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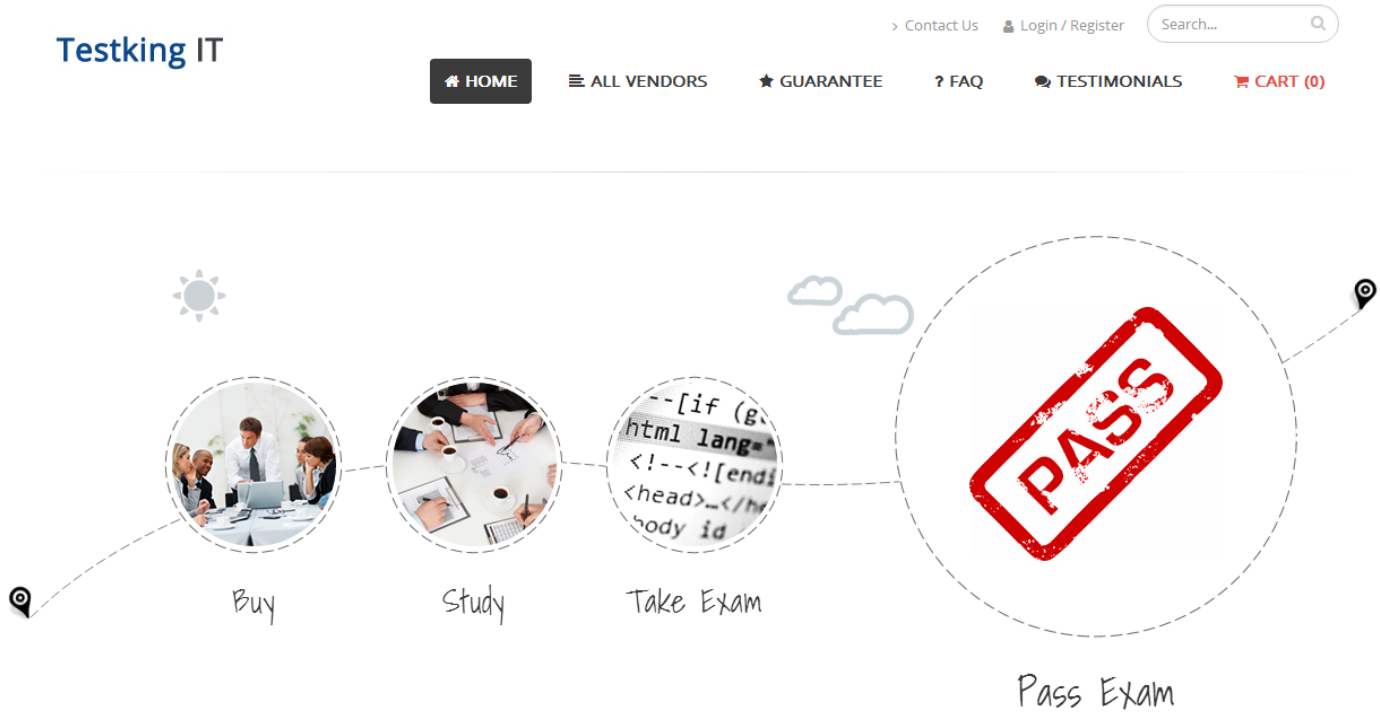

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Exam : **CV0-003**

Title : CompTIA Cloud+ Certification Exam

Vendor : CompTIA

Version : DEMO

NO.1 A systems administrator has been asked to restore a VM from backup without changing the current VM's operating state.
Which of the following restoration methods would BEST fit this scenario?
A. Alternate location
B. Rolling
C. Storage live migration
D. In-place
Answer: C
Explanation:
Storage live migration is the best restoration method to restore a VM from backup without changing the current VM's operating state. Storage live migration is a process of moving or transferring storage resources or data from one location to another without affecting or interrupting the operation or performance of the VMs that use them. Storage live migration can help to restore a VM from backup by copying the backup data to a new storage location and switching the VM's storage configuration to point to the new location, without requiring any downtime or reboot.

NO.2 A cloud administrator is setting up a DR site on a different zone of the same CSP. The application servers are replicated using the VM replication, and the database replication is set up using log shipping. Upon testing the DR site, the application servers are unable to access the database servers. The administrator has verified the systems are running and are accessible from the CSP portal.
Which of the following should the administrator do to fix this issue?
A. Change the database application IP
B. Create a database cluster between the primary site and the DR site
C. Update the connection string
D. Edit the DNS record at the DR site for the application servers
Answer: C
Explanation:
A connection string is a parameter that specifies how to connect to a database server or instance. A connection string typically includes information such as the server name, database name, user name, password, and other options. Updating the connection string is the best way to fix the issue of application servers being unable to access the database servers after setting up a DR site on a different zone of the same CSP and replicating the application and database servers using VM replication and log shipping. Updating the connection string can ensure that the application servers can connect to the correct database server or instance in the DR site, as the server name or IP address may have changed after the replication. References: CompTIA Cloud+ Certification Exam Objectives, page 10, section 1.5

NO.3 A resource pool in a cloud tenant has 90 GB of memory and 120 cores. The cloud administrator needs to maintain a 30% buffer for resources for optimal performance of the hypervisor. Which of the following would all ow for the maximum number of two-core machines with equal memory?
A. 30 VMs, 3GB of memory
B. 40 VMs, 1,5GB of memory
C. 45 VMs, 2 GB of memory

D. 60 VMs, 1 GB of memory

Answer: C

Explanation:

To calculate the maximum number of two-core machines with equal memory, we need to consider the resource pool capacity and the buffer requirement. The resource pool has 90 GB of memory and 120 cores, but the cloud administrator needs to maintain a 30% buffer for optimal performance. This means that only

70% of the resources can be used for VM allocation. Therefore, the available memory is 90 GB x 0.7 = 63 GB, and the available cores are 120 x 0.7 = 84 cores. To allocate two-core machines with equal memory, we need to divide the available memory by the available cores and multiply by two. This gives us the memory size per VM: (63 GB / 84 cores) x 2 = 1.5 GB. However, this is not a valid answer option, so we need to find the closest option that does not exceed the available resources. The best option is C, which allocates 45 VMs with 2 GB of memory each. This uses up 45 x 2 = 90 GB of memory and 45 x 2 = 90 cores, which are within the available limits.

NO.4 A cloud administrator needs to deploy a security virtual appliance in a private cloud environment, but this appliance will not be part of the standard catalog of items for other users to request. Which of the following is the BEST way to accomplish this task?

A. Create an empty VM. import the hard disk of the virtual appliance. and configure the CPU and memory.

B. Acquire the build scripts from the vendor and recreate the appliance using the baseline templates

C. Import the virtual appliance into the environment and deploy it as a VM

D. Convert the virtual appliance to a template and deploy a new VM using the template.

Answer: C

Explanation:

The correct answer is C. Import the virtual appliance into the environment and deploy it as a VM.

A virtual appliance is a pre-packaged and pre-configured software solution that runs on a virtual machine (VM). A virtual appliance typically consists of an operating system, an application, and any required dependencies, and is designed to provide a specific function or service. A virtual appliance can be distributed as a single file or a set of files that can be imported into a virtualization platform, such as VMware, Hyper-V, or KVM .

A cloud administrator can deploy a security virtual appliance in a private cloud environment by importing the virtual appliance into the environment and deploying it as a VM. This is the best way to accomplish this task because it preserves the original configuration and functionality of the virtual appliance, and does not require any additional installation or customization. The cloud administrator can also control the access and visibility of the virtual appliance, and prevent other users from requesting it from the standard catalog of items .

Creating an empty VM, importing the hard disk of the virtual appliance, and configuring the CPU and memory is not the best way to accomplish this task because it involves more steps and complexity than importing the virtual appliance as a whole. It also introduces the risk of losing or corrupting some data or settings during the import process, or misconfiguring the CPU and memory for the virtual appliance.

Acquiring the build scripts from the vendor and recreating the appliance using the baseline templates is not the best way to accomplish this task because it involves more time and effort than importing the virtual appliance directly. It also depends on whether the vendor provides the build scripts or not,

and whether they are compatible with the baseline templates or not.
Converting the virtual appliance to a template and deploying a new VM using the template is not the best way to accomplish this task because it adds an unnecessary step of creating a template from the virtual appliance.
It also does not prevent other users from accessing or requesting the template from the catalog of items.

NO.5 A technician is trying to delete six decommissioned VMs. Four VMs were deleted without issue. However, two of the VMs cannot be deleted due to an error. Which of the following would MOST likely enable the technician to delete the VMs?

A. Remove the snapshots

B. Remove the VMs' IP addresses

C. Remove the VMs from the resource group

D. Remove the lock from the two VMs

Answer: D

Explanation:
Removing the lock from the two VMs is what would most likely enable the technician to delete the VMs that cannot be deleted due to an error. A lock is a feature that prevents certain actions or operations from being performed on a resource or service, such as deleting, modifying, moving, etc. A lock can help to protect a resource or service from accidental or unwanted changes or removals. Removing the lock from the two VMs can enable the technician to delete them by allowing the delete action or operation to be performed on them.

NO.6 An organization hosts an ERP database in on-premises infrastructure.
A recommendation has been made to migrate the ERP solution to reduce operational overhead in the maintenance of the data center.
Which of the following should be considered when migrating this on-premises database to DBaaS?

A. Database application version compatibility

B. Database IOPS values

C. Database storage utilization

D. Physical database server CPU cache value

E. Physical database server DAS type

F. Physical database server network I/O

G. Database total user count

H. Database total number of tables

I. Database total number of storage procedures

J. Physical database server memory configuration

K. Physical database server CPU frequency

L. Physical database server operating system

Answer: A,B,C

Explanation:
When migrating an on-premises database to DBaaS, it is important to consider the database application version compatibility, the database IOPS values, and the database storage utilization. These factors can affect the performance, functionality, and cost of the migration. Database

application version compatibility refers to the ability of the DBaaS provider to support the same or compatible version of the database software as the on- premises database. This can ensure that the database features, syntax, and behavior are consistent and compatible across the environments. Database IOPS values refer to the input/output operations per second that the database performs. This can indicate the workload and throughput of the database, and help determine the appropriate size and configuration of the DBaaS instance. Database storage utilization refers to the amount of disk space that the database consumes. This can affect the cost and scalability of the DBaaS service, and help optimize the storage allocation and backup strategies. References := CompTIA Cloud+ source documents or study guide
* CompTIA Cloud+ Certification Exam Objectives, Domain 2.0: Deployment, Objective 2.1: Given a scenario, execute and implement solutions using appropriate cloud migration tools and methods.
* Migrate your relational databases to Azure - .NET | Microsoft Learn, Migrate On-premises Tablespaces to DBaaS Database Using Cross-Platform Tablespace Transport
* Migrating On-Premises Databases to the DBaaS Database Using RMAN - Oracle, Overview

NO.7 A company is concerned about the security of its data repository that contains customer PII. A systems administrator is asked to deploy a security control that will prevent the exfiltration of such data. Which of the following should the systems administrator implement?
A. DLP
B. WAF
C. FIM
D. ADC
Answer: A
Reference: https://cloud.google.com/blog/products/identity-security/4-steps-to-stop-data-exfiltration-with- google-cloud Implementing DLP (Data Loss Prevention) is the best solution to prevent the exfiltration of customer PII (Personally Identifiable Information) from a data repository. DLP is a security control that monitors, detects, and blocks sensitive data from leaving or being accessed by unauthorized parties. DLP can be applied at different levels, such as network, endpoint, storage, or cloud. DLP can help to protect customer PII from being leaked, stolen, or compromised.

NO.8 Which of the following will provide a systems administrator with the MOST information about potential attacks on a cloud IaaS instance?
A. Network flows
B. FIM
C. Software firewall
D. HIDS
Answer: D
Explanation:
HIDS (Host-based Intrusion Detection System) is the tool that will provide the administrator with the most information about potential attacks on a cloud IaaS instance. HIDS is a software or agent that monitors and analyzes the activities and events on a host system or device, such as a cloud instance. HIDS can detect and alert on any malicious or anomalous behavior, such as unauthorized access, malware infection, configuration changes, etc., that may indicate an attack or compromise.

NO.9 A company is planning its cloud architecture and wants to use a VPC for each of its three

products per environment in two regions, totaling 18 VPCs. The products have interdependences, consuming services between VPCs. Which of the following should the cloud architect use to connect all the VPCs?

A. MPLS connections

B. VPC peering

C. Hub and spoke

D. VPN connections

Answer: C

Explanation:

The best way to connect all the VPCs for the company that is planning its cloud architecture and wants to use a VPC for each of its three products per environment in two regions, totaling 18 VPCs, is to use a hub and spoke model. A hub and spoke model is a networking model that uses a central hub VPC that connects to multiple spoke VPCs that host the products or workloads. The hub VPC can provide common services and security policies for the spoke VPCs, such as network virtual appliances, DNS servers, firewalls, or VPN gateways. The spoke VPCs can communicate with each other through the hub VPC, using private IP addresses or peering connections. A hub and spoke model can simplify the management and scalability of the network, as well as reduce the costs and complexity of peering multiple VPCs directly. Reference: Hub-and- spoke network topology - Clou d Adoption Framework

NO.10 A SaaS provider wants to maintain maximum availability for its service. Which of the following should be implemented to attain the maximum SLA?

A. A mobile site.

B. An active-active site.

C. A warm site.

D. A cold site.

Answer: B

Explanation:

Detailed Explanation:

* B. An active-active site: Active-active configurations involve multiple sites operating simultaneously, ensuring maximum availability and failover capabilities, which are critical for meeting high SLA requirements.

References:

* CompTIA Cloud+ CV0-003 Study Guide Chapter 21: Disaster Recovery Tasks.

NO.11 Which of the following would be the BEST option for discussion of what individuals should do in an incident response or disaster recovery scenario?

A. A business continuity plan

B. Incident response/disaster recovery documentation

C. A tabletop exercise

D. A root cause analysis

Answer: C

Explanation:

A tabletop exercise is the best option for discussion of what individuals should do in an incident

response or disaster recovery scenario. A tabletop exercise is a simulated scenario that involves key stakeholders and decision-makers who review and discuss their roles and responsibilities in response to an emergency situation or event. A tabletop exercise can help to test and evaluate plans, procedures, policies, training, and communication.

NO.12 A new development team requires workstations hosted in a PaaS to develop a new website. Members of the team also require remote access to the workstations using their corporate email addresses. Which of the following solutions will BEST meet these requirements? (Select TWO).

A. Deploy new virtual machines.

B. Configure email account replication.

C. Integrate identity services.

D. Implement a VDI solution.

E. Migrate local VHD workstations.

F. Create a new directory service.

Answer: A C

Explanation:

A Platform-as-a-Service (PaaS) is a cloud computing model that provides customers a complete cloud platform-hardware, software, and infrastructure-for developing, running, and managing applications without the cost, complexity, and inflexibility that often comes with building and maintaining that platform on-premises1.

To develop a new website using a PaaS, the development team needs to deploy new virtual machines (VMs) on the cloud platform. VMs are software emulations of physical computers that can run different operating systems and applications. By deploying new VMs, the development team can create a scalable and flexible environment for their website project, without having to invest in or manage physical hardware2.

To enable remote access to the workstations using their corporate email addresses, the development team needs to integrate identity services on the cloud platform. Identity services are services that provide authentication, authorization, and identity management for users and devices accessing cloud resources. By integrating identity services, the development team can use their corporate email addresses as single sign-on (SSO) credentials to access their workstations from any device and location, while ensuring security and compliance3.

The other options are not the best solutions for these requirements:

* Configuring email account replication is not necessary for remote access to the workstations. Email account replication is a process of synchronizing email accounts across different servers or locations. It can provide backup and redundancy for email services, but it does not provide authentication or identity management for remote access4.

* Implementing a Virtual Desktop Infrastructure (VDI) solution is not a PaaS solution. VDI is a technology that allows users to access virtual desktops hosted on a centralized server. VDI can provide remote access to desktop environments, but it requires additional hardware, software, and management costs that are not included in a PaaS model5.

* Migrating local VHD workstations is not a PaaS solution. VHD stands for Virtual Hard Disk, which is a file format that represents a virtual hard disk drive. Migrating local VHD workstations means moving the virtual hard disk files from local storage to cloud storage. This can provide backup and portability for the workstations, but it does not provide a complete cloud platform for developing and running applications6.

* Creating a new directory service is not necessary for remote access to the workstations. A directory service is a service that stores and organizes information about users, devices, and resources on a network. Creating a new directory service means setting up a new database and schema for storing this information. This can provide identity management and access control for the network, but it does not provide authentication or SSO for remote access.

NO.13 A company is currently running a website on site. However, because of a business requirement to reduce current RTO from 12 hours to one hour, and the RPO from one day to eight hours, the company is considering operating in a hybrid environment. The website uses mostly static files and a small relational database. Which of the following should the cloud architect implement to achieve the objective at the LOWEST cost possible?

A. Implement a load-balanced environment in the cloud that is equivalent to the current on-premises setup and use DNS to shift the load from on premises to cloud.

B. Implement backups to cloud storage and infrastructure as code to provision the environment automatically when the on-premises site is down. Restore the data from the backups.

C. Implement a website replica in the cloud with auto-scaling using the smallest possible footprint. Use DNS to shift the load from on premises to the cloud.

D. Implement a CDN that caches all requests with a higher TTL and deploy the IaaS instances manually in case of disaster. Upload the backup on demand to the cloud to restore on the new instances.

Answer: C

Explanation:

This is the best solution to achieve the objective of reducing current RTO (Recovery Time Objective) from 12 hours to one hour, and RPO (Recovery Point Objective) from one day to eight hours, at the lowest cost possible, for a website that uses mostly static files and a small relational database. RTO is a metric that measures how quickly a system or service can be restored after a disruption or disaster. RPO is a metric that measures how much data can be lost or how far back in time a recovery point can be without causing significant impact or damage. To reduce RTO and RPO, the administrator should implement a website replica in the cloud with auto-scaling using the smallest possible footprint. A website replica is a copy or backup of a website that can be used for recovery or failover purposes. Auto-scaling is a feature that allows cloud resources or systems to adjust their capacity and performance according to demand or workload. Using auto- scaling with the smallest possible footprint can minimize costs by using only the necessary resources and scaling up or down as needed. The administrator should also use DNS (Domain Name System) to shift the load from on premises to the cloud. DNS is a service that translates domain names into IP addresses and vice versa. Using DNS, the administrator can redirect traffic from the on-premises website to the cloud replica in case of a disruption or disaster, and vice versa when recovery is complete.

NO.14 A systems administrator is planning the storage requirements for a two-disk mirror of a server OS disk partition. Which of the following is the amount of disk space available in the mirrored volume?

A. 30%

B. 50%

C. 75%

D. 100%

Answer: B
Explanation:
Detailed Explanation:
* B. 50%: In a two-disk mirror (RAID 1), one disk is used for redundancy. Therefore, only 50% of the total disk capacity is available for storage.
References:
* CompTIA Cloud+ CV0-003 Study Guide Chapter 12: Storage in Cloud Environments.

NO.15 A piece of software applies licensing fees on a socket-based model. Which of the following is the MOST important consideration when attempting to calculate the licensing costs for this software?

A. The amount of memory in the server

B. The number of CPUs in the server

C. The type of cloud in which the software is deployed

D. The number of customers who will be using the software

Answer: B
Explanation:
The most important consideration when attempting to calculate the licensing costs for a piece of software that applies licensing fees on a socket-based model is the number of CPUs in the server. A socket-based model is a type of licensing model that charges based on the number of physical CPU sockets or slots on the server, regardless of how many cores or threads each CPU has. The systems administrator should count how many CPUs are installed on each server and multiply that by the licensing fee per socket to determine the total licensing cost for the software. Reference: CompTIA Cloud+ Certification Exam Objectives, Domain 3.0 Maintenance, Objective 3.3 Given a scenario, analyze system performance using standard tools.

NO.16 After an infrastructure-as-code cloud migration to an IaaS environment, the cloud engineer discovers that configurations on DB servers have drifted from the corporate standard baselines. Which of the following should the cloud engineer do to best ensure configurations are restored to the baselines?

A. Utilize a template to automate and update the DB configuration.

B. Create an image of the DB, delete the previous DB server, and restore from the image.

C. Manually log in to the DB servers and update the configurations.

D. Rename and change the IP of the old DB server and rebuild a new DB server.

Answer: A
Explanation:
A template is a file that defines the desired state and configuration of a cloud resource, such as a server, a network, or a database. Infrastructure as code (IaC) is the practice of using templates to automate and manage cloud resources, rather than manually configuring them. IaC can help prevent configuration drift, which is the deviation of the actual state of a resource from the desired state defined by the template. In this scenario, the cloud engineer discovers that configurations on DB servers have drifted from the corporate standard baselines after an IaC cloud migration to an IaaS environment. The best way to ensure configurations are restored to the baselines is to utilize a template to automate and update the DB configuration. This way, the cloud engineer can apply the same template to all the DB servers, and ensure they are consistent and compliant with the

corporate standards. Creating an image of the DB, deleting the previous DB server, and restoring from the image is not a good solution, as it may cause data loss, downtime, and additional costs. Manually logging in to the DB servers and updating the configurations is not a good solution, as it is time-consuming, error-prone, and not scalable. Renaming and changing the IP of the old DB server and rebuilding a new DB server is not a good solution, as it may cause compatibility issues, network disruptions, and security risks. References: CompTIA Cloud+ CV0-003 Certification Study Guide, Chapter 23, Infrastructure as Code and Configuration Management, page 3691.

NO.17 In an IaaS platform, which of the following actions would a systems administrator take FIRST to identify the scope of an incident?

A. Conduct a memory acquisition.

B. Snapshot all volumes attached to an instance.

C. Retrieve data from a backup.

D. Perform a traffic capture.

Answer: D

Explanation:

The first step to identify the scope of an incident in an IaaS platform is to perform a traffic capture on the affected instances or network interfaces. This will help to determine the source, destination, and nature of the malicious or anomalous traffic, as well as the impact on the network performance and availability. A traffic capture can also provide evidence for further analysis and remediation. Reference: CompTIA Cloud+ Certification Exam Objectives, Domain 4.0 Troubleshooting, Objective 4.2 Given a scenario, troubleshoot security issues related to cloud implementations.

NO.18 An IaaS provider has numerous devices and services that are commissioned and decommissioned automatically on an ongoing basis. The cloud administrator needs to implement a solution that will help reduce administrative overhead.

Which of the following will accomplish this task?

A. IPAM

B. NAC

C. NTP

D. DNS

Answer: A

Explanation:

IP address management (IPAM) is a type of tool or system that automates and standardizes the allocation, tracking, and management of IP addresses in an IP network. IPAM can help reduce administrative overhead for an IaaS provider that has numerous devices and services that are commissioned and decommissioned automatically on an ongoing basis, as it can simplify and centralize the process of assigning and reclaiming IP addresses for different devices and services without manual intervention or errors. IPAM can also help optimize network performance and security, as it can monitor and report any issues or conflicts related to IP addresses. References: CompTIA Cloud+ Certification Exam Objectives, page 15, section 2.8 Reference: https://www.infoblox.com/glossary/ipam-ip-address-management/

NO.19 A technician just received the lessons learned from some recent data that was lost due to an on-premises file- server crash. The action point is to change the backup strategy to minimize manual

intervention. Which of the following is the BEST approach for the technician to implement?

A. Backup as a service

B. RAID 1

C. Long-term storage

D. New backup devices

Answer: A

Explanation:

Backup as a service (BaaS) is the best approach for changing the backup strategy to minimize manual intervention after a data loss due to an on-premises file-server crash. BaaS is a cloud-based service that provides backup and recovery solutions for customers' data and systems. BaaS can automate and simplify backup processes by using cloud storage, encryption, deduplication, compression, scheduling, etc., without requiring customers to purchase or maintain backup hardware or software.

NO.20 A systems administrator is trying to reduce storage consumption. Which of the following file types would benefit the MOST from compression?

A. System files

B. User backups

C. Relational database

D. Mail database

Answer: B

Explanation:

User backups are the file type that would benefit the most from compression to reduce storage consumption.

Compression is a process of reducing the size of data by removing redundant or unnecessary information or using algorithms to encode data more efficiently. Compression can save storage space and bandwidth, but it may also affect the quality or performance of data depending on the compression method and ratio. User backups are typically large files that contain various types of data, such as documents, images, videos, etc., that can be compressed without significant loss of quality or functionality.

NO.21 A DevOps team needs to provide a solution that offers isolation, portability, and scalability Which of the following would BEST meet these requirements?

A. Virtual machines

B. Containers

C. Appliances

D. Clusters

Answer: B

Explanation:

Containers are a solution that offers isolation, portability, and scalability for software development and deployment. Containers are lightweight and self-contained units of software that package up the application code and all its dependencies, such as libraries, frameworks, and configuration files. Containers run on a container platform, such as Docker or Kubernetes, that provides the runtime environment and orchestration for the containers.

Containers offer isolation, as they run independently from each other and from the underlying host

system.
Each container has its own namespace, filesystem, network, and resources, and does not interfere with other containers or processes. Containers also offer portability, as they can run on any system that supports the container platform, regardless of the hardware or operating system differences. Containers can be easily moved, copied, or deployed across different environments, such as development, testing, or production.
Containers also offer scalability, as they can be dynamically created, destroyed, or replicated to meet the changing demand for the application. Containers can also leverage the distributed computing power of clusters, which are groups of servers that work together to provide high availability and performance .

NO.22 A Cloud administrator needs to reduce storage costs. Which of the following would BEST help the administrator reach that goal?
A. Enabling compression
B. Implementing deduplication
C. Using containers
D. Rightsizing the VMS
Answer: B
Explanation:
The correct answer is B. Implementing deduplication would best help the administrator reduce storage costs.
Deduplication is a technique that eliminates redundant copies of data and stores only one unique instance of the data. This can reduce the amount of storage space required and lower the storage costs. Deduplication can be applied at different levels, such as file-level, block-level, or object-level. Deduplication can also improve the performance and efficiency of backup and recovery operations.
Enabling compression is another technique that can reduce storage costs, but it may not be as effective as deduplication, depending on the type and amount of data. Compression reduces the size of data by applying algorithms that remove or replace redundant or unnecessary bits. Compression can also affect the quality and accessibility of the data, depending on the compression ratio and method.
Using containers and rightsizing the VMs are techniques that can reduce compute costs, but not necessarily storage costs. Containers are lightweight and portable units of software that run on a shared operating system and include only the necessary dependencies and libraries. Containers can reduce the overhead and resource consumption of virtual machines (VMs), which require a full operating system for each instance. Rightsizing the VMs means adjusting the CPU, memory, disk, and network resources of the VMs to match their workload requirements. Rightsizing the VMs can optimize their performance and utilization, and avoid overprovisioning or underprovisioning.

NO.23 An organization is hosting a DNS domain with private and public IP ranges.
Which of the following should be implemented to achieve ease of management?
A. Network peering
B. A CDN solution
C. A SDN solution
D. An IPAM solution
Answer: D

Explanation:
An IP address management (IPAM) solution is a type of tool or system that automates and standardizes the allocation, tracking, and management of IP addresses in an IP network. An IPAM solution can help achieve ease of management for hosting a DNS domain with private and public IP ranges, as it can simplify and centralize the process of assigning and updating IP addresses for different DNS records or zones without manual intervention or errors. An IPAM solution can also help optimize DNS performance and security, as it can monitor and report any issues or conflicts related to IP addresses or DNS records. References: CompTIA Cloud+ Certification Exam Objectives, page 15, section 2.8 Reference: https://www.infoblox.com/glossary/ipam-ip-address-management/

NO.24 A security audit related to confidentiality controls found the following transactions occurring in the system:
GET
http://gateway.securetransaction.com/privileged/api/v1/changeResource?id=123
&user=277
Which of the following solutions will solve the audit finding?

A. Using a TLS-protected API endpoint

B. Implementing a software firewall

C. Deploying a HIDS on each system

D. Implementing a Layer 4 load balancer

Answer: A
Reference:
https://cheatsheetseries.owasp.org/cheatsheets/Transport_Layer_Protection_Cheat_Sheet.html The audit finding is related to confidentiality, which means the data should be protected from unauthorized access. The current API endpoint is using HTTP, which is not secure and can expose the data in transit. Using a TLS-protected API endpoint would encrypt the data and prevent anyone from reading it.
Reference: CompTIA Cloud+ Certification Exam Objectives, Domain 2.0 Security, Objective 2.1 Given a scenario, apply security configurations and compliance controls to meet cloud security requirements.

NO.25 A cloud architect is reviewing the design for a new cloud-based ERP solution. The solution consists of eight servers with a single network interface. The allocated IP range is 172.16.0.0/28. One of the requirements of the solution is that it must be able to handle the potential addition of 16 new servers to the environment.
Because of the complexity of the firewall and related ACL requirements, these new servers will need to be in the same network range. Which of the following changes would allow for the potential server addition?

A. Change the IP address range to use a 10.0.0.0 address.

B. Change the server template to add network interfaces.

C. Change the subnet mask to use a 255.255.255.128 range.

D. Change the server scaling configuration to increase the maximum limit.

Answer: C
Explanation:
Changing the subnet mask to use a 255.255.255.128 range would allow for the potential server addition. The current subnet mask of 255.255.255.240 (/28) only allows for 14 usable host addresses

in the 172.16.0.0 network, which is not enough to accommodate the existing eight servers and the possible 16 new servers.
Changing the subnet mask to 255.255.255.128 (/25) would increase the number of usable host addresses to
126 in the same network, which is sufficient to handle the server expansion. Changing the IP address range to use a 10.0.0.0 address, changing the server template to add network interfaces, or changing the server scaling configuration to increase the maximum limit would not solve the issue of the limited host addresses in the same network range. References: CompTIA Cloud+ CV0-003 Certification Study Guide, Chapter 3, Objective 3.1: Given a scenario, implement cloud networking solutions.

NO.26 A software development manager is looking for a solution that will allow a team of developers to work in isolated environments that can be spun up and torn down quickly.
Which of the following is the MOST appropriate solution?

A. Containers

B. File subscriptions

C. Ballooning

D. Software-defined storage

Answer: A

Explanation:
Containers are isolated environments that can run applications and their dependencies without interfering with other processes or systems. Containers are lightweight, portable, and scalable, which makes them ideal for development and testing purposes. Containers can be spun up and torn down quickly using tools such as Docker, Kubernetes, etc.

NO.27 A cloud administrator would like to deploy a cloud solution to its provider using automation techniques.
Which of the following must be used? (Choose two.)

A. Auto-scaling

B. Tagging

C. Playbook

D. Templates

E. Containers

F. Serverless

Answer: C D

Explanation:
Playbook and templates are two things that must be used to deploy a cloud solution to its provider using automation techniques. A playbook is a file or script that defines a set of tasks or actions to be executed on one or more cloud resources or systems. A playbook can automate and standardize the deployment and configuration of cloud solutions using tools such as Ansible, Chef, Puppet, etc. A template is a preconfigured image or blueprint of a cloud resource or system that contains an OS, applications, settings, etc., that can be used to create new resources or systems quickly and consistently. A template can simplify and speed up the deployment of cloud solutions using tools such as AWS CloudFormation, Azure Resource Manager, Google Cloud Deployment Manager, etc.

NO.28 A company is moving its entire infrastructure to the cloud. The infrastructure consists of:
* 100 virtual desktops
* 10 database servers
* 10 web servers
* 15 application servers
* 15 development servers
* 7 VDI servers
Each server, except for web, application, and database servers, needs to be on an isolated subnet. The CSP has allocated a /24 subnet. Which of the following would best divide the IP space to meet these requirements?
Options:
A. VDI: /25Web, application, and database: /26Development: /27VDI servers: /28
B. VDI: /25Web, application, and database: /26Development: /27VDI servers: /28
C. VDI: /25Web, application, and database: /27Development: /27VDI servers: /28
D. VDI: /26Web, application, and database: /26Development: /26VDI servers: /28
Answer: A
Explanation:
1. Requirements Analysis:
* Subnet size (/24): Allows 232#24=2562^{32 - 24} = 256232#24=256 IPs.
* Servers requiring isolation: Development servers and VDI servers.
* Web, application, and database servers can share subnets.
2. Option Analysis:
* A. Correct.
* VDI: /25 (128 IPs): Adequate for 100 virtual desktops. #
* Web, application, and database: /26 (64 IPs): Fits 10 + 10 + 10 = 30 servers. #
* Development: /27 (32 IPs): Fits 15 development servers. #
* VDI servers: /28 (16 IPs): Fits 7 VDI servers. #
* B. Same as A. Correct. #
* C. Incorrect.
* Web, application, and database: /27 (32 IPs): Insufficient for 30 servers. #
* D. Incorrect.
* Allocates excessive IPs to each subnet (e.g., 64 IPs for VDI servers with only 7 devices). #
3. Final Decision:
* Option A (or B) optimally divides the /24 subnet without wasting IPs and meets all isolation requirements.
4. References:
* CompTIA Cloud+ Objectives:
* Section 3.3 - Deploy cloud networking solutions, emphasizing efficient IP space division and subnetting.
* CompTIA Study Guide: Detailed subnetting and network planning examples.

NO.29 A cloud architect is receiving complaints from VDI users overseas about slowness, even though the remote office has Gigabit internet. Which of the following will most likely solve the issue?
A. Increasing bandwidth.
B. Enabling compression.

C. Lowering latency.
D. Adding redundancy.
Answer: C
Explanation:
Detailed Explanation:
* C. Lowering latency: Latency affects response times more than bandwidth in high-speed networks. Techniques like optimizing routing and using edge computing can reduce latency.
References:
* CompTIA Cloud+ CV0-003 Study Guide Chapter 13: Cloud Networking Solutions.

NO.30 After a hardware upgrade on a private cloud system, the systems administrator notices a considerable drop in network performance. Which of the following is MOST likely the cause?
A. The driver
B. The memory
C. The cluster placement
D. The CPU
Answer: A
Explanation:
The driver is the most likely cause of the drop in network performance after a hardware upgrade on a private cloud system. A driver is a software component that enables communication and interaction between hardware devices and operating systems or applications. A driver may need to be updated or reinstalled after a hardware upgrade to ensure compatibility and functionality. If the driver is outdated, missing, or corrupted, it may affect the network performance of the system.

NO.31 A cloud administrator for a retail business identified a significant month-to-month increase in the cost of storage. The current IaaS instances are hosting the organization's ERP solution. Which of the following is the most likely cause for the cost increase?
A. The database (DB) data drive size is set to 512GB, and the DB size is 384GB.
B. The virtual memory in IaaS instances is utilizing space from the OS drive.
C. The storage tiers for the archival data have a suboptimal configuration.
D. The DB backup drive is reaching 80% of utilization and needs to be cleaned up.
Answer: C
Explanation:
The most likely cause of the increasing storage cost is suboptimal storage tier configuration for archival data (Option C). Cloud providers offer different storage tiers, such as:
* Hot Storage: Expensive but optimized for frequent access.
* Cool Storage (Warm Storage): More affordable for infrequently accessed data.
* Cold Storage (Archival Storage): The cheapest option, designed for long-term storage with occasional access.
If archival data is stored in a more expensive hot storage tier instead of a cost-effective archival storage tier, the monthly costs can increase significantly without any real benefit.
* A. The database (DB) data drive size is set to 512GB, and the DB size is 384GB.
* This does not directly impact cost because cloud storage costs are typically based on actual usage, not allocated capacity (except in pre-provisioned volumes).
* A 512GB allocated drive does not necessarily mean all space is being used.

* B. The virtual memory in IaaS instances is utilizing space from the OS drive.
* While virtual memory (swap space) can impact performance, it does not significantly contribute to increasing storage costs unless there is excessive swapping to premium storage.
* However, swap usage is a compute-related issue, not a storage-tier pricing issue.
* D. The DB backup drive is reaching 80% utilization and needs to be cleaned up.
* While excessive backups can increase storage costs, cloud storage providers typically offer lifecycle management policies to automatically archive or delete old backups.
* 80% utilization does not necessarily correlate with a rapid increase in storage costs, and backup data should be managed separately.
The most likely reason for month-over-month increases in storage costs is that archival data is stored in an expensive storage tier rather than a cost-effective archival tier. Implementing proper storage lifecycle policies and moving data to cheaper cold storage can optimize costs.
Reference:CompTIA Cloud+ CV0-003 Exam Objectives (Storage management, cost optimization strategies) Cloud+ Study Guide (Storage tiering best practices and lifecycle policies)

NO.32 A cloud engineer has deployed a virtual storage appliance into a public cloud environment. The storage appliance has a NAT to a public IP address. An administrator later notices there are some strange files on the storage appliance and a large spike in network traffic on the machine. Which of the following is the MOST likely cause?

A. The default password is still configured on the appliance.

B. The appliance's certificate has expired.

C. The storage appliance has no firewall.

D. Data encryption is enabled, and the files are hashed.

Answer: A

Explanation:
One possible cause for the strange files and the large spike in network traffic on the storage appliance is that the default password is still configured on the appliance. A default password is a password that is set by the manufacturer or vendor of a device or software, and it is often easy to guess or find online. If the cloud engineer did not change the default password after deploying the virtual storage appliance, it could allow unauthorized users to access the appliance remotely and upload or download files, which could explain the symptoms observed by the administrator. This is a serious security risk that could compromise the confidentiality, integrity, and availability of the data stored on the appliance.

NO.33 A cloud administrator needs to establish a secure connection between two different locations. Which of the following is the BEST option to implement the secure connection?

A. HTTPS

B. IPSec

C. TLS

D. SSH

Answer: B

Explanation:
The best option to implement a secure connection between two different locations is IPSec (Internet Protocol Security). IPSec is a protocol suite that provides security for IP-based communications over networks. IPSec can encrypt and authenticate the data packets between two endpoints, such as

routers, firewalls, or VPN gateways. IPSec can also provide integrity, confidentiality, and replay protection for the data.
Reference: CompTIA Cloud+ Certification Exam Objectives, Domain 2.0 Security, Objective 2.2 Given a scenario, implement appropriate network security controls for a cloud environment.

NO.34 A cloud administrator is configuring a CDN for an organization's website to improve performance for users in remote regions. Which of the following CDN features will help achieve this goal?

A. Compression of content.

B. Content replication to edge locations.

C. Dynamic request routing.

D. Content deduplication.

Answer: B
Explanation:
Detailed Explanation:
* B. Content replication to edge locations: By replicating content to servers closer to end users, CDNs reduce latency and improve website performance for remote users.
References:
* CompTIA Cloud+ CV0-003 Study Guide Chapter 13: Cloud Networking Solutions.

NO.35 A cloud administrator is switching hosting companies and using the same script that was previously used to deploy VMs in the new cloud. The script is returning errors that the command was not found.
Which of the following is the MOST likely cause of the script failure?

A. Account mismatches

B. IP address changes

C. API version incompatibility

D. Server name changes

Answer: C
Explanation:
An application programming interface (API) is a set of rules or protocols that defines how different systems or applications can communicate or interact with each other. An API version is a specific iteration or release of an API that may have different features or functionalities than previous or subsequent versions. API version incompatibility is the most likely cause of the script failure when switching hosting companies and using the same script that was previously used to deploy VMs in the new cloud, as it can result in errors or failures when trying to execute commands or functions that are not supported or recognized by the new cloud provider's API version. The issue can be resolved by updating or modifying the script to match the new cloud provider's API version. References: CompTIA Cloud+ Certification Exam Objectives, page 13, section 2.5