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QUESTION 1

A company is preparing to deploy an Amazon Elastic Kubernetes Service (Amazon EKS) cluster for a workload. The company expects the cluster to support an unpredictable number of stateless pods. Many of the pods will be created during a short time period as the workload automatically scales the number of replicas that the workload uses.

Which solution will MAXIMIZE node resilience?

- A. Use a separate launch template to deploy the EKS control plane into a second cluster that is separate from the workload node groups.
- B. Update the workload node groups. Use a smaller number of node groups and larger instances in the node groups.
- C. Configure the Kubernetes Cluster Autoscaler to ensure that the compute capacity of the workload node groups stays under provisioned.
- D. Configure the workload to use topology spread constraints that are based on Availability Zone.

Correct Answer: D

Configuring the workload to use topology spread constraints that are based on Availability Zone will maximize the node resilience of the workload node groups. This will ensure that the pods are evenly distributed across different Availability Zones, reducing the impact of failures or disruptions in one Availability Zone². This will also improve the availability and scalability of the workload node groups, as they can leverage the low-latency, high-throughput, and highly redundant networking between Availability Zones¹.

QUESTION 2

A company wants to deploy an API to AWS. The company plans to run the API on AWS Fargate behind a load balancer. The API requires the use of header-based routing and must be accessible from on-premises networks through an AWS Direct Connect connection and a private VIF.

The company needs to add the client IP addresses that connect to the API to an allow list in AWS. The company also needs to add the IP addresses of the API to the allow list. The company's security team will allow /27 CIDR ranges to be added to the allow list. The solution must minimize complexity and operational overhead.

Which solution will meet these requirements?

- A. Create a new Network Load Balancer (NLB) in the same subnets as the Fargate task deployments. Create a security group that includes only the client IP addresses that need access to the API. Attach the new security group to the Fargate tasks. Provide the security team with the NLB's IP addresses for the allow list.
- B. Create two new /27 subnets. Create a new Application Load Balancer (ALB) that extends across the new subnets. Create a security group that includes only the client IP addresses that need access to the API. Attach the security group to the ALB. Provide the security team with the new subnet IP ranges for the allow list.
- C. Create two new /27 subnets. Create a new Network Load Balancer (NLB) that extends across the new subnets. Create a new Application Load Balancer (ALB) within the new subnets. Create a security group that includes only the client IP addresses that need access to the API. Attach the security group to the ALB. Add the ALB's IP addresses as targets behind the NLB. Provide the security team with the NLB's IP addresses for the allow list.
- D. Create a new Application Load Balancer (ALB) in the same subnets as the Fargate task deployments. Create a security group that includes only the client IP addresses that need access to the API. Attach the security group to the



ALB. Provide the security team with the ALB's IP addresses for the allow list.

Correct Answer: A

QUESTION 3

A company has migrated a legacy application to the AWS Cloud. The application runs on three Amazon EC2 instances that are spread across three Availability Zones. One EC2 instance is in each Availability Zone. The EC2 instances are running in three private subnets of the VPC and are set up as targets for an Application Load Balancer (ALB) that is associated with three public subnets.

The application needs to communicate with on-premises systems. Only traffic from IP addresses in the company's IP address range are allowed to access the on-premises systems. The company's security team is bringing only one IP address from its internal IP address range to the cloud. The company has added this IP address to the allow list for the company firewall. The company also has created an Elastic IP address for this IP address.

A solutions architect needs to create a solution that gives the application the ability to communicate with the on-premises systems. The solution also must be able to mitigate failures automatically.

Which solution will meet these requirements?

A. Deploy three NAT gateways, one in each public subnet. Assign the Elastic IP address to the NAT gateways. Turn on health checks for the NAT gateways. If a NAT gateway fails a health check, recreate the NAT gateway and assign the Elastic IP address to the new NAT gateway.

B. Replace the ALB with a Network Load Balancer (NLB). Assign the Elastic IP address to the NLB. Turn on health checks for the NLB. In the case of a failed health check, redeploy the NLB in different subnets.

C. Deploy a single NAT gateway in a public subnet. Assign the Elastic IP address to the NAT gateway. Use Amazon CloudWatch with a custom metric to monitor the NAT gateway. If the NAT gateway is unhealthy, invoke an AWS Lambda function to create a new NAT gateway in a different subnet. Assign the Elastic IP address to the new NAT gateway.

D. Assign the Elastic IP address to the ALB. Create an Amazon Route 53 simple record with the Elastic IP address as the value. Create a Route 53 health check. In the case of a failed health check, recreate the ALB in different subnets.

Correct Answer: C

to connect out from the private subnet you need an NAT gateway and since only one Elastic IP whitelisted on firewall its one NATGateway at time and if AZ failure happens Lambda creates a new NATGATEWAY in a different AZ using the Same Elastic IP ,dont be tempted to select D since application that needs to connect is on a private subnet whose outbound connections use the NATGateway Elastic IP

QUESTION 4

A start up company hosts a fleet of Amazon EC2 instances in private subnets using the latest Amazon Linux 2 AMI. The company's engineers rely heavily on SSH access to the instances for troubleshooting.

The company's existing architecture includes the following:

1.

A VPC with private and public subnets, and a NAT gateway



2.

Site-to-Site VPN for connectivity with the on-premises environment

3.

EC2 security groups with direct SSH access from the on-premises environment

The company needs to increase security controls around SSH access and provide auditing of commands executed by the engineers.

Which strategy should a solutions architect use?

A. Install and configure EC2 Instance Connect on the fleet of EC2 instances. Remove all security group rules attached to EC2 instances that allow inbound TCP on port 22. Advise the engineers to remotely access the instances by using the EC2 Instance Connect CLI.

B. Update the EC2 security groups to only allow inbound TCP on port 22 to the IP addresses of the engineer's devices. Install the Amazon CloudWatch agent on all EC2 instances and send operating system audit logs to CloudWatch Logs.

C. Update the EC2 security groups to only allow inbound TCP on port 22 to the IP addresses of the engineer's devices. Enable AWS Config for EC2 security group resource changes. Enable AWS Firewall Manager and apply a security group policy that automatically remediates changes to rules.

D. Create an IAM role with the AmazonSSMManagedInstanceCore managed policy attached. Attach the IAM role to all the EC2 instances. Remove all security group rules attached to the EC2 instances that allow inbound TCP on port 22. Have the engineers install the AWS Systems Manager Session Manager plugin for their devices and remotely access the instances by using the start-session API call from Systems Manager.

Correct Answer: D

Allows client machines to be able to connect to Session Manager using the AWS CLI instead of going through the AWS EC2 or AWS Server Manager console.

<https://docs.aws.amazon.com/systems-manager/latest/userguide/session-manager-working-with-install-plugin.html> <https://docs.aws.amazon.com/systems-manager/latest/userguide/session-manager-working-with-installplugin.html#:~:text=aws%20ssm%20start%2Dsession%20%2D%2Dtarget%20instance%2Did>

QUESTION 5

A company is migrating some of its applications to AWS. The company wants to migrate and modernize the applications quickly after it finalizes networking and security strategies. The company has set up an AWS Direct Connection connection in a central network account.

The company expects to have hundreds of AWS accounts and VPCs in the near future. The corporate network must be able to access the resources on AWS seamlessly and also must be able to communicate with all the VPCs. The company also wants to route its cloud resources to the internet through its on-premises data center.

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

A. Create a Direct Connect gateway in the central account. In each of the accounts, create an association proposal by using the Direct Connect gateway and the account ID for every virtual private gateway.

B. Create a Direct Connect gateway and a transit gateway in the central network account. Attach the transit gateway to the Direct Connect gateway by using a transit VIF.



- C. Provision an internet gateway. Attach the internet gateway to subnets. Allow internet traffic through the gateway.
- D. Share the transit gateway with other accounts. Attach VPCs to the transit gateway.
- E. Provision VPC peering as necessary.
- F. Provision only private subnets. Open the necessary route on the transit gateway and customer gateway to allow outbound internet traffic from AWS to flow through NAT services that run in the data center.

Correct Answer: BDF

Option A is incorrect because creating a Direct Connect gateway in the central account and creating an association proposal by using the Direct Connect gateway and the account ID for every virtual private gateway does not enable active-passive failover between the regions. A Direct Connect gateway is a globally available resource that enables you to connect your AWS Direct Connect connection over a private virtual interface (VIF) to one or more VPCs in any AWS Region. A virtual private gateway is the VPN concentrator on the Amazon side of a VPN connection. You can associate a Direct Connect gateway with either a transit gateway or a virtual private gateway. However, a Direct Connect gateway does not provide any load balancing or failover capabilities by itself¹

Option B is correct because creating a Direct Connect gateway and a transit gateway in the central network account and attaching the transit gateway to the Direct Connect gateway by using a transit VIF meets the requirement of enabling the corporate network to access the resources on AWS seamlessly and also to communicate with all the VPCs. A transit VIF is a type of private VIF that you can use to connect your AWS Direct Connect connection to a transit gateway or a Direct Connect gateway. A transit gateway is a network transit hub that you can use to interconnect your VPCs and on-premises networks. By using a transit VIF, you can route traffic between your on-premises network and multiple VPCs across different AWS accounts and Regions through a single connection²³

Option C is incorrect because provisioning an internet gateway, attaching the internet gateway to subnets, and allowing internet traffic through the gateway does not meet the requirement of routing cloud resources to the internet through its on-premises data center. An internet gateway is a horizontally scaled, redundant, and highly available VPC component that allows communication between your VPC and the internet. An internet gateway serves two purposes: to provide a target in your VPC route tables for internet-routable traffic, and to perform network address translation (NAT) for instances that have been assigned public IPv4 addresses. By using an internet gateway, you are routing cloud resources directly to the internet, not through your on-premises data center.

Option D is correct because sharing the transit gateway with other accounts and attaching VPCs to the transit gateway meets the requirement of enabling the corporate network to access the resources on AWS seamlessly and also to communicate with all the VPCs. You can share your transit gateway with other AWS accounts within the same organization by using AWS Resource Access Manager (AWS RAM). This allows you to centrally manage connectivity from multiple accounts without having to create individual peering connections between VPCs or duplicate network appliances in each account. You can attach VPCs from different accounts and Regions to your shared transit gateway and enable routing between them.

Option E is incorrect because provisioning VPC peering as necessary does not meet the requirement of enabling the corporate network to access the resources on AWS seamlessly and also to communicate with all the VPCs. VPC peering is a networking connection between two VPCs that enables you to route traffic between them using private IPv4 addresses or IPv6 addresses. You can create a VPC peering connection between your own VPCs, or with a VPC in another AWS account within a single Region. However, VPC peering does not allow you to route traffic from your on-premises network to your VPCs or between multiple Regions. You would need to create multiple VPN connections or Direct Connect connections for each VPC peering connection, which increases operational complexity and costs.

Option F is correct because provisioning only private subnets, opening the necessary route on the transit gateway and customer gateway to allow outbound internet traffic from AWS to flow through NAT services that run in the data center meets the requirement of routing cloud resources to the internet through its on-premises data center. A private subnet is a subnet that's associated with a route table that has no route to an internet gateway. Instances in a private subnet can communicate with other instances in the same VPC but cannot access resources on the internet directly. To enable outbound internet access from instances in private subnets, you can use NAT devices such as NAT gateways or NAT



instances that are deployed in public subnets. A public subnet is a subnet that's associated with a route table that has a route to an internet gateway. Alternatively, you can use your on-premises data center as a NAT device by configuring routes on your transit gateway and customer gateway that direct outbound internet traffic from your private subnets through your VPN connection or Direct Connect connection. This way, you can route cloud resources to the internet through your on-premises data center instead of using an internet gateway.

References: <https://docs.aws.amazon.com/directconnect/latest/UserGuide/direct-connect-gateways-intro.html>
<https://docs.aws.amazon.com/directconnect/latest/UserGuide/direct-connect-transit-virtual-interfaces.html>
<https://docs.aws.amazon.com/vpc/latest/tgw/what-is-transit-gateway.html>
https://docs.aws.amazon.com/vpc/latest/userguide/VPC_Internet_Gateway.html
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https://docs.aws.amazon.com/vpc/latest/userguide/VPC_Scenario3.html
https://docs.aws.amazon.com/vpc/latest/userguide/VPC_NAT_Instance.html
https://docs.aws.amazon.com/vpc/latest/userguide/VPC_NAT_Gateway.html

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