

Amazon-Web-Services

Exam Questions ANS-C01

AWS Certified Advanced Networking Specialty Exam



NEW QUESTION 1

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: A

NEW QUESTION 2

A network engineer needs to update a company's hybrid network to support IPv6 for the upcoming release of a new application. The application is hosted in a VPC in the AWS Cloud. The company's current AWS infrastructure includes VPCs that are connected by a transit gateway. The transit gateway is connected to the on-premises network by AWS Direct Connect and AWS Site-to-Site VPN. The company's on-premises devices have been updated to support the new IPv6 requirements.

The company has enabled IPv6 for the existing VPC by assigning a new IPv6 CIDR block to the VPC and by assigning IPv6 to the subnets for dual-stack support. The company has launched new Amazon EC2 instances for the new application in the updated subnets.

When updating the hybrid network to support IPv6 the network engineer must avoid making any changes to the current infrastructure. The network engineer also must block direct access to the instances' new IPv6 addresses from the internet. However, the network engineer must allow outbound internet access from the instances.

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

- A. Update the Direct Connect transit VIF and configure BGP peering with the AWS assigned IPv6 peering address
- B. Create a new VPN connection that supports IPv6 connectivity
- C. Add an egress-only internet gateway
- D. Update any affected VPC security groups and route tables to provide connectivity within the VPC and between the VPC and the on-premises devices
- E. Update the Direct Connect transit VIF and configure BGP peering with the AWS assigned IPv6 peering address
- F. Update the existing VPN connection to support IPv6 connectivity
- G. Add an egress-only internet gateway
- H. Update any affected VPC security groups and route tables to provide connectivity within the VPC and between the VPC and the on-premises devices.
- I. Create a Direct Connect transit VIF and configure BGP peering with the AWS assigned IPv6 peering address
- J. Create a new VPN connection that supports IPv6 connectivity
- K. Add an egress-only internet gateway
- L. Update any affected VPC security groups and route tables to provide connectivity within the VPC and between the VPC and the on-premises devices.
- M. Create a Direct Connect transit VIF and configure BGP peering with the AWS assigned IPv6 peering address
- N. Create a new VPN connection that supports IPv6 connectivity
- O. Add a NAT gateway
- P. Update any affected VPC security groups and route tables to provide connectivity within the VPC and between the VPC and the on-premises devices.

Answer: B

NEW QUESTION 3

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 it
- 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 4

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 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 subne
- B. Disable the Auto-assign Public IP option while launching the EC2 instance
- C. Create an internet gatewa
- D. Attach the internet gateway to the VP
- E. In the public subnet's route table, add a default route that points to the internet gateway.
- F. Place the EC2 instances in a private subne
- G. Create a NAT gateway in a public subnet in the same Availability Zon
- H. Create an internet gatewa
- I. Attach the internet gateway to the VP
- J. In the public subnet's route table, add a default route that points to the internet gateway
- K. Place the EC2 instances in a private subne
- L. Create an interface VPC endpoint for Amazon SQ
- M. Creategateway 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 6

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 7

A company is planning to use Amazon S3 to archive financial data. The data is currently stored in an on-premises data center. The company uses AWS Direct Connect with a Direct Connect gateway and a transit gateway to connect to the on-premises data center. The data cannot be transported over the public internet and must be encrypted in transit.

Which solution will meet these requirements?

- A. Create a Direct Connect public VI
- B. Set up an IPsec VPN connection over the public VIF to access Amazon S3. Use HTTPS for communication.
- C. Create an IPsec VPN connection over the transit VI
- D. Create a VPC and attach the VPC to the transit gatewa
- E. In the VPC, provision an interface VPC endpoint for Amazon S3. Use HTTPS for communication.
- F. Create a VPC and attach the VPC to the transit gatewa
- G. In the VPC, provision an interface VPC endpoint for Amazon S3. Use HTTPS for communication.
- H. Create a Direct Connect public VI
- I. Set up an IPsec VPN connection over the public VIF to the transit gatewa
- J. Create an attachment for Amazon S3. Use HTTPS for communication.

Answer: B

NEW QUESTION 8

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 VP
- B. Use Traffic Mirroring by specifying the NAT gateway as the source and the EC2 instance as the destinatio

- 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 log
- E. Launch a security information and event management (SIEM) solution in the VP
- F. Configure the SIEM solution to ingest the VPC flow log
- G. Run queries on the SIEM solution to identify the AWS resources that are generating the suspicious traffic.
- H. Use VPC flow log
- I. Publish the flow logs to a log group in Amazon CloudWatch Log
- 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 9

A network engineer must develop an AWS CloudFormation template that can create a virtual private gateway, a customer gateway, a VPN connection, and static routes in a route table. During testing of the template, the network engineer notes that the CloudFormation template has encountered an error and is rolling back. What should the network engineer do to resolve the error?

- A. Change the order of resource creation in the CloudFormation template.
- B. Add the DependsOn attribute to the resource declaration for the virtual private gateway
- C. Specify the route table entry resource.
- D. Add a wait condition in the template to wait for the creation of the virtual private gateway.
- E. Add the DependsOn attribute to the resource declaration for the route table entry
- F. Specify the virtual private gateway resource.

Answer: D

NEW QUESTION 10

A global company operates all its non-production environments out of three AWS Regions: eu-west-1, us-east-1, and us-west-1. The company hosts all its production workloads in two on-premises data centers. The company has 60 AWS accounts and each account has two VPCs in each Region. Each VPC has a virtual private gateway where two VPN connections terminate for resilient connectivity to the data centers. The company has 360 VPN tunnels to each data center, resulting in high management overhead. The total VPN throughput for each Region is 500 Mbps. The company wants to migrate the production environments to AWS. The company needs a solution that will simplify the network architecture and allow for future growth. The production environments will generate an additional 2 Gbps of traffic per Region back to the data centers. This traffic will increase over time. Which solution will meet these requirements?

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

Answer: C

NEW QUESTION 10

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 11

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

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

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

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

Answer: C

Explanation:

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

NEW QUESTION 14

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 15

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 17

An international company provides early warning about tsunamis. The company plans to use IoT devices to monitor sea waves around the world. The data that is collected by the IoT devices must reach the company's infrastructure on AWS as quickly as possible. The company is using three operation centers around the world. Each operation center is connected to AWS through its own AWS Direct Connect connection. Each operation center is connected to the internet through at least two upstream internet service providers.

The company has its own provider-independent (PI) address space. The IoT devices use TCP protocols for reliable transmission of the data they collect. The IoT devices have both landline and mobile internet connectivity. The infrastructure and the solution will be deployed in multiple AWS Regions. The company will use Amazon Route 53 for DNS services.

A network engineer needs to design connectivity between the IoT devices and the services that run in the AWS Cloud.

Which solution will meet these requirements with the HIGHEST availability?

- A. Set up an Amazon CloudFront distribution with origin failover
- B. Create an origin group for each Region where the solution is deployed.
- C. Set up Route 53 latency-based routing
- D. Add latency alias records
- E. For the latency alias records, set the value of Evaluate Target Health to Yes.
- F. Set up an accelerator in AWS Global Accelerator
- G. Configure Regional endpoint groups and health checks.
- H. Set up Bring Your Own IP (BYOIP) addresses

I. Use the same PI addresses for each Region where the solution is deployed.

Answer: B

Explanation:

<https://aws.amazon.com/blogs/iot/automate-global-device-provisioning-with-aws-iot-core-and-amazon-route-53>

NEW QUESTION 21

A company has deployed a critical application on a fleet of Amazon EC2 instances behind an Application Load Balancer. The application must always be reachable on port 443 from the public internet. The application recently had an outage that resulted from an incorrect change to the EC2 security group. A network engineer needs to automate a way to verify the network connectivity between the public internet and the EC2 instances whenever a change is made to the security group. The solution also must notify the network engineer when the change affects the connection. Which solution will meet these requirements?

- A. Enable VPC Flow Logs on the elastic network interface of each EC2 instance to capture REJECT traffic on port 443. Publish the flow log records to a log group in Amazon CloudWatch Log
- B. Create a CloudWatch Logs metric filter for the log group for rejected traffic
- C. Create an alarm to notify the network engineer.
- D. Enable VPC Flow Logs on the elastic network interface of each EC2 instance to capture all traffic on port 443. Publish the flow log records to a log group in Amazon CloudWatch Log
- E. Create a CloudWatch Logs metric filter for the log group for all traffic
- F. Create an alarm to notify the network engineer
- G. Create a VPC Reachability Analyzer path on port 443. Specify the security group as the source
- H. Specify the EC2 instances as the destination
- I. Create an Amazon Simple Notification Service (Amazon SNS) topic to notify the network engineer when a change to the security group affects the connection
- J. Create an AWS Lambda function to start Reachability Analyzer and to publish a message to the SNS topic in case the analyses fail. 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 24

A banking company is successfully operating its public mobile banking stack on AWS. The mobile banking stack is deployed in a VPC that includes private subnets and public subnets. The company is using IPv4 networking and has not deployed or supported IPv6 in the environment. The company has decided to adopt a third-party service provider's API and must integrate the API with the existing environment. The service provider's API requires the use of IPv6.

A network engineer must turn on IPv6 connectivity for the existing workload that is deployed in a private subnet. The company does not want to permit IPv6 traffic from the public internet and mandates that the company's servers must initiate all IPv6 connectivity. The network engineer turns on IPv6 in the VPC and in the private subnets.

Which solution will meet these requirements?

- A. Create an internet gateway and a NAT gateway in the VPC
- B. Add a route to the existing subnet route tables to point IPv6 traffic to the NAT gateway.
- C. Create an internet gateway and a NAT instance in the VPC
- D. Add a route to the existing subnet route tables to point IPv6 traffic to the NAT instance.
- E. Create an egress-only Internet gateway in the VPC. Add a route to the existing subnet route tables to point IPv6 traffic to the egress-only internet gateway.
- F. Create an egress-only internet gateway in the VPC
- G. Configure a security group that denies all inbound traffic
- H. Associate the security group with the egress-only internet gateway.

Answer: C

NEW QUESTION 29

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

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

Answer: A

NEW QUESTION 32

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

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

A network engineer must integrate the systems by designing a solution that results in the least possible disruption to the existing environments.

Which solution will meet these requirements?

- A. Create a VPC peering connection between the web service VPC and the existing production VPC
- B. Add a routing rule to the appropriate route table to allow data to flow to 192.168.224.0/19 from the existing production environment and to flow to 192.168.128.0/17 from the web service environment

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

Answer: C

NEW QUESTION 36

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 VIFs
- 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 VIFs
- 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 41

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 44

A software company offers a software-as-a-service (SaaS) accounting application that is hosted in the AWS Cloud. The application requires connectivity to the company's on-premises network. The company has two redundant 10 GB AWS Direct Connect connections between AWS and its on-premises network to accommodate the growing demand for the application.

The company already has encryption between its on-premises network and the colocation. The company needs to encrypt traffic between AWS and the edge routers in the colocation within the next few months. The company must maintain its current bandwidth.

What should a network engineer do to meet these requirements with the LEAST operational overhead?

- A. Deploy a new public VIF with encryption on the existing Direct Connect connection
- B. Reroute traffic through the new public VIF.
- C. Create a virtual private gateway. Deploy new AWS Site-to-Site VPN connections from on-premises to the virtual private gateway. Reroute traffic from the Direct Connect private VIF to the new VPNs.
- D. Deploy a new pair of 10 GB Direct Connect connections with MACsec
- E. Configure MACsec on the edge router

- F. Reroute traffic to the new Direct Connect connection
- G. Decommission the original Direct Connect connections
- H. Deploy a new pair of 10 GB Direct Connect connections with MACse
- I. Deploy a new public VIF on the new Direct Connect connection
- J. Deploy two AWS Site-to-Site VPN connections on top of the new public VI
- K. Reroute traffic from the existing private VIF to the new Site-to-Site connection
- L. Decommission the original Direct Connect connections.

Answer: C

NEW QUESTION 45

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

NEW QUESTION 50

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 53

Your security team implements a host-based firewall on all of your Amazon Elastic Compute Cloud (EC2) instances to block all outgoing traffic. Exceptions must be requested for each specific requirement. Until you request a new rule, you cannot access the instance metadata service. Which firewall rule should you request to be added to your instances to allow instance metadata access?

- A. Inbound; Protocol tcp; Source [Instance's EIP]; Destination 169.254.169.254
- B. Inbound; Protocol tcp; Destination 169.254.169.254; Destination port 80
- C. Outbound; Protocol tcp; Destination 169.254.169.254; Destination port 80
- D. Outbound; Protocol tcp; Destination 169.254.169.254; Destination port 443

Answer: C

Explanation:

<https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/instancedata-data-retrieval.html>

To view all categories of instance metadata from within a running instance, use the following URI.

<http://169.254.169.254/latest/meta-data/>

NEW QUESTION 56

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 58

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 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.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 certificate
- S. Modify the CloudFront origin to use the HTTPS protocol only
- T. Delete the HTTP listener on the ALB.

Answer: BDE

NEW QUESTION 63

A company has expanded its network to the AWS Cloud by using a hybrid architecture with multiple AWS accounts. The company has set up a shared AWS account for the connection to its on-premises data centers and the company offices. The workloads consist of private web-based services for internal use. These services run in different AWS accounts. Office-based employees consume these services by using a DNS name in an on-premises DNS zone that is named example.internal.

The process to register a new service that runs on AWS requires a manual and complicated change request to the internal DNS. The process involves many teams.

The company wants to update the DNS registration process by giving the service creators access that will allow them to register their DNS records. A network engineer must design a solution that will achieve this goal. The solution must maximize cost-effectiveness and must require the least possible number of configuration changes.

Which combination of steps should the network engineer take to meet these requirements? (Choose three.)

- A. Create a record for each service in its local private hosted zone (serviceA.account1.aws.example.internal). Provide this DNS record to the employees who need access.
- B. Create an Amazon Route 53 Resolver inbound endpoint in the shared account VPC
- C. Create a conditional forwarder for a domain named aws.example.internal on the on-premises DNS server
- D. Set the forwarding IP addresses to the inbound endpoint's IP addresses that were created.
- E. Create an Amazon Route 53 Resolver rule to forward any queries made to onprem.example.internal to the on-premises DNS servers.
- F. Create an Amazon Route 53 private hosted zone named aws.example.internal in the shared AWS account to resolve queries for this domain.
- G. Launch two Amazon EC2 instances in the shared AWS account
- H. Install BIND on each instance
- I. Create a DNS conditional forwarder on each BIND server to forward queries for each subdomain under aws.example.internal to the appropriate private hosted zone in each AWS account
- J. Create a conditional forwarder for a domain named aws.example.internal on the on-premises DNS server
- K. Set the forwarding IP addresses to the IP addresses of the BIND servers.
- L. Create a private hosted zone in the shared AWS account for each account that runs the service. Configure the private hosted zone to contain aws.example.internal in the domain (account1.aws.example.internal). Associate the private hosted zone with the VPC that runs the service and the shared account VPC.

Answer: ABD

Explanation:

To meet the requirements of updating the DNS registration process while maximizing cost-effectiveness and minimizing configuration changes, the network engineer should take the following steps:

- Create an Amazon Route 53 Resolver inbound endpoint in the shared account VPC. Create a conditional forwarder for a domain named aws.example.internal on the on-premises DNS servers. Set the forwarding IP addresses to the inbound endpoint's IP addresses that were created (Option B).
- Create an Amazon Route 53 private hosted zone named aws.example.internal in the shared AWS account to resolve queries for this domain (Option D).
- Create a record for each service in its local private hosted zone (serviceA.account1.aws.example.internal). Provide this DNS record to the employees who need access (Option A).

These steps will allow service creators to register their DNS records while keeping costs low and minimizing configuration changes.

NEW QUESTION 67

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