Vendor: Cisco

Exam Code: 300-440

Exam Name: Designing and Implementing Cloud Connectivity

Version: DEMO

QUESTION 1
An engineer is implementing a highly secure multitier application in AWS that includes S3. RDS, and some additional private links. What is critical to keep the traffic safe?

A. VPC peering and bucket policies
B. specific routing and bucket policies
C. EC2 super policies and specific routing policies
D. gateway load balancers and specific routing policies

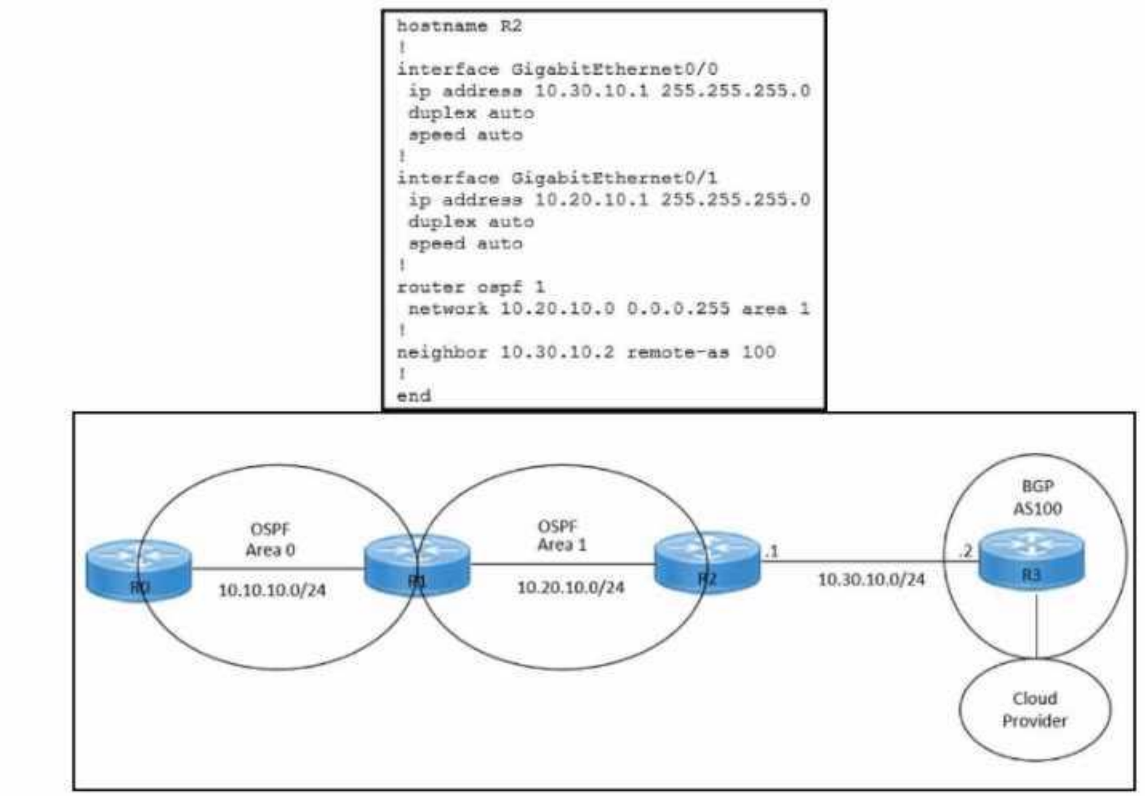
Answer: B
Explanation:
A highly secure multitier application in AWS that includes S3, RDS, and some additional private links requires specific routing and bucket policies to keep the traffic safe. The reasons are as follows:
- Specific routing policies are needed to ensure that the traffic between the tiers is routed through the private links, which provide secure and low-latency connectivity between AWS services and on-premises resources. The private links can also prevent the exposure of the data and the application logic to the public internet.
- Bucket policies are needed to control the access to the S3 buckets that store the application data. Bucket policies can specify the conditions under which the requests are allowed or denied, such as the source IP address, the encryption status, the request time, etc. Bucket policies can also enforce encryption in transit and at rest for the data in S3.

QUESTION 2
What is the role of service providers to establish private connectivity between on-premises networks and Google Cloud resources?

A. facilitate direct, dedicated network connections through Google Cloud Interconnect
B. enable intelligent routing and dynamic path selection using software-defined networking
C. provide end-to-end encryption for data transmission using native IPsec
D. accelerate content delivery through integration with Google Cloud CDN

Answer: A
Explanation:
The role of service providers to establish private connectivity between on-premises networks and Google Cloud resources is to facilitate direct, dedicated network connections through Google Cloud Interconnect. Google Cloud Interconnect is a service that allows customers to connect their on-premises networks to Google Cloud through a service provider partner. This provides low latency, high bandwidth, and secure connectivity to Google Cloud services, such as Google Compute Engine, Google Cloud Storage, and Google BigQuery. Google Cloud Interconnect also supports hybrid cloud scenarios, such as extending on-premises networks to Google Cloud regions, or connecting multiple Google Cloud regions together. Google Cloud Interconnect offers two types of connections: Dedicated Interconnect and Partner Interconnect. Dedicated Interconnect provides physical connections between the customer's network and Google's network at a Google Cloud Interconnect location. Partner Interconnect provides virtual connections between the customer's network and Google's network through a supported service provider partner. Both types of connections use VLAN attachments to establish private connectivity to Google Cloud Virtual Private Cloud (VPC) networks.

QUESTION 3
Refer to the exhibits. An engineer must redistribute IBGP routes into OSPF to connect an on-premises network to a cloud provider. Which command must be configured on router R2?



```
hostname R2
!
interface GigabitEthernet0/0
 ip address 10.30.10.1 255.255.255.0
 duplex auto
 speed auto
!
interface GigabitEthernet0/1
 ip address 10.20.10.1 255.255.255.0
 duplex auto
 speed auto
!
router ospf 1
 network 10.20.10.0 0.0.0.255 area 1
!
neighbor 10.30.10.2 remote-as 100
!
end
```

A. redistribute ospf 1
B. redistribute bgp 100 ospf 1
C. redistribute bgp 100 subnets
D. bgp redistrlbute-lnternal

Answer: B
Explanation:
This command redistributes the routes learned from BGP AS100 into OSPF Area 1, which allows router R2 to advertise those routes to router R1 and connect the on-premises network to the cloud provider. The other options are incorrect because they either redistribute the wrong routes or use the wrong syntax .

QUESTION 4
An engineer must configure an IPsec tunnel to the cloud VPN gateway. Which Two actions send traffic into the tunnel? (Choose two.)

A. Configure access lists that match the interesting user traffic.
B. Configure a static route.
C. Configure a local policy in Cisco vManage.
D. Configure an IPsec profile and match the remote peer IP address.
E. Configure policy-based routing.

Answer: AE
Explanation:
To send traffic into an IPsec tunnel to the cloud VPN gateway, the engineer must configure two actions:

- Configure access lists that match the interesting user traffic. This is the traffic that needs to be encrypted and sent over the IPsec tunnel. The access lists are applied to the crypto map that defines the IPsec parameters for the tunnel.
- Configure policy-based routing (PBR). This is a technique that allows the engineer to override the routing table and forward packets based on a defined policy. PBR can be used to send specific traffic to the IPsec tunnel interface, regardless of the destination IP address. This is useful when the cloud VPN gateway has a dynamic IP address or when multiple cloud VPN gateways are available for load balancing or redundancy.

QUESTION 5
Which architecture model establishes internet-based connectivity between on-premises networks and AWS cloud resources?

A. That establishes an iPsec VPN tunnel with Internet Key Exchange (IKE) for secure key negotiation and encrypted data transmission
B. That relies on AWS Elastic Load Balancing (ELB) for traffic distribution and uses SSL/TLS encryption for secure data transmission.
C. That employs AWS Direct Connect for a dedicated network connection and uses private IP addresses tor secure communication.
D. That uses Amazon CloudFront for caching and distributing content globally and uses HTTPS for secure data transfer.

Answer: A
Explanation:
The architecture model that establishes internet-based connectivity between on-premises networks and AWS cloud resources is the one that establishes an iPsec VPN tunnel with Internet Key Exchange (IKE) for secure key negotiation and encrypted data transmission. This model is also known as the VPN CloudHub model. It allows multiple remote sites to connect to the same virtual private gateway in AWS, creating a hub-and-spoke topology. The VPN CloudHub model provides the following benefits:
- It enables secure communication between remote sites and AWS over the public internet, using encryption and authentication protocols such as IPsec and IKE. It supports dynamic routing protocols such as BGP, which can automatically adjust the routing tables based on the availability and performance of the VPN tunnels.
- It allows for redundancy and load balancing across multiple VPN tunnels, increasing the reliability and throughput of the connectivity.
- It simplifies the management and configuration of the VPN connections, as each remote site only needs to establish one VPN tunnel to the virtual private gateway in AWS, rather than multiple tunnels to different VPCs or regions.

QUESTION 6
A cloud engineer is setting up a new set of nodes in the AWS EKS cluster to manage database integration with Mongo Atlas. The engineer set up security to Mongo but now wants to ensure that the nodes are also secure on the network side. Which feature in AWS should the engineer use?

A. EC2 Trust Lock
B. security groups
C. tagging
D. key pairs

Answer: B
Explanation:

Security groups are a feature in AWS that allow you to control the inbound and outbound traffic to your instances. They act as a virtual firewall that can filter the traffic based on the source, destination, protocol, and port. You can assign one or more security groups to your instances, and each security group can have multiple rules. Security groups are stateful, meaning that they automatically allow the response traffic for any allowed inbound traffic, and vice versa. Security groups are essential for securing your nodes in the AWS EKS cluster, as they can prevent unauthorized access to your Mongo Atlas database or other resources. You can also use security groups to isolate your nodes from other instances in the same VPC or subnet, or to allow communication between nodes in different clusters or regions.

QUESTION 7
Which feature is unique to Cisco SD-WAN IPsec tunnels compared to native IPsec VPN tunnels?

A. real-time dynamic path selection
B. tunneling protocols
C. end-to-end encryption
D. authentication mechanisms

Answer: A
Explanation:
Cisco SD-WAN IPsec tunnels are different from native IPsec VPN tunnels in several ways. One of the unique features of Cisco SD-WAN IPsec tunnels is that they support real-time dynamic path selection, which means that they can automatically choose the best path for each application based on the network conditions and policies. This feature improves the performance, reliability, and efficiency of the network traffic. Native IPsec VPN tunnels, on the other hand, do not have this capability and rely on static routing or manual configuration to select the path for each tunnel. This can result in suboptimal performance, increased latency, and higher costs.