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YOUR GUIDE TO GLOBAL CERTIFIATION

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Question: 1

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.

Reference: 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.

Question: 2

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

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

Answer: D

Explanation:

Before a configuration change is deployed in the cloud production environment, it is crucial to conduct User Acceptance Testing (UAT). UAT involves testing the system by the end-users or clients to ensure it can handle required tasks in real-world scenarios, according to specifications. This testing is the final stage before the change is approved for production, ensuring that all functionalities meet user requirements and the system is ready for deployment.

Reference: The CompTIA Cloud+ certification highlights the significance of various testing phases, including

UAT, as part of the cloud deployment process to validate the system's readiness and functionality for end-users.

Question: 3

A customer is migrating applications to the cloud and wants to grant authorization based on the classification levels of each system. Which of the following should the customer implement to ensure authorisation to systems is granted when the user and system classification properties match?
(Select two).

A. Resource tagging
B. Discretionary access control
C. Multifactor authentication
D. Role-based access control
E. Token-based authentication
F. Bastion host

Answer: B, D

Explanation:

Discretionary Access Control (DAC) and Role-Based Access Control (RBAC) are effective methods for granting authorization based on system classification levels. DAC allows resource owners to grant access rights, making it flexible for environments with varying classification levels. RBAC assigns permissions based on roles within an organization, aligning access rights with the user's job functions and ensuring that users access only what is necessary for their role, which can be mapped to system classifications.
Reference: CompTIA Cloud+ content covers various access control models, emphasizing the importance of implementing appropriate security measures that align with organizational policies and classification levels to ensure secure and authorized access to cloud systems.

Question: 4

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

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

Answer: C

Explanation:

Load scaling is the most appropriate approach when a system surpasses 75% to 80% of resource consumption. This method involves adjusting resources dynamically in response to the current load, ensuring the system can

handle increased demand without performance degradation. Load scaling can be automatic, allowing systems to scale up or down based on predefined metrics like CPU usage, memory, or network traffic, providing an efficient way to manage resources and maintain optimal performance.
Reference: The CompTIA Cloud+ exam objectives include understanding cloud management and technical operations, which encompass knowledge of various scaling approaches, including load scaling, to ensure efficient resource utilization in cloud environments.

Question: 5

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

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

Answer: A

Explanation:

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

Question: 6

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

A. IP
B. DHCP

C. NAT

D. DNS

Answer: D

Explanation:

When a web application is accessible locally via an IP address but not via the internet, the issue likely lies with the Domain Name System (DNS). DNS is responsible for translating domain names into IP addresses. A misconfiguration in DNS records or failure in DNS resolution can prevent users from accessing the application through its domain name, even though the application itself is running and accessible via its direct IP address.

Reference: In the CompTIA Cloud+ curriculum, understanding cloud concepts and networking fundamentals, including DNS, is crucial for troubleshooting and ensuring applications are accessible and perform optimally in cloud environments.

Question: 7

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.

Reference: 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.

Question: 8

A security engineer Identifies a vulnerability m a containerized application. The vulnerability can be exploited by a privileged process to read tie content of the host's memory. The security engineer reviews the following Dockerfile to determine a solution to mitigate similar exploits:

FEXH i-f^.3.1'

MJN JJ • ':c-*Lico 44 -IT * Tfp^Ti#^*

_JZ1 - EV AC 7
»HTSVT :r 1" «■, ,. , .if •]

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

A. Adding the USER myappuserinstruction
B. Patching the host running the Docker daemon
C. Changing FROM alpiner3.17 to FROM alpine:latest
D. Running the container with the ready-only filesystem configuration

Answer: A

Explanation:

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

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

Question: 9

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

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

Answer: C

Explanation:

After a WAF deployment fails to prevent an exploit, adding an Access Control List (ACL) to the Virtual Machine (VM) subnet can be an effective control. ACLs provide an additional layer of security by explicitly defining which traffic can or cannot enter a network segment. By setting granular rules based on IP addresses, protocols, and ports, ACLs help to restrict access to resources, thereby mitigating potential exploits and enhancing the security of the laaS network.

Reference: 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.

Question: 10

A cloud engineer wants containers to run the latest version of a container base image to reduce the number of vulnerabilities. The applications in use requite Python 3.10 and ate not compatible with any other version. The containers' images are created every time a new version is released from the source image. Given the container Dockerfile below:

```
FrOW ‘jr. т^v chain-Ttard/python: ■..
WORKDIR /inyapp
COPY nain.py ./
ENTPYrOINT "python", "/myapp rnaln.py"]
```

Which of the following actions will achieve the objectives with the least effort?

A. Perform docker pull before executing docker run.
B. Execute docker update using a local cron to get the latest container version.
C. Change the image to use python:latest on the image build process.
D. Update the Dockerfile to pin the source image version.

Answer: A

Explanation:

Performing a "docker pull" before executing "docker run" ensures that the latest version of the container base image is used, aligning with the objective of reducing vulnerabilities. This command fetches the latest image version from the repository, ensuring that the container runs the most up- to-date and secure version of the base image. This approach is efficient and requires minimal effort, as it automates the process of maintaining the latest image versions for container deployments. Reference: Within the CompTIA Cloud+ examination scope, understanding management and technical operations in cloud environments, including container management and security, is critical. This includes best practices for maintaining up-to-date container images to minimize vulnerabilities.

Question: 11

An engineer wants lo 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.

Reference: 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.

Question: 12

A software engineer is integrating an application lo The cloud that is web socket based. Which of the following applications is the engineer most likely deploying?

A. Image-sharing
B. Data visualization
C. Chat
D. File transfer

Answer: C

Explanation:

A chat application is most likely to be deployed when integrating a web socket-based application to the cloud. Web sockets provide full-duplex communication channels over a single, long-lived connection, which is ideal for real-time applications like chat services that require persistent connections between the client and server for instant data exchange.
Reference: CompTIA Cloud+ materials cover cloud networking concepts, emphasizing the importance of choosing the right technologies, like web sockets, for specific application requirements to ensure efficient and responsive cloud-based services.

Question: 13

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

A. Retention
B. Alerting
C. Aggregation
D. Collection

Answer: D

Explanation:

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

Question: 14

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

```
FROM cyr.lev/chainguaid/pythun slat est
NCMCI III /inyapp
COPY main.py •/
ENTRY POINT ’"pythrt", ’’/myepp/tnain.py"]
```

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

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

Answer: A

Explanation:

To improve container security, the engineer should add the instruction "USER nonroot" to the Dockerfile. This change ensures that the container does not run as the root user, which reduces the risk of privilege escalation attacks. Running containers as a non-root user is a best practice for enhancing security in containerized environments.

Reference: 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.

Question: 15

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

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

Answer: D

Explanation:

A major advantage of adopting a microservices architecture is rapid feature deployment. Microservices allow for independent development, deployment, and scaling of individual service components, enabling teams to bring new features to market more quickly and efficiently compared to monolithic architectures.

Reference: The CompTIA Cloud+ certification covers cloud design aspects, including architectural models like microservices, emphasizing their role in facilitating agile development practices and rapid feature release cycles in cloud environments.

Question: 16

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. Reference: 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.

Question: 17

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.
Reference: 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.

Question: 18

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.
Reference: 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.

Question: 19

A healthcare organization must follow strict compliance requirements to ensure that Pll 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. Reference: CompTIA Cloud+ content covers governance, risk, compliance, and security aspects of cloud computing, highlighting the role of DLP in safeguarding sensitive information and maintaining compliance in regulated industries like healthcare.

Question: 20

A cloud engineer wants to implement a monitoring solution to detect cryptojacking and other cryptomining malware on cloud instances. Which of the following metrics would most likely be used to identify the activity?

A. Disk I/O
B. Network packets
C. Average memory utilization
D. Percent of CPU utilization

Answer: D

Explanation:

To detect cryptojacking and other cryptomining malware on cloud instances, monitoring the percent of CPU utilization is most effective. Cryptomining malware typically consumes a significant amount of CPU resources for mining operations, leading to unusually high CPU usage. Monitoring and analyzing CPU utilization metrics can help identify instances of cryptojacking by highlighting abnormal levels of resource consumption.
Reference: Understanding management and technical operations in cloud environments, as outlined in the CompTIA Cloud+ objectives, includes the use of monitoring solutions to detect and respond to security threats like cryptomining malware, ensuring the integrity and performance of cloud resources.

Question: 21

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 ranged -00):
    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.
Reference: 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.

Question: 22

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: D, F

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.
Reference: This solution is based on networking and subnetting principles, which are part of the foundational knowledge for cloud networking within the CompTIA Cloud+ framework.

Question: 23

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.

Reference: 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.

Question: 24

An administrator needs to adhere to the following requirements when moving a customer's data to the cloud:

- The new service must be geographically dispersed.
- The customer should have local access to data
- Legacy applications should be accessible.

Which of the following cloud deployment models is most suitable?

A. On-premises
B. Private
C. Hybrid
D. Public

Answer: C

Explanation:

A hybrid cloud deployment model is most suitable given the requirements. This model combines on-premises infrastructure (or private cloud) with public cloud services, providing geographic dispersion while allowing local access to data. It also facilitates the use of legacy applications that might not be well-suited for a full public cloud environment.

Reference: The hybrid model is a fundamental concept within the CompTIA Cloud+ curriculum, under the section of Cloud Concepts, that explains deployment models.

Question: 25

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. Reference: Understanding security concerns and measures is part of the Governance, Risk, Compliance, and Security domain of the CompTIA Cloud+ objectives.

Question: 26

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 new. remotely managed environment
C. The physical transportation, installation, and configuration of company IT equipment in a cloud services provider's facility
D. 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.
Reference: The migration process and strategies are topics included in the Business Principles of Cloud Environments within the CompTIA Cloud+ curriculum.

Question: 27

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.
Reference: 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.

Question: 28

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
541] +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. Reference: 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.

Question: 29

A company migrated its CRM system to a SaaS solution. The security team is updating the RAG matrix for the newly migrated CRM. Given the following table:

	Datacenter security	CRM software security	CRM server patching	CRM development life cycle
Customer	C.I	1	A. 1	A.C.I
CSP	R.A	R.A.C	R.C	R

Which of the following responsibility assignments best aligns with the shared responsibility model for the new CRM?

A. Data-center security
B. CRM software security
C. CRM server patching
D. CRM development life cycle

Answer: A

Explanation:

For the newly migrated SaaS CRM, the responsibility assignment that best aligns with the shared responsibility model is data-center security. In a SaaS model, the cloud service provider (CSP) is responsible for the security of the infrastructure, including data centers, while the customer is typically responsible for the data and possibly the user access management.

Reference: The shared responsibility model and its implications for different service models are foundational concepts included in the CompTIA Cloud+ certification, under the domain of Governance, Risk, Compliance, and Security.

Question: 30

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

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

Answer: B

Explanation:

The most likely cause of the outage, with users from specific regions like Brazil and Argentina reporting an error that the website address was not found, is a regional DNS provider outage. This type of outage would affect users in particular areas, preventing domain name resolution and

leading to the reported error.

Reference: 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.

Question: 31

A cloud engineer is designing a cloud-native, three-tier application. The engineer must adhere to the following security best practices:

- Minimal services should run on all layers of the stack.
- The solution should be vendor agnostic.
- Virealization could be used over physical hardware.

Which of the following concepts should the engineer use to design the system to best meet these requirements?

A. Virtual machine
B. Micro services
C. Fan-out
D. Cloud-provided managed services

Answer: B

Explanation:

Microservices architecture is the most suitable design principle that aligns with the security best practices mentioned. It involves developing a suite of small services, each running in its own process and communicating with lightweight mechanisms, often an HTTP resource API. This architecture minimizes the services running on each layer, allows for vendor-agnostic solutions, and is well-suited for virtualization over physical hardware.

Reference: Microservices as an architectural approach is discussed in the context of cloud-native applications within the CompTIA Cloud+ material.

Question: 32

A high-usage cloud resource needs to be monitored in real time on specific events to guarantee its availability. Which of the following actions should be used to meet this requirement?

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

Answer: B

Explanation:

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

indicate potential issues with availability.

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

Question: 33

A junior cloud administrator was recently promoted to cloud administrator and has been added to the cloud administrator group. The cloud administrator group is the only one that can access the engineering VM. The new administrator unsuccessfully attempts to access the engineering VM. However, the other administrators can access it without issue. Which of the following is the best way to identify the root cause?

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

Answer: B

Explanation:

The best way to identify the root cause of why the new cloud administrator cannot access the engineering VM

is by reviewing the administrator's permissions. It is possible that, despite being added to the cloud administrator group, the specific permissions to access the engineering VM were not properly configured.
Reference: 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

Question: 34

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.
Reference: 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.

Question: 35

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.
Reference: 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.

Question: 36

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.
Reference: This solution is derived from the Management and Technical Operations domain of the CompTIA Cloud+ objectives, focusing on performance optimization for cloud services.

Question: 37

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: A, F

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.

Reference: API throttling and quota management are key concepts in the management of cloud resources, as highlighted in the CompTIA Cloud+ curriculum.

Question: 38

An organization's web application experiences penodic bursts of traffic when a new video is launched. Users are reporting poor performance in the middle of the month. Which of the following scaling approaches should the organization use to scale based on forecasted traffic?

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

Answer: A

Explanation:

For periodic bursts of traffic that are predictable, such as when a new video is launched, a scheduled scaling approach is suitable. This strategy involves scaling resources based on forecasted or known traffic patterns, ensuring that the infrastructure can handle the load during expected peak times. Reference: The use of scheduled scaling to manage predictable traffic increases is discussed within the Management and Technical Operations section of the CompTIA Cloud+ exam objectives.

Question: 39

A company uses containers stored in Docker Hub to deploy workloads (or its laaS 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 laC to deploy the laaS 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. Reference: 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.

Question: 40

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.

Reference: 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.

Question: 41

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.

Reference: The suitability of object storage for unstructured data and scalability is a part of cloud storage technologies covered in CompTIA Cloud+ materials.

Question: 42

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

Hosr	MA/US/Johr ?m:rh
	1G. 15'1.71.151

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
Fl leaystem	ext 4
User	Jchn Smith
category	Compromised Unauthorize2 Access
Domain	HA/US
TP	2"1.1C1. "5. 11 1 (Externa .)
Porr	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: B, D

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.

Reference: Incident response and threat mitigation steps such as these are part of the security protocols discussed in the CompTIA Cloud+ certification.

Question: 43

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

A. Contact the customers to inform them about the data breach.

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

Answer: A, D

Explanation:

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

Question: 44

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

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

Answer: C

Explanation:

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

Question: 45

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.
Reference: 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.

Question: 46

A company wants to combine solutions in a central and scalable environment to achieve the following goals:

- Control
- Visibility
- Automation
- Cost efficiency

Which of the following best describes what the company should implement?

A. Batch processing
B. Workload orchestration
C. Containerization
D. Application modernization

Answer: B

Explanation:

Workload orchestration is the best description of what the company should implement to achieve control, visibility, automation, and cost efficiency. It involves using orchestration tools to manage workloads in cloud environments, ensuring resources are used efficiently and operations are automated.
Reference: Workload orchestration is a part of cloud management strategies discussed under the Management and Technical Operations domain in the CompTIA Cloud+ objectives.

Question: 47

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: A, D

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.

Reference: 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.

Question: 48

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.

Reference: The concept of automatic elasticity is part of the cloud management and technical operations content in the CompTIA Cloud+ curriculum.

Question: 49

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

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

Answer: A

Explanation:

Platform as a Service (PaaS) is the best cloud service model for deploying code directly in the cloud without provisioning additional infrastructure. PaaS provides a platform allowing customers to develop, run, and manage applications without the complexity of building and maintaining the infrastructure.

Reference: The PaaS model and its benefits for application deployment are covered under the Cloud Concepts domain in the CompTIA Cloud+ certification.

Question: 50

An administrator is setting up a cloud backup solution that requires the following features:

- Cost effective
- Granular recovery
- Multilocation

Which of the following backup types best meets these requirements?

A. Off-site, full, incremental, and differential
B. Cloud site, full, and differential
C. On-site. full, and incremental
D. On-site. full, and differential

Answer: A

Explanation:

An off-site cloud backup solution that offers full, incremental, and differential backups would best meet the requirements of being cost-effective, allowing granular recovery, and supporting multilocation storage. This combination allows for comprehensive backup strategies that can be tailored to the company's needs while optimizing storage costs.

Reference: Backup strategies, including full, incremental, and differential backups, are an integral part of data management and protection strategies discussed in the CompTIA Cloud+ objectives.

Question: 51

A cloud engineer needs to deploy a new version of a web application to 100 servers. In the past, new version deployments have caused outages. Which of the following deployment types should the cloud engineer implement to prevent the outages from happening this time?

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

Answer: C

Explanation:

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

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

Question: 52

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.

Reference: Understanding data storage and the various tiers, including archival storage, is part of cloud storage strategies covered in the CompTIA Cloud+ certification.

Question: 53

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:

```
Tracebac): (most recant sail Last):
File "app.py", Line 1, sr OFcduLe'
imp T- requests
ModuleNotFoundError: Ko module named 'request:'
```

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.

Reference: Dependency management is a crucial part of maintaining a CI/CD pipeline, a topic included in the CompTIA Cloud+ examination objectives.

Question: 54

Which of the following cloud deployment strategies is best for an organization that wants to run open-source workloads with other organizations that are sharing the cost?

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

Answer: A

Explanation:

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

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

Question: 55

A cloud administrator shortens the amount of time a backup runs. An executive in the company requires a guarantee that the backups can be restored with no data loss. Which of th€ following backup features should the administrator lest for?

A. Encryption
B. Retention
C. Schedule
D. Integrity

Answer: D

Explanation:

To guarantee that backups can be restored with no data loss, the administrator should test for data integrity. This ensures that the data has not been altered during the backup process and that it can be restored to its original state.

Reference: Backup integrity is a critical aspect of data management and protection, which falls under the best practices for backups and restoration in the CompTIA Cloud+ curriculum.

Question: 56

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

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

Answer: C

Explanation:

Non-relational (NoSQL) databases are best for storing different types of unstructured data that may change frequently. They are designed to handle a wide variety of data types and are not constrained by the fixed schema of relational databases, making them more flexible and scalable for unstructured data.
Reference: 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.

Question: 57

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.

Reference: 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.

Question: 58

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

A. SSH
B. Bastion host
C. Token-based access

D. Web portal

Answer: B

Explanation:

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

Question: 59

A company requests that its cloud administrator provision virtual desktops for every user. Given the following information:

- One hundred users are at the company.
- A maximum of 30 users work at the same time.
- Users cannot be interrupted while working on the desktop.

Which of the following strategies will reduce costs the most?

A. Provisioning VMs of varying sizes to match user needs
B. Configuring a group of VMs to share with multiple users
C. Using VMs that have spot availability
D. Setting up the VMs to turn off outside of business hours at night

Answer: D

Explanation:

Setting up the VMs to turn off outside of business hours at night will reduce costs the most, especially since a maximum of 30 users work at the same time and users cannot be interrupted while working. This approach ensures that resources are used only when necessary.
Reference: Cost management and efficient resource utilization strategies like scheduling VMs to turn off during idle times are discussed within the financial management aspects of cloud services in the CompTIA Cloud+ exam objectives.

Question: 60

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.
Reference: Incident response and addressing unauthorized access attempts, including tracking and blocking IP addresses, are security measures addressed in the CompTIA Cloud+ material.

Question: 61

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.
Reference: Docker and container management concepts, including image registries, are part of the cloud services understanding in the CompTIA Cloud+ curriculum.

Question: 62

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.
Reference: 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.

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Question: 63

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

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

Answer: A, E

Explanation:

Best practices when working with a source control system include merging code often to ensure that changes from different team members are integrated regularly, reducing integration issues.

Committing code often is also recommended to save small changes frequently, which helps in tracking changes and resolving issues more effectively.

Reference: Source control system best practices are part of the software development and deployment guidelines discussed in the CompTIA Cloud+ examination objectives.

Question: 64

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.

Reference: The use of managed services, like managed databases, to minimize operational overhead is a strategic decision in cloud computing covered in CompTIA Cloud+.

Question: 65

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.
Reference: Cloud migration strategies, including retiring outdated systems, are part of the decision-making process for cloud adoption in the CompTIA Cloud+ certification material.

Question: 66

A list of CVEs was identified on a web server. The systems administrator decides to close the ports and disable weak TLS ciphers. Which of the following describes this vulnerability management stage?

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

Answer: D

Explanation:

Closing the ports and disabling weak TLS ciphers as a response to a list of identified CVEs (Common Vulnerabilities and Exposures) describes the vulnerability management stage of 'remediation'. This stage involves taking actions to resolve vulnerabilities and mitigate potential risks.
Reference: Vulnerability management stages, including remediation efforts, are a key aspect of the security measures discussed in CompTIA Cloud+.

Question: 67

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. Reference: Data protection strategies like volume snapshots are discussed under cloud data management and protection in the

CompTIA Cloud+ objectives.

Question: 68

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 vs. SaaS
C. Firewall capabilities
D. Regulatory
E. Implementation timeline
F. Service availability

Answer: A, D

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.
Reference: Compliance and regulatory considerations are crucial factors in the cloud migration process for government entities, as emphasized in the CompTIA Cloud+ certification.

Question: 69

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

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

Answer: C

Explanation:

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

Question: 70

A company recently migrated to a public cloud provider. The company's computer incident response team needs to configure native cloud services tor 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: A, C

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.
Reference: 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.

Question: 71

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.c-m (93.ib4.2io.34)
Hi st is up (>,02 s latency).

POET STATE SERVITE
21/tcp open ftp
443/tcp open ssl/https
1119 /1cp .Ioseel bnetgdine
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.
Reference: The security risks associated with the use of insecure or unencrypted protocols are covered under cloud security best practices in the CompTIA Cloud+ curriculum.

Question: 72

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

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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.

Reference: Disaster recovery and high availability strategies, including the use of multiple availability zones, are discussed in the CompTIA Cloud+ certification material.

Question: 73

A software engineer needs to transfer data over the internet using programmatic access while also being able to query the dat

a. 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.

Reference: Data transfer and querying methods are part of the technical knowledge associated with cloud computing, as included in CompTIA Cloud+.

Question: 74

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.

Reference: Deployment strategies and their impact on operations are a significant topic within the CompTIA Cloud+ examination objectives.

Question: 75

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.

Reference: Understanding cloud service APIs and the importance of keeping up with updates is part of cloud technical operations covered in CompTIA Cloud+.

Question: 76

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

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

Answer: A

Explanation:

Adding a redundant web server behind a load balancer is the solution that will ensure high availability. If one server goes down for maintenance, the other can take over, ensuring that the web service remains available without interruption.

Reference: High availability concepts, including the use of load balancers and redundant servers, are part of cloud infrastructure design as per CompTIA Cloud+.

Question: 77

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. Reference: Cloud resource scaling strategies, including scheduled horizontal scaling, are discussed in the CompTIA Cloud+ curriculum under cloud management and optimization.

Question: 78

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 dat

a. 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.

Reference: Encryption standards and practices, including the use of AES for securing data, are essential knowledge in cloud security covered in CompTIA Cloud+.

Question: 79

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. Rearchitect
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.

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

Question: 80

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.

Reference: The various cloud migration strategies, including rehosting, are part of the knowledge base for cloud migration in the CompTIA Cloud+ certification.

Question: 81

A banking firm's cloud server will be decommissioned after a successful proof of concept using mirrored dat a. 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.
Reference: Data management strategies, including archiving decommissioned data, are covered in the CompTIA Cloud+ examination objectives, particularly within the domain of management and technical operations.

Question: 82

A company has ten cloud engineers working on different manual following is the best method to address this issue?

A. Deployment documentation
B. Service logging
C. Configuration as code
D. Change ticketing

Answer: C

Explanation:

Configuration as code is the best method to address the issue of cloud engineers working on different manual configurations. This practice allows configurations to be scripted and automated, which reduces human error, enhances consistency, and makes the deployment process more efficient and reproducible.
Reference: Configuration as code is part of cloud deployment best practices, ensuring standardized environments, which is a key topic within the CompTIA Cloud+ curriculum.

Question: 83

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

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

Answer: A

Explanation:

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

Question: 84

A CI/CD pipeline is used to deploy VMs to an laaS environment. Which of the following can be used to harden the operating system once the VM is running?

A. Docker
B. Kubernetes
C. Git
D. Ansible

Answer: D

Explanation:

Ansible can be used to harden the operating system once the VM is running. It is an automation tool that can configure systems, deploy software, and orchestrate more advanced IT tasks such as

continuous deployments or zero downtime rolling updates.
Reference: Ansible and other configuration management tools are part of the cloud management strategies discussed in the CompTIA Cloud+ certification material.

Question: 85

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

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

Answer: A

Explanation:

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

Question: 86

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.
Reference: 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+.

Question: 87

Which of the following provides secure, private communication between cloud environments

without provisioning additional hardware or appliances?

A. VPN
B. VPC peering
C. BGP
D. Transit gateway

Answer: B

Explanation:

VPC peering provides secure, private communication between cloud environments without the need for provisioning additional hardware or appliances. It allows direct network connectivity between two Virtual Private Clouds (VPCs), enabling resources in either VPC to communicate with each other using private IP addresses.
Reference: Cloud networking options such as VPC peering and its benefits are included in the networking

concepts of cloud environments in the CompTIA Cloud+ certification.

Question: 88

Which of the following network protocols is generally used in a NAS environment?

A. BGP
B. RDP
C. TCP/IP
D. iSCSI

Answer: C

Explanation:

The network protocol generally used in a NAS (Network Attached Storage) environment is TCP/IP (Transmission Control Protocol/Internet Protocol). NAS devices are accessed over a network rather than being directly connected to the computer, and they utilize the TCP/IP protocol to enable this network communication.
Reference: Understanding of networking protocols, including TCP/IP in the context of NAS environments, is part of the foundational networking knowledge for cloud services in CompTIA Cloud+.

Question: 89

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.
Reference: Resource management concepts such as avoiding oversubscription are covered under the Management and Technical Operations domain of the CompTIA Cloud+ exam objectives.

Question: 90

Which of the following is a field of computer science that enables computers to identify and understand objects and people in images and videos?

A. Image reconstruction
B. Facial recognition
C. Natural language processing
D. Computer vision

Answer: D

Explanation:

Computer vision is a field of computer science that enables computers to identify and understand objects and people in images and videos. It involves the development of systems that can capture and interpret visual information from the world, similar to the way humans do.

Reference: The application of computer vision and its role in cloud services, particularly in relation to AI and machine learning capabilities, is discussed in CompTIA Cloud+.

Question: 91

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.

Reference: Security monitoring and alerting are critical components of managing cloud environments securely, as discussed in the CompTIA Cloud+ certification.

Question: 92

An on-premises data center is located in an earthquake-prone location. The workload consists of real-time, online transaction processing. Which ot the following data protection strategies should be used to back up on-premises data to the cloud while also being cost effective?

A. Remote replication for failover
B. A copy that is RAID 1 protected on spinning drives in an on-premises private cloud
C. A full backup to on-site tape libraries in a private cloud
D. Air-gapped protection to provide cyber resiliency

Answer: A

Explanation:

Remote replication for failover is the data protection strategy that should be used to back up onpremises data to the cloud for an earthquake-prone location. It provides real-time or near-real-time copying of data to a remote location, which can be quickly activated in case the primary site fails. Reference: Disaster recovery strategies, including remote replication for failover, are part of the cloud-based data protection methods covered in the CompTIA Cloud+ certification.

Question: 93

An IT manager is migrating the production environment to the cloud but needs to keep control of the operating systems, patches, and settings of all resources. Which of the following deployment models will best meet the requirements?

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

Answer: C

Explanation:

Infrastructure as a Service (IaaS) is the deployment model that will best meet the requirements of retaining control over the operating systems, patches, and settings of all resources. IaaS provides the cloud infrastructure but leaves the management of the operating system and applications to the user.
Reference: The cloud service models and the level of control they offer are fundamental topics in the CompTIA Cloud+ certification material.

Question: 94

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.
Reference: Backup methodologies, including the importance of full backups, are part of the data management strategies in cloud computing covered in the CompTIA Cloud+ certification.

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Question: 95

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 44 3	PERMIT AMY 443
DENY ANY ANY	PERMIT ANY 3306
	PERMIT ANY S3
	DENY ANY ANY

Application Server Subnet Routing Table

Destination.	Gateway
default	. It ... !
192.168.1.0/24	local

yiySQL Server Stateful Firewall

Inbound rules	Outbound rules
PERMIT 192.168.1.10/32 3306	DENY ANY ANY
DENY ANY ANY	

\4ySQL Server Subnet Routing Table

Destination	Gateway
192.168.2.0/24	192.168.1.1
192.168.1.0/24	ra^

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

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

Answer: C

Explanation:

The connectivity issue between the application server and the MySQL database server in different subnets is likely due to the MySQL Server Stateful Firewall's inbound rules. The application server has an IP of 192.168.1.10, but the MySQL server's inbound rules only permit IP 192.168.1.10/32 on port 3306. This rule allows only a single IP address (192.168.1.10) to communicate on port 3306, which is typical for MySQL. However, if the application server's IP is not 192.168.1.10 or the application is trying to communicate on a different port, it would be blocked. To fix the communication issue, the cloud engineer should address the inbound rules on the MySQL Server Stateful Firewall to ensure that the application server's IP address and the required port are allowed. Reference: Based on the information provided in the question and general

networking principles.

Question: 96

A SaaS provider introduced new software functionality for customers as part of quarterly production enhancements. After an update is implemented, users cannot locate certain transactions from an inbound integration. During the investigation, the application owner finds the following error in the logs:
Error: REST API - Deprecated call is no longer supported in this release.
Which of the following is the best action for the application owner to take to resolve the issue?

A. Update the custom integration to use a supported function.
B. Include the custom integration in the quarterly testing scope.
C. Ask the users to monitor the quarterly updates.
D. Revert the application to the last stable quarterly release.

Answer: A

Explanation:

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

Question: 97

A company wants to build its new platform using a public cloud. The workload requirements include the following:

- Implementation of custom CIS compliance
- Patch for vulnerabilities within 24 hours
- Warrant at least 1,800 IOPS per volume

Which of the following meets the requirements?

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

Answer: B

Explanation:

Infrastructure as a Service (IaaS) provides the most flexibility among cloud service models, allowing for the implementation of custom security and compliance standards, such as CIS compliance. IaaS environments offer control over the infrastructure, enabling patch management within specific time frames. Additionally, IaaS providers typically offer configurable storage options, including the ability to specify IOPS (Input/Output Operations Per Second) per volume to meet performance requirements.

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Question: 98

A cloud engineer is extending on-premises services to a public cloud. The following design requirements must be considered in the overall solution:

" The ability to remotely connect systems from both environments

- No IP address conflicts or overlap
- Cost-effectiveness

Which of the following cloud network concepts best meets these requirements?

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

Answer: B

Explanation:

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

Question: 99

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)

```
fox X in Hst_vms() do
if [ describe_v!n_statu3 (X) I running]
        shutdown_vm(X)
eLae
        echo "vn $x stopped"
done
```

B)

```
  for X in list vws () do
  if 7 describe_vm_status(X) > running]
          shutdown vm(X)
  else
          echo "vm $X stopped"
  done
```

C)

```
  for X in list_vms(l do
  it descrlbe_vm_status(X) == running]
          3hutdown_vm(X)
  else
```

```
        echo *vrri $X stopped*
    done
```

D)

```
    or X in listvmsf) do
    f ' deactibe_'.'n;_status (X) 1- running]
        shutdown_vm(X)
    Ise
        echo "vm $X is stopped"
```

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.

Question: 100

A cloud engineer is developing an operating expense report that will be used to purchase various cloud billing models for virtual machine instances. The cloud billing model must meet the following requirements:

- The instance cannot be ephemeral.
- The minimum life cycle of the instance is expected to be five years.
- The software license is charged per physical CPU count.

Which of the following models would best meet these requirements?

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

Answer: D

Explanation:

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

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Question: 101

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.

Question: 102

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

webbapp_access.1 ^

2023-04-03 16:45:00 GET /hcnje?x=213 /home?x^K6544 / home ?x= 524 5 5
2023-04-03 16:45:01 GET /he rue ?x—5 € . 2.me ..; ". 15
2023-04-03 16:45:02 GET
2023-04-03 16:45:03 JET /hGme?x=3986 502 /hcme?x=24tl 502
202 J 04 -.3 16:4 'j:'. 4 SET

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

2023-04-03 IOG^IOO GET
202J 04 03 16:47:01 GET

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.

Question: 103

A cloud architect is preparing environments to develop a new application that will process sensitive dat a. 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.

Question: 104

A company operates a website that allows customers to upload, share, and retain tull 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.

Question: 105

Which of the following will best reduce the cost of running workloads while maintaining the same performance? (Select two).

A. Instance size
B. Tagging
C. Reserved resources model
D. Spot instance model
E. Pay-as-you-go model
F. Dedicated host model

Answer: C, D

Explanation:

The Reserved resources model offers cost savings for committed use over a long term, which can reduce costs while maintaining performance for predictable workloads. The Spot instance model allows users to take advantage of unused capacity at lower prices, offering significant cost savings, though with the possibility of instances being terminated when demand rises. Both models can be strategically used to optimize costs without compromising performance.

Question: 106

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.

Question: 107

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

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

Answer: D

Explanation:

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

Question: 108

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

A. Adding a new remote

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B. Creating a pull request
C. Merging the branch
D. Rebasing the branch

Answer: B

Explanation:

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

Question: 109

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.

Question: 110

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.

Question: 111

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.

Question: 112

Which of the following can reduce the risk of CI/CD pipelines leaking secrets?

A. Protected Git branches
B. Use of a VM instead of containers
C. Private image repositories
D. Canary tests

Answer: A

Explanation:

Protected Git branches help reduce the risk of CI/CD pipelines leaking secrets by imposing restrictions on who can commit to the branches, enforce status checks before merging, and prevent

unauthorized access or changes to sensitive information, such as API keys, passwords, and secret tokens. This ensures that only approved changes can be made to the codebase, and sensitive information is safeguarded.

Question: 113

Which of the following communication methods between on-premises and cloud environments would ensure minimal-to-low latency and overhead?

A. Site-to-site VPN
B. Peer-to-peer VPN
C. Direct connection
D. peering

Answer: C

Explanation:

A direct connection between on-premises and cloud environments involves a dedicated, private connection that does not traverse the public internet. This setup ensures minimal-to-low latency and overhead, providing more consistent network performance and reliability compared to other methods like VPNs or public internet connections, making it suitable for high-volume or latencysensitive applications.

Question: 114

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.

Question: 115

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.

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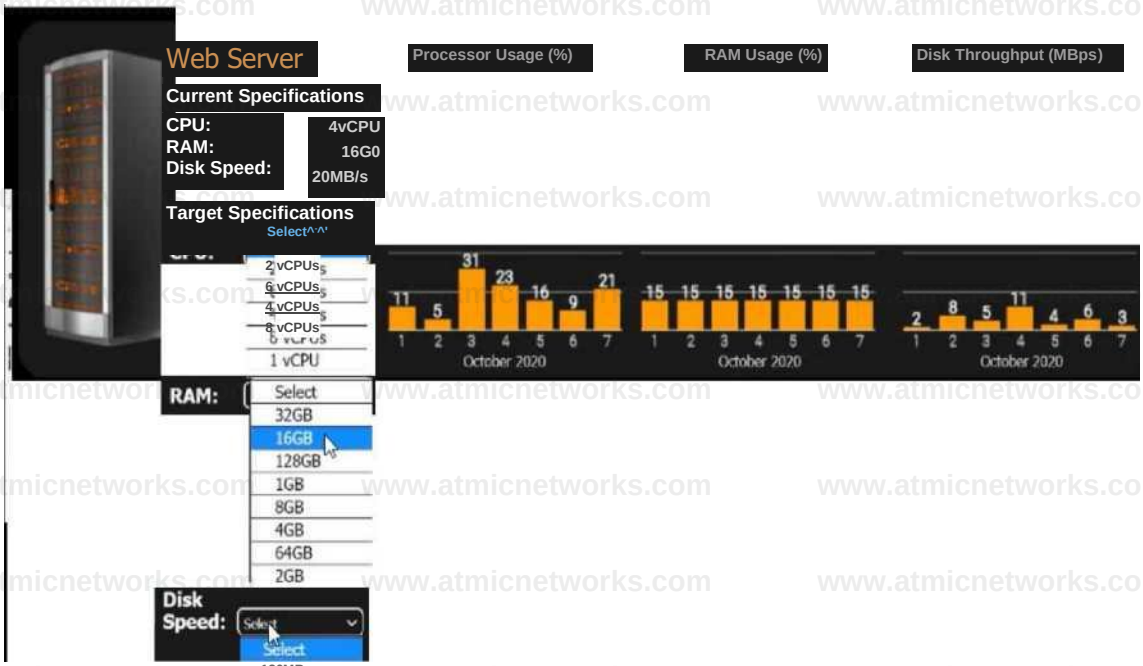
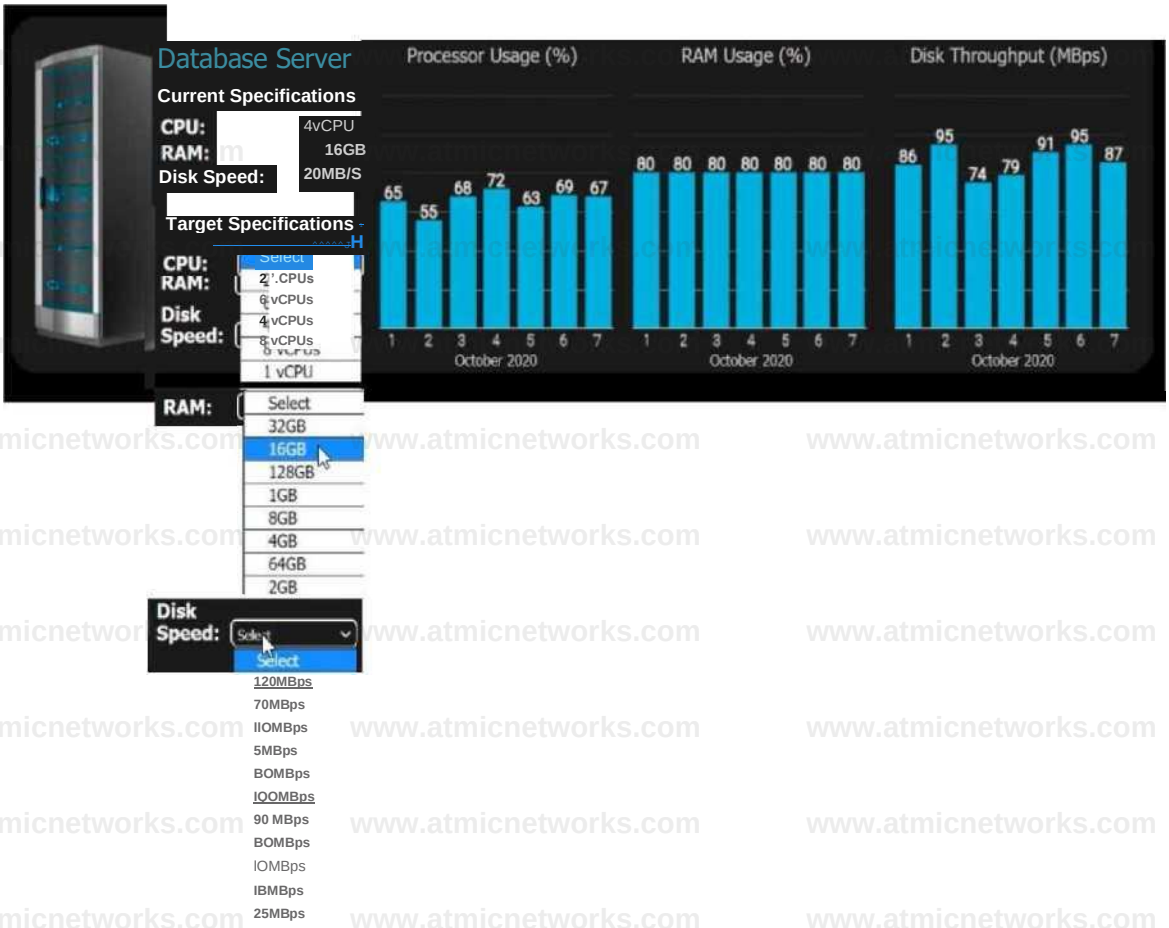




Answer:

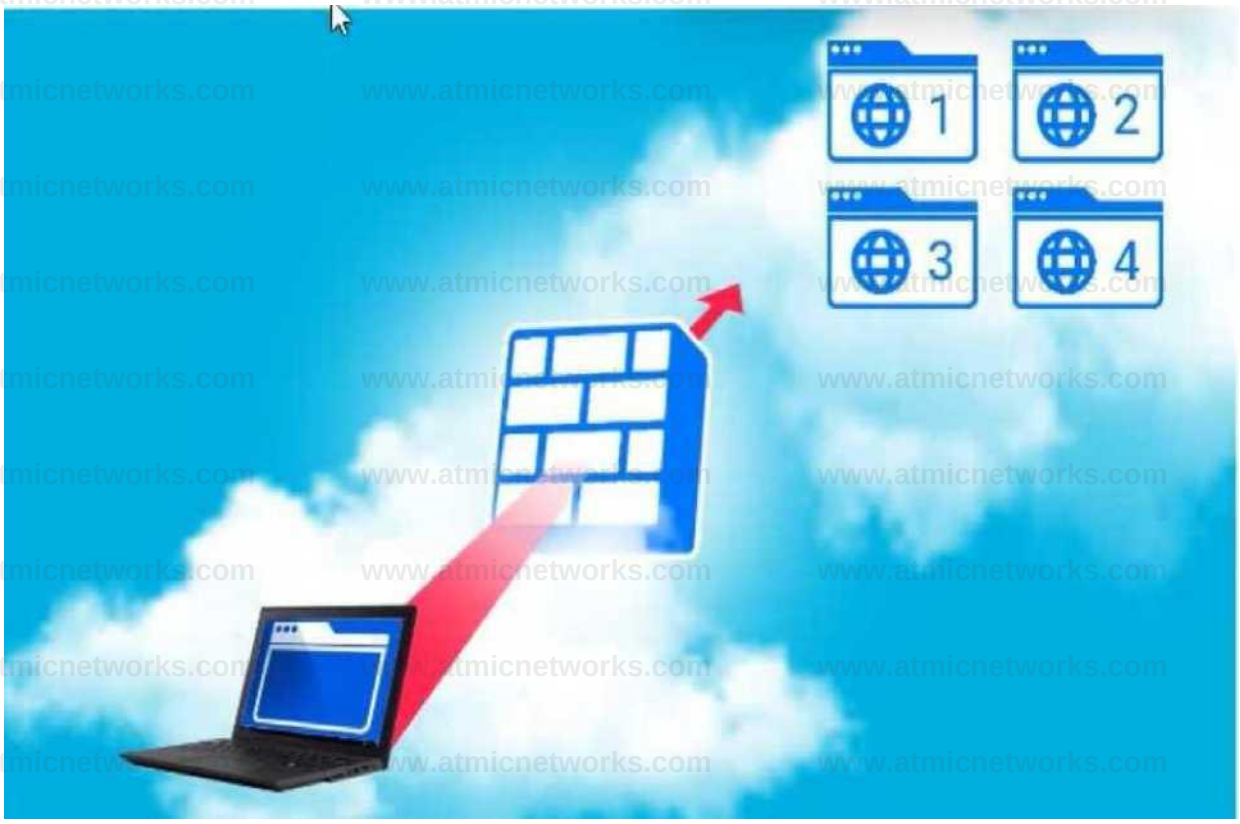
Explanation:

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.

Question: 116

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.



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Web app1 [x]

SVC Host	SVC Name	SVC IP	SVC Port
webappl	FIN	10.22.10.11	443

Web app 2

SVC Host	SVC Name	SVC IP	SVC Port
webapp2	VIDEO	10.22.10.21	443

x

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

Answer: See the Explanation below for solution.

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.

Question: 117

A company has decided to scale its e-commerce application from its corporate datacenter to a commercial cloud provider to meet an anticipated increase in demand during an upcoming holiday.

The majority of the application load takes place on the application server under normal conditions. For this reason, the company decides to deploy additional application servers into a commercial cloud provider using the on-premises orchestration engine that installs and configures common software and network configurations.

The remote computing environment is connected to the on-premises datacenter via a site-to-site

IPSec tunnel. The external DNS provider has been configured to use weighted round-robin routing to load

balance connections from the Internet.

During testing, the company discovers that only 20% of connections completed successfully.

INSTRUCTIONS

Review the network architecture and supporting documents and fulfill these requirements:

Part 1:

■Analyze the configuration of the following components: DNS, Firewall 1, Firewall 2, Router 1, Router 2, VPN and Orchestrator Server.

■ Identify the problematic device(s).

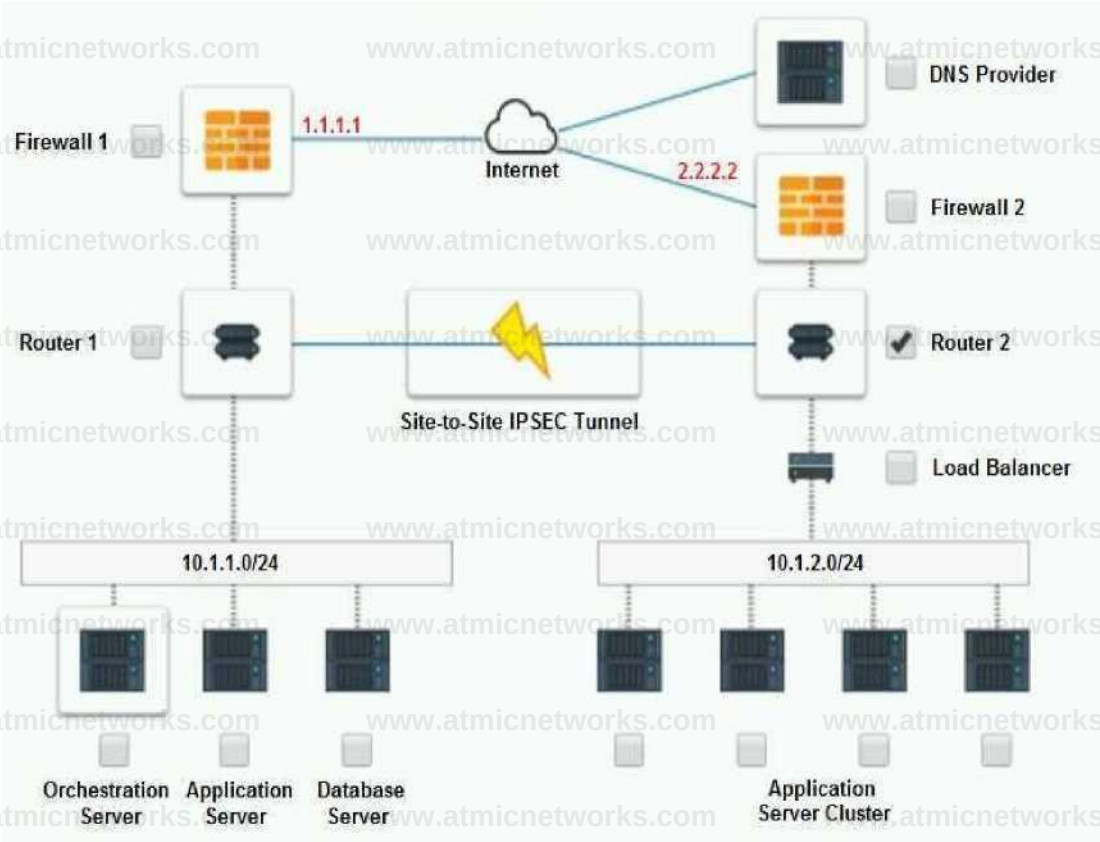
Part 2:

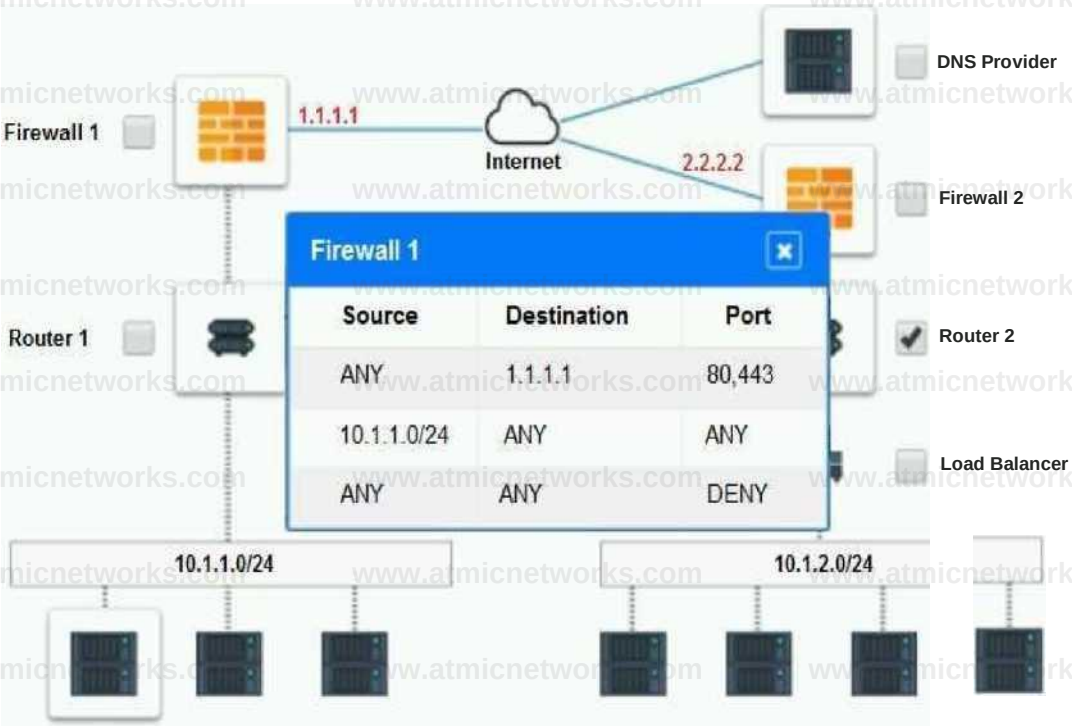
■ Identify the correct options to provide adequate configuration for hybrid cloud architecture.

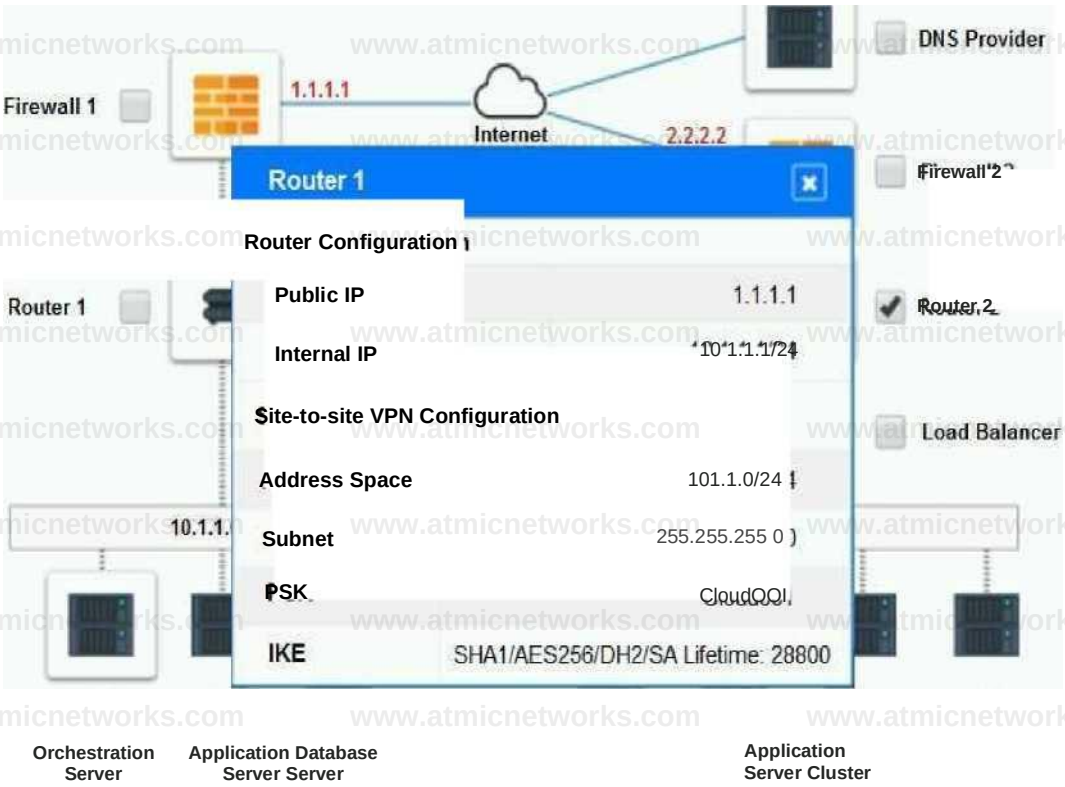
If at any time you would like to bring back the initial state of the simulation, please click the Reset All button.

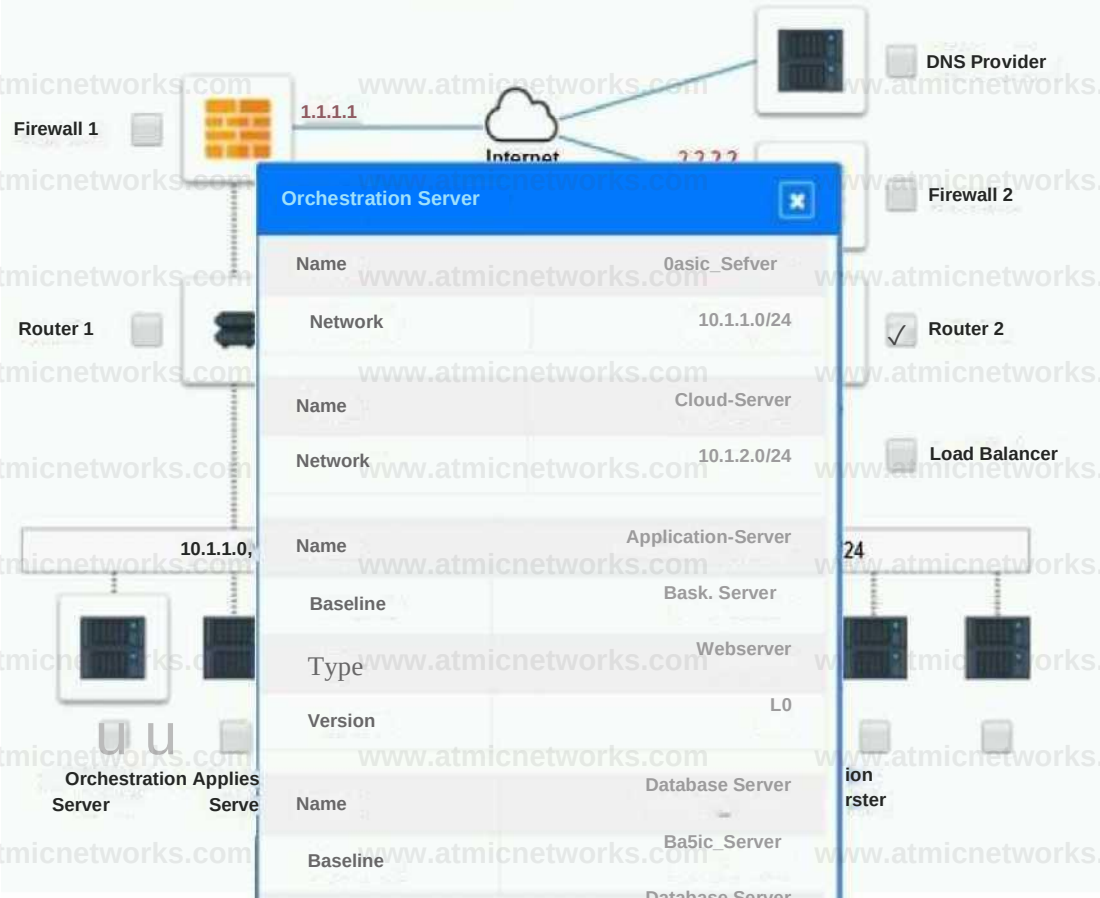
Part 1:

Cloud Hybrid Network Diagram



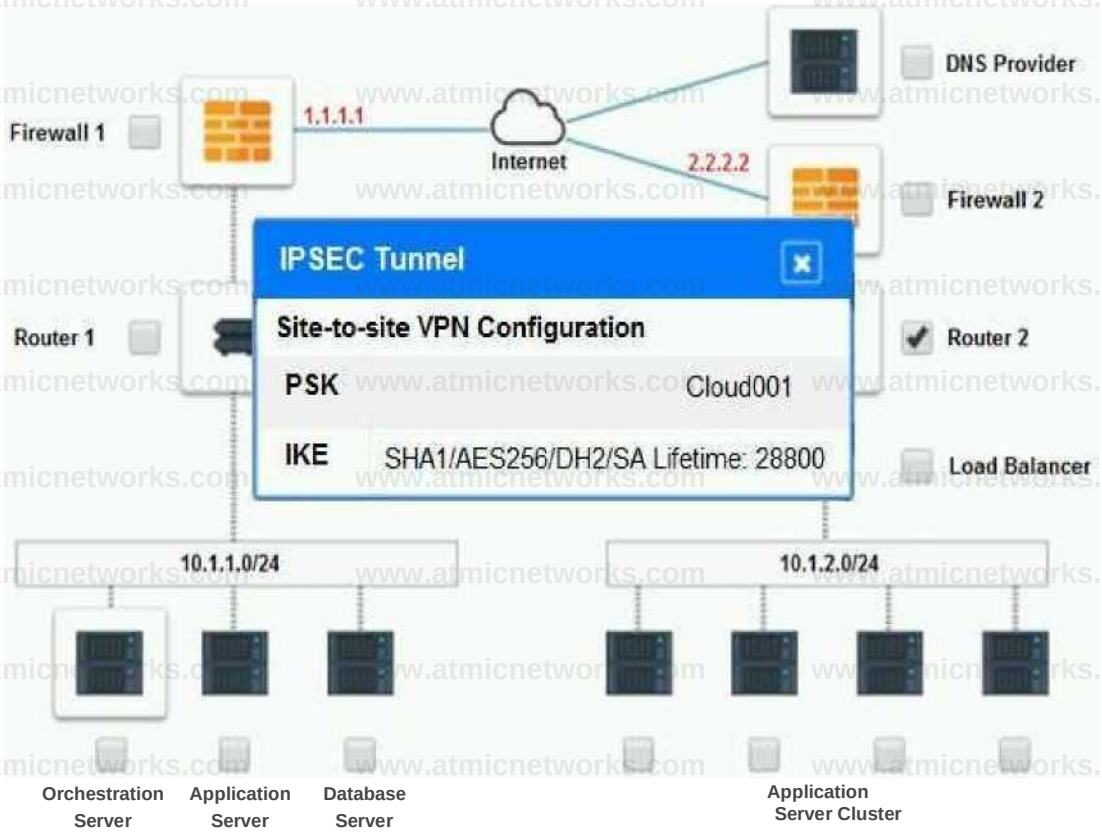

DNS Provider
Firewall 1
1.1.1.1
Internet
2.2.2.2
Firewall 2
Firewall 1
Source
Destination
Port
ANY
1.1.1.1
80,443
10.1.1.0/24
ANY
ANY
ANY
ANY
DENY
Router 1
Router 2
Load Balancer
10.1.1.0/24
10.1.2.0/24
Orchestration Application Server Server
Database Server
Application Server Cluster

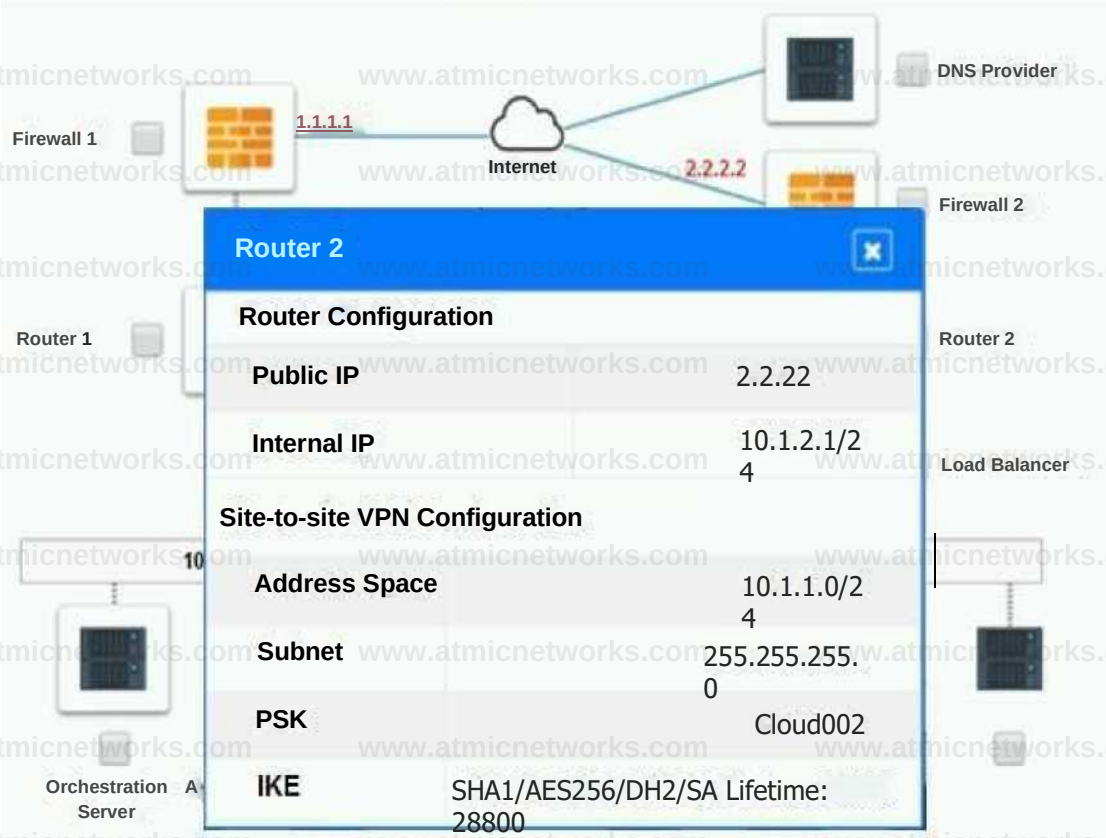

DNS Provider
Firewall 1
1.1.1.1
Internet
2.2.2.2
Router 1
Router Configuration
Public IP
1.1.1.1
Internet IP
10.1.1.1/24
Site-to-site VPN Configuration
Address Space
101.1.0/24
Subnet
255.255.255.0
PSK
CloudQQI
IKE
SHA1/AES256/DH2/SA Lifetime: 28800
Router 1
Load Balancer
10.1.1.
Orchestration Server
Application Database Server Server
Application Server Cluster

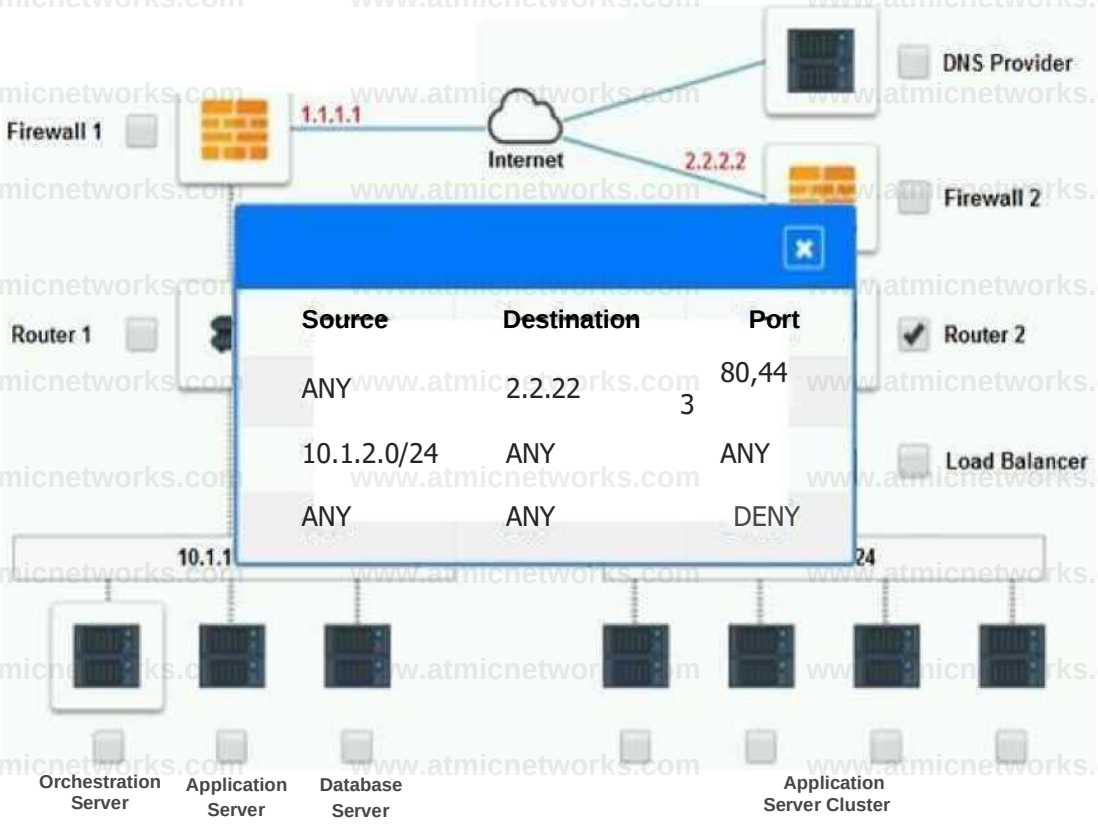


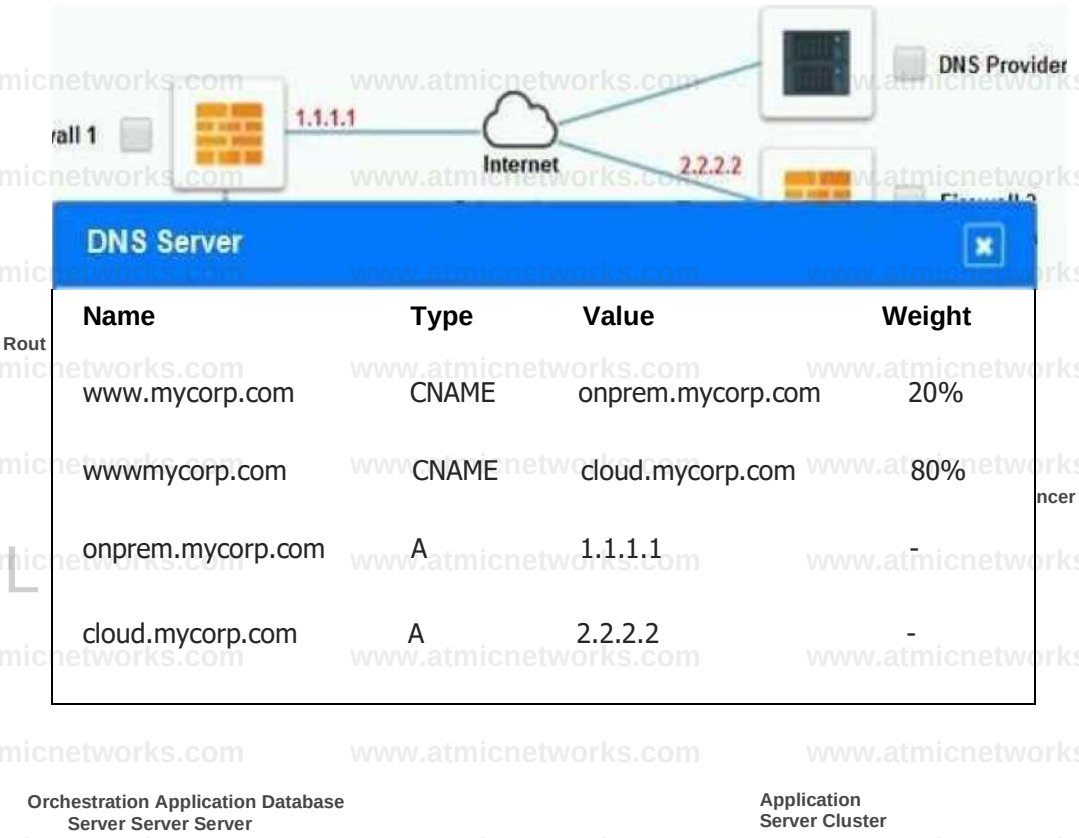
Orchestration Server

Name	0asic_Sefver
Network	10.1.1.0/24
Name	Cloud-Server
Network	10.1.2.0/24
Name	Application-Server
Baseline	Bask. Server
Type	Webserver
Version	L0
Name	Database Server
Baseline	Ba5ic_Server
Type	Database Server
Version	1.0
Name	Corporate Datacenter
Baseline	Application-Server
Count	1
Name	Cloud.Service- Provider
Baseline	Cloud-Server
Count	4


DNS Provider
Firewall 1
1.1.1.1
Internet
2.2.2.2
Firewall 2
IPSEC Tunnel
Site-to-site VPN Configuration
PSK
Cloud001
IKE
SHA1/AES256/DH2/SA Lifetime: 28800
Router 1
Router 2
Load Balancer
10.1.1.0/24
10.1.2.0/24
Orchestration Server
Application Server
Database Server
Application Server Cluster


DNS Provider
Firewall 1
1.1.1.1
Internet
2.2.2.2
Firewall 2
Router 2
Router Configuration
Public IP
2.2.22
Internal IP
10.1.2.1/24
Site-to-site VPN Configuration
Address Space
10.1.1.0/24
Subnet
255.255.255.0
PSK
Cloud002
IKE
SHA1/AES256/DH2/SA Lifetime: 28800
Router 1
Router 2
Load Balancer
Orchestration Server





Part 2:

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

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

Answer: See explanation below.

Explanation:

Part 1: Router 2

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

According to the network diagram and the configuration files, Router 2 has a different PSK and a different address space than Router 1. Router 2 has a PSK of "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 onpremises 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.

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

E. Change the Address Space on Router2

Question: 118

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

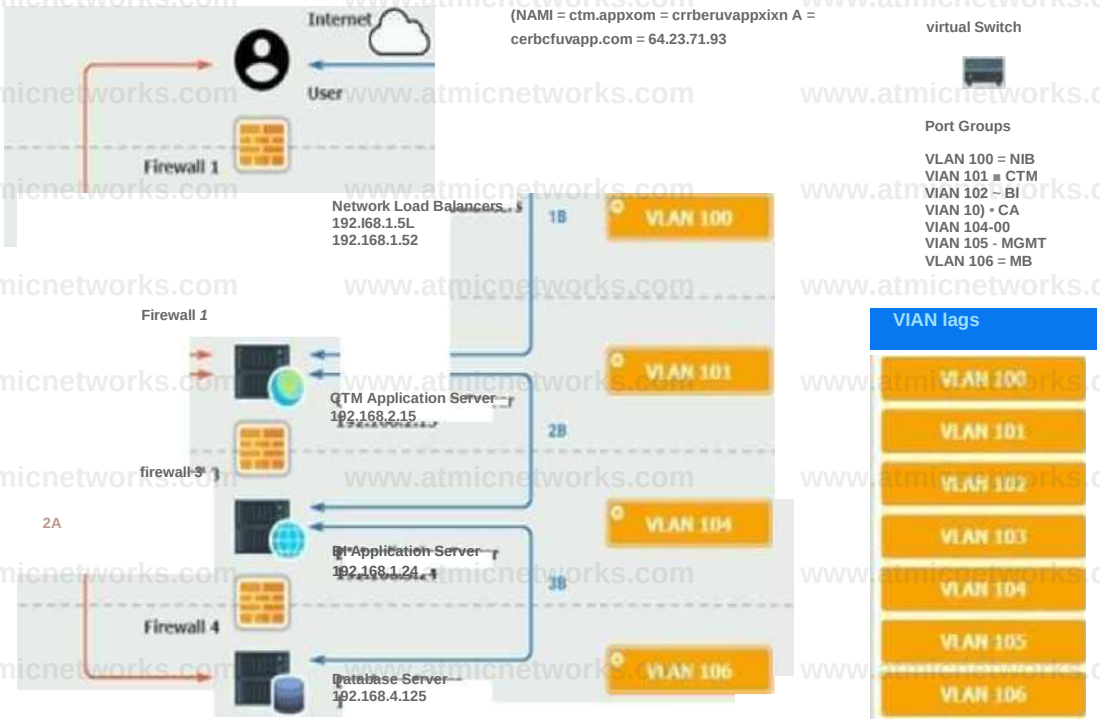
You are a cloud engineer who is tasked with reviewing the firewall rules as well as virtual network settings.

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.


Internet
User
Firewall 1
(NAMI = ctm.appxom = crrberuvappxixn A = cerbcfuvapp.com = 64.23.71.93
virtual Switch
Port Groups
VLAN 100 = NIB
VIAN 101 ■ CTM
VIAN 102 ~ BI
VIAN 10) • CA
VIAN 104-00
VIAN 105 - MGMT
VLAN 106 = MB
Network Load Balancers
192.I68.1.5L
192.168.1.52
1B
VLAN 100
Firewall 1
VLAN 101
QTM Application Server
192.168.2.15
2B
firewall 3
2A
VLAN 104
BI Application Server
192.168.1.24
3B
Firewall 4
VLAN 106
Database Server
192.168.4.125
VIAN lags
VLAN 100
VLAN 101
VLAN 102
VLAN 103
VLAN 104
VLAN 105
VLAN 106

Internet
User
CNAME = ctm.app.com = cerberus.app.com
A = cerberus.app.com = 64.23.71.93
Virtual Switch
Port Groups
VLAN 100 = NLB
VLAN 101 = CTM
VLAN 102 = BI
VLAN 103 = CA
VLAN 104 = DB
VLAN 105 = MGMT
VLAN 106 = WEB
Firewall 1
1A
Firewall 2
Firewall 3
2A
Firewall 4
Action Source Declination Protocol Port
ALLOW o.o.o.o 192.168.1.51 TCP 443
ALLOW O.O.O.O 192.168 1.52 TCP 443
ALLOW o.o.o.o 192.168.1.51 TCP 80
ALLOW o.o.o.o 192.168.1.52 TCP 80
DENY O.O.O.O O.O.O.O ANY ANY
192.168.3.24
3B
Database Server
192.168.4.125
VLAN 105
VLAN Tags
VLAN 100
VLAN 101
VLAN 102
VLAN 103
VLAN 104
VLAN 105
VLAN 106

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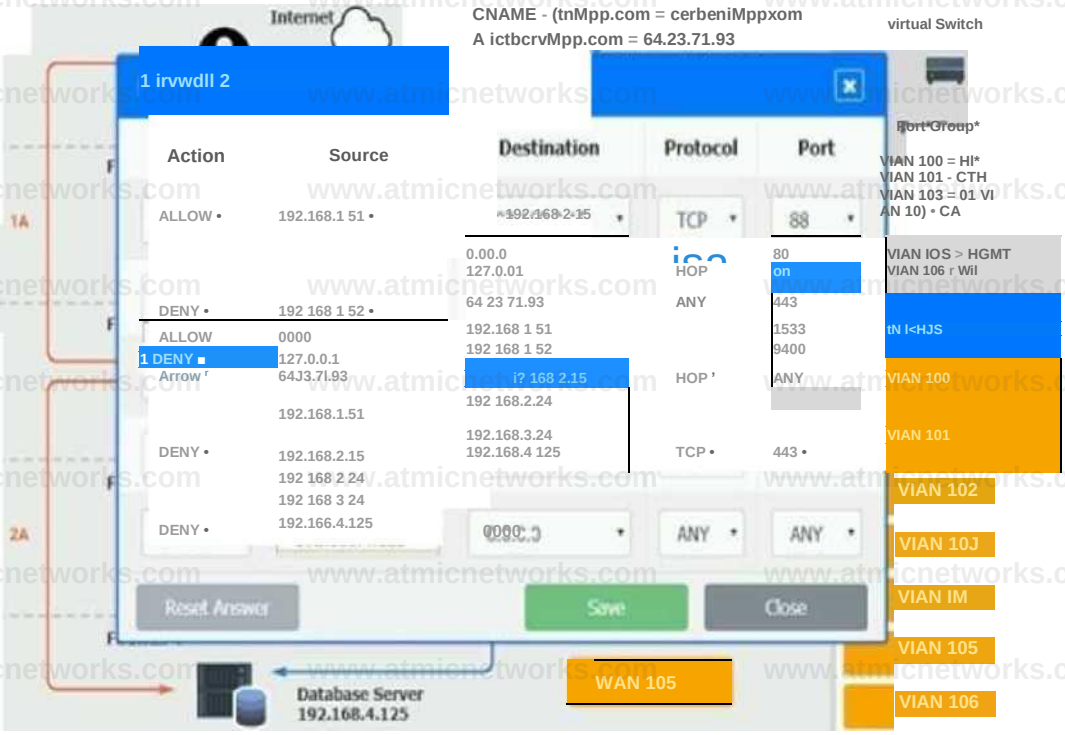
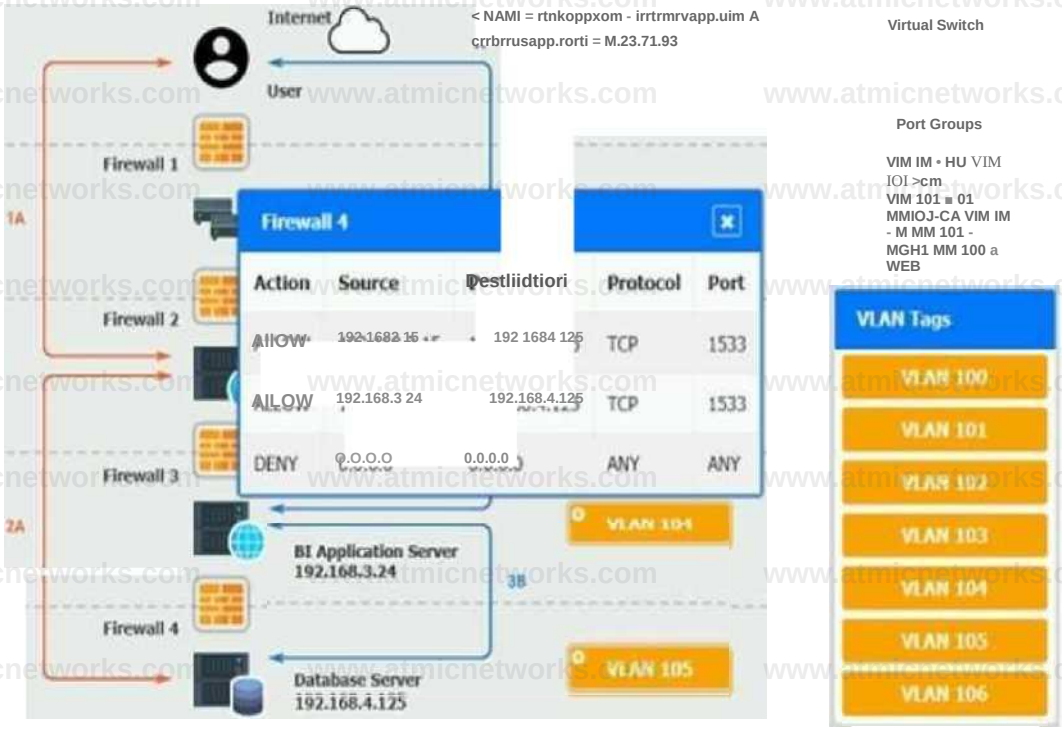




Answer: See explanation below.

Explanation:

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

Question: 119

HOTSPOT

A highly regulated business is required to work remotely, and the risk tolerance is very low. You are tasked with providing an identity solution to the company cloud that includes the following:

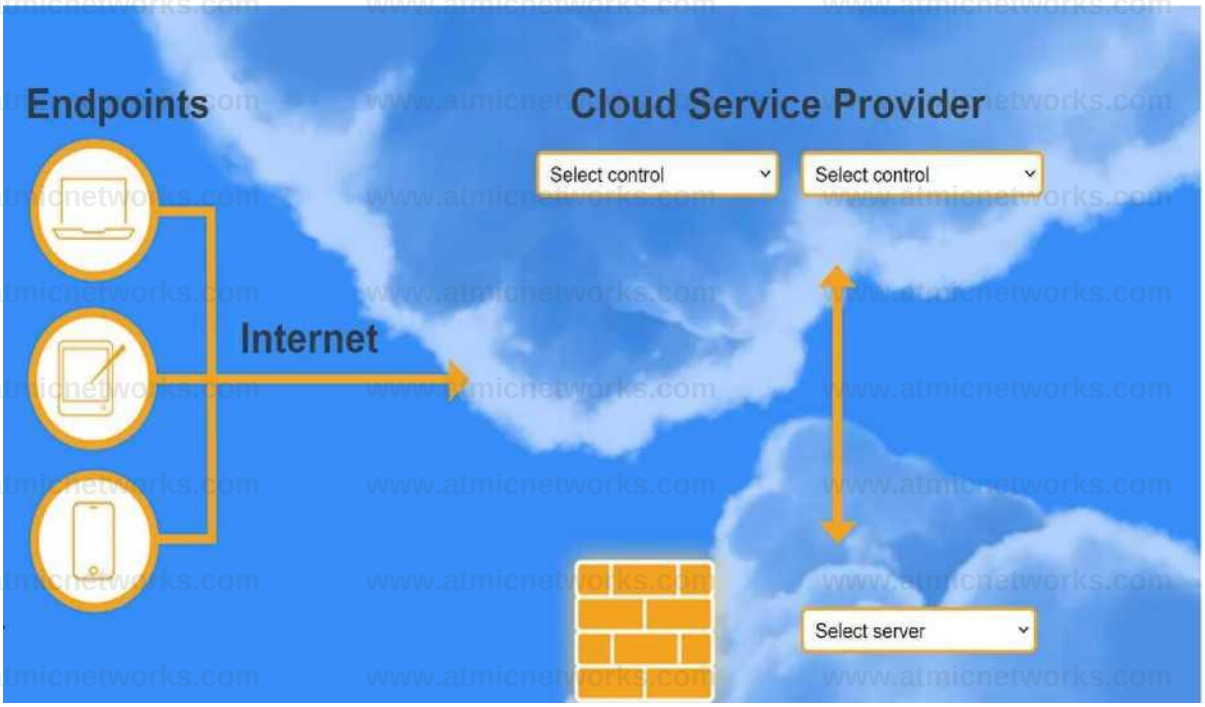
secure connectivity that minimizes user login

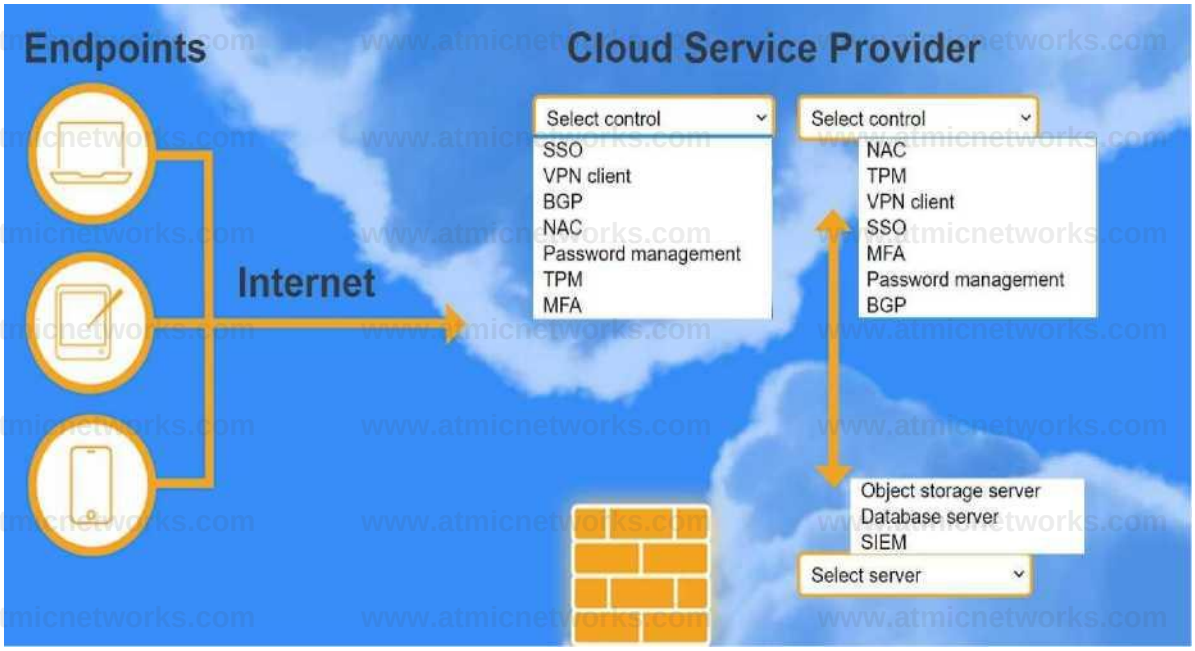
tracks user activity and monitors for anomalous activity

requires secondary authentication

INSTRUCTIONS

Select controls and servers for the proper control points.





Answer:

Explanation:
VPN Client
MFA
SIEM

Question: 120

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

A. Monolithic

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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. Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Designing a Cloud Environment

Question: 121

An organization's internal security team mandated that public cloud resources must be accessible only by a corporate VPN and not by direct public internet access. Which of the following would achieve this objective?

A. WAF

B. ACL

C. VPC

D. SSH

Answer: C

Explanation:

A Virtual Private Cloud (VPC) allows users to create a secluded section of the public cloud where resources can be launched in a defined virtual network. This enables an organization to have a section of the cloud that is secured and isolated from the public internet, thus, access to public cloud resources can be restricted to only a corporate VPN. Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Cloud Security

Question: 122

Which of the following AI/ML technologies consumes text input to discern tone?

A. Text recognition

B. Computer vision

C. Visual recognition

D. Sentiment analysis

Answer: D

Explanation:

Sentiment analysis is an AI/ML technology that processes text to determine the tone. It helps in understanding the sentiments behind the words by analyzing the text input, which can be positive, negative, or neutral. Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Cloud Technologies and Applications

Question: 123

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. Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Disaster Recovery

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Question: 124

Department supervisors have requested a report that will help them understand the utilization of cloud resources, make decisions about budgeting for the following year, and reduce costs. Which of the following are the most important requisite steps to create the report? (Select two).

A. Set the desired retention of resource logs.

B. Configure application tracing.

C. Integrate email alerts with ticketing software.

D. Enable resource tagging.

E. Configure the collection of performance/utilization logs.

F. Configure metric threshold alerts.

Answer: DE

Explanation:

To create a report that helps understand the utilization of cloud resources, make budget decisions, and reduce costs, the most important steps are to enable resource tagging and configure the collection of performance/utilization logs. Resource tagging helps in categorizing and tracking costs by associating tags with resources, while performance/utilization logs are essential for analyzing resource usage over time. Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Cloud Management

Question: 125

A customer relationship management application, which is hosted in a public cloud laaS 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. Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Security in the Cloud

Question: 126

A cloud solutions architect needs to design a solution that will collect a report and upload it to an object storage service every time a virtual machine is gracefully or non-gracefully stopped. Which of the following will best satisfy this requirement?

A. An event-driven architecture that will send a message when the VM shuts down to a log-collecting function that extracts and uploads the log directly from the storage volume

B. Creating a webhook that will trigger on VM shutdown API calls and upload the requested files from the volume attached to the VM into the object-defined storage service

C. An API of the object-defined storage service that will scrape the stopped VM disk and self-upload the required files as objects

D. A script embedded on the stopping VM's OS that will upload the logs on system shutdown

Answer: A

Explanation:

An event-driven architecture is suited for this scenario, where an event (like a VM shutdown) triggers a function to execute specific tasks (log collection and upload). This approach is efficient and ensures that the logs are collected and uploaded to an object storage service every time the VM is stopped, regardless of whether it is a graceful or non-graceful shutdown. Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Cloud Delivery Implementations

Question: 127

A cloud developer needs to update a REST API endpoint to resolve a defect. When too many users attempt to call the API simultaneously, the following message is displayed:

Error: Request Timeout - Please Try Again Later

Which of the following concepts should the developer consider to resolve this error?

A. Server patch

B. TLS encryption

C. Rate limiting

D. Permission issues

Answer: C

Explanation:

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

Question: 128

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

A. Public

B. Community

C. Private

D. Hybrid

Answer: D

Explanation:

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

Question: 129

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. Reference: 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. Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Cloud Security

Question: 130

Which of the following is true of SSDs?

A. SSDs do not have self-encrypting capabilities.

B. SSDs have small storage capacities.

C. SSDs can be used for high-IOP applications.

D. SSDs are used mostly in cold storage.

Answer: C

Explanation:

SSDs (Solid State Drives) are known for their high performance and can handle a high number of input/output operations per second (IOPS). This makes them ideal for applications and workloads that require rapid access to storage, such as databases and high-performance computing applications. Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Cloud Storage Options

Question: 131

A cloud engineer is in charge of deploying a platform in an laaS public cloud. The application tracks the state using session cookies, and there are no affinity restrictions. Which of the following will help the engineer reduce monthly expenses and allow the application to provide the service?

A. Resource metering

B. Reserved resources

C. Dedicated host

D. Pay-as-you-go model

Answer: D

Explanation:

A pay-as-you-go model would be beneficial for the cloud engineer because it allows the application to be scaled based on demand, reducing monthly expenses since costs are only incurred for the resources actually used. Since there are no affinity restrictions and the application uses session cookies for state tracking, the pay-as-you-go model can handle fluctuating workloads without the need to pay for unused reserved resources or dedicated hosts. Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Cloud Service Models

Question: 132

A systems administrator is provisioning VMs according to the following requirements:

· A VM instance needs to be present in at least two data centers.
. During replication, the application hosted on the VM tolerates a maximum latency of one second.

· When a VM is unavailable, failover must be immediate.

Which of the following replication methods will best meet these requirements?

A. Snapshot

B. Transactional

C. Live

D. Point-in-time

Answer: C

Explanation:

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

Question: 133

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

A. Network flow logs

B. Endpoint detection and response logs

C. Cloud provider event logs

D. Instance syslog

Answer: A

Explanation:

To identify DDoS attacks against a CMS service, a cloud engineer should monitor network flow logs. These logs provide data about the IP traffic going to and from network interfaces in a public cloud,

which is essential for detecting the increased traffic volumes typically associated with DDoS attacks. Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Security in the Cloud

Question: 134

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

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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. Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Cloud Integration

Question: 135

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. Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Security Configuration

Question: 136

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. Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Network Management

Question: 137

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. Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Cloud Migration

Question: 138

A company's engineering department is conducting a month-long test on the scalability of an inhouse-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 compute resources and allows the engineering department to configure the environment as needed for their specific test without the constraints that might be present in PaaS or SaaS offerings. Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Cloud Service Models

Question: 139

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

A. On-site

B. Replication

C. Retention

D. Off-site

Answer: D

Explanation:

For an organization looking to protect its data in the event of a natural disaster, the best disaster

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

Question: 140

Which of the following do developers use to keep track of changes made during software development projects?

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A. Code drifting

B. Code control

C. Code testing

D. Code versioning

Answer: D

Explanation:

Developers use code versioning to keep track of changes made during software development projects. It is a system that records changes to a file or set of files over time so that specific versions can be recalled later. Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Software Development in Cloud Environments

Question: 141

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

Question: 142

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. Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Cloud Security

Question: 143

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. Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Cloud Storage Options

Question: 144

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

A. The engineer implemented MFA to access the WAF configurations.

B. The engineer blocked all traffic originating outside the region.

C. The engineer installed the latest security patches on the WAF.

D. The engineer completed an upgrade from TLS version 1.1 to version 1.3.

Answer: B

Explanation:

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

Question: 145

A cloud solution needs to be replaced without interruptions. The replacement process can be completed in phases, but the cost should be kept as low as possible. Which of the following is the best strategy to implement?

A. Blue-green

B. Rolling

C. In-place

D. Canary

Answer: B

Explanation:

A rolling strategy is the best to implement when needing to replace a cloud solution without interruptions and keeping costs low. This approach updates or replaces parts of the system gradually with minimal downtime and allows for a phased implementation. Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Cloud Deployment and Provisioning

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Question: 146

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. Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Cloud Scalability

Question: 147

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.
Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Cloud Security Threats

Question: 148

A company wants to create a few additional VDIs so support vendors and contractors have a secure method to access the company's cloud environment. When a cloud administrator attempts to create the additional instances in the new locations, the operation is successful in some locations but fails in others. Which of the following is the most likely reason for this failure?

A. Partial service outages

B. Regional service availability

C. Service quotas

D. Deprecation of functionality

Answer: C

Explanation:

If a cloud administrator can create additional instances in some locations but not others, the most likely reason for this failure is service quotas. Cloud providers often have quotas on the number of resources that can be created, and these limits can vary by region. Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Cloud Resource Management

Question: 149

Which of the following is used to deliver code quickly and efficiently across the development, test, and production environments?

A. Snapshot

B. Container image

C. Serverless function

D. VM template

Answer: B

Explanation:

A container image is used to deliver code quickly and efficiently across the development, test, and production environments. Container images are lightweight, standalone, executable software packages that include everything needed to run a piece of software, including the code, runtime, system tools, libraries, and settings. Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Cloud Deployment Methods

Question: 150

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. Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Cloud Monitoring and Management

Question: 151

A security engineer recently discovered a vulnerability in the operating system of the company VMs. The operations team reviews the issue and decides all VMs need to be updated
from version 3.4.0 to 3.4.1. Which of the following best describes the type of update that will be applied?

A. Consistent

B. Major

C. Minor

D. Ephemeral

Answer: C

Explanation:

The update from version 3.4.0 to 3.4.1 is considered a minor update, typically involving small bug fixes or security patches that do not include major feature changes or improvements. Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Systems Management

Question: 152

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. Reference: CompTIA Cloud+ Study Guide (Exam CV0- 004) - Chapter on Cloud Data Management

Question: 153

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. Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Risk Management

Question: 154

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

A. Using CIS-hardened images

B. Using watermarked images

C. Using digitally signed images

D. Using images that have an application firewall

Answer: A

Explanation:

Question: 155

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?

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

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

O C. if [ VOL = describe_volume_size(getvolume(VM)) ! = 100]
resize_size(VOL) else
                echo "$vol is already larger than 100GB"

O 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. Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) - Chapter on Automation

Question: 156

Servers in the hot site are clustered with the main site.

A. Network traffic is balanced between the main site and hot site servers.

B. Ofline server backups are replicated hourly from the main site.

C. All servers are replicated from the main site in an online status.

D. Which of the following best describes a characteristic of a hot site?

Answer: C

Explanation:

When servers in a hot site are clustered with the main site, it indicates that all servers are replicated from the main site in an online status. This means that the hot site maintains a live, real-time copy of data and applications, ensuring immediate availability in the event of a failure at the main site.

Unlike options A and B, which describe load balancing and backup strategies respectively, clustering with a hot site as described in option C ensures that the hot site can take over with minimal downtime, maintaining business continuity.

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

Question: 157

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.

Question: 158

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.

Question: 159

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

A. Cloning

B. Clustering

C. Hardware passthrough

D. Stand-alone container

Answer: B

Explanation:

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

Question: 160

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. Reference: CompTIA Cloud+ Guide to Cloud Computing (ISBN: 978-1-64274-282-2)

Question: 161

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. Reference: CompTIA Cloud+ Guide to Cloud Computing (ISBN: 978-164274-282-2)

Question: 162

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. Reference: CompTIA Cloud+ Guide to Cloud Computing (ISBN: 978-1-64274-282-2)

Question: 163

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. Reference: CompTIA Cloud+ Guide to Cloud Computing (ISBN: 978-1-64274-282-2)

Question: 164

A group of cloud administrators frequently uses the same deployment template to recreate a cloudbased 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. Reference: CompTIA Cloud+ Guide to Cloud Computing (ISBN: 978-1-64274-282-2)

Question: 165

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

A. Relational databases

B. Time series databases

C. Graph databases

D. NoSQL databases

Answer: A

Explanation:

CRUD stands for Create, Read, Update, Delete, and it is most commonly used for interacting with relational databases. These operations form the basis of persistent storage manipulation in most applications that use a database to store data. Reference: CompTIA Cloud+ Guide to Cloud Computing (ISBN: 978-1-64274-282-2)

Question: 166

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. Reference: CompTIA Cloud+

Guide to Cloud Computing (ISBN: 978-1-64274-282-2)

Question: 167

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. Ful

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. Reference: CompTIA Cloud+ Guide to Cloud Computing (ISBN: 978-1-64274-282-2)

Question: 168

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. Reference: CompTIA Cloud+ Guide to Cloud Computing (ISBN: 978-1-64274-282-2)

Question: 169

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.

Question: 170

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.

Reference: CompTIA Cloud+ resources and cloud migration strategies

Question: 171

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.

Reference: CompTIA Cloud+ resources and vulnerability management processes

Question: 172

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_URL
bool RESPONSE_CODE
string VM
health checker (APP_URL, VM) {

if [http_probe (APP_URL) == 200] { echo RESPONSE_CODE } else{
stop (VM)
echo

B.

else{

echo

string APP_URL
float RESPONSE_CODE
string VM

health_checker (APP_URL, VM) {
if [http_probe (APP_URL) == 200] { stop (RESPONSE_CODE)
echo VM }

stop (VM)
RESPONSE CODE }

C.

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```
else{

echo

string APP_URL
int RESPONSE CODE
string VM

health checker (APP_URL, VM) {
if [ http_probe (APP_URL) == 200] { echo RESPONSE_CODE }

stop (VM)
RESPONSE_CODE }
```

D.

```
else{
echo

string APP_URL
int RESPONSE_CODE
string VM

health_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.

Reference: CompTIA Cloud+ resources and general scripting practices for cloud environments

Question: 173

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.

Reference: CompTIA Cloud+ resources and CDN functionality

Question: 174

A company just learned that the data in its object storage was accessed by an unauthorized party. Which of the following should the company have done to make the data unusable?

A. The company should have switched from object storage to file storage.

B. The company should have hashed the data.

C. The company should have changed the file access permissions.

D. The company should have encrypted the data at rest.

Answer: D

Explanation:

Encrypting the data at rest is a crucial security measure to make the data unusable to unauthorized parties. If the object storage data was accessed by an unauthorized party, having the data encrypted would ensure that the data remains confidential and inaccessible without the proper encryption keys, thus mitigating the impact of the breach.

Reference: CompTIA Cloud+ resources and data security practices

Question: 175

Which of the following storage resources provides higher availability and speed for currently used files?

A. Warm/HDD

B. Cold/SSD

C. Hot/SSD

D. Archive/HDD

Answer: C

Explanation:

Hot storage using Solid State Drives (SSD) is designed for data that needs to be accessed frequently and quickly. SSDs provide faster access times compared to HDDs, making them suitable for high- availability and speed-critical files, such as those currently in use or requiring rapid access.
Reference: CompTIA Cloud+ resources and storage tiering concepts

Question: 176

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.
Reference: CompTIA Cloud+ resources and data management strategies

Question: 177

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.
Reference: CompTIA Cloud+ resources and cloud service architectures

Question: 178

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. Reference: CompTIA Cloud+ resources and microservices architecture principles

Question: 179

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. Reference: CompTIA Cloud+ Certification Study Guide (Exam CV0-004) by Scott Wilson and Eric Vanderburg

Question: 180

The company's IDS has reported an anomaly. The cloud engineer remotely accesses the cloud instance, runs a command, and receives the following information:

```
UID   PID    PPID  CMD
                   sshd /usr/sbin/sshd -D [listener] 0 of 10-100 startups
0     987    1
0     915    915   sshd: su seceng
0     45078  987   sshd: seceng [priv]
1000  45418  45078 sshd: seceng @pts/0
1000  45419  45418 -bash
1000  45440  45419 ps -elf
0     505961       /usr/sbin/apache2      -k    start
65535 50597  50596 /usr/sbin/apache2      -k    start
0     50612  50597 /var/ww/command.py
```

Which of the following is the most likely root cause of this anomaly?

A. Privilege escalation

B. Leaked credentials

C. Cryptojacking

D. Defaced website

Answer: A

Explanation:

The output from the 'ps' command indicates there is a process running under the UID (User ID) of 0, which is the root user, and the command that was run is '/var/www/command.py'. Given that the normal Apache processes are running under their own UID (65535), this suggests that a command was executed with root privileges that typically should not have such high-level access. This is a strong indicator of privilege escalation, where an unauthorized user or process gains elevated access to resources that are normally protected from an application or user. Reference: CompTIA Cloud+ Certification Study Guide (Exam CV0-004) by Scott Wilson and Eric Vanderburg

Question: 181

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. Reference: CompTIA Cloud+ Certification Study Guide (Exam CV0-004) by Scott Wilson and Eric Vanderburg

Question: 182

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

A. Community

B. Public

C. Private

D. Hybrid

Answer: C

Explanation:

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

Question: 183

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. Reference: CompTIA Cloud+ Certification Study Guide (Exam CV0-004) by Scott Wilson and Eric Vanderburg

Question: 184

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. Reference: CompTIA Cloud+ Certification Study Guide (Exam CV0-004) by Scott Wilson and Eric Vanderburg

Question: 185

A cloud security analyst is investigating the impact of a recent cyberattack. The analyst is reviewing the following information:

Web server access log:
104.210.233.225 - - [21/10/2022:11:17: 40] "POST /uploadfile.html?f=myfile.php" 200 1638674
45.32.10.66 - - [21/10/2022:11:19:12] "GET /welcome.html" 200 5812
104.210.233.225 - - [21/10/2022:11:21:19] "GET / .. / .. / .. / .. /conf/server.xml HTTP/1.1" 200 74458
45.32.10.66 - - [21/10/22:11:22:32] "GET /admin.html HTTP/1.1" 200 9518

Web application firewall log:
"2022/10/21 11:17:33" "10.25.2.35" "104. 210.233.225" "userl" "File transfer completed successfully."
"2022/10/21 11:21:05" "10. 25.2. 35" "104. 210.233.225" "userl" "Accessed application page."
"2022/10/21 11:22:13" "10.25.2.35" "45. 32. 10. 66" "user2" "Accessing admin page. "

Which of the following has occurred?

A. The corporate administration page was defaced by the attacker.

B. A denial-of-service attack was successfully performed on the web server.

C. A new user was created on the web server by the attacker.

D. Sensitive information from the corporate web server was leaked.

Answer: D

Explanation:

The logs indicate that the IP address 104.210.233.225 made a GET request that appears to traverse directories (as indicated by the '/../../') to access 'server.xml', which is a configuration file for the server. This type of request is indicative of a directory traversal attack, which can lead to unauthorized access to sensitive files on the server. The successful 200 response code suggests that the file was accessed, implying that sensitive configuration data could

have been leaked. Reference: CompTIA Cloud+ Certification Study Guide (Exam CV0-004) by Scott Wilson and Eric Vanderburg

Question: 186

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 cloudnative features and services. This can address user demand and reduce maintenance costs by making the application more scalable, resilient, and manageable. Reference: CompTIA Cloud+ Certification Study Guide (Exam CV0-004) by Scott Wilson and Eric Vanderburg

Question: 187

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.
Reference: CompTIA Cloud+ Certification Study Guide (Exam CV0-004) by Scott Wilson and Eric Vanderburg

Question: 188

A developer at a small startup company deployed some code for a new feature to its public repository. A few days later, a data breach occurred. A security team investigated the incident and found that the database was hacked. Which of the following is the most likely cause of this breach?

A. Database core dump

B. Hard-coded credentials

C. Compromised deployment agent

D. Unpatched web servers

Answer: B

Explanation:

Hard-coded credentials within code, especially when deployed in a public repository, are a common security vulnerability. If credentials such as passwords or API keys are embedded in the code, anyone with access to the repository can potentially use them to gain unauthorized access to databases or other sensitive resources. This is a likely cause of the data breach in the scenario described.
Reference: CompTIA Security+ Guide to Network Security Fundamentals by Mark Ciampa.

Question: 189

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. Reference: CompTIA Network+ Certification Study Guide by Glen E. Clarke.

Question: 190

A cloud administrator wants to provision a host with two VMs. The VMs require the following:

	Host	VM1	VM2
NIC	IGbps	IGbps	IGbps
CPU	4	1	1
RAM	8	2	2
Storage (thin provisioned)	2TB	1.5TB	1.2TB
Storage utilization		22.5%	50%
Daily network traffic		1.2TB	200GB

After configuring the servers, the administrator notices that during certain hours of the day, the performance heavily degrades. Which of the following is the best explanation?

A. The host requires additional physical CPUs.

B. A higher number of processes occur at those times.

C. The RAM on each VM is insufficient.

D. The storage is overutilized.

Answer: C

Explanation:

Given the provided table, the VMs have been allocated 2GB of RAM each, which may be insufficient for their workload, especially during peak hours which could lead to performance degradation.
Insufficient RAM can cause the VMs to use swap space on disk, which is significantly slower and can lead to poor performance. Reference: CompTIA Cloud+ Certification Study Guide (Exam CV0-004) by Scott Wilson and Eric Vanderburg.

Question: 191

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. Reference: CompTIA Cloud Essentials+ Certification Study Guide (Exam CLO-002) by Scott Wilson.

Question: 192

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. Reference: Official PCI Security Standards Council Site.

Question: 193

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. Reference: CompTIA Cloud+ Certification Study Guide (Exam CV0-004) by Scott Wilson and Eric Vanderburg.

Question: 194

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

A. Four instances of 4vCPU, 8GB RAM, 80GB SSD

B. Four instances of 4vCPU, 8GB RAM, 80GB HDD

C. Two instances of 8vCPU, 16GB RAM, 80GB SSD

D. Two instances of 8vCPU, 16GB RAM, 80GB HDD

Answer: A

Explanation:

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

Question: 195

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

A. Bare-metal server

B. Managed container

C. Virtual machine

D. Serverless function

Answer: D

Explanation:

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

Question: 196

A company runs a discussion forum that caters to global users. The company's monitoring system reports that the home page suddenly is seeing elevated response times, even though internal monitoring has reported no issues or changes. Which of the following is the most likely cause of this issue?

A. Cryptojacking

B. Human error

C. DDoS

D. Phishing

Answer: C

Explanation:

Elevated response times without reported issues or changes internally could indicate a Distributed Denial of Service (DDoS) attack, where multiple systems flood the bandwidth or resources of a targeted system, usually one or more web servers. Reference: CompTIA Security+ Guide to Network Security Fundamentals by Mark Ciampa.

Question: 197

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. Reference: CompTIA Accessibility in IT Study Guide.

Question: 198

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

A. Using Terraform templates with environment variables

B. Using Grafana in each environment

C. Using the ELK stack in each environment

D. Using Jenkins agents in different environments

Answer: A

Explanation:

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

Question: 199

A cloud engineer wants to deploy a new application to the cloud and is writing the following script:

```
terraform { required_providers { cloud_providerl = {
                source = "hashicorp/cloud_providerl" version = "~>
                4.16"
        }
```

```
        required_version = ">= 1.2.0"
    }
    provider "cloud_providerl" { region = "us-west-2"

    resource "server_instance" "app_server" { ami = "ami-830c94e3"
        instance_type = "t2.micro" tags = {
        Name = "AppServerlnstance" }
```

Which of the following actions will this script perform?

A. Upload a new VM image.

B. Create a new cloud resource.

C. Build a local server.

D. Import a cloud module.

Answer: B

Explanation:

The script shown is written in Terraform, which is an infrastructure as code (IaC) tool used for building, changing, and versioning infrastructure safely and efficiently. This particular Terraform script specifies a required provider and its version, the Terraform version, sets the cloud provider's region, and then defines a resource for a server instance with a specific AMI ID and instance type. It also includes tags for the instance. The action this script will perform is to create a new cloud resource, specifically a server instance on the cloud provider's platform. Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) by Todd Montgomery and Stephen Olson

Question: 200

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. Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) by Todd Montgomery and Stephen Olson

Question: 201

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. Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) by Todd Montgomery and Stephen Olson

Question: 202

For compliance purposes, a cloud developer at an insurance company needs to save all customer policies for more than ten years. Which of the following options is the most costefficient tier to save the data in the cloud?

A. Archive

B. Hot

C. Cold

D. Warm

Answer: A

Explanation:

For compliance purposes, saving customer policies for more than ten years most cost-efficiently can be achieved by using the Archive storage tier. Archive or archival storage is designed for data that needs to be retained over the long term but accessed infrequently. It is generally the most costeffective storage tier for this type of data.

Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) by Todd Montgomery and Stephen Olson

Question: 203

Following a ransomware attack, the legal department at a company instructs the IT administrator to store the data from the affected virtual machines for a minimum of one year.

Which of the following is this an example of?

A. Recoverability

B. Retention

C. Encryption

D. Integrity

Answer: B

Explanation:

The instruction by the legal department to store data from the affected virtual machines for a minimum of one year is an example of data Retention. Retention policies are often driven by regulatory compliance requirements and dictate how long certain types of data must be kept before they can be securely disposed of. Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) by Todd Montgomery and Stephen Olson

Question: 204

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. Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) by Todd Montgomery and Stephen Olson

Question: 205

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. Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) by Todd Montgomery and Stephen Olson

Question: 206

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

A. Code documentation

B. Code control

C. Code repository

D. Code versioning

Answer: D

Explanation:

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

Question: 207

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	IIMEJLAZT

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. Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) by Todd Montgomery and Stephen Olson

Question: 208

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. Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) by Todd Montgomery and Stephen Olson

Question: 209

A systems administrator is configuring backups on a VM and needs the process to run as quickly as possible, reducing the bandwidth on the network during all times from Monday through Saturday. In the event of data corruption, the management team expects the mean time to recovery to be as low as possible. Which of the following backup methods can the administrator use to accomplish these goals?

A. Incremental backup daily to the cloud

B. Full backup on Sunday and incremental backups on all other days of the week

C. Differential backup daily to the cloud

D. Incremental backups during off-hours on Monday, Wednesday, and Friday

Answer: B

Explanation:

To achieve a quick backup process and reduce bandwidth use, the administrator should perform a Full backup on Sunday and incremental backups on all other days of the week. This method ensures that only the changes made since the last full backup are copied, reducing the amount of data that needs to be transferred each time, and thus the time and bandwidth required. Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) by Todd Montgomery and Stephen Olson

Question: 210

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. Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) by Todd Montgomery and Stephen Olson

Question: 211

A company serves customers globally from its website hosted in North Americ

a. A cloud engineer recently deployed new instances of the website in the Europe region. Which of the following is the most likely reason?

A. To simplify workflow

B. To enhance security

C. To reduce latency

D. To decrease cost

Answer: C

Explanation:

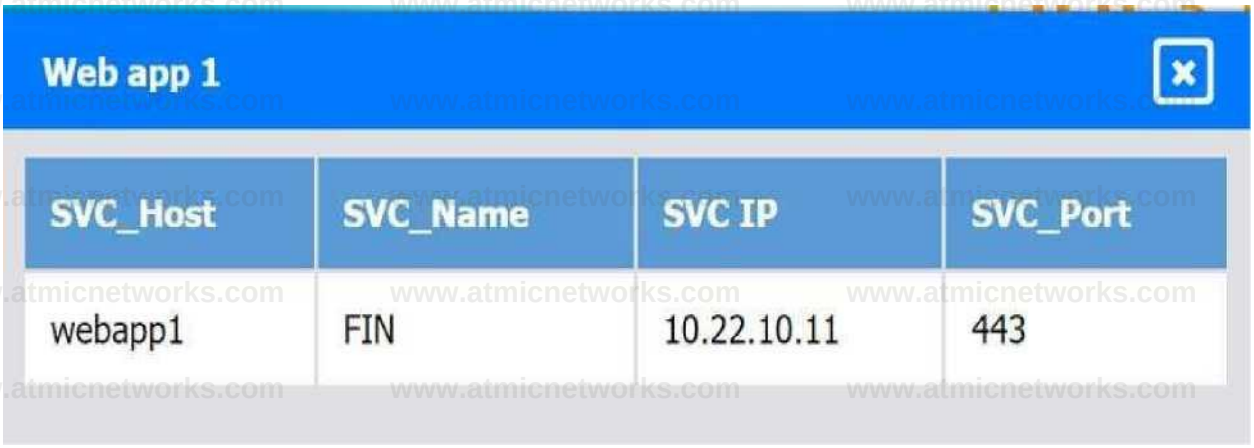
The most likely reason for deploying new instances of a website in the Europe region, in addition to the ones hosted in North America, is to reduce latency for users located in Europe. By having the website's resources closer to the end-users, the data has a shorter distance to travel, resulting in faster load times and better performance.
Reference: CompTIA Cloud+ Study Guide (Exam CV0-004) by Todd Montgomery and Stephen Olson

Question: 212

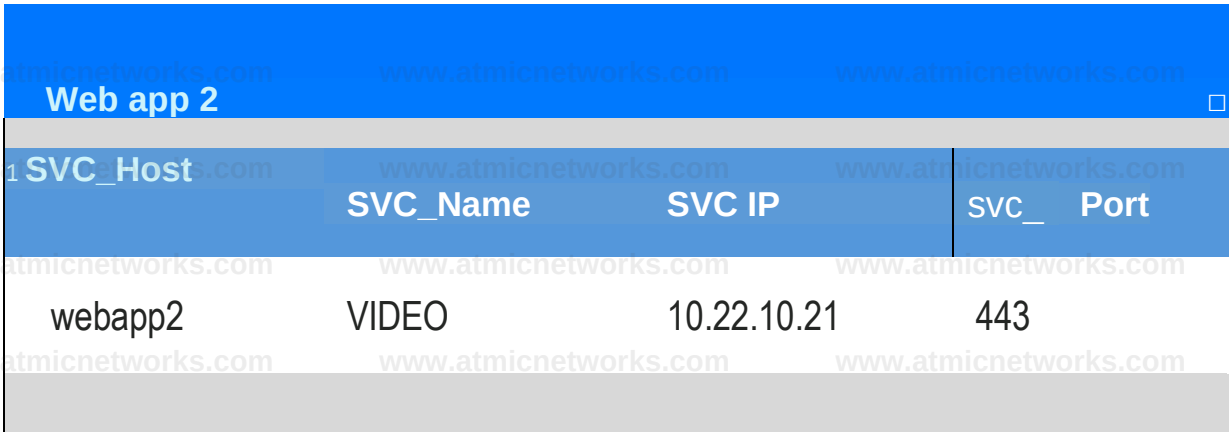
A company hosts various containerized applications for business uses. A client reports that one of its routine business applications fails to load the web-based login prompt hosted in the company cloud.

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

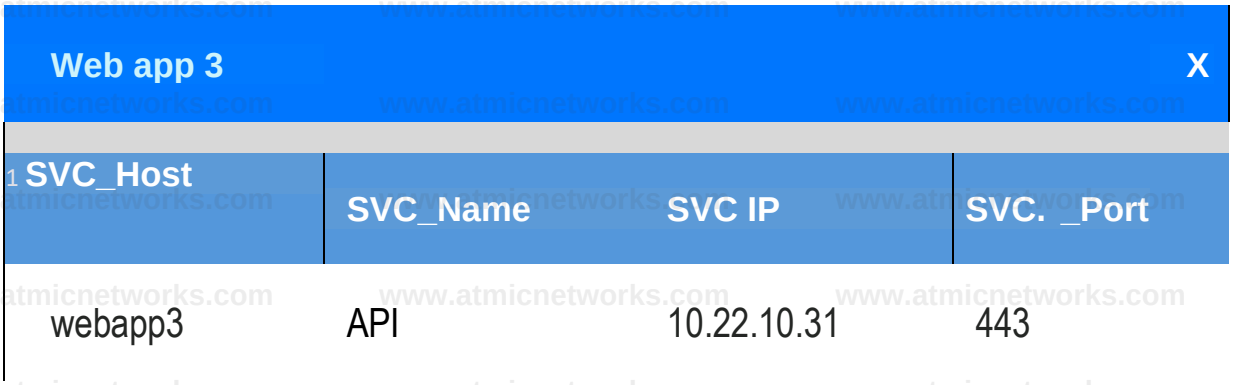
Web app 1



Web app 2



Web app 3



Web app 4

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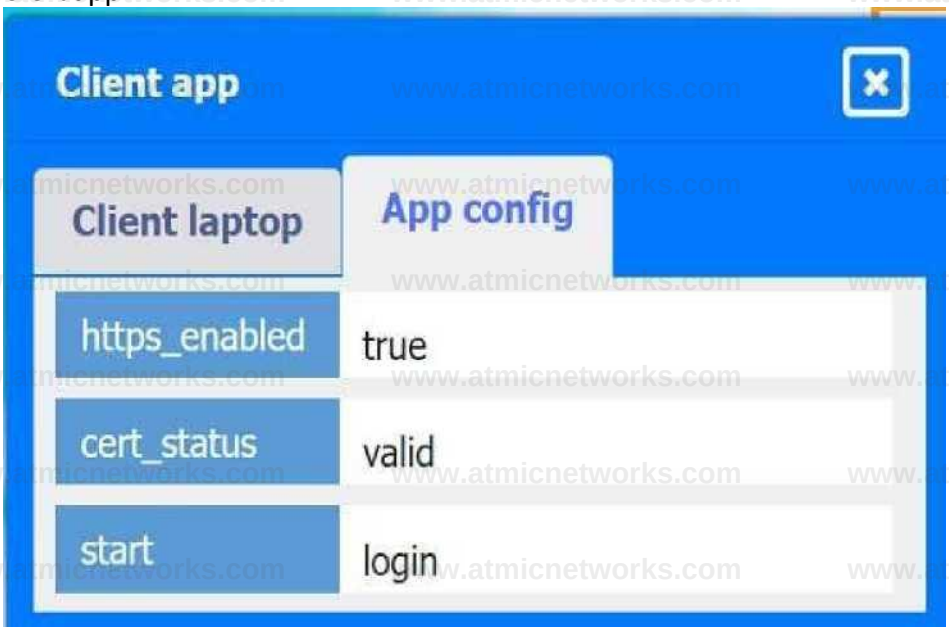
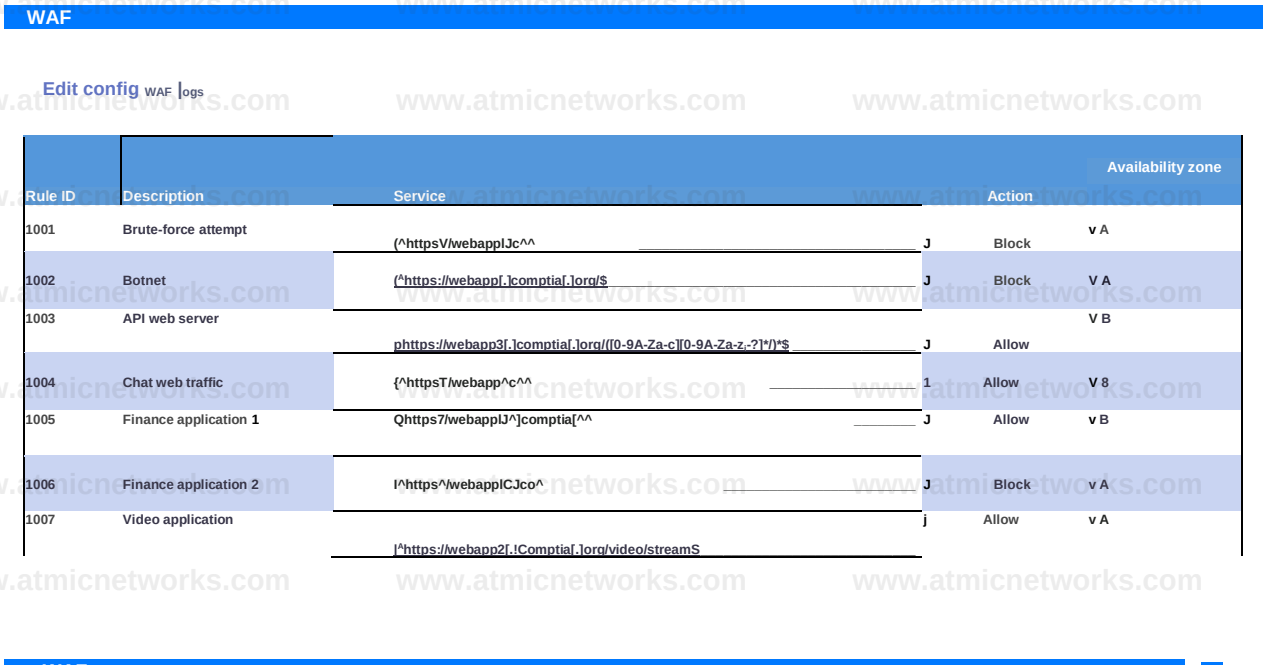
Web app 4 I X

SVC_Host	SVC_Name	SVC IP	SVC_Port
webapp4	CHAT	10.22.10.41	443

Client app





Answer: Check the Explanation for the complete Solution.

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.

Reference:

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.

Question: 213

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).

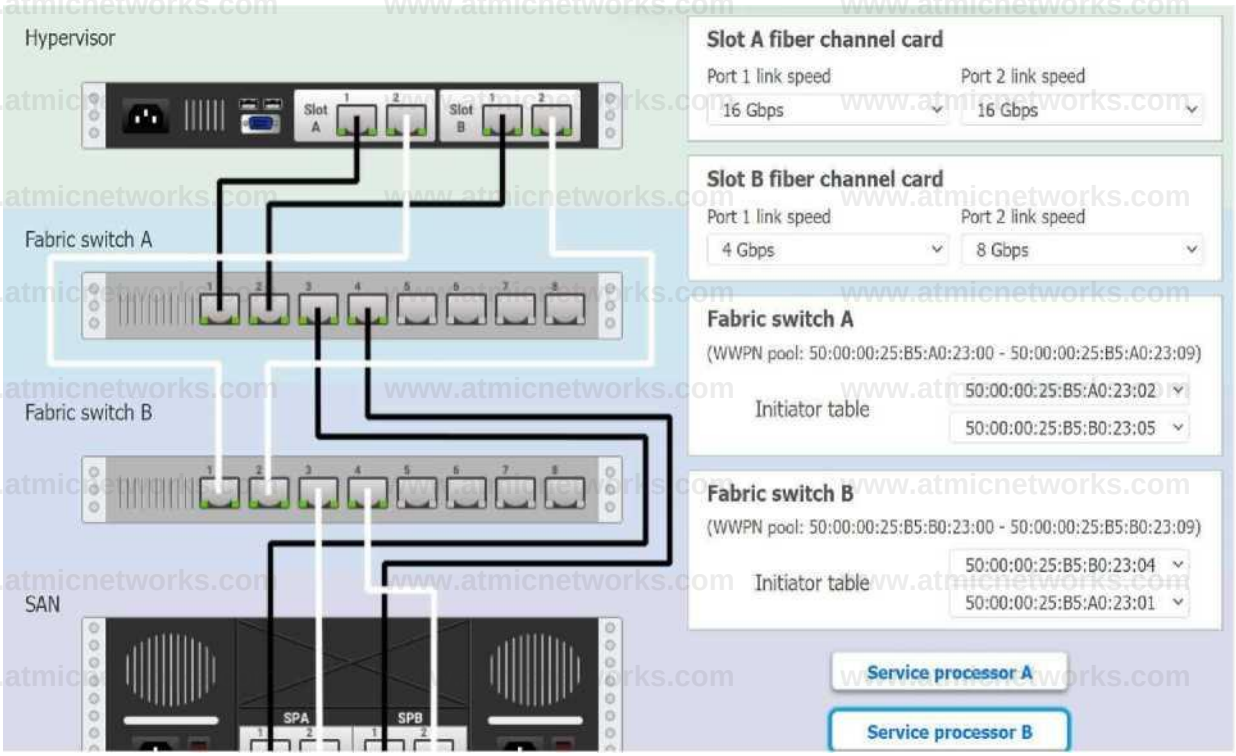
The SLA specifies:

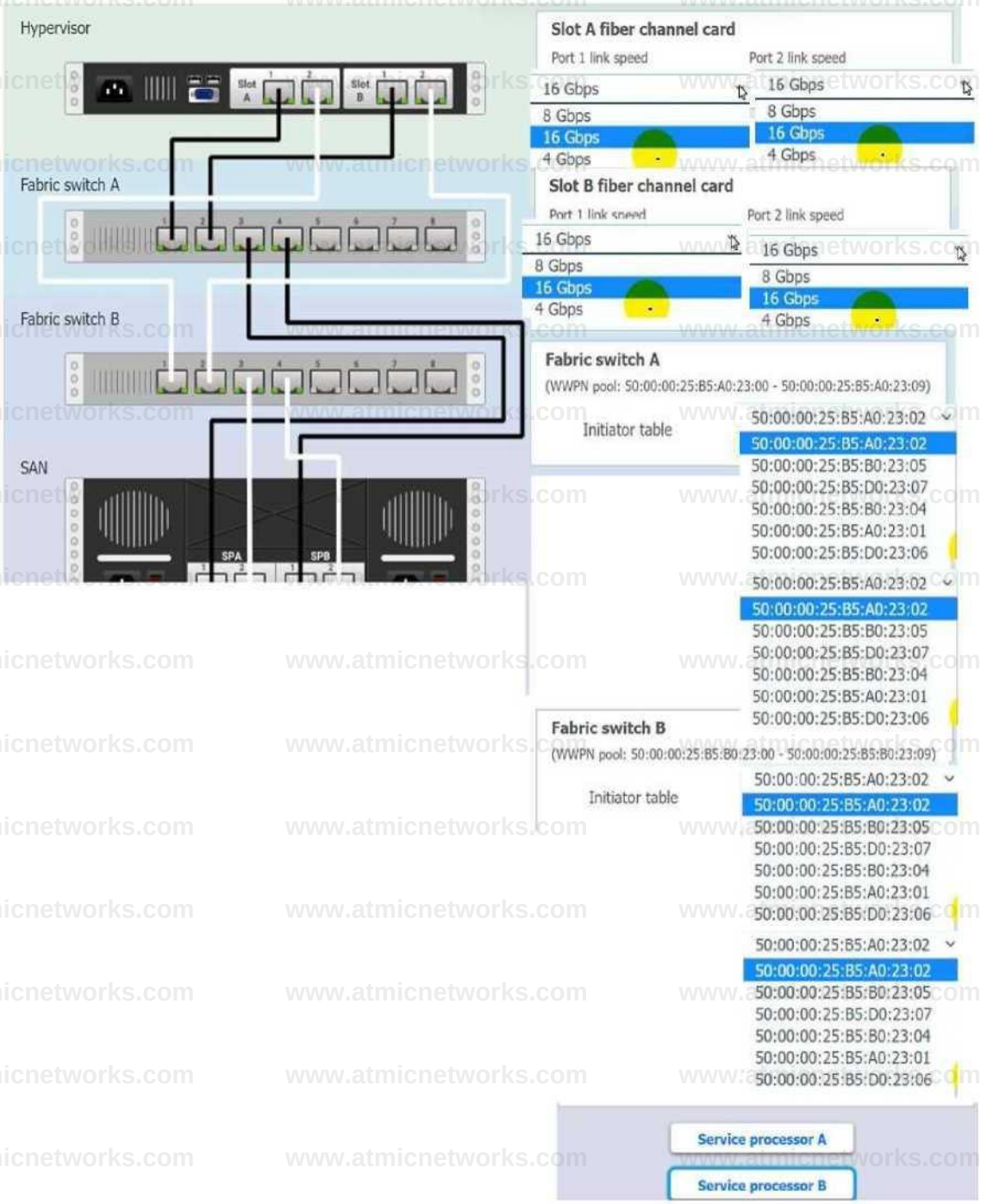
. Each SFP on the hypervisor host must be set to the maximum link speed
allowed by the SAN array. . All SAN array disk groups must be configured in a RAID 5.

. 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
Slot B
Fabric switch A
Fabric switch B
SAN
SPA
SPB
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 I X

"no initiators currently logged in"

SP-A module 0 Port 0 8 Gbps

SP-A module 0 Port 1 8 Gbps

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Disk groups	1	
RAID level	5	

Service processor B details | X

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

"50:00:00:25:65:60:23:04 - logged in"

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

Disk groups	1	
RAID level	5	

Answer: See the explanation for complete solution.

Explanation:

Based on the SLA requirements and the information provided in the diagram:

For the Hypervisor:

Slot A fiber channel card:

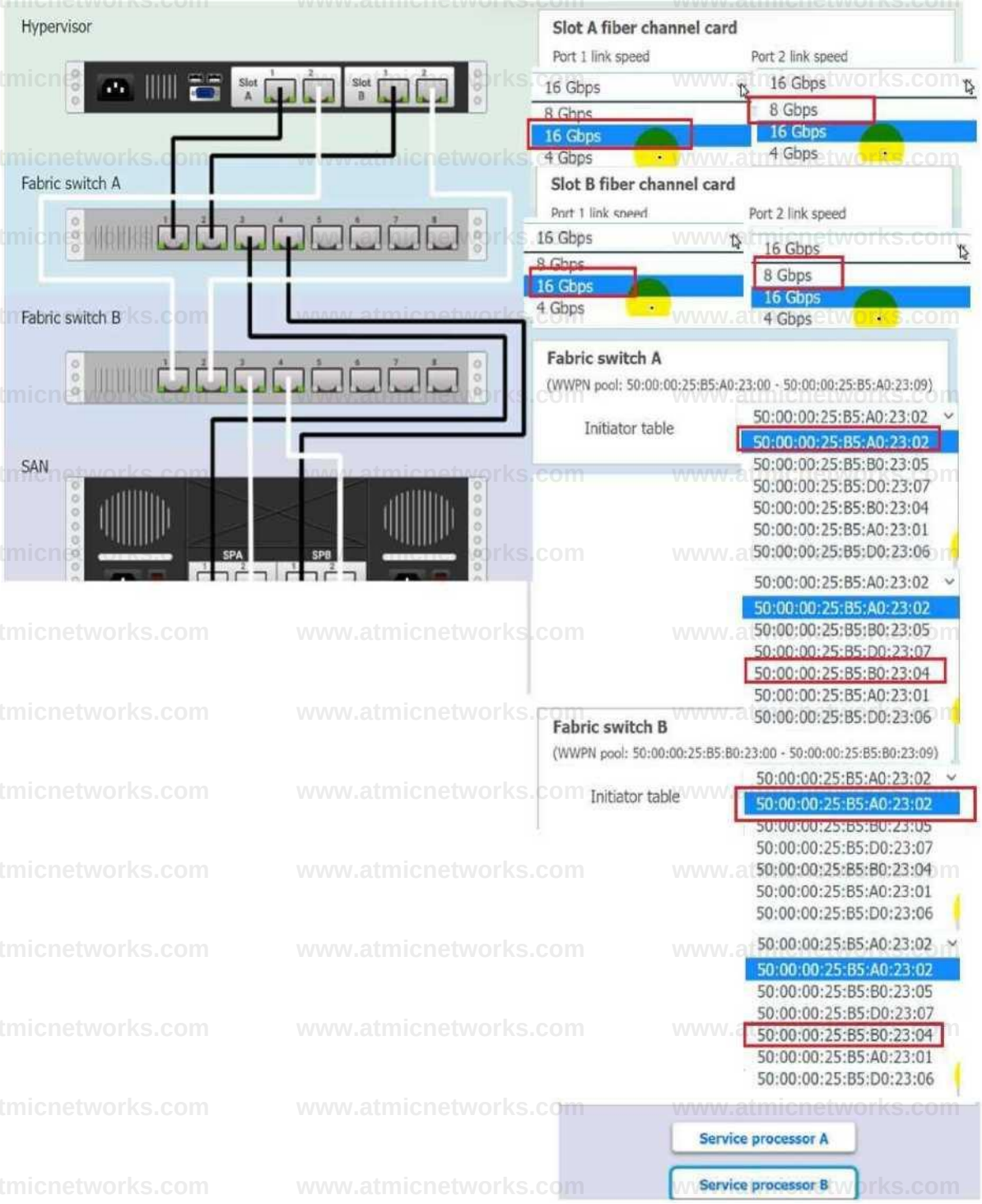
Port 1 link speed should be set to 16 Gbps since it's connected to Fabric switch A which supports 16 Gbps.

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.



Question: 214

A company's VMs that are created using the noncritical application tag are automatically shut down at 5:00 p.m. using a cronjob. Which of the following actions would allow a cloud engineer to stop all unresponsive instances with the least effort in case the automation fails?

A. Using the cloud audit logs for tagging and stopping events
B. Using the cloud provider web console to check and stop the instances
C. Using the cloud provider command line to stop the Instances based on tags

D. Using a Bash script to shut down all instances

Answer: C

Question: 215

A cloud engineer is concerned about command-and-control (C2) communication out of a cloud network over HTTPS. Which of the following should the cloud engineer implement to most efficiently identify the type of communication?

A. Inline IPS
B. Cloud flow logs
C. Hourly cron listing connections
D. Traffic mirroring

Answer: B

Question: 216

Which of the transfer when comparing a multiregional to a single-region cloud platform design?

A. Storage
B. Power and cooling
C. Network
D. Compliance and regulation

Answer: C

Question: 217

A cloud administrator is working on the deployment of an e-commerce website. The administrator evaluates the scaling methods to be implemented when seasonal or flash sales are launched. Which of the following scaling approaches should the administrator use to best manage this scenario?

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

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Answer: B

Question: 218

A company has been using a CRM application that was developed in-house and is hosted on local servers. Due to internal changes, the company wants to migrate the application to the cloud without having to manage the infrastructure. Which of the following services should the company consider?

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

Answer: B

Question: 219

A cloud developer receives a security vulnerability scan report and needs to analyze and record the true positives. Which of the following vulnerability management steps is this an example of?

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

Answer: B

Question: 220

Which of the following models will best reduce the cost of running short-term, non-critical workloads?

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

Answer: B

Question: 221

Which of the following types of releases best describes the update made to a code repository production release when it changes from version 1.0 to version 1.1?

A. Alpha
B. Beta

C. Minor

D. Major

Answer: C

Explanation:

Comprehensive and Detailed Step-by-Step

Alpha (A): Refers to pre-release software that is still in the early testing phase.

Beta (B): Indicates pre-release software that is feature-complete but requires testing.

Minor (C): Updates from version 1.0 to 1.1 signify incremental improvements or minor feature additions without significant changes.

Major (D): Involves substantial changes, often indicated by a change in the primary version number (e.g., 1.x to 2.x).

Reference:

CompTIA Cloud+ CV0-004 Study Guide, Objective 1.4: Deploy and manage cloud-based applications.

Question: 222

An administrator configures three subnets to the corporate network. All servers should communicate with the main corporate network and access the internet. The administrator creates the following configurations:

Network	Subnet
Corporate Network	192.168.0.0/24
Network 2	192.168.10.0/24
Network 3	192.168.11.0/24
Network 4	192.168.12.0/24

Routing Table:

Source	Destination
192.168.10.0/24	192.168.0.0/24
192.168.11.0/24	192.168.0.0/24
192.168.12.0/24	192.168.1.0/24
192.168.13.0/24	192.168.1.0/24

After configuring the networks, the administrator recognizes an issue with the configuration. Which of the following can the administrator change in one step to accomplish the goal?

A. Remove source 192.168.12.0/24 and destination 192.168.1.0/24 from the routing table.

B. Replace destination 192.168.1.0/24 with destination 192.168.0.0/24.

C. Add source 192.168.12.0/24 and destination 192.168.0.0/24 to the routing table.

D. Reconfigure Network 4 to 192.168.13.0/24.

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Answer: B

Explanation:

A . Remove 192.168.12.0/24 and 192.168.1.0/24: This would cause connectivity issues for Network 4.

B . Replace 192.168.1.0/24 with 192.168.0.0/24: Corrects the incorrect destination for Network 4, aligning it with the corporate network subnet.

C . Add 192.168.12.0/24 and 192.168.0.0/24: Duplicates an existing configuration and doesn't solve the issue.

D . Reconfigure Network 4 to 192.168.13.0/24: Alters the network unnecessarily and doesn't resolve the destination routing issue.

Reference:

CompTIA Cloud+ CV0-004 Study Guide, Objective 2.2: Configure routing tables to ensure proper network communication.

Question: 223

A company has ten cloud engineers working on different manual cloud deployments. In the past, engineers have had difficulty keeping deployments consistent. Which of the following is the best method to address this issue?

A. Deployment documentation
B. Service logging
C. Configuration as code
D. Change ticketing

Answer: C

Explanation:

Comprehensive and Detailed Step-by-Step

A . Deployment documentation: Helpful but does not enforce consistency or automation.

B . Service logging: Useful for monitoring but unrelated to deployment consistency.

C . Configuration as code: Automates and standardizes deployments, ensuring consistency regardless of the engineer performing the task.

D . Change ticketing: Tracks changes but doesn’t enforce consistency or standardization.

Reference:

CompTIA Cloud+ CV0-004 Study Guide, Objective 2.4: Automate infrastructure deployments using Infrastructure as Code (IaC).

Question: 224

A developer is sending requests to a SaaS application. The developer becomes unable to send more requests after sending a number of them, but other developers can still send requests. Which of the following is most likely causing the issue?

A. Partial outage
B. API throttling

C. Rate limiting
D. Service quota

Answer: C

Explanation:

A . Partial outage: Would affect multiple developers, not just one.
B . API throttling: Temporarily limits requests but doesn't block them entirely.
C . Rate limiting: Prevents excessive requests from a single user or system, explaining why the developer was blocked after reaching a certain threshold.
D . Service quota: Typically applies to overall service usage rather than individual user requests. Reference: CompTIA Cloud+ CV0-004 Study Guide, Objective 2.6: Optimize resource usage and application access controls.

Question: 225

A write-intensive workload is having frequent performance issues. The workload is running on pay- as-you-go VMs. These VMs use SSDs and have appropriate CPU and RAM sizes. The workload writes millions of small files and has a one-year retention requirement. Which of the following actions should be taken?

A. Use provisioned IOPS volumes.
B. Increase the VM size.
C. Switch to reserved VMs.
D. Change to ephemeral storage.

Answer: A

Explanation:
Comprehensive and Detailed Step-by-Step
A . Use provisioned IOPS volumes: Ideal for write-intensive workloads as they provide guaranteed performance by provisioning a specific number of IOPS.
B . Increase the VM size: CPU or RAM upgrades won't significantly benefit a storage-bound workload.
C . Switch to reserved VMs: Cost-effective but doesn't address performance issues.
D . Change to ephemeral storage: Temporary storage is not suitable for workloads requiring a one- year retention policy.
Reference:
CompTIA Cloud+ CV0-004 Study Guide, Objective 3.2: Select appropriate storage types for specific workloads.

Question: 226

A company 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:

Comprehensive and Detailed Step-by-Step

A . Event-based scaling does not scale down resources: Event-based scaling can scale both up and down depending on triggers.

B . Event-based scaling should not be triggered at the 2,000-user frequency: The frequency is a design choice but doesn't explain the behavior.

C . Event-based scaling should not track user subscriptions: Tracking users isn't inherently wrong, but it should align with resource load metrics.

D . Event-based scaling does not take resource load into account: Event-based scaling relies on predefined triggers (e.g., user count) and doesn't dynamically assess resource utilization, leading to inefficiencies.

Reference:

CompTIA Cloud+ CV0-004 Study Guide, Objective 3.5: Implement scalable solutions in cloud environments.

Question: 227

A cloud engineer is receiving multiple alerts from the infrastructure monitoring agent. The alerts state that all the VMs in the public subnet are at 100% CPU utilization. However, when the engineer checks the network utilization of the VMs, the network throughput is at normal levels. Which of the following is the most likely cause of this issue?

A. Ransomware
B. Cryptojacking
C. DDoS
D. Zombie instances

Answer: B

Explanation:

A . Ransomware: Encrypts data to demand payment but doesn't typically result in sustained high CPU utilization.

B . Cryptojacking: Involves unauthorized use of VMs to mine cryptocurrency, leading to 100% CPU usage without high network activity.

C . DDoS: Causes high network throughput and latency, which are not present in this scenario.

D . Zombie instances: Refers to unused VMs consuming resources unnecessarily but doesn't explain high CPU utilization.

Reference:

CompTIA Cloud+ CV0-004 Study Guide, Objective 4.5: Identify and mitigate security incidents in cloud environments.

Question: 228

A cloud service provider just launched a new serverless service that is compliant with all security regulations. A company deployed its code using the service, and the company's application was hacked due to leaked credentials. Which of the following is responsible?

A. Customer
B. Cloud service provider
C. Hacker
D. Code repository

Answer: A

Explanation:

Comprehensive and Detailed Step-by-Step

A . Customer: Under the shared responsibility model, customers are responsible for securing their code and credentials in cloud environments.

B . Cloud service provider: Responsible for securing the underlying infrastructure, not customer- deployed applications or credentials.

C. Hacker: Exploited the breach but isn't directly responsible for security lapses.

D . Code repository: Doesn't inherently cause the issue unless mismanaged by the customer.

Reference:

CompTIA Cloud+ CV0-004 Study Guide, Objective 4.2: Understand the shared responsibility model in cloud security.

Question: 229

Participant attendance has been poor at the last few weekly meetings. The project manager wants to validate who the participants should be, how often the meetings should occur, and on which day and at what time the meeting should be held. Which of the following is the best place to validate this information?

A. Project communication plan
B. Project management plan
C. Project business case
D. Project schedule

Answer: A

Explanation:

The communication plan defines the meeting cadence, frequency, participants, formats, and methods of communication. If participation is low, the project manager refers to this plan for validation and adjustment. This is part of governance and compliance to ensure the right stakeholders are engaged appropriately.

Reference: CompTIA Project+ PK0-005 Study Guide – Communications Management; CompTIA Cloud+ CV0-004 Governance & Compliance objectives.

Question: 230

A software engineer notices that the newest update to the reporting software includes many new features that were not defined in the requirements document. Which of the following steps should the engineer take next?

A. Seek approval before continuing
B. Edit the requirements document
C. Disregard the update
D. Notify the users of the new features

Answer: A

Explanation:

When scope changes occur, proper change management is critical. The engineer must submit the change for formal approval before moving forward. Skipping approval would violate governance processes and may introduce compliance or contractual risks.

Reference: CompTIA Project+ PK0-005 – Change Control Process; CompTIA Cloud+ CV0-004 Governance & Risk objectives.

Question: 231

Which of the following is part of software change control?

A. Rollback plans
B. Maintenance windows
C. Validation checks
D. Requirements definition

Answer: A

Explanation:

A key element of change control is having a rollback plan, which allows recovery to a previous stable state if the change causes instability. This is part of operational support to maintain service availability and minimize downtime during updates.

Reference: CompTIA Project+ PK0-005 – Change Management; CompTIA Cloud+ CV0-004 Operations and Support objectives.

Question: 232

Which of the following is an intended outcome of a stand-up meeting?

A. To identify team members for next tasks
B. To identify future tasks
C. To identify stakeholders for next tasks
D. To identify blocking tasks

Answer: D

Explanation:

Daily stand-ups focus on progress and impediments. Identifying blocking tasks helps the team resolve issues quickly to maintain productivity and keep operations flowing. This aligns with operational best practices in both agile and cloud environments.
Reference: CompTIA Project+ PK0-005 – Agile Practices; CompTIA Cloud+ CV0-004 Operations and Support objectives.

Question: 233

A highly scored negative risk causes a risk trigger, but the issue has not started yet. Which of the following is the next step the project team should take?

A. Execute the contingency plan
B. Perform a work-around
C. Escalate to senior management
D. Assign a risk owner

Answer: A

Explanation:

When a risk trigger is detected, the risk hasn't yet turned into an issue, but the conditions indicate it may happen. At this stage, the project team should execute the contingency plan that was predeveloped during risk planning. Assigning a risk owner happens earlier in the planning stage, and work-arounds are used only for unplanned risks. Escalation is only needed if the contingency cannot address the risk.
Reference: CompTIA Project+ PK0-005 – Risk Response Planning; CompTIA Cloud+ CV0-004 Governance, Risk & Compliance domain.

Question: 234

Which of the following is the focus of DevSecOps?

A. Securing, testing, and maintaining new software
B. Developing, testing, and maintaining software
C. Developing, maintaining, and securing software
D. Developing, securing, and testing software

Answer: D

Explanation:

DevSecOps integrates security controls early in the development lifecycle. Its focus is to develop, secure, and test continuously, ensuring that vulnerabilities are identified and addressed before deployment. Security is not bolted on later but woven into development and testing workflows. Reference: CompTIA Project+ PK0-005 – DevOps/DevSecOps; CompTIA Cloud+ CV0-004 Cloud Security domain.

Question: 235

Which of the following would help a project manager identify that project goals have been reached?

A. Audit report
B. Key performance indicators
C. Backlog
D. Lessons learned

Answer: B

Explanation:

KPIs (Key Performance Indicators) are measurable values tied to project goals. If KPIs are being met, the PM can confirm that the project outcomes align with objectives. Audit reports verify compliance, while lessons learned capture knowledge at project closure.
Reference: CompTIA Project+ PK0-005 – Performance Measurement; CompTIA Cloud+ CV0-004 Operations and Support domain.

Question: 236

A project team has been assigned to improve the customer service of a retail company. The team has conducted a thorough analysis of the existing process, determined areas of improvement, and identified the desired outcomes of the project. Which of the following best describes this analysis?

A. Process improvement
B. Business objectives
C. Current state vs. future state

D. Project success criteria

Answer: C

Explanation:

The analysis described is a current state vs. future state comparison. This identifies where the business is today, where it needs to go, and the gaps that must be bridged. This type of assessment underpins cloud adoption and architecture design, where the existing infrastructure/process is mapped against the target solution.

Reference: CompTIA Project+ PK0-005 – Business Process Analysis; CompTIA Cloud+ CV0-004 Cloud Architecture & Design domain.

Question: 237

During project initiation, a project manager needs to identify goals and deliverables that should be completed by the end of the project and also meet certain cost and time factors. Which of the following would best align with these needs?

A. Work breakdown structure
B. Change log
C. Project success criteria
D. Milestone chart

Answer: C

Explanation:

Project success criteria are the standards used to evaluate whether a project has met its goals within cost, time, and quality boundaries. These are defined early in initiation and form part of governance to ensure alignment with business value. WBS and milestones come later during planning and scheduling.

Reference: CompTIA Project+ PK0-005 – Initiating & Success Criteria; CompTIA Cloud+ CV0-004 Governance, Risk & Compliance domain.

Question: 238

During a project kickoff meeting, the project manager wants to set expectations for all of the team members. Which of the following actions should the project manager take to accomplish this goal?

A. Assign tasks and responsibilities to the team members
B. Provide an overview of the project objectives and timeline
C. Develop a project communication plan
D. Set a meeting cadence for the rest of the project

Answer: B

Explanation:

The kickoff meeting is held at the beginning of a project to set direction and expectations. The most important activity is to review the project objectives and overall timeline so everyone understands the project's scope and goals. Detailed assignments and communication planning are handled afterward in the execution and planning phases.

Reference: CompTIA Project+ PK0-005 – Project Kickoff & Initiation; CompTIA Cloud+ CV0-004 Governance & Compliance domain.

Question: 239

A project stakeholder has asked the project manager to provide the performance data of a project. Which of the following should the project manager send to the stakeholder?

A. Issue log
B. Dashboard
C. WBS
D. Milestone chart

Answer: B

Explanation:

A dashboard provides visual, real-time performance data such as KPIs, budget usage, and progress toward deliverables. This helps stakeholders quickly interpret project health. Milestones only show schedule checkpoints, and issue logs track problems, not overall performance.

Reference: CompTIA Project+ PK0-005 – Reporting Tools & Stakeholder Communication; CompTIA Cloud+ CV0-004 Operations & Support domain.

Question: 240

The project manager must create a project charter. Which of the following should be included in the charter?

A. Project schedule
B. Resource allocation
C. Risk plan
D. Stakeholder identification

Answer: D

Explanation:

The project charter is a high-level authorization document that outlines the purpose, objectives, and identifies key stakeholders. It does not contain detailed schedules, risk management plans, or resource allocation — those come later in the planning process.

Reference: CompTIA Project+ PK0-005 – Project Initiation & Charter Development; CompTIA Cloud+ CV0-004 Governance & Compliance domain.

Question: 241

Which of the following best describes a program in the context of project management?

A. It is a group of unrelated projects within an organization
B. It is used to represent the daily activities of multiple projects
C. It is a consolidation of related projects with a common goal
D. It provides the definition of a project workload

Answer: C

Explanation:

A program is a group of related projects managed in a coordinated way to achieve benefits not available if managed separately. This is different from a portfolio (broader grouping, not necessarily related) or daily activities (operational work).

Reference: CompTIA Project+ PK0-005 – Program vs. Project vs. Portfolio; CompTIA Cloud+ CV0-004 Cloud Architecture & Design domain.

Question: 242

A project team is deciding how to break up a large project into smaller components so the project can be delivered without increasing the duration of the iteration cycles. Which of the following describes the grouping of the smaller components?

A. An issue
B. A goal
C. A backlog item
D. An epic

Answer: D

Explanation:

In agile methodology, an epic is a large user story or body of work that can be broken down into smaller backlog items deliverable within iteration cycles. This enables large projects to be incrementally deployed while maintaining predictable iteration lengths.

Reference: CompTIA Project+ PK0-005 – Agile Planning & Work Breakdown; CompTIA Cloud+ CV0- 004 Cloud Deployment domain.

Question: 243

A retail store is rolling out a new point-of-sale solution to several locations where the staff members normally use cash registers. Which of the following activities will best assist staff members with integrating this new solution? (Select two).

A. Documentation
B. Team collaboration
C. Gap analysis
D. Training sessions
E. Touch points
F. Progress monitoring

Answer: A, D

Explanation:

For successful adoption of new systems, user documentation and training sessions are essential. Documentation provides reference material, while training equips staff with hands-on knowledge for daily operations. Gap analysis and monitoring are planning and control tasks but do not directly support staff integration.

Reference: CompTIA Project+ PK0-005 – Change Management & Training; CompTIA Cloud+ CV0-004 Operations & Support domain.

Question: 244

A project manager is assigned to a project that has contracted with vendors. Which of the following actions should the project manager most frequently take? (Select two).

A. Update the issue log
B. Create a project charter
C. Validate the status report
D. Monitor performance
E. Approve deliverables
F. Baseline the project schedule

Answer: C, D

Explanation:

When managing vendor contracts, the PM must validate vendor status reports to confirm progress and monitor vendor performance against agreed service levels. Approving deliverables occurs less frequently, and creating charters/baselining schedules are initiation tasks, not recurring vendor management tasks.

Reference: CompTIA Project+ PK0-005 – Procurement & Vendor Management; CompTIA Cloud+ CV0-004 Governance, Risk & Compliance domain.

Question: 245

A project manager is reviewing quality planning techniques. Which of the following involves comparing results of similar activities?

A. Performing a cost-benefit analysis
B. Defining metrics

C. Benchmarking
D. Brainstorming

Answer: C

Explanation:

Benchmarking is a quality technique that compares results, processes, or best practices from similar activities or organizations. It helps set realistic performance standards and identify improvement opportunities. Unlike cost-benefit analysis (financial), benchmarking focuses on performance comparison.

Reference: CompTIA Project+ PK0-005 – Quality Planning Techniques; CompTIA Cloud+ CV0-004 Operations & Support domain.

Question: 246

A project manager must determine how ideas from the organization and results from the review committee should move through the enterprise for a new project. Which of the following does the project manager need to do?

A. Establish communication channels
B. Plan a kickoff meeting
C. Develop a responsibility assignment matrix
D. Identify the stakeholders

Answer: A

Explanation:

The correct step is to establish communication channels that ensure proper flow of information from idea origination through review and approval. Kickoff meetings occur later, while RACI matrices and stakeholder identification are planning tools — not communication flow structures.

Reference: CompTIA Project+ PK0-005 – Communication Planning; CompTIA Cloud+ CV0-004 Governance, Risk & Compliance domain.

Question: 247

Which of the following best describes a benefit of the CI/CD process?

A. Software delivery is sped up without compromising quality
B. Incremental changes are done at the end of the project
C. The software is integrated with other projects easily
D. Updates are released every sprint

Answer: A

Explanation:

CI/CD (Continuous Integration/Continuous Deployment) allows faster and more reliable delivery by automating builds, tests, and deployments. It ensures rapid delivery without compromising quality. Updates are frequent but not necessarily tied to sprint cycles.

Reference: CompTIA Project+ PK0-005 – CI/CD Benefits; CompTIA Cloud+ CV0-004 Cloud Deployment domain.

Question: 248

A project team is reviewing the project plan and related documents and identifies tasks that could be spread into smaller deliverables. Which of the following documents should the team edit first?

A. Risk assessment
B. Preliminary scope statement
C. Work breakdown structure
D. Milestone chart

Answer: C

Explanation:

The Work Breakdown Structure (WBS) is the hierarchical decomposition of deliverables into smaller, manageable work packages. If tasks need to be split into smaller deliverables, the WBS is the document to update first. Risk assessments and milestone charts serve other purposes.

Reference: CompTIA Project+ PK0-005 – WBS & Scope Management; CompTIA Cloud+ CV0-004 Cloud Architecture & Design domain.

Question: 249

Which of the following situations would require a project manager to revise the communication plan during a project's execution?

A. A change is approved that impacts the project schedule and budget
B. The test results are not as expected
C. The team is unclear which meetings they should attend
D. A stakeholder requests some changes to the scope

Answer: C

Explanation:

If team members are confused about which meetings to attend, this indicates a flaw in the communication plan. Revising the plan ensures clear expectations on who participates in which communication events. Scope or schedule changes don't automatically require altering the communication plan.

Reference: CompTIA Project+ PK0-005 – Communication Planning & Updates; CompTIA Cloud+ CV0- 004 Governance, Risk & Compliance domain.

Question: 250

Project team members enter their time sheets into a system that also displays incurred project cost. Which of the following systems can perform this task?

A. EDRMS

B. CRM

C. CMS

D. ERP

Answer: D

Explanation:

An ERP (Enterprise Resource Planning) system integrates financial management, HR, and operations. In this case, ERP can handle time tracking and cost reporting together. EDRMS manages documents, CRM handles customer relationships, and CMS manages content—not project costs.

Reference: CompTIA Project+ PK0-005 – Enterprise Systems; CompTIA Cloud+ CV0-004 Cloud Storage & Data Management domain.

Question: 251

A project manager is taking notes along with gathering feedback about a prior project in order to consider known issues with a project enhancement. Which of the following best describes the plan that the project team is working on?

A. A plan for capturing issues and conflicts in a project's knowledge base

B. A plan for avoiding potential issues that may arise during project execution

C. A plan for documenting the outcomes of the project

D. A plan for addressing and resolving identified issues once the project has been completed

Answer: B

Explanation:

The team is leveraging lessons learned to create a preventive plan for avoiding issues in the upcoming project enhancement. This falls under risk management and compliance, ensuring previous failures do not repeat.

Reference: CompTIA Project+ PK0-005 – Lessons Learned & Risk Avoidance; CompTIA Cloud+ CV0- 004 Governance, Risk & Compliance domain.

Question: 252

A project sponsor has asked for a log listing all the bugs identified within a specific project. Which of the following tools should the project manager provide to the sponsor?

A. Change log
B. Issue log
C. Risk register
D. Defect log

Answer: D

Explanation:

A defect log specifically tracks bugs, errors, or defects discovered in the product. It includes descriptions, severity, and resolution. Issue logs capture broader non-technical challenges, while change logs and risk registers serve different purposes.

Reference: CompTIA Project+ PK0-005 – Logs & Registers; CompTIA Cloud+ CV0-004 Operations & Support domain.

Question: 253

During a phase review, two stakeholders discuss the approval of a deliverable. The project manager convinces the stakeholders to agree on a common solution. Which of the following best describes what the project manager did to gain approval from both stakeholders?

A. Force
B. Smooth

C. Compromise
D. Avoid

Answer: C

Explanation:

By negotiating a middle ground, the PM used compromise as a conflict resolution technique. Force and avoid do not build consensus, while smoothing minimizes issues but does not resolve them. Compromise achieves agreement acceptable to both sides.

Reference: CompTIA Project+ PK0-005 – Conflict Resolution; CompTIA Cloud+ CV0-004 Governance, Risk & Compliance domain.

Question: 254

The PMO wants to streamline the routing and approval of project activities to provide up-to-date visibility of the status. Which of the following collaboration tools would be most appropriate to use?

A. Real-time, multi-authoring tool
B. Wiki knowledge base and search engine
C. Workflow and e-signature platform
D. File-sharing platform and storage system

Answer: C

Explanation:

A workflow and e-signature platform automates approvals, routing, and visibility of project tasks. This ensures that documents and activities are approved quickly and transparently, supporting operational efficiency. Real-time editing or file storage doesn't inherently provide workflow automation.

Reference: CompTIA Project+ PK0-005 – Collaboration & Approval Tools; CompTIA Cloud+ CV0-004 Operations & Support domain.

Question: 255

Which of the following best describes why a project manager would decide to sign a fixed-price contract with a vendor?

A. The scope of the project deliverable is clearly defined
B. There is a non-disclosure agreement in place
C. There are multiple requirements for the product

D. The PM wants to simplify the logistics of the required product

Answer: A

Explanation:

A fixed-price contract is suitable when the scope is well defined and stable. This shifts cost risk to the vendor, as they must deliver within the agreed-upon price. NDAs, requirements volume, or logistics do not determine contract type as strongly as scope clarity does.

Reference: CompTIA Project+ PK0-005 – Procurement & Contracts; CompTIA Cloud+ CV0-004 Governance, Risk & Compliance domain.

Question: 256

A project team that handles sensitive data analysis recently onboarded three new employees. Which of the following should the PM do first?

A. Check employee security clearance
B. Allow access to the internet on corporate computers
C. Train the new employees to handle sensitive data
D. Execute an analysis of the sensitive data

Answer: A

Explanation:

When onboarding new staff who will handle sensitive data, the PM must first verify their security clearance or authorization. Only authorized personnel should access sensitive systems or datasets. Training follows after confirming clearance. Data analysis itself should never begin until security requirements are validated.

Reference: CompTIA Project+ PK0-005 – Security & Compliance in Projects; CompTIA Cloud+ CV0-004 Cloud Security domain.