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You are building up a Lambda function that runs periodically and processes the data stored in a DynamoDB table. As the data in the DynamoDB table grows fast, you need to estimate the cost of the Lambda function. Which of the following two factors directly determine the monthly cost of Lambda?

1) The memory allocated to the Lambda function and 2) The total number of requests for the Lambda function

In your AWS account, you have configured three Application Load Balancers to route the traffic, and each ALB has its own target group. As the traffic keeps growing, the cost of the Elastic Load Balancers increases as well. Which method would you take to reduce the load balancer cost?

Use one ALB instead of three. Attached all three target groups to the ALB.

Your team creates an Application Load Balancer for a new application and registers a Lambda function as its target. Three availability zones are enabled for the ALB. You want to take some actions to reduce the cost. Which of the below options is most appropriate?

Optimize the Lambda function so that the function executes the code faster.

A web application is hosted on EC2 and serves global customers. As the application is getting more and more popular, the data transfer cost keeps increasing. You plan to use AWS CloudFront to improve the latency and reduce the cost. Which of the following services is free for CloudFront?

Data transfer from origin to CloudFront edge locations (Amazon CloudFront "origin fetches")

Your application is deployed in EC2 instances and uses Cloud-Front to deliver the content. In order to reduce the cost of requests to the origin, you plan to increase the cache duration for certain dynamic contents. Which of the following is the most appropriate to achieve the requirement?

Modify the application to add a Cache-Control header to control how long the objects stay in the CloudFront cache.

You use CloudFormation to create an auto-scaling group for a web application. The application needs to be deployed in both production and non-production AWS accounts. You want to use Spot instances in the non-production environment to save costs. Which of the following methods would you use?

In the CloudFormation template, use a parameter to set the On-DemandPercentageAboveBaseCapacity property. Set the parameter to be 0 in non-production and 100 in production.

You are working as a Solutions Architect in an organization. You have peered VPC A and VPC B as a requestor and an acceptor where both the VPCs can communicate with each other. Now you want the resources in the private subnets of both of the VPCs to reach out to the internet. But no one on the internet should be able to reach the resources within both the VPCs. Which of the below will achieve the desired outcome?

Create NAT Gateways in both VPCs and configure routes for each VPC to use its own NAT gateway.

Your organization already had a VPC (10.10.0.0/16) setup with one public (10.10.1.0/24) and two private subnets - private subnet 1 (10.10.2.0/24) and private subnet 2 (10.10.3.0/24). The public subnet has the main route table, and two private subnets have two different route tables respectively. AWS SysOps team reports a problem starting the EC2 instance in private subnet 1 cannot communicate to the RDS MySQL database on private subnet 2. What are the possible reasons (choose two options)?

1) RDS security group inbound rule is incorrectly configured with 10.10.1.0/24 instead of 10.10.2.0/24. 2) 10.10.3.0/24 subnet's NACL denies inbound on port 3306 from subnet 10.10.2.0/24.

A new VPC with CIDR range 10.10.0.0/16 has been setup with a public and private subnet, Internet Gateway and a custom route table have been created and a route has been added with the 'Destination' as '0.0.0.0/0' and the 'Target' with Internet Gateway (igw-id). A new Linux EC2 instance has been launched on the public subnet with the auto-assign public IP option enabled, but when trying to SSH into the machine, the connection is getting failed. What could be the reason?

The NACL of the public subnet disallows the ingress SSH traffic

- * Elastic IP is not assigned.
- * Both the subnets are associated with the main route talbe, no subnet is explicitly associated with the custom route table which has internet gateway route.



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- * Public IP address is not assigned.
- * None of the above.

You are an AWS architect in your organization. Your organization would want to upload files to the AWS S3 bucket. In a VPC, you create a private subnet and VPC endpoint for S3. You also create one route table that routes the traffic from the private subnet to a NAT gateway for the internet access. In AWS S3 server logs, you notice the requests to the S3 bucket from an EC2 instance in the VPC do not go through the NAT gateway. What could cause this situation?

The requests are routed through the VPC endpoint.

Your organization has an existing VPC with an AWS S3 endpoint created and serving certain S3 buckets. You were asked to create a new S3 bucket and reuse the existing VPC endpoint to route requests to the new S3 bucket. However, after creating a new S3 bucket and sending requests from an EC2 instance via the VPC endpoint, you found the requests are failing with the "Access Denied" error. What could be the issue?

1) VPC endpoint contains a policy, currently restricted to certain S3 buckets, and does not contain a new S3 bucket. 2) AWS IAM role/user does not have access to the S3 bucket.

A company has its major applications deployed in AWS. The company is building a new office and requires a high-performance network connection between the local office network and the AWS network. The connection needs to have high bandwidth throughput and allow users in the office to connect with multiple AWS VPCs of multiple AWS Regions. How would you establish the connection in the most appropriate way?

Create a Direct Connect Gateway to connect the local network with multiple Amazon VPCs across different regions.

You are building a fleet of EC2 Linux instances in the AWS environment to manage heavy workloads and write data into AWS Redshift. The developers and administrators need to login to these EC2 machines to develop, fix, deploy and manage workloads within your organizational network ONLY. Which of the following would allow only the personnel within the organization to access the resources most securely?

AWS VPN connection from your organization to AWS VPC, a bastion host in VPN enabled subnet with secure SSH key to login, EC2 instances in private subnet with secure SSH keys to login, Redshift in private subnet

Your company owns several EC2 Windows servers in production. In order to be compliant with recent company security policies, you need to create an EC2 Windows bastion host for users to connect to the instances via RDP. How would you ensure that users can perform remote administration for the Windows servers ONLY through the new bastion host?

Configure the security groups of the Windows server instances to only accept RDP/3389 connections from the security group of the Windows bastion host.

You have an existing VPC in us-east-1. You have created a VPC Endpoint for S3 and added it to the main route table. You have launched an EC2 instance inside a subnet that is associated with the main route table. From the new EC2 instance, when requesting the S3 bucket within us-east-1, you noticed the connection is failing. What could be the reason?

1) EC2 instance security group outbound rules are restricted and does not contain prefix list, 2) Subnet's Network ACL inbound rule does not allow traffic from S3.

Your organization had asked to be cost-efficient in designing AWS solutions. You have created three VPCs (VPC A, VPC B, VPC C), peered VPC A to VPC B and VPC B to VPC C. You have created a NAT gateway in VPC B and would like to use the same NAT Gateway for resources within VPC A and VPC C. However, the resources within VPC A and VPC C cannot communicate through the internet through NAT Gateway, but resources in VPC B can communicate. What could be the reason?

Using another VPC's NAT Gateway is not supported in AWS.

You are taking over the AWS Platform in your organization. You were asked to build a new application that would require a fleet of 20 EC2 instances inside a private VPC that should communicate with each other and no traffic going into the EC2 instances from the internet but should receive requests from all other EC2 instances inside the VPC. When you looked at the existing VPC, it was created with 10.10.0.0/24 CIDR range containing only 256 IP addresses. You noticed that 8 subnets were consuming all 256 IP

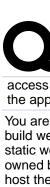
Add secondary CIDR range for the VPC



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addresses with /27 CIDR ranges. How can you change the CIDR range of the VPC?	
You have set up two VPCs: VPC A has the address of "10.10.0.0/16". It also has a subnet with address space "10.11.1.0/28". You also have set up VPC peering connection between the two VPCs. What should be the respective route table entries in VPC A and VPC B?	VPC B contains route with Destination as 10.10.1.0/24 and VPC A contains route with Destination as 10.11.1.0/28.
Your organization had setup a VPC with CIDR range 10.10.0.0/16. There are a total of 100 subnets within the VPC and are being actively used by multiple application teams. An application team who is using 50 EC2 instances in subnet 10.10.55.0/24 complains that there are intermittent outgoing network connection failures across 30 random EC2 instances in a given day. How would you troubleshoot the issue with minimal configuration and minimal logs written?	Create a flow log for 10.10.55.0/24
As a Cloud Architect, you have deployed an existing application from the local server to an On-demand EC2 instance. You found out that there is an issue while connecting the application using the HTTPS Protocol. After troubleshooting the issue, you added port 443 to the security group of the instance. How much time will it take to update changes to all of the resources related to Security Groups?	
You are working in a College as a Cloud Technical Advisor, and your college was maintaining all its data locally where they felt security and redundancy issues. So you suggested deploying the application in AWS and use a NoSQL database for their database. While deploying the servers in AWS, the team needs your suggestion for creating new Security Groups. Can you select which Option given by the team is true? 1	The default rules in a security group disallows all incoming traffic, 2) By default, outbound traffic is allowed
An IT company hired you recently as Cloud Architect, and your Manager told you that the team is going to host an application on an EC2 Server with instance type of t2.micro. The team has created a Security Group named APP_SG and sent it for User Acceptance Testing where the tester complained that they cannot access the website. What could be the issue for the scenario?	By default, the new security group allows no inbound traffic.
You are working in a gaming company with four departments that make games for iOS, Android, Windows and PlayStation. For that, they just adapted a hybrid cloud architecture where their on-premise data center is connected to their Amazon VPC. Your VPC is configured with a CIDR block of 10.0.0.0/24 (256 IPs). Your supervisor told you that they need such security in all four departments so that information from one department should not reach other departments. They don't want to have a new network that can be expensive and will create more overhead. As a Solutions Architect, how will you configure your network to accomplish this requirement?	(10.0.0.0-10.0.0.03), 10.0.0.04/20 (10.0.0.04-10.0.0.127),
You have created a bucket in the us-east-1 region with the default configuration. Versioning is not enabled. You are located in Asia and and deleted an object in the bucket using AWS CLI. What will happen when you try to list the objects in the bucket?	The chiect is deleted completely
Your organization is planning to upload a large number of files to the AWS Cloud. These files need to be immediately available for download across different geographical regions right after the download is complete. They consulted you to check if S3 is a suitable solution for the use case. What do you suggest?	S3 is suitable for immediate downloads because AWS provides strong read-after-write consistency for new objects.
You are a solutions architect. Your organization is building an application by hosting at the on-premise location. They would like to keep the storage on AWS. Objects/files should only be ac-	File Gateway

cessed via the application. As an exception, Administrators should



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access the objects/files directly from S3 console/API bypassing the application. What solution would you provide? You are a solutions architect working as a consultant where you build web applications for clients. One of your clients needs a static website hosted on AWS. The website will host content files 1) Disable the block public access setting for the bucket and write owned by the AWS account used to create the S3 bucket that will a bucket policy that grants public read access for the bucket. 2) host the website. However, some of the objects in the bucket that Create an object access control list (ACL) that grants read access are owned by a parent company's AWS account are also needed to the bucket. for the website. How should you configure the S3 bucket access controls to achieve the most secure website that is accessible to the public? (Select TWO) 1) x-amz-server-side-encryption, 2) x-amz-version-id, 3) Con-Which of the following are system metadata for objects in S3? tent-Length You are building a web application that will allow authenticated users to upload videos to the AWS S3 bucket across multiple Add configuration in S3 bucket CORS to allow PUT requests from domains. However, while testing the application, you found that the web application URL. the upload requests to S3 are being blocked. What should you do to make the upload work? You created a bucket named "myfirstwhizbucket" in the US West https://myfirstwhizbucket.s3.us-west-1.amazonaws.com, region. What are valid URLs for accessing the bucket (select two https://s3.us-west-1.amazonaws.com/myfirstwhizbucket options)? What are the minimum and maximum file sizes that can be stored D. 0 Bytes and 5 terabytes in S3 respectively? You have a versioning-enabled S3 bucket. You have accidentally deleted an object which contains 3 versions. Now you want to B. Delete the delete-marker on the object restore the deleted object. What should be done to achieve the requirement? Your organization had built a video sharing website on EC2 within the US for which the S3 bucket in us-east-1 is used to store the A. Use CloudFront for improving the performance on website by video files. The website has been receiving excellent feedback and caching static files. C. Enable Transfer Acceleration feature on \$3 and your organization decided to expand the website all over the bucket which uses AWS edge locations to improve upload and world. However, customers in Europe and Asia started to complain download speeds that website access, upload and download of video files are slow. How can you resolve the issue? You have an AWS setup with an existing VPC in us-east-1. You have a fleet of 20 EC2 instances attached to EFS with mount B. Create a new VPC. Establish a new VPC peering connection between the VPCs. Use the instances that are created in the targets on all existing VPC's availability zones. Your organization had requested you to replicate the same setup in another VPC new VPC to directly access the already existing EFS with mount within us-east-1 keeping the same EFS volume. How will you targets. achieve this? You have two VPCs in different regions (VPC A and VPC B) 1. Security group is improperly configured for the EFS mount peered with each other. You have created an EFS for VPC A. When target, 2. Security group on mount targets does not have inbound you tried to mount the EFS on EC2 instances on VPC B, you are NFS port open to VPC B's EC2 instances. getting a connection timed out error. What can cause this? You have created AWS EFS with default settings and mounted it Encryption during transit can be enabled when mounting the file on an EC2 instance. Due to regulatory policies, your organization system using the Amazon EFS mount helper. The mount helper had asked you to encrypt data during transit to EFS. What would uses TLS v1.2 to communicate with the file system. you do to enable encryption during transit? You are building a content-serving web application with 20 EC2 instances. The EC2 servers are all load-balanced, and content storage for the instances will remain the same. You have chosen AWS EFS as a common storage repository. Your application General Purpose Performance Mode needs to have as low of latency as possible while serving content to the web users. Which of the following options is the best choice for this situation? You are building a content serving web application (size not ex-

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ceeding 25 GB) on 5 EC2 load-balanced instances. You have chosen EFS for content storage. The content is accessed frequently



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by a large number of users. Which of the following throughput modes would you choose to ensure that the application on EC2 Throughput mode = Provisioned, you can configure specific instances transfers the data to EFS without any performance throughput irrespective of EFS data size. bottleneck? A Company ABC has 100 REST APIs exposed to the internet from their on-premise network. They have already integrated with AWS through Direct Connect. They have approached you asking for a B. Use VPC Private Link to integrate on-premises backend solucost effective way of making these REST APIs available through tions through Direct Connect and private VPC. AWS API Gateway because of the resiliency and cost reductions provided by it. What solution would you provide? You have built a REST API using API Gateway and distributed to your customers. However, your API is receiving large num-1. Enable throttling and control the number of requests per second. ber of requests and overloading your backend system causing 2. Enable API caching to serve frequently requested data from an performance bottlenecks and eventually delays and failures in API cache. serving the requests for your important customers. How would you improve the API's performance (choose 2 options) Which of the following are not access control mechanisms for C. Server-side certificates, D. VPC Route Tables AWS API Gateway (choose two options)? In AWS API Gateway, which of the following security measures is C. Protection from distributed denial of service (DDoS) attacks. provided default by AWS to protect the backend systems? With respect to API caching for API Gateway through the console, C. Import cache which of the following is not a cache setting? A. JSON template that describes containers which form your Which of the following defines task definition? application Your organization is planning to use AWS ECS for docker applications. However, they would like to apply 3rd party monitoring Customers will have control over AWS ECS container instances tools on the ECS container instances to monitor the instances. and can set up monitoring like a normal EC2 instance. They approached you asking for a recommendation. What do you suggest? You have launched an ECS cluster with 5 EC2 instances with its IAM role used to run ECS instance does not have ecs:Poll action task definitions. However, ECS is not getting any status informain its policy. Interface VPC endpoint is not configured for ECS tion back from the container agent in each ECS instance. What service. could be the reason (select TWO?) 1) The Docker images to use with the containers in your task, 2) Which of the following are the parameters specified in task defin-How much CPU and memory to use with each container, 3) The ition? (choose 3 options) command the container should run when it is started Which of the following are the parameters specified in the Amazon 1. Cluster, 2. Capacity provider strategy, 3. Client token ECS task definition? (Select Three) 1. EBS backed volumes can persist storage across instance stop, Which of the following is correct with respect to the instance store terminate and failures. 2. You cannot add instance store volumes and EBS volume (Select TWO)? once the EC2 instance is launched. Which of the following is not true with respect to EBS volume Encrypted EBS volumes are not supported on all current generencryption? ation instance types. Which of the following statements is false with respect to EBS Without enabling encryption by default, a volume restored from an volume and snapshots encryption? unencrypted snapshot, cannot be encrypted You are using AWS EC2 linux instance for log processing which would require high throughput. You chose Throughput Optimized HDD storage with 500 GB in size. You deployed your application to production mode and it is running as expected. After a month, B. Increase the size of the existing EBS volume. you see an increase in log files and you are fast approaching the 500 GB size and running out of space on the EBS volume. Which of the following is a best approach to mitigate the situation with minimal configuration? Whizlabs organization has an AWS setup and planning to use

Amazon SQS for queueing messages. The design is such that the

two applications will receive the same message in the queue and

1. The second application makes a call before Visibility Timeout

which was set by the first application's ReceiveMessage call. 2.



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the message will be deleted once it is read by the applications. During the testing phase, when the second application makes the ReceiveMessage API call, the message failed to return. What could be the possible reason for the failure? (Select TWO)	The first application has deleted the message once it has been processed before the Visibility Timeout elapsed.
Your organization is using Amazon SQS as an enterprise message queueing platform. 100s of applications read the queues every few seconds to process the messages and delete them as soon as they are written into the queues. Looking at the number of requests being sent to Amazon SQS APIs, your management is concerned about the pricing that will be incurred. As an architect, how would you reduce pricing without compromising on time in this scenario?	quests in batch.
Which of the following is not a feature of AWS Security Token Service?	STS generates Git credentials for IAM users
Which of the following are valid delivery protocols for receiving notifications from Amazon SNS?	Lambda, SQS, SNS
Which of the following is not a default metric type for Auto Scaling Group policy?	B. Memory Utilization
An eCommerce website is hosted on two EC2 instances that sit behind an Elastic Load Balancer. The response time of the website has slowed dramatically. The analytics team found that one of the EC2 instances failed, leaving only one instance running. What is the best course of action to prevent this from happening again in the future?	
In the AWS Setup of a Company, a web-based application has a fleet of 10 EC2 instances. 7 EC2 instances are present in Availability Zone A, whereas 3 EC2 instances are in Availability Zone B. The percentage of requests received in Availability Zone B is greater than the percentage of requests in Availability Zone A. What can be done at the architecture level to balance the load across the two availability zones?	Enable Cross-Zone Load Balancing
You have created a VPC with an application load balancer and selected two EC2 instances as targets. However, when you are trying to make a request to the internet-facing load balancer, the request fails. What could be the reason?	The route table associated with the load balancer's subnet does not have a route to the internet gateway.
A company started using EBS backed instances due to the cost improvements over running their own servers. The company's policy is to stop the development servers over the weekend and restart them each week. The first time the servers were brought back, none of the developers were able to SSH into them. What did the server most likely overlook?	The public IPv4 address has changed on server restart and the SSH configurations were not updated.
Which of the following are the main functions of Route 53?	Register domain names, route internet traffic to the resources for your domain, load-balance traffic among geographically-distributed web servers and check the health of your resources
Your organization had created an S3 bucket for static website hosting. They had created and configured all necessary components for the static website with the S3 website endpoint http://example-bucket.s3-website-us-east-2.amazonaws.com. They would like to get the website served through the custom bucket name www.example-bucket.com which is already registered. You want to create a record in a hosted zone (www.example-bucket.com) for that domain via Route 53, to be able to route to the S3 website endpoint. Which type of record set do you need to create?	CNAME - Canonical Name with Alias=NO
Which of the following is not an AWS Service that AWS Route 53 can route traffic to?	Amazon CloudWatch
Your organization had set up a web application on AWS VPC with 4 EC2 instances in a private subnet. They had configured	



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an elastic load balancer to distribute traffic across all 4 EC2 instances. They decided to route traffic from the internet to the elastic load balancer via the domain, "www.example-web-application.com" they had already registered. Which type of record set do you need to create in Route 53?

A - IPv4 Address with Alias=YES and select the ELB resource.

You have a web application hosted on AWS VPC with a single EC2 instance with Auto Scaling enabled. You have also auto assigned elastic IP addresses to the EC2 instance. When you access the elastic IP address, you are able to successfully connect to your web application. You decided to route requests to your application from a custom domain through Route 53. You have performed the setup on Route 53. However, when you access your custom domain from the internet, you get "Server Not Found" error. Which of the following could be a reason?

IP address configured in Route53 DNS record set might be incorrect.

Which of the following are correct options for logging and monitoring AWS Route 53 service?

Amazon CloudWatch and AWS CloudTrail

You have launched an RDS instance in your VPC. The endpoint that is assigned to your DB instance is a long, partially random, alphanumeric string, for example, myexampledb.a1b2c3d4wxvz.us-west-2.rds.amazonaws.com. Your organization wants to use a name that's easier to remember. So you registered a domain name using the Route53 service. Which type of record set do you need to create?

CNAME - Canonical Name with ALIAS=NO

In the AWS Route53 record set, which of the following is not a routing policy?

Distributed routing policy

You are working as a Cloud Architect in a big IT Firm. To ensure high availability of both the web servers and your web application database, you deployed your auto-scaled EC2 instances in multiple Availability Zones with an Application Load Balancer in front. You configured Multi-Availability Zone to your RDS instance. There is a spike in incoming requests in the past few hours, and the performance of the primary database is starting to go down. What would happen to the database if the primary DB instance fails?

The canonical name record will be changed from the primary database to the standby database.

A company is planning to migrate an on-premise 15 TB MySQL database cluster onto AWS. The replication lag needs to be less than 100ms for the cluster, and the size is expected to double in the next couple of months. Which of the following would be the ideal data store that should be chosen in AWS?

AWS Aurora

You are working as an AWS Architect for a multinational bank with hybrid cloud architecture. The bank is running a currency exchange website that uses a MySQL Server RDS Instance as its Create an IPSec VPN from AWS to the On-Premise datacenter is a need to keep a read replica of the production RDS instance in MySQL server. to the bank's on-premise data center. In this scenario, what is the most secure and effective way to meet this requirement?

database. As part of the company's business continuity plan, there through the Virtual Private Cloud service and configure replication

Your team has developed an online feedback application for the best image competition in AWS using CloudFormation. The application accepts high-quality images of each participant and stores them in S3. Then it records the information about the image as well as the participant's profile in RDS. After the competition, the CloudFormation stack is not used anymore and should be terminated to save the cost. Your manager instructed you to back up the RDS instance and the S3 bucket so that the data can still be used even after the CloudFormation template is deleted. Which of the following options will fulfill this requirement?

Set the DeletionPolicy on the RDS resource to snapshot and set the S3 bucket to retain.

You are working as a Cloud Engineer for a startup company that is planning to develop a web application with a ReactJS frontend in EC2 and DynamoDB with provisioned throughput (1000 writes



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per second) as its database. They are expecting a high number of writes on the database during peak hours (3000 writes per second). How could you ensure that scalability and cost-effectiveness of the application to reduce the load on the DynamoDB database?	Use DynamoDB Auto Scaling
An IT Company uses Scaling policies to maintain an exact number of Amazon EC2 instances in different Availability Zones as per application workloads. The developer team has developed a new version of the application for which a new AMI needs to be updated to all the instances. For this, you have been asked to ensure that instances with previous AMI are phased quickly. Which termination criteria best suits the requirement?	Specify termination criteria using "OldestLaunchTemplate" predefined termination policy
A large engineering company plans to deploy a distributed application with Amazon Aurora as the database. The database should be restored with a Recovery Time Objective of one minute when there is a service degradation in the primary region. The service restoration should incur the least admin work. What approach can be initiated to design an Aurora database to meet cross region disaster recovery requirements?	Use Amazon Aurora Global Database and use the secondary region as a failover for service degradation in the primary region.
A financial company has deployed a business-critical application on an Amazon EC2 instance front-ended by an internet-facing Application Load Balancer. AWS WAF is used with the Application Load Balancer for securing this application. The security team is looking to protect the extensive computational resources of the application specifically. The requests to these resources should be limited to a threshold of sessions beyond which all the requests should be dropped.	Create WAF URI-specific rate-based rules and attach them to Application Load Balancer
An IT company has recently deployed highly available resilient web servers on Amazon EC2 instances. Application Load Balancers are used as the front end to these instances. The company has deployed a lower capacity web server at the on-premises data center. IT Head wants to have Amazon EC2 instances in AWS Cloud as primary and web servers at the data center as secondary. You will be using Amazon Route 53 to configure this failover. How can Amazon Route 53 health checks be designed to achieve the desired results?	For primary resources in the AWS Cloud, create alias records and set Target Health Evaluation to Yes. For secondary records, create a Health Check in Route 53 for web servers in the data center. Create two failover records for each primary and secondary instance.
A startup firm has a large number of applications hosted on VMs (virtual machines) associated with VMware vCenter at the on-premises data center. Each of these VMs has different operating systems. They are planning to host these servers in the AWS Cloud. For estimating Amazon EC2 sizing in the AWS Cloud, the IT team is looking for the resource utilization from on-premises servers which should include key parameters like CPU, disk, memory, and network. This data should be saved in an encrypted format and shared with the SME working on this migration. Which method is best suited to get these server details?	Use Agentless-discovery method with AWS Application Discovery Service
A company has SQL servers at the on-premises location where they are planning to migrate to AWS Cloud. This migration should be non-disruptive with minimal downtime. Prerequisite tests should be performed, and results should be captured before servers in AWS are elevated as primary servers. What cost-effective automated tool can be used to perform SQL server migration?	AWS Application Migration Service
A finance company is using Amazon S3 to store data for all its customers. During an annual audit, it was observed that sensitive data is stored by some of the customers. Operations Head is looking for an automated tool to scan all data in Amazon S3 buckets and create a report based on the findings from all the buckets with sensitive data. Which solution can be designed to get the required details?	C. Enable Amazon Macie on the Amazon S3 buckets



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An online photo printing company is planning to free up on-premises IT resources by moving all its data to Amazon S3 buckets. This data is around 50 TB in size. All the data must be processed using a customized Lambda function before storing them into the Amazon S3 bucket. Which design apporach is best suited for this data transfer?

Migrate data using AWS Snowball Edge - snowcone only supports 8 TB

Utopia Municipality Corporation runs its application used for the local citizen in EC2 while its database is still in an on-premise data center. The Organization is adamant about not migrating its Database to AWS due to regulatory compliances. However, if they are willing to extend the database to extend the database to the cloud to serve all other AWS services. The organization is looking for a solution by which all AWS services can communicate seamlessly to their on-premises Database without migrating or hosting it in the cloud. You are hired as a Solutions Architect to help the customer achieve this and and also ensure a region-specific, frictionless, low latency fully managed environment for a truly consistent hybrid experience. Which of the following would you recommend?

AWS Outposts

A drug research company is receiving sensitive scientific data from multiple sources in different formats. The organization wants to create a Data Lake in AWS to analyze the data thoroughly. Data cleansing is a critical step before the data lands into Data Lake, and all the matching data needs to be removed. The solution should also enable secure access to sensitive data using granular controls at the column, row and cell levels. You are hired as a Solutions Architect to help them achieve this in real quick time. Which of the following do you think would solve the problem?

AWS Lake Formation

To comply with industry regulations, a Healthcare Institute wants to keep their large volume of lab records in some durable, secure, lowest-cost storage class for an extended period of time (about five years). The data will be rarely accessed but requires immediate retrieval (in milliseconds) when required. As a Solutions Architect, the Institute wants your suggestion to suggest a suitable storage class here. Which of the following would you recommend for the given requirement?

Amazon S3 Glacier Instant Retrieval

A media company is planning to host its relational database in AWS. They want a low-cost, on-demand autoscaling database from the RDS family that can handle variable and unpredictable workloads and scales compute capacity up and down based on your application's needs. Which of the following RDS types will fulfill this requirement?

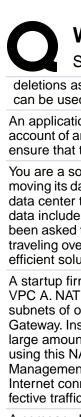
Amazon Aurora Serverless

A popular media company delivers content on News, Sports and Entertainment to audiences around the globe. The company uses AWS Redshift to analyze PB of structured and semi-structured data across their data warehouse, operational database, and Amazon S3 files to activate data-driven decisions and powerful insights. As their petabyte scale data continues to grow rapidly, the company starts facing bottlenecks around network bandwidth and and memory processing (CPU) that result in slow query performance. As a solutions architect in the company, you have to find a solution that will improve the query performance without increasing the operational overhead and cost. What would you recommend?

Use Advanced Query Accelerator (AQUA) for Redshift

An organization runs nearly 500 EC2 instances in several accounts across regions. These EC2 instances are built on Amazon Machine Images (AMIs). The organization is concerned about the accidental deletions of AMIs used for production EC2 instances. They want a solution that can help them recover from accidental

Use Recycle Bin



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deletions as soon as they know about it. Which of the following can be used for the above scenario?	
An application needs to access resources from another AWS account of another VPC in the same region. Which of the following ensure that the resources can be accessed as required?	D. Use VPC Peering between accounts
You are a solutions architect working for a regional bank that is moving its data center to the AWS Cloud. You need to migrate your data center to a new S3 and EFS data store in EFS. Since your data includes Personally Identifiable Information (PII), you have been asked to transfer data from your data center to AWS without traveling over the public internet. Which option gives you the most efficient solution that meets your requirements?	B. Create a private VPC endpoint, and configure the DataSync agent to communicate to the private DataSync service endpoints via the VPC endpoint using Direct Connect
A startup firm is using the Internet via NAT Gateway attached to VPC A. NAT Gateway is in a single availability zone, and all the subnets of of the VPC A are accessing the internet via this NAT Gateway. Instances in different Availability Zones are transferring large amounts of traffic to the Internet across Availability Zones using this NAT Gateway. This is leading to high operational costs. Management is looking for a cost-saving option along with reliable Internet connectivity. What solution can be designed for cost-effective traffic flow between resources to the Internet?	availability zone having instances with large volumes of internet traffic
A company has created VPC A for deploying web applications. Recently this company has acquired another company that has created VPC B for deploying applications in an AWS cloud. It is found that the subnets of both of these VPCs are overlapping. The company requires web applications in VPC A to communicate with servers in VPC B. This communication should be over AWS-managed networking infrastructure. Which of the following designs can be implemented to establish connections between these VPCs?	to connect these VPCs over new subnets. Update route table in both overlapping subnets to send traffic via NAT Gateway in VPC
A large government Organization has created multiple accounts as part of the AWS Organizations. Each of these accounts has a NAT Gateway attached for Internet access to applications. The Finance team is looking for total charges incurred for all the NAT Gateways as well as charges of individual accounts for using NAT Gateway.	Assign Cost Allocation Tags to NAT Gateway in each of the member accounts from individual member accounts. Use a management account in an AWS Organizations to access the Cost Allocation Tags manager in the billing console.
You have created a Lambda function for reading data from the Kinesis stream of transactions. In the code, you were using a context trigger to log to CloudWatch, and you can monitor them at a later point in time. Lambda function started running along with Kinesis stream. However, you do not see any log entries for the new Lambda function. What could be the reason?	Lambda execution role policy does not have access to create CloudWatch logs
A Research and Development department in a global pharma company is planning to store all of its formulation documents as an archive in Amazon S3 Glacier Vault. The security team of this company wants to ensure that no deletion of these formulation documents is permitted to any user for an indefinite period. Users should retain permissions to delete temporary document archives around these vaults. What approach should be initiated to meet this requirement (select two)?	
How to route traffic between two VPCs having overlapping subnets?	 Create new subnets from a new CIDR in each VPC Deploy a private NAT gateway in VPC A and an Application Load Balancer in VPC B. Use Transit Gateway to route traffic between these VPCs. Update the Route Table of the overlapping subnets in VPC A to send all traffic destined to overlapping subnets of VPC B via a private NAT gateway. Reverse traffic from VPC B will be communicating with overlapping subnets in VPC A via Application Load Balancer. The



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	Application Load Balancer will use the IP address of the private NAT gateway as a destination.
A company is using AWS Organizations for managing accounts created in multiple regions. Each of these accounts has created Amazon S3 buckets for storing files. During a security audit, it was found that some of these S3 buckets have public access without any proper requirements leading to security risks. The Security Team has engaged you to propose a secure design to deny all accounts in AWS Organizations from creating an S3 bucket with public access. What policies can be designed to ensure additional protections?	Enable Amazon S3 Block Public Access on AWS Organization's Service Control Policies (SCPs) to deny users making changes to those settings.
An IT Company has deployed Amazon EFS in VPC A created in eu-west-2. Data in this Amazon EFS needs to be accessed from the Amazon EC2 instance in VPC B created in us-east-1 and from an on-premises location. On-Premises locations have an existing AWS Direct Connect link with VPC B. You need to provide a high-performance cost-effective solution for this data access with optimum latency. What solution can be designed for accessing data in Amazon EFS?	Create an AWS PrivateLink between VPC A and VPC B. Access Amazon EFS in VPC A from an instance in VPC B over this PrivateLink. From the on-premises network, use existing AWS Direct Connect to VPC B. From there, use PrivateLink to connect to Amazon EFS in VPC A.
You are a solutions architect working for a financial services firm that operates applications in the hybrid cloud model. You have applications running on EC2 instances in your VPC that communicate with resources in your on-prem data center. You have a workload on an EC2 instance in one subnet and a transit gateway association in a different subnet. Also, these two subnets are associated with different NACLs. You have set up Network Access Control List (NACL) rules to control the traffic to and from your EC2 instances and transit gateway. Which of the following is true about the NACL rules from your EC2 instances to the transit gateway?	
You are a solutions architect working for a media company that produces stock images and videos for sale via a mobile app and website. Your app and website allow users to gain access only to stock content they have purchased. Your content is stored in S3 buckets. You need to restrict access to multiple files that your users have purchased. Also, due to the nature of the stock content (purchasable by multiple users), you don't want to change the URLs of each stock item. What access control option best fits your scenario?	
You are a solutions architect working as a consultant where you build web applications for clients. One of your clients needs a static website hosted on AWS. The website will host content files hosted by the AWS account that used to create the S3 bucket that will host the website. However, some of the objects in the bucket that are owned by a parent company's AWS account are also needed for the website. How should you configure the S3 bucket access controls to achieve the most secure website that is accessible to the public (select TWO?)	Disable the block public access setting for the bucket and write a bucket policy that grants public read access to the bucket. Create an object access control list (ACL) that grants read access to the
You are a solutions architect working for a media company that produces and stores images and video content that is sold as stock content to other companies that wish to use your stock content in their web and mobile apps. You are storing your stock content in S3 and need to optimize for cost. Some of your images are small, less than 128KB in size. However, most of your stock content is much larger. The amount of content you manage is very large, with over 1 million objects in S3. These objects have varying access patterns. Some are accessed frequently, while others are accessed very infrequently. Also the access patterns for the stock objects change over time. Which S3 storage class should you choose for your stock content to optimize your costs while also providing the best overall performance?	C. S3 Intelligent-Tiering



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You create several SQS queues to store different types of customer requests. Each SQS queue has a backend node that pulls messages for processing. Now you need a service to collect messages from the frontend and push them to the related queues using the publish/subscribe model. Which service would B. Amazon Simple Notification Service (SNS) you choose? A. Amazon MQ B. Amazon Simple Notification Service (SNS) C. Amazon Simple Queue Service (SQS) D. AWS Step Functions Whizlabs, an E-Learning Platform hosted on AWS provides various online courses to a global audience. They have video lessons and quiz questions for every lesson. They are more customer-centric and always work to improve their services based on the feedback received from their customers. Recently they have seen a surge in responses where their customers are demanding D. Use Amazon Polly to implement this feature in the platform. a feature where they can listen to the quiz questions instead of just reading it because they understand it better by listening. It will help the visually impaired learners as well. Krish, the solutions architect at WhizLabs, is looking for a solution to introduce this feature to their platform. Which of the following options can fulfill the given requirement? Kayne is instructed by his manager to build a solution to detect whether the visitors entering their office building are wearing a face mask or not. The building has two entrances with CCTVs installed on both. The data needs to be captured from them and sent to AWS for detection and analysis. He is exploring AWS Services C. Kinesis Video Streams to build them efficiently. After some research, he has found that Amazon Kinesis with a combination of Amazon Rekognition can serve the purpose. But he is not aware of what capability will help in this case. Which of the following Kinesis capabilities is most appropriate for the given scenario? A stock broking company has deployed a stock trading web application on the Amazon EC2 instance. The company is looking for virtual agents to be integrated with this application to provide conversational channels to its premium customers. Real-time per-Amazon Lex sonalized stock recommendations should be provided for premium customers during market hours. Which service is best suited to integrate with this application? A large manufacturing company is looking to track IoT sensor data collected from thousands of equipment across multiple factory units. This is extremely high-volume traffic that needs to be Send sensor data to Amazon Timestream using Amazon Kinesis collected in real time and should be efficiently visualized. The and visualize data using Amazon QuickSight company is looking for a suitable database in the AWS cloud for storing these sensor data. Which of the following cost-effective databases can be used for this purpose? A manufacturing company has a large number of smart devices installed in various locations worldwide. Hourly logs from these devices are stored in an Amazon S3 bucket. Management is Use S3 as a source for Amazon QuickSight and create dashlooking for comprehensive dashboards which should incorporate boards for usage and forecast trends usages of these devices and forecast usage trends for these devices. Which tool is best suited to get this required dashboard? A company has launched EC2 instances in an Auto Scaling group deploying a web application. The Operations Team is looking to Install a unified CloudWatch agent on all Amazon EC2 instances

A critical web application is deployed on multiple Amazon EC2 instances which are part of an Autoscaling group. One of the

capture custom metrics for this application from all the instances.

These metrics should be viewed as aggregrated metrics for all

instances in an Auto Scaling group. What configuration can be

implemented to get the metrics as required?

in an Auto Scaling group and use "aggregation_dimensions" in an

agent configuration file to aggregate metrics for all instances



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Amazon EC2 instances in the group needs to have a software upgrade. The Operations Team is looking for your suggestions to advise for this upgrade without impacting another instance in the group. Post upgrade, the same instance should be part of the Auto Scaling group. What steps can be initiated to complete this upgrade?

Put the instance in Standby mode. Post upgrade, move instance back to InService mode. It will be part of the same Auto Scaling group.

A company is storing data in an Amazon S3 bucket which is accessed by global users. Amazon S3 bucket is encrypted with AWS KMS. The company is planning to use Amazon CloudFront as a CDN for high performance. The Operations Team is looking for your suggestions to create an S3 bucket policy to restrict access to the S3 bucket only via specific CloudFront distribution. How can the S3 bucket policy be implemented to control access to the S3 bucket?

Use a Condition element in the policy to allow CloudFront to access the bucket only when the request is on behalf of of the CloudFront distribution that contains the S3 origin.

A company is using microservices-based applications using Amazon ECS for an online shopping application. For different services, multiple tasks are created in a container using the EC2 launch type. The security team is looking for some specific security controls for the tasks in the containers along with granular network monitoring using various tools for each task. What networking mode configuration can be considered with Amazon ECS to meet this requirement?

Use awsvpc networking mode for Amazon ECS tasks

A start up company is planning to deploy container based applications using Amazon ECS. The firm is looking for the least latency from on-premises networks to the workloads in the containers. The proposed solutions should be scalable and should support consistent high CPU and memory requirements. What deployment can be implemented for this purpose?

Create an EC2 launch type with Amazon ECS and deploy it in the AWS Outpost

The HR team is using Amazon S3 buckets to save details of the employees. The HR head wants strict access control for the HR bucket to ensure only legitimate members from the HR team have access to the HR bucket. The policy should be applicable when new users are created with the IAM policy of full access to S3 buckets. What access control can be created for this purpose with the least admin work?

Create an S3 bucket policy for the HR bucket restricting access to only the roles. Create a role with access permissions to the Amazon S3 bucket. HR Team users who require access to the bucket can assume this role.

Amazon EC2 instances are launched in a public subnet of the VPC. Applications deployed on these instances are accessed by global users. The operations team is looking for a restrictive control for accessing these instances allowing only SSH traffic. How can access controls be designed without any impact on application traffic?

Create a secondary network interface in different subnets of a VPC for management purposes. Attach a security group to this interface allowing only specific SSH traffic.

An IT firm is planning to deploy microservices applications on Amazon ECS. The Project Team is expecting occasional bursts in the application usage. Amazon ECS clusters should be scalable to meet this burst without any manual interventions. The relational database for this application should automatically scale to the application demand without any need to manage underlying instances. What design can be recommended to have a scalable application?

Create Amazon ECS clusters with Fargate launch type. For Database use Amazon Aurora Serverless.

A startup firm has deployed multiple Amazon EC2 instances for its web application. The operations team is looking to retrieve ami-id for all these running instances. They are seeking your help with the correct URL for this purpose. What command can be used to get this detail?

Use http://169.254.169.254/latest/meta-data/ami-id

When analyzing billions of pages in a company, you have noticed some munging processes are exceeding SLAs even after using X1e instances suitable for HPC applications. After monitoring logs, trailing and tracing data closely, you have noticed that write operations involving S3 content pre-processing causing 80% of the bot-

B. Using Amazon S3 Transfer Acceleration, Multipart upload, parallelized reading via byte-range fetches, and partitioned prefix for distributing key names as part of naming patterns.



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tleneck. In comparison, read operations for post processing and LIST operations are leading to the remaining 20% of congestion. Which two options are recommended to increase performance in this scenario?

D. Instead of LIST operations, you can build a search catalog to keep track of S3 metadata by using other AWS services like Amazon DynamoDB or Amazon OpenSearch service.

While evaluating the benefits of enhanced networking in your HPC instances, you find out some setting doesn't seem to be functioning well. You have VPC peering connection configurations in place. Some of your instances support ENA. You are using AWS CLI, and you have checked that all instances have internet connectivity. Which relevant statement is correct in this scenario?

Some instance types are supported for using the ENA. Make sure you are using a supported version of the Linux kernel and a supported distribution, you run ethtool -i eth0 and you have to get the ENA as the driver.

You plan to manage API keys in AWS Secrets Manager. The keys need to be automatically rotated to be compliant with the company policy. From Secrets Manager, applications can get the latest version of the API credentials. How would you implement the rotation of keys?

Customize the Lambda function that performs the rotation of secrets in Secrets Manager.

IoT sensors monitor the number of bags that are handled at an airport. The data is sent back to a Kinesis stream with default settings. Every alternate day, the data from the stream is sent to S3 for processing. But it is noticed that S3 is not receiving all the data being sent to the Kinesis stream. What could be the reason for this?

The default retention period of the data stream is set to 24 hours only, and hence the failure.

You have a web application that processes customer orders. The frontend application application forwards the order messages to an SQS queue. The backend contains an Elastic Load Balancer and an Auto Scaling group. You want the ASG to auto-scale depending on the queue size. Which of the following CloudWatch metrics would you choose to discover the SQS queue length?

ApproximateNumberOfMessagesVisible - describes the number of messages available for retrieval. It can be used to decide the queue length.

An IT Company has deployed Amazon EFS in VPC A created in eu-west-2. Data in this Amazon EFS needs to be accessed from the Amazon EC2 instance created in us-east-1 and from an on-premises location. On-Premises locations have an existing AWS Direct Connect link with VPC B. You need to provide a high-performance cost-effective solution for this data access with optimum latency. Which solution can be designed for accessing data in Amazon EFS?

Create an AWS PrivateLink between VPC A and VPC B. Access Amazon EFS in VPC A from an instance in VPC B over this PrivateLink. From the on-premises network, use existing Direct Connect to VPC B. From there, use PrivateLink to connect to Amazon EFS in VPC A.

Jim is a Solutions Architect working in an MNC that owns a global E-Commerce application. They have stored the data across different regions across the world and and always look for ways to provide low latency data delivery to their global customers securely. All the data is encrypted using KMS, but they have observed some latency in some regions recently. After checking out a few configurations, Jim found the cause of the issue: the call made to KMS for using a single encryption key available in the Mumbai region only. What should Jim use to resolve the latency issues in the given scenario?

Create Multi-Region Keys in the Regions where the data resides

Shoptech is a recently launched E-commerce platform serving customers around the globe. For the platform, they have used EC2 instances as application servers managed by an Auto Scaling Group. For the database layer, they have used Amazon RDS with MySQL engine. During their regular monitoring activity, the team observed performance issues in the form of slower database queries over the last few days. They also discovered that the DB instance is intermittently throwing "too many connections" errors. They found that this might happen due to the large number of database connections getting opened to ensure quick user response times. These active connections are barely getting used. Which of the following options can solve the problem in the MOST efficient way?

Use Amazon RDS Proxy with the MySQL DB instance



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An IT company Techify has recently started using Amazon SQS to let their web applications communicate with the application servers through the messages in the SQS queue. However, upon testing, the team observed that the request from the Web server is not reaching the App server and they are looking for an AWS Service that can efficiently help them debug such errors. They also want to identify potential issues and more information about errors and latency for the messages passing through SQS. Which of the following services/features can be used in the given scenario?

Amazon X-Ray

You are working on a Fraud Detection system that relies on getting real-time data from databases quickly. You perform the analysis on it. Your manager has instructed you to find a database solution where you can pursue the analytical queries directly on your current database where you are performing other transactional queries as well. The manager has asked you not to use a separate software or infrastructure to perform the analytics. Also, he has instructed you to use a solution where the underlying database can run the queries on thousands of CPUs together without slowing down or compromising the overall performance. Which of the following is the MOST efficient solution for this requirement?

Amazon Aurora Parallel Query