

Amazon-Web-Services

Exam Questions ANS-C01

AWS Certified Advanced Networking Specialty Exam



NEW QUESTION 1

A company has developed an application on AWS that will track inventory levels of vending machines and initiate the restocking process automatically. The company plans to integrate this application with vending machines and deploy the vending machines in several markets around the world. The application resides in a VPC in the us-east-1 Region. The application consists of an Amazon Elastic Container Service (Amazon ECS) cluster behind an Application Load Balancer (ALB). The communication from the vending machines to the application happens over HTTPS.

The company is planning to use an AWS Global Accelerator accelerator and configure static IP addresses of the accelerator in the vending machines for application endpoint access. The application must be accessible only through the accelerator and not through a direct connection over the internet to the ALB endpoint.

Which solution will meet these requirements?

- A. Configure the ALB in a private subnet of the VP
- B. Attach an internet gateway without adding routes in the subnet route tables to point to the internet gatewa
- C. Configure the accelerator with endpoint groups that include the ALB endpoint
- D. Configure the ALB's security group to only allow inbound traffic from the internet on the ALB listener port.
- E. Configure the ALB in a private subnet of the VP
- F. Configure the accelerator with endpoint groups that include the ALB endpoint
- G. Configure the ALB's security group to only allow inbound traffic from the internet on the ALB listener port.
- H. Configure the ALB in a public subnet of the VPAttach an internet gatewa
- I. Add routes in the subnet route tables to point to the internet gatewa
- J. Configure the accelerator with endpoint groups that include the ALB endpoint
- K. Configure the ALB's security group to only allow inbound traffic from the accelerator's IP addresses on the ALB listener port.
- L. Configure the ALB in a private subnet of the VP
- M. Attach an internet gatewa
- N. Add routes in the subnet route tables to point to the internet gatewa
- O. Configure the accelerator with endpoint groups that include the ALB endpoint
- P. Configure the ALB's security group to only allow inbound trafficfrom the accelerator's IP addresses on the ALB listener port.

Answer: A

Explanation:

Please read the below link typically describing ELB integration with AWS Global accelator (and the last line of the extract) - <https://docs.aws.amazon.com/global-accelerator/latest/dg/secure-vpc-connections.html> "When you add an internal Application Load Balancer or an Amazon EC2 instance endpoint in AWS Global Accelerator, you enable internet traffic to flow directly to and from the endpoint in Virtual Private Clouds (VPCs) by targeting it in a private subnet. The VPC that contains the load balancer or EC2 instance must have an internet gateway attached to it, to indicate that the VPC accepts internet traffic. However, you don't need public IP addresses on the load balancer or EC2 instance. You also don't need an associated internet gateway route for the subnet."

NEW QUESTION 2

A real estate company is building an internal application so that real estate agents can upload photos and videos of various properties. The application will store these photos and videos in an Amazon S3 bucket as objects and will use Amazon DynamoDB to store corresponding metadata. The S3 bucket will be configured to publish all PUT events for new object uploads to an Amazon Simple Queue Service (Amazon SQS) queue.

A compute cluster of Amazon EC2 instances will poll the SQS queue to find out about newly uploaded objects. The cluster will retrieve new objects, perform proprietary image and video recognition and classification update metadata in DynamoDB and replace the objects with new watermarked objects. The company does not want public IP addresses on the EC2 instances.

Which networking design solution will meet these requirements MOST cost-effectively as application usage increases?

- A. Place the EC2 instances in a public subne
- B. Disable the Auto-assign Public IP option while launching the EC2 instance
- C. Create an internet gatewa
- D. Attach the internet gateway to the VP
- E. In the public subnet's route table, add a default route that points to the internet gateway.
- F. Place the EC2 instances in a private subne
- G. Create a NAT gateway in a public subnet in the same Availability Zon
- H. Create an internet gatewa
- I. Attach the internet gateway to the VP
- J. In the public subnet's route table, add a default route that points to the internet gateway
- K. Place the EC2 instances in a private subne
- L. Create an interface VPC endpoint for Amazon SQ
- M. Create gateway VPC endpoints for Amazon S3 and DynamoDB.
- N. Place the EC2 instances in a private subne
- O. Create a gateway VPC endpoint for Amazon SQS.Create interface VPC endpoints for Amazon S3 and DynamoDB.

Answer: C

NEW QUESTION 3

All IP addresses within a 10.0.0.0/16 VPC are fully utilized with application servers across two Availability Zones. The application servers need to send frequent UDP probes to a single central authentication server on the Internet to confirm that is running up-to-date packages. The network is designed for application servers to use a single NAT gateway for internal access. Testing reveals that a few of the servers are unable to communicate with the authentication server.

- A. The NAT gateway does not support UDP traffic.
- B. The authentication server is not accepting traffic.
- C. The NAT gateway cannot allocate more ports.
- D. The NAT gateway is launched in a private subnet.

Answer: C

Explanation:

Ref:<https://docs.aws.amazon.com/vpc/latest/userguide/vpc-nat-gateway.html>

"A NAT gateway can support up to 55,000 simultaneous connections to each unique destination. This limit also applies if you create approximately 900 connections per second to a single destination (about 55,000 connections per minute). If the destination IP address, the destination port, or the protocol

(TCP/UDP/ICMP) changes, you can create an additional 55,000 connections. For more than 55,000 connections, there is an increased chance of connection errors due to port allocation errors. These errors can be monitored by viewing the ErrorPortAllocation CloudWatch metric for your NAT gateway. For more information, see [Monitoring NAT Gateways Using Amazon CloudWatch](#)."

NEW QUESTION 4

A company's network engineer is designing a hybrid DNS solution for an AWS Cloud workload. Individual teams want to manage their own DNS hostnames for their applications in their development environment. The solution must integrate the application-specific hostnames with the centrally managed DNS hostnames from the on-premises network and must provide bidirectional name resolution. The solution also must minimize management overhead. Which combination of steps should the network engineer take to meet these requirements? (Choose three.)

- A. Use an Amazon Route 53 Resolver inbound endpoint.
- B. Modify the DHCP options set by setting a custom DNS server value.
- C. Use an Amazon Route 53 Resolver outbound endpoint.
- D. Create DNS proxy servers.
- E. Create Amazon Route 53 private hosted zones.
- F. Set up a zone transfer between Amazon Route 53 and the on-premises DNS.

Answer: ABE

NEW QUESTION 5

A company has two AWS accounts one for Production and one for Connectivity. A network engineer needs to connect the Production account VPC to a transit gateway in the Connectivity account. The feature to auto accept shared attachments is not enabled on the transit gateway. Which set of steps should the network engineer follow in each AWS account to meet these requirements?

- A. * 1. In the Production account: Create a resource share in AWS Resource Access Manager for the transit gateway
- B. Provide the Connectivity account ID
- C. Enable the feature to allow external accounts* 2. In the Connectivity account: Accept the resource.* 3. In the Connectivity account: Create an attachment to the VPC subnets.* 4. In the Production account: Accept the attachment
- D. Associate a route table with the attachment.
- E. * 1. In the Production account: Create a resource share in AWS Resource Access Manager for the VPC subnet
- F. Provide the Connectivity account ID
- G. Enable the feature to allow external accounts.* 2. In the Connectivity account: Accept the resource.* 3. In the Production account: Create an attachment on the transit gateway to the VPC subnets.* 4. In the Connectivity account: Accept the attachment
- H. Associate a route table with the attachment.
- I. * 1. In the Connectivity account: Create a resource share in AWS Resource Access Manager for the VPC subnet
- J. Provide the Production account ID
- K. Enable the feature to allow external accounts.* 2. In the Production account: Accept the resource.* 3. In the Connectivity account: Create an attachment on the transit gateway to the VPC subnets.* 4. In the Production account: Accept the attachment
- L. Associate a route table with the attachment.
- M. * 1. In the Connectivity account: Create a resource share in AWS Resource Access Manager for the transit gateway
- N. Provide the Production account ID Enable the feature to allow external accounts.* 2. In the Production account: Accept the resource.* 3. In the Production account: Create an attachment to the VPC subnets.* 4. In the Connectivity account: Accept the attachment
- O. Associate a route table with the attachment.

Answer: A

Explanation:

step 1: In the Production account, create a resource share in AWS Resource Access Manager for the transit gateway and provide the Connectivity account ID. Enabling the feature to allow external accounts is also required to share resources between accounts. Step 2: In the Connectivity account, accept the shared resource. This action will allow the Production account to use the transit gateway in the Connectivity account. Step 3: In the Connectivity account, create an attachment to the VPC subnets. This attachment will enable communication between the VPC in the Production account and the transit gateway in the Connectivity account. Step 4: In the Production account, accept the attachment and associate a route table with the attachment. This will enable the VPC to route traffic through the transit gateway to other resources in the Connectivity account.

NEW QUESTION 6

You deploy an Amazon EC2 instance that runs a web server into a subnet in a VPC. An Internet gateway is attached, and the main route table has a default route (0.0.0.0/0) configured with a target of the Internet gateway.

The instance has a security group configured to allow as follows:

- Protocol: TCP
- Port: 80 inbound, nothing outbound

The Network ACL for the subnet is configured to allow as follows:

- Protocol: TCP
- Port: 80 inbound, nothing outbound

When you try to browse to the web server, you receive no response. Which additional step should you take to receive a successful response?

- A. Add an entry to the security group outbound rules for Protocol: TCP, Port Range: 80
- B. Add an entry to the security group outbound rules for Protocol: TCP, Port Range: 1024-65535
- C. Add an entry to the Network ACL outbound rules for Protocol: TCP, Port Range: 80
- D. Add an entry to the Network ACL outbound rules for Protocol: TCP, Port Range: 1024-65535

Answer: D

Explanation:

To enable the connection to a service running on an instance, the associated network ACL must allow both inbound traffic on the port that the service is listening on as well as allow outbound traffic from ephemeral ports. When a client connects to a server, a random port from the ephemeral port range (1024-65535) becomes the client's source port. The designated ephemeral port then becomes the destination port for return traffic from the service, so outbound traffic from the ephemeral port must be allowed in the network ACL.<https://aws.amazon.com/premiumsupport/knowledge-center/resolve-connection-sg-acl-inbound/>

NEW QUESTION 7

A global delivery company is modernizing its fleet management system. The company has several business units. Each business unit designs and maintains applications that are hosted in its own AWS account in separate application VPCs in the same AWS Region. Each business unit's applications are designed to get data from a central shared services VPC.

The company wants the network connectivity architecture to provide granular security controls. The architecture also must be able to scale as more business units consume data from the central shared services VPC in the future.

Which solution will meet these requirements in the MOST secure manner?

- A. Create a central transit gateway
- B. Create a VPC attachment to each application VP
- C. Provide full mesh connectivity between all the VPCs by using the transit gateway.
- D. Create VPC peering connections between the central shared services VPC and each application VPC in each business unit's AWS account.
- E. Create VPC endpoint services powered by AWS PrivateLink in the central shared services VPC. Create VPC endpoints in each application VPC.
- F. Create a central transit VPC with a VPN appliance from AWS Marketplac
- G. Create a VPN attachment from each VPC to the transit VP
- H. Provide full mesh connectivity among all the VPCs.

Answer: C

Explanation:

Option C provides a secure and scalable solution using VPC endpoint services powered by AWS PrivateLink. AWS PrivateLink enables private connectivity between VPCs and services without exposing the data to the public internet or using a VPN connection. By creating VPC endpoints in each application VPC, the company can securely access the central shared services VPC without the need for complex network configurations. Furthermore, PrivateLink supports cross-account connectivity, which makes it a scalable solution as more business units consume data from the central shared services VPC in the future.

NEW QUESTION 8

A company is using Amazon Route 53 Resolver DNS Firewall in a VPC to block all domains except domains that are on an approved list. The company is concerned that if DNS Firewall is unresponsive, resources in the VPC might be affected if the network cannot resolve any DNS queries. To maintain application service level agreements, the company needs DNS queries to continue to resolve even if Route 53 Resolver does not receive a response from DNS Firewall.

Which change should a network engineer implement to meet these requirements?

- A. Update the DNS Firewall VPC configuration to disable fail open for the VPC.
- B. Update the DNS Firewall VPC configuration to enable fail open for the VPC.
- C. Create a new DHCP options set with parameter `dns_firewall_fail_open=fals`
- D. Associate the new DHCP options set with the VPC.
- E. Create a new DHCP options set with parameter `dns_firewall_fail_open=tru`
- F. Associate the new DHCP options set with the VPC.

Answer: B

NEW QUESTION 9

A company manages resources across VPCs in multiple AWS Regions. The company needs to connect to the resources by using its internal domain name. A network engineer needs to apply the `aws.example.com` DNS suffix to all resources.

What must the network engineer do to meet this requirement?

- A. Create an Amazon Route 53 private hosted zone for `aws.example.com` in each Region that has resource
- B. Associate the private hosted zone with that Region's VP
- C. In the appropriate private hosted zone, create DNS records for the resources in each Region.
- D. Create one Amazon Route 53 private hosted zone for `aws.example.co`
- E. Configure the private hosted zone to allow zone transfers with every VPC.
- F. Create one Amazon Route 53 private hosted zone for `example.co`
- G. Create a single resource record for `aws.example.com` in the private hosted zon
- H. Apply a multivalue answer routing policy to the recor
- I. Add all VPC resources as separate values in the routing policy.
- J. Create one Amazon Route 53 private hosted zone for `aws.example.co`
- K. Associate the private hosted zone with every VPC that has resource
- L. In the private hosted zone, create DNS records for all resources.

Answer: D

Explanation:

Creating one private hosted zone for `aws.example.com` and associating it with every VPC that has resources would enable DNS resolution for all resources by using their internal domain name. Creating an alias record in each private hosted zone with the full AWS service endpoint pointing to the interface VPC endpoint in the shared services VPC would enable private connectivity to Amazon S3 and AWS Systems Manager without using public endpoints.

NEW QUESTION 10

A company is hosting an application on Amazon EC2 instances behind an Application Load Balancer. The instances are in an Amazon EC2 Auto Scaling group. Because of a recent change to a security group, external users cannot access the application.

A network engineer needs to prevent this downtime from happening again. The network engineer must implement a solution that remediates noncompliant changes to security groups.

Which solution will meet these requirements?

- A. Configure Amazon GuardDuty to detect inconsistencies between the desired security group configuration and the current security group configuratio
- B. Create an AWS Systems Manager Automation runbook to remediate noncompliant security groups.
- C. Configure an AWS Config rule to detect inconsistencies between the desired security group configuration and the current security group configuratio
- D. Configure AWS OpsWorks for Chef to remediate noncompliant security groups.
- E. Configure Amazon GuardDuty to detect inconsistencies between the desired security group configuration and the current security group configuratio
- F. Configure AWS OpsWorks for Chef to remediate noncompliant security groups.
- G. Configure an AWS Config rule to detect inconsistencies between the desired security group configuration and the current security group configuratio
- H. Create an AWS Systems Manager Automation runbook to remediate noncompliant security groups.

Answer: D

Explanation:

Configuring an AWS Config rule to detect inconsistencies between the desired security group configuration and the current security group configuration would enable evaluation of the compliance status of the security groups based on predefined or custom rules³. Creating an AWS Systems Manager Automation runbook to remediate noncompliant security groups would enable automation of the remediation process². Additionally, configuring AWS Config to trigger the runbook when a noncompliant change is detected would enable timely and consistent remediation of security group changes.

NEW QUESTION 10

A company's development team has created a new product recommendation web service. The web service is hosted in a VPC with a CIDR block of 192.168.224.0/19. The company has deployed the web service on Amazon EC2 instances and has configured an Auto Scaling group as the target of a Network Load Balancer (NLB).

The company wants to perform testing to determine whether users who receive product recommendations spend more money than users who do not receive product recommendations. The company has a big sales event in 5 days and needs to integrate its existing production environment with the recommendation engine by then. The existing production environment is hosted in a VPC with a CIDR block of 192.168.128.0/17.

A network engineer must integrate the systems by designing a solution that results in the least possible disruption to the existing environments. Which solution will meet these requirements?

- A. Create a VPC peering connection between the web service VPC and the existing production VP
- B. Add a routing rule to the appropriate route table to allow data to flow to 192.168.224.0/19 from the existing production environment and to flow to 192.168.128.0/17 from the web service environmen
- C. Configure the relevant security groups and ACLs to allow the systems to communicate.
- D. Ask the development team of the web service to redeploy the web service into the production VPC and integrate the systems there.
- E. Create a VPC endpoint servic
- F. Associate the VPC endpoint service with the NLB for the web service. Create an interface VPC endpoint for the web service in the existing production VPC.
- G. Create a transit gateway in the existing production environmen
- H. Create attachments to the production VPC and the web service VP
- I. Configure appropriate routing rules in the transit gateway and VPC route tables for 192.168.224.0/19 and 192.168.128.0/17. Configure the relevant security groups and ACLs to allow the systems to communicate.

Answer: C

NEW QUESTION 13

A company hosts an application on Amazon EC2 instances behind an Application Load Balancer (ALB). The company recently experienced a network security breach. A network engineer must collect and analyze logs that include the client IP address, target IP address, target port, and user agent of each user that accesses the application.

What is the MOST operationally efficient solution that meets these requirements?

- A. Configure the ALB to store logs in an Amazon S3 bucke
- B. Download the files from Amazon S3, and use a spreadsheet application to analyze the logs.
- C. Configure the ALB to push logs to Amazon Kinesis Data Stream
- D. Use Amazon Kinesis Data Analytics to analyze the logs.
- E. Configure Amazon Kinesis Data Streams to stream data from the ALB to Amazon OpenSearch Service (Amazon Elasticsearch Service). Use search operations in Amazon OpenSearch Service (Amazon Elasticsearch Service) to analyze the data.
- F. Configure the ALB to store logs in an Amazon S3 bucke
- G. Use Amazon Athena to analyze the logs in Amazon S3.

Answer: D

Explanation:

The most operationally efficient solution to collect and analyze logs that include the client IP address, target IP address, target port, and user agent of each user that accesses the application would be to configure the ALB to store logs in an Amazon S3 bucket and use Amazon Athena to analyze the logs in Amazon S3 (Option D). This solution allows for quick and easy analysis of log data without requiring manual download or manipulation of log files.

NEW QUESTION 18

A network engineer must provide additional safeguards to protect encrypted data at Application Load Balancers (ALBs) through the use of a unique random session key.

What should the network engineer do to meet this requirement?

- A. Change the ALB security policy to a policy that supports TLS 1.2 protocol only
- B. Use AWS Key Management Service (AWS KMS) to encrypt session keys
- C. Associate an AWS WAF web ACL with the ALB
- D. and create a security rule to enforce forward secrecy (FS)
- E. Change the ALB security policy to a policy that supports forward secrecy (FS)

Answer: D

NEW QUESTION 19

A global company operates all its non-production environments out of three AWS Regions: eu-west-1, us-east-1, and us-west-1. The company hosts all its production workloads in two on-premises data centers. The company has 60 AWS accounts and each account has two VPCs in each Region. Each VPC has a virtual private gateway where two VPN connections terminate for resilient connectivity to the data centers. The company has 360 VPN tunnels to each data center, resulting in high management overhead. The total VPN throughput for each Region is 500 Mbps.

The company wants to migrate the production environments to AWS. The company needs a solution that will simplify the network architecture and allow for future growth. The production environments will generate an additional 2 Gbps of traffic per Region back to the data centers. This traffic will increase over time.

Which solution will meet these requirements?

- A. Set up an AWS Direct Connect connection from each data center to AWS in each Regio
- B. Create and attach private VIFs to a single Direct Connect gatewa
- C. Attach the Direct Connect gateway to all the VPC

- D. Remove the existing VPN connections that are attached directly to the virtual private gateways.
- E. Create a single transit gateway with VPN connections from each data center
- F. Share the transit gateway with each account by using AWS Resource Access Manager (AWS RAM). Attach the transit gateway to each VPC
- G. Remove the existing VPN connections that are attached directly to the virtual private gateways.
- H. Create a transit gateway in each Region with multiple newly commissioned VPN connections from each data center
- I. Share the transit gateways with each account by using AWS Resource Access Manager (AWS RAM). In each Region, attach the transit gateway to each VPC
- J. Peer all the VPCs in each Region to a new VPC in each Region that will function as a centralized transit VPC
- K. Create new VPN connections from each data center to the transit VPC
- L. Terminate the original VPN connections that are attached to all the original VPCs
- M. Retain the new VPN connection to the new transit VPC in each Region.

Answer: C

NEW QUESTION 20

A company has a hybrid cloud environment. The company's data center is connected to the AWS Cloud by an AWS Direct Connect connection. The AWS environment includes VPCs that are connected together in a hub-and-spoke model by a transit gateway. The AWS environment has a transit VIF with a Direct Connect gateway for on-premises connectivity.

The company has a hybrid DNS model. The company has configured Amazon Route 53 Resolver endpoints in the hub VPC to allow bidirectional DNS traffic flow. The company is running a backend application in one of the VPCs.

The company uses a message-oriented architecture and employs Amazon Simple Queue Service (Amazon SQS) to receive messages from other applications over a private network. A network engineer wants to use an interface VPC endpoint for Amazon SQS for this architecture. Client services must be able to access the endpoint service from on premises and from multiple VPCs within the company's AWS infrastructure.

Which combination of steps should the network engineer take to ensure that the client applications can resolve DNS for the interface endpoint? (Choose three.)

- A. Create the interface endpoint for Amazon SQS with the option for private DNS names turned on.
- B. Create the interface endpoint for Amazon SQS with the option for private DNS names turned off.
- C. Manually create a private hosted zone for sqs.us-east-1.amazonaws.com
- D. Add necessary records that point to the interface endpoint
- E. Associate the private hosted zones with other VPCs.
- F. Use the automatically created private hosted zone for sqs.us-east-1.amazonaws.com with previously created necessary records that point to the interface endpoint
- G. Associate the private hosted zones with other VPCs.
- H. Access the SQS endpoint by using the public DNS name sqs.us-east-1.amazonaws.com in VPCs and on premises.
- I. Access the SQS endpoint by using the private DNS name of the interface endpoint sqs.us-east-1.vpce.amazonaws.com in VPCs and on premises.

Answer: ADF

NEW QUESTION 21

A company has deployed a critical application on a fleet of Amazon EC2 instances behind an Application Load Balancer. The application must always be reachable on port 443 from the public internet. The application recently had an outage that resulted from an incorrect change to the EC2 security group.

A network engineer needs to automate a way to verify the network connectivity between the public internet and the EC2 instances whenever a change is made to the security group. The solution also must notify the network engineer when the change affects the connection.

Which solution will meet these requirements?

- A. Enable VPC Flow Logs on the elastic network interface of each EC2 instance to capture REJECT traffic on port 443. Publish the flow log records to a log group in Amazon CloudWatch Log
- B. Create a CloudWatch Logs metric filter for the log group for rejected traffic
- C. Create an alarm to notify the network engineer.
- D. Enable VPC Flow Logs on the elastic network interface of each EC2 instance to capture all traffic on port 443. Publish the flow log records to a log group in Amazon CloudWatch Log
- E. Create a CloudWatch Logs metric filter for the log group for all traffic
- F. Create an alarm to notify the network engineer
- G. Create a VPC Reachability Analyzer path on port 443. Specify the security group as the source
- H. Specify the EC2 instances as the destination
- I. Create an Amazon Simple Notification Service (Amazon SNS) topic to notify the network engineer when a change to the security group affects the connection
- J. Create an AWS Lambda function to start Reachability Analyzer and to publish a message to the SNS topic in case the analyses fail
- K. Create an Amazon EventBridge (Amazon CloudWatch Events) rule to invoke the Lambda function when a change to the security group occurs
- L. Specify the EC2 instances as the destination
- M. Create an Amazon Simple Notification Service (Amazon SNS) topic to notify the network engineer when a change to the security group affects the connection
- N. Create an AWS Lambda function to start Reachability Analyzer and to publish a message to the SNS topic in case the analyses fail
- O. Create an Amazon EventBridge (Amazon CloudWatch Events) rule to invoke the Lambda function when a change to the security group occurs.

Answer: C

NEW QUESTION 26

An organization launched an IPv6-only web portal to support IPv6-native mobile clients. Front-end instances launch in an Amazon VPC associated with an appropriate IPv6 CIDR. The VPC IPv4 CIDR is fully utilized. A single subnet exists in each of two Availability Zones with appropriately configured IPv6 CIDR associations. Auto Scaling is properly configured, and no Elastic Load Balancing is used.

Customers say the service is unavailable during peak load times. The network engineer attempts to launch an instance manually and receives the following message: "There are not enough free addresses in subnet 'subnet-12345677' to satisfy the requested number of instances."

What action will resolve the availability problem?

- A. Create a new subnet using a VPC secondary IPv6 CIDR, and associate an IPv6 CIDR
- B. Include the new subnet in the Auto Scaling group.
- C. Create a new subnet using a VPC secondary IPv4 CIDR, and associate an IPv6 CIDR
- D. Include the new subnet in the Auto Scaling group.
- E. Resize the IPv6 CIDR on each of the existing subnets
- F. Modify the Auto Scaling group maximum number of instances.

- G. Add a secondary IPv4 CIDR to the Amazon VP
- H. Assign secondary IPv4 address space to each of the existing subnets.

Answer: B

NEW QUESTION 27

A company is planning to deploy many software-defined WAN (SD-WAN) sites. The company is using AWS Transit Gateway and has deployed a transit gateway in the required AWS Region. A network engineer needs to deploy the SD-WAN hub virtual appliance into a VPC that is connected to the transit gateway. The solution must support at least 5 Gbps of throughput from the SD-WAN hub virtual appliance to other VPCs that are attached to the transit gateway. Which solution will meet these requirements?

- A. Create a new VPC for the SD-WAN hub virtual appliance
- B. Create two IPsec VPN connections between the SD-WAN hub virtual appliance and the transit gateway
- C. Configure BGP over the IPsec VPN connections
- D. Assign a new CIDR block to the transit gateway
- E. Create a new VPC for the SD-WAN hub virtual appliance
- F. Attach the new VPC to the transit gateway with a VPC attachment
- G. Add a transit gateway Connect attachment
- H. Create a Connect peer and specify the GRE and BGP parameter
- I. Create a route in the appropriate VPC for the SD-WAN hub virtual appliance to route to the transit gateway.
- J. Create a new VPC for the SD-WAN hub virtual appliance
- K. Attach the new VPC to the transit gateway with a VPC attachment
- L. Create two IPsec VPN connections between the SD-WAN hub virtual appliance and the transit gateway
- M. Configure BGP over the IPsec VPN connections.
- N. Assign a new CIDR block to the transit gateway
- O. Create a new VPC for the SD-WAN hub virtual appliance
- P. Attach the new VPC to the transit gateway with a VPC attachment
- Q. Add a transit gateway Connect attachment
- R. Create a Connect peer and specify the VXLAN and BGP parameter
- S. Create a route in the appropriate VPC for the SD-WAN hub virtual appliance to route to the transit gateway.

Answer: D

NEW QUESTION 32

A company hosts a web application on Amazon EC2 instances behind an Application Load Balancer (ALB). The ALB is the origin in an Amazon CloudFront distribution. The company wants to implement a custom authentication system that will provide a token for its authenticated customers. The web application must ensure that the GET/POST requests come from authenticated customers before it delivers the content. A network engineer must design a solution that gives the web application the ability to identify authorized customers. What is the MOST operationally efficient solution that meets these requirements?

- A. Use the ALB to inspect the authorized token inside the GET/POST request payload
- B. Use an AWS Lambda function to insert a customized header to inform the web application of an authenticated customer request.
- C. Integrate AWS WAF with the ALB to inspect the authorized token inside the GET/POST request payload
- D. Configure the ALB listener to insert a customized header to inform the web application of an authenticated customer request.
- E. Use an AWS Lambda@Edge function to inspect the authorized token inside the GET/POST request payload
- F. Use the Lambda@Edge function also to insert a customized header to inform the web application of an authenticated customer request.
- G. Set up an EC2 instance that has a third-party packet inspection tool to inspect the authorized token inside the GET/POST request payload
- H. Configure the tool to insert a customized header to inform the web application of an authenticated customer request.

Answer: C

NEW QUESTION 35

A bank built a new version of its banking application in AWS using containers that connect to an on-premises database over VPN connection. This application version requires users to also update their client application. The bank plans to deprecate the earlier client version. However, the company wants to keep supporting earlier clients through their on-premises version of the application to serve a small portion of the customers who haven't yet upgraded. What design will allow the company to serve both newer and earlier clients in the MOST efficient way?

- A. Use an Amazon Route 53 multivalue answer routing policy to route older client traffic to the on-premises application version and the rest of the traffic to the new AWS based version.
- B. Use a Classic Load Balancer for the new application
- C. Route all traffic to the new application by using an Elastic Load Balancing (ELB) load balancer DNS
- D. Define a user-agent-based rule on the backend servers to redirect earlier clients to the on-premises application.
- E. Use an Application Load Balancer for the new application
- F. Register both the new and earlier applications as separate target groups and use path-based routing to route traffic based on the application version.
- G. Use an Application Load Balancer for the new application
- H. Register both the new and earlier application backends as separate target groups
- I. Use header-based routing to route traffic based on the application version.

Answer: D

NEW QUESTION 40

A company wants to improve visibility into its AWS environment. The AWS environment consists of multiple VPCs that are connected to a transit gateway. The transit gateway connects to an on-premises data center through an AWS Direct Connect gateway and a pair of redundant Direct Connect connections that use transit VIFs. The company must receive notification each time a new route is advertised to AWS from on-premises over Direct Connect. What should a network engineer do to meet these requirements?

- A. Enable Amazon CloudWatch metrics on Direct Connect to track the received route
- B. Configure a CloudWatch alarm to send notifications when routes change.
- C. Onboard Transit Gateway Network Manager to Amazon CloudWatch Logs Insight

- D. Use Amazon EventBridge (Amazon CloudWatch Events) to send notifications when routes change.
- E. Configure an AWS Lambda function to periodically check the routes on the Direct Connect gateway and to send notifications when routes change.
- F. Enable Amazon CloudWatch Logs on the transit VIFs to track the received route
- G. Create a metric filter Set an alarm on the filter to send notifications when routes change.

Answer: B

Explanation:

<https://docs.aws.amazon.com/network-manager/latest/cloudwan/cloudwan-cloudwatch-events.html>

To receive notification each time a new route is advertised to AWS from on premises over Direct Connect, a network engineer should onboard Transit Gateway Network Manager to Amazon CloudWatch Logs Insights and use Amazon EventBridge (Amazon CloudWatch Events) to send notifications when routes change (Option B). This solution allows for real-time monitoring of route changes and automatic notification when new routes are advertised.

NEW QUESTION 42

An organization is replacing a tape backup system with a storage gateway. there is currently no connectivity to AWS. Initial testing is needed. What connection option should the organization use to get up and running at minimal cost?

- A. Use an internet connection.
- B. Set up an AWS VPN connection.
- C. Provision an AWS Direct Connection private virtual interface.
- D. Provision a Direct Connect public virtual interface.

Answer: A

NEW QUESTION 43

A company's AWS architecture consists of several VPCs. The VPCs include a shared services VPC and several application VPCs. The company has established network connectivity from all VPCs to the on-premises DNS servers.

Applications that are deployed in the application VPCs must be able to resolve DNS for internally hosted domains on premises. The applications also must be able to resolve local VPC domain names and domains that are hosted in Amazon Route 53 private hosted zones.

What should a network engineer do to meet these requirements?

- A. Create a new Route 53 Resolver inbound endpoint in the shared services VP
- B. Create forwarding rules for the on-premises hosted domain
- C. Associate the rules with the new Resolver endpoint and each application VP
- D. Update each application VPC's DHCP configuration to point DNS resolution to the new Resolver endpoint.
- E. Create a new Route 53 Resolver outbound endpoint in the shared services VP
- F. Create forwarding rules for the on-premises hosted domain
- G. Associate the rules with the new Resolver endpoint and each application VPC.
- H. Create a new Route 53 Resolver outbound endpoint in the shared services VPCcreate forwarding rules for the on-premises hosted domain
- I. Associate the rules with the new Resolver endpoint and each application VPUpdate each application VPC's DHCP configuration to point DNS resolution to the new Resolver endpoint.
- J. Create a new Route 53 Resolver inbound endpoint in the shared services VP
- K. Create forwarding rules for the on-premises hosted domain
- L. Associate the rules with the new Resolver endpoint and each application VPC.

Answer: B

Explanation:

Creating a new Route 53 Resolver outbound endpoint in the shared services VPC would enable forwarding of DNS queries from the VPC to on-premises1.

Creating forwarding rules for the on-premises hosted domains would enable specifying which domain names are forwarded to the on-premises DNS servers2.

Associating the rules with the new Resolver endpoint and each application VPC would enable applying the rules to the VPCs2. This solution would not affect the default DNS resolution behavior of Route 53 Resolver for local VPC domain names and domains that are hosted in Route 53 private hosted zones3.

NEW QUESTION 47

A company has several production applications across different accounts in the AWS Cloud. The company operates from the us-east-1 Region only. Only certain partner companies can access the applications. The applications are running on Amazon EC2 instances that are in an Auto Scaling group behind an Application Load Balancer (ALB). The EC2 instances are in private subnets and allow traffic only from the ALB. The ALB is in a public subnet and allows inbound traffic only from partner network IP address ranges over port 80.

When the company adds a new partner, the company must allow the IP address range of the partner network in the security group that is associated with the ALB in each account. A network engineer must implement a solution to centrally manage the partner network IP address ranges.

Which solution will meet these requirements in the MOST operationally efficient manner?

- A. Create an Amazon DynamoDB table to maintain all IP address ranges and security groups that need to be update
- B. Update the DynamoDB table with the new IP address range when the company adds a new partne
- C. Invoke an AWS Lambda function to read new IP address ranges and security groups from the DynamoDB table to update the security group
- D. Deploy this solution in all accounts.
- E. Create a new prefix lis
- F. Add all allowed IP address ranges to the prefix lis
- G. Use Amazon EventBridge (Amazon CloudWatch Events) rules to invoke an AWS Lambda function to update security groups whenever a new IP address range is added to the prefix lis
- H. Deploy this solution in all accounts.
- I. Create a new prefix lis
- J. Add all allowed IP address ranges to the prefix lis
- K. Share the prefix list across different accounts by using AWS Resource Access Manager (AWS RAM). Update security groups to use the prefix list instead of the partner IP address rang
- L. Update the prefix list with the new IP address range when the company adds a new partner.
- M. Create an Amazon S3 bucket to maintain all IP address ranges and security groups that need to be update
- N. Update the S3 bucket with the new IP address range when the company adds a new partne
- O. Invoke an AWS Lambda function to read new IP address ranges and security groups from the S3 bucket to update the security group

P. Deploy this solution in all accounts.

Answer: C

Explanation:

Creating a new prefix list and adding all allowed IP address ranges to the prefix list would enable grouping of CIDR blocks that can be referenced in security group rules³. Sharing the prefix list across different accounts by using AWS Resource Access Manager (AWS RAM) would enable central management of the partner network IP address ranges⁵. Updating security groups to use the prefix list instead of the partner IP address range would enable simplification of security group rules³. Updating the prefix list with the new IP address range when the company adds a new partner would enable automatic propagation of the changes to all security groups that use the prefix list³.

NEW QUESTION 49

A company is hosting an application on Amazon EC2 instances behind a Network Load Balancer (NLB). A solutions architect added EC2 instances in a second Availability Zone to improve the availability of the application. The solutions architect added the instances to the NLB target group. The company's operations team notices that traffic is being routed only to the instances in the first Availability Zone. What is the MOST operationally efficient solution to resolve this issue?

- A. Enable the new Availability Zone on the NLB
- B. Create a new NLB for the instances in the second Availability Zone
- C. Enable proxy protocol on the NLB
- D. Create a new target group with the instances in both Availability Zones

Answer: A

Explanation:

When adding instances in a new Availability Zone to an existing Network Load Balancer (NLB), it is important to ensure that the new Availability Zone is enabled on the NLB. This will allow traffic to be routed to instances in both Availability Zones. This can be done by editing the settings of the NLB and selecting the new Availability Zone from the list of available zones.

NEW QUESTION 52

A retail company is running its service on AWS. The company's architecture includes Application Load Balancers (ALBs) in public subnets. The ALB target groups are configured to send traffic to backend Amazon EC2 instances in private subnets. These backend EC2 instances can call externally hosted services over the internet by using a NAT gateway.

The company has noticed in its billing that NAT gateway usage has increased significantly. A network engineer needs to find out the source of this increased usage.

Which options can the network engineer use to investigate the traffic through the NAT gateway? (Choose two.)

- A. Enable VPC flow logs on the NAT gateway's elastic network interface
- B. Publish the logs to a log group in Amazon CloudWatch Log
- C. Use CloudWatch Logs Insights to query and analyze the logs.
- D. Enable NAT gateway access log
- E. Publish the logs to a log group in Amazon CloudWatch Log
- F. Use CloudWatch Logs Insights to query and analyze the logs.
- G. Configure Traffic Mirroring on the NAT gateway's elastic network interface
- H. Send the traffic to an additional EC2 instance
- I. Use tools such as tcpdump and Wireshark to query and analyze the mirrored traffic.
- J. Enable VPC flow logs on the NAT gateway's elastic network interface
- K. Publish the logs to an Amazon S3 bucket
- L. Create a custom table for the S3 bucket in Amazon Athena to describe the log structure
- M. Use Athena to query and analyze the logs.
- N. Enable NAT gateway access log
- O. Publish the logs to an Amazon S3 bucket
- P. Create a custom table for the S3 bucket in Amazon Athena to describe the log structure
- Q. Use Athena to query and analyze the logs.

Answer: AD

Explanation:

To investigate the increased usage of a NAT gateway in a VPC architecture with ALBs and backend EC2 instances, a network engineer can use the following options:

➤ Enable VPC flow logs on the NAT gateway's elastic network interface and publish the logs to a log group in Amazon CloudWatch Logs. Use CloudWatch Logs Insights to query and analyze the logs.

(Option A)

➤ Enable VPC flow logs on the NAT gateway's elastic network interface and publish the logs to an Amazon S3 bucket. Create a custom table for the S3 bucket in Amazon Athena to describe the log structure and use Athena to query and analyze the logs. (Option D)

These options allow for detailed analysis of traffic through the NAT gateway to identify the source of increased usage.

NEW QUESTION 57

A network engineer has deployed an Amazon EC2 instance in a private subnet in a VPC. The VPC has no public subnet. The EC2 instance hosts application code that sends messages to an Amazon Simple Queue Service (Amazon SQS) queue. The subnet has the default network ACL with no modification applied. The EC2 instance has the default security group with no modification applied.

The SQS queue is not receiving messages.

Which of the following are possible causes of this problem? (Choose two.)

- A. The EC2 instance is not attached to an IAM role that allows write operations to Amazon SQS.
- B. The security group is blocking traffic to the IP address range used by Amazon SQS
- C. There is no interface VPC endpoint configured for Amazon SQS
- D. The network ACL is blocking return traffic from Amazon SQS
- E. There is no route configured in the subnet route table for the IP address range used by Amazon SQS

Answer: CE

NEW QUESTION 60

A government contractor is designing a multi-account environment with multiple VPCs for a customer. A network security policy requires all traffic between any two VPCs to be transparently inspected by a third-party appliance.

The customer wants a solution that features AWS Transit Gateway. The setup must be highly available across multiple Availability Zones, and the solution needs to support automated failover. Furthermore, asymmetric routing is not supported by the inspection appliances.

Which combination of steps is part of a solution that meets these requirements? (Choose two.)

- A. Deploy two clusters that consist of multiple appliances across multiple Availability Zones in a designated inspection VP
- B. Connect the inspection VPC to the transit gateway by using a VPC attachmen
- C. Create a target group, and register the appliances with the target grou
- D. Create a Network Load Balancer (NLB), and set it up to forward to the newly created target grou
- E. Configure a default route in the inspection VPCs transit gateway subnet toward the NLB.
- F. Deploy two clusters that consist of multiple appliances across multiple Availability Zones in a designated inspection VP
- G. Connect the inspection VPC to the transit gateway by using a VPC attachmen
- H. Create a target group, and register the appliances with the target grou
- I. Create a Gateway Load Balancer, and set it up to forward to the newly created target grou
- J. Configure a default route in the inspection VPC's transit gateway subnet toward the Gateway Load Balancer endpoint.
- K. Configure two route tables on the transit gatewa
- L. Associate one route table with all the attachments of the application VPC
- M. Associate the other route table with the inspection VPC's attachmen
- N. Propagate all VPC attachments into the inspection route tabl
- O. Define a static default route in the application route tabl
- P. Enable appliance mode on the attachment that connects the inspection VPC.
- Q. Configure two route tables on the transit gatewa
- R. Associate one route table with all the attachments of the application VPC
- S. Associate the other route table with the inspection VPCs attachmen
- T. Propagate all VPC attachments into the application route tabl
- . Define a static default route in the inspection route tabl
- . Enable appliance mode on the attachment that connects the inspection VPC.
- . Configure one route table on the transit gatewa
- . Associate the route table with all the VPC
- . Propagate all VPC attachments into the route tabl
- . Define a static default route in the route table.

Answer: BC

NEW QUESTION 61

A company is running multiple workloads on Amazon EC2 instances in public subnets. In a recent incident, an attacker exploited an application vulnerability on one of the EC2 instances to gain access to the instance. The company fixed the application and launched a replacement EC2 instance that contains the updated application.

The attacker used the compromised application to spread malware over the internet. The company became aware of the compromise through a notification from AWS. The company needs the ability to identify when an application that is deployed on an EC2 instance is spreading malware.

Which solution will meet this requirement with the LEAST operational effort?

- A. Use Amazon GuardDuty to analyze traffic patterns by inspecting DNS requests and VPC flow logs.
- B. Use Amazon GuardDuty to deploy AWS managed decoy systems that are equipped with the most recent malware signatures.
- C. Set up a Gateway Load Balance
- D. Run an intrusion detection system (IDS) appliance from AWS Marketplace on Amazon EC2 for traffic inspection.
- E. Configure Amazon Inspector to perform deep packet inspection of outgoing traffic.

Answer: A

Explanation:

This solution involves using Amazon GuardDuty to monitor network traffic and analyze DNS requests and VPC flow logs for suspicious activity. This will allow the company to identify when an application is spreading malware by monitoring the network traffic patterns associated with the instance. GuardDuty is a fully managed threat detection service that continuously monitors for malicious activity and unauthorized behavior in your AWS accounts and workloads. It requires minimal setup and configuration and can be integrated with other AWS services for automated remediation. This solution requires the least operational effort compared to the other options

NEW QUESTION 64

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