



# Amazon-Web-Services

## Exam Questions ANS-C01

AWS Certified Advanced Networking Specialty Exam

### NEW QUESTION 1

A company has an AWS Site-to-Site VPN connection between its existing VPC and on-premises network. The default DHCP options set is associated with the VPC. The company has an application that is running on an Amazon Linux 2 Amazon EC2 instance in the VPC. The application must retrieve an Amazon RDS database secret that is stored in AWS Secrets Manager through a private VPC endpoint. An on-premises application provides internal RESTful API service that can be reached by URL (<https://api.example.internal>). Two on-premises Windows DNS servers provide internal DNS resolution. The application on the EC2 instance needs to call the internal API service that is deployed in the on-premises environment. When the application on the EC2 instance attempts to call the internal API service by referring to the hostname that is assigned to the service, the call fails. When a network engineer tests the API service call from the same EC2 instance by using the API service's IP address, the call is successful. What should the network engineer do to resolve this issue and prevent the same problem from affecting other resources in the VPC?

- A. Create a new DHCP options set that specifies the on-premises Windows DNS server
- B. Associate the new DHCP options set with the existing VP
- C. Reboot the Amazon Linux 2 EC2 instance.
- D. Create an Amazon Route 53 Resolver rul
- E. Associate the rule with the VP
- F. Configure the rule to forward DNS queries to the on-premises Windows DNS servers if the domain name matches example.internal.
- G. Modify the local host file in the Amazon Linux 2 EC2 instance in the VPC to map the service domain name (api.example.internal) to the IP address of the internal API service.
- H. Modify the local /etc/resolv.conf file in the Amazon Linux 2 EC2 instance in the VP
- I. Change the IP addresses of the name servers in the file to the IP addresses of the company's on-premises Windows DNS servers.

**Answer:** B

#### Explanation:

Creating an Amazon Route 53 Resolver rule and associating it with the VPC would enable forwarding of DNS queries for a specified domain name (example.internal) to a specified IP address (the on-premises Windows DNS servers)<sup>3</sup>. This would allow EC2 instances in the VPC to resolve the internal API service by using its hostname. Configuring the rule to forward DNS queries only if the domain name matches example.internal would also allow EC2 instances to use the Amazon Route 53 Resolver server for other DNS queries, such as those for AWS services through private VPC endpoints<sup>2</sup>.

### NEW QUESTION 2

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 KM
- B. Modify the interface endpoint by disabling the private DNS nam
- 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 KM
- F. Modify the interface endpoint by disabling the private DNS nam
- 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 KM
- J. Modify each interface endpoint by disabling the private DNS nam
- 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 KM
- N. Modify each interface endpoint by disabling the private DNS nam
- 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 3

A company has its production VPC (VPC-A) in the eu-west-1 Region in Account 1. VPC-A is attached to a transit gateway (TGW-A) that is connected to an on-premises data center in Dublin, Ireland, by an AWS Direct Connect transit VIF that is configured for an AWS Direct Connect gateway. The company also has a staging VPC (VPC-B) that is attached to another transit gateway (TGW-B) in the eu-west-2 Region in Account 2. A network engineer must implement connectivity between VPC-B and the on-premises data center in Dublin. Which solutions will meet these requirements? (Choose two.)

- A. Configure inter-Region VPC peering between VPC-A and VPC-
- B. Add the required VPC peering route
- C. Add the VPC-B CIDR block in the allowed prefixes on the Direct Connect gateway association.
- D. Associate TGW-B with the Direct Connect gatewa
- E. Advertise the VPC-B CIDR block under the allowed prefixes.
- F. Configure another transit VIF on the Direct Connect connection and associate TGW-
- G. Advertise the VPC-B CIDR block under the allowed prefixes.
- H. Configure inter-Region transit gateway peering between TGW-A and TGW-
- I. Add the peering routes in the transit gateway route table
- J. Add both the VPC-A and the VPC-B CIDR block under the allowed prefix list in the Direct Connect gateway association.
- K. Configure an AWS Site-to-Site VPN connection over the transit VIF to TGW-B as a VPN attachment.

**Answer:** BC

#### Explanation:

\* B. Associate TGW-B with the Direct Connect gateway. Advertise the VPC-B CIDR block under the allowed prefixes. This will allow traffic from VPC-B to be sent

over the Direct Connect connection to the on-premises data center via TGW-B. C. Configure another transit VIF on the Direct Connect connection and associate TGW-B. Advertise the VPC-B CIDR block under the allowed prefixes. This will enable the use of the Direct Connect connection for VPC-B's traffic by connecting TGW-B to the Direct Connect gateway.

#### NEW QUESTION 4

A company has deployed a web application on AWS. The web application uses an Application Load Balancer (ALB) across multiple Availability Zones. The targets of the ALB are AWS Lambda functions. The web application also uses Amazon CloudWatch metrics for monitoring.

Users report that parts of the web application are not loading properly. A network engineer needs to troubleshoot the problem. The network engineer enables access logging for the ALB.

What should the network engineer do next to determine which errors the ALB is receiving?

- A. Send the logs to Amazon CloudWatch Log
- B. Review the ALB logs in CloudWatch Insights to determine which error messages the ALB is receiving.
- C. Configure the Amazon S3 bucket destination
- D. Use Amazon Athena to determine which error messages the ALB is receiving.
- E. Configure the Amazon S3 bucket destination
- F. After Amazon CloudWatch Logs pulls the ALB logs from the S3 bucket automatically, review the logs in CloudWatch Logs to determine which error messages the ALB is receiving.
- G. Send the logs to Amazon CloudWatch Log
- H. Use the Amazon Athena CloudWatch Connector to determine which error messages the ALB is receiving.

**Answer: B**

#### Explanation:

Access logs is an optional feature of Elastic Load Balancing that is disabled by default. After you enable access logs for your load balancer, Elastic Load Balancing captures the logs and stores them in the Amazon S3 bucket that you specify as compressed files. You can disable access logs at any time. <https://docs.aws.amazon.com/elasticloadbalancing/latest/application/load-balancer-access-logs.html>

#### NEW QUESTION 5

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 VPC
- 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 subnet
- G. Create a NAT gateway in a public subnet in the same Availability Zone
- H. Create an internet gateway
- I. Attach the internet gateway to the VPC
- 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 subnet
- L. Create an interface VPC endpoint for Amazon SQS
- M. Create gateway VPC endpoints for Amazon S3 and DynamoDB.
- N. Place the EC2 instances in a private subnet
- O. Create a gateway VPC endpoint for Amazon SQS. Create interface VPC endpoints for Amazon S3 and DynamoDB.

**Answer: C**

#### NEW QUESTION 6

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 7

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 resources<sup>1</sup>.

**NEW QUESTION 8**

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 9**

Your organization has a newly installed 1-Gbps AWS Direct Connect connection. You order the cross-connect from the Direct Connect location provider to the port on your router in the same facility. To enable the use of your first virtual interface, your router must be configured appropriately. What are the minimum requirements for your router?

- A. 1-Gbps Multi Mode Fiber Interface, 802.1Q VLAN, Peer IP Address, BGP Session with MD5.
- B. 1-Gbps Single Mode Fiber Interface, 802.1Q VLAN, Peer IP Address, BGP Session with MD5.
- C. IPsec Parameters, Pre-Shared key, Peer IP Address, BGP Session with MD5
- D. BGP Session with MD5, 802.1Q VLAN, Route-Map, Prefix List, IPsec encrypted GRE Tunnel

**Answer:** B

**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

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 11

A company uses a 1 Gbps AWS Direct Connect connection to connect its AWS environment to its on-premises data center. The connection provides employees with access to an application VPC that is hosted on AWS. Many remote employees use a company-provided VPN to connect to the data center. These employees are reporting slowness when they access the application during business hours. On-premises users have started to report similar slowness while they are in the office.

The company plans to build an additional application on AWS. On-site and remote employees will use the additional application. After the deployment of this additional application, the company will need 20% more bandwidth than the company currently uses. With the increased usage, the company wants to add resiliency to the AWS connectivity. A network engineer must review the current implementation and must make improvements within a limited budget.

What should the network engineer do to meet these requirements MOST cost-effectively?

- A. Set up a new 1 Gbps Direct Connect dedicated connection to accommodate the additional traffic load from remote employees and the additional application
- B. Create a link aggregation group (LAG).
- C. Deploy an AWS Site-to-Site VPN connection to the application VPC
- D. Configure the on-premises routing for the remote employees to connect to the Site-to-Site VPN connection.
- E. Deploy Amazon Workspaces into the application VPC. Instruct the remote employees to connect to Workspaces.
- F. Replace the existing 1 Gbps Direct Connect connection with two new 2 Gbps Direct Connect hosted connections
- G. Create an AWS Client VPN endpoint in the application VPC
- H. Instruct the remote employees to connect to the Client VPN endpoint.

**Answer: A**

#### Explanation:

Setting up a new 1 Gbps Direct Connect dedicated connection to accommodate the additional traffic load from remote employees and the additional application would provide more bandwidth and lower latency than a VPN connection over the public internet. Creating a link aggregation group (LAG) with the existing and new Direct Connect connections would provide resiliency and redundancy for the AWS connectivity.

#### NEW QUESTION 12

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 16

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 20

A company is deploying an application. The application is implemented in a series of containers in an Amazon Elastic Container Service (Amazon ECS) cluster. The company will use the Fargate launch type for its tasks. The containers will run workloads that require connectivity initiated over an SSL connection. Traffic must be able to flow to the application from other AWS accounts over private connectivity. The application must scale in a manageable way as more consumers use the application.

Which solution will meet these requirements?

- A. Choose a Gateway Load Balancer (GLB) as the type of load balancer for the ECS service
- B. Create a lifecycle hook to add new tasks to the target group from Amazon ECS as required to handle scaling
- C. Specify the GLB in the service definition
- D. Create a VPC peer for external AWS account
- E. Update the route tables so that the AWS accounts can reach the GLB.
- F. Choose an Application Load Balancer (ALB) as the type of load balancer for the ECS service
- G. Create path-based routing rules to allow the application to target the containers that are registered in the target group
- H. Specify the ALB in the service definition
- I. Create a VPC endpoint service for the ALB. Share the VPC endpoint service with other AWS accounts.
- J. Choose an Application Load Balancer (ALB) as the type of load balancer for the ECS service
- K. Create path-based routing rules to allow the application to target the containers that are registered in the target group
- L. Specify the ALB in the service definition
- M. Create a VPC peer for the external AWS account
- N. Update the route tables so that the AWS accounts can reach the ALB.
- O. Choose a Network Load Balancer (NLB) as the type of load balancer for the ECS service
- P. Specify the NLB in the service definition
- Q. Create a VPC endpoint service for the NLB
- R. Share the VPC endpoint service with other AWS accounts.

**Answer:** D

#### NEW QUESTION 21

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 resources
- B. Associate the private hosted zone with that Region's VPC
- 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.com
- E. Configure the private hosted zone to allow zone transfers with every VPC.
- F. Create one Amazon Route 53 private hosted zone for example.com
- G. Create a single resource record for aws.example.com in the private hosted zone
- H. Apply a multivalued answer routing policy to the records
- I. Add all VPC resources as separate values in the routing policy.
- J. Create one Amazon Route 53 private hosted zone for aws.example.com
- K. Associate the private hosted zone with every VPC that has resources
- 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 22

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 connectio
- E. Connect the new connection to the transit gateway by using a VPN attachmen
- F. Update the customer gateway device to use the new Site to Site VPN connectio
- G. Delete the existing Site-to-Site VPN connection
- H. Create a new accelerated Site-to-Site VPN connectio
- I. Connect the new Site-to-Site VPN connection to the existing virtual private gatewa
- J. Update the customer gateway device to use the new Site-to-Site VPN connectio
- 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 Clou
- M. Update the customer gateway device to use the new Direct Connect connectio
- N. Delete the existing Site-to-Site VPN connection.

**Answer:** B

#### NEW QUESTION 23

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 28

A company has deployed an AWS Network Firewall 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 bucke
- B. Create an AWS Lambda function to load logs into the Amazon OpenSearch Service (Amazon Elasticsearch Service) cluste
- C. Enable Amazon Simple Notification Service (Amazon SNS) notifications on the S3 bucket to invoke the Lambda functio
- D. Configure flow logs for the firewal
- 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 destinatio
- 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 firewal
- 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 destinatio
- K. Configure flow logs for the firewal
- 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-usin>

#### NEW QUESTION 33

A company is planning to create a service that requires encryption in transit. The traffic must not be decrypted between the client and the backend of the service. The company will implement the service by using the gRPC protocol over TCP port 443. The service will scale up to thousands of simultaneous connections. The backend of the service will be hosted on an Amazon Elastic Kubernetes Service (Amazon EKS) duster with the Kubernetes Cluster Autoscaler and the Horizontal Pod Autoscaler configured. The company needs to use mutual TLS for two-way authentication between the client and the backend.

Which solution will meet these requirements?

- A. Install the AWS Load Balancer Controller for Kubernete
- B. Using that controller, configure a NetworkLoad Balancer with a TCP listener on port 443 to forward traffic to the IP addresses of the backend service Pods.
- C. Install the AWS Load Balancer Controller for Kubernete
- D. Using that controller, configure an Application Load Balancer with an HTTPS listener on port 443 to forward traffic to the IP addresses of the backend service Pods.
- E. Create a target grou
- F. Add the EKS managed node group's Auto Scaling group as a target Create an Application Load Balancer with an HTTPS listener on port 443 to forward traffic to the target group.
- G. Create a target grou
- H. Add the EKS managed node group's Auto Scaling group as a targe
- I. Create a Network Load Balancer with a TLS listener on port 443 to forward traffic to the target group.

**Answer:** B

**Explanation:**

<https://docs.aws.amazon.com/elasticloadbalancing/latest/application/load-balancer-target-groups.html#target-gro>

**NEW QUESTION 34**

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 38**

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 41**

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 42

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 46

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.com
- B. Import the certificate into AWS Certificate Manager (ACM). Configure CloudFront to use this imported SSL/TLS certificate
- 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 certificate
- 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 listener
- 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 listener
- 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 certificate
- O. Modify the CloudFront origin to use the HTTPS protocol only
- P. Delete the HTTP listener on the ALB.
- Q. Create a self-signed certificate for service-alb.example.com
- 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 certificate
- S. Modify the CloudFront origin to use the HTTPS protocol only
- T. Delete the HTTP listener on the ALB.

**Answer: BDE**

#### NEW QUESTION 51

A company uses a hybrid architecture and has an AWS Direct Connect connection between its on-premises data center and AWS. The company has production applications that run in the on-premises data center. The company also has production applications that run in a VPC. The applications that run in the on-premises data center need to communicate with the applications that run in the VPC. The company is using corp.example.com as the domain name for the on-premises resources and is using an Amazon Route 53 private hosted zone for aws.example.com to host the VPC resources. The company is using an open-source recursive DNS resolver in a VPC subnet and is using a DNS resolver in the on-premises data center. The company's on-premises DNS resolver has a forwarder that directs requests for the aws.example.com domain name to the DNS resolver in the VPC. The DNS resolver in the VPC has a forwarder that directs requests for the corp.example.com domain name to the DNS resolver in the on-premises data center. The company has decided to replace the open-source recursive DNS resolver with Amazon Route 53 Resolver endpoints. Which combination of steps should a network engineer take to make this replacement? (Choose three.)

- A. Create a Route 53 Resolver rule to forward aws.example.com domain queries to the IP addresses of the outbound endpoint.
- B. Configure the on-premises DNS resolver to forward aws.example.com domain queries to the IP addresses of the inbound endpoint.
- C. Create a Route 53 Resolver inbound endpoint and a Route 53 Resolver outbound endpoint.
- D. Create a Route 53 Resolver rule to forward aws.example.com domain queries to the IP addresses of the inbound endpoint.
- E. Create a Route 53 Resolver rule to forward corp.example.com domain queries to the IP address of the on-premises DNS resolver.
- F. Configure the on-premises DNS resolver to forward aws.example.com queries to the IP addresses of the outbound endpoint.

**Answer: BCE**

#### Explanation:

To replace the open-source recursive DNS resolver with Amazon Route 53 Resolver endpoints in a hybrid architecture where on-premises applications need to communicate with applications running in a VPC, a network engineer should take the following steps:

- Create a Route 53 Resolver inbound endpoint and a Route 53 Resolver outbound endpoint. (Option C)

- Configure the on-premises DNS resolver to forward aws.example.com domain queries to the IP addresses of the inbound endpoint. (Option B)
- Create a Route 53 Resolver rule to forward corp.example.com domain queries to the IP address of the on-premises DNS resolver. (Option E)

These steps will allow for seamless replacement of the open-source recursive DNS resolver with Amazon Route 53 Resolver endpoints and enable communication between on-premises and VPC applications.

#### NEW QUESTION 56

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 61

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 rul
- G. Configure the function to use the event information to update the privatehosted zone.
- H. Add the private IP addresses in the existing Route 53 public hosted zone.

**Answer: BCD**

#### NEW QUESTION 66

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 68

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 AL
- B. Configure the Auto Scaling group to register instances with the ALB's target group.
- C. Create an Amazon CloudFront distributio
- D. Configure the distribution with a custom SSL/TLS certificat
- E. Set the Auto Scaling group as the distribution's origin.
- F. Create a Network Load Balancer (NLB). Add a TCP listener to the NL

- 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 71**

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