

## ANS-C01 Dumps

### AWS Certified Advanced Networking Specialty Exam

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**NEW QUESTION 1**

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 2**

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 3**

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

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

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

**Answer: B**

**NEW QUESTION 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 company is using an AWS Site-to-Site VPN connection from the company's on-premises data center to a virtual private gateway in the AWS Cloud. Because of congestion, the company is experiencing availability and performance issues as traffic travels across the internet before the traffic reaches AWS. A network engineer must reduce these issues for the connection as quickly as possible with minimum administration effort.

Which solution will meet these requirements?

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

**Answer:** B

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

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

Which solution will meet these requirements?

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

**Answer:** A

**Explanation:**

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

**NEW QUESTION 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 Regio
- B. Create and attach private VIFs to a single Direct Connect gatewa
- C. Attach the Direct Connect gateway to all the VPC
- D. Remove the existing VPN connections that are attached directly to the virtual private gateways.
- E. Create a single transit gateway with VPN connections from each data cente
- F. Share the transit gateway with each account by using AWS Resource Access Manager (AWS RAM). Attach the transit gateway to each VP
- 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 cente
- 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 VP
- 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 VP
- 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 VPC
- N. Retain the new VPN connection to the new transit VPC in each Region.

**Answer:** C

**NEW QUESTION 10**

A company is deploying a non-web application on an AWS load balancer. All targets are servers located on-premises that can be accessed by using AWS Direct Connect. The company wants to ensure that the source IP addresses of clients connecting to the application are passed all the way to the end server.

How can this requirement be achieved?

- A. Use a Network Load Balancer to automatically preserve the source IP address.
- B. Use a Network Load Balancer and enable the X-Forwarded-For attribute.
- C. Use a Network Load Balancer and enable the ProxyProtocol v2 attribute.
- D. Use an Application Load Balancer to automatically preserve the source IP address in the X-Forwarded-For header.

**Answer:** C

**Explanation:**

<https://docs.aws.amazon.com/elasticloadbalancing/latest/network/load-balancer-target-groups.html#proxy-protocol>

**NEW QUESTION 13**

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

The company tests the application with a single EC2 instance and does not observe any problems. However, after production deployment, users report that they



can log in but that they cannot use the application. Every new web request restarts the login process. What should a network engineer do to resolve this issue?

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

**Answer: C**

#### NEW QUESTION 16

A company is using custom DNS servers that run BIND for name resolution in its VPCs. The VPCs are deployed across multiple AWS accounts that are part of the same organization in AWS Organizations. All the VPCs are connected to a transit gateway. The BIND servers are running in a central VPC and are configured to forward all queries for an on-premises DNS domain to DNS servers that are hosted in an on-premises data center. To ensure that all the VPCs use the custom DNS servers, a network engineer has configured a VPC DHCP options set in all the VPCs that specifies the custom DNS servers to be used as domain name servers.

Multiple development teams in the company want to use Amazon Elastic File System (Amazon EFS). A development team has created a new EFS file system but cannot mount the file system to one of its Amazon EC2 instances. The network engineer discovers that the EC2 instance cannot resolve the IP address for the EFS mount point fs-33444567d.efs.us-east-1.amazonaws.com. The network engineer needs to implement a solution so that development teams throughout the organization can mount EFS file systems.

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

- A. Configure the BIND DNS servers in the central VPC to forward queries forefs.us-east-1.amazonaws.com to the Amazon provided DNS server (169.254.169.253).
- B. Create an Amazon Route 53 Resolver outbound endpoint in the central VP
- C. Update all the VPC DHCP options sets to use AmazonProvidedDNS for name resolution.
- D. Create an Amazon Route 53 Resolver inbound endpoint in the central VPUupdate all the VPC DHCP options sets to use the Route 53 Resolver inbound endpoint in the central VPC for name resolution.
- E. Create an Amazon Route 53 Resolver rule to forward queries for the on-premises domain to the on-premises DNS server
- F. Share the rule with the organization by using AWS Resource Access Manager (AWS RAM). Associate the rule with all the VPCs.
- G. Create an Amazon Route 53 private hosted zone for the efs.us-east-1.amazonaws.com domain. Associate the private hosted zone with the VPC where the EC2 instance is deploye
- H. Create an A record for fs-33444567d.efs.us-east-1.amazonaws.com in the private hosted zon
- I. Configure the A record to return the mount target of the EFS mount point.

**Answer: BD**

#### Explanation:

Option B suggests using Amazon Route 53 Resolver outbound endpoint, which would replace the existing BIND DNS servers with the AmazonProvidedDNS for name resolution. However, the scenario specifically mentions that the company is using custom DNS servers that run BIND for name resolution in its VPCs, so this solution would not work. Option D suggests creating a Route 53 Resolver rule to forward queries for the on-premises domain to the on-premises DNS servers, which would not address the issue of resolving the EFS mount point. The problem is not with resolving queries for the on-premises domain, but rather with resolving the IP address for the EFS mount point.

#### NEW QUESTION 19

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

Which solution will meet these requirements?

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

**Answer: B**

#### Explanation:

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

#### NEW QUESTION 22

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 24

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 26

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 30

A company uses a hybrid architecture and has an AWS Direct Connect connection between its on-premises data center and AWS. The company has production applications that run in the on-premises data center. The company also has production applications that run in a VPC. The applications that run in the on-premises data center need to communicate with the applications that run in the VPC. The company is using corp.example.com as the domain name for the on-premises resources and is using an Amazon Route 53 private hosted zone for aws.example.com to host the VPC resources.

The company is using an open-source recursive DNS resolver in a VPC subnet and is using a DNS resolver in the on-premises data center. The company's on-premises DNS resolver has a forwarder that directs requests for the aws.example.com domain name to the DNS resolver in the VPC. The DNS resolver in the VPC has a forwarder that directs requests for the corp.example.com domain name to the DNS resolver in the on-premises data center. The company has decided to replace the open-source recursive DNS resolver with Amazon Route 53 Resolver endpoints.

Which combination of steps should a network engineer take to make this replacement? (Choose three.)

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

**Answer:** BCE

#### Explanation:

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

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

➤ Create a Route 53 Resolver rule to forward corp.example.com domain queries to the IP address of the on-premises DNS resolver. (Option E)

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

**NEW QUESTION 35**

A company's network engineer is designing an active-passive connection to AWS from two on-premises data centers. The company has set up AWS Direct Connect connections between the on-premises data centers and AWS. From each location, the company is using a transit VIF that connects to a Direct Connect gateway that is associated with a transit gateway.

The network engineer must ensure that traffic from AWS to the data centers is routed first to the primary data center. The traffic should be routed to the failover data center only in the case of an outage.

Which solution will meet these requirements?

- A. Set the BGP community tag for all prefixes from the primary data center to 7224:7100. Set the BGP community tag for all prefixes from the failover data center to 7224:7300
- B. Set the BGP community tag for all prefixes from the primary data center to 7224:7300. Set the BGP community tag for all prefixes from the failover data center to 7224:7100
- C. Set the BGP community tag for all prefixes from the primary data center to 7224:9300. Set the BGP community tag for all prefixes from the failover data center to 7224:9100
- D. Set the BGP community tag for all prefixes from the primary data center to 7224:9100. Set the BGP community tag for all prefixes from the failover data center to 7224:9300

**Answer:** B

**NEW QUESTION 37**

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

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

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

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

- A. Add a geoproximity routing policy in Route 53.
- B. Create a Route 53 private hosted zone for the same domain name Associate the application's VPC with the new private hosted zone.
- C. Enable DNS hostnames for the application's VPC.
- D. Create entries in the private hosted zone for each name in the public hosted zone by using the corresponding private IP addresses.
- E. Create an Amazon EventBridge (Amazon CloudWatch Events) rule that runs when AWS CloudTrail logs a Route 53 API call to the public hosted zon
- F. Create an AWS Lambda function as the target of the rul
- G. Configure the function to use the event information to update the privatehosted zone.
- H. Add the private IP addresses in the existing Route 53 public hosted zone.

**Answer:** BCD

**NEW QUESTION 42**

A network engineer needs to set up an Amazon EC2 Auto Scaling group to run a Linux-based network appliance in a highly available architecture. The network engineer is configuring the new launch template for the Auto Scaling group.

In addition to the primary network interface the network appliance requires a second network interface that will be used exclusively by the application to exchange traffic with hosts over the internet. The company has set up a Bring Your Own IP (BYOIP) pool that includes an Elastic IP address that should be used as the public IP address for the second network interface.

How can the network engineer implement the required architecture?

- A. Configure the two network interfaces in the launch templat
- B. Define the primary network interface to be created in one of the private subnet
- C. For the second network interface, select one of the public subnet
- D. Choose the BYOIP pool ID as the source of public IP addresses.
- E. Configure the primary network interface in a private subnet in the launch templat
- F. Use the user data option to run a cloud-init script after boot to attach the second network interface from a subnet with auto-assign public IP addressing enabled.
- G. Create an AWS Lambda function to run as a lifecycle hook of the Auto Scaling group when an instance is launchin
- H. In the Lambda function, assign a network interface to an AWS Global Accelerator endpoint.
- I. During creation of the Auto Scaling group, select subnets for the primary network interfac
- J. Use the user data option to run a cloud-init script to allocate a second network interface and to associate an Elastic IP address from the BYOIP pool.

**Answer:** D

**Explanation:**

During creation of the Auto Scaling group, select subnets for the primary network interface. Use the user data option to run a cloud-init script to allocate a second network interface and to associate an Elastic IP address from the BYOIP pool.

This solution meets all of the requirements stated in the question. The primary network interface can be configured in a private subnet during creation of the Auto Scaling group. The user data option can be used to run a cloud-init script that will allocate a second network interface and associate an Elastic IP address from the BYOIP pool with it.

**NEW QUESTION 44**

A Network Engineer is provisioning a subnet for a load balancer that will sit in front of a fleet of application servers in a private subnet. There is limited IP space left in the VPC CIDR. The application has few users now but is expected to grow quickly to millions of users.

What design will use the LEAST amount of IP space, while allowing for this growth?



- A. Use two /29 subnets for an Application Load Balancer in different Availability Zones.
- B. Use one /29 subnet for the Network Load Balance
- C. Add another VPC CIDR to the VPC to allow for future growth.
- D. Use two /28 subnets for a Network Load Balancer in different Availability Zones.
- E. Use one /28 subnet for an Application Load Balance
- F. Add another VPC CIDR to the VPC to allow for future growth.

**Answer:** C

#### NEW QUESTION 49

A company is deploying a new application in the AWS Cloud. The company wants a highly available web server that will sit behind an Elastic Load Balancer. The load balancer will route requests to multiple target groups based on the URL in the request. All traffic must use HTTPS. TLS processing must be offloaded to the load balancer. The web server must know the user's IP address so that the company can keep accurate logs for security purposes. Which solution will meet these requirements?

- A. Deploy an Application Load Balancer with an HTTPS listene
- B. Use path-based routing rules to forward the traffic to the correct target grou
- C. Include the X-Forwarded-For request header with traffic to the targets.
- D. Deploy an Application Load Balancer with an HTTPS listener for each domai
- E. Use host-based routing rules to forward the traffic to the correct target group for each domai
- F. Include the X-Forwarded-For request header with traffic to the targets.
- G. Deploy a Network Load Balancer with a TLS listene
- H. Use path-based routing rules to forward the traffic to the correct target grou
- I. Configure client IP address preservation for traffic to the targets.
- J. Deploy a Network Load Balancer with a TLS listener for each domai
- K. Use host-based routing rules to forward the traffic to the correct target group for each domai
- L. Configure client IP address preservation for traffic to the targets.

**Answer:** A

#### Explanation:

An Application Load Balancer (ALB) can be used to route traffic to multiple target groups based on the URL in the request. The ALB can be configured with an HTTPS listener to ensure all traffic uses HTTPS. TLS processing can be offloaded to the ALB, which reduces the load on the web server. Path-based routing rules can be used to route traffic to the correct target group based on the URL in the request. The X-Forwarded-For request header can be included with traffic to the targets, which will allow the web server to know the user's IP address and keep accurate logs for security purposes.

#### NEW QUESTION 52

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 VI
- B. Associate the transit gateway in us-east-1 with the same Direct Connect gatewa
- C. Enable SiteLink for the transit VIF and the private VIF.
- D. Connect the VPC in eu-west-2 to a new transit gatewa
- E. Connect the Europe data center to the new transit gateway by using a Direct Connect gateway and a new transit VI
- F. Associate the transit gateway in us-east-1 with the same Direct Connect gatewa
- 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 gatewa
- J. Connect the Europe data center to the new transit gateway by using a Direct Connect gateway and a new transit VI
- K. Create a new Direct Connect gatewa
- L. Associate the transit gateway in us-east-1 with the new Direct Connect gatewa
- 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 VI
- P. Create a new Direct Connect gatewa
- Q. Associate the transit gateway in us-east-1 with the new Direct Connect gatewa
- R. Enable SiteLink for the transit VIF and the private VIF.

**Answer:** C

#### NEW QUESTION 57

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 61**

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 MACsec
- 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 VIF
- 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 62**

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

What design will allow the company to serve both newer and earlier clients in the MOST efficient way?

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

**Answer:** D

**NEW QUESTION 67**

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 connection
- 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 connection
- D. Configure an IPsec VPN connection to an EC2 instance that is running third-party VPN software.
- E. Configure MACsec for the Direct Connect connection
- 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 connection
- H. Configure two AWS Site-to-Site VPN connections to the transit gateway
- 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 70**

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 gateway
- B. Associate the VPCs and applicable subnets with the multicast domain
- C. Register the multicast senders' network interface with the multicast domain
- 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 gateway
- F. Associate the VPCs and applicable subnets with the multicast domain
- G. Register the multicast senders' network interface with the multicast domain
- 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 domain
- J. Register the multicast senders' network interface with the multicast domain
- 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 domain
- M. Register the multicast senders' network interface with the multicast domain
- 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 74

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

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

**Answer: C**

#### NEW QUESTION 79

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 84

A company is building its website on AWS in a single VPC. The VPC has public subnets and private subnets in two Availability Zones. The website has static content such as images. The company is using Amazon S3 to store the content. The company has deployed a fleet of Amazon EC2 instances as web servers in a private subnet. The EC2 instances are in an Auto Scaling group behind an Application Load Balancer. The EC2 instances will serve traffic, and they must pull content from an S3 bucket to render the webpages. The company is using AWS Direct Connect with a public VIF for on-premises connectivity to the S3 bucket. A network engineer notices that traffic between the EC2 instances and Amazon S3 is routing through a NAT gateway. As traffic increases, the company's costs are increasing. The network engineer needs to change the connectivity to reduce the NAT gateway costs that result from the traffic between the EC2 instances and Amazon S3. Which solution will meet these requirements?

- A. Create a Direct Connect private VIF
- B. Migrate the traffic from the public VIF to the private VIF.
- C. Create an AWS Site-to-Site VPN tunnel over the existing public VIF.
- D. Implement interface VPC endpoints for Amazon S3. Update the VPC route table.
- E. Implement gateway VPC endpoints for Amazon S3. Update the VPC route table.

**Answer:** D

#### NEW QUESTION 85

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

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

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

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

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

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

**Answer:** AD

#### NEW QUESTION 90

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 93

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