Exam Questions AWS-Certified-Developer-Associate

Amazon AWS Certified Developer - Associate

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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 performance of the video conversion process and reduce the execution time of the function. This solution does not require any code the 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
An online food company provides an Amazon API Gateway HTTP API 1o receive orders for partners. The API is integrated with an AWS Lambda function. The Lambda function stores the orders in an Amazon DynamoDB table.
The company expects to onboard additional partners Some to me panthers require additional Lambda function to receive orders. The company has created an Amazon S3 bucket. The company needs 10 store all orders and updates m the S3 bucket for future analysis
How can the developer ensure that an orders and updates are stored to Amazon S3 with the LEAST development effort?

A. Create a new Lambda function and a new API Gateway API endpoin
B. Configure the new Lambda function to write to the S3 bucke
C. Modify the original Lambda function to post updates to the new API endpoint.
D. Use Amazon Kinesis Data Streams to create a new data strea
E. Modify the Lambda function to publish orders to the oats stream Configure in data stream to write to the S3 bucket.
F. Enable DynamoDB Streams on me DynamoOB tabl
G. Create a new lambda functio

Configure the Lambda function to write to the S3 bucket as records appear in the table's stream.
H. Associate the stream's Amazon Resource Name (ARN) with the Lambda Function
I. Modify the Lambda function to punish to a new Amazo
J. Simple Lambda function receives order
K. Subscribe a new Lambda function to the topi
L. Configure the new Lambda function to write to the S3 bucket as updates come through the topic.

Answer: C

Explanation:
This solution will ensure that all orders and updates are stored to Amazon S3 with the least development effort because it uses DynamoDB Streams to capture changes in the DynamoDB table and trigger a Lambda function to write those changes to the S3 bucket. This way, the original Lambda function and API Gateway API endpoint do not need to be modified, and no additional services are required. Option A is not optimal because it will require more development effort to create a new Lambda function and a new API Gateway API endpoint, and to modify the original Lambda function to post updates to the new API endpoint. Option B is not optimal because it will introduce additional costs and complexity to use Amazon Kinesis Data Streams to create a new data stream, and to modify the Lambda function to publish orders to the data stream. Option D is not optimal because it will require more development effort to modify the Lambda function to publish to a new Amazon SNS topic, and to create and subscribe a new Lambda function to the topic. References: Using DynamoDB Streams, Using AWS Lambda with Amazon S3

NEW QUESTION 3
A company has a multi-node Windows legacy application that runs on premises. The application uses a network shared folder as a centralized configuration repository to store configuration files in .xml format. The company is migrating the application to Amazon EC2 instances. As part of the migration to AWS, a developer must identify a solution that provides high availability for the repository.
Which solution will meet this requirement MOST cost-effectively?

A. Mount an Amazon Elastic Block Store (Amazon EBS) volume onto one of the EC2 instance
B. Deploy a file system on the EBS volum
C. Use the host operating system to share a folde

shared folder.
D. Update the application code to read and write configuration files from the
E. Deploy a micro EC2 instance with an instance store volum
F. Use the host operating system to share a folde
G. Update the application code to read and write configuration files from the shared folder.
H. Create an Amazon S3 bucket to host the repositor
I. Migrate the existing .xml files to the S3 bucke
J. Update the application code to use the AWS SDK to read and write configuration files from Amazon S3.
K. Create an Amazon S3 bucket to host the repositor
L. Migrate the existing .xml files to the S3 bucke
M. Mount the S3 bucket to the EC2 instances as a local volum
N. Update the application code to read and write configuration files from the disk.

Answer: C

Explanation:
Amazon S3 is a service that provides highly scalable, durable, and secure object storage. The developer can create an S3 bucket to host the repository and migrate the existing .xml files to the S3 bucket. The developer can update the application code to use the AWS SDK to read and write configuration files from S3.

This solution will meet the requirement of high availability for the repository in a cost-effective way.
References:
? [Amazon Simple Storage Service (S3)]
? [Using AWS SDKs with Amazon S3]

NEW QUESTION 4
A company needs to deploy all its cloud resources by using AWS CloudFormation templates A developer must create an Amazon Simple Notification Service (Amazon SNS) automatic notification to help enforce this rule. The developer creates an SNS topic and subscribes the email address of the company's security team to the SNS topic.
The security team must receive a notification immediately if an 1AM role is created without the use of CloudFormation.
Which solution will meet this requirement?

A. Create an AWS Lambda function to filter events from CloudTrail if a role was created without CloudFormation Configure the Lambda function to publish to the SNS topi
B. Create an Amazon EventBridge schedule to invoke the Lambda function every 15 minutes
C. Create an AWS Fargate task in Amazon Elastic Container Service (Amazon ECS) to filter events from CloudTrail if a role was created without CloudFormation Configure the Fargate task to publish to the SNS topic Create an Amazon EventBridge schedule to run the Fargate task every 15 minutes
D. Launch an Amazon EC2 instance that includes a script to filter events from CloudTrail if a role was created without CloudFormatio
E. Configure the script to publish to the SNS topi
F. Create a cron job to run the script on the EC2 instance every 15 minutes.
G. Create an Amazon EventBridge rule to filter events from CloudTrail if a role was created without CloudFormation Specify the SNS topic as the target of the EventBridge rule.

Answer: D

Explanation:
Creating an Amazon EventBridge rule is the most efficient and scalable way to monitor and react to events from CloudTrail, such as the creation of an IAM role without CloudFormation. EventBridge allows you to specify a filter pattern to match the events you are interested in, and then specify an SNS topic as the target to send notifications. This solution does not require any additional resources or code, and it can trigger notifications in near real-time. The other solutions involve creating and managing additional resources, such as Lambda functions, Fargate tasks, or EC2 instances, and they rely on polling CloudTrail events every 15 minutes, which can introduce delays and increase
costs. References
? Using Amazon EventBridge rules to process AWS CloudTrail events
? Using AWS CloudFormation to create and manage AWS Batch resources
? How to use AWS CloudFormation to configure auto scaling for Amazon Cognito and AWS AppSync
? Using AWS CloudFormation to automate the creation of AWS WAF web ACLs, rules, and conditions

NEW QUESTION 5
A developer has been asked to create an AWS Lambda function that is invoked any time updates are made to items in an Amazon DynamoDB table. The function has been created and appropriate permissions have been added to the Lambda execution role Amazon DynamoDB streams have been enabled for the table, but the function 15 still not being invoked.
Which option would enable DynamoDB table updates to invoke the Lambda function?

A. Change the StreamViewType parameter value to NEW_AND_OLOJMAGES for the DynamoDB table.
B. Configure event source mapping for the Lambda function.
C. Map an Amazon Simple Notification Service (Amazon SNS) topic to the DynamoDB streams.
D. Increase the maximum runtime (timeout) setting of the Lambda function.

Answer: B

Explanation:
This solution allows the Lambda function to be invoked by the DynamoDB stream whenever updates are made to items in the DynamoDB table. Event source mapping is a feature of Lambda that enables a function to be triggered by an event source, such as a DynamoDB stream, an Amazon Kinesis stream, or an Amazon Simple Queue Service (SQS) queue. The developer can configure event source mapping for the Lambda function using the AWS Management Console, the AWS CLI, or the AWS SDKs. Changing the StreamViewType parameter value to NEW_AND_OLD_IMAGES for the DynamoDB table will not affect the invocation of the Lambda function, but only change the information that is written to the stream record. Mapping an Amazon Simple Notification Service (Amazon SNS) topic to the DynamoDB stream will not invoke the Lambda function directly, but require an additional subscription from the Lambda function to the SNS topic. Increasing the maximum runtime (timeout) setting of the Lambda function will not affect the invocation of the Lambda function, but only change how long the function can run before it is terminated.
Reference: [Using AWS Lambda with Amazon DynamoDB], [Using AWS Lambda with Amazon SNS]

NEW QUESTION 6
An application that runs on AWS receives messages from an Amazon Simple Queue Service (Amazon SQS) queue and processes the messages in batches. The application sends the data to another SQS queue to be consumed by another legacy application. The legacy system can take up to 5 minutes to process some transaction data.
A developer wants to ensure that there are no out-of-order updates in the legacy system. The developer cannot alter the behavior of the legacy system.
Which solution will meet these requirements?

A. Use an SQS FIFO queu
B. Configure the visibility timeout value.
C. Use an SQS standard queue with a SendMessageBatchRequestEntry data typ
D. Configure the DelaySeconds values.
E. Use an SQS standard queue with a SendMessageBatchRequestEntry data typ
F. Configure the visibility timeout value.
G. Use an SQS FIFO queu
H. Configure the DelaySeconds value.

Answer: A

Explanation:

? An SQS FIFO queue is a type of queue that preserves the order of messages and ensures that each message is delivered and processed only once1. This is suitable for the scenario where the developer wants to ensure that there are no out-of-order updates in the legacy system.
? The visibility timeout value is the amount of time that a message is invisible in the queue after a consumer receives it2. This prevents other consumers from processing the same message simultaneously. If the consumer does not delete the message before the visibility timeout expires, the message becomes visible again and another consumer can receive it2.
? In this scenario, the developer needs to configure the visibility timeout value to be longer than the maximum processing time of the legacy system, which is 5 minutes. This will ensure that the message remains invisible in the queue until the legacy system finishes processing it and deletes it. This will prevent duplicate or out-of-order processing of messages by the legacy system.

NEW QUESTION 7
A company has an application that is hosted on Amazon EC2 instances The application stores objects in an Amazon S3 bucket and allows users to download objects from the S3 bucket A developer turns on S3 Block Public Access for the S3 bucket After this change, users report errors when they attempt to download objects The developer needs to implement a solution so that only users who are signed in to the application can access objects in the S3 bucket.
Which combination of steps will meet these requirements in the MOST secure way? (Select TWO.)

A. Create an EC2 instance profile and role with an appropriate policy Associate the role with the EC2 instances
B. Create an 1AM user with an appropriate polic
C. Store the access key ID and secret access key on the EC2 instances
D. Modify the application to use the S3 GeneratePresignedUrl API call
E. Modify the application to use the S3 GetObject API call and to return the object handle to the user
F. Modify the application to delegate requests to the S3 bucket.

Answer: AC

Explanation:
The most secure way to allow the EC2 instances to access the S3 bucket is to use an EC2 instance profile and role with an appropriate policy that grants the necessary permissions. This way, the EC2 instances can use temporary security credentials that are automatically rotated and do not need to store any access keys on the instances. To allow the users who are signed in to the application to download objects from the S3 bucket, the application can use the S3 GeneratePresignedUrl API call to create a pre-signed URL that grants temporary access to a specific object. The pre-signed URL can be returned to the user, who can then use it to download the object within a specified time period. References
? Use Amazon S3 with Amazon EC2
? How to Access AWS S3 Bucket from EC2 Instance In a Secured Way
? Sharing an Object with Others

NEW QUESTION 8
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 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 company needs to harden its container images before the images are in a running state. The company's application uses Amazon Elastic Container Registry (Amazon ECR) as an image registry. Amazon Elastic Kubernetes Service (Amazon EKS) for compute. and an AWS CodePipeline pipeline that orchestrates a continuous integration and continuous delivery (CI/CD) workflow.
Dynamic application security testing occurs in the final stage of the pipeline after a new image is deployed to a development namespace in the EKS cluster. A developer needs to place an analysis stage before this deployment to analyze the container image earlier in the CI/CD pipeline.
Which solution will meet these requirements with the MOST operational efficiency?

A. Build the container image and run the docker scan command locall
B. Mitigate any findings before pushing changes to the source code repositor
C. Write a pre-commit hook that enforces the use of this workflow before commit.
D. Create a new CodePipeline stage that occurs after the container image is buil
E. Configure ECR basic image scanning to scan on image pus
F. Use an AWS Lambda function as the action provide
G. Configure the Lambda function to check the scan results and to fail the pipeline if there are findings.
H. Create a new CodePipeline stage that occurs after source code has been retrieved from its repositor
I. Run a security scanner on the latest revision of the source cod
J. Fail the pipeline if there are findings.
K. Add an action to the deployment stage of the pipeline so that the action occurs before the deployment to the EKS cluste
L. Configure ECR basic image scanning to scan on image pus
M. Use an AWS Lambda function as the action provide
N. Configure the Lambda function to check the scan results and to fail the pipeline if there are findings.

Answer: B

Explanation:
The solution that will meet the requirements with the most operational efficiency is to create a new CodePipeline stage that occurs after the container image is built. Configure ECR basic image scanning to scan on image push. Use an AWS Lambda function as the action provider. Configure the Lambda function to check the scan results and to fail the pipeline if there are findings. This way, the container image is analyzed earlier in the CI/CD pipeline and any vulnerabilities are detected and reported before deploying to the EKS cluster. The other options either delay the analysis until after deployment, which increases the risk of exposing insecure images, or perform analysis on the source code instead of the container image, which may not capture all the dependencies and configurations that affect the security posture of the image.
Reference: Amazon ECR image scanning

NEW QUESTION 10
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 13
A company is using an AWS Lambda function to process records from an Amazon Kinesis data stream. The company recently observed slow processing of the records. A developer notices that the iterator age metric for the function is increasing and that the Lambda run duration is constantly above normal.
Which actions should the developer take to increase the processing speed? (Choose two.)

A. Increase the number of shards of the Kinesis data stream.
B. Decrease the timeout of the Lambda function.
C. Increase the memory that is allocated to the Lambda function.
D. Decrease the number of shards of the Kinesis data stream.
E. Increase the timeout of the Lambda function.

Answer: AC

Explanation:
Increasing the number of shards of the Kinesis data stream will increase the throughput and parallelism of the data processing. Increasing the memory that is allocated to the Lambda function will also increase the CPU and network performance of the function, which will reduce the run duration and improve the processing speed. Option B is not correct because decreasing the timeout of the Lambda function will not affect the processing speed, but may cause some records to fail if they exceed the timeout limit. Option D is not correct because decreasing the number of shards of the Kinesis data stream will decrease the throughput and parallelism of the data processing, which will slow down the processing speed. Option E is not correct because increasing the timeout of the Lambda function will not affect the processing speed, but may increase the cost of running the function.
References: [Amazon Kinesis Data Streams Scaling], [AWS Lambda Performance Tuning]

NEW QUESTION 14
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 17
A developer has an application that makes batch requests directly to Amazon DynamoDB by using the BatchGetItem low-level API operation. The responses frequently return values in the UnprocessedKeys element.
Which actions should the developer take to increase the resiliency of the application when the batch response includes values in UnprocessedKeys? (Choose two.)

A. Retry the batch operation immediately.
B. Retry the batch operation with exponential backoff and randomized delay.
C. Update the application to use an AWS software development kit (AWS SDK) to make the requests.
D. Increase the provisioned read capacity of the DynamoDB tables that the operation accesses.
E. Increase the provisioned write capacity of the DynamoDB tables that the operation accesses.

Answer: BC

Explanation:
The UnprocessedKeys element indicates that the BatchGetItem operation did not process all of the requested items in the current response. This can happen if the
response size limit is exceeded or if the table's provisioned throughput is exceeded. To handle this situation, the developer should retry the batch operation with exponential backoff and randomized delay to avoid throttling errors and reduce the load on the table. The developer should also use an AWS SDK to make the requests, as the SDKs automatically retry requests that return UnprocessedKeys.
References:
? [BatchGetItem - Amazon DynamoDB]
? [Working with Queries and Scans - Amazon DynamoDB]
? [Best Practices for Handling DynamoDB Throttling Errors]

NEW QUESTION 19
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 21
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 26
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 27
A developer is working on an ecommerce platform that communicates with several third- party payment processing APIs The third-party payment services do not provide a test environment.
The developer needs to validate the ecommerce platform's integration with the third-party payment processing APIs. The developer must test the API integration code without invoking the third-party payment processing APIs.
Which solution will meet these requirements'?

A. Set up an Amazon API Gateway REST API with a gateway response configured for status code 200 Add response templates that contain sample responses captured from the real third-party API.
B. Set up an AWS AppSync GraphQL API with a data source configured for each third- party API Specify an integration type of Mock Configure integration responses by using sample responses captured from the real third-party API.
C. Create an AWS Lambda function for each third-party AP
D. Embed responses captured from the real third-party AP
E. Configure Amazon Route 53 Resolver with an inbound endpoint for each Lambda function's Amazon Resource Name (ARN).
F. Set up an Amazon API Gateway REST API for each third-party API Specify an integration request type of Mock Configure integration responses by using sample responses captured from the real third-party API

Answer: D

Explanation:
 Amazon API Gateway can mock responses for testing purposes without requiring any integration backend. This allows the developer to test the API integration code without invoking the third-party payment processing APIs. The developer can configure integration responses by using sample responses captured from the real third- party API. References:
? Mocking Integration Responses in API Gateway
? Set up Mock Integrations for an API in API Gateway

NEW QUESTION 31
A financial company must store original customer records for 10 years for legal reasons. A complete record contains personally identifiable information (PII). According to local regulations, PII is available to only certain people in the company and must not be shared with third parties. The company needs to make the records available to third-party organizations for statistical analysis without sharing the PII.
A developer wants to store the original immutable record in Amazon S3. Depending on who accesses the S3 document, the document should be returned as is or with all the PII removed. The developer has written an AWS Lambda function to remove the PII from the document. The function is named removePii.
What should the developer do so that the company can meet the PII requirements while maintaining only one copy of the document?

A. Set up an S3 event notification that invokes the removePii function when an S3 GET request is mad
B. Call Amazon S3 by using a GET request to access the object without PII.
C. Set up an S3 event notification that invokes the removePii function when an S3 PUT request is mad
D. Call Amazon S3 by using a PUT request to access the object without PII.
E. Create an S3 Object Lambda access point from the S3 consol

F. Select the removePii functio
G. Use S3 Access Points to access the object without PII.
H. Create an S3 access point from the S3 consol
I. Use the access point name to call the GetObjectLegalHold S3 API functio
J. Pass in the removePii function name to access the object without PII.

Answer: C

Explanation:
S3 Object Lambda allows you to add your own code to process data retrieved from S3 before returning it to an application. You can use an AWS Lambda function to modify the data, such as removing PII, redacting confidential information, or resizing images. You can create an S3 Object Lambda access point and associate it with your Lambda function. Then, you can use the access point to request objects from S3 and get the modified data back. This way, you can maintain only one copy of the original

document in S3 and apply different transformations depending on who accesses it. Reference: Using AWS Lambda with Amazon S3

NEW QUESTION 34
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 37
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 42
A company needs to distribute firmware updates to its customers around the world.
Which service will allow easy and secure control of the access to the downloads at the lowest cost?

A. Use Amazon CloudFront with signed URLs for Amazon S3.
B. Create a dedicated Amazon CloudFront Distribution for each customer.
C. Use Amazon CloudFront with AWS Lambda@Edge.
D. Use Amazon API Gateway and AWS Lambda to control access to an S3 bucket.

Answer: A

Explanation:
This solution allows easy and secure control of access to the downloads at the lowest cost because it uses a content delivery network (CDN) that can cache and distribute firmware updates to customers around the world, and uses a mechanism that can restrict access to specific files or versions. Amazon CloudFront is a CDN that can improve performance, availability, and security of web applications by delivering content from edge locations closer to customers. Amazon S3 is a storage service that can store firmware updates in buckets and objects. Signed URLs are URLs that include additional information, such as an expiration date and time, that give users temporary access to specific objects in S3 buckets. The developer can use CloudFront to serve firmware updates from S3 buckets and use signed URLs to control who can download them and for how long. Creating a dedicated CloudFront distribution for each customer will incur unnecessary costs and complexity. Using Amazon CloudFront with AWS Lambda@Edge will require additional programming overhead to implement custom logic at the edge locations. Using Amazon API Gateway and AWS Lambda to control access to an S3 bucket will also require additional programming overhead and may not provide optimal performance or availability.
Reference: [Serving Private Content through CloudFront], [Using CloudFront with Amazon
S3]

NEW QUESTION 45
An application uses Lambda functions to extract metadata from files uploaded to an S3 bucket; the metadata is stored in Amazon DynamoDB. The application starts behaving unexpectedly, and the developer wants to examine the logs of the Lambda function code for errors.

Based on this system configuration, where would the developer find the logs?

A. Amazon S3
B. AWS CloudTrail
C. Amazon CloudWatch
D. Amazon DynamoDB

Answer: C

Explanation:
Amazon CloudWatch is the service that collects and stores logs from AWS Lambda functions. The developer can use CloudWatch Logs Insights to query and analyze the logs for errors and metrics. Option A is not correct because Amazon S3 is a storage service that does not store Lambda function logs. Option B is not correct because AWS CloudTrail is a service that records API calls and events for AWS services, not Lambda function logs. Option D is not correct because Amazon DynamoDB is a database service that does not store Lambda function logs.
References: AWS Lambda Monitoring, [CloudWatch Logs Insights]

NEW QUESTION 50
A developer at a company needs to create a small application mat makes the same API call once each flay at a designated time. The company does not have infrastructure in the AWS Cloud yet, but the company wants to implement this functionality on AWS.
Which solution meets these requirements in the MOST operationally efficient manner?

A. Use a Kubernetes cron job that runs on Amazon Elastic Kubemetes Sen/ice (Amazon EKS)
B. Use an Amazon Linux crontab scheduled job that runs on Amazon EC2
C. Use an AWS Lambda function that is invoked by an Amazon EventBridge scheduled event.
D. Use an AWS Batch job that is submitted to an AWS Batch job queue.

Answer: C

Explanation:
This solution meets the requirements in the most operationally efficient manner because it does not require any infrastructure provisioning or management. The developer can create a Lambda function that makes the API call and configure an EventBridge rule that triggers the function once a day at a designated time. This is a serverless solution that scales automatically and only charges for the execution time of the function.
Reference: [Using AWS Lambda with Amazon EventBridge], [Schedule Expressions for
                    Rules]

NEW QUESTION 51
A developer has written an AWS Lambda function. The function is CPU-bound. The developer wants to ensure that the function returns responses quickly.
How can the developer improve the function's performance?

A. Increase the function's CPU core count.
B. Increase the function's memory.
C. Increase the function's reserved concurrency.
D. Increase the function's timeout.

Answer: B

Explanation:
The amount of memory you allocate to your Lambda function also determines how much CPU and network bandwidth it gets. Increasing the memory size can improve the performance of CPU-bound functions by giving them more CPU power. The CPU allocation is proportional to the memory allocation, so a function with 1 GB of memory has twice the CPU power of a function with 512 MB of memory. Reference: AWS Lambda execution environment

NEW QUESTION 52
An application is processing clickstream data using Amazon Kinesis. The clickstream data feed into Kinesis experiences periodic spikes. The PutRecords API call occasionally fails and the logs show that the failed call returns the response shown below:

```
{
    "FailedRecordCount": 1,
    "Records": [
        {
            "SequenceNumber": "21269319989900637946712965403778482371",
            "ShardId": "shardId-000000000001"
        },
        {
            "ErrorCode":"ProvisionedThroughputExceededException",
            "ErrorMessage": "Rate exceeded for shard shardId-000000000001 in

                stream exampleStreamName under account 123456789."
        },
        {
            "SequenceNumber": "21269319989999963794671296540377848298",
            "ShardId": "shardId-000000000002"
        }
    ]
}
```

Which techniques will help mitigate this exception? (Choose two.)

A. Implement retries with exponential backoff.
B. Use a PutRecord API instead of PutRecords.
C. Reduce the frequency and/or size of the requests.
D. Use Amazon SNS instead of Kinesis.
E. Reduce the number of KCL consumers.

Answer: AC

Explanation:

The response from the API call indicates that the ProvisionedThroughputExceededException exception has occurred. This exception means that the rate of incoming requests exceeds the throughput limit for one or more shards in a stream. To mitigate this exception, the developer can use one or more of the following techniques:
? Implement retries with exponential backoff. This will introduce randomness in the retry intervals and avoid overwhelming the shards with retries.
? Reduce the frequency and/or size of the requests. This will reduce the load on the shards and avoid throttling errors.
? Increase the number of shards in the stream. This will increase the throughput capacity of the stream and accommodate higher request rates.
? Use a PutRecord API instead of PutRecords. This will reduce the number of records per request and avoid exceeding the payload limit.
References:
? [ProvisionedThroughputExceededException - Amazon Kinesis Data Streams Service API Reference]
? [Best Practices for Handling Kinesis Data Streams Errors]

NEW QUESTION 57
A company is migrating its PostgreSQL database into the AWS Cloud. The company wants to use a database that will secure and regularly rotate database credentials. The company wants a solution that does not require additional programming overhead.
Which solution will meet these requirements?

A. Mastered
B. Not Mastered

Answer: A

Explanation:

This solution meets the requirements because it uses a PostgreSQL- compatible database that can secure and regularly rotate database credentials without requiring additional programming overhead. Amazon Aurora PostgreSQL is a relational database service that is compatible with PostgreSQL and offers high performance, availability, and scalability. AWS Secrets Manager is a service that helps you protect secrets needed to access your applications, services, and IT resources. You can store database credentials in AWS Secrets Manager and use them to access your Aurora PostgreSQL database. You can also enable automatic rotation of your secrets according to a schedule or an event. AWS Secrets Manager handles the complexity of rotating secrets for you, such as generating new passwords and updating your database with the new credentials. Using Amazon DynamoDB for the database will not meet the requirements because it is a NoSQL database that is not compatible with PostgreSQL. Using AWS Systems Manager Parameter Store for storing and rotating database credentials will require additional programming overhead to integrate with your database.
Reference: [What Is Amazon Aurora?], [What Is AWS Secrets Manager?]

NEW QUESTION 60
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 64
A company has installed smart motes in all Its customer locations. The smart meter's measure power usage at 1minute intervals and send the usage readings to a remote endpoint tot collection. The company needs to create an endpoint that will receive the smart meter readings and store the readings in a database. The company wants to store the location ID and timestamp information.
The company wants to give Is customers low-latency access to their current usage and historical usage on demand The company expects demand to increase significantly. The solution must not impact performance or include downtime write seeing.
When solution will meet these requirements MOST cost-effectively?

A. Store the smart meter readings in an Amazon RDS databas
B. Create an index on the location ID and timestamp columns Use the columns to filter on the customers 'data.
C. Store the smart motor readings m an Amazon DynamoDB table Croato a composite Key oy using the location ID and timestamp column
D. Use the columns to filter on the customers' data.
E. Store the smart meter readings in Amazon EastCache for Reds Create a Sorted set key y using the location ID and timestamp column
F. Use the columns to filter on the customers' data.

G. Store the smart meter readings m Amazon S3 Parton the data by using the location ID and timestamp column
H. Use Amazon Athena lo tiler on me customers' data.

Answer: B

Explanation:
 The solution that will meet the requirements most cost-effectively is to store the smart meter readings in an Amazon DynamoDB table. Create a composite key by using the location ID and timestamp columns. Use the columns to filter on the customers' data. This way, the company can leverage the scalability, performance, and low latency of DynamoDB to store and retrieve the smart meter readings. The company can also use the composite key to query the data by location ID and timestamp efficiently. The other options either involve more expensive or less scalable services, or do not provide low-latency access to the current usage.
Reference: Working with Queries in DynamoDB

NEW QUESTION 67
A company is creating an application that processes csv files from Amazon S3 A developer has created an S3 bucket The developer has also created an AWS Lambda function to process the csv files from the S3 bucket
Which combination of steps will invoke the Lambda function when a csv file is uploaded to Amazon S3? (Select TWO.)

A. Create an Amazon EventBridge rule Configure the rule with a pattern to match the S3 object created event
B. Schedule an Amazon EventBridge rule to run a new Lambda function to scan the S3 bucket.
C. Add a trigger to the existing Lambda functio
D. Set the trigger type to EventBridge Select the Amazon EventBridge rule.
E. Create a new Lambda function to scan the S3 bucket for recently added S3 objects
F. Add S3 Lifecycle rules to invoke the existing Lambda function

Answer: AC

Explanation:
 To invoke a Lambda function when a csv file is uploaded to Amazon S3, you can use Amazon EventBridge to create a rule that matches the S3 object created event. Then, you can add a trigger to the existing Lambda function and set the trigger type to EventBridge. This way, the Lambda function will be invoked whenever a new csv file is added to the S3 bucket. References
? Tutorial: Using an Amazon S3 trigger to invoke a Lambda function
? How to trigger my Lambda Function once the file is uploaded to s3 bucket
? Lambda Function to be invoked or triggered by S3(csv file upload …

NEW QUESTION 72
A company is building a micro services app1 cation that consists of many AWS Lambda functions. The development team wants to use AWS Serverless Application Model (AWS SAM) templates to automatically test the Lambda functions. The development team plans to test a small percentage of traffic that is directed to new updates before the team commits to a full deployment of the application.
Which combination of steps will meet these requirements in the MOST operationally efficient way? (Select TWO.)

A. Use AWS SAM CLI commands in AWS CodeDeploy lo invoke the Lambda functions lo lest the deployment
B. Declare the EventlnvokeConfig on the Lambda functions in the AWS SAM templates with OnSuccess and OnFailure configurations.
                    Enable gradual deployments through AWS SAM templates.
C: Set the deployment preference type to Canary10Percen130Minutes Use hooks to test the deployment.
E. Set the deployment preference type to Linear10PefcentEvery10Minutes Use hooks to test the deployment.

Answer: CD

Explanation:
 This solution will meet the requirements by using AWS Serverless Application Model (AWS SAM) templates and gradual deployments to automatically test the Lambda functions. AWS SAM templates are configuration files that define serverless applications and resources such as Lambda functions. Gradual deployments are a feature of AWS SAM that enable deploying new versions of Lambda functions incrementally, shifting traffic gradually, and performing validation tests during deployment. The developer can enable gradual deployments through AWS SAM templates by adding a DeploymentPreference property to each Lambda function resource in the template. The developer can set the deployment preference type to Canary10Percent30Minutes, which means that 10 percent of traffic will be shifted to the new version of the Lambda function for 30 minutes before shifting 100 percent of traffic. The developer can also use hooks to test the deployment, which are custom Lambda functions that run before or after traffic shifting and perform validation tests or rollback actions.
References: [AWS Serverless Application Model (AWS SAM)], [Gradual Code Deployment]

NEW QUESTION 73
A developer is troubleshooting an application mat uses Amazon DynamoDB in the uswest- 2 Region. The application is deployed to an Amazon EC2 instance. The application requires read-only permissions to a table that is named Cars The EC2 instance has an attached IAM role that contains the following IAM policy.

```
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Sid": "ReadOnlyAPIActions",
            "Effect": "Allow",
            "Action": [
                "dynamodb:GetItem",
                "dynamodb:BatchGetItem",
                "dynamodb:Scan",
                "dynamodb:Query",
                "dynamodb:ConditionCheckItem"
            ],
            "Resource": "arn:aws:dynamodb:us-west-2:account-id:table/Cars"
        }
    ]
}
```

When the application tries to read from the Cars table, an Access Denied error occurs. How can the developer resolve this error?

A. Modify the IAM policy resource to be "arn aws dynamo* us-west-2 account-id table/*"
B. Modify the IAM policy to include the dynamodb * action

C. Create a trust policy that specifies the EC2 service principa
D. Associate the role with the policy.
E. Create a trust relationship between the role and dynamodb Amazonas com.

Answer: C

Explanation:

https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/access-control- overview.html#access-control-resource-ownership

NEW QUESTION 78
A developer is creating a service that uses an Amazon S3 bucket for image uploads. The service will use an AWS Lambda function to create a thumbnail of each image Each time an image is uploaded the service needs to send an email notification and create the thumbnail The developer needs to configure the image processing and email notifications
Which solution will meet these requirements?

A. Create an Amazon Simple Notification Service (Amazon SNS) topic Configure S3 event notifications with a destination of the SNS topic Subscribe the Lambda function to the SNS topic Create an email notification subscription to the SNS topic
B. Create an Amazon Simple Notification Service (Amazon SNS) topi
C. Configure S3 event notifications with a destination of the SNS topi
D. Subscribe the Lambda function to the SNS topi
E. Create an Amazon Simple Queue Service (Amazon SQS) queue Subscribe the SQS queue to the SNS topic Create an email notification subscription to the SQS queue.
F. Create an Amazon Simple Queue Service (Amazon SQS) queue Configure S3 event notifications with a destination of the SQS queue Subscribe the Lambda function to the SQS queue Create an email notification subscription to the SQS queue.
G. Create an Amazon Simple Queue Service (Amazon SQS) queu
H. Send S3 event notifications to Amazon EventBridg
I. Create an EventBndge rule that runs the Lambda function when images are uploaded to the S3 bucket Create an EventBridge rule that sends notifications to the SQS queue Create an email notification subscription to the SQS queue

Answer: A

Explanation:

This solution will allow the developer to receive notifications for each image uploaded to the S3 bucket, and also create a thumbnail using the Lambda function. The SNS topic will serve as a trigger for both the Lambda function and the email notification subscription. When an image is uploaded, S3 will send a notification to the SNS topic, which will trigger the Lambda function to create the thumbnail and also send an email notification to the specified email address.

NEW QUESTION 81
A company has an application that stores data in Amazon RDS instances. The application periodically experiences surges of high traffic that cause performance problems.
During periods of peak traffic, a developer notices a reduction in query speed in all database queries.
The team's technical lead determines that a multi-threaded and scalable caching solution should be used to offload the heavy read traffic. The solution needs to improve performance.
Which solution will meet these requirements with the LEAST complexity?

A. Use Amazon ElastiCache for Memcached to offload read requests from the main database.
B. Replicate the data to Amazon DynamoD
C. Set up a DynamoDB Accelerator (DAX) cluster.
D. Configure the Amazon RDS instances to use Multi-AZ deployment with one standby instanc
E. Offload read requests from the main database to the standby instance.
F. Use Amazon ElastiCache for Redis to offload read requests from the main database.

Answer: A

Explanation:
? Amazon ElastiCache for Memcached is a fully managed, multithreaded, and scalable in-memory key-value store that can be used to cache frequently accessed data and improve application performance1. By using Amazon ElastiCache for Memcached, the developer can reduce the load on the main database and handle high traffic surges more efficiently.
? To use Amazon ElastiCache for Memcached, the developer needs to create a cache cluster with one or more nodes, and configure the application to store and retrieve data from the cache cluster2. The developer can use any of the supported Memcached clients to interact with the cache cluster3. The developer can also use Auto Discovery to dynamically discover and connect to all cache nodes in a cluster4.
? Amazon ElastiCache for Memcached is compatible with the Memcached protocol, which means that the developer can use existing tools and libraries that work with
                              Memcached1. Amazon ElastiCache for Memcached also supports data partitioning, which allows the developer to distribute data among multiple nodes and scale out the cache cluster as needed.
? Using Amazon ElastiCache for Memcached is a simple and effective solution that meets the requirements with the least complexity. The developer does not need to change the database schema, migrate data to a different service, or use a different caching model. The developer can leverage the existing Memcached ecosystem and easily integrate it with the application.

NEW QUESTION 82
A developer is trying get data from an Amazon DynamoDB table called demoman-table. The developer configured the AWS CLI to use a specific IAM use's credentials and ran the following command.

```
aws dynamodb get-item --table-name demoman-table --key '{"id": {"N":"1993"}}'
```

The command returned errors and no rows were returned. What is the MOST likely cause of these issues?

A. The command is incorrect; it should be rewritten to use put-item with a string argument
B. The developer needs to log a ticket with AWS Support to enable access to the demoman-table
C. Amazon DynamoOB cannot be accessed from the AWS CLI and needs to called via the REST API
D. The IAM user needs an associated policy with read access to demoman-table

Answer: D

Explanation:
This solution will most likely solve the issues because it will grant the IAM user the necessary permission to access the DynamoDB table using the AWS CLI command. The error message indicates that the IAM user does not have sufficient access rights to perform the scan operation on the table. Option A is not optimal because it will change the command to use put-item instead of scan, which will not achieve the desired result of getting data from the table. Option B is not optimal because it will involve contacting AWS Support, which may not be necessary or efficient for this issue. Option C is not optimal because it will state that DynamoDB cannot be accessed from the AWS CLI, which is incorrect as DynamoDB supports AWS CLI commands.
References: AWS CLI for DynamoDB, [IAM Policies for DynamoDB]

NEW QUESTION 86
A developer is writing an application that will retrieve sensitive data from a third-party system. The application will format the data into a PDF file. The PDF file could be more than 1 MB. The application will encrypt the data to disk by using AWS Key Management Service (AWS KMS). The application will decrypt the file when a user requests to download it. The retrieval and formatting portions of the application are complete.
The developer needs to use the GenerateDataKey API to encrypt the PDF file so that the PDF file can be decrypted later. The developer needs to use an AWS KMS symmetric customer managed key for encryption.
Which solutions will meet these requirements?

A. Write the encrypted key from the GenerateDataKey API to disk for later us
B. Use the   plaintext key from the GenerateDataKey API and a symmetric encryption algorithm to encrypt the file.
C. Write the plain text key from the GenerateDataKey API to disk for later us
D. Use the encrypted key from the GenerateDataKey API and a symmetric encryption algorithm to encrypt the file.
E. Write the encrypted key from the GenerateDataKey API to disk for later us
F. Use the plaintext key from the GenerateDataKey API to encrypt the file by using the KMS Encrypt API
G. Write the plain text key from the GenerateDataKey API to disk for later us
H. Use the encrypted key from the GenerateDataKey API to encrypt the file by using the KMS Encrypt API

Answer: A

Explanation:
? The GenerateDataKey API returns a data key that is encrypted under a symmetric encryption KMS key that you specify, and a plaintext copy of the same data key1. The data key is a random byte string that can be used with any standard encryption algorithm, such as AES or SM42. The plaintext data key can be used to encrypt or decrypt data outside of AWS KMS, while the encrypted data key can be stored with the encrypted data and later decrypted by AWS KMS1.
? In this scenario, the developer needs to use the GenerateDataKey API to encrypt
the PDF file so that it can be decrypted later. The developer also needs to use an AWS KMS symmetric customer managed key for encryption. To achieve this, the developer can follow these steps:

NEW QUESTION 91
An application that runs on AWS Lambda requires access to specific highly confidential objects in an Amazon S3 bucket. In accordance with the principle of least privilege a company grants access to the S3 bucket by using only temporary credentials.
How can a developer configure access to the S3 bucket in the MOST secure way?

A. Hardcode the credentials that are required to access the S3 objects in the application cod
B. Use the credentials to access me required S3 objects.
C.   Create a secret access key and access key ID with permission to access the S3 bucke
D. Store the key and key ID in AWS Secrets Manage
E. Configure the application to retrieve the Secrets Manager secret and use the credentials to access me S3 objects.
F. Create a Lambda function execution role Attach a policy to the rote that grants access to specific objects in the S3 bucket.
G. Create a secret access key and access key ID with permission to access the S3 bucket Store the key and key ID as environment variables m Lambd
H. Use the environment variables to access the required S3 objects.

Answer: C

Explanation:
This solution will meet the requirements by creating a Lambda function execution role, which is an IAM role that grants permissions to a Lambda function to access AWS resources such as Amazon S3 objects. The developer can attach a policy to the role that grants access to specific objects in the S3 bucket that are required by the application, following the principle of least privilege. Option A is not optimal because it will hardcode the credentials that are required to access S3 objects in the application code, which is insecure and difficult to maintain. 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 store the secret access key and access key ID as environment variables in Lambda, which is also insecure and difficult to maintain. References: [AWS Lambda Execution Role], [Using AWS Lambda with Amazon S3]

NEW QUESTION 92
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 93
A developer has an application that is composed of many different AWS Lambda functions. The Lambda functions all use some of the same dependencies. To avoid security issues the developer is constantly updating the dependencies of all of the Lambda functions. The result is duplicated effort to reach function.
How can the developer keep the dependencies of the Lambda functions up to date with the LEAST additional complexity?

A. Define a maintenance window for the Lambda functions to ensure that the functions get updated copies of the dependencies.
B. Upgrade the Lambda functions to the most recent runtime version.
C. Define a Lambda layer that contains all of the shared dependencies.
D. Use an AWS CodeCommit repository to host the dependencies in a centralized location.

Answer: C

Explanation:
This solution allows the developer to keep the dependencies of the Lambda functions up to date with the least additional complexity because it eliminates the need to update each function individually. A Lambda layer is a ZIP archive that contains libraries, custom runtimes, or other dependencies. The developer can create a layer that contains all of the shared dependencies and attach it to multiple Lambda functions. When the developer updates the layer, all of the functions that use the layer will have access to the latest version of the dependencies.
Reference: [AWS Lambda layers]

NEW QUESTION 97
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 101
A company needs to set up secure database credentials for all its AWS Cloud resources. The company's resources include Amazon RDS DB instances Amazon DocumentDB clusters and Amazon Aurora DB instances. The company's security policy mandates that database credentials be encrypted at rest and rotated at a regular interval.
Which solution will meet these requirements MOST securely?

A. Set up IAM database authentication for token-based acces
B. Generate user tokens to provide centralized access to RDS DB instance
C. Amazon DocumentDB clusters and Aurora DB instances.
D. Create parameters for the database credentials in AWS Systems Manager Parameter Store Set the Type parameter to Secure Stin
E. Set up automatic rotation on the parameters.
F. Store the database access credentials as an encrypted Amazon S3 object in an S3 bucket Block all public access on the S3 bucke
G. Use S3 server-side encryption to set up automatic rotation on the encryption key.
H. Create an AWS Lambda function by using the SecretsManagerRotationTemplate template in the AWS Secrets Manager consol
I. Create secrets for the database credentials in Secrets Manager Set up secrets rotation on a schedule.

Answer: D

Explanation:
This solution will meet the requirements by using AWS Secrets Manager, which is a service that helps protect secrets such as database credentials by encrypting them with AWS Key Management Service (AWS KMS) and enabling automatic rotation of secrets. The developer can create an AWS Lambda function by using the SecretsManagerRotationTemplate template in the AWS Secrets Manager console, which provides a sample code for rotating secrets for RDS DB instances,

Amazon DocumentDB clusters, and Amazon Aurora DB instances. The developer can also create secrets for the database credentials in Secrets Manager, which encrypts them at rest and provides secure access to them. The developer can set up secrets rotation on a schedule, which changes the database credentials periodically according to a specified interval or event. Option A is not optimal because it will set up IAM database authentication for token-based access, which may not be compatible with all database engines and may require additional configuration and management of IAM roles or users. Option B is not optimal because it will create parameters for the database credentials in AWS Systems Manager Parameter Store, which does not support automatic rotation of secrets. Option C is not optimal because it will store the database access credentials as an encrypted Amazon S3 object in an S3 bucket, which may introduce additional costs and complexity for accessing and securing the data.
References: [AWS Secrets Manager], [Rotating Your AWS Secrets Manager Secrets]

NEW QUESTION 103
A company has an ecommerce application. To track product reviews, the company's development team uses an Amazon DynamoDB table.
Every record includes the following
• A Review ID a 16-digrt universally unique identifier (UUID)
• A Product ID and User ID 16 digit UUIDs that reference other tables
• A Product Rating on a scale of 1-5
• An optional comment from the user
The table partition key is the Review ID. The most performed query against the table is to find the 10 reviews with the highest rating for a given product.
Which index will provide the FASTEST response for this query"?

A. A global secondary index (GSI) with Product ID as the partition key and Product Rating as the sort key
B. A global secondary index (GSI) with Product ID as the partition key and Review ID as the sort key
C. A local secondary index (LSI) with Product ID as the partition key and Product Rating as the sort key
D. A local secondary index (LSI) with Review ID as the partition key and Product ID as the sort key

Answer: A

Explanation:
This solution allows the fastest response for the query because it enables the query to use a single partition key value (the Product ID) and a range of sort key values (the Product Rating) to find the matching items. A global secondary index (GSI) is an index that has a partition key and an optional sort key that are different from those on the base table. A GSI can be created at any time and can be queried or scanned independently of the base table. A local secondary index (LSI) is an index that has the same partition key as the base table, but a different sort key. An LSI can only be created when the base table is created and must be queried together with the base table partition key. Using a GSI with Product ID as the partition key and Review ID as the sort key will not allow the query to use a range of sort key values to find the highest ratings. Using an LSI with Product ID as the partition key and Product Rating as the sort key will not work because Product ID is not the partition key of the base table. Using an LSI with Review ID as the partition key and Product ID as the sort key will not allow the query to use a single partition key value to find the matching items.
Reference: [Global Secondary Indexes], [Querying]

NEW QUESTION 107
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 109
A developer uses AWS CloudFormation to deploy an Amazon API Gateway API and an AWS Step Functions state machine The state machine must reference the API Gateway API after the CloudFormation template is deployed The developer needs a solution that uses the state machine to reference the API Gateway endpoint.
Which solution will meet these requirements MOST cost-effectively?

A. Configure the CloudFormation template to reference the API endpoint in the DefinitionSubstitutions property for the AWS StepFunctions StateMachme resource.
B. Configure the CloudFormation template to store the API endpoint in an environment variable for the AWS::StepFunctions::StateMachine resourc Configure the state machine to reference the environment variable
C. Configure the CloudFormation template to store the API endpoint in a standard AWS: SecretsManager Secret resource Configure the state machine to reference the resource
D. Configure the CloudFormation template to store the API endpoint in a standard AWS::AppConfig;:ConfigurationProfile resource Configure the state machine to reference the resource.

Answer: A

Explanation:
The most cost-effective solution is to use the DefinitionSubstitutions property of the AWS::StepFunctions::StateMachine resource to inject the API endpoint as a variable in the state machine definition. This way, the developer can use the intrinsic function

Fn::GetAtt to get the API endpoint from the AWS::ApiGateway::RestApi resource, and pass it to the state machine without creating any additional resources or environment variables. The other solutions involve creating and managing extra resources, such as Secrets Manager secrets or AppConfig configuration profiles, which incur additional costs and complexity. References
? AWS::StepFunctions::StateMachine - AWS CloudFormation
? Call API Gateway with Step Functions - AWS Step Functions
? amazon-web-services aws-api-gateway terraform aws-step-functions

NEW QUESTION 114
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 119
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 123
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 125
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 129
A company is expanding the compatibility of its photo-snaring mobile app to hundreds of additional devices with unique screen dimensions and resolutions. Photos are stored in Amazon S3 in their original format and resolution. The company uses an Amazon CloudFront distribution to serve the photos The app includes the dimension and resolution of the display as GET parameters with every request.
A developer needs to implement a solution that optimizes the photos that are served to each device to reduce load time and increase photo quality.
Which solution will meet these requirements MOST cost-effective?

A. Use S3 Batch Operations to invoke an AWS Lambda function to create new variants of the photos with the required dimensions and resolution
B. Create a dynamic CloudFront origin that automatically maps the request of each device to the corresponding photo variant.
C. Use S3 Batch Operations to invoke an AWS Lambda function to create new variants of the photos with the required dimensions and resolution
D. Create a Lambda@Edge function to route requests to the corresponding photo vacant by using request headers.
E. Create a Lambda@Edge function that optimizes the photos upon request and returns the photos as a respons
F. Change the CloudFront TTL cache policy to the maximum value possible.
G. Create a Lambda@Edge function that optimizes the photos upon request and returns the photos as a respons
H: In the same function store a copy of the processed photos on Amazon S3 for subsequent requests.

Answer: D

Explanation:
This solution meets the requirements most cost-effectively because it optimizes the photos on demand and caches them for future requests. Lambda@Edge allows the developer to run Lambda functions at AWS locations closer to viewers, which can reduce latency and improve photo quality. The developer can create a Lambda@Edge function that uses the GET parameters from each request to optimize the photos with the required dimensions and resolutions and returns them as a response. The function can also store a copy of the processed photos on Amazon S3 for subsequent requests, which can reduce processing time and costs. Using S3 Batch Operations to create new variants of the photos will incur additional storage costs and may not cover all possible dimensions and resolutions. Creating a dynamic CloudFront origin or a Lambda@Edge function to route requests to corresponding photo variants will require maintaining a mapping of device types and photo variants, which can be complex and error-prone.
Reference: [Lambda@Edge Overview], [Resizing Images with Amazon CloudFront & Lambda@Edge]

NEW QUESTION 130
A company is using Amazon RDS as the Backend database for its application. After a recent marketing campaign, a surge of read requests to the database increased the latency of data retrieval from the database.
The company has decided to implement a caching layer in front of the database. The cached content must be encrypted and must be highly available.
Which solution will meet these requirements?

A. Amazon Cloudfront
B. Amazon ElastiCache to Memcached
C. Amazon ElastiCache for Redis in cluster mode
D. Amazon DynamoDB Accelerate (DAX)

Answer: C

Explanation:
This solution meets the requirements because it provides a caching layer that can store and retrieve encrypted data from multiple nodes. Amazon ElastiCache for Redis supports encryption at rest and in transit, and can scale horizontally to increase the cache capacity and availability. Amazon ElastiCache for Memcached does not support encryption, Amazon CloudFront is a content delivery network that is not suitable for caching database queries, and Amazon DynamoDB Accelerator (DAX) is a caching service that only works with DynamoDB tables.
Reference: [Amazon ElastiCache for Redis Features], [Choosing a Cluster Engine]

NEW QUESTION 135

A developer is working on an ecommerce website The developer wants to review server logs without logging in to each of the application servers individually. The website runs on multiple Amazon EC2 instances, is written in Python, and needs to be highly available
How can the developer update the application to meet these requirements with MINIMUM changes?

A. Rewrite the application to be cloud native and to run on AWS Lambda, where the logs can be reviewed in Amazon CloudWatch
B. Set up centralized logging by using Amazon OpenSearch Service, Logstash, and OpenSearch Dashboards
C. Scale down the application to one larger EC2 instance where only one instance is recording logs
D. Install the unified Amazon CloudWatch agent on the EC2 instances Configure the agent to push the application logs to CloudWatch

Answer: D

Explanation:
The unified Amazon CloudWatch agent can collect both system metrics and log files from Amazon EC2 instances and on-premises servers. By installing and configuring the agent on the EC2 instances, the developer can easily access and analyze the application logs in CloudWatch without logging in to each server individually. This option requires minimum changes to the existing application and does not affect its availability or scalability. References
? Using the CloudWatch Agent
? Collecting Metrics and Logs from Amazon EC2 Instances and On-Premises Servers with the CloudWatch Agent

NEW QUESTION 137
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 KMSMasterKeyld 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 138
An application is using Amazon Cognito user pools and identity pools for secure access. A developer wants to integrate the user-specific file upload and download features in the application with Amazon S3. The developer must ensure that the files are saved and retrieved in a secure manner and that users can access only their own files. The file sizes range from 3 KB to 300 MB.
Which option will meet these requirements with the HIGHEST level of security?

A. Use S3 Event Notifications to validate the file upload and download requests and update the user interface (UI).
B. Save the details of the uploaded files in a separate Amazon DynamoDB tabl
C. Filter the list of files in the user interface (UI) by comparing the current user ID with the user ID associated with the file in the table.
D. Use Amazon API Gateway and an AWS Lambda function to upload and download file
E. Validate each request in the Lambda function before performing the requested operation.
F. Use an IAM policy within the Amazon Cognito identity prefix to restrict users to use their own folders in Amazon S3.

Answer: D

Explanation:
https://docs.aws.amazon.com/cognito/latest/developerguide/amazon-cognito-integrating-user-pools-with-identity-pools.html

NEW QUESTION 139
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 141

A developer is creating a serverless application that uses an AWS Lambda function The developer will use AWS CloudFormation to deploy the application The application will write logs to Amazon CloudWatch Logs The developer has created a log group in a CloudFormation template for the application to use The developer needs to modify the CloudFormation template to make the name of the log group available to the application at runtime Which solution will meet this requirement?

A. Use the AWS:Include transform in CloudFormation to provide the log group's name to the application
B. Pass the log group's name to the application in the user data section of the CloudFormation template.
C. Use the CloudFormation template's Mappings section to specify the log group's name for the application.
D. Pass the log group's Amazon Resource Name (ARN) as an environment variable to the Lambda function

Answer: D

Explanation:
FunctionName: MyLambdaFunction Code:
S3Bucket: your-lambda-code-bucket S3Key: lambda-code.zip
Runtime: nodejs14.x # Specify the desired runtime for your Lambda function Environment:
Variables:
LOG_GROUP_NAME: !Ref MyLogGroup https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/aws-resource-logs- loggroup.html

NEW QUESTION 145
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 149
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 152
A developer is creating an AWS Lambda function. The Lambda function needs an external library to connect to a third-party solution The external library is a collection of files with a total size of 100 MB The developer needs to make the external library available to the Lambda execution environment and reduce the Lambda package space
Which solution will meet these requirements with the LEAST operational overhead?

A.

Create a Lambda layer to store the external library Configure the Lambda function to use the layer
B. Create an Amazon S3 bucket Upload the external library into the S3 bucke
C. Mount the S3 bucket folder in the Lambda function Import the library by using the proper folder in the mount point.
D. Load the external library to the Lambda function's /tmp directory during deployment of the Lambda packag
E. Import the library from the /tmp directory.
F. Create an Amazon Elastic File System (Amazon EFS) volum
G. Upload the external library to the EFS volume Mount the EFS volume in the Lambda functio
H. Import the library by using the proper folder in the mount point.

Answer: A

Explanation:
Create a Lambda layer to store the external library. Configure the Lambda function to use the layer. This will allow the developer to make the external library available to the Lambda execution environment without having to include it in the Lambda package, which will reduce the Lambda package space. Using a Lambda layer is a simple and straightforward solution that requires minimal operational overhead. https://docs.aws.amazon.com/lambda/latest/dg/configuration-layers.html

NEW QUESTION 155
An ecommerce application is running behind an Application Load Balancer. A developer observes some unexpected load on the application during non-peak hours. The developer wants to analyze patterns for the client IP addresses that use the application. Which HTTP header should the developer use for this analysis?

A. The X-Forwarded-Proto header
B. The X-F Forwarded-Host header
C. The X-Forwarded-For header
D. The X-Forwarded-Port header

Answer: C

Explanation:
The HTTP header that the developer should use for this analysis is the X- Forwarded-For header. This header contains the IP address of the client that made the request to the Application Load Balancer. The developer can use this header to analyze patterns for the client IP addresses that use the application. The other headers either contain information about the protocol, host, or port of the request, which are not relevant for the analysis.
Reference: How Application Load Balancer works with your applications

NEW QUESTION 156
A developer is creating a template that uses AWS CloudFormation to deploy an application. The application is serverless and uses Amazon API Gateway, Amazon DynamoDB, and AWS Lambda.
Which AWS service or tool should the developer use to define serverless resources in YAML?

A. CloudFormation serverless intrinsic functions
B. AWS Elastic Beanstalk
C. AWS Serverless Application Model (AWS SAM)
D. AWS Cloud Development Kit (AWS CDK)

Answer: C

Explanation:
AWS Serverless Application Model (AWS SAM) is an open-source framework that enables developers to build and deploy serverless applications on AWS. AWS SAM uses a template specification that extends AWS CloudFormation to simplify the

definition of serverless resources such as API Gateway, DynamoDB, and Lambda. The developer can use AWS SAM to define serverless resources in YAML and deploy them using the AWS SAM CLI.
References:
? [What Is the AWS Serverless Application Model (AWS SAM)? - AWS Serverless Application Model]
? [AWS SAM Template Specification - AWS Serverless Application Model]

NEW QUESTION 158
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 159
A company has an application that uses Amazon Cognito user pools as an identity provider. The company must secure access to user records. The company has set up multi-factor authentication (MFA). The company also wants to send a login activity notification by email every time a user logs in.
What is the MOST operationally efficient solution that meets this requirement?

A. Create an AWS Lambda function that uses Amazon Simple Email Service (Amazon SES) to send the email notificatio
B. Add an Amazon API Gateway API to invoke the functio
C. Call the API from the client side when login confirmation is received.
D. Create an AWS Lambda function that uses Amazon Simple Email Service (Amazon SES) to send the email notificatio
E. Add an Amazon Cognito post authentication Lambda trigger for the function.
F. Create an AWS Lambda function that uses Amazon Simple Email Service (Amazon SES) to send the email notificatio
G. Create an Amazon CloudWatch Logs log subscription filter to invoke the function based on the login status.
H. Configure Amazon Cognito to stream all logs to Amazon Kinesis Data Firehos
I. Create an AWS Lambda function to process the streamed logs and to send the email notification based on the login status of each user.

Answer: B

Explanation:
Amazon Cognito user pools support Lambda triggers, which are custom functions that can be executed at various stages of the user pool workflow. A post authentication Lambda trigger can be used to perform custom actions after a user is authenticated, such as sending an email notification. Amazon SES is a cloud-based email sending service that can be used to send transactional or marketing emails. A Lambda function can use the Amazon SES API to send an email to the user's email address after the user logs in successfully. Reference: Post authentication Lambda trigger

NEW QUESTION 160
A developer maintains an Amazon API Gateway REST API. Customers use the API through a frontend UI and Amazon Cognito authentication.
The developer has a new version of the API that contains new endpoints and backward- incompatible interface changes. The developer needs to provide beta access to other developers on the team without affecting customers.
Which solution will meet these requirements with the LEAST operational overhead?

A. Define a development stage on the API Gateway AP
B. Instruct the other developers to point the endpoints to the development stage.
C. Define a new API Gateway API that points to the new API application cod
D. Instruct the other developers to point the endpoints to the new API.
E. Implement a query parameter in the API application code that determines which code version to call.
F. Specify new API Gateway endpoints for the API endpoints that the developer wants to add.

Answer: A

Explanation:
 Amazon API Gateway is a service that enables developers to create, publish, maintain, monitor, and secure APIs at any scale. The developer can define a development stage on the API Gateway API and instruct the other developers to point the endpoints to the development stage. This way, the developer can provide beta access to the new version of the API without affecting customers who use the production stage. This solution will meet the requirements with the least operational overhead.
References:
? [What Is Amazon API Gateway? - Amazon API Gateway]
? [Set up a Stage in API Gateway - Amazon API Gateway]

NEW QUESTION 164
A company runs an application on AWS The application uses an AWS Lambda function that is configured with an Amazon Simple Queue Service (Amazon SQS) queue called high priority queue as the event source A developer is updating the Lambda function with another SQS queue called low priority queue as the event source The Lambda function must always read up to 10 simultaneous messages from the high priority queue before processing messages from low priority queue. The Lambda function must be limited to 100 simultaneous invocations.
Which solution will meet these requirements'?

A. Set the event source mapping batch size to 10 for the high priority queue and to 90 for the low priority queue
B. Set the delivery delay to 0 seconds for the high priority queue and to 10 seconds for the low priority queue
C. Set the event source mapping maximum concurrency to 10 for the high priority queue and to 90 for the low priority queue
D. Set the event source mapping batch window to 10 for the high priority queue and to 90 for the low priority queue

Answer: C

Explanation:
 Setting the event source mapping maximum concurrency is the best way to control how many messages from each queue are processed by the Lambda function at a time. The maximum concurrency setting limits the number of batches that can be processed concurrently from the same event source. By setting it to 10 for the high priority queue and to 90 for the low priority queue, the developer can ensure that the Lambda function always reads up to 10 simultaneous messages from the high priority queue before processing messages from the low priority queue, and that the total number of concurrent invocations does not exceed 100. The other solutions are either not effective or not relevant. The batch size setting controls how many messages are sent to the Lambda function in a single invocation, not how many invocations are allowed at a time. The delivery delay setting controls how long a message is invisible in the queue after it is sent, not how often it is processed by the Lambda function. The batch window setting controls how long the event source mapping can buffer messages before sending a batch, not how many batches are processed concurrently. References
? Using AWS Lambda with Amazon SQS
? AWS Lambda Event Source Mapping - Examples and best practices | Shisho Dojo
? Lambda event source mappings - AWS Lambda
? aws_lambda_event_source_mapping - Terraform Registry

NEW QUESTION 167
A developer maintains a critical business application that uses Amazon DynamoDB as the primary data store The DynamoDB table contains millions of documents and receives 30- 60 requests each minute The developer needs to perform processing in near-real time on the documents when they are added or updated in the DynamoDB table
How can the developer implement this feature with the LEAST amount of change to the existing application code?

A. Set up a cron job on an Amazon EC2 instance Run a script every hour to query the table for changes and process the documents
B. Enable a DynamoDB stream on the table Invoke an AWS Lambda function to process the documents.
C. Update the application to send a PutEvents request to Amazon EventBridg
D. Create an EventBridge rule to invoke an AWS Lambda function to process the documents.
E. Update the application to synchronously process the documents directly after the DynamoDB write

Answer: B

Explanation:
 https://aws.amazon.com/blogs/database/dynamodb-streams-use-cases-and- design-patterns/

NEW QUESTION 171
A company is building a new application that runs on AWS and uses Amazon API Gateway to expose APIs Teams of developers are working on separate components of the application in parallel The company wants to publish an API without an integrated backend so that teams that depend on the application backend can continue the development work before the API backend development is complete.
Which solution will meet these requirements?

A. Create API Gateway resources and set the integration type value to MOCK Configure the method integration request and integration response to associate a response with an HTTP status code Create an API Gateway stage and deploy the API.
B. Create an AWS Lambda function that returns mocked responses and various HTTP status code
C. Create API Gateway resources and set the integration type value to AWS_PROXY Deploy the API.
D. Create an EC2 application that returns mocked HTTP responses Create API Gateway resources and set the integration type value to AWS Create an API Gateway stage and deploy the API.
E. Create API Gateway resources and set the integration type value set to HTTP_PROX
F. Add mapping templates and deploy the AP
G. Create an AWS Lambda layer that returns various HTTP status codes Associate the Lambda layer with the API deployment

Answer: A

Explanation:
The best solution for publishing an API without an integrated backend is to use the MOCK integration type in API Gateway. This allows the developer to return a static response to the client without sending the request to a backend service. The developer can configure the method integration request and integration response to associate a response with an HTTP status code, such as 200 OK or 404 Not Found. The developer can also create an API Gateway stage and deploy the API to make it available to the teams that depend on the application backend. The other solutions are either not feasible or not efficient. Creating an AWS Lambda function, an EC2 application, or an AWS Lambda layer would require additional resources and code to generate the mocked responses and HTTP status codes. These solutions would also incur additional costs and complexity, and would not leverage the built-in functionality of API Gateway. References
? Set up mock integrations for API Gateway REST APIs
? Mock Integration for API Gateway - AWS CloudFormation
? Mocking API Responses with API Gateway
? How to mock API Gateway responses with AWS SAM

NEW QUESTION 174
A company is offering APIs as a service over the internet to provide unauthenticated read access to statistical information that is updated daily. The company uses Amazon API Gateway and AWS Lambda to develop the APIs. The service has become popular, and the company wants to enhance the responsiveness of the APIs.
Which action can help the company achieve this goal?

A. Enable API caching in API Gateway.
B. Configure API Gateway to use an interface VPC endpoint.
C. Enable cross-origin resource sharing (CORS) for the APIs.
D. Configure usage plans and API keys in API Gateway.

Answer: A

Explanation:
Amazon API Gateway is a service that enables developers to create, publish, maintain, monitor, and secure APIs at any scale. The developer can enable API caching in API Gateway to cache responses from the backend integration point for a specified time-to- live (TTL) period. This can improve the responsiveness of the APIs by reducing the number
                                of calls made to the backend service. References:
? [What Is Amazon API Gateway? - Amazon API Gateway]
? [Enable API Caching to Enhance Responsiveness - Amazon API Gateway]

NEW QUESTION 175
A company has an application that runs across multiple AWS Regions. The application is experiencing performance issues at irregular intervals. A developer must
                                to implement distributed tracing for the application to troubleshoot the root cause of the performance issues.
use AWS X-Ray
What should the developer do to meet this requirement?

A. Use the X-Ray console to add annotations for AWS services and user-defined services
B. Use Region annotation that X-Ray adds automatically for AWS services Add Region annotation for user-defined services
C. Use the X-Ray daemon to add annotations for AWS services and user-defined services
D. Use Region annotation that X-Ray adds automatically for user-defined services Configure X-Ray to add Region annotation for AWS services

Answer: B

Explanation:
AWS X-Ray automatically adds Region annotation for AWS services that are integrated with X-Ray. This annotation indicates the AWS Region where the service is running. The developer can use this annotation to filter and group traces by Region and identify any performance issues related to cross-Region calls. The developer can also add Region annotation for user-defined services by using the X-Ray SDK. This option enables the developer to implement distributed tracing for the application that runs across multiple AWS Regions. References
? AWS X-Ray Annotations
? AWS X-Ray Concepts

NEW QUESTION 176
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