Free Questions for ANS-C01

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Question 1

Question Type: MultipleChoice

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?

Options:

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

Question 2

Question Type: MultipleChoice

A data analytics company has a 100-node high performance computing (HPC) cluster. The HPC cluster is for parallel data processing and is hosted in a VPC in the AWS Cloud. As part of the data processing workflow, the HPC cluster needs to perform several DNS queries to resolve and connect to Amazon RDS databases, Amazon S3 buckets, and on-premises data stores that are accessible through AWS Direct Connect. The HPC cluster can increase in size by five to seven times during the company's peak event at the end of the year.

The company is using two Amazon EC2 instances as primary DNS servers for the VPC. The EC2 instances are configured to forward queries to the default VPC resolver for Amazon Route 53 hosted domains and to the on-premises DNS servers for other on-premises hosted domain names. The company notices job failures and finds that DNS queries from the HPC cluster nodes failed when the nodes tried to resolve RDS and S3 bucket endpoints.

Which architectural change should a network engineer implement to provide the DNS service in the MOST scalable way?

Options:

A- Scale out the DNS service by adding two additional EC2 instances in the VPC. Reconfigure half of the HPC cluster nodes to use these new DNS servers. Plan to scale out by adding additional EC2 instance-based DNS servers in the future as the HPC cluster size grows.

B- Scale up the existing EC2 instances that the company is using as DNS servers. Change the instance size to the largest possible instance size to accommodate the current DNS load and the anticipated load in the future.

C- Create Route 53 Resolver outbound endpoints. Create Route 53 Resolver rules to forward queries to on-premises DNS servers for on premises hosted domain names. Reconfigure the HPC cluster nodes to use the default VPC resolver instead of the EC2 instance-based DNS servers. Terminate the EC2 instances.

D- Create Route 53 Resolver inbound endpoints. Create rules on the on-premises DNS servers to forward queries to the default VPC resolver. Reconfigure the HPC cluster nodes to forward all DNS queries to the on-premises DNS servers. Terminate the EC2 instances.

Answer:

C

Question 3

Question Type: MultipleChoice

A security team is performing an audit of a company's AWS deployment. The security team is concerned that two applications might be accessing resources that should be blocked by network ACLs and security groups. The applications are deployed across two Amazon

Elastic Kubernetes Service (Amazon EKS) clusters that use the Amazon VPC Container Network Interface (CNI) plugin for Kubernetes. The clusters are in separate subnets within the same VPC and have a Cluster Autoscaler configured.

The security team needs to determine which POD IP addresses are communicating with which services throughout the VPC. The security team wants to limit the number of flow logs and wants to examine the traffic from only the two applications.

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

Options:

A- Create VPC flow logs in the default format. Create a filter to gather flow logs only from the EKS nodes. Include the srcaddr field and the dstaddr field in the flow logs.

B- Create VPC flow logs in a custom format. Set the EKS nodes as the resource Include the pkt-srcaddr field and the pkt-dstaddr field in the flow logs.

C- Create VPC flow logs in a custom format. Set the application subnets as resources. Include the pkt-srcaddr field and the pkt-dstaddr field in the flow logs.

D- Create VPC flow logs in a custom format. Create a filter to gather flow logs only from the EKS nodes. Include the pkt-srcaddr field and the pkt-dstaddr field in the flow logs.

Answer:

D

Question 4

Question Type: MultipleChoice

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?

Options:

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 Logs. Create a CloudWatch Logs metric filter for the log group for rejected traffic. Create an alarm to notify the network engineer.

B- 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 Logs. Create a CloudWatch Logs metric filter for the log group for all traffic. Create an alarm to notify the network engineer

C- Create a VPC Reachability Analyzer path on port 443. Specify the security group as the source. Specify the EC2 instances as the destination. Create an Amazon Simple Notification Service (Amazon SNS) topic to notify the network engineer when a change to the

security group affects the connection. 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.

D- Create a VPC Reachability Analyzer path on port 443. Specify the internet gateway of the VPC as the source. Specify the EC2 instances as the destination. Create an Amazon Simple Notification Service (Amazon SNS) topic to notify the network engineer when a change to the security group affects the connection. 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.

Answer:

C

Question 5

Question Type: MultipleChoice

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?

Options:

A- Create a static source multicast domain within the transit gateway. Associate the VPCs and applicable subnets with the multicast domain. Register the multicast senders' network interface with the multicast domain. 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.

B- Create a static source multicast domain within the transit gateway. Associate the VPCs and applicable subnets with the multicast domain. Register the multicast senders' network interface with the multicast domain. 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.

C- Create an Internet Group Management Protocol (IGMP) multicast domain within the transit gateway. Associate the VPCs and applicable subnets with the multicast domain. Register the multicast senders' network interface with the multicast domain. 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.

D- Create an Internet Group Management Protocol (IGMP) multicast domain within the transit gateway. Associate the VPCs and applicable subnets with the multicast domain. Register the multicast senders' network interface with the multicast domain. 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

Question 6

Question Type: MultipleChoice

A company is planning to deploy many software-defined WAN (SD-WAN) sites. The company is using AWS Transit Gateway and has deployed a transit gateway in the required AWS Region. A network engineer needs to deploy the SD-WAN hub virtual appliance into a VPC that is connected to the transit gateway. The solution must support at least 5 Gbps of throughput from the SD-WAN hub virtual appliance to other VPCs that are attached to the transit gateway.

Which solution will meet these requirements?

Options:

A- Create a new VPC for the SD-WAN hub virtual appliance. Create two IPsec VPN connections between the SD-WAN hub virtual appliance and the transit gateway. Configure BGP over the IPsec VPN connections

B- Assign a new CIDR block to the transit gateway. Create a new VPC for the SD-WAN hub virtual appliance. Attach the new VPC to the transit gateway with a VPC attachment. Add a transit gateway Connect attachment. Create a Connect peer and specify the GRE and BGP parameters. Create a route in the appropriate VPC for the SD-WAN hub virtual appliance to route to the transit gateway.

C- Create a new VPC for the SD-WAN hub virtual appliance. Attach the new VPC to the transit gateway with a VPC attachment. Create two IPsec VPN connections between the SD-WAN hub virtual appliance and the transit gateway. Configure BGP over the IPsec VPN connections.

D- Assign a new CIDR block to the transit gateway. Create a new VPC for the SD-WAN hub virtual appliance. Attach the new VPC to the transit gateway with a VPC attachment. Add a transit gateway Connect attachment. Create a Connect peer and specify the VXLAN and BGP parameters. Create a route in the appropriate VPC for the SD-WAN hub virtual appliance to route to the transit gateway.

Answer:

D

Question 7

Question Type: MultipleChoice

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?

Options:

A- Add a static default route in the transit gateway route table to point to the secondary SD-WAN virtual appliance. Add routes that are more specific to point to the primary SD-WAN virtual appliance.

B- Configure the BGP community tag 7224:7300 on the primary SD-WAN virtual appliance for BGP routes toward the transit gateway.

C- Configure the AS_PATH prepend attribute on the secondary SD-WAN virtual appliance for BGP routes toward the transit gateway.

D- Disable equal-cost multi-path (ECMP) routing on the transit gateway for Transit Gateway Connect.

Answer:

A

Question 8

Question Type: MultipleChoice

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?

Options:

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 ALBs. and create a security rule to enforce forward secrecy (FS)

D- Change the ALB security policy to a policy that supports forward secrecy (FS)

Answer:

D

Question 9

Question Type: MultipleChoice

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?

Options:

A- Update the Direct Connect transit VIF and configure BGP peering with the AWS assigned IPv6 peering address. Create a new VPN connection that supports IPv6 connectivity. Add an egress-only internet gateway. Update any affected VPC security groups and route

tables to provide connectivity within the VPC and between the VPC and the on-premises devices

B- Update the Direct Connect transit VIF and configure BGP peering with the AWS assigned IPv6 peering address. Update the existing VPN connection to support IPv6 connectivity. Add an egress-only internet gateway. Update any affected VPC security groups and route tables to provide connectivity within the VPC and between the VPC and the on-premises devices.

C- Create a Direct Connect transit VIF and configure BGP peering with the AWS assigned IPv6 peering address. Create a new VPN connection that supports IPv6 connectivity. Add an egress-only internet gateway. Update any affected VPC security groups and route tables to provide connectivity within the VPC and between the VPC and the on-premises devices.

D- Create a Direct Connect transit VIF and configure BGP peering with the AWS assigned IPv6 peering address. Create a new VPN connection that supports IPv6 connectivity. Add a NAT gateway. 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

Question 10

Question Type: MultipleChoice

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?

Options:

A- Create a VPC peering connection between the web service VPC and the existing production VPC. 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. Configure the relevant security groups and ACLs to allow the systems to communicate.

B- Ask the development team of the web service to redeploy the web service into the production VPC and integrate the systems there.

C- Create a VPC endpoint service. 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.

D- Create a transit gateway in the existing production environment. Create attachments to the production VPC and the web service VPC. 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

Question 11

Question Type: MultipleChoice

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

Which solution will meet these requirements?

Options:

A- Choose a Gateway Load Balancer (GLB) as the type of load balancer for the ECS service. Create a lifecycle hook to add new tasks to the target group from Amazon ECS as required to handle scaling. Specify the GLB in the service definition. Create a VPC peer for external AWS accounts. Update the route tables so that the AWS accounts can reach the GLB.

B- Choose an Application Load Balancer (ALB) as the type of load balancer for the ECS service. Create path-based routing rules to allow the application to target the containers that are registered in the target group. Specify the ALB in the service definition. Create a VPC endpoint service for the ALB Share the VPC endpoint service with other AWS accounts.

C- Choose an Application Load Balancer (ALB) as the type of load balancer for the ECS service. Create path-based routing rules to allow the application to target the containers that are registered in the target group. Specify the ALB in the service definition. Create a VPC peer for the external AWS accounts. Update the route tables so that the AWS accounts can reach the ALB.

D- Choose a Network Load Balancer (NLB) as the type of load balancer for the ECS service. Specify the NLB in the service definition. Create a VPC endpoint service for the NLB. Share the VPC endpoint service with other AWS accounts.

Answer:

D