



Amazon

Exam Questions AWS-Certified-Advanced-Networking-Specialty

Amazon AWS Certified Advanced Networking - Specialty

NEW QUESTION 1

A company is running multiple workloads on Amazon EC2 instances in public subnets. In a recent incident, an attacker exploited an application vulnerability on one of the EC2 instances to gain access to the instance. The company fixed the application and launched a replacement EC2 instance that contains the updated application.

The attacker used the compromised application to spread malware over the internet. The company became aware of the compromise through a notification from AWS. The company needs the ability to identify when an application that is deployed on an EC2 instance is spreading malware.

Which solution will meet this requirement with the LEAST operational effort?

- A. Use Amazon GuardDuty to analyze traffic patterns by inspecting DNS requests and VPC flow logs.
- B. Use Amazon GuardDuty to deploy AWS managed decoy systems that are equipped with the most recent malware signatures.
- C. Set up a Gateway Load Balance
- D. Run an intrusion detection system (IDS) appliance from AWS Marketplace on Amazon EC2 for traffic inspection.
- E. Configure Amazon Inspector to perform deep packet inspection of outgoing traffic.

Answer: A

Explanation:

This solution involves using Amazon GuardDuty to monitor network traffic and analyze DNS requests and VPC flow logs for suspicious activity. This will allow the company to identify when an application is spreading malware by monitoring the network traffic patterns associated with the instance. GuardDuty is a fully managed threat detection service that continuously monitors for malicious activity and unauthorized behavior in your AWS accounts and workloads. It requires minimal setup and configuration and can be integrated with other AWS services for automated remediation. This solution requires the least operational effort compared to the other options

NEW QUESTION 2

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

Answer: A

NEW QUESTION 3

A company has deployed Amazon EC2 instances in private subnets in a VPC. The EC2 instances must initiate any requests that leave the VPC, including requests to the company's on-premises data center over an AWS Direct Connect connection. No resources outside the VPC can be allowed to open communications directly to the EC2 instances.

The on-premises data center's customer gateway is configured with a stateful firewall device that filters for incoming and outgoing requests to and from multiple VPCs. In addition, the company wants to use a single IP match rule to allow all the communications from the EC2 instances to its data center from a single IP address.

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

- A. Create a VPN connection over the Direct Connect connection by using the on-premises firewal
- B. Use the firewall to block all traffic from on premises to AW
- C. Allow a stateful connection from the EC2 instances to initiate the requests.
- D. Configure the on-premises firewall to filter all requests from the on-premises network to the EC2 instance
- E. Allow a stateful connection if the EC2 instances in the VPC initiate the traffic.

- F. Deploy a NAT gateway into a private subnet in the VPC where the EC2 instances are deployed.
- G. Specify the NAT gateway type as private.
- H. Configure the on-premises firewall to allow connections from the IP address that is assigned to the NAT gateway.
- I. Deploy a NAT instance into a private subnet in the VPC where the EC2 instances are deployed. Configure the on-premises firewall to allow connections from the IP address that is assigned to the NAT instance.

Answer: C

NEW QUESTION 4

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 host file in the Amazon Linux 2 EC2 instance in the VPC to map the service domain name (api.example.internal) to the IP address of the internal API service.
- H. Modify the local `/etc/resolv.conf` file in the Amazon Linux 2 EC2 instance in the 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 5

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

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

Answer: B

Explanation:

<https://docs.aws.amazon.com/vpn/latest/s2svpn/private-ip-dx.html>

An IPsec VPN connection over the transit VIF can encrypt traffic between the on-premises network and AWS without using public IP addresses or the internet. A VPC endpoint for Amazon S3 can enable private access to S3 buckets within the same region. HTTPS can provide additional encryption for communication.

NEW QUESTION 6

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 7

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 8

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 9

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 10

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

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

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

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

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

Answer: ABD

Explanation:

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

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

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

NEW QUESTION 10

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

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

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

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

Answer: C

Explanation:

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

NEW QUESTION 14

A company 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 17

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=false
- D. Associate the new DHCP options set with the VPC.

- E. Create a new DHCP options set with parameter dns_firewall_fail_open=true
- F. Associate the new DHCP options set with the VPC.

Answer: B

NEW QUESTION 18

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

Answer: B

Explanation:

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

NEW QUESTION 22

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

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

Answer: C

NEW QUESTION 27

A company has a global network and is using transit gateways to connect AWS Regions together. The company finds that two Amazon EC2 instances in different Regions are unable to communicate with each other. A network engineer needs to troubleshoot this connectivity issue. What should the network engineer do to meet this requirement?

- A. Use AWS Network Manager Route Analyzer to analyze routes in the transit gateway route tables and in the VPC route table
- B. Use VPC flow logs to analyze the IP traffic that security group rules and network ACL rules accept or reject in the VPC.
- C. Use AWS Network Manager Route Analyzer to analyze routes in the transit gateway route tables. Verify that the VPC route tables are correct
- D. Use AWS Firewall Manager to analyze the IP traffic that security group rules and network ACL rules accept or reject in the VPC.
- E. Use AWS Network Manager Route Analyzer to analyze routes in the transit gateway route tables. Verify that the VPC route tables are correct
- F. Use VPC flow logs to analyze the IP traffic that security group rules and network ACL rules accept or reject in the VPC.
- G. Use VPC Reachability Analyzer to analyze routes in the transit gateway route table
- H. Verify that the VPC route tables are correct
- I. Use VPC flow logs to analyze the IP traffic that security group rules and network ACL rules accept or reject in the VPC.

Answer: C

Explanation:

Using AWS Network Manager Route Analyzer to analyze routes in the transit gateway route tables would enable identification of routing issues between VPCs and transit gateways. Verifying that the VPC route tables are correct would enable identification of routing issues within a VPC. Using VPC flow logs to analyze the IP traffic that security group rules and network ACL rules accept or reject in the VPC would enable identification of traffic filtering issues within a VPC. Additionally, using VPC Reachability Analyzer to analyze routes in the transit gateway route tables would enable identification of routing issues between transit gateways in different Regions. VPC Reachability Analyzer is a configuration analysis tool that enables connectivity testing between a source resource and a destination

resource in your VPCs.

NEW QUESTION 29

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 34

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 listener
- B. Use path-based routing rules to forward the traffic to the correct target group
- 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 domain
- E. Use host-based routing rules to forward the traffic to the correct target group for each domain
- F. Include the X-Forwarded-For request header with traffic to the targets.
- G. Deploy a Network Load Balancer with a TLS listener
- H. Use path-based routing rules to forward the traffic to the correct target group
- I. Configure client IP address preservation for traffic to the targets.
- J. Deploy a Network Load Balancer with a TLS listener for each domain
- K. Use host-based routing rules to forward the traffic to the correct target group for each domain
- 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 38

A company has been using an outdated application layer protocol for communication among applications. The company decides not to use this protocol anymore and must migrate all applications to support a new protocol. The old protocol and the new protocol are TCP-based, but the protocols use different port numbers. After several months of work, the company has migrated dozens of applications that run on Amazon EC2 instances and in containers. The company believes that all the applications have been migrated, but the company wants to verify this belief. A network engineer needs to verify that no application is still using the old protocol. Which solution will meet these requirements without causing any downtime?

- A. Use Amazon Inspector and its Network Reachability rules package
- B. Wait until the analysis has finished running to find out which EC2 instances are still listening to the old port.
- C. Enable Amazon GuardDuty
- D. Use the graphical visualizations to filter for traffic that uses the port of the old protocol
- E. Exclude all internet traffic to filter out occasions when the same port is used as an ephemeral port.
- F. Configure VPC flow logs to be delivered into an Amazon S3 bucket
- G. Use Amazon Athena to query the data and to filter for the port number that is used by the old protocol.
- H. Inspect all security groups that are assigned to the EC2 instances that host the application
- I. Remove the port of the old protocol if that port is in the list of allowed ports
- J. Verify that the applications are operating properly after the port is removed from the security groups.

Answer: C

Explanation:

Configuring VPC flow logs to be delivered into an Amazon S3 bucket would enable capture of information about the IP traffic going to and from network interfaces within the VPC. Using Amazon Athena to query the data and to filter for the port number that is used by the old protocol would enable identification of applications that are still using the old protocol.

NEW QUESTION 41

A company has deployed a new web application on Amazon EC2 instances behind an Application Load Balancer (ALB). The instances are in an Amazon EC2 Auto Scaling group. Enterprise customers from around the world will use the application. Employees of these enterprise customers will connect to the application over HTTPS from office locations. The company must configure firewalls to allow outbound traffic to only approved IP addresses. The employees of the enterprise customers must be able to access the application with the least amount of latency. Which change should a network engineer make in the infrastructure to meet these requirements?

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

Answer: B

Explanation:

Amazon CloudFront is a content delivery network (CDN) that can speed up the delivery of static and dynamic web content, such as images, videos, and APIs². CloudFront can also provide end-to-end encryption for HTTPS traffic by using SSL certificates from AWS Certificate Manager (ACM) or other sources². CloudFron can also support session affinity (sticky sessions) with a load balancer-generated cookie or an application-based cookie policy².

NEW QUESTION 46

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 observed.Create a new 10 Gbps dedicated connectio
- I. Shift traffic from the existing dedicated connection to the new dedicated connection.

Answer: A

Explanation:

To meet the requirements of finding out which business unit is causing the sudden increase in throughput and resolving the problem, the network engineer should review the Amazon CloudWatch metrics for VirtualInterfaceBpsEgress and VirtualInterfaceBpsIngress to determine which VIF is sending the highest throughput during the period in which slowness is observed (Option 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 47

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 Zonesafter 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 51

A company is deploying a new application on AWS. The application uses dynamic multicasting. The company has five VPCs that are all attached to a transit gateway Amazon EC2 instances in each VPC need to be able to register dynamically to receive a multicast transmission.

How should a network engineer configure the AWS resources to meet these requirements?

- A. Create a static source multicast domain within the transit gatewa
- B. Associate the VPCs and applicable subnets with the multicast domai
- C. Register the multicast senders' network interface with the multicast domai
- D. Adjust the network ACLs to allow UDP traffic from the source to all receivers and to allow UDP traffic that is sent to the multicast group address.
- E. Create a static source multicast domain within the transit gatewa
- F. Associate the VPCs and applicable subnets with the multicast domai
- G. Register the multicast senders' network interface with the multicast domai
- H. Adjust the network ACLs to allow TCP traffic from the source to all receivers and to allow TCP traffic that is sent to the multicast group address.

- I. Create an Internet Group Management Protocol (IGMP) multicast domain within the transit gateway. Associate the VPCs and applicable subnets with the multicast 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 56

A company has several production applications across different accounts in the AWS Cloud. The company operates from the us-east-1 Region only. Only certain partner companies can access the applications. The applications are running on Amazon EC2 instances that are in an Auto Scaling group behind an Application Load Balancer (ALB). The EC2 instances are in private subnets and allow traffic only from the ALB. The ALB is in a public subnet and allows inbound traffic only from partner network IP address ranges over port 80.

When the company adds a new partner, the company must allow the IP address range of the partner network in the security group that is associated with the ALB in each account. A network engineer must implement a solution to centrally manage the partner network IP address ranges.

Which solution will meet these requirements in the MOST operationally efficient manner?

- A. Create an Amazon DynamoDB table to maintain all IP address ranges and security groups that need to be updated.
- B. Update the DynamoDB table with the new IP address range when the company adds a new partner.
- C. Invoke an AWS Lambda function to read new IP address ranges and security groups from the DynamoDB table to update the security group.
- D. Deploy this solution in all accounts.
- E. Create a new prefix list.
- F. Add all allowed IP address ranges to the prefix list.
- G. Use Amazon EventBridge (Amazon CloudWatch Events) rules to invoke an AWS Lambda function to update security groups whenever a new IP address range is added to the prefix list.
- H. Deploy this solution in all accounts.
- I. Create a new prefix list.
- J. Add all allowed IP address ranges to the prefix list.
- K. Share the prefix list across different accounts by using AWS Resource Access Manager (AWS RAM). Update security groups to use the prefix list instead of the partner IP address range.
- L. Update the prefix list with the new IP address range when the company adds a new partner.
- M. Create an Amazon S3 bucket to maintain all IP address ranges and security groups that need to be updated.
- N. Update the S3 bucket with the new IP address range when the company adds a new partner.
- O. Invoke an AWS Lambda function to read new IP address ranges and security groups from the S3 bucket to update the security group.
- P. Deploy this solution in all accounts.

Answer: C

Explanation:

Creating a new prefix list and adding all allowed IP address ranges to the prefix list would enable grouping of CIDR blocks that can be referenced in security group rules. Sharing the prefix list across different accounts by using AWS Resource Access Manager (AWS RAM) would enable central management of the partner network IP address ranges. Updating security groups to use the prefix list instead of the partner IP address range would enable simplification of security group rules. Updating the prefix list with the new IP address range when the company adds a new partner would enable automatic propagation of the changes to all security groups that use the prefix list.

NEW QUESTION 61

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

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

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

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

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

Answer: BCD

NEW QUESTION 65

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