:

Given the suspicious activity and Kali Linux's association with penetration testing and hacking tools, the security analyst should block all inbound connections on port 4444, as it is commonly used for malicious purposes, and block the IP address that's potentially the source of the intrusion. Additionally, checking the running processes on John Smith's computer is crucial to determine if a backdoor or unauthorized connection has been established. References: Incident response and threat mitigation steps such as these are part of the security protocols discussed in the CompTIA Cloud+ certification.

NEW QUESTION 122

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 126

A healthcare organization must follow strict compliance requirements to ensure that PII is not leaked. The cloud administrator needs to ensure the cloud email system can support this requirement Which of the following should the organization enable?

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

Answer: B

Explanation:

To ensure that Personally Identifiable Information (PII) is not leaked and to comply with strict healthcare regulations, the organization should enable Data Loss Prevention (DLP). DLP systems are designed to detect and prevent unauthorized access or sharing of sensitive data, making them ideal for securing PII in cloud email systems and ensuring compliance with healthcare industry standards. References: CompTIA Cloud+ content covers governance, risk, compliance, and security aspects of cloud computing, highlighting the role of DLP in safeguarding sensitive information and maintaining compliance in regulated industries like healthcare.

NEW QUESTION 131

SIMULATION

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

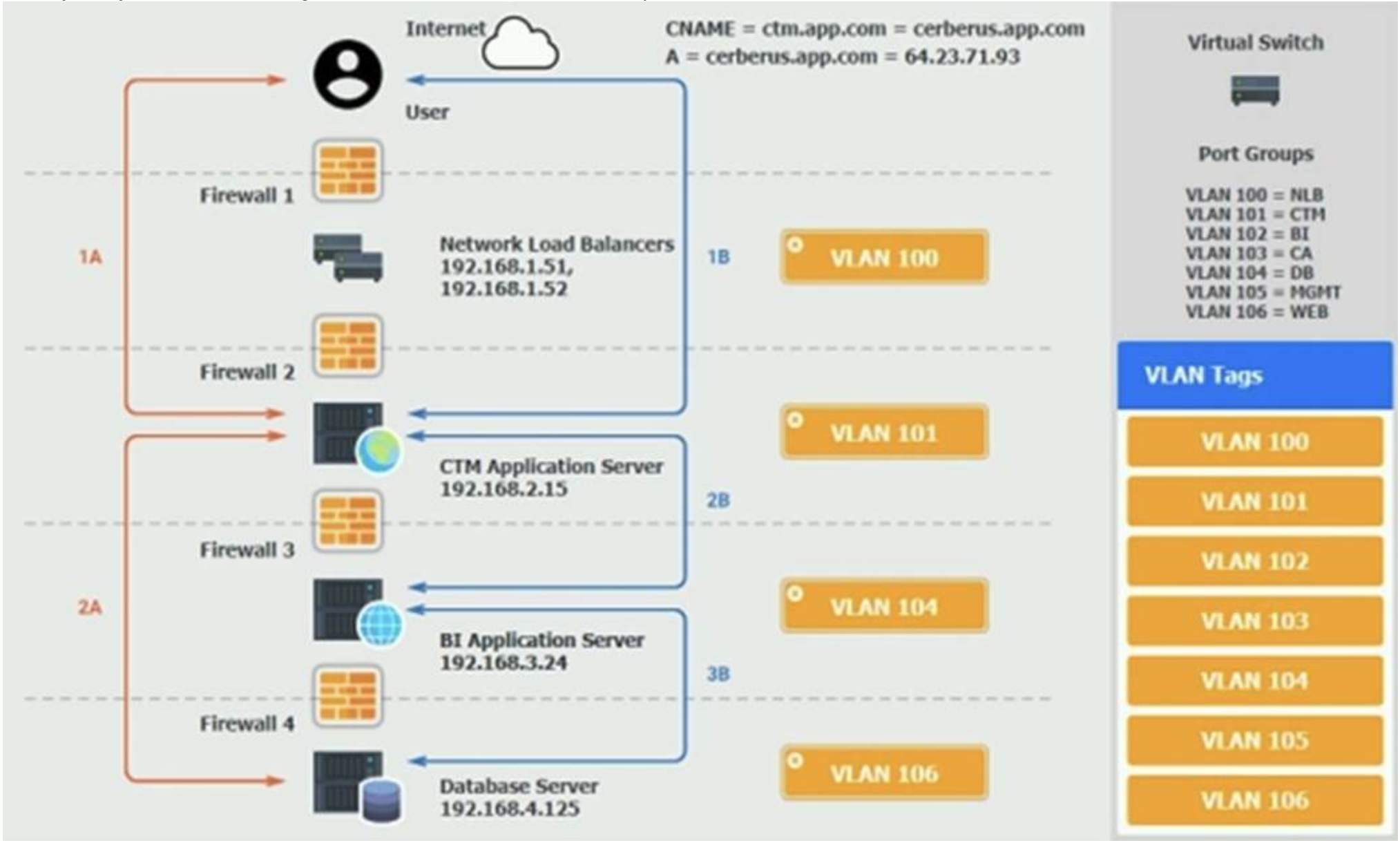
instructed to use HTTP and HTTPS. Refer to the application dataflow:

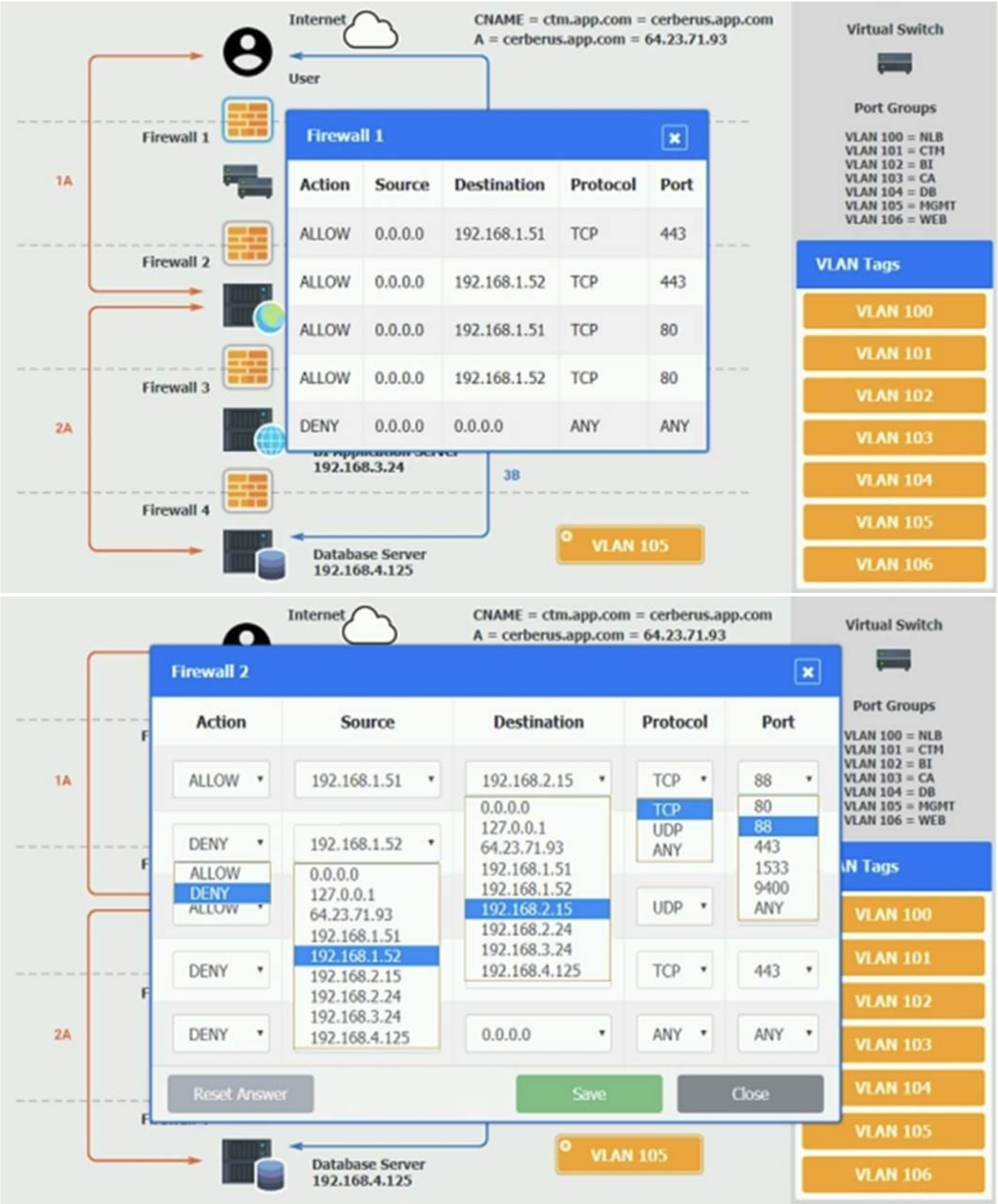
- 1A– The end user accesses the application through a web browser to enter and view clinical data.
- 2A– The CTM application server reads/writes data to/from the database server.
- 1B– The end user accesses the application through a web browser to run reports on clinical data.
- 2B– The CTM application server makes a SOAP call on a non-privileged port to the BI application server.
- 3B– The BI application server gets the data from the database server and presents it to the CTM application server.

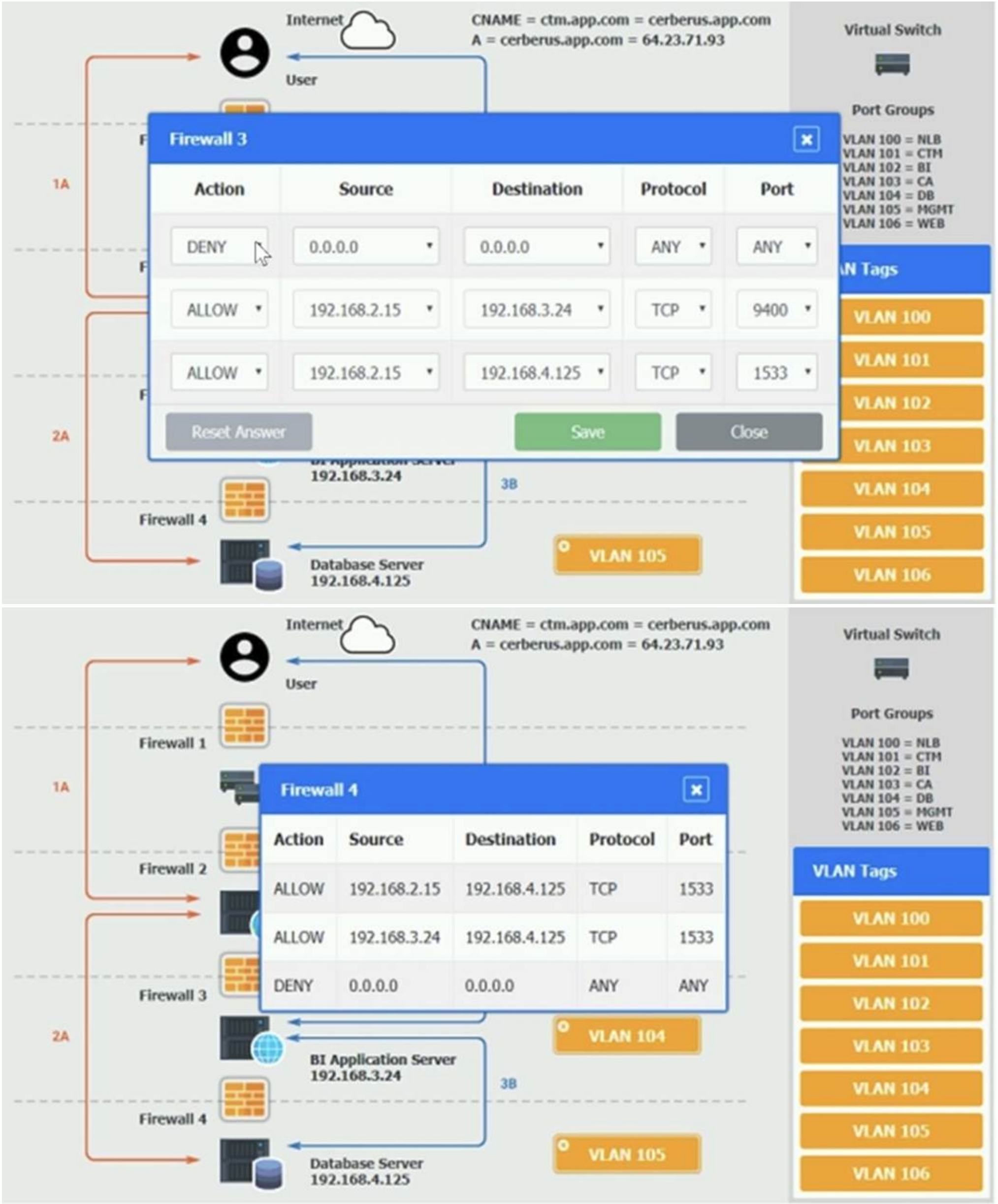
When UAT users try to access the application using <https://ctm.app.com> or <http://ctm.app.com>, they get a message stating: ??Browser cannot display the webpage.?? The QA team has raised a ticket to troubleshoot the issue.

INSTRUCTIONS

You are a cloud engineer who is tasked with reviewing the firewall rules as well as virtual network settings. You should ensure the firewall rules are allowing only the traffic based on the dataflow. You have already verified the external DNS resolution and NAT are working. Verify and appropriately configure the VLAN assignments and ACLs. Drag and drop the appropriate VLANs to each tier from the VLAN Tags table. Click on each Firewall to change ACLs as needed. If at any time you would like to bring back the initial state of the simulation, please click the Reset All button.







A. Mastered
B. Not Mastered

Answer: A

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

NEW QUESTION 133

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 137

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 139

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 140

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 144

Two CVEs are discovered on servers in the company's public cloud virtual network. The CVEs are listed as having an attack vector value of network and CVSS score of 9.0. Which of the following actions would be the best way to mitigate the vulnerabilities?

- A. Patching the operating systems
- B. Upgrading the operating systems to the latest beta
- C. Encrypting the operating system disks
- D. Disabling unnecessary open ports

Answer: A

Explanation:

For vulnerabilities with a high CVSS score and a network attack vector, the most effective and direct mitigation action is to patch the operating systems. Patching addresses the specific vulnerabilities that have been identified and helps to secure the servers against the known exploits that could take advantage of these CVEs. References: CompTIA Cloud+ Guide to Cloud Computing (ISBN: 978-1-64274-282-2)

NEW QUESTION 147

A cloud engineer wants to run a script that increases the volume storage size if it is below 100GB. Which of the following should the engineer run?

- ☐ A.

```
if [ VOL = describe_volume_size(get_volume(VM)) < 100]
    resize_size(VOL)
else
    echo "$vol is already larger than 100GB"
```
- ☐ B.

```
if [ VOL = describe_volume_size(get_volume(VM)) + 100]
    resize_size(VOL)
else
    echo "$vol is already larger than 100GB"
```
- ☐ C.

```
if [ VOL = describe_volume_size(get_volume(VM)) != 100]
    resize_size(VOL)
else
    echo "$vol is already larger than 100GB"
```
- ☐ D.

```
if [ VOL = describe_volume_size(get_volume(VM)) == 100]
    resize_size(VOL)
else
    echo "$vol is already larger than 100GB"
```

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

Answer: A

Explanation:

The correct script is Option A, which uses a conditional test to check if the volume size is less than 100GB. If it is, then it performs a resize operation; otherwise, it outputs a message indicating the volume is already the desired size. References: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Automation

NEW QUESTION 152

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

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

Answer: A

Explanation:

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

NEW QUESTION 153

A cloud administrator deploys new VMs in a cluster and discovers they are getting IP addresses in the range of 169.254.0.0/16. Which of the following is the most likely cause?

- A. The scope has been exhausted.
B. The network is overlapping.
C. The VLAN is missing.
D. The NAT is Improperly configured.

Answer: A

Explanation:

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

NEW QUESTION 154

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

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

Answer: D

Explanation:

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

References: CompTIA Cloud+ resources and cloud migration strategies

NEW QUESTION 158

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

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

Answer: A

Explanation:

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

References: CompTIA Cloud+ resources and data management strategies

NEW QUESTION 160

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 162

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

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

Answer: B

Explanation:

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

NEW QUESTION 165

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