Amazon

Exam Questions AWS-Certified-Developer-Associate

Amazon AWS Certified Developer - Associate

NEW QUESTION 1
An Amazon Simple Queue Service (Amazon SQS) queue serves as an event source for an AWS Lambda function In the SQS queue, each item corresponds to a video file that the Lambda function must convert to a smaller resolution The Lambda function is timing out on longer video files, but the Lambda function's timeout is already configured to its maximum value
What should a developer do to avoid the timeouts without additional code changes'?

A. Increase the memory configuration of the Lambda function
B. Increase the visibility timeout on the SQS queue
C. Increase the instance size of the host that runs the Lambda function.
D. Use multi-threading for the conversion.

Answer: A

Explanation:
Increasing the memory configuration of the Lambda function will also increase the CPU and network throughput available to the function. This can improve the performance of the video conversion process and reduce the execution time of the function. This solution does not require any code changes or additional resources. It is also recommended to follow the best practices for preventing Lambda function timeouts1. References
? Troubleshoot Lambda function invocation timeout errors | AWS re:Post

NEW QUESTION 2
A developer is troubleshooting an Amazon API Gateway API Clients are receiving HTTP 400 response errors when the clients try to access an endpoint of the API.
How can the developer determine the cause of these errors?

A. Create an Amazon Kinesis Data Firehose delivery stream to receive API call logs from API Gatewa
B. Configure Amazon CloudWatch Logs as the delivery stream's destination.
C. Turn on AWS CloudTrail Insights and create a trail Specify the Amazon Resource Name (ARN) of the trail for the stage of the API.
D. Turn on AWS X-Ray for the API stage Create an Amazon CtoudWalch Logs log group Specify the Amazon Resource Name (ARN) of the log group for the API stage.
E. Turn on execution logging and access logging in Amazon CloudWatch Logs for the API stag
F. Create a CloudWatch Logs log grou
G. Specify the Amazon Resource Name (ARN) of the log group for the API stage.

Answer: D

Explanation:
This solution will meet the requirements by using Amazon CloudWatch Logs to capture and analyze the logs from API Gateway. Amazon CloudWatch Logs is a service that monitors, stores, and accesses log files from AWS resources. The developer can turn on execution logging and access logging in Amazon CloudWatch Logs for the API stage, which enables logging information about API execution and client access to the API. The developer can create a CloudWatch Logs log group, which is a collection of log streams that share the same retention, monitoring, and access control settings. The developer can specify the Amazon Resource Name (ARN) of the log group for the API stage, which instructs API Gateway to send the logs to the specified log group. The developer can then examine the logs to determine the cause of the HTTP 400 response errors. Option A is not optimal because it will create an Amazon Kinesis Data Firehose delivery stream to receive API call logs from API Gateway, which may introduce additional costs and complexity for delivering and processing streaming data. Option B is not optimal because it will turn on AWS CloudTrail Insights and create a trail, which is a feature that helps identify and troubleshoot unusual API activity or operational issues, not HTTP response errors. Option C is not optimal because it will turn on AWS X-Ray for the API stage, which is a service that helps analyze and debug distributed applications, not HTTP response errors. References: [Setting Up CloudWatch Logging for a REST API], [CloudWatch Logs Concepts]

NEW QUESTION 3
A developer is creating an AWS Lambda function that needs credentials to connect to an Amazon RDS for MySQL database. An Amazon S3 bucket currently stores the credentials. The developer needs to improve the existing solution by implementing credential rotation and secure storage. The developer also needs to provide integration with the Lambda function.
Which solution should the developer use to store and retrieve the credentials with the LEAST management overhead?

A. Store the credentials in AWS Systems Manager Parameter Stor
B. Select the database that the parameter will acces
C. Use the default AWS Key Management Service (AWS KMS) key to encrypt the paramete
D. Enable automatic rotation for the paramete
E. Use the parameter from Parameter Store on the Lambda function to connect to the database.
F. Encrypt the credentials with the default AWS Key Management Service (AWS KMS) ke
G. Store the credentials as environment variables for the Lambda functio
H. Create a second Lambda function to generate new credentials and to rotate the credentials by updating the environment variables of the first Lambda functio
I. Invoke the second Lambda function by using an Amazon EventBridge rule that runs on a schedul
J. Update the database to use the new credential
K. On the first Lambda function, retrieve the credentials from the environment variable
L. Decrypt the credentials by using AWS KMS, Connect to the database.
M. Store the credentials in AWS Secrets Manage
N. Set the secret type to Credentials for Amazon RDS databas
O. Select the database that the secret will acces
P. Use the default AWS Key Management Service (AWS KMS) key to encrypt the secre
Q. Enable automatic rotation for the secre
R. Use the secret from Secrets Manager on the Lambda function to connect to the database.
S. Encrypt the credentials by using AWS Key Management Service (AWS KMS). Store the credentials in an Amazon DynamoDB tabl
T. Create a second Lambda function to rotate the credential
. Invoke the second Lambda function by using an Amazon EventBridge rule that runs on a schedul
. Update the DynamoDB tabl
. Update the database to use the generated credential
. Retrieve the credentials from DynamoDB with the first Lambda functio
. Connect to the database.

Answer: C

Explanation:
AWS Secrets Manager is a service that helps you protect secrets needed to access your applications, services, and IT resources. Secrets Manager enables you to store, retrieve, and rotate secrets such as database credentials, API keys, and passwords. Secrets Manager supports a secret type for RDS databases, which allows you to select an existing RDS database instance and generate credentials for it. Secrets Manager encrypts the secret using AWS Key Management Service (AWS KMS) keys and enables automatic rotation of the secret at a specified interval. A Lambda function can use the AWS SDK or CLI to retrieve the secret from Secrets Manager and use it to connect to the database. Reference: Rotating your AWS Secrets Manager secrets

NEW QUESTION 4
A developer is configuring an applications deployment environment in AWS CodePipeine. The application code is stored in a GitHub repository. The developer wants to ensure that the repository package's unit tests run in the new deployment environment. The deployment has already set the pipeline's source provider to GitHub and has specified the repository and branch to use in the deployment.
When combination of steps should the developer take next to meet these requirements with the least the LEAST overhead' (Select TWO).

A. Create an AWS CodeCommt projec
B. Add the repository package's build and test commands to the protects buildspec
C. Create an AWS CodeBuid projec
D. Add the repository package's build and test commands to the projects buildspec
E. Create an AWS CodeDeploy protec
F. Add the repository package's build and test commands to the project's buildspec
G. Add an action to the source stag
H. Specify the newly created project as the action provide
I. Specify the build attract as the actions input artifact.
J. Add a new stage to the pipeline alter the source stag
K. Add an action to the new stag
L. Speedy the newly created protect as the action provide
M. Specify the source artifact as the action's input artifact.

Answer: BE

Explanation:
This solution will ensure that the repository package’s unit tests run in the new deployment environment with the least overhead because it uses AWS CodeBuild to build and test the code in a fully managed service, and AWS CodePipeline to orchestrate the deployment stages and actions. Option A is not optimal because it will use AWS CodeCommit instead of AWS CodeBuild, which is a source control service, not a build and test service. Option C is not optimal because it will use AWS CodeDeploy instead of AWS CodeBuild, which is a deployment service, not a build and test service. Option D is not optimal because it will add an action to the source stage instead of creating a new stage, which will not follow the best practice of separating different deployment phases. References: AWS CodeBuild, AWS CodePipeline

NEW QUESTION 5
A company uses Amazon API Gateway to expose a set of APIs to customers. The APIs have caching enabled in API Gateway. Customers need a way to invalidate the cache for each API when they test the API.
What should a developer do to give customers the ability to invalidate the API cache?

A. Ask the customers to use AWS credentials to call the InvalidateCache API operation.
B. Attach an InvalidateCache policy to the IAM execution role that the customers use to invoke the AP
C. Ask the customers to send a request that contains the HTTP header when they make an API call.
D. Ask the customers to use the AWS SDK API Gateway class to invoke the InvalidateCache API operation.
E. Attach an InvalidateCache policy to the IAM execution role that the customers use to invoke the AP
F. Ask the customers to add the INVALIDATE_CACHE query string parameter when they make an API call.

Answer: D

NEW QUESTION 6
A developer is creating a simple proof-of-concept demo by using AWS CloudFormation and AWS Lambda functions The demo will use a CloudFormation template to deploy an existing Lambda function The Lambda function uses deployment packages and dependencies stored in Amazon S3 The developer defined anAWS Lambda Function resource in a CloudFormation template. The developer needs to add the S3 bucket to the CloudFormation template.
What should the developer do to meet these requirements with the LEAST development effort?

A. Add the function code in the CloudFormation template inline as the code property
B. Add the function code in the CloudFormation template as the ZipFile property.
C. Find the S3 key for the Lambda function Add the S3 key as the ZipFile property in the CloudFormation template.
D. Add the relevant key and bucket to the S3Bucket and S3Key properties in the CloudFormation template

Answer: D

Explanation:
The easiest way to add the S3 bucket to the CloudFormation template is to use the S3Bucket and S3Key properties of the AWS::Lambda::Function resource. These properties specify the name of the S3 bucket and the location of the .zip file that contains the function code and dependencies. This way, the developer does not need to modify the function code or upload it to a different location. The other options are either not feasible or not efficient. The code property can only be used for inline code, not for code stored in S3. The ZipFile property can only be used for code that is less than 4096 bytes, not for code that has dependencies. Finding the S3 key for the Lambda function and adding it as the ZipFile property would not work, as the ZipFile property expects a base64-encoded .zip file, not an S3 location. References
? AWS::Lambda::Function - AWS CloudFormation
? Deploying Lambda functions as .zip file archives
? AWS Lambda Function Code - AWS CloudFormation

NEW QUESTION 7
A company has a web application that is hosted on Amazon EC2 instances The EC2 instances are configured to stream logs to Amazon CloudWatch Logs The

company needs to receive an Amazon Simple Notification Service (Amazon SNS) notification when the number of application error messages exceeds a defined threshold within a 5-minute period
Which solution will meet these requirements?

A. Rewrite the application code to stream application logs to Amazon SNS Configure an SNS topic to send a notification when the number of errors exceeds the defined threshold within a 5-minute period
B. Configure a subscription filter on the CloudWatch Logs log grou
C. Configure the filter to send an SNS notification when the number of errors exceeds the defined threshold within a 5-minute period.
D. Install and configure the Amazon Inspector agent on the EC2 instances to monitor for errors Configure Amazon Inspector to send an SNS notification when the number of errors exceeds the defined threshold within a 5-minute period
E. Create a CloudWatch metric filter to match the application error pattern in the log data. Set up a CloudWatch alarm based on the new custom metri
F. Configure the alarm to send an SNS notification when the number of errors exceeds the defined threshold within a 5- minute period.

Answer: D

Explanation:
The best solution is to create a CloudWatch metric filter to match the application error pattern in the log data. This will allow you to create a custom metric that tracks the number of errors in your application. You can then set up a CloudWatch alarm based on this metric and configure it to send an SNS notification when the number of errors exceeds a defined threshold within a 5-minute period. This solution does not require any changes to your application code or installing any additional agents on your EC2 instances. It also leverages the existing integration between CloudWatch and SNS for sending notifications. References
? Create Metric Filters - Amazon CloudWatch Logs
? Creating Amazon CloudWatch Alarms - Amazon CloudWatch
? How to send alert based on log message on CloudWatch - Stack Overflow

NEW QUESTION 8
A developer is creating an application that will store personal health information (PHI). The PHI needs to be encrypted at all times. An encrypted Amazon RDS for MySQL DB instance is storing the data. The developer wants to increase the performance of the application by caching frequently accessed data while adding the ability to sort or rank the cached datasets.
Which solution will meet these requirements?

A. Create an Amazon ElastiCache for Redis instanc
B. Enable encryption of data in transit and at res
C. Store frequently accessed data in the cache.
D. Create an Amazon ElastiCache for Memcached instanc
E. Enable encryption of data in transit and at res
F. Store frequently accessed data in the cache.
G. Create an Amazon RDS for MySQL read replic
H. Connect to the read replica by using SS
I. Configure the read replica to store frequently accessed data.
J. Create an Amazon DynamoDB table and a DynamoDB Accelerator (DAX) cluster for the tabl
K. Store frequently accessed data in the DynamoDB table.

Answer: A

Explanation:
Amazon ElastiCache is a service that offers fully managed in-memory data stores that are compatible with Redis or Memcached. The developer can create an ElastiCache for Redis instance and enable encryption of data in transit and at rest. This will ensure that the PHI is encrypted at all times. The developer can store frequently accessed data in the cache and use Redis features such as sorting and ranking to enhance the performance of the application.
References:
? [What Is Amazon ElastiCache? - Amazon ElastiCache]
? [Encryption in Transit - Amazon ElastiCache for Redis]
? [Encryption at Rest - Amazon ElastiCache for Redis]

NEW QUESTION 9
A developer wants to expand an application to run in multiple AWS Regions. The developer wants to copy Amazon Machine Images (AMIs) with the latest changes and create a new application stack in the destination Region. According to company requirements, all AMIs must be encrypted in all Regions. However, not all the AMIs that the company uses are encrypted.
How can the developer expand the application to run in the destination Region while meeting the encryption requirement?

A. Mastered
B. Not Mastered

Answer: A

Explanation:
Amazon Machine Images (AMIs) are encrypted snapshots of EC2 instances that can be used to launch new instances. The developer can create new AMIs from the existing instances and specify encryption parameters. The developer can copy the encrypted AMIs to the destination Region and use them to create a new application stack. The developer can delete the unencrypted AMIs after the encryption process is complete. This solution will meet the encryption requirement and allow the developer to expand the application to run in the destination Region.
References:
? [Amazon Machine Images (AMI) - Amazon Elastic Compute Cloud]
? [Encrypting an Amazon EBS Snapshot - Amazon Elastic Compute Cloud]
? [Copying an AMI - Amazon Elastic Compute Cloud]

NEW QUESTION 10
A developer is creating a new REST API by using Amazon API Gateway and AWS Lambda. The development team tests the API and validates responses for the known use cases before deploying the API to the production environment.
The developer wants to make the REST API available for testing by using API Gateway locally.
Which AWS Serverless Application Model Command Line Interface (AWS SAM CLI) subcommand will meet these requirements?

A. Sam local invoke
B. Sam local generate-event
C. Sam local start-lambda
D. Sam local start-api

Answer: D

Explanation:
? The sam local start-api subcommand allows you to run your serverless application locally for quick development and testing1. It creates a local HTTP server that acts as a proxy for API Gateway and invokes your Lambda functions based on the AWS SAM template1. You can use the sam local start-api subcommand to test your REST API locally by sending HTTP requests to the local endpoint1.

NEW QUESTION 10
A company is building a compute-intensive application that will run on a fleet of Amazon EC2 instances. The application uses attached Amazon Elastic Block Store (Amazon EBS) volumes for storing data. The Amazon EBS volumes will be created at time of initial deployment. The application will process sensitive information. All of the data must be encrypted. The solution should not impact the application's performance.
Which solution will meet these requirements?

A. Configure the fleet of EC2 instances to use encrypted EBS volumes to store data.
B. Configure the application to write all data to an encrypted Amazon S3 bucket.
C. Configure a custom encryption algorithm for the application that will encrypt and decrypt all data.
D. Configure an Amazon Machine Image (AMI) that has an encrypted root volume and store the data to ephemeral disks.

Answer: A

Explanation:
Amazon Elastic Block Store (Amazon EBS) provides block level storage volumes for use with Amazon EC2 instances1. Amazon EBS encryption offers a straight-forward encryption solution for your EBS resources associated with your EC2 instances1. When you create an encrypted EBS volume and attach it to a supported instance type, the following types of data are encrypted: Data at rest inside the volume, all data moving between the volume and the instance, all snapshots created from the volume, and all volumes created from those snapshots1. Therefore, option A is correct.

NEW QUESTION 15
A developer designed an application on an Amazon EC2 instance The application makes API requests to objects in an Amazon S3 bucket
Which combination of steps will ensure that the application makes the API requests in the MOST secure manner? (Select TWO.)

A. Create an IAM user that has permissions to the S3 bucke
B. Add the user to an 1AM group
C. Create an IAM role that has permissions to the S3 bucket
D. Add the IAM role to an instance profil
E. Attach the instance profile to the EC2 instance.
F. Create an 1AM role that has permissions to the S3 bucket Assign the role to an 1AM group
G. Store the credentials of the IAM user in the environment variables on the EC2 instance

Answer: BC

Explanation:
- Create an IAM role that has permissions to the S3 bucket. - Add the IAM role to an instance profile. Attach the instance profile to the EC2 instance. We first need to create a n IAM Role with permissions to read and eventually write a specific S3 bucket. Then, we need to attach the role to the EC2 isntance through an instance profile. In this
way, the ec2 instance has the permissions to read and eventually write the specified S3 bucket

NEW QUESTION 16
A developer is creating an AWS CloudFormation template to deploy Amazon EC2 instances across multiple AWS accounts. The developer must choose the EC2 instances from a list of approved instance types.
How can the developer incorporate the list of approved instance types in the CloudFormation template?

A. Create a separate CloudFormation template for each EC2 instance type in the list.
B. In the Resources section of the CloudFormation template, create resources for each EC2 instance type in the list.
C. In the CloudFormation template, create a separate parameter for each EC2 instance type in the list.
D. In the CloudFormation template, create a parameter with the list of EC2 instance types as AllowedValues.

Answer: D

Explanation:
In the CloudFormation template, the developer should create a parameter with the list of approved EC2 instance types as AllowedValues. This way, users can select the instance type they want to use when launching the CloudFormation stack, but only from the approved list.

NEW QUESTION 18
A developer is creating an AWS Lambda function that consumes messages from an Amazon Simple Queue Service (Amazon SQS) standard queue. The developer notices that the Lambda function processes some messages multiple times.
How should developer resolve this issue MOST cost-effectively?

A. Change the Amazon SQS standard queue to an Amazon SQS FIFO queue by using the Amazon SQS message deduplication ID.
B. Set up a dead-letter queue.
C. Set the maximum concurrency limit of the AWS Lambda function to 1
D. Change the message processing to use Amazon Kinesis Data Streams instead of Amazon SQS.

Answer: A

Explanation:
Amazon Simple Queue Service (Amazon SQS) is a fully managed queue service that allows you to de-couple and scale for applications1. Amazon SQS offers two types of queues: Standard and FIFO (First In First Out) queues1. The FIFO queue uses
the messageDeduplicationId property to treat messages with the same value as duplicate2.
Therefore, changing the Amazon SQS standard queue to an Amazon SQS FIFO queue using the Amazon SQS message deduplication ID can help resolve the issue of the Lambda function processing some messages multiple times. Therefore, option A is correct.

NEW QUESTION 23
A developer is working on a Python application that runs on Amazon EC2 instances. The developer wants to enable tracing of application requests to debug performance issues in the code.
Which combination of actions should the developer take to achieve this goal? (Select TWO)

A. Install the Amazon CloudWatch agent on the EC2 instances.
B. Install the AWS X-Ray daemon on the EC2 instances.
C. Configure the application to write JSON-formatted togs to /var/log/cloudwatch.
D. Configure the application to write trace data to /Var/log-/xray.
E. Install and configure the AWS X-Ray SDK for Python in the application.

Answer: BE

Explanation:
This solution will meet the requirements by using AWS X-Ray to enable tracing of application requests to debug performance issues in the code. AWS X-Ray is a
service that collects data about requests that the applications serve, and provides tools to view, filter, and gain insights into that data.
The developer can install the AWS X-Ray daemon on the EC2 instances, which is a software that listens for traffic on UDP port 2000, gathers raw segment data, and relays it to the X-Ray API. The developer can also install and configure the AWS X-Ray SDK for Python in the application, which is a library that enables instrumenting Python code to generate and send trace data to the X-Ray daemon. Option A is not optimal because it will install the Amazon CloudWatch agent on the EC2 instances, which is a software that collects metrics and logs from EC2 instances and on- premises servers, not application performance data. Option C is not optimal because it will configure the application to write JSON-formatted logs to /var/log/cloudwatch, which is not a valid path or destination for CloudWatch logs. Option D is not optimal because it will configure the application to write trace data to /var/log/xray, which is also not a valid path or destination for X-Ray trace data.
References: [AWS X-Ray], [Running the X-Ray Daemon on Amazon EC2]

NEW QUESTION 28
A company receives food orders from multiple partners. The company has a microservices application that uses Amazon API Gateway APIs with AWS Lambda integration. Each partner sends orders by calling a customized API that is exposed through API Gateway. The API call invokes a shared Lambda function to process the orders.
Partners need to be notified after the Lambda function processes the orders. Each partner must receive updates for only the partner's own orders. The company wants to add new partners in the future with the fewest code changes possible.
Which solution will meet these requirements in the MOST scalable way?

A. Create a different Amazon Simple Notification Service (Amazon SNS) topic for each partne
B. Configure the Lambda function to publish messages for each partner to the partner's SNS topic.
C. Create a different Lambda function for each partne
D. Configure the Lambda function to notify each partner's service endpoint directly.
E. Create an Amazon Simple Notification Service (Amazon SNS) topi
F. Configure the Lambda function to publish messages with specific attributes to the SNS topi
G. Subscribe each partner to the SNS topi
H. Apply the appropriate filter policy to the topic subscriptions.
Create one Amazon Simple Notification Service (Amazon SNS) topi
J. Subscribe all partners to the SNS topic.

Answer: C

Explanation:
Amazon Simple Notification Service (Amazon SNS) is a fully managed messaging service that enables pub/sub communication between distributed systems. The developer can create an SNS topic and configure the Lambda function to publish messages with specific attributes to the topic. The developer can subscribe each partner to the SNS topic and apply the appropriate filter policy to the topic subscriptions. This way, each partner will receive updates for only their own orders based on the message attributes. This solution will meet the requirements in the most scalable way and allow adding new partners in the future with minimal code changes.
References:
? [Amazon Simple Notification Service (SNS)]
? [Filtering Messages with Attributes - Amazon Simple Notification Service]

NEW QUESTION 33
A developer is creating an application that will give users the ability to store photos from their cellphones in the cloud. The application needs to support tens of thousands of users. The application uses an Amazon API Gateway REST API that is integrated with AWS Lambda functions to process the photos. The application stores details about the photos in Amazon DynamoDB.
Users need to create an account to access the application. In the application, users must be able to upload photos and retrieve previously uploaded photos. The photos will range in size from 300 KB to 5 MB.
Which solution will meet these requirements with the LEAST operational overhead?

A. Use Amazon Cognito user pools to manage user account
B. Create an Amazon Cognito user pool authorizer in API Gateway to control access to the AP
C. Use the Lambda function to store the photos and details in the DynamoDB tabl
D. Retrieve previously uploaded photos directly from the DynamoDB table.
E. Use Amazon Cognito user pools to manage user account
F. Create an Amazon Cognito user pool authorizer in API Gateway to control access to the AP
G. Use the Lambda function to store the photos in Amazon S3. Store the object's S3 key as part of the photo details in the DynamoDB tabl
H. Retrieve previously uploaded photos by querying DynamoDB for the S3 key.
I. Create an IAM user for each user of the application during the sign-up proces

J. Use IAM authentication to access the API Gateway AP

K. Use the Lambda function to store the photos in Amazon S3. Store the object's S3 key as part of the photo details in the DynamoDB tabl
L. Retrieve previously uploaded photos by querying DynamoDB for the S3 key.
M. Create a users table in DynamoD
N. Use the table to manage user account
O. Create a Lambda authorizer that validates user credentials against the users tabl
P. Integrate the Lambda authorizer with API Gateway to control access to the AP
Q. Use the Lambda function to store the photos in Amazon S3. Store the object's S3 key as par of the photo details in the DynamoDB tabl
R. Retrieve previously uploaded photos by querying DynamoDB for the S3 key.

Answer: B

Explanation:
Amazon Cognito user pools is a service that provides a secure user directory that scales to hundreds of millions of users. The developer can use Amazon Cognito user pools to manage user accounts and create an Amazon Cognito user pool authorizer in API Gateway to control access to the API. The developer can use the Lambda function to store the photos in Amazon S3, which is a highly scalable, durable, and secure object storage service. The developer can store the object's S3 key as part of the photo details in the DynamoDB table, which is a fast and flexible NoSQL database service. The developer can retrieve previously uploaded photos by querying DynamoDB for the S3 key and fetching the photos from S3. This solution will meet the requirements with the least operational overhead.
References:
? [Amazon Cognito User Pools]
? [Use Amazon Cognito User Pools - Amazon API Gateway]
? [Amazon Simple Storage Service (S3)]
? [Amazon DynamoDB]

NEW QUESTION 35
A company has an application that runs as a series of AWS Lambda functions. Each Lambda function receives data from an Amazon Simple Notification Service (Amazon SNS) topic and writes the data to an Amazon Aurora DB instance.
To comply with an information security policy, the company must ensure that the Lambda functions all use a single securely encrypted database connection string to access Aurora.
Which solution will meet these requirements'?

A. Use IAM database authentication for Aurora to enable secure database connections for ail the Lambda functions.
B. Store the credentials and read the credentials from an encrypted Amazon RDS DB instance.
C. Store the credentials in AWS Systems Manager Parameter Store as a secure string parameter.
D. Use Lambda environment variables with a shared AWS Key Management Service (AWS KMS) key for encryption.

Answer: A

Explanation:

This solution will meet the requirements by using IAM database authentication for Aurora, which enables using IAM roles or users to authenticate with Aurora databases instead of using passwords or other secrets. The developer can use IAM database authentication for Aurora to enable secure database connections for all the Lambda functions that access Aurora DB instance. The developer can create an IAM role with permission to connect to Aurora DB instance and attach it to each Lambda function. The developer can also configure Aurora DB instance to use IAM database authentication and enable encryption in transit using SSL certificates. This way, the Lambda functions can use a single securely encrypted database connection string to access Aurora without needing any secrets or passwords. Option B is not optimal because it will store the credentials and read them from an encrypted Amazon RDS DB instance, which may introduce additional costs and complexity for managing and accessing another RDS DB instance. Option C is not optimal because it will store the credentials in AWS Systems Manager Parameter Store as a secure string parameter, which may require additional steps or permissions to retrieve and decrypt the credentials from Parameter Store. Option D is not optimal because it will use Lambda environment variables with a shared AWS Key Management Service (AWS KMS) key for encryption, which may not be secure or scalable as environment variables are stored as plain text unless encrypted with AWS KMS. References: [IAM Database Authentication for MySQL and PostgreSQL], [Using SSL/TLS to Encrypt a Connection to a DB Instance]

NEW QUESTION 38
A company has an existing application that has hardcoded database credentials A developer needs to modify the existing application The application is deployed in two AWS Regions with an active-passive failover configuration to meet company's disaster recovery strategy
The developer needs a solution to store the credentials outside the code. The solution must comply With the company's disaster recovery strategy
Which solution Will meet these requirements in the MOST secure way?

A. Store the credentials in AWS Secrets Manager in the primary Regio
B. Enable secret replication to the secondary Region Update the application to use the Amazon Resource Name (ARN) based on the Region.
C. Store credentials in AWS Systems Manager Parameter Store in the primary Regio
D. Enable parameter replication to the secondary Regio
E. Update the application to use the Amazon Resource Name (ARN) based on the Region.
F. Store credentials in a config fil
G. Upload the config file to an S3 bucket in me primary Regio
H. Enable Cross-Region Replication (CRR) to an S3 bucket in the secondary regio
I. Update the application to access the config file from the S3 bucket based on the Region.
J. Store credentials in a config fil
K. Upload the config file to an Amazon Elastic File System (Amazon EFS) file syste
L. Update the application to use the Amazon EFS file system Regional endpoints to access the config file in the primary and secondary Regions.

Answer: A

Explanation:
AWS Secrets Manager is a service that allows you to store and manage secrets, such as database credentials, API keys, and passwords, in a secure and centralized way. It also provides features such as automatic secret rotation, auditing, and monitoring1. By using AWS Secrets Manager, you can avoid hardcoding credentials in your code, which is a bad security practice and makes it difficult to update them. You can also replicate your secrets to another Region, which is useful for disaster recovery purposes2. To access your secrets from your application, you can use the ARN of the secret, which is a unique identifier that includes the Region name. This way, your application can use the appropriate secret based on the Region where it is deployed3.
References:
? AWS Secrets Manager

? Replicating and sharing secrets
? Using your own encryption keys

NEW QUESTION 43
A developer must use multi-factor authentication (MFA) to access data in an Amazon S3 bucket that is in another AWS account. Which AWS Security Token Service (AWS STS) API operation should the developer use with the MFA information to meet this requirement?

A. AssumeRoleWithWebidentity
B. GetFederationToken
C. AssumeRoleWithSAML
D. AssumeRole

Answer: D

Explanation:
The AssumeRole API operation returns a set of temporary security credentials that can be used to access resources in another AWS account. The developer can specify the MFA device serial number and the MFA token code in the request parameters. This option enables the developer to use MFA to access data in an S3 bucket that is in another AWS account. The other options are not relevant or effective for this scenario. References
? AssumeRole
? Requesting Temporary Security Credentials

NEW QUESTION 44
A company is building a web application on AWS. When a customer sends a request, the application will generate reports and then make the reports available to the customer within one hour. Reports should be accessible to the customer for 8 hours. Some reports are larger than 1 MB. Each report is unique to the customer. The application should delete all reports that are older than 2 days.
Which solution will meet these requirements with the LEAST operational overhead?

A. Generate the reports and then store the reports as Amazon DynamoDB items that have a specified TT
B. Generate a URL that retrieves the reports from DynamoD
C. Provide the URL to customers through the web application.
D. Generate the reports and then store the reports in an Amazon S3 bucket that uses server-side encryptio
E. Attach the reports to an Amazon Simple Notification Service (Amazon SNS) messag
F. Subscribe the customer to email notifications from Amazon SNS.
G. Generate the reports and then store the reports in an Amazon S3 bucket that uses server-side encryptio
H. Generate a presigned URL that contains an expiration date Provide the URL to customers through the web applicatio
I. Add S3 Lifecycle configuration rules to the S3 bucket to delete old reports.
J. Generate the reports and then store the reports in an Amazon RDS database with a date stam
K. Generate an URL that retrieves the reports from the RDS databas
L. Provide the URL to customers through the web applicatio
M. Schedule an hourly AWS Lambda function to delete database records that have expired date stamps.

Answer: C

Explanation:
This solution will meet the requirements with the least operational overhead because it uses Amazon S3 as a scalable, secure, and durable storage service for the reports. The presigned URL will allow customers to access their reports for a limited time (8 hours) without requiring additional authentication. The S3 Lifecycle configuration rules will automatically delete the reports that are older than 2 days, reducing storage costs and complying with the data retention policy. Option A is not optimal because it will incur additional costs and complexity to store the reports as DynamoDB items, which have a size limit of 400 KB. Option B is not optimal because it will not provide customers with access to their reports within one hour, as Amazon SNS email delivery is not guaranteed. Option D is not optimal because it will require more operational overhead to manage an RDS database and a Lambda function for storing and deleting the reports.
References: Amazon S3 Presigned URLs, Amazon S3 Lifecycle

NEW QUESTION 48
A developer has created an AWS Lambda function that is written in Python. The Lambda function reads data from objects in Amazon S3 and writes data to an Amazon DynamoDB table. The function is successfully invoked from an S3 event notification when an object is created. However, the function fails when it attempts to write to the DynamoDB table.
What is the MOST likely cause of this issue?

A. The Lambda function's concurrency limit has been exceeded.
B. DynamoDB table requires a global secondary index (GSI) to support writes.
C. The Lambda function does not have IAM permissions to write to DynamoDB.
D. The DynamoDB table is not running in the same Availability Zone as the Lambda function.

Answer: C

Explanation:
https://docs.aws.amazon.com/IAM/latest/UserGuide/reference_policies_examples_lambda- access-dynamodb.html

NEW QUESTION 53
A developer has observed an increase in bugs in the AWS Lambda functions that a development team has deployed in its Node.js application.
To minimize these bugs, the developer wants to implement automated testing of Lambda functions in an environment that closely simulates the Lambda environment.
The developer needs to give other developers the ability to run the tests locally. The developer also needs to integrate the tests into the team's continuous integration and continuous delivery (CI/CD) pipeline before the AWS Cloud Development Kit (AWS CDK) deployment.
Which solution will meet these requirements?

A. Create sample events based on the Lambda documentatio
B. Create automated test scripts that use the cdk local invoke command to invoke the Lambda function
C. Check the respons
D. Document the test scripts for the other developers on the tea
E. Update the CI/CD pipeline to run the test scripts.

Create sample events based on the Lambda documentatio

F. Install a unit testing framework that reproduces the Lambda execution environment.
G. Invoke the handler function by using a unit testing framewor
H. Check the respons
I. Document how to run the unit testing framework for the other developers on the tea
J. Update the CI/CD pipeline to run the unit testing framework.
K. Install the AWS Serverless Application Model (AWS SAM) CLI too
L. Use the sam local generate-event command to generate sample events for the automated test
M. Create automated test scripts that use the sam local invoke command to invoke the Lambda function
N. Check the respons
O. Document the test scripts for the other developers on the tea
P. Update the CI/CD pipeline to run the test scripts.
Q. Create sample events based on the Lambda documentatio
R. Create a Docker container from the Node.js base image to invoke the Lambda function
S. Check the respons
T. Document how to run the Docker container for the other developers on the tea
. Update the CllCD pipeline to run the Docker container.

Answer: C

Explanation:
The AWS Serverless Application Model Command Line Interface (AWS SAM CLI) is a command-line tool for local development and testing of Serverless applications3. The sam local generate-event command of AWS SAM CLI generates sample events for automated tests3. The sam local invoke command is used to invoke Lambda functions3. Therefore, option C is correct.

NEW QUESTION 58
A developer is creating a new REST API by using Amazon API Gateway and AWS Lambda. The development team tests the API and validates responses for the known use cases before deploying the API to the production environment.
The developer wants to make the REST API available for testing by using API Gateway locally.
Which AWS Serverless Application Model Command Line Interface (AWS SAM CLI) subcommand will meet these requirements?

A. Sam local invoke
B. Sam local generate-event
C. Sam local start-lambda
D. Sam local start-api

Answer: D

Explanation:
The AWS Serverless Application Model Command Line Interface (AWS SAM CLI) is a command-line tool for local development and testing of Serverless applications2. The sam local start-api subcommand of AWS SAM CLI is used to simulate a REST API by starting a new local endpoint3. Therefore, option D is correct.

NEW QUESTION 63
A developer is building a serverless application by using AWS Serverless Application Model (AWS SAM) on multiple AWS Lambda functions. When the application is deployed, the developer wants to shift 10% of the traffic to the new deployment of the application for the first 10 minutes after deployment. If there are no issues, all traffic must switch over to the new version.
Which change to the AWS SAM template will meet these requirements?

A. Set the Deployment Preference Type to Canaryl OPercent10Minute
B. Set the AutoPublishAlias property to the Lambda alias.
C. Set the Deployment Preference Type to Linearl OPercentEveryIOMinute
D. Set AutoPubIishAIias property to the Lambda alias.
E. Set the Deployment Preference Type to Canaryl OPercentIOMinute
F. Set the PreTraffic and PostTraffic properties to the Lambda alias.
G. Set the Deployment Preference Type to Linearl OPercentEvery10Minute
H. Set PreTraffic and PostTraffic properties to the Lambda alias.

Answer: A

Explanation:
? The Deployment Preference Type property specifies how traffic should be shifted between versions of a Lambda function1. The Canary10Percent10Minutes option means that 10% of the traffic is immediately shifted to the new version, and after 10 minutes, the remaining 90% of the traffic is shifted1. This matches the requirement of shifting 10% of the traffic for the first 10 minutes, and then switching all traffic to the new version.
? The AutoPublishAlias property enables AWS SAM to automatically create and update a Lambda alias that points to the latest version of the function1. This is required to use the Deployment Preference Type property1. The alias name can be specified by the developer, and it can be used to invoke the function with the latest code.

NEW QUESTION 66
A company wants to automate part of its deployment process. A developer needs to automate the process of checking for and deleting unused resources that supported previously deployed stacks but that are no longer used.
The company has a central application that uses the AWS Cloud Development Kit (AWS CDK) to manage all deployment stacks. The stacks are spread out across multiple accounts. The developer's solution must integrate as seamlessly as possible within the current deployment process.

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

A. In the central AWS CDK application, write a handler function in the code that uses AWS SDK calls to check for and delete unused resource
B. Create an AWS CloudPormation template from a JSON fil
C. Use the template to attach the function code to an AWS Lambda function and lo invoke the Lambda function when the deployment slack runs.
D. In the central AWS CDK applicatio
E. write a handler function in the code that uses AWS SDK calls to check for and delete unused resource
F. Create an AWS CDK custom resource Use the custom resource to attach the function code to an AWS Lambda function and to invoke the Lambda function when the deployment stack runs.
G. In the central AWS CDK, write a handler function m the code that uses AWS SDK calls to check for and delete unused resource
H. Create an API in AWS Amplify Use the API to attach the function code to an AWS Lambda function and to invoke the Lambda function when the deployment stack runs.
I. In the AWS Lambda console write a handler function in the code that uses AWS SDK calls to check for and delete unused resource
J. Create an AWS CDK custom resourc
K. Use the custom resource to import the Lambda function into the stack and to Invoke the Lambda function when the deployment stack runs.

Answer: B

Explanation:
This solution meets the requirements with the least amount of configuration because it uses a feature of AWS CDK that allows custom logic to be executed during stack deployment or deletion. The AWS Cloud Development Kit (AWS CDK) is a software development framework that allows you to define cloud infrastructure as code and provision it through CloudFormation. An AWS CDK custom resource is a construct that enables you to create resources that are not natively supported by CloudFormation or perform tasks that are not supported by CloudFormation during stack deployment or deletion. The developer can write a handler function in the code that uses AWS SDK calls to check for and delete unused resources, and create an AWS CDK custom resource that attaches the function code to a Lambda function and invokes it when the deployment stack runs. This way, the developer can automate the cleanup process without requiring additional configuration or integration. Creating a CloudFormation template from a JSON file will require additional configuration and integration with the central AWS CDK application. Creating an API in AWS Amplify will require additional configuration and integration with the central AWS CDK application and may not provide optimal performance or availability. Writing a handler function in the AWS Lambda console will require additional configuration and integration with the central AWS CDK application.
Reference: [AWS Cloud Development Kit (CDK)], [Custom Resources]

NEW QUESTION 68
A developer is migrating some features from a legacy monolithic application to use AWS Lambda functions instead. The application currently stores data in an Amazon Aurora DB cluster that runs in private subnets in a VPC. The AWS account has one VPC deployed. The Lambda functions and the DB cluster are deployed in the same AWS Region in the same AWS account.
The developer needs to ensure that the Lambda functions can securely access the DB cluster without crossing the public internet.
Which solution will meet these requirements?

A. Configure the DB cluster's public access setting to Yes.
B. Configure an Amazon RDS database proxy for the Lambda functions.
C. Configure a NAT gateway and a security group for the Lambda functions.
D. Configure the VPC, subnets, and a security group for the Lambda functions.

Answer: D

Explanation:
This solution will meet the requirements by allowing the Lambda functions to access the DB cluster securely within the same VPC without crossing the public internet. The developer can configure a VPC endpoint for RDS in a private subnet and assign it to the Lambda functions. The developer can also configure a security group for the Lambda functions that allows inbound traffic from the DB cluster on port 3306 (MySQL). Option A is not optimal because it will expose the DB cluster to public access, which may compromise its security and data integrity. Option B is not optimal because it will introduce additional latency and complexity to use an RDS database proxy for accessing the DB cluster from Lambda functions within the same VPC. Option C is not optimal because it will require additional costs and configuration to use a NAT gateway for accessing resources in private subnets from Lambda functions.
References: [Configuring a Lambda Function to Access Resources in a VPC]

NEW QUESTION 73
A developer is using an AWS Lambda function to generate avatars for profile pictures that are uploaded to an Amazon S3 bucket. The Lambda function is automatically invoked for profile pictures that are saved under the /original/ S3 prefix. The developer notices that some pictures cause the Lambda function to time out. The developer wants to implement a fallback mechanism by using another Lambda function that resizes the profile picture.
Which solution will meet these requirements with the LEAST development effort?

A. Set the image resize Lambda function as a destination of the avatar generator Lambda function for the events that fail processing.
B. Create an Amazon Simple Queue Service (Amazon SQS) queu
C. Set the SQS queue as a destination with an on failure condition for the avatar generator Lambda functio
D. Configure the image resize Lambda function to poll from the SQS queue.
E. Create an AWS Step Functions state machine that invokes the avatar generator Lambda function and uses the image resize Lambda function as a fallbac
F. Create an Amazon EventBridge rule that matches events from the S3 bucket to invoke the state machine.
G. Create an Amazon Simple Notification Service (Amazon SNS) topi
H. Set the SNS topic as a destination with an on failure condition for the avatar generator Lambda functio
I. Subscribe the image resize Lambda function to the SNS topic.

Answer: A

Explanation:
The solution that will meet the requirements with the least development effort is to set the image resize Lambda function as a destination of the avatar generator Lambda function for the events that fail processing. This way, the fallback mechanism is automatically triggered by the Lambda service without requiring any additional components or configuration. The other options involve creating and managing additional resources such as queues, topics, state machines, or rules, which would increase the complexity and cost of the solution.
Reference: Using AWS Lambda destinations

NEW QUESTION 78
A company is planning to securely manage one-time fixed license keys in AWS. The company's development team needs to access the license keys in automaton scripts that run in Amazon EC2 instances and in AWS CloudFormation stacks.
Which solution will meet these requirements MOST cost-effectively?

A. Amazon S3 with encrypted files prefixed with “config”
B. AWS Secrets Manager secrets with a tag that is named SecretString
C. AWS Systems Manager Parameter Store SecureString parameters
D. CloudFormation NoEcho parameters

Answer: C

Explanation:
AWS Systems Manager Parameter Store is a service that provides secure, hierarchical storage for configuration data and secrets. Parameter Store supports SecureString parameters, which are encrypted using AWS Key Management Service (AWS KMS) keys. SecureString parameters can be used to store license keys in AWS and retrieve them securely from automation scripts that run in EC2 instances or CloudFormation stacks. Parameter Store is a cost-effective solution because it does not charge for storing parameters or API calls. Reference: Working with Systems Manager parameters

NEW QUESTION 79
A company hosts a client-side web application for one of its subsidiaries on Amazon S3. The web application can be accessed through Amazon CloudFront from https://www.example.com. After a successful rollout, the company wants to host three more client-side web applications for its remaining subsidiaries on three separate S3 buckets.
To achieve this goal, a developer moves all the common JavaScript files and web fonts to a central S3 bucket that serves the web applications. However, during testing, the developer notices that the browser blocks the JavaScript files and web fonts.
What should the developer do to prevent the browser from blocking the JavaScript files and web fonts?

A. Create four access points that allow access to the central S3 bucke
B. Assign an access point to each web application bucket.
C. Create a bucket policy that allows access to the central S3 bucke
D. Attach the bucket policy to the central S3 bucket.
E. Create a cross-origin resource sharing (CORS) configuration that allows access to the central S3 bucke
F. Add the CORS configuration to the central S3 bucket.
G. Create a Content-MD5 header that provides a message integrity check for the central S3 bucke
H. Insert the Content-MD5 header for each web application request.

Answer: C

Explanation:
This is a frequent trouble. Web applications cannot access the resources in other domains by default, except some exceptions. You must configure CORS on the resources to be accessed. https://docs.aws.amazon.com/AmazonS3/latest/userguide/cors.html

NEW QUESTION 81
A company is implementing an application on Amazon EC2 instances. The application needs to process incoming transactions. When the application detects a transaction that is not valid, the application must send a chat message to the company's support team. To send the message, the application needs to retrieve the access token to authenticate by using the chat API.
A developer needs to implement a solution to store the access token. The access token must be encrypted at rest and in transit. The access token must also be accessible from other AWS accounts.
Which solution will meet these requirements with the LEAST management overhead?

A. Use an AWS Systems Manager Parameter Store SecureString parameter that uses an AWS Key Management Service (AWS KMS) AWS managed key to store the access toke
B. Add a resource-based policy to the parameter to allow access from other account
C. Update the IAM role of the EC2 instances with permissions to access Parameter Stor
D. Retrieve the token from Parameter Store with the decrypt flag enable
E. Use the decrypted access token to send the message to the chat.
F. Encrypt the access token by using an AWS Key Management Service (AWS KMS) customer managed ke
G. Store the access token in an Amazon DynamoDB tabl
H. Update the IAM role of the EC2 instances with permissions to access DynamoDB and AWS KM
I. Retrieve the token from DynamoD
J. Decrypt the token by using AWS KMS on the EC2 instance
K. Use the decrypted access token to send the message to the chat.
L. Use AWS Secrets Manager with an AWS Key Management Service (AWS KMS) customer managed key to store the access toke
M. Add a resource-based policy to the secret to allow access from other account
N. Update the IAM role of the EC2 instances with permissions to access Secrets Manage
O. Retrieve the token from Secrets Manage
P. Use the decrypted access token to send the message to the chat.
Q. Encrypt the access token by using an AWS Key Management Service (AWS KMS) AWS managed ke
R. Store the access token in an Amazon S3 bucke
S. Add a bucket policy to the S3 bucket to allow access from other account
T. Update the IAM role of the EC2 instances with permissions to access Amazon S3 and AWS KM
. Retrieve the token from the S3 bucke
. Decrypt the token by using AWS KMS on the EC2 instance
. Use the decrypted access token to send the massage to the chat.

Answer: C

Explanation:
https://aws.amazon.com/premiumsupport/knowledge-center/secrets-manager-share-between-accounts/
https://docs.aws.amazon.com/secretsmanager/latest/userguide/auth-and- access_examples_cross.html

NEW QUESTION 85

A developer is creating an AWS Lambda function that searches for items from an Amazon DynamoDB table that contains customer contact information- The DynamoDB table items have the customer's email_address as the partition key and additional properties such as customer_type, name, and job_tltle.

The Lambda function runs whenever a user types a new character into the customer_type text input The developer wants the search to return partial matches of all the email_address property of a particular customer_type The developer does not want to recreate the DynamoDB table.

What should the developer do to meet these requirements?

A. Add a global secondary index (GSI) to the DynamoDB table with customer_type as the partition key and email_address as the sort key Perform a query operation on the GSI by using the begvns_wth key condition expression With the email_address property

B. Add a global secondary index (GSI) to the DynamoDB table With ernail_address as the partition key and customer_type as the sort key Perform a query operation on the GSI by using the begins_wtth key condition expression With the email_address property.

C. Add a local secondary index (LSI) to the DynamoDB table With customer_type as the partition key and email_address as the sort key Perform a query operation on the LSI by using the begins_wlth key condition expression With the email_address property

D. Add a local secondary Index (LSI) to the DynamoDB table With job_tltle as the partition key and emad_address as the sort key Perform a query operation on the LSI by using the begins_wrth key condition expression With the email_address property

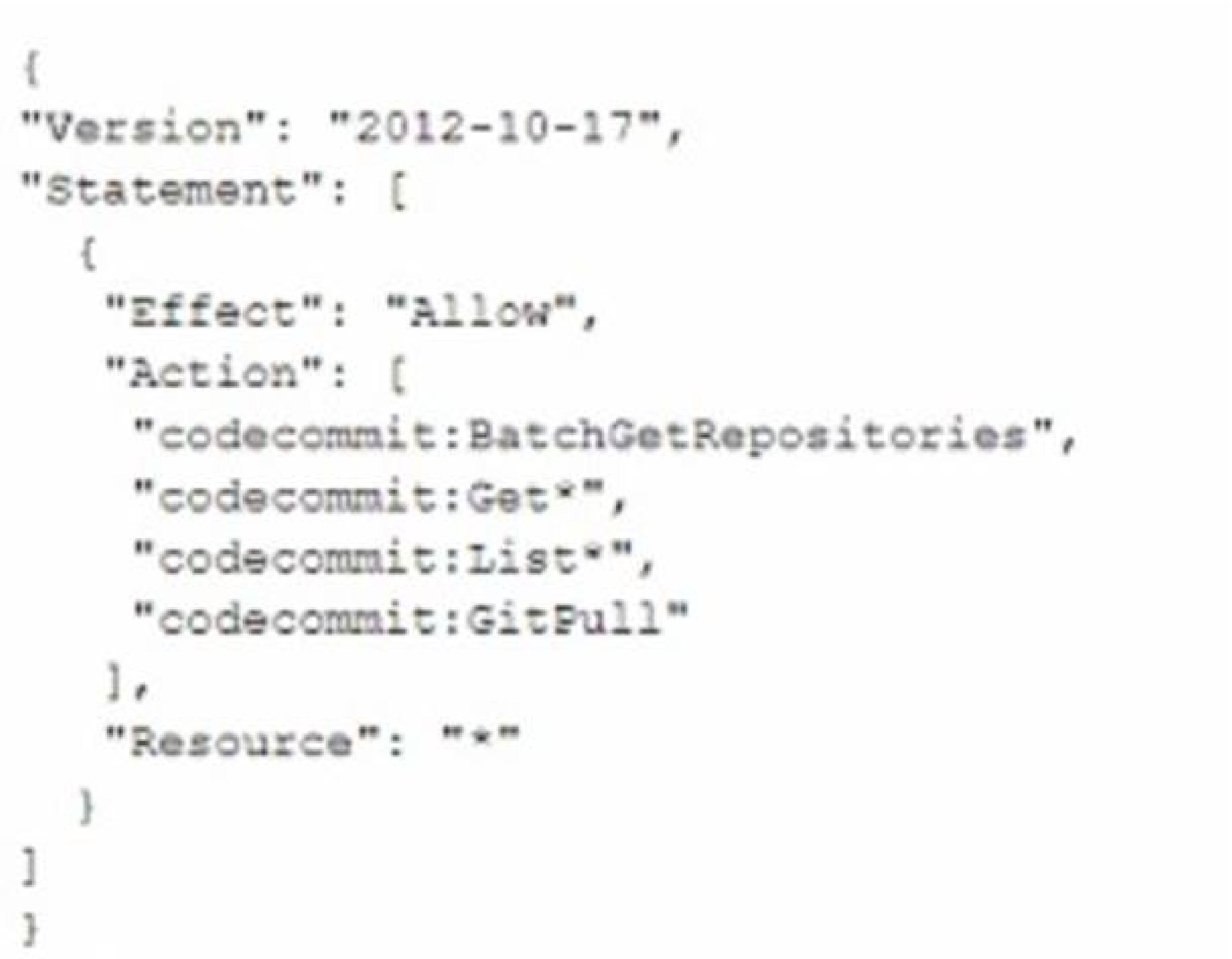
Answer: A

Explanation:

By adding a global secondary index (GSI) to the DynamoDB table with customer_type as the partition key and email_address as the sort key, the developer can perform a query operation on the GSI using the Begins_with key condition expression with the email_address property. This will return partial matches of all email_address properties of a specific customer_type.

NEW QUESTION 90

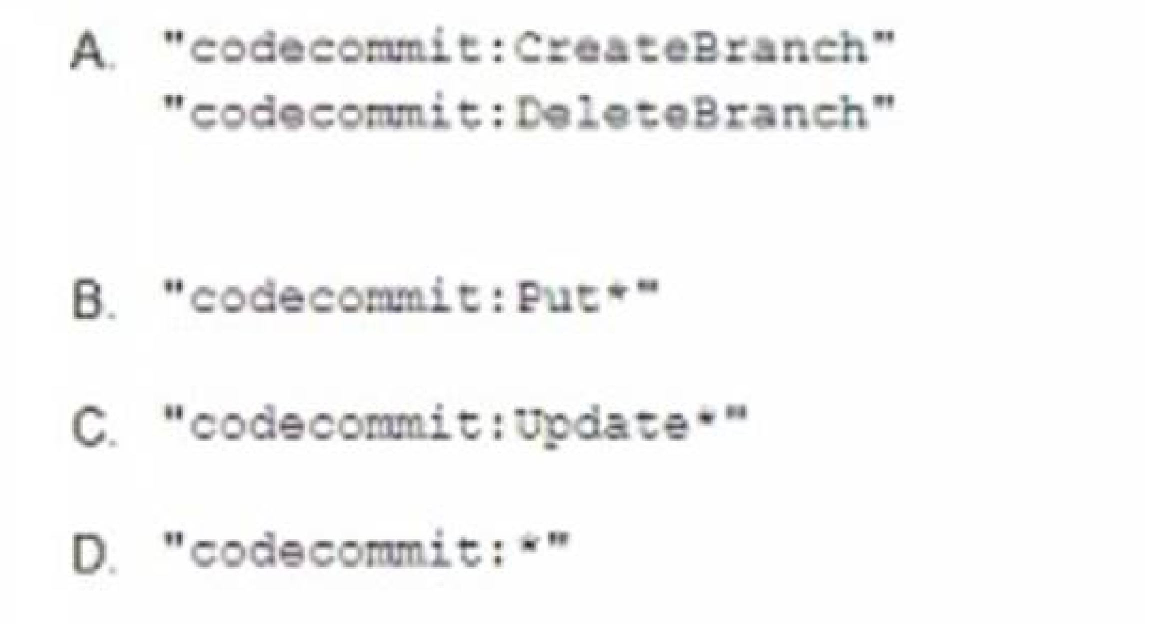
A developer accesses AWS CodeCommit over SSH. The SSH keys configured to access AWS CodeCommit are tied to a user with the following permissions:



```
{
"Version": "2012-10-17",
"Statement": [
  {
   "Effect": "Allow",
   "Action": [
    "codecommit:BatchGetRepositories",
    "codecommit:Get*",
    "codecommit:List*",
    "codecommit:GitPull"
   ],
   "Resource": "*"
  }
]
}
```

The developer needs to create/delete branches

Which specific IAM permissions need to be added based on the principle of least privilege?



A. "codecommit:CreateBranch"
"codecommit:DeleteBranch"

B. "codecommit:Put*"

C. "codecommit:Update*"

D. "codecommit:*"

A. Option A
B. Option B
C. Option C

D. Option D

Answer: A

Explanation:
This solution allows the developer to create and delete branches in AWS CodeCommit by granting the codecommit:CreateBranch and codecommit:DeleteBranch permissions. These are the minimum permissions required for this task, following the principle of least privilege. Option B grants too many permissions, such as codecommit:Put*, which allows the developer to create, update, or delete any resource in CodeCommit. Option C grants too few permissions, such as codecommit:Update*, which does not allow the developer to create or delete branches. Option D grants all permissions, such as codecommit:*, which is not secure or recommended.
Reference: [AWS CodeCommit Permissions Reference], [Create a Branch (AWS CLI)]

NEW QUESTION 93
A developer needs to store configuration variables for an application. The developer needs to set an expiration date and time for me configuration. The developer wants to receive notifications. Before the configuration expires. Which solution will meet these requirements with the LEAST operational overhead?

A. Create a standard parameter in AWS Systems Manager Parameter Store Set Expiation and Expiration Notification policy types.
B. Create a standard parameter in AWS Systems Manager Parameter Store Create an AWS Lambda function to expire the configuration and to send Amazon Simple Notification Service (Amazon SNS) notifications.
C. Create an advanced parameter in AWS Systems Manager Parameter Store Set Expiration and Expiration Notification policy types.
D. Create an advanced parameter in AWS Systems Manager Parameter Store Create an Amazon EC2 instance with a corn job to expire the configuration and to send notifications.

Answer: C

Explanation:
This solution will meet the requirements by creating an advanced parameter in AWS Systems Manager Parameter Store, which is a secure and scalable service for storing and managing configuration data and secrets. The advanced parameter allows setting expiration and expiration notification policy types, which enable specifying an expiration date and time for the configuration and receiving notifications before the configuration expires. The Lambda code will be refactored to load the Root CA Cert from the parameter store and modify the runtime trust store outside the Lambda function handler, which will improve performance and reduce latency by avoiding repeated calls to Parameter Store and trust store modifications for each invocation of the Lambda function. Option A is not optimal because it will create a standard parameter in AWS Systems Manager Parameter Store, which does not support expiration and expiration notification policy types. Option B is not optimal because it will create a secret access key and access key ID with permission to access the S3 bucket, which will introduce additional security risks and complexity for storing and managing credentials. Option D is not optimal because it will create a Docker container from Node.js base image to invoke Lambda functions, which will incur additional costs and overhead for creating and running Docker containers. References: AWS Systems Manager Parameter Store, [Using SSL/TLS to Encrypt a Connection to a DB Instance]

NEW QUESTION 96
A developer is preparing to begin development of a new version of an application. The previous version of the application is deployed in a production environment. The developer needs to deploy fixes and updates to the current version during the development of the new version of the application. The code for the new version of the application is stored in AWS CodeCommit.
Which solution will meet these requirements?

A. From the main branch, create a feature branch for production bug fixe
B. Create a second feature branch from the main branch for development of the new version.
C. Create a Git tag of the code that is currently deployed in productio
D. Create a Git tag for the development of the new versio
E. Push the two tags to the CodeCommit repository.
F. From the main branch, create a branch of the code that is currently deployed in productio
G. Apply an IAM policy that ensures no other other users can push or merge to the branch.
H. Create a new CodeCommit repository for development of the new version of the applicatio
I. Create a Git tag for the development of the new version.

Answer: A

Explanation:
? A feature branch is a branch that is created from the main branch to work on a specific feature or task1. Feature branches allow developers to isolate their work from the main branch and avoid conflicts with other changes1. Feature branches can be merged back to the main branch when the feature or task is completed and tested1.
? In this scenario, the developer needs to maintain two parallel streams of work: one for fixing and updating the current version of the application that is deployed in production, and another for developing the new version of the application. The developer can use feature branches to achieve this goal.
? The developer can create a feature branch from the main branch for production bug fixes. This branch will contain the code that is currently deployed in production, and any fixes or updates that need to be applied to it. The developer can push this branch to the CodeCommit repository and use it to deploy changes to the production environment.
? The developer can also create a second feature branch from the main branch for development of the new version of the application. This branch will contain the code that is under development for the new version, and any changes or enhancements that are part of it. The developer can push this branch to the CodeCommit repository and use it to test and deploy the new version of the application in a separate environment.
? By using feature branches, the developer can keep the main branch stable and clean, and avoid mixing code from different versions of the application. The developer can also easily switch between branches and merge them when needed.

NEW QUESTION 99
A development team maintains a web application by using a single AWS CloudFormation template. The template defines web servers and an Amazon RDS database. The team uses the Cloud Formation template to deploy the Cloud Formation stack to different environments.
During a recent application deployment, a developer caused the primary development database to be dropped and recreated. The result of this incident was a loss of data. The team needs to avoid accidental database deletion in the future.
Which solutions will meet these requirements? (Choose two.)

A. Add a CloudFormation Deletion Policy attribute with the Retain value to the database resource.

B. Update the CloudFormation stack policy to prevent updates to the database.
C. Modify the database to use a Multi-AZ deployment.
D. Create a CloudFormation stack set for the web application and database deployments.
E. Add a Cloud Formation DeletionPolicy attribute with the Retain value to the stack.

Answer: AB

Explanation:
AWS CloudFormation is a service that enables developers to model and provision AWS resources using templates. The developer can add a CloudFormation Deletion Policy attribute with the Retain value to the database resource. This will prevent the database from being deleted when the stack is deleted or updated. The developer can also update the CloudFormation stack policy to prevent updates to the database. This will prevent accidental changes to the database configuration or properties.
References:
? [What Is AWS CloudFormation? - AWS CloudFormation]
? [DeletionPolicy Attribute - AWS CloudFormation]
? [Protecting Resources During Stack Updates - AWS CloudFormation]

NEW QUESTION 101
A company has a web application that runs on Amazon EC2 instances with a custom Amazon Machine Image (AMI) The company uses AWS CloudFormation to provision the application The application runs in the us-east-1 Region, and the company needs to deploy the application to the us-west-1 Region
An attempt to create the AWS CloudFormation stack in us-west-1 fails. An error message states that the AMI ID does not exist. A developer must resolve this error with a solution that uses the least amount of operational overhead
Which solution meets these requirements?

A. Change the AWS CloudFormation templates for us-east-1 and us-west-1 to use an AWS AM
B. Relaunch the stack for both Regions.
C. Copy the custom AMI from us-east-1 to us-west-1. Update the AWS CloudFormation template for us-west-1 to refer to AMI ID for the copied AMI Relaunch the stack
D. Build the custom AMI in us-west-1 Create a new AWS CloudFormation template to launch the stack in us-west-1 with the new AMI ID
E. Manually deploy the application outside AWS CloudFormation in us-west-1.

Answer: B

Explanation:
https://aws.amazon.com/blogs/aws/ec2-ami-copy-between-regions/

NEW QUESTION 103
A developer is working on a serverless application that needs to process any changes to an Amazon DynamoDB table with an AWS Lambda function.
How should the developer configure the Lambda function to detect changes to the DynamoDB table?

A. Create an Amazon Kinesis data stream, and attach it to the DynamoDB tabl
B. Create a trigger to connect the data stream to the Lambda function.
C. Create an Amazon EventBridge rule to invoke the Lambda function on a regular schedul
D. Connect to the DynamoDB table from the Lambda function to detect changes.
E. Enable DynamoDB Streams on the tabl
F. Create a trigger to connect the DynamoDB stream to the Lambda function.
G. Create an Amazon Kinesis Data Firehose delivery stream, and attach it to the DynamoDB tabl
H. Configure the delivery stream destination as the Lambda function.

Answer: C

Explanation:
Amazon DynamoDB is a fully managed NoSQL database service that provides fast and consistent performance with seamless scalability. DynamoDB Streams is a feature that captures data modification events in DynamoDB tables. The developer can enable DynamoDB Streams on the table and create a trigger to connect the DynamoDB stream to the Lambda function. This solution will enable the Lambda function to detect changes to the DynamoDB table in near real time.
References:
? [Amazon DynamoDB]
? [DynamoDB Streams - Amazon DynamoDB]
? [Using AWS Lambda with Amazon DynamoDB - AWS Lambda]

NEW QUESTION 107
A company built an online event platform For each event the company organizes quizzes and generates leaderboards that are based on the quiz scores. The company stores the leaderboard data in Amazon DynamoDB and retains the data for 30 days after an event is complete The company then uses a scheduled job to delete the old leaderboard data
The DynamoDB table is configured with a fixed write capacity. During the months when many events occur, the DynamoDB write API requests are throttled when the scheduled delete job runs.
A developer must create a long-term solution that deletes the old leaderboard data and optimizes write throughput
Which solution meets these requirements?

A. Configure a TTL attribute for the leaderboard data
B. Use DynamoDB Streams to schedule and delete the leaderboard data
C. Use AWS Step Functions to schedule and delete the leaderboard data.
D. Set a higher write capacity when the scheduled delete job runs

Answer: A

Explanation:
"deletes the item from your table without consuming any write throughput" https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/TTL.html

NEW QUESTION 110
A developer has created an AWS Lambda function that makes queries to an Amazon Aurora MySQL DB instance. When the developer performs a test the OB instance shows an error for too many connections.
Which solution will meet these requirements with the LEAST operational effort?

A. Create a read replica for the DB instance Query the replica DB instance instead of the primary DB instance.
B. Migrate the data lo an Amazon DynamoDB database.
C. Configure the Amazon Aurora MySQL DB instance tor Multi-AZ deployment.
D. Create a proxy in Amazon RDS Proxy Query the proxy instead of the DB instance.

Answer: D

Explanation:
This solution will meet the requirements by using Amazon RDS Proxy, which is a fully managed, highly available database proxy for Amazon RDS that makes applications more scalable, more resilient to database failures, and more secure. The developer can create a proxy in Amazon RDS Proxy, which sits between the application

and the DB instance and handles connection management, pooling, and routing. The developer can query the proxy instead of the DB instance, which reduces the number of open connections to the DB instance and avoids errors for too many connections. Option A is not optimal because it will create a read replica for the DB instance, which may not solve the problem of too many connections as read replicas also have connection limits and may incur additional costs. Option B is not optimal because it will migrate the data to an Amazon DynamoDB database, which may introduce additional complexity and overhead for migrating and accessing data from a different database service. Option C is not optimal because it will configure the Amazon Aurora MySQL DB instance for Multi-AZ deployment, which may improve availability and durability of the DB instance but not reduce the number of connections.
References: [Amazon RDS Proxy], [Working with Amazon RDS Proxy]

NEW QUESTION 115
A company has an analytics application that uses an AWS Lambda function to process transaction data asynchronously A developer notices that asynchronous invocations of the Lambda function sometimes fail When failed Lambda function invocations occur, the developer wants to invoke a second Lambda function to handle errors and log details.
Which solution will meet these requirements?

A. Mastered
B. Not Mastered

Answer: A

Explanation:
Configuring a Lambda function destination with a failure condition is the best solution for invoking a second Lambda function to handle errors and log details. A Lambda function destination is a resource that Lambda sends events to after a function is invoked. The developer can specify the destination type as Lambda function and the ARN of the error-handling Lambda function as the resource. The developer can also specify the failure condition, which means that the destination is invoked only when the initial Lambda function fails. The destination event will include the response from the initial function, the request ID, and the timestamp. The other solutions are either not feasible or not efficient. Enabling AWS X-Ray active tracing on the initial Lambda function will help to monitor and troubleshoot the function performance, but it will not automatically invoke the error-handling Lambda function. Configuring a Lambda function trigger with a failure condition is not a valid option, as triggers are used to invoke Lambda functions, not to send events from Lambda functions. Creating a status check alarm on the initial Lambda function will incur additional costs and complexity, and it will not capture the details of the failed
invocations. References
? Using AWS Lambda destinations
? Asynchronous invocation - AWS Lambda
? AWS Lambda Destinations: What They Are and Why to Use Them
? AWS Lambda Destinations: A Complete Guide | Dashbird

NEW QUESTION 119
A company wants to deploy and maintain static websites on AWS. Each website's source code is hosted in one of several version control systems, including AWS CodeCommit, Bitbucket, and GitHub.
The company wants to implement phased releases by using development, staging, user acceptance testing, and production environments in the AWS Cloud. Deployments to each environment must be started by code merges on the relevant Git branch. The company wants to use HTTPS for all data exchange. The company needs a solution that does not require servers to run continuously.
Which solution will meet these requirements with the LEAST operational overhead?

A. Host each website by using AWS Amplify with a serverless backen
B. Conned the repository branches that correspond to each of the desired environment
C. Start deployments by merging code changes to a desired branch.
D. Host each website in AWS Elastic Beanstalk with multiple environment
E. Use the EB CLI to link each repository branc
F. Integrate AWS CodePipeline to automate deployments from version control code merges.
G. Host each website in different Amazon S3 buckets for each environmen
H. Configure AWS CodePipeline to pull source code from version contro
I. Add an AWS CodeBuild stage to copy source code to Amazon S3.
J. Host each website on its own Amazon EC2 instanc
K. Write a custom deployment script to bundle each website's static asset
L. Copy the assets to Amazon EC2. Set up a workflow to run the script when code is merged.

Answer: A

Explanation:
AWS Amplify is a set of tools and services that enables developers to build and deploy full-stack web and mobile applications that are powered by AWS. AWS Amplify supports hosting static websites on Amazon S3 and Amazon CloudFront, with HTTPS enabled by default. AWS Amplify also integrates with various version control systems, such as AWS CodeCommit, Bitbucket, and GitHub, and allows developers to connect different branches to different environments. AWS Amplify automatically builds and deploys the website whenever code changes are merged to a connected branch, enabling phased releases with minimal operational overhead. Reference: AWS Amplify Console

NEW QUESTION 124

A company's developer has deployed an application in AWS by using AWS CloudFormation The CloudFormation stack includes parameters in AWS Systems Manager Parameter Store that the application uses as configuration settings. The application can modify the parameter values

When the developer updated the stack to create additional resources with tags, the developer noted that the parameter values were reset and that the values ignored the latest changes made by the application. The developer needs to change the way the company deploys the CloudFormation stack. The developer also needs to avoid resetting the parameter values outside the stack.

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

A. Modify the CloudFormation stack to set the deletion policy to Retain for the Parameter Store parameters.
B. Create an Amazon DynamoDB table as a resource in the CloudFormation stack to hold configuration data for the application Migrate the parameters that the application is modifying from Parameter Store to the DynamoDB table
C. Create an Amazon RDS DB instance as a resource in the CloudFormation stac
D. Create a table in the database for parameter configuratio
E. Migrate the parameters that the application is modifying from Parameter Store to the configuration table
F. Modify the CloudFormation stack policy to deny updates on Parameter Store parameters

Answer: D

Explanation:

https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/protect-stack- resources.html#stack-policy-samples

NEW QUESTION 127

A developer created an AWS Lambda function that performs a series of operations that involve multiple AWS services. The function's duration time is higher than normal. To determine the cause of the issue, the developer must investigate traffic between the services without changing the function code

Which solution will meet these requirements?

A. Mastered
B. Not Mastered

Answer: A

Explanation:

AWS X-Ray is a service that helps you analyze and debug your applications. You can use X-Ray to trace requests made to your Lambda function and other AWS services, and identify performance bottlenecks and errors. Enabling active tracing in your Lambda function allows X-Ray to collect data from the function invocation and the downstream services that it calls. You can then review the logs and service maps in X-Ray to diagnose the issue. References

? Monitoring and troubleshooting Lambda functions - AWS Lambda
? Using AWS Lambda with AWS X-Ray
? Troubleshoot Lambda function cold start issues | AWS re:Post

NEW QUESTION 130

A developer is using AWS Amplify Hosting to build and deploy an application. The developer is receiving an increased number of bug reports from users. The developer wants to add end-to-end testing to the application to eliminate as many bugs as possible before the bugs reach production.

Which solution should the developer implement to meet these requirements?

A. Run the amplify add test command in the Amplify CLI.
B. Create unit tests in the applicatio
C. Deploy the unit tests by using the amplify push command in the Amplify CLI.
D. Add a test phase to the amplify.yml build settings for the application.
E. Add a test phase to the aws-exports.js file for the application.

Answer: C

Explanation:

The solution that will meet the requirements is to add a test phase to the amplify.yml build settings for the application. This way, the developer can run end-to-end tests on every code commit and catch any bugs before deploying to production. The other options either do not support end-to-end testing, or do not run tests automatically.

Reference: End-to-end testing

NEW QUESTION 131

A developer is working on a web application that uses Amazon DynamoDB as its data store The application has two DynamoDB tables one table that is named artists and one table that is named songs The artists table has artistName as the partition key. The songs table has songName as the partition key and artistName as the sort key

The table usage patterns include the retrieval of multiple songs and artists in a single database operation from the webpage. The developer needs a way to retrieve this information with minimal network traffic and optimal application performance.

Which solution will meet these requirements'?

A. Perform a BatchGetItem operation that returns items from the two table
B. Use the list of songName artistName keys for the songs table and the list of artistName key for the artists table.
C. Create a local secondary index (LSI) on the songs table that uses artistName as the partition key Perform a query operation for each artistName on the songs table that filters by the list of songName Perform a query operation for each artistName on the artists table
D. Perform a BatchGetItem operation on the songs table that uses the songName/artistName key
E. Perform a BatchGetItem operation on the artists table that uses artistName as the key.
F. Perform a Scan operation on each table that filters by the list of songName/artistName for the songs table and the list of artistName in the artists table.

Answer: A

Explanation:

BatchGetItem can return one or multiple items from one or more tables. For reference check the link below https://docs.aws.amazon.com/amazondynamodb/latest/APIReference/API_BatchGetItem.h tml

NEW QUESTION 133
A company is migrating legacy internal applications to AWS. Leadership wants to rewrite the internal employee directory to use native AWS services. A developer needs to create a solution for storing employee contact details and high-resolution photos for use with the new application.
Which solution will enable the search and retrieval of each employee's individual details and high-resolution photos using AWS APIs?

A. Encode each employee's contact information and photos using Base64. Store the information in an Amazon DynamoDB table using a sort key.
B. Store each employee's contact information in an Amazon DynamoDB table along with the object keys for the photos stored in Amazon S3.
C. Use Amazon Cognito user pools to implement the employee directory in a fully managed software-as-a-service (SaaS) method.
D. Store employee contact information in an Amazon RDS DB instance with the photos stored in Amazon Elastic File System (Amazon EFS).

Answer: B

Explanation:
Amazon DynamoDB is a fully managed NoSQL database service that provides fast and consistent performance with seamless scalability. The developer can store each employee's contact information in a DynamoDB table along with the object keys for the photos stored in Amazon S3. Amazon S3 is an object storage service that offers industry-leading scalability, data availability, security, and performance. The developer can use AWS APIs to search and retrieve the employee details and photos from DynamoDB and S3.
References:
? [Amazon DynamoDB]
? [Amazon Simple Storage Service (S3)]

NEW QUESTION 138
A company is running a custom application on a set of on-premises Linux servers that are accessed using Amazon API Gateway. AWS X-Ray tracing has been enabled on the API test stage.
How can a developer enable X-Ray tracing on the on-premises servers with the LEAST amount of configuration?

A. Install and run the X-Ray SDK on the on-premises servers to capture and relay the data to the X-Ray service.
B. Install and run the X-Ray daemon on the on-premises servers to capture and relay the data to the X-Ray service.
C. Capture incoming requests on-premises and configure an AWS Lambda function to pull, process, and relay relevant data to X-Ray using the PutTraceSegments API call.
D. Capture incoming requests on-premises and configure an AWS Lambda function to pull, process, and relay relevant data to X-Ray using the PutTelemetryRecords API call.

Answer: B

Explanation:
The X-Ray daemon is a software that collects trace data from the X-Ray SDK and relays it to the X-Ray service. The X-Ray daemon can run on any platform that supports Go, including Linux, Windows, and macOS. The developer can install and run the X-Ray daemon on the on-premises servers to capture and relay the data to the X-Ray service with minimal configuration. The X-Ray SDK is used to instrument the application code, not to capture and relay data. The Lambda function solutions are more complex and require additional configuration.
References:
? [AWS X-Ray concepts - AWS X-Ray]
? [Setting up AWS X-Ray - AWS X-Ray]

NEW QUESTION 141
A developer has a legacy application that is hosted on-premises. Other applications hosted on AWS depend on the on-premises application for proper functioning. In case of any application errors, the developer wants to be able to use Amazon CloudWatch to monitor and troubleshoot all applications from one place.
How can the developer accomplish this?

A. Install an AWS SDK on the on-premises server to automatically send logs to CloudWatch.
B. Download the CloudWatch agent to the on-premises serve
C. Configure the agent to use IAM user credentials with permissions for CloudWatch.
D. Upload log files from the on-premises server to Amazon S3 and have CloudWatch read the files.
E. Upload log files from the on-premises server to an Amazon EC2 instance and have the instance forward the logs to CloudWatch.

Answer: B

Explanation:
Amazon CloudWatch is a service that monitors AWS resources and applications. The developer can use CloudWatch to monitor and troubleshoot all applications from one place. To do so, the developer needs to download the CloudWatch agent to the on-premises server and configure the agent to use IAM user credentials with permissions for CloudWatch. The agent will collect logs and metrics from the on-premises server and send them to CloudWatch.
References:
? [What Is Amazon CloudWatch? - Amazon CloudWatch]
? [Installing and Configuring the CloudWatch Agent - Amazon CloudWatch]

NEW QUESTION 146
A developer deployed an application to an Amazon EC2 instance The application needs to know the public IPv4 address of the instance
How can the application find this information?

A. Query the instance metadata from http./M69.254.169.254. latestmeta-data/.
B. Query the instance user data from http '169 254.169 254. latest/user-data/
C. Query the Amazon Machine Image (AMI) information from http://169.254.169.254/latest/meta-data/ami/.
D. Check the hosts file of the operating system

Answer: A

Explanation:
The instance metadata service provides information about the EC2 instance, including the public IPv4 address, which can be obtained by querying the endpoint http://169.254.169.254/latest/meta-data/public-ipv4. References
? Instance metadata and user data
? Get Public IP Address on current EC2 Instance
? Get the public ip address of your EC2 instance quickly

NEW QUESTION 149
A team of developed is using an AWS CodePipeline pipeline as a continuous integration and continuous delivery (CI/CD) mechanism for a web application. A developer has written unit tests to programmatically test the functionality of the application code. The unit tests produce a test report that shows the results of each individual check. The developer now
wants to run these tests automatically during the CI/CD process.

A. Write a Git pre-commit hook that runs the test before every commi
B. Ensure that each developer who is working on the project has the pre-commit hook instated locall
C. Review the test report and resolve any issues before pushing changes to AWS CodeCommit.
D. Add a new stage to the pipelin
E. Use AWS CodeBuild as the provide
F. Add the new stage after the stage that deploys code revisions to the test environmen
G. Write a buildspec that fails the CodeBuild stage if any test does not pas
H. Use the test reports feature of Codebuild to integrate the report with the CodoBuild consol
I. View the test results in CodeBuild Resolve any issues.
J. Add a new stage to the pipelin
K. Use AWS CodeBuild at the provide
L. Add the new stage before the stage that deploys code revisions to the test environmen
M. Write a buildspec that fails the CodeBuild stage it any test does not pas
N. Use the test reports feature of CodeBuild to integrate the report with the CodeBuild consol
O. View the test results in codeBuild Resolve any issues.
P. Add a new stage to the pipelin
Q. Use Jenkins as the provide
R. Configure CodePipeline to use Jenkins to run the unit test
S. Write a Jenkinsfile that fails the stage if any test does not pas
T. Use the test report plugin for Jenkins to integrate the repot with the Jenkins dashboar
. View the test results in Jenkin
. Resolve any issues.

Answer: C

Explanation:
The solution that will meet the requirements is to add a new stage to the pipeline. Use AWS CodeBuild as the provider. Add the new stage before the stage that deploys code revisions to the test environment. Write a buildspec that fails the CodeBuild stage if any test does not pass. Use the test reports feature of CodeBuild to integrate the report with the CodeBuild console. View the test results in CodeBuild. Resolve any issues. This way, the developer can run the unit tests automatically during the CI/CD process and catch any bugs before deploying to the test environment. The developer can also use the test reports feature of CodeBuild to view and analyze the test results in a graphical interface. The other options either involve running the tests manually, running them after deployment, or using a different provider that requires additional configuration and integration.
Reference: Test reports for CodeBuild

NEW QUESTION 150
A company’s website runs on an Amazon EC2 instance and uses Auto Scaling to scale the environment during peak times. Website users across the world ate experiencing high latency flue lo sialic content on theEC2 instance. even during non-peak hours.
When companion of steps mill resolves the latency issue? (Select TWO)

A. Double the Auto Scaling group's maximum number of servers
B. Host the application code on AWS lambda
C. Scale vertically by resizing the EC2 instances
D. Create an Amazon Cloudfront distribution to cache the static content
E. Store the application’s sialic content in Amazon S3

Answer: DE

Explanation:
The combination of steps that will resolve the latency issue is to create an Amazon CloudFront distribution to cache the static content and store the application’s static content in Amazon S3. This way, the company can use CloudFront to deliver the static content from edge locations that are closer to the website users, reducing latency and improving performance. The company can also use S3 to store the static content reliably and cost-effectively, and integrate it with CloudFront easily. The other options either do not address the latency issue, or are not necessary or feasible for the given scenario.
Reference: Using Amazon S3 Origins and Custom Origins for Web Distributions

NEW QUESTION 153
A company runs a batch processing application by using AWS Lambda functions and Amazon API Gateway APIs with deployment stages for development, user acceptance testing and production A development team needs to configure the APIs in the deployment stages to connect to third-party service endpoints.
Which solution will meet this requirement?

A. Store the third-party service endpoints in Lambda layers that correspond to the stage
B. Store the third-party service endpoints in API Gateway stage variables that correspond to the stage
C. Encode the third-party service endpoints as query parameters in the API Gateway request URL.
D. Store the third-party service endpoint for each environment in AWS AppConfig

Answer: B

Explanation:
API Gateway stage variables are name-value pairs that can be defined as configuration attributes associated with a deployment stage of a REST API. They act like environment variables and can be used in the API setup and mapping templates. For example, the development team can define a stage variable named endpoint and assign it different values for each stage, such as dev.example.com for development, uat.example.com for user acceptance testing, and prod.example.com for production. Then, the team can use the stage variable value in the integration request URL, such as http://$ { stageVariables.endpoint}/api. This way, the team can use the same API setup with different endpoints at each stage by resetting the stage variable value. The other solutions are either not feasible or not cost-effective. Lambda layers are used to package and load dependencies for Lambda functions, not for storing endpoints. Encoding the endpoints as query parameters would expose them to the public and make the request URL unnecessarily long. Storing the endpoints in AWS AppConfig would incur additional costs and complexity, and would require additional logic to retrieve the values from the configuration store. References
? Using Amazon API Gateway stage variables
? Setting up stage variables for a REST API deployment
? Setting stage variables using the Amazon API Gateway console

NEW QUESTION 157
A developer is creating an AWS Lambda function in VPC mode An Amazon S3 event will invoke the Lambda function when an object is uploaded into an S3 bucket The Lambda function will process the object and produce some analytic results that will be recorded into a file Each processed object will also generate a log entry that will be recorded into a file.
Other Lambda functions. AWS services, and on-premises resources must have access to the result files and log file. Each log entry must also be appended to the same shared log file. The developer needs a solution that can share files and append results into an existing file.
Which solution should the developer use to meet these requirements?

A. Create an Amazon Elastic File System (Amazon EFS) file syste
B. Mount the EFS file system in Lambd
C. Store the result files and log file in the mount poin
D. Append the log entries to the log file.
E. Create an Amazon Elastic Block Store (Amazon EBS) Multi-Attach enabled volume Attach the EBS volume to all Lambda function
F. Update the Lambda function code to download the log file, append the log entries, and upload the modified log file to Amazon EBS
G. Create a reference to the /tmp local director
H. Store the result files and log file by using the directory referenc
I. Append the log entry to the log file.
J. Create a reference to the /opt storage directory Store the result files and log file by using the directory reference Append the log entry to the log file

Answer: A

Explanation:
https://aws.amazon.com/blogs/compute/using-amazon-efs-for-aws-lambda-in-your-serverless-applications/

NEW QUESTION 159
A company has built an AWS Lambda function to convert large image files into output files that can be used in a third-party viewer application The company recently added a new module to the function to improve the output of the generated files However, the new module has increased the bundle size and has increased the time that is needed to deploy changes to the function code.
How can a developer increase the speed of the Lambda function deployment?

A. Use AWS CodeDeploy to deploy the function code
B. Use Lambda layers to package and load dependencies.
C. Increase the memory size of the function.
D. Use Amazon S3 to host the function dependencies

Answer: B

Explanation:
Using Lambda layers is a way to reduce the size of the deployment package and speed up the deployment process. Lambda layers are reusable components that can contain libraries, custom runtimes, or other dependencies. By using layers, the developer can separate the core function logic from the dependencies, and avoid uploading them every time the function code changes. Layers can also be shared across multiple functions or accounts, which can improve consistency and maintainability. References
? Working with AWS Lambda layers
? AWS Lambda Layers Best Practices
? Best practices for working with AWS Lambda functions

NEW QUESTION 164
A developer is creating an Amazon DynamoDB table by using the AWS CLI The DynamoDB table must use server-side encryption with an AWS owned encryption key
How should the developer create the DynamoDB table to meet these requirements?

A. Create an AWS Key Management Service (AWS KMS) customer managed ke
B. Provide the key's Amazon Resource Name (ARN) in the KMSMasterKeyld parameter during creation of the DynamoDB table
C. Create an AWS Key Management Service (AWS KMS) AWS managed key Provide the key's Amazon Resource Name (ARN) in the KMSMasterKeyld parameter during creation of the DynamoDB table
D. Create an AWS owned key Provide the key's Amazon Resource Name (ARN) in the KMSMasterKeyld parameter during creation of the DynamoDB table.
E. Create the DynamoDB table with the default encryption options

Answer: D

Explanation:
When creating an Amazon DynamoDB table using the AWS CLI, server-side encryption with an AWS owned encryption key is enabled by default. Therefore, the developer does not need to create an AWS KMS key or specify the KMSMasterKeyId parameter. Option A and B are incorrect because they suggest creating customer- managed and AWS-managed KMS keys, which are not needed in this scenario. Option C is also incorrect because AWS owned keys are automatically used for server-side encryption by default.

NEW QUESTION 165
A developer wants to deploy a new version of an AWS Elastic Beanstalk application. During deployment, the application must maintain full capacity and avoid service interruption. Additionally, the developer must minimize the cost of additional resources that support the deployment.
Which deployment method should the developer use to meet these requirements?

A.

All at once
B. Rolling with additional batch
C. Blue/green
D. Immutable

Answer: D

Explanation:
The immutable deployment method is the best option for this scenario, because it meets the requirements of maintaining full capacity, avoiding service interruption, and minimizing the cost of additional resources.
The immutable deployment method creates a new set of instances in a separate Auto Scaling group and deploys the new version of the application to them. Then, it swaps the new instances with the old ones and terminates the old instances. This way, the application maintains full capacity during the deployment and avoids any downtime. The cost of additional resources is also minimized, because the new instances are only created for a short time and then replaced by the old ones.
The other deployment methods do not meet all the requirements:
? The all at once method deploys the new version to all instances simultaneously, which causes a short period of downtime and reduced capacity.
? The rolling with additional batch method deploys the new version in batches, but for the first batch it creates new instances instead of using the existing ones. This increases the cost of additional resources and reduces the capacity of the original environment.
? The blue/green method creates a new environment with a new set of instances and deploys the new version to them. Then, it swaps the URLs between the old and new environments. This method maintains full capacity and avoids service interruption, but it also increases the cost of additional resources significantly, because it duplicates the entire environment.

NEW QUESTION 169
A developer is building an application that gives users the ability to view bank account from multiple sources in a single dashboard. The developer has automated the process to retrieve API credentials for these sources. The process invokes an AWS Lambda function that is associated with an AWS CloudFormation cotton resource.
The developer wants a solution that will store the API credentials with minimal operational overhead.
When solution will meet these requirements?

A. Add an AWS Secrets Manager GenerateSecretString resource to the CloudFormation templat
B. Set the value to reference new credentials to the Cloudformation resource.
C. Use the AWS SDK ssm PutParameter operation in the Lambda function from the existing, custom resource to store the credentials as a paramete
D. Set the parameter value to reference the new credential
E. Set ma parameter type to SecureString.
F. Add an AWS Systems Manager Parameter Store resource to the CloudFormation templat
G. Set the CloudFormation resource value to reference the new credentials Set the resource NoEcho attribute to true.
H. Use the AWS SDK ssm PutParameter operation in the Lambda function from the existing custom resources to store the credentials as a paramete
I. Set the parameter value to reference the new credential
J. Set the parameter NoEcho attribute to true.

Answer: B

Explanation:
The solution that will meet the requirements is to use the AWS SDK ssm PutParameter operation in the Lambda function from the existing custom resource to store the credentials as a parameter. Set the parameter value to reference the new credentials. Set the parameter type to SecureString. This way, the developer can store the API credentials with minimal operational overhead, as AWS Systems Manager Parameter Store provides secure and scalable storage for configuration data. The SecureString parameter type encrypts the parameter value with AWS Key Management Service (AWS KMS). The other options either involve adding additional resources to the CloudFormation template, which increases complexity and cost, or do not encrypt the parameter value, which reduces security.
Reference: Creating Systems Manager parameters

NEW QUESTION 172

A developer is troubleshooting an application in an integration environment. In the application, an Amazon Simple Queue Service (Amazon SQS) queue consumes messages and then an AWS Lambda function processes the messages. The Lambda function transforms the messages and makes an API call to a third-party service.
There has been an increase in application usage. The third-party API frequently returns an HTTP 429 Too Many Requests error message. The error message prevents a significant number of messages from being processed successfully.
How can the developer resolve this issue?

A. Increase the SQS event source's batch size setting.
B. Configure provisioned concurrency for the Lambda function based on the third-party API's documented rate limits.
C. Increase the retry attempts and maximum event age in the Lambda function's asynchronous configuration.
D. Configure maximum concurrency on the SQS event source based on the third-party service's documented rate limits.

Answer: D

Explanation:
? Maximum concurrency for SQS as an event source allows customers to control the maximum concurrent invokes by the SQS event source1. When multiple SQS event sources are configured to a function, customers can control the maximum concurrent invokes of individual SQS event source1.
? In this scenario, the developer needs to resolve the issue of the third-party API frequently returning an HTTP 429 Too Many Requests error message, which prevents a significant number of messages from being processed successfully. To achieve this, the developer can follow these steps:
? By using this solution, the developer can reduce the frequency of HTTP 429 errors and improve the message processing success rate. The developer can also avoid throttling or blocking by the third-party API.

NEW QUESTION 175
A company is planning to use AWS CodeDeploy to deploy an application to Amazon Elastic Container Service (Amazon ECS) During the deployment of a new version of the application, the company initially must expose only 10% of live traffic to the new version of the deployed application. Then, after 15 minutes elapse, the company must route all the remaining live traffic to the new version of the deployed application.
Which CodeDeploy predefined configuration will meet these requirements?

A. CodeDeployDefault ECSCanary10Percent15Minutes
B. CodeDeployDefault LambdaCanary10Percent5Minutes
C. CodeDeployDefault LambdaCanary10Percent15Minutes
D. CodeDeployDefault ECSLinear10PercentEvery1 Minutes

Answer: A

Explanation:
The predefined configuration "CodeDeployDefault.ECSCanary10Percent15Minutes" is designed for Amazon Elastic Container Service (Amazon ECS) deployments and meets the specified requirements. It will perform a canary deployment, which means it will initially route 10% of live traffic to the new version of the application, and then after 15 minutes elapse, it will automatically route all the remaining live traffic to the new version. This gradual deployment approach allows

the company to verify the health and performance of the new version with a small portion of traffic before fully deploying it to all users.

NEW QUESTION 179

A data visualization company wants to strengthen the security of its core applications The applications are deployed on AWS across its development staging, pre-production, and production environments. The company needs to encrypt all of its stored sensitive credentials The sensitive credentials need to be automatically rotated Aversion of the sensitive credentials need to be stored for each environment

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

A. Configure AWS Secrets Manager versions to store different copies of the same credentials across multiple environments
B. Create a new parameter version in AWS Systems Manager Parameter Store for each environment Store the environment-specific credentials in the parameter version.
C. Configure the environment variables in the application code Use different names for each environment type Store the environment-specific credentials in the secret
D. Configure AWS Secrets Manager to create a new secret for each environment type.

Answer: D

Explanation:

AWS Secrets Manager is the best option for managing sensitive credentials across multiple environments, as it provides automatic secret rotation, auditing, and monitoring features. It also allows storing environment-specific credentials in separate secrets, which can be accessed by the applications using the SDK or CLI. AWS Systems Manager Parameter Store does not have built-in secret rotation capability, and it requires creating individual parameters or storing the entire credential set as JSON object. Configuring the environment variables in the application code is not a secure or scalable solution, as it exposes the credentials to anyone who can access the code. References

? AWS Secrets Manager vs. Systems Manager Parameter Store
? AWS System Manager Parameter Store vs Secrets Manager vs Environment Variation in Lambda, when to use which
? AWS Secrets Manager vs. Parameter Store: Features, Cost & More

NEW QUESTION 183

A developer wants to add request validation to a production environment Amazon API Gateway API. The developer needs to test the changes before the API is deployed to the production environment. For the test, the developer will send test requests to the API through a testing tool.

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

A. Export the existing API to an OpenAPI fil
B. Create a new AP Modify the new API to add request validatio
C. Import the OpenAPI file.
D. Perform the test
E. Modify the existing API to add request validatio
F. Deploy the existing API to production.
G. Modify the existing API to add request validatio
H. Deploy the updated API to a new API Gateway stag
I. Perform the test
J. Deploy the updated API to the API Gateway production stage.
K. Create a new AP
L. Add the necessary resources and methods, including new request validatio
M. Perform the test
N. Modify the existing API to add request validatio
O. Deploy the existing API to production.
P. Clone the existing AP
Q. Modify the new API to add request validatio
R. Perform the test
S. Modify the existing API to add request validatio
T. Deploy the existing API to production.

Answer: B

Explanation:

Amazon API Gateway allows you to create, deploy, and manage a RESTful API to expose backend HTTP endpoints, AWS Lambda functions, or other AWS services1. You can use API Gateway to perform basic validation of an API request before proceeding with the integration request1. When the validation fails, API Gateway immediately fails the request, returns a 400 error response to the caller, and publishes the validation results in CloudWatch Logs1.
To test changes before deploying to a production environment, you can modify the existing API to add request validation and deploy the updated API to a new API Gateway stage1. This allows you to perform tests without affecting the production environment. Once testing is complete and successful, you can then deploy the updated API to the API Gateway production stage1.
This approach has the least operational overhead as it avoids unnecessary creation of new APIs or exporting and importing of APIs. It leverages the existing infrastructure and only requires changes in the configuration of the existing API1.

NEW QUESTION 184
A developer is creating a mobile app that calls a backend service by using an Amazon API Gateway REST API. For integration testing during the development phase, the developer wants to simulate different backend responses without invoking the backend service.
Which solution will meet these requirements with the LEAST operational overhead?

A. Create an AWS Lambda functio
B. Use API Gateway proxy integration to return constant HTTP responses.
C. Create an Amazon EC2 instance that serves the backend REST API by using an AWS CloudFormation template.
D. Customize the API Gateway stage to select a response type based on the request.
E. Use a request mapping template to select the mock integration response.

Answer: D

Explanation:
Amazon API Gateway supports mock integration responses, which are predefined responses that can be returned without sending requests to a backend service. Mock integration responses can be used for testing or prototyping purposes, or for simulating different backend responses based on certain conditions. A request mapping template can be used to select a mock integration response based on an expression that evaluates some aspects of the request, such as headers, query strings, or body content. This solution does not require any additional resources or code changes and has the least operational overhead. Reference: Set up mock integrations for an API Gateway REST API
https://docs.aws.amazon.com/apigateway/latest/developerguide/how-to-mock- integration.html

NEW QUESTION 188
A developer is incorporating AWS X-Ray into an application that handles personal identifiable information (PII). The application is hosted on Amazon EC2 instances. The application trace messages include encrypted PII and go to Amazon CloudWatch. The developer needs to ensure that no PII goes outside of the EC2 instances.
Which solution will meet these requirements?

A. Manually instrument the X-Ray SDK in the application code.
B. Use the X-Ray auto-instrumentation agent.
C. Use Amazon Macie to detect and hide PI
D. Call the X-Ray API from AWS Lambda.
E. Use AWS Distro for Open Telemetry.

Answer: A

Explanation:
This solution will meet the requirements by allowing the developer to control what data is sent to X-Ray and CloudWatch from the application code. The developer can filter out any PII from the trace messages before sending them to X-Ray and CloudWatch, ensuring that no PII goes outside of the EC2 instances. Option B is not optimal because it will automatically instrument all incoming and outgoing requests from the application, which may include PII in the trace messages. Option C is not optimal because it will require additional services and costs to use Amazon Macie and AWS Lambda, which may not be able to detect and hide all PII from the trace messages. Option D is not optimal because it will use Open Telemetry instead of X-Ray, which may not be compatible with CloudWatch and other AWS services.
References: [AWS X-Ray SDKs]

NEW QUESTION 189
A developer is deploying a company's application to Amazon EC2 instances The application generates gigabytes of data files each day The files are rarely accessed but the files must be available to the application's users within minutes of a request during the first year of storage The company must retain the files for 7 years.
How can the developer implement the application to meet these requirements MOST cost- effectively?

A. Store the files in an Amazon S3 bucket Use the S3 Glacier Instant Retrieval storage class Create an S3 Lifecycle policy to transition the files to the S3 Glacier Deep Archive storage class after 1 year
B. Store the files in an Amazon S3 bucke
C. Use the S3 Standard storage clas
D. Create an S3 Lifecycle policy to transition the files to the S3 Glacier Flexible Retrieval storage class after 1 year.
E. Store the files on an Amazon Elastic Block Store (Amazon EBS) volume Use Amazon Data Lifecycle Manager (Amazon DLM) to create snapshots of the EBS volumes and to store those snapshots in Amazon S3
F. Store the files on an Amazon Elastic File System (Amazon EFS) moun
G. Configure EFS lifecycle management to transition the files to the EFS Standard-Infrequent Access (Standard-IA) storage class after 1 year.

Answer: A

Explanation:
Amazon S3 Glacier Instant Retrieval is an archive storage class that delivers the lowest-cost storage for long-lived data that is rarely accessed and requires retrieval in milliseconds. With S3 Glacier Instant Retrieval, you can save up to 68% on storage costs compared to using the S3 Standard-Infrequent Access (S3 Standard-IA) storage class, when your data is accessed once per quarter. https://aws.amazon.com/s3/storage- classes/glacier/instant-retrieval/

NEW QUESTION 191

A developer is creating an application that includes an Amazon API Gateway REST API in the us-east-2 Region. The developer wants to use Amazon CloudFront and a custom domain name for the API. The developer has acquired an SSL/TLS certificate for the domain from a third-party provider.
How should the developer configure the custom domain for the application?

A. Import the SSL/TLS certificate into AWS Certificate Manager (ACM) in the same Region as the AP
B. Create a DNS A record for the custom domain.
C. Import the SSL/TLS certificate into CloudFron
D. Create a DNS CNAME record for the custom domain.
E. Import the SSL/TLS certificate into AWS Certificate Manager (ACM) in the same Region as the AP
F. Create a DNS CNAME record for the custom domain.
G. Import the SSL/TLS certificate into AWS Certificate Manager (ACM) in the us-east-1 Regio
H. Create a DNS CNAME record for the custom domain.

Answer: D

Explanation:
Amazon API Gateway is a service that enables developers to create, publish, maintain, monitor, and secure APIs at any scale. Amazon CloudFront is a content delivery network (CDN) service that can improve the performance and security of web applications. The developer can use CloudFront and a custom domain name for the API Gateway REST API. To do so, the developer needs to import the SSL/TLS certificate into AWS Certificate Manager (ACM) in the us-east-1 Region. This is because CloudFront requires certificates from ACM to be in this Region. The developer also needs to create a DNS CNAME record for the custom domain that points to the CloudFront distribution.
References:
? [What Is Amazon API Gateway? - Amazon API Gateway]
? [What Is Amazon CloudFront? - Amazon CloudFront]
? [Custom Domain Names for APIs - Amazon API Gateway]

NEW QUESTION 195
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