

# Amazon-Web-Services

## Exam Questions ANS-C01

AWS Certified Advanced Networking Specialty Exam



### NEW QUESTION 1

An IoT company sells hardware sensor modules that periodically send out temperature, humidity, pressure, and location data through the MQTT messaging protocol. The hardware sensor modules send this data to the company's on-premises MQTT brokers that run on Linux servers behind a load balancer. The hardware sensor modules have been hardcoded with public IP addresses to reach the brokers. The company is growing and is acquiring customers across the world. The existing solution can no longer scale and is introducing additional latency because of the company's global presence. As a result, the company decides to migrate its entire infrastructure from on premises to the AWS Cloud. The company needs to migrate without reconfiguring the hardware sensor modules that are already deployed across the world. The solution also must minimize latency. The company migrates the MQTT brokers to run on Amazon EC2 instances. What should the company do next to meet these requirements?

- A. Place the EC2 instances behind a Network Load Balancer (NLB). Configure TCP listener
- B. Use Bring Your Own IP (BYOIP) from the on-premises network with the NLB.
- C. Place the EC2 instances behind a Network Load Balancer (NLB). Configure TCP listener
- D. Create an AWS Global Accelerator accelerator in front of the NLB. Use Bring Your Own IP (BYOIP) from the on-premises network with Global Accelerator.
- E. Place the EC2 instances behind an Application Load Balancer (ALB). Configure TCP listener
- F. Create an AWS Global Accelerator accelerator in front of the ALB
- G. Use Bring Your Own IP (BYOIP) from the on-premises network with Global Accelerator
- H. Place the EC2 instances behind an Amazon CloudFront distribution
- I. Use Bring Your Own IP (BYOIP) from the on-premises network with CloudFront.

**Answer: B**

### NEW QUESTION 2

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 VPC
- B. Attach an internet gateway without adding routes in the subnet route tables to point to the internet gateway
- 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 VPC
- 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 VPC. Attach an internet gateway
- I. Add routes in the subnet route tables to point to the internet gateway
- 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 VPC
- M. Attach an internet gateway
- N. Add routes in the subnet route tables to point to the internet gateway
- O. Configure the accelerator with endpoint groups that include the ALB endpoint
- P. Configure the ALB's security group to only allow inbound traffic from 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 accelerator (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 3

A network engineer needs to standardize a company's approach to centralizing and managing interface VPC endpoints for private communication with AWS services. The company uses AWS Transit Gateway for inter-VPC connectivity between AWS accounts through a hub-and-spoke model. The company's network services team must manage all Amazon Route 53 zones and interface endpoints within a shared services AWS account. The company wants to use this centralized model to provide AWS resources with access to AWS Key Management Service (AWS KMS) without sending traffic over the public internet. What should the network engineer do to meet these requirements?

- A. In the shared services account, create an interface endpoint for AWS KMS
- B. Modify the interface endpoint by disabling the private DNS name
- C. Create a private hosted zone in the shared services account with an alias record that points to the interface endpoint
- D. Associate the private hosted zone with the spoke VPCs in each AWS account.
- E. In the shared services account, create an interface endpoint for AWS KMS
- F. Modify the interface endpoint by disabling the private DNS name
- G. Create a private hosted zone in each spoke AWS account with an alias record that points to the interface endpoint
- H. Associate each private hosted zone with the shared services AWS account.
- I. In each spoke AWS account, create an interface endpoint for AWS KMS
- J. Modify each interface endpoint by disabling the private DNS name
- K. Create a private hosted zone in each spoke AWS account with an alias record that points to each interface endpoint
- L. Associate each private hosted zone with the shared services AWS account.
- M. In each spoke AWS account, create an interface endpoint for AWS KMS
- N. Modify each interface endpoint by disabling the private DNS name
- O. Create a private hosted zone in the shared services account with an alias record that points to each interface endpoint

P. Associate the private hosted zone with the spoke VPCs in each AWS account.

**Answer:** A

#### NEW QUESTION 4

A company has an AWS Direct Connect connection between its on-premises data center in the United States (US) and workloads in the us-east-1 Region. The connection uses a transit VIF to connect the data center to a transit gateway in us-east-1. The company is opening a new office in Europe with a new on-premises data center in England. A Direct Connect connection will connect the new data center with some workloads that are running in a single VPC in the eu-west-2 Region. The company needs to connect the US data center and us-east-1 with the Europe data center and eu-west-2. A network engineer must establish full connectivity between the data centers and Regions with the lowest possible latency. How should the network engineer design the network architecture to meet these requirements?

- A. Connect the VPC in eu-west-2 with the Europe data center by using a Direct Connect gateway and a private VIF
- B. Associate the transit gateway in us-east-1 with the same Direct Connect gateway
- C. Enable SiteLink for the transit VIF and the private VIF.
- D. Connect the VPC in eu-west-2 to a new transit gateway
- E. Connect the Europe data center to the new transit gateway by using a Direct Connect gateway and a new transit VIF
- F. Associate the transit gateway in us-east-1 with the same Direct Connect gateway
- G. Enable SiteLink for both transit VIF
- H. Peer the two transit gateways.
- I. Connect the VPC in eu-west-2 to a new transit gateway
- J. Connect the Europe data center to the new transit gateway by using a Direct Connect gateway and a new transit VIF
- K. Create a new Direct Connect gateway
- L. Associate the transit gateway in us-east-1 with the new Direct Connect gateway
- M. Enable SiteLink for both transit VIF
- N. Peer the two transit gateways.
- O. Connect the VPC in eu-west-2 with the Europe data center by using a Direct Connect gateway and a private VIF
- P. Create a new Direct Connect gateway
- Q. Associate the transit gateway in us-east-1 with the new Direct Connect gateway
- R. Enable SiteLink for the transit VIF and the private VIF.

**Answer:** C

#### NEW QUESTION 5

A company has hundreds of VPCs on AWS. All the VPCs access the public endpoints of Amazon S3 and AWS Systems Manager through NAT gateways. All the traffic from the VPCs to Amazon S3 and Systems Manager travels through the NAT gateways. The company's network engineer must centralize access to these services and must eliminate the need to use public endpoints. Which solution will meet these requirements with the LEAST operational overhead?

- A. Create a central egress VPC that has private NAT gateway
- B. Connect all the VPCs to the central egress VPC by using AWS Transit Gateway
- C. Use the private NAT gateways to connect to Amazon S3 and Systems Manager by using private IP addresses.
- D. Create a central shared services VPC
- E. In the central shared services VPC, create interface VPC endpoints for Amazon S3 and Systems Manager to access
- F. Ensure that private DNS is turned off
- G. Connect all the VPCs to the central shared services VPC by using AWS Transit Gateway
- H. Create an Amazon Route 53 forwarding rule for each interface VPC endpoint
- I. Associate the forwarding rules with all the VPC
- J. Forward DNS queries to the interface VPC endpoints in the shared services VPC.
- K. Create a central shared services VPC. In the central shared services VPC, create interface VPC endpoints for Amazon S3 and Systems Manager to access
- L. Ensure that private DNS is turned off
- M. Connect all the VPCs to the central shared services VPC by using AWS Transit Gateway
- N. Create an Amazon Route 53 private hosted zone with a full service endpoint name for Amazon S3 and Systems Manager
- O. Associate the private hosted zones with all the VPC
- P. Create 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.
- Q. Create a central shared services VPC
- R. In the central shared services VPC, create interface VPC endpoints for Amazon S3 and Systems Manager to access
- S. Connect all the VPCs to the central shared services VPC by using AWS Transit Gateway
- T. Ensure that private DNS is turned on for the interface VPC endpoints and that the transit gateway is created with DNS support turned on.

**Answer:** B

#### Explanation:

Interface VPC endpoints enable private connectivity between VPCs and supported AWS services without requiring an internet gateway, NAT device, VPN connection, or AWS Direct Connect connection. Interface VPC endpoints are powered by AWS PrivateLink, a technology that enables private access to AWS services. Amazon S3 and AWS Systems Manager support interface VPC endpoints. By turning off private DNS, the interface VPC endpoints can be accessed by using their private IP addresses. By using Amazon Route 53 forwarding rules, DNS queries can be resolved to the interface VPC endpoints in the shared services VPC.

#### NEW QUESTION 6

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 subnet
- B. Disable the Auto-assign Public IP option while launching the EC2 instance

- C. Create an internet gateway
- 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 7

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 8

An insurance company is planning the migration of workloads from its on-premises data center to the AWS Cloud. The company requires end-to-end domain name resolution. Bi-directional DNS resolution between AWS and the existing on-premises environments must be established. The workloads will be migrated into multiple VPCs. The workloads also have dependencies on each other, and not all the workloads will be migrated at the same time. Which solution meets these requirements?

- A. Configure a private hosted zone for each application VPC, and create the requisite record
- B. Create a set of Amazon Route 53 Resolver inbound and outbound endpoints in an egress VP
- C. Define Route 53 Resolver rules to forward requests for the on-premises domains to the on-premises DNS resolve
- D. Associate the application VPC private hosted zones with the egress VPC, and share the Route 53 Resolver rules with the application accounts by using AWS Resource Access Manage
- E. Configure the on-premises DNS servers to forward the cloud domains to the Route 53 inboundendpoints.
- F. Configure a public hosted zone for each application VPC, and create the requisite record
- G. Create a set of Amazon Route 53 Resolver inbound and outbound endpoints in an egress VP
- H. Define Route 53 Resolver rules to forward requests for the on-premises domains to the on-premises DNS resolve
- I. Associate the application VPC private hosted zones with the egress VP
- J. and share the Route 53 Resolver rules with the application accounts by using AWS Resource Access Manage
- K. Configure the on-premises DNS servers to forward the cloud domains to the Route 53 inbound endpoints.
- L. Configure a private hosted zone for each application VPC, and create the requisite record
- M. Create a set of Amazon Route 53 Resolver inbound and outbound endpoints in an egress VPDefine Route 53 Resolver rules to forward requests for the on-premises domains to the on-premises DNS resolve
- N. Associate the application VPC private hosted zones with the egress VPand s

**Answer: A**

#### Explanation:

Creating a private hosted zone for each application VPC and creating the requisite records would enable end-to-end domain name resolution for the resources. Creating a set of Amazon Route 53 Resolver inbound and outbound endpoints in an egress VPC would enable bi-directional DNS resolution between AWS and the existing on-premises environments. Defining Route 53 Resolver rules to forward requests for the on-premises domains to the on-premises DNS resolver would enable DNS queries from AWS resources to on-premises resources. Associating the application VPC private hosted zones with the egress VPC and sharing the Route 53 Resolver rules with the application accounts by using AWS Resource Access Manager would enable DNS queries among different VPCs and accounts. Configuring the on-premises DNS servers to forward the cloud domains to the Route 53 inbound endpoints would enable DNS queries from on-premises resources to AWS resources1.

#### NEW QUESTION 9

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 10

A software-as-a-service (SaaS) provider hosts its solution on Amazon EC2 instances within a VPC in the AWS Cloud. All of the provider's customers also have their environments in the AWS Cloud.

A recent design meeting revealed that the customers have IP address overlap with the provider's AWS deployment. The customers have stated that they will not share their internal IP addresses and that they do not want to connect to the provider's SaaS service over the internet.

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

- A. Deploy the SaaS service endpoint behind a Network Load Balancer.
- B. Configure an endpoint service, and grant the customers permission to create a connection to the endpoint service.
- C. Deploy the SaaS service endpoint behind an Application Load Balancer.
- D. Configure a VPC peering connection to the customer VPC
- E. Route traffic through NAT gateways.
- F. Deploy an AWS Transit Gateway, and connect the SaaS VPC to i
- G. Share the transit gateway with the customer
- H. Configure routing on the transit gateway.

**Answer:** AB

#### Explanation:

NLB for creating the private link which solves the overlapping IP address issue and the SaaS service endpoint behind it. (the SaaS endpoint could be an ALB)  
<https://aws.amazon.com/about-aws/whats-new/2021/09/application-load-balancer-aws-privatelink-static-ip>

#### NEW QUESTION 10

Your company runs an application for the US market in the us-east-1 AWS region. This application uses proprietary TCP and UDP protocols on Amazon Elastic Compute Cloud (EC2) instances. End users run a

real-time, front-end application on their local PCs. This front-end application knows the DNS hostname of the service.

You must prepare the system for global expansion. The end users must access the application with lowest latency.

How should you use AWS services to meet these requirements?

- A. Register the IP addresses of the service hosts as "A" records with latency-based routing policy in Amazon Route 53, and set a Route 53 health check for these hosts.
- B. Set the Elastic Load Balancing (ELB) load balancer in front of the hosts of the service, and register the ELB name of the main service host as an ALIAS record with a latency-based routing policy in Route 53.
- C. Set Amazon CloudFront in front of the host of the service, and register the CloudFront name of the main service as an ALIAS record in Route 53.
- D. Set the Amazon API gateway in front of the service, and register the API gateway name of the main service as an ALIAS record in Route 53.

**Answer:** B

#### NEW QUESTION 14

A customer has set up multiple VPCs for Dev, Test, Prod, and Management. You need to set up AWS Direct Connect to enable data flow from on-premises to each VPC. The customer has monitoring software running in the Management VPC that collects metrics from the instances in all the other VPCs. Due to budget requirements, data transfer charges should be kept at minimum.

Which design should be recommended?

- A. Create a total of four private VIFs, one for each VPC owned by the customer, and route traffic between VPCs using the Direct Connect link.
- B. Create a private VIF to the Management VPC, and peer this VPC to all other VPCs.
- C. Create a private VIF to the Management VPC, and peer this VPC to all other VPCs, enable source/destination NAT in the Management VPC.
- D. Create a total of four private VIFs, and enable VPC peering between all VPCs.

**Answer:** D

#### Explanation:

- creating VPC peering is free of charge - traffic costs ~0.01€/GB for VPC peering (IN + OUT) and ~0.02€/GB for direct connect (OUT only). As the communication involved in monitoring will never have IN == OUT, then  $0.01 * (IN + OUT)$  will always be lower the  $0.02 * OUT$ , ergo VPC peering will be cheaper

#### NEW QUESTION 17

A company has deployed a software-defined WAN (SD-WAN) solution to interconnect all of its offices. The company is migrating workloads to AWS and needs to extend its SD-WAN solution to support connectivity to these workloads.

A network engineer plans to deploy AWS Transit Gateway Connect and two SD-WAN virtual appliances to provide this connectivity. According to company policies, only a single SD-WAN virtual appliance can handle traffic from AWS workloads at a given time.

How should the network engineer configure routing to meet these requirements?

- A. Add a static default route in the transit gateway route table to point to the secondary SD-WAN virtual appliance
- B. Add routes that are more specific to point to the primary SD-WAN virtual appliance.
- C. Configure the BGP community tag 7224:7300 on the primary SD-WAN virtual appliance for BGP routes toward the transit gateway.
- D. Configure the AS\_PATH prepend attribute on the secondary SD-WAN virtual appliance for BGP routes toward the transit gateway.
- E. Disable equal-cost multi-path (ECMP) routing on the transit gateway for Transit Gateway Connect.

**Answer:** A

#### NEW QUESTION 21

An AWS CloudFormation template is being used to create a VPC peering connection between two existing operational VPCs, each belonging to a different AWS

account. All necessary components in the 'Remote' (receiving) account are already in place.

The template below creates the VPC peering connection in the Originating account. It contains these components:

AWSTemplateFormation Version: 2010-09-09 Parameters:

Originating VPCId: Type: String RemoteVPCId: Type: String

RemoteVPCAccountId: Type: String Resources:

newVPCPeeringConnection:

Type: 'AWS::EC2::VPCPeeringConnection'

Properties:

VpcId: !Ref OriginatingVPCId PeerVpcId: !Ref RemoteVPCId PeerOwnerId: !Ref RemoteVPCAccountId

Which additional AWS CloudFormation components are necessary in the Originating account to create an operational cross-account VPC peering connection with AWS CloudFormation? (Select two.)

- A. Resources:NewEC2SecurityGroup:Type: AWS::EC2::SecurityGroup
- B. Resources:NetworkInterfaceToRemoteVPC:Type: "AWS::EC2NetworkInterface"
- C. Resources:newEC2Route:Type: AWS::EC2::Route
- D. Resources:VPCGatewayToRemoteVPC:Type: "AWS::EC2::VPCGatewayAttachment"
- E. Resources:newVPCPeeringConnection:Type: 'AWS::EC2VPCPeeringConnection'PeerRoleArn: !Ref PeerRoleArn

**Answer: CE**

**Explanation:**

[https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/AWS\\_EC2.html](https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/AWS_EC2.html)

### NEW QUESTION 25

A company plans to deploy a two-tier web application to a new VPC in a single AWS Region. The company has configured the VPC with an internet gateway and four subnets. Two of the subnets are public and have default routes that point to the internet gateway. Two of the subnets are private and share a route table that does not have a default route.

The application will run on a set of Amazon EC2 instances that will be deployed behind an external Application Load Balancer. The EC2 instances must not be directly accessible from the internet. The application will use an Amazon S3 bucket in the same Region to store data. The application will invoke S3 GET API operations and S3 PUT API operations from the EC2 instances. A network engineer must design a VPC architecture that minimizes data transfer cost.

Which solution will meet these requirements?

- A. Deploy the EC2 instances in the public subnet
- B. Create an S3 interface endpoint in the VP
- C. Modify the application configuration to use the S3 endpoint-specific DNS hostname.
- D. Deploy the EC2 instances in the private subnet
- E. Create a NAT gateway in the VP
- F. Create default routes in the private subnets to the NAT gateway
- G. Connect to Amazon S3 by using the NAT gateway.
- H. Deploy the EC2 instances in the private subnet
- I. Create an S3 gateway endpoint in the VPSpecify die route table of the private subnets during endpoint creation to create routes to Amazon S3.
- J. Deploy the EC2 instances in the private subnet
- K. Create an S3 interface endpoint in the VP
- L. Modify the application configuration to use the S3 endpoint-specific DNS hostname.

**Answer: C**

**Explanation:**

Option C is the optimal solution as it involves deploying the EC2 instances in the private subnets, which provides additional security benefits. Additionally, creating an S3 gateway endpoint in the VPC will enable the EC2 instances to communicate with Amazon S3 directly, without incurring data transfer costs. This is because the S3 gateway endpoint uses Amazon's private network to transfer data between the VPC and S3, which is not charged for data transfer. Furthermore, specifying the route table of the private subnets during endpoint creation will create routes to Amazon S3, which is required for the EC2 instances to communicate with S3.

### NEW QUESTION 29

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 multivalued 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 31

A company is using an AWS Site-to-Site VPN connection from the company's on-premises data center to a virtual private gateway in the AWS Cloud Because of

congestion, the company is experiencing availability and performance issues as traffic travels across the internet before the traffic reaches AWS. A network engineer must reduce these issues for the connection as quickly as possible with minimum administration effort. Which solution will meet these requirements?

- A. Edit the existing Site-to-Site VPN connection by enabling acceleration
- B. Stop and start the VPN service on the customer gateway for the new setting to take effect.
- C. Configure a transit gateway in the same AWS Region as the existing virtual private gateway
- D. Create a new accelerated Site-to-Site VPN connection
- E. Connect the new connection to the transit gateway by using a VPN attachment
- F. Update the customer gateway device to use the new Site-to-Site VPN connection
- G. Delete the existing Site-to-Site VPN connection
- H. Create a new accelerated Site-to-Site VPN connection
- I. Connect the new Site-to-Site VPN connection to the existing virtual private gateway
- J. Update the customer gateway device to use the new Site-to-Site VPN connection
- K. Delete the existing Site-to-Site VPN connection.
- L. Create a new AWS Direct Connect connection with a private VIF between the on-premises data center and the AWS Cloud
- M. Update the customer gateway device to use the new Direct Connect connection
- N. Delete the existing Site-to-Site VPN connection.

**Answer: B**

### NEW QUESTION 33

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 configuration
- 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 configuration
- 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 configuration
- 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 configuration
- 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 rules<sup>3</sup>. Creating an AWS Systems Manager Automation runbook to remediate noncompliant security groups would enable automation of the remediation process<sup>2</sup>. 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 36

A company has deployed an AWS Network Firewall into a VPC. A network engineer needs to implement a solution to deliver Network Firewall flow logs to the company's Amazon OpenSearch Service (Amazon Elasticsearch Service) cluster in the shortest possible time.

Which solution will meet these requirements?

- A. Create an Amazon S3 bucket
- B. Create an AWS Lambda function to load logs into the Amazon OpenSearch Service (Amazon Elasticsearch Service) cluster
- C. Enable Amazon Simple Notification Service (Amazon SNS) notifications on the S3 bucket to invoke the Lambda function
- D. Configure flow logs for the firewall
- E. Set the S3 bucket as the destination.
- F. Create an Amazon Kinesis Data Firehose delivery stream that includes the Amazon OpenSearch Service (Amazon Elasticsearch Service) cluster as the destination
- G. Configure flow logs for the firewall Set the Kinesis Data Firehose delivery stream as the destination for the Network Firewall flow logs.
- H. Configure flow logs for the firewall
- I. Set the Amazon OpenSearch Service (Amazon Elasticsearch Service) cluster as the destination for the Network Firewall flow logs.
- J. Create an Amazon Kinesis data stream that includes the Amazon OpenSearch Service (Amazon Elasticsearch Service) cluster as the destination
- K. Configure flow logs for the firewall
- L. Set the Kinesis data stream as the destination for the Network Firewall flow logs.

**Answer: B**

### Explanation:

<https://aws.amazon.com/blogs/networking-and-content-delivery/how-to-analyze-aws-network-firewall-logs-using-aws-lambda/>

### NEW QUESTION 37

A company has two on-premises data center locations. There is a company-managed router at each data center. Each data center has a dedicated AWS Direct Connect connection to a Direct Connect gateway through a private virtual interface. The router for the first location is advertising 110 routes to the Direct Connect gateway by using BGP, and the router for the second location is advertising 60 routes to the Direct Connect gateway by using BGP. The Direct Connect gateway is attached to a company VPC through a virtual private gateway.

A network engineer receives reports that resources in the VPC are not reachable from various locations in either data center. The network engineer checks the VPC route table and sees that the routes from the first data center location are not being populated into the route table. The network engineer must resolve this issue in the most operationally efficient manner.

What should the network engineer do to meet these requirements?

- A. Remove the Direct Connect gateway, and create a new private virtual interface from each company router to the virtual private gateway of the VPC.

- B. Change the router configurations to summarize the advertised routes.
- C. Open a support ticket to increase the quota on advertised routes to the VPC route table.
- D. Create an AWS Transit Gateway
- E. Attach the transit gateway to the VPC, and connect the Direct Connect gateway to the transit gateway.

**Answer:** B

**Explanation:**

"If you advertise more than 100 routes each for IPv4 and IPv6 over the BGP session, the BGP session will go into an idle state with the BGP session DOWN." <https://docs.aws.amazon.com/directconnect/latest/UserGuide/limits.html>

**NEW QUESTION 41**

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. Create an Amazon EventBridge (Amazon CloudWatch Events) rule to invoke the Lambda function when a change to the security group occurs.
- K. Create a VPC Reachability Analyzer path on port 443. Specify the internet gateway of the VPC as the source
- 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 42**

An organization is using a VPC endpoint for Amazon S3. When the security group rules for a set of instances were initially configured, access was restricted to allow traffic only to the IP addresses of the Amazon S3 API endpoints in the region from the published JSON file. The application was working properly, but now is logging a growing number of timeouts when connecting with Amazon S3. No internet gateway is configured for the VPC. Which solution will fix the connectivity failures with the LEAST amount of effort?

- A. Create a Lambda function to update the security group based on AmazonIPSpaceChanged notifications.
- B. Update the VPC routing to direct Amazon S3 prefix-list traffic to the VPC endpoint using the route table APIs.
- C. Update the application server's outbound security group to use the prefix-list for Amazon S3 in the same region.
- D. Create an additional VPC endpoint for Amazon S3 in the same route table to scale the concurrent connections to Amazon.

**Answer:** C

**Explanation:**

<https://aws.amazon.com/blogs/aws/subscribe-to-aws-public-ip-address-changes-via-amazon-sns/>

**NEW QUESTION 43**

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 45**

A company operates its IT services through a multi-site hybrid infrastructure. The company deploys resources on AWS in the us-east-1 Region and in the eu-west-2 Region. The company also deploys resources in its own data centers that are located in the United States (US) and in the United Kingdom (UK). In both AWS Regions, the company uses a transit gateway to connect 15 VPCs to each other. The company has created a transit gateway peering connection between the two transit gateways. The VPC CIDR blocks do not overlap with each other or with IP addresses used within the data centers. The VPC CIDR prefixes can also be aggregated either on a Regional level or for the company's entire AWS environment.

The data centers are connected to each other by a private WAN connection. IP routing information is exchanged dynamically through Interior BGP (iBGP) sessions. The data centers maintain connectivity to AWS through one AWS Direct Connect connection in the US and one Direct Connect connection in the UK. Each Direct Connect connection is terminated on a Direct Connect gateway and is associated with a local transit gateway through a transit VIF.

Traffic follows the shortest geographical path from source to destination. For example, packets from the UK data center that are targeted to resources in eu-west-2 travel across the local Direct Connect connection. In cases of cross-Region data transfers, such as from the UK data center to VPCs in us-east-1, the private WAN connection must be used to minimize costs on AWS. A network engineer has configured each transit gateway association on the Direct Connect gateway to advertise VPC-specific CIDR IP prefixes only from the local Region. The routes toward the other Region must be learned through BGP from the routers in the other data center in the original, non-aggregated form.

The company recently experienced a problem with cross-Region data transfers because of issues with its private WAN connection. The network engineer needs to modify the routing setup to prevent similar interruptions in the future. The solution cannot modify the original traffic routing goal when the network is operating normally.

Which modifications will meet these requirements? (Choose two.)

- A. Remove all the VPC CIDR prefixes from the list of subnets advertised through the local Direct Connect connection.
- B. Add the company's entire AWS environment aggregate route to the list of subnets advertised through the local Direct Connect connection.
- C. Add the CIDR prefixes from the other Region VPCs and the local VPC CIDR blocks to the list of subnets advertised through the local Direct Connect connection.
- D. Configure data center routers to make routing decisions based on the BGP communities received.
- E. Add the aggregate IP prefix for the other Region and the local VPC CIDR blocks to the list of subnets advertised through the local Direct Connect connection.
- F. Add the aggregate IP prefix for the company's entire AWS environment and the local VPC CIDR blocks to the list of subnets advertised through the local Direct Connect connection.
- G. Remove all the VPC CIDR prefixes from the list of subnets advertised through the local Direct Connect connection.
- H. Add both Regional aggregate IP prefixes to the list of subnets advertised through the Direct Connect connection on both sides of the network.
- I. Configure data center routers to make routing decisions based on the BGP communities received.

**Answer: AD**

**NEW QUESTION 47**

A company deploys a new web application on Amazon EC2 instances. The application runs in private subnets in three Availability Zones behind an Application Load Balancer (ALB). Security auditors require encryption of all connections. The company uses Amazon Route 53 for DNS and uses AWS Certificate Manager (ACM) to automate SSL/TLS certificate provisioning. SSL/TLS connections are terminated on the ALB.

The company tests the application with a single EC2 instance and does not observe any problems. However, after production deployment, users report that they can log in but that they cannot use the application. Every new web request restarts the login process.

What should a network engineer do to resolve this issue?

- A. Modify the ALB listener configuration.
- B. Edit the rule that forwards traffic to the target group.
- C. Change the rule to enable group-level stickiness.
- D. Set the duration to the maximum application session length.
- E. Replace the ALB with a Network Load Balance.
- F. Create a TLS listener.
- G. Create a new target group with the protocol type set to TLS. Register the EC2 instance.
- H. Modify the target group configuration by enabling the stickiness attribute.
- I. Modify the ALB target group configuration by enabling the stickiness attribute.
- J. Use an application-based cookie.
- K. Set the duration to the maximum application session length.
- L. Remove the ALB.
- M. Create an Amazon Route 53 rule with a failover routing policy for the application name.
- N. Configure ACM to issue certificates for each EC2 instance.

**Answer: C**

**NEW QUESTION 48**

A network engineer is designing a hybrid architecture that uses a 1 Gbps AWS Direct Connect connection between the company's data center and two AWS Regions: us-east-1 and eu-west-1. The VPCs in us-east-1 are connected by a transit gateway and need to access several on-premises databases. According to company policy, only one VPC in eu-west-1 can be connected to one on-premises server. The on-premises network segments the traffic between the databases and the server.

How should the network engineer set up the Direct Connect connection to meet these requirements?

- A. Create one hosted connection.
- B. Use a transit VIF to connect to the transit gateway in us-east-1. Use a private VIF to connect to the VPC in eu-west-1. Use one Direct Connect gateway for both VIFs to route from the Direct Connect locations to the corresponding AWS Region along the path that has the lowest latency.
- C. Connect gateway for both VIFs to route from the Direct Connect locations to the corresponding AWS Region along the path that has the lowest latency.
- D. Create one hosted connection.
- E. Use a transit VIF to connect to the transit gateway in us-east-1. Use a private VIF to connect to the VPC in eu-west-1. Use two Direct Connect gateways, one for each VIF, to route from the Direct Connect locations to the corresponding AWS Region along the path that has the lowest latency.
- F. Create one dedicated connection.
- G. Use a transit VIF to connect to the transit gateway in us-east-1. Use a private VIF to connect to the VPC in eu-west-1. Use one Direct Connect gateway for both VIFs to route from the Direct Connect locations to the corresponding AWS Region along the path that has the lowest latency.
- H. Create one dedicated connection.
- I. Use a transit VIF to connect to the transit gateway in us-east-1. Use a private VIF to connect to the VPC in eu-west-1. Use two Direct Connect gateways, one for each VIF, to route from the Direct Connect locations to the corresponding AWS Region along the path that has the lowest latency.

**Answer: B**

**Explanation:**

This solution meets the requirements of the company by using a single Direct Connect connection with two VIFs, one connected to the transit gateway in us-east-1 and the other connected to the VPC in eu-west-1. Two Direct Connect gateways are used, one for each VIF, to route traffic from the Direct Connect location to the corresponding AWS Region along the path that has the lowest latency. This setup ensures that traffic between the VPCs in us-east-1 and on-premises databases is routed through the transit gateway, while traffic between the VPC in eu-west-1 and the on-premises server is routed directly through the private VIF.

**NEW QUESTION 50**

A company has deployed a new web application on Amazon EC2 instances behind an Application Load Balancer (ALB). The instances are in an Amazon EC2 Auto Scaling group. Enterprise customers from around the world will use the application. Employees of these enterprise customers will connect to the application over HTTPS from office locations.

The company must configure firewalls to allow outbound traffic to only approved IP addresses. The employees of the enterprise customers must be able to access the application with the least amount of latency.

Which change should a network engineer make in the infrastructure to meet these requirements?

- A. Create a new Network Load Balancer (NLB). Add the ALB as a target of the NLB.
- B. Create a new Amazon CloudFront distribution.
- C. Set the ALB as the distribution's origin.
- D. Create a new accelerator in AWS Global Accelerator.
- E. Add the ALB as an accelerator endpoint.
- F. Create a new Amazon Route 53 hosted zone.
- G. Create a new record to route traffic to the ALB.

**Answer: B**

**Explanation:**

Amazon CloudFront is a content delivery network (CDN) that can speed up the delivery of static and dynamic web content, such as images, videos, and APIs. CloudFront can also provide end-to-end encryption for HTTPS traffic by using SSL certificates from AWS Certificate Manager (ACM) or other sources. CloudFront can also support session affinity (sticky sessions) with a load balancer-generated cookie or an application-based cookie policy.

**NEW QUESTION 55**

A company uses a 4 Gbps AWS Direct Connect dedicated connection with a link aggregation group (LAG) bundle to connect to five VPCs that are deployed in the us-east-1 Region. Each VPC serves a different business unit and uses its own private VIF for connectivity to the on-premises environment. Users are reporting slowness when they access resources that are hosted on AWS.

A network engineer finds that there are sudden increases in throughput and that the Direct Connect connection becomes saturated at the same time for about an hour each business day. The company wants to know which business unit is causing the sudden increase in throughput. The network engineer must find out this information and implement a solution to resolve the problem.

Which solution will meet these requirements?

- A. Review the Amazon CloudWatch metrics for `VirtualInterfaceBpsEgress` and `VirtualInterfaceBpsIngress` to determine which VIF is sending the highest throughput during the period in which slowness is observed.
- B. Create a new 10 Gbps dedicated connection.
- C. Shift traffic from the existing dedicated connection to the new dedicated connection.
- D. Review the Amazon CloudWatch metrics for `VirtualInterfaceBpsEgress` and `VirtualInterfaceBpsIngress` to determine which VIF is sending the highest throughput during the period in which slowness is observed.
- E. Upgrade the bandwidth of the existing dedicated connection to 10 Gbps.
- F. Review the Amazon CloudWatch metrics for `ConnectionBpsIngress` and `ConnectionBpsEgress` to determine which VIF is sending the highest throughput during the period in which slowness is observed.
- G. Upgrade the existing dedicated connection to a 5 Gbps hosted connection.
- H. Review the Amazon CloudWatch metrics for `ConnectionBpsIngress` and `ConnectionBpsEgress` to determine which VIF is sending the highest throughput during the period in which slowness is observed. Create a new 10 Gbps dedicated connection.
- I. Shift traffic from the existing dedicated connection to the new dedicated connection.

**Answer: A**

**Explanation:**

To meet the requirements of finding out which business unit is causing the sudden increase in throughput and resolving the problem, the network engineer should review the Amazon CloudWatch metrics for `VirtualInterfaceBpsEgress` and `VirtualInterfaceBpsIngress` to determine which VIF is sending the highest throughput during the period in which slowness is observed (Option A). After identifying the VIF that is causing the issue, they can upgrade the bandwidth of the existing dedicated connection to 10 Gbps to resolve the problem (Option B).

**NEW QUESTION 56**

A company has deployed an application in a VPC that uses a NAT gateway for outbound traffic to the internet. A network engineer notices a large quantity of suspicious network traffic that is traveling from the VPC over the internet to IP addresses that are included on a deny list. The network engineer must implement a solution to determine which AWS resources are generating the suspicious traffic. The solution must minimize cost and administrative overhead.

Which solution will meet these requirements?

- A. Launch an Amazon EC2 instance in the VPC.
- B. Use Traffic Mirroring by specifying the NAT gateway as the source and the EC2 instance as the destination.
- C. Analyze the captured traffic by using open-source tools to identify the AWS resources that are generating the suspicious traffic.
- D. Use VPC flow logs.
- E. Launch a security information and event management (SIEM) solution in the VPC.
- F. Configure the SIEM solution to ingest the VPC flow logs.
- G. Run queries on the SIEM solution to identify the AWS resources that are generating the suspicious traffic.
- H. Use VPC flow logs.
- I. Publish the flow logs to a log group in Amazon CloudWatch Logs.
- J. Use CloudWatch Logs Insights to query the flow logs to identify the AWS resources that are generating the suspicious traffic.
- K. Configure the VPC to stream the network traffic directly to an Amazon Kinesis data stream.
- L. Send the data from the Kinesis data stream to an Amazon Kinesis Data Firehose delivery stream to store the data in Amazon S3. Use Amazon Athena to query the data to identify the AWS resources that are generating the suspicious traffic.

**Answer: C**

**NEW QUESTION 60**

A company is developing an application in which IoT devices will report measurements to the AWS Cloud. The application will have millions of end users. The company observes that the IoT devices cannot support DNS resolution. The company needs to implement an Amazon EC2 Auto Scaling solution so that the IoT devices can connect to an application endpoint without using DNS. Which solution will meet these requirements MOST cost-effectively?

- A. Use an Application Load Balancer (ALB)-type target group for a Network Load Balancer (NLB). Create an EC2 Auto Scaling group
- B. Attach the Auto Scaling group to the AL
- C. Set up the IoT devices to connect to the IP addresses of the NLB.
- D. Use an AWS Global Accelerator accelerator with an Application Load Balancer (ALB) endpoint
- E. Create an EC2 Auto Scaling group
- F. Attach the Auto Scaling group to the ALSet up the IoT devices to connect to the IP addresses of the accelerator.
- G. Use a Network Load Balancer (NLB). Create an EC2 Auto Scaling group
- H. Attach the Auto Scaling group to the NL
- I. Set up the IoT devices to connect to the IP addresses of the NLB.
- J. Use an AWS Global Accelerator accelerator with a Network Load Balancer (NLB) endpoint
- K. Create anEC2 Auto Scaling group
- L. Attach the Auto Scaling group to the NL
- M. Set up the IoT devices to connect to the IP addresses of the accelerator.

**Answer: D**

**Explanation:**

AWS Global Accelerator can provide static IP addresses that the IoT devices can connect to without using DNS2. It can also route traffic over the AWS global network and improve performance and availability for the IoT devices2. An NLB can provide end-to-end encryption for HTTPS traffic by using TLS as a target group protocol and terminating SSL connections at the load balancer level1. An NLB can also support session affinity (sticky sessions) with TCP connections1.

**NEW QUESTION 63**

A company is deploying a new application on AWS. The application uses dynamic multicasting. The company has five VPCs that are all attached to a transit gateway Amazon EC2 instances in each VPC need to be able to register dynamically to receive a multicast transmission. How should a network engineer configure the AWS resources to meet these requirements?

- A. Create a static source multicast domain within the transit gatewa
- B. Associate the VPCs and applicable subnets with the multicast domai
- C. Register the multicast senders' network interface with the multicast domai
- D. Adjust the network ACLs to allow UDP traffic from the source to all receivers and to allow UDP traffic that is sent to the multicast group address.
- E. Create a static source multicast domain within the transit gatewa
- F. Associate the VPCs and applicable subnets with the multicast domai
- G. Register the multicast senders' network interface with the multicast domai
- H. Adjust the network ACLs to allow TCP traffic from the source to all receivers and to allow TCP traffic that is sent to the multicast group address.
- I. Create an Internet Group Management Protocol (IGMP) multicast domain within the transit gateway.Associate the VPCs and applicable subnets with the multicast domai
- J. Register the multicast senders' network interface with the multicast domai
- K. Adjust the network ACLs to allow UDP traffic from the source to all receivers and to allow UDP traffic that is sent to the multicast group address.
- L. Create an Internet Group Management Protocol (IGMP) multicast domain within the transit gateway.Associate the VPCs and applicable subnets with the multicast domai
- M. Register the multicast senders' network interface with the multicast domai
- N. Adjust the network ACLs to allow TCP traffic from the source to all receivers and to allow TCP traffic that is sent to the multicast group address.

**Answer: C**

**NEW QUESTION 66**

A media company is implementing a news website for a global audience. The website uses Amazon CloudFront as its content delivery network. The backend runs on Amazon EC2 Windows instances behind an Application Load Balancer (ALB). The instances are part of an Auto Scaling group. The company's customers access the website by using service example com as the CloudFront custom domain name. The CloudFront origin points to an ALB that uses service-alb.example.com as the domain name.

The company's security policy requires the traffic to be encrypted in transit at all times between the users and the backend. Which combination of changes must the company make to meet this security requirement? (Choose three.)

- A. Create a self-signed certificate for service.example.co
- B. Import the certificate into AWS Certificate Manager (ACM). Configure CloudFront to use this imported SSL/TLS certificat
- C. Change the default behavior to redirect HTTP to HTTPS.
- D. Create a certificate for service.example.com by using AWS Certificate Manager (ACM). Configure CloudFront to use this custom SSL/TLS certificat
- E. Change the default behavior to redirect HTTP to HTTPS.
- F. Create a certificate with any domain name by using AWS Certificate Manager (ACM) for the EC2 instance
- G. Configure the backend to use this certificate for its HTTPS listene
- H. Specify the instance target type during the creation of a new target group that uses the HTTPS protocol for its target
- I. Attach the existing Auto Scaling group to this new target group.
- J. Create a public certificate from a third-party certificate provider with any domain name for the EC2 instance
- K. Configure the backend to use this certificate for its HTTPS listene
- L. Specify the instance target type during the creation of a new target group that uses the HTTPS protocol for its target
- M. Attach the existing Auto Scaling group to this new target group.
- N. Create a certificate for service-alb.example.com by using AWS Certificate Manager (ACM). On the ALB add a new HTTPS listener that uses the new target group and the service-alb.example.com ACM certificat
- O. Modify the CloudFront origin to use the HTTPS protocol onl
- P. Delete the HTTPlistener on the ALB.
- Q. Create a self-signed certificate for service-alb.example.co
- R. Import the certificate into AWS Certificate Manager (ACM). On the ALB add a new HTTPS listener that uses the new target group and the imported service-

alb.example.com ACM certificat  
S. Modify the CloudFront origin to use the HTTPS protocol onl  
T. Delete the HTTP listener on the ALB.

**Answer:** BDE

#### NEW QUESTION 67

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 rules<sup>3</sup>. 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 ranges<sup>5</sup>. Updating security groups to use the prefix list instead of the partner IP address range would enable simplification of security group rules<sup>3</sup>. 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 list<sup>3</sup>.

#### NEW QUESTION 71

A security team is performing an audit of a company's AWS deployment. The security team is concerned that two applications might be accessing resources that should be blocked by network ACLs and security groups. The applications are deployed across two Amazon Elastic Kubernetes Service (Amazon EKS) clusters that use the Amazon VPC Container Network Interface (CNI) plugin for Kubernetes. The clusters are in separate subnets within the same VPC and have a Cluster Autoscaler configured.

The security team needs to determine which POD IP addresses are communicating with which services throughout the VPC. The security team wants to limit the number of flow logs and wants to examine the traffic from only the two applications.

Which solution will meet these requirements with the LEAST operational overhead?

- A. Create VPC flow logs in the default forma
- B. Create a filter to gather flow logs only from the EKS nodes. Include the srcaddr field and the dstaddr field in the flow logs.
- C. Create VPC flow logs in a custom forma
- D. Set the EKS nodes as the resource Include the pkt-srcaddr field and the pkt-dstaddr field in the flow logs.
- E. Create VPC flow logs in a custom forma
- F. Set the application subnets as resource
- G. Include the pkt-srcaddr field and the pkt-dstaddr field in the flow logs.
- H. Create VPC flow logs in a custom forma
- I. Create a filter to gather flow logs only from the EKS nodes. Include the pkt-srcaddr field and the pkt-dstaddr field in the flow logs.

**Answer:** D

#### NEW QUESTION 75

A company delivers applications over the internet. An Amazon Route 53 public hosted zone is the authoritative DNS service for the company and its internet applications, all of which are offered from the same domain name.

A network engineer is working on a new version of one of the applications. All the application's components are hosted in the AWS Cloud. The application has a three-tier design. The front end is delivered through Amazon EC2 instances that are deployed in public subnets with Elastic IP addresses assigned. The backend components are deployed in private subnets from RFC1918.

Components of the application need to be able to access other components of the application within the application's VPC by using the same host names as the host names that are used over the public internet. The network engineer also needs to accommodate future DNS changes, such as the introduction of new host names or the retirement of DNS entries.

Which combination of steps will meet these requirements? (Choose three.)

- A. Add a geoproximity routing policy in Route 53.
- B. Create a Route 53 private hosted zone for the same domain name Associate the application's VPC with the new private hosted zone.
- C. Enable DNS hostnames for the application's VPC.
- D. Create entries in the private hosted zone for each name in the public hosted zone by using the corresponding private IP addresses.
- E. Create an Amazon EventBridge (Amazon CloudWatch Events) rule that runs when AWS CloudTrail logs a Route 53 API call to the public hosted zon

- F. Create an AWS Lambda function as the target of the rule.
- G. Configure the function to use the event information to update the private hosted zone.
- H. Add the private IP addresses in the existing Route 53 public hosted zone.

**Answer:** BCD

#### NEW QUESTION 78

A company recently migrated its Amazon EC2 instances to VPC private subnets to satisfy a security compliance requirement. The EC2 instances now use a NAT gateway for internet access. After the migration, some long-running database queries from private EC2 instances to a publicly accessible third-party database no longer receive responses. The database query logs reveal that the queries successfully completed after 7 minutes but that the client EC2 instances never received the response.

Which configuration change should a network engineer implement to resolve this issue?

- A. Configure the NAT gateway timeout to allow connections for up to 600 seconds.
- B. Enable enhanced networking on the client EC2 instances.
- C. Enable TCP keepalive on the client EC2 instances with a value of less than 300 seconds.
- D. Close idle TCP connections through the NAT gateway.

**Answer:** C

#### Explanation:

When a TCP connection is idle for a long time, it may be terminated by network devices, including the NAT gateway. By enabling TCP keepalive, the client EC2 instances can periodically send packets to the third-party database to indicate that the connection is still active, preventing it from being terminated prematurely.

#### NEW QUESTION 83

An ecommerce company is hosting a web application on Amazon EC2 instances to handle continuously changing customer demand. The EC2 instances are part of an Auto Scaling group. The company wants to implement a solution to distribute traffic from customers to the EC2 instances. The company must encrypt all traffic at all stages between the customers and the application servers. No decryption at intermediate points is allowed.

Which solution will meet these requirements?

- A. Create an Application Load Balancer (ALB). Add an HTTPS listener to the ALB.
- B. Configure the Auto Scaling group to register instances with the ALB's target group.
- C. Create an Amazon CloudFront distribution.
- D. Configure the distribution with a custom SSL/TLS certificate.
- E. Set the Auto Scaling group as the distribution's origin.
- F. Create a Network Load Balancer (NLB). Add a TCP listener to the NLB.
- G. Configure the Auto Scaling group to register instances with the NLB's target group.
- H. Create a Gateway Load Balancer (GLB). Configure the Auto Scaling group to register instances with the GLB's target group.

**Answer:** C

#### Explanation:

To distribute traffic from customers to EC2 instances in an Auto Scaling group and encrypt all traffic at all stages between the customers and the application servers without decryption at intermediate points, the company should create a Network Load Balancer (NLB) with a TCP listener and configure the Auto Scaling group to register instances with the NLB's target group (Option C). This solution allows for end-to-end encryption of traffic without decryption at intermediate points.

#### NEW QUESTION 88

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