

# Amazon-Web-Services

## Exam Questions ANS-C01

AWS Certified Advanced Networking Specialty Exam



### NEW QUESTION 1

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

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

**Answer: B**

### NEW QUESTION 2

A company has 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 VPC
- C. Reboot the Amazon Linux 2 EC2 instance.
- D. Create an Amazon Route 53 Resolver rule
- E. Associate the rule with the VPC
- 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 hosts 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 VPC
- 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). 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.

### NEW QUESTION 3

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

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

**Answer: A**

### NEW QUESTION 4

A company has an AWS Direct Connect connection between its on-premises data center in the United States (US) and workloads in the us-east-1 Region. The

connection uses a transit VIF to connect the data center to a transit gateway in us-east-1.

The company is opening a new office in Europe with a new on-premises data center in England. A Direct Connect connection will connect the new data center with some workloads that are running in a single VPC in the eu-west-2 Region. The company needs to connect the US data center and us-east-1 with the Europe data center and eu-west-2. A network engineer must establish full connectivity between the data centers and Regions with the lowest possible latency.

How should the network engineer design the network architecture to meet these requirements?

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

**Answer: C**

#### NEW QUESTION 5

A company has 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 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 VPC
- C. Define Route 53 Resolver rules to forward requests for the on-premises domains to the on-premises DNS resolver

- 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 Manager
- E. Configure the on-premises DNS servers to forward the cloud domains to the Route 53 inbound endpoints.
- 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 VPC
- H. Define Route 53 Resolver rules to forward requests for the on-premises domains to the on-premises DNS resolver
- I. Associate the application VPC private hosted zones with the egress VPC
- J. and share the Route 53 Resolver rules with the application accounts by using AWS Resource Access Manager
- 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 VPC
- N. Define Route 53 Resolver rules to forward requests for the on-premises domains to the on-premises DNS resolver
- O. 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 Manager

**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.

**NEW QUESTION 8**

A company is deploying third-party firewall appliances for traffic inspection and NAT capabilities in its VPC. The VPC is configured with private subnets and public subnets. The company needs to deploy the firewall appliances behind a load balancer. Which architecture will meet these requirements MOST cost-effectively?

- A. Deploy a Gateway Load Balancer with the firewall appliances as target
- B. Configure the firewall appliances with a single network interface in a private subnet
- C. Use a NAT gateway to send the traffic to the internet after inspection.
- D. Deploy a Gateway Load Balancer with the firewall appliances as target
- E. Configure the firewall appliances with two network interfaces: one network interface in a private subnet and another network interface in a public subnet
- F. Use the NAT functionality on the firewall appliances to send the traffic to the internet after inspection.
- G. Deploy a Network Load Balancer with the firewall appliances as target
- H. Configure the firewall appliances with a single network interface in a private subnet
- I. Use a NAT gateway to send the traffic to the internet after inspection.
- J. Deploy a Network Load Balancer with the firewall appliances as target
- K. Configure the firewall appliances with two network interfaces: one network interface in a private subnet and another network interface in a public subnet
- L. Use the NAT functionality on the firewall appliances to send the traffic to the internet after inspection.

**Answer: B**

**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**

Your company runs an application for the US market in the us-east-1 AWS region. This application uses proprietary TCP and UDP protocols on Amazon Elastic Compute Cloud (EC2) instances. End users run a real-time, front-end application on their local PCs. This front-end application knows the DNS hostname of the service. You must prepare the system for global expansion. The end users must access the application with lowest latency. How should you use AWS services to meet these requirements?

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

**Answer: B**

**NEW QUESTION 10**

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

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

**Answer: D**

**Explanation:**

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

**NEW QUESTION 11**

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

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

**Answer: A**

**Explanation:**

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

**NEW QUESTION 14**

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 15**

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 20**

A company is planning a migration of its critical workloads from an on-premises data center to Amazon EC2 instances. The plan includes a new 10 Gbps AWS Direct Connect dedicated connection from the on-premises data center to a VPC that is attached to a transit gateway. The migration must occur over encrypted paths between the on-premises data center and the AWS Cloud.

Which solution will meet these requirements while providing the HIGHEST throughput?

- A. Configure a public VIF on the Direct Connect connectio
- B. Configure an AWS Site-to-Site VPN connection to the transit gateway as a VPN attachment.
- C. Configure a transit VIF on the Direct Connect connectio
- D. Configure an IPsec VPN connection to an EC2 instance that is running third-party VPN software.
- E. Configure MACsec for the Direct Connect connectio
- F. Configure a transit VIF to a Direct Connect gateway that is associated with the transit gateway.
- G. Configure a public VIF on the Direct Connect connectio
- H. Configure two AWS Site-to-Site VPN connections to the transit gatewa
- I. Enable equal-cost multi-path (ECMP) routing.

**Answer: C**

**Explanation:**

<https://aws.amazon.com/blogs/networking-and-content-delivery/adding-macsec-security-to-aws-direct-connect-c>

**NEW QUESTION 23**

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 AL
- G. Use Bring Your Own IP (BYOIP) from the on-premises network with Global Accelerator
- H. Place the EC2 instances behind an Amazon CloudFront distributio
- I. Use Bring Your Own IP (BYOIP) from the on-premises network with CloudFront.

**Answer: B**

**NEW QUESTION 28**

A global company runs business applications in the us-east-1 Region inside a VPC. One of the company's regional offices in London uses a virtual private gateway for an AWS Site-to-Site VPN connection tom the VPC. The company has configured a transit gateway and has set up peering between the VPC and other VPCs that various departments in the company use.

Employees at the London office are experiencing latency issues when they connect to the business applications.

What should a network engineer do to reduce this latency?

- A. Create a new Site-to-Site VPN connectio
- B. Set the transit gateway as the target gatewa
- C. Enable acceleration on the new Site-to-Site VPN connectio
- D. Update the VPN device in the London office with the new connection details.
- E. Modify the existing Site-to-Site VPN connection by setting the transit gateway as the target gateway.Enable acceleration on the existing Site-to-Site VPN connection.
- F. Create a new transit gateway in the eu-west-2 (London) Regio

- G. Peer the new transit gateway with the existing transit gateway
- H. Modify the existing Site-to-Site VPN connection by setting the new transit gateway as the target gateway.
- I. Create a new AWS Global Accelerator standard accelerator that has an endpoint of the Site-to-Site VPN connection
- J. Update the VPN device in the London office with the new connection details.

**Answer:** A

**Explanation:**

Enabling acceleration for a Site-to-Site VPN connection uses AWS Global Accelerator to route traffic from the on-premises network to an AWS edge location that is closest to the customer gateway device<sup>1</sup>. AWS Global Accelerator optimizes the network path, using the congestion-free AWS global network to route traffic to the endpoint that provides the best application performance<sup>2</sup>. Setting the transit gateway as the target gateway enables connectivity between the on-premises network and multiple VPCs that are attached to the transit gateway<sup>3</sup>.

**NEW QUESTION 29**

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 31**

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

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

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

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

**Answer:** A

**NEW QUESTION 35**

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

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

Which solution will meet these requirements?

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

**Answer:** C

**Explanation:**

Option C is the optimal solution as it involves deploying the EC2 instances in the private subnets, which provides additional security benefits. Additionally, creating an S3 gateway endpoint in the VPC will enable the EC2 instances to communicate with Amazon S3 directly, without incurring data transfer costs. This is because

the S3 gateway endpoint uses Amazon's private network to transfer data between the VPC and S3, which is not charged for data transfer. Furthermore, specifying the route table of the private subnets during endpoint creation will create routes to Amazon S3, which is required for the EC2 instances to communicate with S3.

#### NEW QUESTION 40

A company has created three VPCs: a production VPC, a nonproduction VPC, and a shared services VPC. The production VPC and the nonproduction VPC must each have communication with the shared services VPC. There must be no communication between the production VPC and the nonproduction VPC. A transit gateway is deployed to facilitate communication between VPCs.

Which route table configurations on the transit gateway will meet these requirements?

- A. Configure a route table with the production and nonproduction VPC attachments associated with propagated routes for only the shared services VPC
- B. Create an additional route table with only the shared services VPC attachment associated with propagated routes from the production and nonproduction VPCs.
- C. Configure a route table with the production and nonproduction VPC attachments associated with propagated routes for each VPC
- D. Create an additional route table with only the shared services VPC attachment associated with propagated routes from each VPC.
- E. Configure a route table with all the VPC attachments associated with propagated routes for only the shared services VPC
- F. Create an additional route table with only the shared services VPC attachment associated with propagated routes from the production and nonproduction VPCs.
- G. Configure a route table with the production and nonproduction VPC attachments associated with propagated routes disabled
- H. Create an additional route table with only the shared services VPC attachment associated with propagated routes from the production and nonproduction VPCs.

**Answer: A**

#### NEW QUESTION 42

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 43

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

What should the network engineer do to meet this requirement?

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

**Answer: D**

#### NEW QUESTION 45

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

M. Retain the new VPN connection to the new transit VPC in each Region.

**Answer:** C

#### NEW QUESTION 50

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 52

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 record
- 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 56

A company's network engineer builds and tests network designs for VPCs in a development account. The company needs to monitor the changes that are made to network resources and must ensure strict compliance with network security policies. The company also needs access to the historical configurations of network resources.

Which solution will meet these requirements?

- A. Create an Amazon EventBridge (Amazon CloudWatch Events) rule with a custom pattern to monitor the account for change
- B. Configure the rule to invoke an AWS Lambda function to identify noncompliant resources
- C. Update an Amazon DynamoDB table with the changes that are identified.
- D. Create custom metrics from Amazon CloudWatch logs
- E. Use the metrics to invoke an AWS Lambda function to identify noncompliant resources
- F. Update an Amazon DynamoDB table with the changes that are identified.
- G. Record the current state of network resources by using AWS Config
- H. Create rules that reflect the desired configuration settings
- I. Set remediation for noncompliant resources.
- J. Record the current state of network resources by using AWS Systems Manager Inventory
- K. Use Systems Manager State Manager to enforce the desired configuration settings and to carry out remediation for noncompliant resources.

**Answer:** C

#### Explanation:

Recording the current state of network resources by using AWS Config would enable auditing and assessment of resource configurations and compliance. Creating rules that reflect the desired configuration settings would enable evaluation of whether the network resources comply with network security policies. Setting remediation for noncompliant resources would enable automatic correction of undesired configurations.

#### NEW QUESTION 60

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

- A. Use an Amazon Route 53 multivalue answer routing policy to route older client traffic to the on-premises application version and the rest of the traffic to the new AWS based version.

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

**Answer:** D

#### NEW QUESTION 62

A company has multiple AWS accounts. Each account contains one or more VPCs. A new security guideline requires the inspection of all traffic between VPCs. The company has deployed a transit gateway that provides connectivity between all VPCs. The company also has deployed a shared services VPC with Amazon EC2 instances that include IDS services for stateful inspection. The EC2 instances are deployed across three Availability Zones. The company has set up VPC associations and routing on the transit gateway. The company has migrated a few test VPCs to the new solution for traffic inspection. Soon after the configuration of routing, the company receives reports of intermittent connections for traffic that crosses Availability Zones. What should a network engineer do to resolve this issue?

- A. Modify the transit gateway VPC attachment on the shared services VPC by enabling cross-Availability Zone load balancing.
- B. Modify the transit gateway VPC attachment on the shared services VPC by enabling appliance mode support.
- C. Modify the transit gateway by selecting VPN equal-cost multi-path (ECMP) routing support.
- D. Modify the transit gateway by selecting multicast support.

**Answer:** B

#### Explanation:

To resolve the issue of intermittent connections for traffic that crosses Availability Zones after configuring routing for traffic inspection between VPCs using a transit gateway and EC2 instances with IDS services in a shared services VPC, a network engineer should modify the transit gateway VPC attachment on the shared services VPC by enabling appliance mode support (Option B). This will ensure that traffic is routed to the same EC2 instance for stateful inspection and prevent intermittent connections.

#### NEW QUESTION 63

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

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

**Answer:** A

#### Explanation:

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

#### NEW QUESTION 65

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 70

An Australian ecommerce company hosts all of its services in the AWS Cloud and wants to expand its customer base to the United States (US). The company is targeting the western US for the expansion.

The company's existing AWS architecture consists of four AWS accounts with multiple VPCs deployed in the ap-southeast-2 Region. All VPCs are attached to a transit gateway in ap-southeast-2. There are dedicated VPCs for each application service. The company also has VPCs for centralized security features such as proxies, firewalls, and logging.

The company plans to duplicate the infrastructure from ap-southeast-2 to the us-west-1 Region. A network engineer must establish connectivity between the various applications in the two Regions. The solution must maximize bandwidth, minimize latency and minimize operational overhead.

Which solution will meet these requirements?

- A. Create VPN attachments between the two transit gateway

- B. Configure the VPN attachments to use BGP routing between the two transit gateways.
- C. Peer the transit gateways in each Region
- D. Configure routing between the two transit gateways for each Region's IP addresses.
- E. Create a VPN server in a VPC in each Region
- F. Update the routing to point to the VPN servers for the IP addresses in alternate Regions.
- G. Attach the VPCs in us-west-1 to the transit gateway in ap-southeast-2.

**Answer:** B

**Explanation:**

Peering the transit gateways in each region would establish a private network connection between the two regions, allowing the company to route traffic between the VPCs in different regions without going over the public internet. This would help minimize latency and maximize bandwidth while reducing the operational overhead of managing multiple VPN connections.

**NEW QUESTION 73**

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

The SQS queue is not receiving messages.

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

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

**Answer:** CE

**NEW QUESTION 75**

A company is migrating an existing application to a new AWS account. The company will deploy the application in a single AWS Region by using one VPC and multiple Availability Zones. The application will run on Amazon EC2 instances. Each Availability Zone will have several EC2 instances. The EC2 instances will be deployed in private subnets.

The company's clients will connect to the application by using a web browser with the HTTPS protocol. Inbound connections must be distributed across the Availability Zones and EC2 instances. All connections from the same client session must be connected to the same EC2 instance. The company must provide end-to-end encryption for all connections between the clients and the application by using the application SSL certificate.

Which solution will meet these requirements?

- A. Create a Network Load Balance
- B. Create a target group
- C. Set the protocol to TCP and the port to 443 for the target group
- D. Turn on session affinity (sticky sessions). Register the EC2 instances as target
- E. Create a listener
- F. Set the protocol to TCP and the port to 443 for the listener
- G. Deploy SSL certificates to the EC2 instances.
- H. Create an Application Load Balance
- I. Create a target group
- J. Set the protocol to HTTP and the port to 80 for the target group
- K. Turn on session affinity (sticky sessions) with an application-based cookie policy
- L. Register the EC2 instances as target
- M. Create an HTTPS listener
- N. Set the default action to forward to the target group
- O. Use AWS Certificate Manager (ACM) to create a certificate for the listener.
- P. Create a Network Load Balance
- Q. Create a target group
- R. Set the protocol to TLS and the port to 443 for the target group
- S. Turn on session affinity (sticky sessions). Register the EC2 instances as target
- T. Create a listener
- . Set the protocol to TLS and the port to 443 for the listener
- . Use AWS Certificate Manager (ACM) to create a certificate for the application.
- . Create an Application Load Balance
- . Create a target group
- . Set the protocol to HTTPS and the port to 443 for the target group
- . Turn on session affinity (sticky sessions) with an application-based cookie policy
- . Register the EC2 instances as target
- . Create an HTTP listener
- . Set the port to 443 for the listener
- . Set the default action to forward to the target group.

**Answer:** A

**NEW QUESTION 78**

.....

## **Thank You for Trying Our Product**

### **We offer two products:**

1st - We have Practice Tests Software with Actual Exam Questions

2nd - Questions and Answers in PDF Format

### **ANS-C01 Practice Exam Features:**

- \* ANS-C01 Questions and Answers Updated Frequently
- \* ANS-C01 Practice Questions Verified by Expert Senior Certified Staff
- \* ANS-C01 Most Realistic Questions that Guarantee you a Pass on Your First Try
- \* ANS-C01 Practice Test Questions in Multiple Choice Formats and Updates for 1 Year

**100% Actual & Verified — Instant Download, Please Click**  
**[Order The ANS-C01 Practice Test Here](#)**