



Amazon-Web-Services

Exam Questions SAA-C03

AWS Certified Solutions Architect - Associate (SAA-C03)

NEW QUESTION 1

- (Exam Topic 1)

A solutions architect is designing the cloud architecture for a new application being deployed on AWS. The process should run in parallel while adding and removing application nodes as needed based on the number of jobs to be processed. The processor application is stateless. The solutions architect must ensure that the application is loosely coupled and the job items are durably stored.

Which design should the solutions architect use?

- A. Create an Amazon SNS topic to send the jobs that need to be processed Create an Amazon Machine Image (AMI) that consists of the processor application Create a launch configuration that uses the AMI Create an Auto Scaling group using the launch configuration Set the scaling policy for the Auto Scaling group to add and remove nodes based on CPU usage
- B. Create an Amazon SQS queue to hold the jobs that need to be processed Create an Amazon Machine image (AMI) that consists of the processor application Create a launch configuration that uses the AMI Create an Auto Scaling group using the launch configuration Set the scaling policy for the Auto Scaling group to add and remove nodes based on network usage
- C. Create an Amazon SQS queue to hold the jobs that needs to be processed Create an Amazon Machine image (AMI) that consists of the processor application Create a launch template that uses the AMI Create an Auto Scaling group using the launch template Set the scaling policy for the Auto Scaling group to add and remove nodes based on the number of items in the SQS queue
- D. Create an Amazon SNS topic to send the jobs that need to be processed Create an Amazon Machine Image (AMI) that consists of the processor application Create a launch template that uses the AMI Create an Auto Scaling group using the launch template Set the scaling policy for the Auto Scaling group to add and remove nodes based on the number of messages published to the SNS topic

Answer: C

Explanation:

"Create an Amazon SQS queue to hold the jobs that needs to be processed. Create an Amazon EC2 Auto Scaling group for the compute application. Set the scaling policy for the Auto Scaling group to add and remove nodes based on the number of items in the SQS queue"

In this case we need to find a durable and loosely coupled solution for storing jobs. Amazon SQS is ideal for this use case and can be configured to use dynamic scaling based on the number of jobs waiting in the queue. To configure this scaling you can use the backlog per instance metric with the target value being the acceptable backlog per instance to maintain. You can calculate these numbers as follows: Backlog per instance: To calculate your backlog per instance, start with the ApproximateNumberOfMessages queue attribute to determine the length of the SQS queue

NEW QUESTION 2

- (Exam Topic 1)

A company collects temperature, humidity, and atmospheric pressure data in cities across multiple continents. The average volume of data collected per site each day is 500 GB. Each site has a high-speed internet connection. The company's weather forecasting applications are based in a single Region and analyze the data daily.

What is the FASTEST way to aggregate data from all of these global sites?

- A. Enable Amazon S3 Transfer Acceleration on the destination bucket
- B. Use multipart uploads to directly upload site data to the destination bucket.
- C. Upload site data to an Amazon S3 bucket in the closest AWS Region
- D. Use S3 cross-Region replication to copy objects to the destination bucket.
- E. Schedule AWS Snowball jobs daily to transfer data to the closest AWS Region
- F. Use S3 cross-Region replication to copy objects to the destination bucket.
- G. Upload the data to an Amazon EC2 instance in the closest Region
- H. Store the data in an Amazon Elastic Block Store (Amazon EBS) volume
- I. Once a day take an EBS snapshot and copy it to the centralized Region
- J. Restore the EBS volume in the centralized Region and run an analysis on the data daily.

Answer: A

Explanation:

You might want to use Transfer Acceleration on a bucket for various reasons, including the following: You have customers that upload to a centralized bucket from all over the world.

You transfer gigabytes to terabytes of data on a regular basis across continents.

You are unable to utilize all of your available bandwidth over the Internet when uploading to Amazon S3.

<https://docs.aws.amazon.com/AmazonS3/latest/dev/transfer-acceleration.html> [https://aws.amazon.com/s3/transfer-acceleration/#:~:text=S3%20Transfer%20Acceleration%20\(S3TA\)%20redu](https://aws.amazon.com/s3/transfer-acceleration/#:~:text=S3%20Transfer%20Acceleration%20(S3TA)%20redu) "Amazon S3 Transfer Acceleration can speed up content transfers to and from Amazon S3 by as much as 50-500% for long-distance transfer of larger objects. Customers who have either web or mobile applications with widespread users or applications hosted far away from their S3 bucket can experience long and variable upload and download speeds over the Internet"

<https://docs.aws.amazon.com/AmazonS3/latest/userguide/mpuoverview.html> "Improved throughput - You can upload parts in parallel to improve throughput."

NEW QUESTION 3

- (Exam Topic 1)

A company has created an image analysis application in which users can upload photos and add photo frames to their images. The users upload images and metadata to indicate which photo frames they want to add to their images. The application uses a single Amazon EC2 instance and Amazon DynamoDB to store the metadata.

The application is becoming more popular, and the number of users is increasing. The company expects the number of concurrent users to vary significantly depending on the time of day and day of week. The company must ensure that the application can scale to meet the needs of the growing user base. Which solution meets these requirements?

- A. Use AWS Lambda to process the photo
- B. Store the photos and metadata in DynamoDB.
- C. Use Amazon Kinesis Data Firehose to process the photos and to store the photos and metadata.
- D. Use AWS Lambda to process the photo
- E. Store the photos in Amazon S3. Retain DynamoDB to store the metadata.
- F. Increase the number of EC2 instances to three
- G. Use Provisioned IOPS SSD (io2) Amazon Elastic Block Store (Amazon EBS) volumes to store the photos and metadata.

Answer: C

NEW QUESTION 4

- (Exam Topic 1)

A company is designing an application. The application uses an AWS Lambda function to receive information through Amazon API Gateway and to store the information in an Amazon Aurora PostgreSQL database.

During the proof-of-concept stage, the company has to increase the Lambda quotas significantly to handle the high volumes of data that the company needs to load into the database. A solutions architect must recommend a new design to improve scalability and minimize the configuration effort.

Which solution will meet these requirements?

- A. Refactor the Lambda function code to Apache Tomcat code that runs on Amazon EC2 instances. Connect the database by using native Java Database Connectivity (JDBC) drivers.
- B. Change the platform from Aurora to Amazon DynamoDB
- C. Provision a DynamoDB Accelerator (DAX) cluster
- D. Use the DAX client SDK to point the existing DynamoDB API calls at the DAX cluster.
- E. Set up two Lambda function
- F. Configure one function to receive the information
- G. Configure the other function to load the information into the database
- H. Integrate the Lambda functions by using Amazon Simple Notification Service (Amazon SNS).
- I. Set up two Lambda function
- J. Configure one function to receive the information
- K. Configure the other function to load the information into the database
- L. Integrate the Lambda functions by using an Amazon Simple Queue Service (Amazon SQS) queue.

Answer: B

Explanation:

bottlenecks can be avoided with queues (SQS).

NEW QUESTION 5

- (Exam Topic 1)

A company is preparing to store confidential data in Amazon S3. For compliance reasons the data must be encrypted at rest. Encryption key usage must be logged for auditing purposes. Keys must be rotated every year.

Which solution meets these requirements and is the MOST operationally efficient?

- A. Server-side encryption with customer-provided keys (SSE-C)
- B. Server-side encryption with Amazon S3 managed keys (SSE-S3)
- C. Server-side encryption with AWS KMS (SSE-KMS) customer master keys (CMKs) with manual rotation
- D. Server-side encryption with AWS KMS (SSE-KMS) customer master keys (CMKs) with automatic rotation

Answer: D

Explanation:

<https://docs.aws.amazon.com/kms/latest/developerguide/rotate-keys.html>

When you enable automatic key rotation for a customer managed key, AWS KMS generates new cryptographic material for the KMS key every year. AWS KMS also saves the KMS key's older cryptographic material in perpetuity so it can be used to decrypt data that the KMS key encrypted.

Key rotation in AWS KMS is a cryptographic best practice that is designed to be transparent and easy to use. AWS KMS supports optional automatic key rotation only for customer managed CMKs. Enable and disable key rotation. Automatic key rotation is disabled by default on customer managed CMKs. When you enable (or re-enable) key rotation, AWS KMS automatically rotates the CMK 365 days after the enable date and every 365 days thereafter.

NEW QUESTION 6

- (Exam Topic 1)

A company has an automobile sales website that stores its listings in a database on Amazon RDS. When an automobile is sold, the listing needs to be removed from the website and the data must be sent to multiple target systems.

Which design should a solutions architect recommend?

- A. Create an AWS Lambda function triggered when the database on Amazon RDS is updated to send the information to an Amazon Simple Queue Service (Amazon SQS) queue for the targets to consume
- B. Create an AWS Lambda function triggered when the database on Amazon RDS is updated to send the information to an Amazon Simple Queue Service (Amazon SQS) FIFO queue for the targets to consume
- C. Subscribe to an RDS event notification and send an Amazon Simple Queue Service (Amazon SQS) queue fanned out to multiple Amazon Simple Notification Service (Amazon SNS) topics. Use AWS Lambda functions to update the targets
- D. Subscribe to an RDS event notification and send an Amazon Simple Notification Service (Amazon SNS) topic fanned out to multiple Amazon Simple Queue Service (Amazon SQS) queues. Use AWS Lambda functions to update the targets

Answer: D

Explanation:

<https://docs.aws.amazon.com/lambda/latest/dg/services-rds.html> <https://docs.aws.amazon.com/lambda/latest/dg/with-sns.html>

NEW QUESTION 7

- (Exam Topic 1)

A company recently launched Linux-based application instances on Amazon EC2 in a private subnet and launched a Linux-based bastion host on an Amazon EC2 instance in a public subnet of a VPC. A solutions architect needs to connect from the on-premises network, through the company's internet connection to the bastion host and to the application servers. The solutions architect must make sure that the security groups of all the EC2 instances will allow that access.

Which combination of steps should the solutions architect take to meet these requirements? (Select TWO)

- A. Replace the current security group of the bastion host with one that only allows inbound access from the application instances
- B. Replace the current security group of the bastion host with one that only allows inbound access from the internal IP range for the company
- C. Replace the current security group of the bastion host with one that only allows inbound access from the external IP range for the company
- D. Replace the current security group of the application instances with one that allows inbound SSH access from only the private IP address of the bastion host

E. Replace the current security group of the application instances with one that allows inbound SSH access from only the public IP address of the bastion host

Answer: CD

Explanation:

<https://digitalcloud.training/ssh-into-ec2-in-private-subnet/>

NEW QUESTION 8

- (Exam Topic 1)

A company needs to store data in Amazon S3 and must prevent the data from being changed. The company wants new objects that are uploaded to Amazon S3 to remain unchangeable for a nonspecific amount of time until the company decides to modify the objects. Only specific users in the company's AWS account can have the ability to delete the objects. What should a solutions architect do to meet these requirements?

- A. Create an S3 Glacier vault Apply a write-once, read-many (WORM) vault lock policy to the objects
- B. Create an S3 bucket with S3 Object Lock enabled Enable versioning Set a retention period of 100 years Use governance mode as the S3 bucket's default retention mode for new objects
- C. Create an S3 bucket Use AWS CloudTrail to track any S3 API events that modify the objects Upon notification, restore the modified objects from any backup versions that the company has
- D. Create an S3 bucket with S3 Object Lock enabled Enable versioning Add a legal hold to the objects Add the s3 PutObjectLegalHold permission to the IAM policies of users who need to delete the objects

Answer: D

Explanation:

"The Object Lock legal hold operation enables you to place a legal hold on an object version. Like setting a retention period, a legal hold prevents an object version from being overwritten or deleted. However, a legal hold doesn't have an associated retention period and remains in effect until removed."

<https://docs.aws.amazon.com/AmazonS3/latest/userguide/batch-ops-legal-hold.html>

NEW QUESTION 9

- (Exam Topic 1)

A company that hosts its web application on AWS wants to ensure all Amazon EC2 instances. Amazon RDS DB instances. and Amazon Redshift clusters are configured with tags. The company wants to minimize the effort of configuring and operating this check. What should a solutions architect do to accomplish this?

- A. Use AWS Config rules to define and detect resources that are not properly tagged.
- B. Use Cost Explorer to display resources that are not properly tagged
- C. Tag those resources manually.
- D. Write API calls to check all resources for proper tag allocation
- E. Periodically run the code on an EC2 instance.
- F. Write API calls to check all resources for proper tag allocation
- G. Schedule an AWS Lambda function through Amazon CloudWatch to periodically run the code.

Answer: A

NEW QUESTION 10

- (Exam Topic 1)

A company recently signed a contract with an AWS Managed Service Provider (MSP) Partner for help with an application migration initiative. A solutions architect needs to share an Amazon Machine Image (AMI) from an existing AWS account with the MSP Partner's AWS account. The AMI is backed by Amazon Elastic Block Store (Amazon EBS) and uses a customer managed customer master key (CMK) to encrypt EBS volume snapshots.

What is the MOST secure way for the solutions architect to share the AMI with the MSP Partner's AWS account?

- A. Make the encrypted AMI and snapshots publicly available
- B. Modify the CMK's key policy to allow the MSP Partner's AWS account to use the key
- C. Modify the launchPermission property of the AMI
- D. Share the AMI with the MSP Partner's AWS account only
- E. Modify the CMK's key policy to allow the MSP Partner's AWS account to use the key.
- F. Modify the launchPermission property of the AMI Share the AMI with the MSP Partner's AWS account only
- G. Modify the CMK's key policy to trust a new CMK that is owned by the MSP Partner for encryption.
- H. Export the AMI from the source account to an Amazon S3 bucket in the MSP Partner's AWS account. Encrypt the S3 bucket with a CMK that is owned by the MSP Partner Copy and launch the AMI in the MSP Partner's AWS account.

Answer: B

Explanation:

Share the existing KMS key with the MSP external account because it has already been used to encrypt the AMI snapshot.

<https://docs.aws.amazon.com/kms/latest/developerguide/key-policy-modifying-external-accounts.html>

NEW QUESTION 10

- (Exam Topic 1)

A survey company has gathered data for several years from areas in the United States. The company hosts the data in an Amazon S3 bucket that is 3 TB in size and growing. The company has started to share the data with a European marketing firm that has S3 buckets. The company wants to ensure that its data transfer costs remain as low as possible.

Which solution will meet these requirements?

- A. Configure the Requester Pays feature on the company's S3 bucket
- B. Configure S3 Cross-Region Replication from the company's S3 bucket to one of the marketing firm's S3 buckets.
- C. Configure cross-account access for the marketing firm so that the marketing firm has access to the company's S3 bucket.
- D. Configure the company's S3 bucket to use S3 Intelligent-Tiering Sync the S3 bucket to one of the marketing firm's S3 buckets

Answer: A

Explanation:

"Typically, you configure buckets to be Requester Pays buckets when you want to share data but not incur charges associated with others accessing the data. For example, you might use Requester Pays buckets when making available large datasets, such as zip code directories, reference data, geospatial information, or web crawling data." <https://docs.aws.amazon.com/AmazonS3/latest/userguide/RequesterPaysBuckets.html>

NEW QUESTION 14

- (Exam Topic 1)

A company is running a popular social media website. The website gives users the ability to upload images to share with other users. The company wants to make sure that the images do not contain inappropriate content. The company needs a solution that minimizes development effort.

What should a solutions architect do to meet these requirements?

- A. Use Amazon Comprehend to detect inappropriate content
- B. Use human review for low-confidence predictions.
- C. Use Amazon Rekognition to detect inappropriate content
- D. Use human review for low-confidence predictions.
- E. Use Amazon SageMaker to detect inappropriate content
- F. Use ground truth to label low-confidence predictions.
- G. Use AWS Fargate to deploy a custom machine learning model to detect inappropriate content
- H. Use ground truth to label low-confidence predictions.

Answer: B

Explanation:

<https://docs.aws.amazon.com/rekognition/latest/dg/moderation.html?pg=ln&sec=ft> <https://docs.aws.amazon.com/rekognition/latest/dg/a2i-rekognition.html>

NEW QUESTION 17

- (Exam Topic 1)

A company wants to improve its ability to clone large amounts of production data into a test environment in the same AWS Region. The data is stored in Amazon EC2 instances on Amazon Elastic Block Store (Amazon EBS) volumes. Modifications to the cloned data must not affect the production environment. The software that accesses this data requires consistently high I/O performance.

A solutions architect needs to minimize the time that is required to clone the production data into the test environment.

Which solution will meet these requirements?

- A. Take EBS snapshots of the production EBS volume
- B. Restore the snapshots onto EC2 instance store volumes in the test environment.
- C. Configure the production EBS volumes to use the EBS Multi-Attach feature
- D. Take EBS snapshots of the production EBS volume
- E. Attach the production EBS volumes to the EC2 instances in the test environment.
- F. Take EBS snapshots of the production EBS volume
- G. Create and initialize new EBS volume
- H. Attach the new EBS volumes to EC2 instances in the test environment before restoring the volumes from the production EBS snapshots.
- I. Take EBS snapshots of the production EBS volume
- J. Turn on the EBS fast snapshot restore feature on the EBS snapshot
- K. Restore the snapshots into new EBS volume
- L. Attach the new EBS volumes to EC2 instances in the test environment.

Answer: C

NEW QUESTION 18

- (Exam Topic 1)

A company is storing backup files by using Amazon S3 Standard storage. The files are accessed frequently for 1 month. However, the files are not accessed after 1 month. The company must keep the files indefinitely.

Which storage solution will meet these requirements MOST cost-effectively?

- A. Configure S3 Intelligent-Tiering to automatically migrate objects.
- B. Create an S3 Lifecycle configuration to transition objects from S3 Standard to S3 Glacier Deep Archive after 1 month.
- C. Create an S3 Lifecycle configuration to transition objects from S3 Standard to S3 Standard-Infrequent Access (S3 Standard-IA) after 1 month.
- D. Create an S3 Lifecycle configuration to transition objects from S3 Standard to S3 One Zone-Infrequent Access (S3 One Zone-IA) after 1 month.

Answer: B

NEW QUESTION 19

- (Exam Topic 1)

A company wants to reduce the cost of its existing three-tier web architecture. The web, application, and database servers are running on Amazon EC2 instances for the development, test, and production environments. The EC2 instances average 30% CPU utilization during peak hours and 10% CPU utilization during non-peak hours.

The production EC2 instances run 24 hours a day. The development and test EC2 instances run for at least 8 hours each day. The company plans to implement automation to stop the development and test EC2 instances when they are not in use.

Which EC2 instance purchasing solution will meet the company's requirements MOST cost-effectively?

- A. Use Spot Instances for the production EC2 instance
- B. Use Reserved Instances for the development and test EC2 instances.
- C. Use Reserved Instances for the production EC2 instance
- D. Use On-Demand Instances for the development and test EC2 instances.
- E. Use Spot blocks for the production EC2 instance
- F. Use Reserved Instances for the development and test EC2 instances.
- G. Use On-Demand Instances for the production EC2 instance

H. Use Spot blocks for the development and test EC2 instances.

Answer: B

NEW QUESTION 21

- (Exam Topic 1)

An ecommerce company wants to launch a one-deal-a-day website on AWS. Each day will feature exactly one product on sale for a period of 24 hours. The company wants to be able to handle millions of requests each hour with millisecond latency during peak hours. Which solution will meet these requirements with the LEAST operational overhead?

- A. Use Amazon S3 to host the full website in different S3 buckets Add Amazon CloudFront distributions Set the S3 buckets as origins for the distributions Store the order data in Amazon S3
- B. Deploy the full website on Amazon EC2 instances that run in Auto Scaling groups across multiple Availability Zones Add an Application Load Balancer (ALB) to distribute the website traffic Add another ALB for the backend APIs Store the data in Amazon RDS for MySQL
- C. Migrate the full application to run in containers Host the containers on Amazon Elastic Kubernetes Service (Amazon EKS) Use the Kubernetes Cluster Autoscaler to increase and decrease the number of pods to process bursts in traffic Store the data in Amazon RDS for MySQL
- D. Use an Amazon S3 bucket to host the website's static content Deploy an Amazon CloudFront distributio
- E. Set the S3 bucket as the origin Use Amazon API Gateway and AWS Lambda functions for the backend APIs Store the data in Amazon DynamoDB

Answer: D

NEW QUESTION 24

- (Exam Topic 1)

A company's HTTP application is behind a Network Load Balancer (NLB). The NLB's target group is configured to use an Amazon EC2 Auto Scaling group with multiple EC2 instances that run the web service.

The company notices that the NLB is not detecting HTTP errors for the application. These errors require a manual restart of the EC2 instances that run the web service. The company needs to improve the application's availability without writing custom scripts or code.

What should a solutions architect do to meet these requirements?

- A. Enable HTTP health checks on the NL
- B. supplying the URL of the company's application.
- C. Add a cron job to the EC2 instances to check the local application's logs once each minut
- D. If HTTP errors are detected, the application will restart.
- E. Replace the NLB with an Application Load Balance
- F. Enable HTTP health checks by supplying the URL of the company's applicatio
- G. Configure an Auto Scaling action to replace unhealthy instances.
- H. Create an Amazon Cloud Watch alarm that monitors the UnhealthyHostCount metric for the NL
- I. Configure an Auto Scaling action to replace unhealthy instances when the alarm is in the ALARM state.

Answer: C

NEW QUESTION 26

- (Exam Topic 1)

A company is launching a new application and will display application metrics on an Amazon CloudWatch dashboard. The company's product manager needs to access this dashboard periodically. The product manager does not have an AWS account. A solution architect must provide access to the product manager by following the principle of least privilege.

Which solution will meet these requirements?

- A. Share the dashboard from the CloudWatch consol
- B. Enter the product manager's email address, and complete the sharing step
- C. Provide a shareable link for the dashboard to the product manager.
- D. Create an IAM user specifically for the product manage
- E. Attach the CloudWatch Read Only Access managed policy to the use
- F. Share the new login credential with the product manage
- G. Share the browser URL of the correct dashboard with the product manager.
- H. Create an IAM user for the company's employees, Attach the View Only Access AWS managed policy to the IAM use
- I. Share the new login credentials with the product manage
- J. Ask the product manager to navigate to the CloudWatch console and locate the dashboard by name in the Dashboards section.
- K. Deploy a bastion server in a public subne
- L. When the product manager requires access to the dashboard, start the server and share the RDP credential
- M. On the bastion server, ensure that the browser is configured to open the dashboard URL with cached AWS credentials that have appropriate permissions to view the dashboard.

Answer: B

NEW QUESTION 30

- (Exam Topic 1)

A company hosts its web applications in the AWS Cloud. The company configures Elastic Load Balancers to use certificate that are imported into AWS Certificate Manager (ACM). The company's security team must be notified 30 days before the expiration of each certificate.

What should a solutions architect recommend to meet the requirement?

- A. Add a rule m ACM to publish a custom message to an Amazon Simple Notification Service (Amazon SNS) topic every day beginning 30 days before any certificate will expire.
- B. Create an AWS Config rule that checks for certificates that will expire within 30 day
- C. Configure Amazon EventBridge (Amazon CloudWatch Events) to invoke a custom alert by way of Amazon Simple Notification Service (Amazon SNS) when AWS Config reports a noncompliant resource
- D. Use AWS trusted Advisor to check for certificates that will expire within to day
- E. Create an Amazon CloudWatch alarm that is based on Trusted Advisor metrics for check status changes Configure the alarm to send a custom alert by way of Amazon Simple rectification Service (Amazon SNS)

- F. Create an Amazon EventBridge (Amazon CloudWatch Events) rule to detect any certificates that will expire within 30 day
- G. Configure the rule to invoke an AWS Lambda function
- H. Configure the Lambda function to send a custom alert by way of Amazon Simple Notification Service (Amazon SNS).

Answer: B

Explanation:

<https://aws.amazon.com/premiumsupport/knowledge-center/acm-certificate-expiration/>

NEW QUESTION 33

- (Exam Topic 1)

A company hosts an application on multiple Amazon EC2 instances. The application processes messages from an Amazon SQS queue, writes to an Amazon RDS table, and deletes the message from the queue. Occasional duplicate records are found in the RDS table. The SQS queue does not contain any duplicate messages.

What should a solutions architect do to ensure messages are being processed once only?

- A. Use the CreateQueue API call to create a new queue
- B. Use the AddPermission API call to add appropriate permissions
- C. Use the ReceiveMessage API call to set an appropriate wait time
- D. Use the ChangeMessageVisibility API call to increase the visibility timeout

Answer: D

Explanation:

The visibility timeout begins when Amazon SQS returns a message. During this time, the consumer processes and deletes the message. However, if the consumer fails before deleting the message and your system doesn't call the DeleteMessage action for that message before the visibility timeout expires, the message becomes visible to other consumers and the message is received again. If a message must be received only once, your consumer should delete it within the duration of the visibility timeout. <https://docs.aws.amazon.com/AWSSimpleQueueService/latest/SQSDeveloperGuide/sqs-visibility-timeout.html>

Keyword: SQS queue writes to an Amazon RDS. From this, Option D is the best choice & other options are ruled out [Option A - You can't introduce one more Queue in the existing one; Option B - only Permission & Option C - Only Retrieves Messages]. FIFO queues are designed to never introduce duplicate messages. However, your message producer might introduce duplicates in certain scenarios: for example, if the producer sends a message, does not receive a response, and then resends the same message. Amazon SQS APIs provide deduplication functionality that prevents your message producer from sending duplicates. Any duplicates introduced by the message producer are removed within a 5-minute deduplication interval. For standard queues, you might occasionally receive a duplicate copy of a message (at-least- once delivery). If you use a standard queue, you must design your applications to be idempotent (that is, they must not be affected adversely when processing the same message more than once).

NEW QUESTION 34

- (Exam Topic 1)

A company's containerized application runs on an Amazon EC2 instance. The application needs to download security certificates before it can communicate with other business applications. The company wants a highly secure solution to encrypt and decrypt the certificates in near real time. The solution also needs to store data in highly available storage after the data is encrypted.

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

- A. Create AWS Secrets Manager secrets for encrypted certificates
- B. Manually update the certificates as needed
- C. Control access to the data by using fine-grained IAM access.
- D. Create an AWS Lambda function that uses the Python cryptography library to receive and perform encryption operation
- E. Store the function in an Amazon S3 bucket.
- F. Create an AWS Key Management Service (AWS KMS) customer managed key
- G. Allow the EC2 role to use the KMS key for encryption operation
- H. Store the encrypted data on Amazon S3.
- I. Create an AWS Key Management Service (AWS KMS) customer managed key
- J. Allow the EC2 role to use the KMS key for encryption operation
- K. Store the encrypted data on Amazon Elastic Block Store (Amazon EBS) volumes.

Answer: D

NEW QUESTION 38

- (Exam Topic 1)

A company has an application that ingests incoming messages. These messages are then quickly consumed by dozens of other applications and microservices. The number of messages varies drastically and sometimes spikes as high as 100,000 each second. The company wants to decouple the solution and increase scalability. Which solution meets these requirements?

- A. Persist the messages to Amazon Kinesis Data Analytics
- B. All the applications will read and process the messages.
- C. Deploy the application on Amazon EC2 instances in an Auto Scaling group, which scales the number of EC2 instances based on CPU metrics.
- D. Write the messages to Amazon Kinesis Data Streams with a single shard
- E. All applications will read from the stream and process the messages.
- F. Publish the messages to an Amazon Simple Notification Service (Amazon SNS) topic with one or more Amazon Simple Queue Service (Amazon SQS) subscriptions
- G. All applications then process the messages from the queues.

Answer: D

Explanation:

<https://aws.amazon.com/sqs/features/>

By routing incoming requests to Amazon SQS, the company can decouple the job requests from the processing instances. This allows them to scale the number of instances based on the size of the queue, providing more resources when needed. Additionally, using an Auto Scaling group based on the queue size will automatically scale the number of instances up or down depending on the workload. Updating the software to read from the queue will allow it to process the job requests in a more efficient manner, improving the performance of the system.

NEW QUESTION 41

- (Exam Topic 1)

A company hosts an application on AWS Lambda functions that are invoked by an Amazon API Gateway API. The Lambda functions save customer data to an Amazon Aurora MySQL database. Whenever the company upgrades the database, the Lambda functions fail to establish database connections until the upgrade is complete. The result is that customer data is not recorded for some of the event.

A solutions architect needs to design a solution that stores customer data that is created during database upgrades.

Which solution will meet these requirements?

- A. Provision an Amazon RDS proxy to sit between the Lambda functions and the database. Configure the Lambda functions to connect to the RDS proxy.
- B. Increase the run time of the Lambda functions to the maximum. Create a retry mechanism in the code that stores the customer data in the database.
- C. Persist the customer data to Lambda local storage.
- D. Configure new Lambda functions to scan the local storage to save the customer data to the database.
- E. Store the customer data in an Amazon Simple Queue Service (Amazon SQS) FIFO queue. Create a new Lambda function that polls the queue and stores the customer data in the database.

Answer: D

Explanation:

<https://www.learnaws.org/2020/12/13/aws-rds-proxy-deep-dive/>

RDS proxy can improve application availability in such a situation by waiting for the new database instance to be functional and maintaining any requests received from the application during this time. The end result is that the application is more resilient to issues with the underlying database.

This will enable solution to hold data till the time DB comes back to normal. RDS proxy is to optimally utilize the connection between Lambda and DB. Lambda can open multiple connections concurrently which can be taxing on DB compute resources, hence RDS proxy was introduced to manage and leverage these connections efficiently.

NEW QUESTION 45

- (Exam Topic 1)

A company is using a SQL database to store movie data that is publicly accessible. The database runs on an Amazon RDS Single-AZ DB instance. A script runs queries at random intervals each day to record the number of new movies that have been added to the database. The script must report a final total during business hours. The company's development team notices that the database performance is inadequate for development tasks when the script is running. A solutions architect must recommend a solution to resolve this issue. Which solution will meet this requirement with the LEAST operational overhead?

- A. Modify the DB instance to be a Multi-AZ deployment.
- B. Create a read replica of the database. Configure the script to query only the read replica.
- C. Instruct the development team to manually export the entries in the database at the end of each day.
- D. Use Amazon ElastiCache to cache the common queries that the script runs against the database.

Answer: B

NEW QUESTION 49

- (Exam Topic 1)

A company's dynamic website is hosted using on-premises servers in the United States. The company is launching its product in Europe, and it wants to optimize site loading times for new European users. The site's backend must remain in the United States. The product is being launched in a few days, and an immediate solution is needed.

What should the solutions architect recommend?

- A. Launch an Amazon EC2 instance in us-east-1 and migrate the site to it.
- B. Move the website to Amazon S3. Use cross-Region replication between Regions.
- C. Use Amazon CloudFront with a custom origin pointing to the on-premises servers.
- D. Use an Amazon Route 53 geo-proximity routing policy pointing to on-premises servers.

Answer: C

Explanation:

<https://aws.amazon.com/pt/blogs/aws/amazon-cloudfront-support-for-custom-origins/>

You can now create a CloudFront distribution using a custom origin. Each distribution will can point to an S3 or to a custom origin. This could be another storage service, or it could be something more interesting and more dynamic, such as an EC2 instance or even an Elastic Load Balancer.

NEW QUESTION 52

- (Exam Topic 1)

A company is running a business-critical web application on Amazon EC2 instances behind an Application Load Balancer. The EC2 instances are in an Auto Scaling group. The application uses an Amazon Aurora PostgreSQL database that is deployed in a single Availability Zone. The company wants the application to be highly available with minimum downtime and minimum loss of data.

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

- A. Place the EC2 instances in different AWS Region.
- B. Use Amazon Route 53 health checks to redirect traffic.
- C. Use Aurora PostgreSQL Cross-Region Replication.
- D. Configure the Auto Scaling group to use multiple Availability Zone.
- E. Configure the database as Multi-AZ.
- F. Configure an Amazon RDS Proxy instance for the database.
- G. Configure the Auto Scaling group to use one Availability Zone.
- H. Generate hourly snapshots of the database.
- I. Recover the database from the snapshots in the event of a failure.
- J. Configure the Auto Scaling group to use multiple AWS Region.
- K. Write the data from the application to Amazon S3. Use S3 Event Notifications to launch an AWS Lambda function to write the data to the database.

Answer: B

NEW QUESTION 54

- (Exam Topic 1)

A company is developing a two-tier web application on AWS. The company's developers have deployed the application on an Amazon EC2 instance that connects directly to a backend Amazon RDS database. The company must not hardcode database credentials in the application. The company must also implement a solution to automatically rotate the database credentials on a regular basis.

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

- A. Store the database credentials in the instance metadata
- B. Use Amazon EventBridge (Amazon CloudWatch Events) rules to run a scheduled AWS Lambda function that updates the RDS credentials and instance metadata at the same time.
- C. Store the database credentials in a configuration file in an encrypted Amazon S3 bucket
- D. Use Amazon EventBridge (Amazon CloudWatch Events) rules to run a scheduled AWS Lambda function that updates the RDS credentials and the credentials in the configuration file at the same time
- E. Use S3 Versioning to ensure the ability to fall back to previous values.
- F. Store the database credentials as a secret in AWS Secrets Manager
- G. Turn on automatic rotation for the secret
- H. Attach the required permission to the EC2 role to grant access to the secret.
- I. Store the database credentials as encrypted parameters in AWS Systems Manager Parameter Store
- J. Turn on automatic rotation for the encrypted parameter
- K. Attach the required permission to the EC2 role to grant access to the encrypted parameters.

Answer: C

Explanation:

https://docs.aws.amazon.com/secretsmanager/latest/userguide/create_database_secret.html

NEW QUESTION 56

- (Exam Topic 1)

A company is migrating applications to AWS. The applications are deployed in different accounts. The company manages the accounts centrally by using AWS Organizations. The company's security team needs a single sign-on (SSO) solution across all the company's accounts. The company must continue managing the users and groups in its on-premises self-managed Microsoft Active Directory.

Which solution will meet these requirements?

- A. Enable AWS Single Sign-On (AWS SSO) from the AWS SSO console
- B. Create a one-way forest trust or a one-way domain trust to connect the company's self-managed Microsoft Active Directory with AWS SSO by using AWS Directory Service for Microsoft Active Directory.
- C. Enable AWS Single Sign-On (AWS SSO) from the AWS SSO console
- D. Create a two-way forest trust to connect the company's self-managed Microsoft Active Directory with AWS SSO by using AWS Directory Service for Microsoft Active Directory.
- E. Use AWS Directory Service
- F. Create a two-way trust relationship with the company's self-managed Microsoft Active Directory.
- G. Deploy an identity provider (IdP) on premise
- H. Enable AWS Single Sign-On (AWS SSO) from the AWS SSO console.

Answer: A

NEW QUESTION 58

- (Exam Topic 1)

An Amazon EC2 administrator created the following policy associated with an IAM group containing several users

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": "ec2:TerminateInstances",
      "Resource": "*",
      "Condition": {
        "IpAddress": {
          "aws:SourceIp": "10.100.100.0/24"
        }
      }
    },
    {
      "Effect": "Deny",
      "Action": "ec2:*",
      "Resource": "*",
      "Condition": {
        "StringNotEquals": {
          "ec2:Region": "us-east-1"
        }
      }
    }
  ]
}
```

What is the effect of this policy?

- A. Users can terminate an EC2 instance in any AWS Region except us-east-1.
- B. Users can terminate an EC2 instance with the IP address 10 100 100 1 in the us-east-1 Region
- C. Users can terminate an EC2 instance in the us-east-1 Region when the user's source IP is 10.100.100.254.
- D. Users cannot terminate an EC2 instance in the us-east-1 Region when the user's source IP is 10.100.100.254

Answer: C

Explanation:

as the policy prevents anyone from doing any EC2 action on any region except us-east-1 and allows only users with source ip 10.100.100.0/24 to terminate instances. So user with source ip 10.100.100.254 can terminate instances in us-east-1 region.

NEW QUESTION 60

- (Exam Topic 1)

A development team runs monthly resource-intensive tests on its general purpose Amazon RDS for MySQL DB instance with Performance Insights enabled. The testing lasts for 48 hours once a month and is the only process that uses the database. The team wants to reduce the cost of running the tests without reducing the compute and memory attributes of the DB instance.

Which solution meets these requirements MOST cost-effectively?

- A. Stop the DB instance when tests are complete
- B. Restart the DB instance when required.
- C. Use an Auto Scaling policy with the DB instance to automatically scale when tests are completed.
- D. Create a snapshot when tests are complete
- E. Terminate the DB instance and restore the snapshot when required.
- F. Modify the DB instance to a low-capacity instance when tests are complete
- G. Modify the DB instance again when required.

Answer: A

NEW QUESTION 63

- (Exam Topic 1)

An image-processing company has a web application that users use to upload images. The application uploads the images into an Amazon S3 bucket. The company has set up S3 event notifications to publish the object creation events to an Amazon Simple Queue Service (Amazon SQS) standard queue. The SQS queue serves as the event source for an AWS Lambda function that processes the images and sends the results to users through email.

Users report that they are receiving multiple email messages for every uploaded image. A solutions architect determines that SQS messages are invoking the Lambda function more than once, resulting in multiple email messages.

What should the solutions architect do to resolve this issue with the LEAST operational overhead?

- A. Set up long polling in the SQS queue by increasing the ReceiveMessage wait time to 30 seconds.
- B. Change the SQS standard queue to an SQS FIFO queue
- C. Use the message deduplication ID to discard duplicate messages.
- D. Increase the visibility timeout in the SQS queue to a value that is greater than the total of the function timeout and the batch window timeout.
- E. Modify the Lambda function to delete each message from the SQS queue immediately after the message is read before processing.

Answer: C

NEW QUESTION 66

- (Exam Topic 1)

A solutions architect is designing a VPC with public and private subnets. The VPC and subnets use IPv4 CIDR blocks. There is one public subnet and one private subnet in each of three Availability Zones (AZs) for high availability. An internet gateway is used to provide internet access for the public subnets. The private subnets require access to the internet to allow Amazon EC2 instances to download software updates. What should the solutions architect do to enable Internet access for the private subnets?

- A. Create three NAT gateways, one for each public subnet in each A
- B. Create a private route table for each AZ that forwards non-VPC traffic to the NAT gateway in its AZ.
- C. Create three NAT instances, one for each private subnet in each A
- D. Create a private route table for each AZ that forwards non-VPC traffic to the NAT instance in its AZ.
- E. Create a second internet gateway on one of the private subnet
- F. Update the route table for the private subnets that forward non-VPC traffic to the private internet gateway.
- G. Create an egress-only internet gateway on one of the public subnet
- H. Update the route table for the private subnets that forward non-VPC traffic to the egress- only internet gateway.

Answer: A

Explanation:

<https://aws.amazon.com/about-aws/whats-new/2018/03/introducing-amazon-vpc-nat-gateway-in-the-aws-govclo>
<https://docs.aws.amazon.com/vpc/latest/userguide/vpc-nat-comparison.html>

NEW QUESTION 68

- (Exam Topic 1)

A company observes an increase in Amazon EC2 costs in its most recent bill The billing team notices unwanted vertical scaling of instance types for a couple of EC2 instances A solutions architect needs to create a graph comparing the last 2 months of EC2 costs and perform an in-depth analysis to identify the root cause of the vertical scaling

How should the solutions architect generate the information with the LEAST operational overhead?

- A. Use AWS Budgets to create a budget report and compare EC2 costs based on instance types
- B. Use Cost Explorer's granular filtering feature to perform an in-depth analysis of EC2 costs based on instance types
- C. Use graphs from the AWS Billing and Cost Management dashboard to compare EC2 costs based on instance types for the last 2 months
- D. Use AWS Cost and Usage Reports to create a report and send it to an Amazon S3 bucket Use Amazon QuickSight with Amazon S3 as a source to generate an interactive graph based on instance types.

Answer: B

Explanation:

AWS Cost Explorer is a tool that enables you to view and analyze your costs and usage. You can explore your usage and costs using the main graph, the Cost Explorer cost and usage reports, or the Cost Explorer RI reports. You can view data for up to the last 12 months, forecast how much you're likely to spend for the next 12 months, and get recommendations for what Reserved Instances to purchase. You can use Cost Explorer to identify areas that need further inquiry and see trends that you can use to understand your costs. <https://docs.aws.amazon.com/cost-management/latest/userguide/ce-what-is.html>

NEW QUESTION 70

- (Exam Topic 1)

A solutions architect must design a highly available infrastructure for a website. The website is powered by Windows web servers that run on Amazon EC2 instances. The solutions architect must implement a solution that can mitigate a large-scale DDoS attack that originates from thousands of IP addresses. Downtime is not acceptable for the website.

Which actions should the solutions architect take to protect the website from such an attack? (Select TWO.)

- A. Use AWS Shield Advanced to stop the DDoS attack.
- B. Configure Amazon GuardDuty to automatically block the attackers.
- C. Configure the website to use Amazon CloudFront for both static and dynamic content.
- D. Use an AWS Lambda function to automatically add attacker IP addresses to VPC network ACLs.
- E. Use EC2 Spot Instances in an Auto Scaling group with a target tracking scaling policy that is set to 80% CPU utilization

Answer: AC

Explanation:

(<https://aws.amazon.com/cloudfront>

NEW QUESTION 73

- (Exam Topic 1)

A company recently migrated a message processing system to AWS. The system receives messages into an ActiveMQ queue running on an Amazon EC2 instance. Messages are processed by a consumer application running on Amazon EC2. The consumer application processes the messages and writes results to a MySQL database running on Amazon EC2. The company wants this application to be highly available with low operational complexity Which architecture offers the HIGHEST availability?

- A. Add a second ActiveMQ server to another Availability Zone Add an additional consumer EC2 instance in another Availability Zone
- B. Replicate the MySQL database to another Availability Zone.
- C. Use Amazon MQ with active/standby brokers configured across two Availability Zones Add an additional consumer EC2 instance in another Availability Zone
- D. Replicate the MySQL database to another Availability Zone.
- E. Use Amazon MQ with active/standby brokers configured across two Availability Zone
- F. Add an additional consumer EC2 instance in another Availability Zone
- G. Use Amazon RDS for MySQL with Multi-AZ enabled.
- H. Use Amazon MQ with active/standby brokers configured across two Availability Zones Add an Auto Scaling group for the consumer EC2 instances across two Availability Zone

I. Use Amazon RDS for MySQL with Multi-AZ enabled.

Answer: D

NEW QUESTION 78

- (Exam Topic 1)

A company has more than 5 TB of file data on Windows file servers that run on premises. Users and applications interact with the data each day. The company is moving its Windows workloads to AWS. As the company continues this process, the company requires access to AWS and on-premises file storage with minimum latency. The company needs a solution that minimizes operational overhead and requires no significant changes to the existing file access patterns. The company uses an AWS Site-to-Site VPN connection for connectivity to AWS. What should a solutions architect do to meet these requirements?

- A. Deploy and configure Amazon FSx for Windows File Server on AWS.
- B. Move the on-premises file data to FSx for Windows File Server.
- C. Reconfigure the workloads to use FSx for Windows File Server on AWS.
- D. Deploy and configure an Amazon S3 File Gateway on premises. Move the on-premises file data to the S3 File Gateway. Reconfigure the on-premises workloads and the cloud workloads to use the S3 File Gateway.
- E. Deploy and configure an Amazon S3 File Gateway on premises. Move the on-premises file data to Amazon S3. Reconfigure the workloads to use either Amazon S3 directly or the S3 File Gateway, depending on each workload's location.
- F. Deploy and configure Amazon FSx for Windows File Server on AWS. Deploy and configure an Amazon FSx File Gateway on premises. Move the on-premises file data to the FSx File Gateway. Configure the cloud workloads to use FSx for Windows File Server on AWS. Configure the on-premises workloads to use the FSx File Gateway.

Answer: D

NEW QUESTION 79

- (Exam Topic 1)

A company wants to move a multi-tiered application from on premises to the AWS Cloud to improve the application's performance. The application consists of application tiers that communicate with each other by way of RESTful services. Transactions are dropped when one tier becomes overloaded. A solutions architect must design a solution that resolves these issues and modernizes the application. Which solution meets these requirements and is the MOST operationally efficient?

- A. Use Amazon API Gateway and direct transactions to the AWS Lambda functions as the application layer.
- B. Use Amazon Simple Queue Service (Amazon SQS) as the communication layer between application services.
- C. Use Amazon CloudWatch metrics to analyze the application performance history to determine the server's peak utilization during the performance failure.
- D. Increase the size of the application server's Amazon EC2 instances to meet the peak requirements.
- E. Use Amazon Simple Notification Service (Amazon SNS) to handle the messaging between application servers running on Amazon EC2 in an Auto Scaling group.
- F. Use Amazon CloudWatch to monitor the SNS queue length and scale up and down as required.
- G. Use Amazon Simple Queue Service (Amazon SQS) to handle the messaging between application servers running on Amazon EC2 in an Auto Scaling group.
- H. Use Amazon CloudWatch to monitor the SQS queue length and scale up when communication failures are detected.

Answer: A

Explanation:

<https://aws.amazon.com/getting-started/hands-on/build-serverless-web-app-lambda-apigateway-s3-dynamodb-c/> Build a Serverless Web Application with AWS Lambda, Amazon API Gateway, AWS Amplify, Amazon DynamoDB, and Amazon Cognito. This example showed similar setup as question: Build a Serverless Web Application with AWS Lambda, Amazon API Gateway, AWS Amplify, Amazon DynamoDB, and Amazon Cognito

NEW QUESTION 84

- (Exam Topic 1)

A company runs a photo processing application that needs to frequently upload and download pictures from Amazon S3 buckets that are located in the same AWS Region. A solutions architect has noticed an increased cost in data transfer fees and needs to implement a solution to reduce these costs. How can the solutions architect meet this requirement?

- A. Deploy Amazon API Gateway into a public subnet and adjust the route table to route S3 calls through it.
- B. Deploy a NAT gateway into a public subnet and attach an endpoint policy that allows access to the S3 buckets.
- C. Deploy the application into a public subnet and allow it to route through an internet gateway to access the S3 buckets.
- D. Deploy an S3 VPC gateway endpoint into the VPC and attach an endpoint policy that allows access to the S3 buckets.

Answer: D

NEW QUESTION 85

- (Exam Topic 1)

A company has a production web application in which users upload documents through a web interface or a mobile app. According to a new regulatory requirement, new documents cannot be modified or deleted after they are stored. What should a solutions architect do to meet this requirement?

- A. Store the uploaded documents in an Amazon S3 bucket with S3 Versioning and S3 Object Lock enabled.
- B. Store the uploaded documents in an Amazon S3 bucket.
- C. Configure an S3 Lifecycle policy to archive the documents periodically.
- D. Store the uploaded documents in an Amazon S3 bucket with S3 Versioning enabled. Configure an ACL to restrict all access to read-only.
- E. Store the uploaded documents on an Amazon Elastic File System (Amazon EFS) volume.
- F. Access the data by mounting the volume in read-only mode.

Answer: A

Explanation:

<https://docs.aws.amazon.com/AmazonS3/latest/userguide/object-lock-overview.html>

NEW QUESTION 88

- (Exam Topic 1)

A company receives 10 TB of instrumentation data each day from several machines located at a single factory. The data consists of JSON files stored on a storage area network (SAN) in an on-premises data center located within the factory. The company wants to send this data to Amazon S3 where it can be accessed by several additional systems that provide critical near-real-time analytics. A secure transfer is important because the data is considered sensitive. Which solution offers the MOST reliable data transfer?

- A. AWS DataSync over public internet
- B. AWS DataSync over AWS Direct Connect
- C. AWS Database Migration Service (AWS DMS) over public internet
- D. AWS Database Migration Service (AWS DMS) over AWS Direct Connect

Answer: B

Explanation:

These are some of the main use cases for AWS DataSync: • Data migration – Move active datasets rapidly over the network into Amazon S3, Amazon EFS, or FSx for Windows File Server. DataSync includes automatic encryption and data integrity validation to help make sure that your data arrives securely, intact, and ready to use.

"DataSync includes encryption and integrity validation to help make sure your data arrives securely, intact, and ready to use."

<https://aws.amazon.com/datasync/faqs/>

NEW QUESTION 91

- (Exam Topic 1)

A company has an application that runs on Amazon EC2 instances and uses an Amazon Aurora database. The EC2 instances connect to the database by using user names and passwords that are stored locally in a file. The company wants to minimize the operational overhead of credential management. What should a solutions architect do to accomplish this goal?

- A. Use AWS Secrets Manager
- B. Turn on automatic rotation.
- C. Use AWS Systems Manager Parameter Store
- D. Turn on automatic rotation.
- E. Create an Amazon S3 bucket to store objects that are encrypted with an AWS Key Management Service (AWS KMS) encryption key
- F. Migrate the credential file to the S3 bucket
- G. Point the application to the S3 bucket.
- H. Create an encrypted Amazon Elastic Block Store (Amazon EBS) volume (or each EC2 instance)
- I. Attach the new EBS volume to each EC2 instance
- K. Migrate the credential file to the new EBS volume
- L. Point the application to the new EBS volume.

Answer: A

Explanation:

<https://aws.amazon.com/cn/blogs/security/how-to-connect-to-aws-secrets-manager-service-within-a-virtual-private-cloud/> <https://aws.amazon.com/blogs/security/rotate-amazon-rds-database-credentials-automatically-with-aws-secrets-manager/>

NEW QUESTION 95

- (Exam Topic 1)

A company has a data ingestion workflow that consists of the following:

- An Amazon Simple Notification Service (Amazon SNS) topic for notifications about new data deliveries
- An AWS Lambda function to process the data and record metadata

The company observes that the ingestion workflow fails occasionally because of network connectivity issues. When such a failure occurs, the Lambda function does not ingest the corresponding data unless the company manually reruns the job.

Which combination of actions should a solutions architect take to ensure that the Lambda function ingests all data in the future? (Select TWO.)

- A. Configure the Lambda function in multiple Availability Zones.
- B. Create an Amazon Simple Queue Service (Amazon SQS) queue, and subscribe it to the SNS topic.
- C. Increase the CPU and memory that are allocated to the Lambda function.
- D. Increase provisioned throughput for the Lambda function.
- E. Modify the Lambda function to read from an Amazon Simple Queue Service (Amazon SQS) queue

Answer: BE

NEW QUESTION 96

- (Exam Topic 1)

A company stores call transcript files on a monthly basis. Users access the files randomly within 1 year of the call, but users access the files infrequently after 1 year. The company wants to optimize its solution by giving users the ability to query and retrieve files that are less than 1-year-old as quickly as possible. A delay in retrieving older files is acceptable.

Which solution will meet these requirements MOST cost-effectively?

- A. Store individual files with tags in Amazon S3 Glacier Instant Retrieval
- B. Query the tags to retrieve the files from S3 Glacier Instant Retrieval.
- C. Store individual files in Amazon S3 Intelligent-Tiering
- D. Use S3 Lifecycle policies to move the files to S3 Glacier Flexible Retrieval after 1 year
- E. Query and retrieve the files that are in Amazon S3 by using Amazon Athena
- F. Query and retrieve the files that are in S3 Glacier by using S3 Glacier Select.
- G. Store individual files with tags in Amazon S3 Standard storage
- H. Store search metadata for each archive in Amazon S3 Standard storage
- I. Use S3 Lifecycle policies to move the files to S3 Glacier Instant Retrieval after 1 year

- J. Query and retrieve the files by searching for metadata from Amazon S3.
- K. Store individual files in Amazon S3 Standard storag
- L. Use S3 Lifecycle policies to move the files to S3 Glacier Deep Archive after 1 yea
- M. Store search metadata in Amazon RD
- N. Query the files from Amazon RD
- O. Retrieve the files from S3 Glacier Deep Archive.

Answer: B

Explanation:

"For archive data that needs immediate access, such as medical images, news media assets, or genomics data, choose the S3 Glacier Instant Retrieval storage class, an archive storage class that delivers the lowest cost storage with milliseconds retrieval. For archive data that does not require immediate access but needs the flexibility to retrieve large sets of data at no cost, such as backup or disaster recovery use cases, choose S3 Glacier Flexible Retrieval (formerly S3 Glacier), with retrieval in minutes or free bulk retrievals in 5-12 hours."

<https://aws.amazon.com/about-aws/whats-new/2021/11/amazon-s3-glacier-instant-retrieval-storage-class/>

NEW QUESTION 100

- (Exam Topic 1)

A company uses AWS Organizations to manage multiple AWS accounts for different departments. The management account has an Amazon S3 bucket that contains project reports. The company wants to limit access to this S3 bucket to only users of accounts within the organization in AWS Organizations. Which solution meets these requirements with the LEAST amount of operational overhead?

- A. Add the aws:PrincipalOrgID global condition key with a reference to the organization ID to the S3 bucket policy.
- B. Create an organizational unit (OU) for each departmen
- C. Add the aws:PrincipalOrgPaths global condition key to the S3 bucket policy.
- D. Use AWS CloudTrail to monitor the CreateAccount, InviteAccountToOrganization, LeaveOrganization, and RemoveAccountFromOrganization event
- E. Update the S3 bucket policy accordingly.
- F. Tag each user that needs access to the S3 bucke
- G. Add the aws:PrincipalTag global condition key to the S3 bucket policy.

Answer: A

Explanation:

<https://aws.amazon.com/blogs/security/control-access-to-aws-resources-by-using-the-aws-organization-of-iam-p> The aws:PrincipalOrgID global key provides an alternative to listing all the account IDs for all AWS accounts in an organization. For example, the following Amazon S3 bucket policy allows members of any account in the XXX organization to add an object into the examtopics bucket.

```
{"Version": "2020-09-10",
"Statement": {
  "Sid": "AllowPutObject", "Effect": "Allow",
  "Principal": "*", "Action": "s3:PutObject",
  "Resource": "arn:aws:s3:::examtopics/*", "Condition": {"StringEquals":
{"aws:PrincipalOrgID":["XXX"]}}}}
```

https://docs.aws.amazon.com/IAM/latest/UserGuide/reference_policies_condition-keys.html

NEW QUESTION 101

- (Exam Topic 1)

A company has an application that generates a large number of files, each approximately 5 MB in size. The files are stored in Amazon S3. Company policy requires the files to be stored for 4 years before they can be deleted Immediate accessibility is always required as the files contain critical business data that is not easy to reproduce. The files are frequently accessed in the first 30 days of the object creation but are rarely accessed after the first 30 days Which storage solution is MOST cost-effective?

- A. Create an S3 bucket lifecycle policy to move Mm from S3 Standard to S3 Glacier 30 days from object creation Delete the Tiles 4 years after object creation
- B. Create an S3 bucket lifecycle policy to move tiles from S3 Standard to S3 One Zone-infrequent Access (S3 One Zone-IA] 30 days from object creatio
- C. Delete the fees 4 years after object creation
- D. Create an S3 bucket lifecycle policy to move files from S3 Standard-infrequent Access (S3 Standard-IA) 30 from object creatio
- E. Delete the ties 4 years after object creation
- F. Create an S3 bucket Lifecycle policy to move files from S3 Standard to S3 Standard-Infrequent Access (S3 Standard-IA) 30 days from object creation Move the files to S3 Glacier 4 years after object carton.

Answer: B

Explanation:

https://aws.amazon.com/s3/storage-classes/?trk=66264cd8-3b73-416c-9693-ea7cf4fe846a&sc_channel=ps&s_k

NEW QUESTION 105

- (Exam Topic 1)

An application runs on an Amazon EC2 instance in a VPC. The application processes logs that are stored in an Amazon S3 bucket. The EC2 instance needs to access the S3 bucket without connectivity to the internet. Which solution will provide private network connectivity to Amazon S3?

- A. Create a gateway VPC endpoint to the S3 bucket.
- B. Stream the logs to Amazon CloudWatch Log
- C. Export the logs to the S3 bucket.
- D. Create an instance profile on Amazon EC2 to allow S3 access.
- E. Create an Amazon API Gateway API with a private link to access the S3 endpoint.

Answer: A

Explanation:

VPC endpoint allows you to connect to AWS services using a private network instead of using the public Internet

NEW QUESTION 108

- (Exam Topic 1)

A company is deploying a new public web application to AWS. The application will run behind an Application Load Balancer (ALB). The application needs to be encrypted at the edge with an SSL/TLS certificate that is issued by an external certificate authority (CA). The certificate must be rotated each year before the certificate expires.

What should a solutions architect do to meet these requirements?

- A. Use AWS Certificate Manager (ACM) to issue an SSL/TLS certificat
- B. Apply the certificate to the AL
- C. Use the managed renewal feature to automatically rotate the certificate.
- D. Use AWS Certificate Manager (ACM) to issue an SSL/TLS certificat
- E. Import the key material from the certificat
- F. Apply the certificate to the AL
- G. Use the managed renewal feature to automatically rotate the certificate.
- H. Use AWS Certificate Manager (ACM) Private Certificate Authority to issue an SSL/TLS certificate from the root C
- I. Apply the certificate to the AL
- J. Use the managed renewal feature to automatically rotate the certificate.
- K. Use AWS Certificate Manager (ACM) to import an SSL/TLS certificat
- L. Apply the certificate to the AL
- M. Use Amazon EventBridge (Amazon CloudWatch Events) to send a notification when the certificate is nearing expiratio
- N. Rotate the certificate manually.

Answer: D

NEW QUESTION 112

- (Exam Topic 1)

A company wants to migrate its on-premises application to AWS. The application produces output files that vary in size from tens of gigabytes to hundreds of terabytes The application data must be stored in a standard file system structure The company wants a solution that scales automatically, is highly available, and requires minimum operational overhead.

Which solution will meet these requirements?

- A. Migrate the application to run as containers on Amazon Elastic Container Service (Amazon ECS) Use Amazon S3 for storage
- B. Migrate the application to run as containers on Amazon Elastic Kubernetes Service (Amazon EKS) Use Amazon Elastic Block Store (Amazon EBS) for storage
- C. Migrate the application to Amazon EC2 instances in a Multi-AZ Auto Scaling grou
- D. Use Amazon Elastic File System (Amazon EFS) for storage.
- E. Migrate the application to Amazon EC2 instances in a Multi-AZ Auto Scaling grou
- F. Use Amazon Elastic Block Store (Amazon EBS) for storage.

Answer: C

Explanation:

EFS is a standard file system, it scales automatically and is highly available.

NEW QUESTION 115

- (Exam Topic 1)

A company has several web servers that need to frequently access a common Amazon RDS MySQL Multi-AZ DB instance The company wants a secure method for the web servers to connect to the database while meeting a security requirement to rotate user credentials frequently.

Which solution meets these requirements?

- A. Store the database user credentials in AWS Secrets Manager Grant the necessary IAM permissions to allow the web servers to access AWS Secrets Manager
- B. Store the database user credentials in AWS Systems Manager OpsCenter Grant the necessary IAM permissions to allow the web servers to access OpsCenter
- C. Store the database user credentials in a secure Amazon S3 bucket Grant the necessary IAM permissions to allow the web servers to retrieve credentials and access the database.
- D. Store the database user credentials in files encrypted with AWS Key Management Service (AWS KMS) on the web server file syste
- E. The web server should be able to decrypt the files and access the database

Answer: A

Explanation:

AWS Secrets Manager helps you protect secrets needed to access your applications, services, and IT resources. The service enables you to easily rotate, manage, and retrieve database credentials, API keys, and other secrets throughout their lifecycle.

<https://docs.aws.amazon.com/secretsmanager/latest/userguide/intro.html>

Secrets Manager enables you to replace hardcoded credentials in your code, including passwords, with an API call to Secrets Manager to retrieve the secret programmatically. This helps ensure the secret can't be compromised by someone examining your code, because the secret no longer exists in the code. Also, you can configure Secrets Manager to automatically rotate the secret for you according to a specified schedule. This enables you to replace long-term secrets with short-term ones, significantly reducing the risk of compromise.

NEW QUESTION 120

- (Exam Topic 1)

A company maintains a searchable repository of items on its website. The data is stored in an Amazon RDS for MySQL database table that contains more than 10 million rows The database has 2 TB of General Purpose SSD storage There are millions of updates against this data every day through the company's website The company has noticed that some insert operations are taking 10 seconds or longer The company has determined that the database storage performance is the problem

Which solution addresses this performance issue?

- A. Change the storage type to Provisioned IOPS SSD
- B. Change the DB instance to a memory optimized instance class
- C. Change the DB instance to a burstable performance instance class
- D. Enable Multi-AZ RDS read replicas with MySQL native asynchronous replication.

Answer: A

Explanation:

<https://aws.amazon.com/ebs/features/>

"Provisioned IOPS volumes are backed by solid-state drives (SSDs) and are the highest performance EBS volumes designed for your critical, I/O intensive database applications.

These volumes are ideal for both IOPS-intensive and throughput-intensive workloads that require extremely low latency."

https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/CHAP_Storage.html

NEW QUESTION 121

- (Exam Topic 1)

A company hosts more than 300 global websites and applications. The company requires a platform to analyze more than 30 TB of clickstream data each day. What should a solutions architect do to transmit and process the clickstream data?

- A. Design an AWS Data Pipeline to archive the data to an Amazon S3 bucket and run an Amazon EMR cluster with the data to generate analytics
- B. Create an Auto Scaling group of Amazon EC2 instances to process the data and send it to an Amazon S3 data lake for Amazon Redshift to use for analysis
- C. Cache the data to Amazon CloudFront: Store the data in an Amazon S3 bucket. When an object is added to the S3 bucket, run an AWS Lambda function to process the data for analysis.
- D. Collect the data from Amazon Kinesis Data Stream
- E. Use Amazon Kinesis Data Firehose to transmit the data to an Amazon S3 data lake. Load the data in Amazon Redshift for analysis

Answer: D

Explanation:

<https://aws.amazon.com/es/blogs/big-data/real-time-analytics-with-amazon-redshift-streaming-ingestion/>

NEW QUESTION 122

- (Exam Topic 2)

A solutions architect needs to securely store a database user name and password that an application uses to access an Amazon RDS DB instance. The application that accesses the database runs on an Amazon EC2 instance. The solutions architect wants to create a secure parameter in AWS Systems Manager Parameter Store.

What should the solutions architect do to meet this requirement?

- A. Create an IAM role that has read access to the Parameter Store parameter
- B. Allow Decrypt access to an AWS Key Management Service (AWS KMS) key that is used to encrypt the parameter
- C. Assign this IAM role to the EC2 instance.
- D. Create an IAM policy that allows read access to the Parameter Store parameter
- E. Allow Decrypt access to an AWS Key Management Service (AWS KMS) key that is used to encrypt the parameter
- F. Assign this IAM policy to the EC2 instance.
- G. Create an IAM trust relationship between the Parameter Store parameter and the EC2 instance
- H. Specify Amazon RDS as a principal in the trust policy.
- I. Create an IAM trust relationship between the DB instance and the EC2 instance
- J. Specify Systems Manager as a principal in the trust policy.

Answer: B

Explanation:

https://docs.aws.amazon.com/IAM/latest/UserGuide/reference_aws-services-that-work-with-iam.html

NEW QUESTION 124

- (Exam Topic 2)

A company uses a three-tier web application to provide training to new employees. The application is accessed for only 12 hours every day. The company is using an Amazon RDS for MySQL DB instance to store information and wants to minimize costs.

What should a solutions architect do to meet these requirements?

- A. Configure an IAM policy for AWS Systems Manager Session Manager
- B. Create an IAM role for the policy
- C. Update the trust relationship of the role
- D. Set up automatic start and stop for the DB instance.
- E. Create an Amazon ElastiCache for Redis cache cluster that gives users the ability to access the data from the cache when the DB instance is stopped
- F. Invalidate the cache after the DB instance is started.
- G. Launch an Amazon EC2 instance
- H. Create an IAM role that grants access to Amazon RDS
- I. Attach the role to the EC2 instance
- J. Configure a cron job to start and stop the EC2 instance on the desired schedule.
- K. Create AWS Lambda functions to start and stop the DB instance
- L. Create Amazon EventBridge (Amazon CloudWatch Events) scheduled rules to invoke the Lambda function
- M. Configure the Lambda functions as event targets for the rules

Answer: C

NEW QUESTION 127

- (Exam Topic 2)

A gaming company hosts a browser-based application on AWS. The users of the application consume a large number of videos and images that are stored in Amazon S3. This content is the same for all users.

The application has increased in popularity, and millions of users worldwide are accessing these media files. The company wants to provide the files to the users while reducing the load on the origin.

Which solution meets these requirements MOST cost-effectively?

- A. Deploy an AWS Global Accelerator accelerator in front of the web servers.
- B. Deploy an Amazon CloudFront web distribution in front of the S3 bucket.
- C. Deploy an Amazon ElastiCache for Redis instance in front of the web servers.
- D. Deploy an Amazon ElastiCache for Memcached instance in front of the web servers.

Answer: B

NEW QUESTION 132

- (Exam Topic 2)

A company needs to move data from an Amazon EC2 instance to an Amazon S3 bucket. The company must ensure that no API calls and no data are routed through public internet routes. Only the EC2 instance can have access to upload data to the S3 bucket.

Which solution will meet these requirements?

- A. Create an interface VPC endpoint for Amazon S3 in the subnet where the EC2 instance is located. Attach a resource policy to the S3 bucket to only allow the EC2 instance's IAM role for access.
- B. Create a gateway VPC endpoint for Amazon S3 in the Availability Zone where the EC2 instance is located.
- C. Attach appropriate security groups to the endpoint.
- D. Attach a resource policy to the S3 bucket to only allow the EC2 instance's IAM role for access.
- E. Run the nslookup tool from inside the EC2 instance to obtain the private IP address of the S3 bucket's service API endpoint.
- F. Create a route in the VPC route table to provide the EC2 instance with access to the S3 bucket.
- G. Attach a resource policy to the S3 bucket to only allow the EC2 instance's IAM role for access.
- H. Use the AWS provided, publicly available ip-ranges.json file to obtain the private IP address of the S3 bucket's service API endpoint.
- I. Create a route in the VPC route table to provide the EC2 instance with access to the S3 bucket.
- J. Attach a resource policy to the S3 bucket to only allow the EC2 instance's IAM role for access.

Answer: A

Explanation:

(<https://aws.amazon.com/blogs/security/how-to-restrict-amazon-s3-bucket-access-to-a-specific-iam-role/>)

NEW QUESTION 134

- (Exam Topic 2)

An ecommerce company has an order-processing application that uses Amazon API Gateway and an AWS Lambda function. The application stores data in an Amazon Aurora PostgreSQL database. During a recent sales event, a sudden surge in customer orders occurred. Some customers experienced timeouts and the application did not process the orders of those customers. A solutions architect determined that the CPU utilization and memory utilization were high on the database because of a large number of open connections. The solutions architect needs to prevent the timeout errors while making the least possible changes to the application.

Which solution will meet these requirements?

- A. Configure provisioned concurrency for the Lambda function. Modify the database to be a global database in multiple AWS Regions.
- B. Use Amazon RDS Proxy to create a proxy for the database. Modify the Lambda function to use the RDS Proxy endpoint instead of the database endpoint.
- C. Create a read replica for the database in a different AWS Region. Use query string parameters in API Gateway to route traffic to the read replica.
- D. Migrate the data from Aurora PostgreSQL to Amazon DynamoDB by using AWS Database Migration Service (AWS DMS). Modify the Lambda function to use the DynamoDB table.

Answer: D

NEW QUESTION 137

- (Exam Topic 2)

A company is migrating an application from on-premises servers to Amazon EC2 instances. As part of the migration design requirements, a solutions architect must implement infrastructure metric alarms. The company does not need to take action if CPU utilization increases to more than 50% for a short burst of time. However, if the CPU utilization increases to more than 50% and read IOPS on the disk are high at the same time, the company needs to act as soon as possible. The solutions architect also must reduce false alarms.

What should the solutions architect do to meet these requirements?

- A. Create Amazon CloudWatch composite alarms where possible.
- B. Create Amazon CloudWatch dashboards to visualize the metrics and react to issues quickly.
- C. Create Amazon CloudWatch Synthetics canaries to monitor the application and raise an alarm.
- D. Create single Amazon CloudWatch metric alarms with multiple metric thresholds where possible.

Answer: A

NEW QUESTION 140

- (Exam Topic 2)

A company wants to direct its users to a backup static error page if the company's primary website is unavailable. The primary website's DNS records are hosted in Amazon Route 53. The domain is pointing to an Application Load Balancer (ALB). The company needs a solution that minimizes changes and infrastructure overhead.

Which solution will meet these requirements?

- A. Update the Route 53 records to use a latency routing policy.
- B. Add a static error page that is hosted in an Amazon S3 bucket to the records so that the traffic is sent to the most responsive endpoints.
- C. Set up a Route 53 active-passive failover configuration.
- D. Direct traffic to a static error page that is hosted in an Amazon S3 bucket when Route 53 health checks determine that the ALB endpoint is unhealthy.
- E. Set up a Route 53 active-active configuration with the ALB and an Amazon EC2 instance that hosts a static error page as endpoint.
- F. Configure Route 53 to send requests to the instance only if the health checks fail for the ALB.
- G. Update the Route 53 records to use a multivalue answer routing policy.
- H. Create a health check.
- I. Direct traffic to the website if the health check passes.
- J. Direct traffic to a static error page that is hosted in Amazon S3 if the health check does not pass.

Answer: B

NEW QUESTION 144

- (Exam Topic 2)

A company uses a popular content management system (CMS) for its corporate website. However, the required patching and maintenance are burdensome. The company is redesigning its website and wants anew solution. The website will be updated four times a year and does not need to have any dynamic content available. The solution must provide high scalability and enhanced security.

Which combination of changes will meet these requirements with the LEAST operational overhead? (Choose two.)

- A. Deploy an AWS WAF web ACL in front of the website to provide HTTPS functionality
- B. Create and deploy an AWS Lambda function to manage and serve the website content
- C. Create the new website and an Amazon S3 bucket Deploy the website on the S3 bucket with static website hosting enabled
- D. Create the new websit
- E. Deploy the website by using an Auto Scaling group of Amazon EC2 instances behind an Application Load Balancer.

Answer: AD

NEW QUESTION 149

- (Exam Topic 2)

A solutions architect must design a solution that uses Amazon CloudFront with an Amazon S3 origin to store a static website. The company's security policy requires that all website traffic be inspected by AWS WAR

How should the solutions architect comply with these requirements?

- A. Configure an S3 bucket policy lo accept requests coming from the AWS WAF Amazon Resource Name (ARN) only.
- B. Configure Amazon CloudFront to forward all incoming requests to AWS WAF before requesting content from the S3 origin.
- C. Configure a security group that allows Amazon CloudFront IP addresses to access Amazon S3 only.Associate AWS WAF to CloudFront.
- D. Configure Amazon CloudFront and Amazon S3 to use an origin access identity (OAI) to restrict access to the S3 bucke
- E. Enable AWS WAF on the distribution.

Answer: D

Explanation:

<https://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/private-content-restricting-access-to-s3>

<https://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/distribution-web-aws-waf.html>

NEW QUESTION 153

- (Exam Topic 2)

A company has a Windows-based application that must be migrated to AWS. The application requires the use of a shared Windows file system attached to multiple Amazon EC2 Windows instances that are deployed across multiple Availability Zones.

What should a solutions architect do to meet this requirement?

- A. Configure AWS Storage Gateway in volume gateway mod
- B. Mount the volume to each Windows instance.
- C. Configure Amazon FSx for Windows File Serve
- D. Mount the Amazon FSx file system to each Windows instance.
- E. Configure a file system by using Amazon Elastic File System (Amazon EFS). Mount the EFS file system to each Windows instance.
- F. Configure an Amazon Elastic Block Store (Amazon EBS) volume with the required siz
- G. Attach each EC2 instance to the volum
- H. Mount the file system within the volume to each Windows instance.

Answer: B

NEW QUESTION 158

- (Exam Topic 2)

A company owns an asynchronous API that is used to ingest user requests and, based on the request type, dispatch requests to the appropriate microservice for processing. The company is using Amazon API Gateway to deploy the API front end, and an AWS Lambda function that invokes Amazon DynamoDB to store user requests before dispatching them to the processing microservices.

The company provisioned as much DynamoDB throughput as its budget allows, but the company is still experiencing availability issues and is losing user requests. What should a solutions architect do to address this issue without impacting existing users?

- A. Add throttling on the API Gateway with server-side throttling limits.
- B. Use DynamoDB Accelerator (DAX) and Lambda to buffer writes to DynamoDB.
- C. Create a secondary index in DynamoDB for the table with the user requests.
- D. Use the Amazon Simple Queue Service (Amazon SQS) queue and Lambda to buffer writes to DynamoDB.

Answer: D

Explanation:

By using an SQS queue and Lambda, the solutions architect can decouple the API front end from the processing microservices and improve the overall scalability and availability of the system. The SQS queue acts as a buffer, allowing the API front end to continue accepting user requests even if the processing microservices are experiencing high workloads or are temporarily unavailable. The Lambda function can then retrieve requests from the SQS queue and write them to DynamoDB, ensuring that all user requests are stored and processed. This approach allows the company to scale the processing microservices independently from the API front end, ensuring that the API remains available to users even during periods of high demand.

NEW QUESTION 161

- (Exam Topic 2)

A company wants to migrate its MySQL database from on premises to AWS. The company recently experienced a database outage that significantly impacted the business. To ensure this does not happen again, the company wants a reliable database solution on AWS that minimizes data loss and stores every transaction on

at least two nodes.

Which solution meets these requirements?

- A. Create an Amazon RDS DB instance with synchronous replication to three nodes in three Availability Zones.
- B. Create an Amazon RDS MySQL DB instance with Multi-AZ functionality enabled to synchronously replicate the data.
- C. Create an Amazon RDS MySQL DB instance and then create a read replica in a separate AWS Region that synchronously replicates the data.
- D. Create an Amazon EC2 instance with a MySQL engine installed that triggers an AWS Lambda function to synchronously replicate the data to an Amazon RDS MySQL DB instance.

Answer: B

Explanation:

Q: What does Amazon RDS manage on my behalf?

Amazon RDS manages the work involved in setting up a relational database: from provisioning the infrastructure capacity you request to installing the database software. Once your database is up and running, Amazon RDS automates common administrative tasks such as performing backups and patching the software that powers your database. With optional Multi-AZ deployments, Amazon RDS also manages synchronous data replication across Availability Zones with automatic failover.

<https://aws.amazon.com/rds/faqs/>

NEW QUESTION 166

- (Exam Topic 2)

A company is planning to move its data to an Amazon S3 bucket. The data must be encrypted when it is stored in the S3 bucket. Additionally, the encryption key must be automatically rotated every year.

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

- A. Move the data to the S3 bucket
- B. Use server-side encryption with Amazon S3 managed encryption keys (SSE-S3). Use the built-in key rotation behavior of SSE-S3 encryption keys.
- C. Create an AWS Key Management Service (AWS KMS) customer managed key
- D. Enable automatic key rotation
- E. Set the S3 bucket's default encryption behavior to use the customer managed KMS key
- F. Move the data to the S3 bucket.
- G. Create an AWS Key Management Service (AWS KMS) customer managed key
- H. Set the S3 bucket's default encryption behavior to use the customer managed KMS key
- I. Move the data to the S3 bucket
- J. Manually rotate the KMS key every year.
- K. Encrypt the data with customer key material before moving the data to the S3 bucket
- L. Create an AWS Key Management Service (AWS KMS) key without key material
- M. Import the customer key material into the KMS key
- N. Enable automatic key rotation.

Answer: C

NEW QUESTION 171

- (Exam Topic 2)

A company runs a web-based portal that provides users with global breaking news, local alerts, and weather updates. The portal delivers each user a personalized view by using a mixture of static and dynamic content. Content is served over HTTPS through an API server running on an Amazon EC2 instance behind an Application Load Balancer (ALB). The company wants the portal to provide this content to its users across the world as quickly as possible.

How should a solutions architect design the application to ensure the LEAST amount of latency for all users?

- A. Deploy the application stack in a single AWS Region
- B. Use Amazon CloudFront to serve all static and dynamic content by specifying the ALB as an origin.
- C. Deploy the application stack in two AWS Regions
- D. Use an Amazon Route 53 latency routing policy to serve all content from the ALB in the closest Region.
- E. Deploy the application stack in a single AWS Region
- F. Use Amazon CloudFront to serve the static content
- G. Serve the dynamic content directly from the ALB.
- H. Deploy the application stack in two AWS Regions
- I. Use an Amazon Route 53 geolocation routing policy to serve all content from the ALB in the closest Region.

Answer: A

Explanation:

<https://aws.amazon.com/blogs/networking-and-content-delivery/deliver-your-apps-dynamic-content-using-amaz>

NEW QUESTION 176

- (Exam Topic 2)

A company wants to build a scalable key management infrastructure to support developers who need to encrypt data in their applications.

What should a solutions architect do to reduce the operational burden?

- A. Use multifactor authentication (MFA) to protect the encryption keys.
- B. Use AWS Key Management Service (AWS KMS) to protect the encryption keys
- C. Use AWS Certificate Manager (ACM) to create, store, and assign the encryption keys
- D. Use an IAM policy to limit the scope of users who have access permissions to protect the encryption keys

Answer: B

Explanation:

<https://aws.amazon.com/kms/faqs/#:~:text=If%20you%20are%20a%20developer%20who%20needs%20to%20d>

NEW QUESTION 178

- (Exam Topic 2)

A company runs its two-tier ecommerce website on AWS. The web tier consists of a load balancer that sends traffic to Amazon EC2 instances. The database tier uses an Amazon RDS DB instance. The EC2 instances and the RDS DB instance should not be exposed to the public internet. The EC2 instances require internet access to complete payment processing of orders through a third-party web service. The application must be highly available. Which combination of configuration options will meet these requirements? (Choose two.)

- A. Use an Auto Scaling group to launch the EC2 instances in private subnet
- B. Deploy an RDS Multi-AZ DB instance in private subnets.
- C. Configure a VPC with two private subnets and two NAT gateways across two Availability Zones. Deploy an Application Load Balancer in the private subnets.
- D. Use an Auto Scaling group to launch the EC2 instances in public subnets across two Availability Zones. Deploy an RDS Multi-AZ DB instance in private subnets.
- E. Configure a VPC with one public subnet, one private subnet, and two NAT gateways across two Availability Zone
- F. Deploy an Application Load Balancer in the public subnet.
- G. Configure a VPC with two public subnets, two private subnets, and two NAT gateways across two Availability Zone
- H. Deploy an Application Load Balancer in the public subnets.

Answer: AE

Explanation:

Before you begin: Decide which two Availability Zones you will use for your EC2 instances. Configure your virtual private cloud (VPC) with at least one public subnet in each of these Availability Zones. These public subnets are used to configure the load balancer. You can launch your EC2 instances in other subnets of these Availability Zones instead.

NEW QUESTION 179

- (Exam Topic 2)

A company has two applications: a sender application that sends messages with payloads to be processed and a processing application intended to receive the messages with payloads. The company wants to implement an AWS service to handle messages between the two applications. The sender application can send about 1,000 messages each hour. The messages may take up to 2 days to be processed. If the messages fail to process, they must be retained so that they do not impact the processing of any remaining messages.

Which solution meets these requirements and is the MOST operationally efficient?

- A. Set up an Amazon EC2 instance running a Redis database
- B. Configure both applications to use the instance
- C. Store, process, and delete the messages, respectively.
- D. Use an Amazon Kinesis data stream to receive the messages from the sender application
- E. Integrate the processing application with the Kinesis Client Library (KCL).
- F. Integrate the sender and processor applications with an Amazon Simple Queue Service (Amazon SQS) queue
- G. Configure a dead-letter queue to collect the messages that failed to process.
- H. Subscribe the processing application to an Amazon Simple Notification Service (Amazon SNS) topic to receive notifications to process
- I. Integrate the sender application to write to the SNS topic.

Answer: C

Explanation:

[https://aws.amazon.com/blogs/compute/building-loosely-coupled-scalable-c-applications-with-amazon-sqs-and-](https://aws.amazon.com/blogs/compute/building-loosely-coupled-scalable-c-applications-with-amazon-sqs-and-aws-sns/)
<https://docs.aws.amazon.com/AWSSimpleQueueService/latest/SQSDeveloperGuide/sqs-dead-letter-queues.htm>

NEW QUESTION 181

- (Exam Topic 2)

A company has a legacy data processing application that runs on Amazon EC2 instances. Data is processed sequentially, but the order of results does not matter. The application uses a monolithic architecture. The only way that the company can scale the application to meet increased demand is to increase the size of the instances.

The company's developers have decided to rewrite the application to use a microservices architecture on Amazon Elastic Container Service (Amazon ECS).

What should a solutions architect recommend for communication between the microservices?

- A. Create an Amazon Simple Queue Service (Amazon SQS) queue
- B. Add code to the data producers, and send data to the queue
- C. Add code to the data consumers to process data from the queue.
- D. Create an Amazon Simple Notification Service (Amazon SNS) topic
- E. Add code to the data producers, and publish notifications to the topic
- F. Add code to the data consumers to subscribe to the topic.
- G. Create an AWS Lambda function to pass message
- H. Add code to the data producers to call the Lambda function with a data object
- I. Add code to the data consumers to receive a data object that is passed from the Lambda function.
- J. Create an Amazon DynamoDB table
- K. Enable DynamoDB Stream
- L. Add code to the data producers to insert data into the table
- M. Add code to the data consumers to use the DynamoDB Streams API to detect new table entries and retrieve the data.

Answer: A

Explanation:

Queue has Limited throughput (300 msg/s without batching, 3000 msg/s with batching whereby up-to 10 msg per batch operation; Msg duplicates not allowed in the queue (exactly-once delivery); Msg order is preserved (FIFO); Queue name must end with .fifo

NEW QUESTION 183

- (Exam Topic 2)

A company is building a containerized application on premises and decides to move the application to AWS. The application will have thousands of users soon after it is deployed. The company is unsure how to manage the deployment of containers at scale. The company needs to deploy the containerized application in a highly available architecture that minimizes operational overhead.

Which solution will meet these requirements?

- A. Store container images In an Amazon Elastic Container Registry (Amazon ECR) repositior
- B. Use an Amazon Elastic Container Service (Amazon ECS) cluster with the AWS Fargate launch type to run the container
- C. Use target tracking to scale automatically based on demand.
- D. Store container images in an Amazon Elastic Container Registry (Amazon ECR) repositior
- E. Use an Amazon Elastic Container Service (Amazon ECS) cluster with the Amazon EC2 launch type to run the container
- F. Use target tracking to scale automatically based on demand.
- G. Store container images in a repository that runs on an Amazon EC2 instanc
- H. Run the containers on EC2 instances that are spread across multiple Availability Zone
- I. Monitor the average CPU utilization in Amazon CloudWatc
- J. Launch new EC2 instances as needed
- K. Create an Amazon EC2 Amazon Machine Image (AMI) that contains the container image Launch EC2 Instances in an Auto Scaling group across multiple Availability Zone
- L. Use an Amazon CloudWatch alarm to scale out EC2 instances when the average CPU utilization threshold is breached.

Answer: A

NEW QUESTION 188

- (Exam Topic 2)

A company is developing a file-sharing application that will use an Amazon S3 bucket for storage. The company wants to serve all the files through an Amazon CloudFront distribution. The company does not want the files to be accessible through direct navigation to the S3 URL.

What should a solutions architect do to meet these requirements?

- A. Write individual policies for each S3 bucket to grant read permission for only CloudFront access.
- B. Create an IAM use
- C. Grant the user read permission to objects in the S3 bucke
- D. Assign the user to CloudFront.
- E. Write an S3 bucket policy that assigns the CloudFront distribution ID as the Principal and assigns the target S3 bucket as the Amazon Resource Name (ARN).
- F. Create an origin access identity (OAI). Assign the OAI to the CloudFront distributio
- G. Configure the S3 bucket permissions so that only the OAI has read permission.

Answer: D

Explanation:

<https://aws.amazon.com/premiumsupport/knowledge-center/cloudfront-access-to-amazon-s3/>

<https://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/private-content-restricting-access-to-s3>

NEW QUESTION 191

- (Exam Topic 2)

An ecommerce company hosts its analytics application in the AWS Cloud. The application generates about 300 MB of data each month. The data is stored in JSON format. The company is evaluating a disaster recovery solution to back up the data. The data must be accessible in milliseconds if it is needed, and the data must be kept for 30 days.

Which solution meets these requirements MOST cost-effectively?

- A. Amazon OpenSearch Service (Amazon Elasticsearch Service)
- B. Amazon S3 Glacier
- C. Amazon S3 Standard
- D. Amazon RDS for PostgreSQL

Answer: C

NEW QUESTION 195

- (Exam Topic 2)

An application runs on Amazon EC2 instances across multiple Availability Zones The instances run in an Amazon EC2 Auto Scaling group behind an Application Load Balancer The application performs best when the CPU utilization of the EC2 instances is at or near 40%.

What should a solutions architect do to maintain the desired performance across all instances in the group?

- A. Use a simple scaling policy to dynamically scale the Auto Scaling group
- B. Use a target tracking policy to dynamically scale the Auto Scaling group
- C. Use an AWS Lambda function to update the desired Auto Scaling group capacity.
- D. Use scheduled scaling actions to scale up and scale down the Auto Scaling group

Answer: B

Explanation:

<https://docs.aws.amazon.com/autoscaling/application/userguide/application-auto-scaling-target-tracking.html>

NEW QUESTION 196

- (Exam Topic 2)

A medical records company is hosting an application on Amazon EC2 instances. The application processes customer data files that are stored on Amazon S3. The EC2 instances are hosted in public subnets. The EC2 instances access Amazon S3 over the internet, but they do not require any other network access.

A new requirement mandates that the network traffic for file transfers take a private route and not be sent over the internet.

Which change to the network architecture should a solutions architect recommend to meet this requirement?

- A. Create a NAT gatewa
- B. Configure the route table for the public subnets to send traffic to Amazon S3 through the NAT gateway.
- C. Configure the security group for the EC2 instances to restrict outbound traffic so that only traffic to the S3 prefix list is permitted.
- D. Move the EC2 instances to private subnet

- E. Create a VPC endpoint for Amazon S3, and link the endpoint to the route table for the private subnets
- F. Remove the internet gateway from the VP
- G. Set up an AWS Direct Connect connection, and route traffic to Amazon S3 over the Direct Connect connection.

Answer: C

NEW QUESTION 199

- (Exam Topic 2)

A company has implemented a self-managed DNS solution on three Amazon EC2 instances behind a Network Load Balancer (NLB) in the us-west-2 Region. Most of the company's users are located in the United States and Europe. The company wants to improve the performance and availability of the solution. The company launches and configures three EC2 instances in the eu-west-1 Region and adds the EC2 instances as targets for a new NLB.

Which solution can the company use to route traffic to all the EC2 instances?

- A. Create an Amazon Route 53 geolocation routing policy to route requests to one of the two NLB
- B. Create an Amazon CloudFront distributio
- C. Use the Route 53 record as the distribution's origin.
- D. Create a standard accelerator in AWS Global Accelerato
- E. Create endpoint groups in us-west-2 and eu-west-1. Add the two NLBs as endpoints for the endpoint groups.
- F. Attach Elastic IP addresses to the six EC2 instance
- G. Create an Amazon Route 53 geolocation routing policy to route requests to one of the six EC2 instance
- H. Create an Amazon CloudFront distributio
- I. Use the Route 53 record as the distribution's origin.
- J. Replace the two NLBs with two Application Load Balancers (ALBs). Create an Amazon Route 53 latency routing policy to route requests to one of the two ALB
- K. Create an Amazon CloudFront distributio
- L. Use the Route 53 record as the distribution's origin.

Answer: B

Explanation:

For standard accelerators, Global Accelerator uses the AWS global network to route traffic to the optimal regional endpoint based on health, client location, and policies that you configure, which increases the availability of your applications. Endpoints for standard accelerators can be Network Load Balancers, Application Load Balancers, Amazon EC2 instances, or Elastic IP addresses that are located in one AWS Region or multiple Regions.

<https://docs.aws.amazon.com/global-accelerator/latest/dg/what-is-global-accelerator.html>

NEW QUESTION 202

- (Exam Topic 2)

A gaming company has a web application that displays scores. The application runs on Amazon EC2 instances behind an Application Load Balancer. The application stores data in an Amazon RDS for MySQL database. Users are starting to experience long delays and interruptions that are caused by database read performance. The company wants to improve the user experience while minimizing changes to the application's architecture.

What should a solutions architect do to meet these requirements?

- A. Use Amazon ElastiCache in front of the database.
- B. Use RDS Proxy between the application and the database.
- C. Migrate the application from EC2 instances to AWS Lambda.
- D. Migrate the database from Amazon RDS for MySQL to Amazon DynamoDB.

Answer: A

Explanation:

ElastiCache can help speed up the read performance of the database by caching frequently accessed data, reducing latency and allowing the application to access the data more quickly. This solution requires minimal modifications to the current architecture, as ElastiCache can be used in conjunction with the existing Amazon RDS for MySQL database.

NEW QUESTION 203

- (Exam Topic 2)

A company has a dynamic web application hosted on two Amazon EC2 instances. The company has its own SSL certificate, which is on each instance to perform SSL termination.

There has been an increase in traffic recently, and the operations team determined that SSL encryption and decryption is causing the compute capacity of the web servers to reach their maximum limit.

What should a solutions architect do to increase the application's performance?

- A. Create a new SSL certificate using AWS Certificate Manager (ACM) install the ACM certificate on each instance
- B. Create an Amazon S3 bucket Migrate the SSL certificate to the S3 bucket Configure the EC2 instances to reference the bucket for SSL termination
- C. Create another EC2 instance as a proxy server Migrate the SSL certificate to the new instance and configure it to direct connections to the existing EC2 instances
- D. Import the SSL certificate into AWS Certificate Manager (ACM) Create an Application Load Balancer with an HTTPS listener that uses the SSL certificate from ACM

Answer: D

Explanation:

<https://aws.amazon.com/certificate-manager/>:

"With AWS Certificate Manager, you can quickly request a certificate, deploy it on ACM-integrated AWS resources, such as Elastic Load Balancers, Amazon CloudFront distributions, and APIs on API Gateway, and let AWS Certificate Manager handle certificate renewals. It also enables you to create private certificates for your internal resources and manage the certificate lifecycle centrally."

NEW QUESTION 208

- (Exam Topic 2)

A company runs a production application on a fleet of Amazon EC2 instances. The application reads the data from an Amazon SQS queue and processes the messages in parallel. The message volume is unpredictable and often has intermittent traffic. This application should continually process messages without any downtime.

Which solution meets these requirements MOST cost-effectively?

- A. Use Spot Instances exclusively to handle the maximum capacity required.
- B. Use Reserved Instances exclusively to handle the maximum capacity required.
- C. Use Reserved Instances for the baseline capacity and use Spot Instances to handle additional capacity.
- D. Use Reserved Instances for the baseline capacity and use On-Demand Instances to handle additional capacity.

Answer: D

Explanation:

We recommend that you use On-Demand Instances for applications with short-term, irregular workloads that cannot be interrupted.
<https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ec2-on-demand-instances.html>

NEW QUESTION 209

- (Exam Topic 2)

A company's web application is running on Amazon EC2 instances behind an Application Load Balancer. The company recently changed its policy, which now requires the application to be accessed from one specific country only.

Which configuration will meet this requirement?

- A. Configure the security group for the EC2 instances.
- B. Configure the security group on the Application Load Balancer.
- C. Configure AWS WAF on the Application Load Balancer in a VPC.
- D. Configure the network ACL for the subnet that contains the EC2 instances.

Answer: C

Explanation:

<https://aws.amazon.com/about-aws/whats-new/2017/10/aws-waf-now-supports-geographic-match/>

NEW QUESTION 210

- (Exam Topic 2)

A global company is using Amazon API Gateway to design REST APIs for its loyalty club users in the us-east-1 Region and the ap-southeast-2 Region. A solutions architect must design a solution to protect these API Gateway managed REST APIs across multiple accounts from SQL injection and cross-site scripting attacks.

Which solution will meet these requirements with the LEAST amount of administrative effort?

- A. Set up AWS WAF in both Region
- B. Associate Regional web ACLs with an API stage.
- C. Set up AWS Firewall Manager in both Region
- D. Centrally configure AWS WAF rules.
- E. Set up AWS Shield in both Region
- F. Associate Regional web ACLs with an API stage.
- G. Set up AWS Shield in one of the Region
- H. Associate Regional web ACLs with an API stage.

Answer: A

Explanation:

Using AWS WAF has several benefits. Additional protection against web attacks using criteria that you specify. You can define criteria using characteristics of web requests such as the following: Presence of SQL code that is likely to be malicious (known as SQL injection). Presence of a script that is likely to be malicious (known as cross-site scripting). AWS Firewall Manager simplifies your administration and maintenance tasks across multiple accounts and resources for a variety of protections. <https://docs.aws.amazon.com/waf/latest/developerguide/what-is-aws-waf.html>

NEW QUESTION 211

- (Exam Topic 2)

A company runs an Oracle database on premises. As part of the company's migration to AWS, the company wants to upgrade the database to the most recent available version. The company also wants to set up disaster recovery (DR) for the database. The company needs to minimize the operational overhead for normal operations and DR setup. The company also needs to maintain access to the database's underlying operating system.

Which solution will meet these requirements?

- A. Migrate the Oracle database to an Amazon EC2 instance
- B. Set up database replication to a different AWS Region.
- C. Migrate the Oracle database to Amazon RDS for Oracle
- D. Activate Cross-Region automated backups to replicate the snapshots to another AWS Region.
- E. Migrate the Oracle database to Amazon RDS Custom for Oracle
- F. Create a read replica for the database in another AWS Region.
- G. Migrate the Oracle database to Amazon RDS for Oracle
- H. Create a standby database in another Availability Zone.

Answer: C

Explanation:

<https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/rds-custom.html> and <https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/working-with-custom-oracle.html>

NEW QUESTION 213

- (Exam Topic 2)

A company has a service that produces event data. The company wants to use AWS to process the event data as it is received. The data is written in a specific order that must be maintained throughout processing. The company wants to implement a solution that minimizes operational overhead. How should a solutions architect accomplish this?

- A. Create an Amazon Simple Queue Service (Amazon SQS) FIFO queue to hold messages. Set up an AWS Lambda function to process messages from the queue.
- B. Create an Amazon Simple Notification Service (Amazon SNS) topic to deliver notifications containing payloads to process. Configure an AWS Lambda function as a subscriber.
- C. Create an Amazon Simple Queue Service (Amazon SQS) standard queue to hold message.
- D. Set up an AWS Lambda function to process messages from the queue independently.
- E. Create an Amazon Simple Notification Service (Amazon SNS) topic to deliver notifications containing payloads to process.
- F. Configure an Amazon Simple Queue Service (Amazon SQS) queue as a subscriber.

Answer: A

Explanation:

The details are revealed in below url: <https://docs.aws.amazon.com/AWSSimpleQueueService/latest/SQSDeveloperGuide/FIFO-queues.html>

FIFO (First-In-First-Out) queues are designed to enhance messaging between applications when the order of operations and events is critical, or where duplicates can't be tolerated. Examples of situations where you might use FIFO queues include the following: To make sure that user-entered commands are run in the right order. To display the correct product price by sending price modifications in the right order. To prevent a student from enrolling in a course before registering for an account.

NEW QUESTION 218

- (Exam Topic 2)

A gaming company is designing a highly available architecture. The application runs on a modified Linux kernel and supports only UDP-based traffic. The company needs the front-end tier to provide the best possible user experience. That tier must have low latency, route traffic to the nearest edge location, and provide static IP addresses for entry into the application endpoints.

What should a solutions architect do to meet these requirements?

- A. Configure Amazon Route 53 to forward requests to an Application Load Balance.
- B. Use AWS Lambda for the application in AWS Application Auto Scaling.
- C. Configure Amazon CloudFront to forward requests to a Network Load Balance.
- D. Use AWS Lambda for the application in an AWS Application Auto Scaling group.
- E. Configure AWS Global Accelerator to forward requests to a Network Load Balance.
- F. Use Amazon EC2 instances for the application in an EC2 Auto Scaling group.
- G. Configure Amazon API Gateway to forward requests to an Application Load Balance.
- H. Use Amazon EC2 instances for the application in an EC2 Auto Scaling group.

Answer: C

NEW QUESTION 219

- (Exam Topic 2)

A hospital wants to create digital copies for its large collection of historical written records. The hospital will continue to add hundreds of new documents each day. The hospital's data team will scan the documents and will upload the documents to the AWS Cloud.

A solutions architect must implement a solution to analyze the documents, extract the medical information, and store the documents so that an application can run SQL queries on the data. The solution must maximize scalability and operational efficiency.

Which combination of steps should the solutions architect take to meet these requirements? (Select TWO.)

- A. Write the document information to an Amazon EC2 instance that runs a MySQL database.
- B. Write the document information to an Amazon S3 bucket.
- C. Use Amazon Athena to query the data.
- D. Create an Auto Scaling group of Amazon EC2 instances to run a custom application that processes the scanned files and extracts the medical information.
- E. Create an AWS Lambda function that runs when new documents are uploaded.
- F. Use Amazon Rekognition to convert the documents to raw text.
- G. Use Amazon Transcribe Medical to detect and extract relevant medical information from the text.
- H. Create an AWS Lambda function that runs when new documents are uploaded.
- I. Use Amazon Textract to convert the documents to raw text.
- J. Use Amazon Comprehend Medical to detect and extract relevant medical information from the text.

Answer: DE

NEW QUESTION 223

- (Exam Topic 2)

A company needs to retain application logs files for a critical application for 10 years. The application team regularly accesses logs from the past month for troubleshooting, but logs older than 1 month are rarely accessed. The application generates more than 10 TB of logs per month.

Which storage option meets these requirements MOST cost-effectively?

- A. Store the logs in Amazon S3. Use AWS Backup to move logs more than 1 month old to S3 Glacier Deep Archive.
- B. Store the logs in Amazon S3. Use S3 Lifecycle policies to move logs more than 1 month old to S3 Glacier Deep Archive.
- C. Store the logs in Amazon CloudWatch Logs. Use AWS Backup to move logs more than 1 month old to S3 Glacier Deep Archive.
- D. Store the logs in Amazon CloudWatch Logs. Use Amazon S3 Lifecycle policies to move logs more than 1 month old to S3 Glacier Deep Archive.

Answer: B

Explanation:

You need S3 to be able to archive the logs after one month. Cannot do that with CloudWatch Logs.

NEW QUESTION 228

- (Exam Topic 2)

A company has an ecommerce checkout workflow that writes an order to a database and calls a service to process the payment. Users are experiencing timeouts during the checkout process. When users resubmit the checkout form, multiple unique orders are created for the same desired transaction. How should a solutions architect refactor this workflow to prevent the creation of multiple orders?

- A. Configure the web application to send an order message to Amazon Kinesis Data Firehose
- B. Set the payment service to retrieve the message from Kinesis Data Firehose and process the order.
- C. Create a rule in AWS CloudTrail to invoke an AWS Lambda function based on the logged application path request Use Lambda to query the database, call the payment service, and pass in the order information.
- D. Store the order in the database
- E. Send a message that includes the order number to Amazon Simple Notification Service (Amazon SNS). Set the payment service to poll Amazon SNS
- F. retrieve the message, and process the order.
- G. Store the order in the database
- H. Send a message that includes the order number to an Amazon Simple Queue Service (Amazon SQS) FIFO queue
- I. Set the payment service to retrieve the message and process the order
- J. Delete the message from the queue.

Answer: D

Explanation:

This approach ensures that the order creation and payment processing steps are separate and atomic. By sending the order information to an SQS FIFO queue, the payment service can process the order one at a time and in the order they were received. If the payment service is unable to process an order, it can be retried later, preventing the creation of multiple orders. The deletion of the message from the queue after it is processed will prevent the same message from being processed multiple times.

NEW QUESTION 230

- (Exam Topic 2)

A new employee has joined a company as a deployment engineer. The deployment engineer will be using AWS CloudFormation templates to create multiple AWS resources. A solutions architect wants the deployment engineer to perform job activities while following the principle of least privilege. Which steps should the solutions architect do in conjunction to reach this goal? (Select two.)

- A. Have the deployment engineer use AWS account root user credentials for performing AWS CloudFormation stack operations.
- B. Create a new IAM user for the deployment engineer and add the IAM user to a group that has the PowerUsers IAM policy attached.
- C. Create a new IAM user for the deployment engineer and add the IAM user to a group that has the Administrate/Access IAM policy attached.
- D. Create a new IAM User for the deployment engineer and add the IAM user to a group that has an IAM policy that allows AWS CloudFormation actions only.
- E. Create an IAM role for the deployment engineer to explicitly define the permissions specific to the AWS CloudFormation stack and launch stacks using the IAM role.

Answer: DE

Explanation:

https://docs.aws.amazon.com/IAM/latest/UserGuide/id_roles.html https://docs.aws.amazon.com/IAM/latest/UserGuide/id_users.html

NEW QUESTION 233

- (Exam Topic 2)

A company runs an application using Amazon ECS. The application creates resized versions of an original image and then makes Amazon S3 API calls to store the resized images in Amazon S3. How can a solutions architect ensure that the application has permission to access Amazon S3?

- A. Update the S3 role in AWS IAM to allow read/write access from Amazon ECS, and then relaunch the container.
- B. Create an IAM role with S3 permissions, and then specify that role as the taskRoleArn in the task definition.
- C. Create a security group that allows access from Amazon ECS to Amazon S3, and update the launch configuration used by the ECS cluster.
- D. Create an IAM user with S3 permissions, and then relaunch the Amazon EC2 instances for the ECS cluster while logged in as this account.

Answer: B

NEW QUESTION 237

- (Exam Topic 2)

A company wants to manage Amazon Machine Images (AMIs). The company currently copies AMIs to the same AWS Region where the AMIs were created. The company needs to design an application that captures AWS API calls and sends alerts whenever the Amazon EC2 CreateImage API operation is called within the company's account. Which solution will meet these requirements with the LEAST operational overhead?

- A. Create an AWS Lambda function to query AWS CloudTrail logs and to send an alert when a CreateImage API call is detected.
- B. Configure AWS CloudTrail with an Amazon Simple Notification Service (Amazon SNS) notification that occurs when updated logs are sent to Amazon S3. Use Amazon Athena to create a new table and to query on CreateImage when an API call is detected.
- C. Create an Amazon EventBridge (Amazon CloudWatch Events) rule for the CreateImage API call. Configure the target as an Amazon Simple Notification Service (Amazon SNS) topic to send an alert when a CreateImage API call is detected.
- D. Configure an Amazon Simple Queue Service (Amazon SQS) FIFO queue as a target for AWS CloudTrail log
- E. Create an AWS Lambda function to send an alert to an Amazon Simple Notification Service (Amazon SNS) topic when a CreateImage API call is detected.

Answer: B

NEW QUESTION 242

- (Exam Topic 3)

A company uses a payment processing system that requires messages for a particular payment ID to be received in the same order that they were sent. Otherwise, the payments might be processed incorrectly. Which actions should a solutions architect take to meet this requirement? (Select TWO.)

- A. Write the messages to an Amazon DynamoDB table with the payment ID as the partition key

- B. Write the messages to an Amazon Kinesis data stream with the payment ID as the partition key.
- C. Write the messages to an Amazon ElastiCache for Memcached cluster with the payment ID as the key
- D. Write the messages to an Amazon Simple Queue Service (Amazon SQS) queue Set the message attribute to use the payment ID
- E. Write the messages to an Amazon Simple Queue Service (Amazon SQS) FIFO queue
- F. Set the message group to use the payment ID.

Answer: AE

NEW QUESTION 246

- (Exam Topic 3)

A company hosts a marketing website in an on-premises data center. The website consists of static documents and runs on a single server. An administrator updates the website content infrequently and uses an SFTP client to upload new documents.

The company decides to host its website on AWS and to use Amazon CloudFront. The company's solutions architect creates a CloudFront distribution. The solutions architect must design the most cost-effective and resilient architecture for website hosting to serve as the CloudFront origin.

Which solution will meet these requirements?

- A. Create a virtual server by using Amazon Lightsail
- B. Configure the web server in the Lightsail instance.Upload website content by using an SFTP client.
- C. Create an AWS Auto Scaling group for Amazon EC2 instance
- D. Use an Application Load Balancer.Upload website content by using an SFTP client.
- E. Create a private Amazon S3 bucket
- F. Use an S3 bucket policy to allow access from a CloudFront origin access identity (OAI). Upload website content by using theAWSCLI.
- G. Create a public Amazon S3 bucket
- H. Configure AWS Transfer for SFTP
- I. Configure the S3 bucket for website hosting
- J. Upload website content by using the SFTP client.

Answer: C

Explanation:

<https://docs.aws.amazon.com/cli/latest/reference/transfer/describe-server.html>

NEW QUESTION 247

- (Exam Topic 3)

A company wants to create an application to store employee data in a hierarchical structured relationship. The company needs a minimum-latency response to high-traffic queries for the employee data and must protect any sensitive data. The company also needs to receive monthly email messages if any financial information is present in the employee data.

Which combination of steps should a solutions architect take to meet these requirements? (Select TWO.)

- A. Use Amazon Redshift to store the employee data in a hierarchy
- B. Unload the data to Amazon S3 every month.
- C. Use Amazon DynamoDB to store the employee data in a hierarchy Export the data to Amazon S3 every month.
- D. Configure Amazon Macie for the AWS account Integrate Macie with Amazon EventBridge to send monthly events to AWS Lambda.
- E. Use Amazon Athena to analyze the employee data in Amazon S3 integrate Athena with Amazon QuickSight to publish analysis dashboards and share the dashboards with users.
- F. Configure Amazon Macie for the AWS account
- G. Integrate Macie with Amazon EventBridge to send monthly notifications through an Amazon Simple Notification Service (Amazon SNS) subscription.

Answer: BE

NEW QUESTION 250

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