Amazon

Exam Questions DVA-C02

DVA-C02

NEW QUESTION 1
A data visualization company wants to strengthen the security of its core applications The applications are deployed on AWS across its development staging, pre-production, and production environments. The company needs to encrypt all of its stored sensitive credentials The sensitive credentials need to be automatically rotated Aversion of the sensitive credentials need to be stored for each environment
Which solution will meet these requirements in the MOST operationally efficient way?

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

Answer: D

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

NEW QUESTION 2
A developer is deploying a company's application to Amazon EC2 instances The application generates gigabytes of data files each day The files are rarely accessed but the files must be available to the application's users within minutes of a request during the first year of storage The company must retain the files for 7 years.
How can the developer implement the application to meet these requirements MOST cost- effectively?

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

Answer: A

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

NEW QUESTION 3
A development team wants to build a continuous integration/continuous delivery (CI/CD) pipeline. The team is using AWS CodePipeline to automate the code build and deployment. The team wants to store the program code to prepare for the CI/CD pipeline.
Which AWS service should the team use to store the program code?

A. AWS CodeDeploy
B. AWS CodeArtifact
C. AWS CodeCommit
D. Amazon CodeGuru

Answer: C

Explanation:
AWS CodeCommit is a service that provides fully managed source control for hosting secure and scalable private Git repositories. The development team can use CodeCommit to store the program code and prepare for the CI/CD pipeline. CodeCommit integrates with other AWS services such as CodePipeline, CodeBuild, and CodeDeploy to automate the code build and deployment process.
References:
? [What Is AWS CodeCommit? - AWS CodeCommit]
? [AWS CodePipeline - AWS CodeCommit]

NEW QUESTION 4
A developer is creating an application that includes an Amazon API Gateway REST API in the us-east-2 Region. The developer wants to use Amazon CloudFront and a custom domain name for the API. The developer has acquired an SSL/TLS certificate for the domain from a third-party provider.
How should the developer configure the custom domain for the application?

A. Import the SSL/TLS certificate into AWS Certificate Manager (ACM) in the same Region as the AP
B. Create a DNS A record for the custom domain.

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

Answer: D

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

NEW QUESTION 5
A company is using Amazon OpenSearch Service to implement an audit monitoring system. A developer needs to create an AWS Cloudformation custom resource that is
associated with an AWS Lambda function to configure the OpenSearch Service domain. The Lambda function must access the OpenSearch Service domain by using Open Search Service internal master user credentials.
What is the MOST secure way to pass these credentials to the Lambdas function?

A. Use a CloudFormation parameter to pass the master user credentials at deployment to the OpenSearch Service domain's MasterUserOptions and the Lambda function's environment variabl
B. Set the No Echo attenuate to true.
C. Use a CloudFormation parameter to pass the master user credentials at deployment to the OpenSearch Service domain's MasterUserOptions and to create a paramete
D. In AWS Systems Manager Parameter Stor
E. Set the No Echo attribute to tru
F. Create an 1AM role that has the ssm GetParameter permissio
G. Assign me role to the Lambda functio
H. Store me parameter name as the Lambda function's environment variabl
I. Resolve the parameter's value at runtime.
J. Use a CloudFormation parameter to pass the master uses credentials at deployment to the OpenSearch Service domain's MasterUserOptions and the Lambda function's environment varleWe Encrypt the parameters value by using the AWS Key Management Service (AWS KMS) encrypt command.
K. Use CloudFoimalion to create an AWS Secrets Manager Secre
L. Use a CloudFormation dynamic reference to retrieve the secret's value for the OpenSearch Service domain's MasterUserOption
M. Create an 1AM role that has the secrets manage
N. GetSecretvalue permissio
O. Assign the role to the Lambda Function Store the secrets name as the Lambda function's environment variabl
P. Resole the secret's value at runtime.

Answer: D

Explanation:
The solution that will meet the requirements is to use CloudFormation to create an AWS Secrets Manager secret. Use a CloudFormation dynamic reference to retrieve the secret's value for the OpenSearch Service domain's MasterUserOptions. Create an IAM role that has the secretsmanager:GetSecretValue permission. Assign the role to the Lambda function. Store the secret's name as the Lambda function's environment variable. Resolve the secret's value at runtime. This way, the developer can pass the credentials to the Lambda function in a secure way, as AWS Secrets Manager encrypts and manages the secrets. The developer can also use a dynamic reference to avoid exposing the secret's value in plain text in the CloudFormation template. The other options either involve passing the credentials as plain text parameters, which is not secure, or encrypting them with AWS KMS, which is less convenient than using AWS Secrets Manager.
Reference: Using dynamic references to specify template values

NEW QUESTION 6
A developer is deploying a new application to Amazon Elastic Container Service (Amazon ECS). The developer needs to securely store and retrieve different types of variables. These variables include authentication information for a remote API, the URL for the API, and credentials. The authentication information and API URL must be available to all current and future deployed versions of the application across development, testing, and production environments.
How should the developer retrieve the variables with the FEWEST application changes?

A. Update the application to retrieve the variables from AWS Systems Manager Parameter Stor
B. Use unique paths in Parameter Store for each variable in each environmen
C. Store the credentials in AWS Secrets Manager in each environment.
D. Update the application to retrieve the variables from AWS Key Management Service (AWS KMS). Store the API URL and credentials as unique keys for each environment.
E. Update the application to retrieve the variables from an encrypted file that is stored with the applicatio
F. Store the API URL and credentials in unique files for each environment.
G. Update the application to retrieve the variables from each of the deployed environment
H. Define the authentication information and API URL in the ECS task definition as unique names during the deployment process.

Answer: A

Explanation:
AWS Systems Manager Parameter Store is a service that provides secure, hierarchical storage for configuration data management and secrets management. The developer can update the application to retrieve the variables from Parameter Store by using the AWS SDK or the AWS CLI. The developer can use unique paths in Parameter Store for each variable in each environment, such as /dev/api-url, /test/api-url, and /prod/api-url. The developer can also store the credentials in AWS

Secrets Manager, which is integrated with Parameter Store and provides additional features such as automatic rotation and encryption.
References:
? [What Is AWS Systems Manager? - AWS Systems Manager]
? [Parameter Store - AWS Systems Manager]
? [What Is AWS Secrets Manager? - AWS Secrets Manager]

NEW QUESTION 7
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 8
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 9
A developer is designing a serverless application for a game in which users register and log in through a web browser The application makes requests on behalf of users to a set of AWS Lambda functions that run behind an Amazon API Gateway HTTP API
The developer needs to implement a solution to register and log in users on the application's sign-in page. The solution must minimize operational overhead and must minimize ongoing management of user identities.
Which solution will meet these requirements'?

A. Create Amazon Cognito user pools for external social identity providers Configure 1AM roles for the identity pools.
B. Program the sign-in page to create users' 1AM groups with the 1AM roles attached to the groups
C. Create an Amazon RDS for SQL Server DB instance to store the users and manage the permissions to the backend resources in AWS
D. Configure the sign-in page to register and store the users and their passwords in an Amazon DynamoDB table with an attached IAM policy.

Answer: A

Explanation:
https://docs.aws.amazon.com/cognito/latest/developerguide/signing-up-users-in-your-app.html

NEW QUESTION 10

A developer needs to build an AWS CloudFormation template that self-populates the AWS Region variable that deploys the CloudFormation template
What is the MOST operationally efficient way to determine the Region in which the template is being deployed?

A. Use the AWS:.Region pseudo parameter
B. Require the Region as a CloudFormation parameter
C. Find the Region from the AWS::StackId pseudo parameter by using the Fn::Split intrinsic function
D. Dynamically import the Region by referencing the relevant parameter in AWS Systems Manager Parameter Store

Answer: A

Explanation:
https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/mappings-section- structure.html
https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/pseudo-parameter- reference.html
https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/pseudo-parameter- reference.html

NEW QUESTION 10

A developer is testing a new file storage application that uses an Amazon CloudFront distribution to serve content from an Amazon S3 bucket. The distribution accesses the S3 bucket by using an origin access identity (OAI). The S3 bucket's permissions explicitly deny access to all other users.
The application prompts users to authenticate on a login page and then uses signed cookies to allow users to access their personal storage directories. The developer has configured the distribution to use its default cache behavior with restricted viewer access and has set the origin to point to the S3 bucket. However, when the developer tries to navigate to the login page, the developer receives a 403 Forbidden error.
The developer needs to implement a solution to allow unauthenticated access to the login page. The solution also must keep all private content secure.
Which solution will meet these requirements?

A. Add a second cache behavior to the distribution with the same origin as the default cache behavio
B. Set the path pattern for the second cache behavior to the path of the login page, and make viewer access unrestricte
C. Keep the default cache behavior's settings unchanged.
D. Add a second cache behavior to the distribution with the same origin as the default cache behavio
E. Set the path pattern for the second cache behavior to *, and make viewer access restricte
F. Change the default cache behavior's path pattern to the path of the login page, and make viewer access unrestricted.
G. Add a second origin as a failover origin to the default cache behavio
H. Point the failover origin to the S3 bucke
I. Set the path pattern for the primary origin to *, and make viewer access restricte
J. Set the path pattern for the failover origin to the path of the login page, and make viewer access unrestricted.
K. Add a bucket policy to the S3 bucket to allow read acces
L. Set the resource on the policy to the Amazon Resource Name (ARN) of the login page object in the S3 bucke
M. Add a CloudFront function to the default cache behavior to redirect unauthorized requests to the login page's S3 URL.

Answer: A

Explanation:
The solution that will meet the requirements is to add a second cache behavior to the distribution with the same origin as the default cache behavior. Set the path pattern for the second cache behavior to the path of the login page, and make viewer access unrestricted. Keep the default cache behavior's settings unchanged. This way, the login page can be accessed without authentication, while all other content remains secure and requires signed cookies. The other options either do not allow unauthenticated access to the login page, or expose private content to unauthorized users.
Reference: Restricting Access to Amazon S3 Content by Using an Origin Access Identity

NEW QUESTION 15

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

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

Answer: A

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

NEW QUESTION 18

A company notices that credentials that the company uses to connect to an external software as a service (SaaS) vendor are stored in a configuration file as plaintext.
The developer needs to secure the API credentials and enforce automatic credentials rotation on a quarterly basis.
Which solution will meet these requirements MOST securely?

A. Use AWS Key Management Service (AWS KMS) to encrypt the configuration fil

B. Decrypt the configuration file when users make API calls to the SaaS vendo
C. Enable rotation.
D. Retrieve temporary credentials from AWS Security Token Service (AWS STS) every 15 minute
E. Use the temporary credentials when users make API calls to the SaaS vendor.
F. Store the credentials in AWS Secrets Manager and enable rotatio
G. Configure the API to have Secrets Manager access.
H. Store the credentials in AWS Systems Manager Parameter Store and enable rotatio
I. Retrieve the credentials when users make API calls to the SaaS vendor.

Answer: C

Explanation:
Store the credentials in AWS Secrets Manager and enable rotation. Configure the API to have Secrets Manager access. This is correct. This solution will meet the requirements most securely, because it uses a service that is designed to store and manage secrets such as API credentials. AWS Secrets Manager helps you protect access to your applications, services, and IT resources by enabling you to rotate, manage, and retrieve secrets throughout their lifecycle1. You can store secrets such as passwords, database strings, API keys, and license codes as encrypted values2. You can also configure automatic rotation of your secrets on a schedule that you specify3. You can use the AWS SDK or CLI to retrieve secrets from Secrets Manager when you need them4. This way, you can avoid storing credentials in plaintext files or hardcoding them in your code.

NEW QUESTION 19
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
D. Update the application code to read and write configuration files from the shared folder.
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 21
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 23
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 24
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 29
A developer has observed an increase in bugs in the AWS Lambda functions that a development team has deployed in its Node is application. To minimize these bugs, the developer wants to impendent automated testing of Lambda functions in an environment that Closely simulates the Lambda environment.
The developer needs to give other developers the ability to run the tests locally. The developer also needs to integrate the tests into the team's continuous integration and continuous delivery (Ct/CO) pipeline before the AWS Cloud Development Kit (AWS COK) deployment.
Which solution will meet these requirements?

A. Create sample events based on the Lambda documentatio
B. Create automated test scripts that use the cdk local invoke command to invoke the Lambda function
C. Check the response Document the test scripts for the other developers on the team Update the CI/CD pipeline to run the test scripts.
D. Install a unit testing framework that reproduces the Lambda execution environmen
E. Create sample events based on the Lambda Documentation Invoke the handler function by using a unit testing framewor
F. Check the response Document how to run the unit testing framework for the other developers on the tea
G. Update the OCD pipeline to run the unit testing framework.
H. Install the AWS Serverless Application Model (AWS SAW) CLI tool Use the Sam local generate-event command to generate sample events for me automated test
I. Create automated test scripts that use the Sam local invoke command to invoke the Lambda function
J. Check the response Document the test scripts tor the other developers on the team Update the CI/CD pipeline to run the test scripts.
K. Create sample events based on the Lambda documentatio
L. Create a Docker container from the Node is base image to invoke the Lambda function
M. Check the response Document how to run the Docker container for the more developers on the team update the CI/CD pipeline to run the Docker container.

Answer: C

Explanation:
This solution will meet the requirements by using AWS SAM CLI tool, which is a command line tool that lets developers locally build, test, debug, and deploy serverless applications defined by AWS SAM templates. The developer can use sam local generate- event command to generate sample events for different event sources such as API Gateway or S3. The developer can create automated test scripts that use sam local invoke command to invoke Lambda functions locally in

an environment that closely simulates Lambda environment. The developer can check the response from Lambda functions and document how to run the test scripts for other developers on the team. The developer can also update CI/CD pipeline to run these test scripts before deploying with AWS CDK. Option A is not optimal because it will use cdk local invoke command, which does not exist in AWS CDK CLI tool. Option B is not optimal because it will use a unit testing framework that reproduces Lambda execution environment, which may not be accurate or consistent with Lambda environment. Option D is not optimal because it will create a Docker container from Node.js base image to invoke Lambda functions, which may introduce additional overhead and complexity for creating and running Docker containers.
References: [AWS Serverless Application Model (AWS SAM)], [AWS Cloud Development Kit (AWS CDK)]

NEW QUESTION 31
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 35
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 36
A developer is creating a simple proof-of-concept demo by using AWS CloudFormation and AWS Lambda functions The demo will use a CloudFormation template to deploy an existing Lambda function The Lambda function uses deployment packages and dependencies stored in Amazon S3 The developer defined anAWS Lambda Function resource in a CloudFormation template. The developer needs to add the S3 bucket to the CloudFormation template.
What should the developer do to meet these requirements with the LEAST development effort?

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

Answer: D

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

NEW QUESTION 40
An online sales company is developing a serverless application that runs on AWS. The application uses an AWS Lambda function that calculates order success rates and stores the data in an Amazon DynamoDB table. A developer wants an efficient way to invoke the Lambda function every 15 minutes.
Which solution will meet this requirement with the LEAST development effort?

A. Create an Amazon EventBridge rule that has a rate expression that will run the rule every 15 minute
B. Add the Lambda function as the target of the EventBridge rule.

C. Create an AWS Systems Manager document that has a script that will invoke the Lambda function on Amazon EC2. Use a Systems Manager Run Command task to run the shell script every 15 minutes.
D. Create an AWS Step Functions state machin
E. Configure the state machine to invoke the Lambda function execution role at a specified interval by using a Wait stat
F. Set the interval to 15 minutes.
G. Provision a small Amazon EC2 instanc
H. Set up a cron job that invokes the Lambda function every 15 minutes.

Answer: A

Explanation:
The best solution for this requirement is option A. Creating an Amazon EventBridge rule that has a rate expression that will run the rule every 15 minutes and adding the Lambda function as the target of the EventBridge rule is the most efficient way to invoke the Lambda function periodically. This solution does not require any additional resources or development effort, and it leverages the built-in scheduling capabilities of EventBridge1.

NEW QUESTION 43
A developer is creating a new REST API by using Amazon API Gateway and AWS Lambda. The development team tests the API and validates responses for the known use cases before deploying the API to the production environment.

The developer wants to make the REST API available for testing by using API Gateway locally.
Which AWS Serverless Application Model Command Line Interface (AWS SAM CLI) subcommand will meet these requirements?

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

Answer: D

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

NEW QUESTION 45
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 47
A company is building a compute-intensive application that will run on a fleet of Amazon EC2 instances. The application uses attached Amazon Elastic Block Store (Amazon EBS) volumes for storing data. The Amazon EBS volumes will be created at time of initial deployment. The application will process sensitive information. All of the data must be encrypted. The solution should not impact the application's performance.
Which solution will meet these requirements?

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

Answer: A

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

NEW QUESTION 51
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 53
A company uses a custom root certificate authority certificate chain (Root CA Cert) that is 10 KB in size generate SSL certificates for its on-premises HTTPS endpoints. One of the company's cloud based applications has hundreds of AWS Lambda functions that pull date from these endpoints. A developer updated the trust store of the Lambda execution environment to use the Root CA Cert when the Lambda execution environment is initialized. The developer bundled the Root CA Cert as a text file in the Lambdas deployment bundle.
After 3 months of development the root CA Cert is no longer valid and must be updated. The developer needs a more efficient solution to update the Root CA Cert for all deployed Lambda functions. The solution must not include rebuilding or updating all Lambda functions that use the Root CA Cert. The solution must also work for all development, testing and production environment. Each environment is managed in a separate AWS account.
When combination of steps Would the developer take to meet these environments MOST cost-effectively? (Select TWO)

A. Mastered
B. Not Mastered

Answer: A

Explanation:
This solution will meet the requirements by storing the Root CA Cert as a Secure String parameter in AWS Systems Manager Parameter Store, which is a secure and scalable service for storing and managing configuration data and secrets. The resource-based policy will allow IAM users in different AWS accounts and environments to access the parameter without requiring cross-account roles or permissions. The Lambda code will be refactored to load the Root CA Cert from the parameter store and modify the runtime trust store outside the Lambda function handler, which will improve performance and reduce latency by avoiding repeated calls to Parameter Store and trust store modifications for each invocation of the Lambda function. Option A is not optimal because it will use AWS Secrets Manager instead of AWS Systems Manager Parameter Store, which will incur additional costs and complexity for storing and managing a non-secret configuration data such as Root CA Cert. Option C is not optimal because it will deactivate the application secrets and monitor the application error logs temporarily, which will cause application downtime and potential data loss. Option D is not optimal because it will modify the runtime trust store inside the Lambda function handler, which will degrade performance and increase latency by repeating unnecessary operations for each invocation of the Lambda function.
References: AWS Systems Manager Parameter Store, [Using SSL/TLS to Encrypt a Connection to a DB Instance]

NEW QUESTION 56
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 57
A developer is using AWS Step Functions to automate a workflow The workflow defines each step as an AWS Lambda function task The developer notices that runs of the Step Functions state machine fail in the GetResource task with either an UlegalArgumentException error or a TooManyRequestsException error
The developer wants the state machine to stop running when the state machine encounters an UlegalArgumentException error. The state machine needs to retry the GetResource task one additional time after 10 seconds if the state machine encounters a TooManyRequestsException error. If the second attempt fails, the developer wants the state machine to stop running.
How can the developer implement the Lambda retry functionality without adding unnecessary complexity to the state machine'?

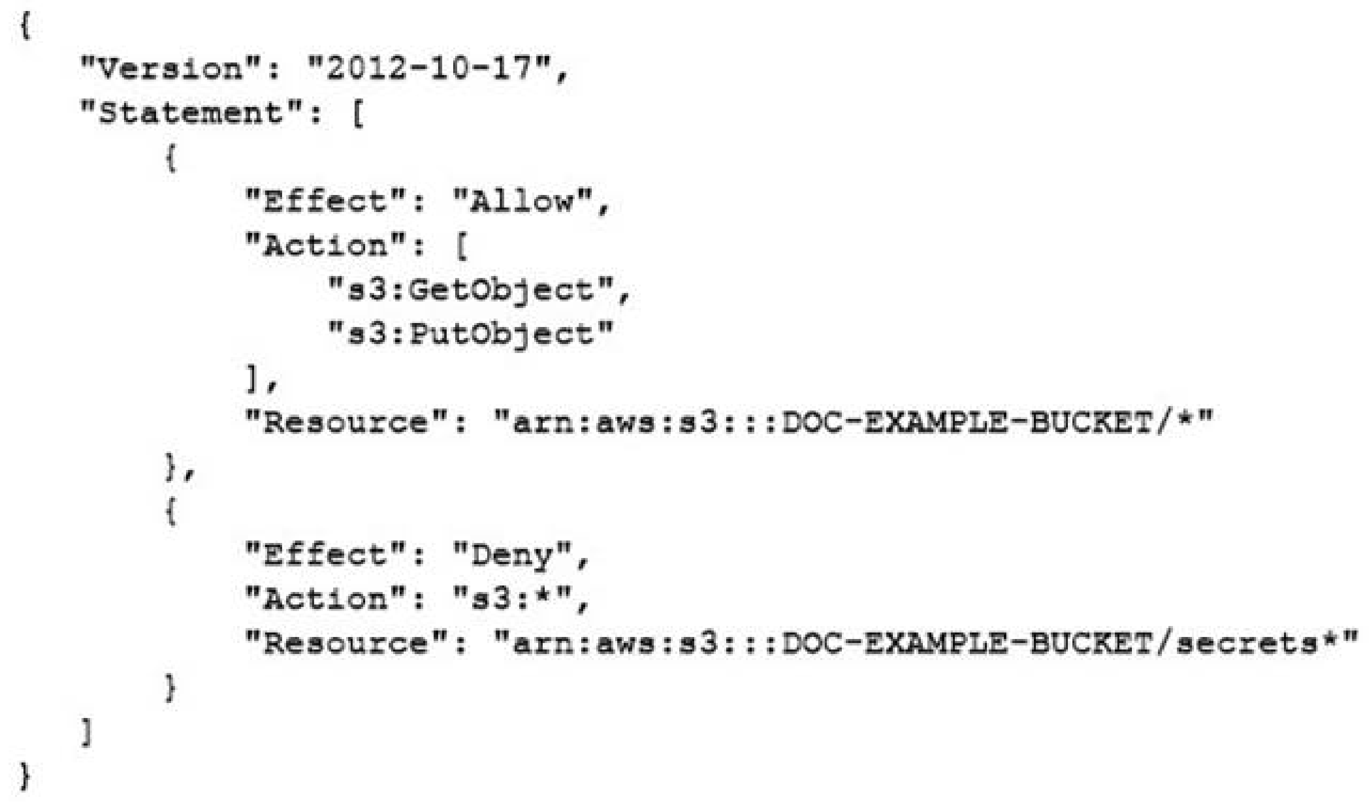
A. Add a Delay task after the GetResource tas
B. Add a catcher to the GetResource tas
C. Configure the catcher with an error type of TooManyRequestsExceptio
D. Configure the next step to be the Delay task Configure the Delay task to wait for an interval of 10 seconds Configure the next step to be the GetResource task.
E. Add a catcher to the GetResource task Configure the catcher with an error type of TooManyRequestsExceptio
F. an interval of 10 seconds, and a maximum attempts value of 1. Configure the next step to be the GetResource task.
G. Add a retrier to the GetResource task Configure the retrier with an error type of TooManyRequestsException, an interval of 10 seconds, and a maximum attempts value of 1.
H. Duplicate the GetResource task Rename the new GetResource task to TryAgain Add a catcher to the original GetResource task Configure the catcher with an error type of TooManyRequestsExceptio

I. Configure the next step to be TryAgain.

Answer: C

Explanation:
The best way to implement the Lambda retry functionality is to use the Retry field in the state definition of the GetResource task. The Retry field allows the developer to specify an array of retriers, each with an error type, an interval, and a maximum number of attempts. By setting the error type to TooManyRequestsException, the interval to 10 seconds, and the maximum attempts to 1, the developer can achieve the desired behavior of retrying the GetResource task once after 10 seconds if it encounters
a TooManyRequestsException error. If the retry fails, the state machine will stop running. If the GetResource task encounters an UlegalArgumentException error, the state machine will also stop running without retrying, as this error type is not specified in the Retry field. References
? Error handling in Step Functions
? Handling Errors, Retries, and adding Alerting to Step Function State Machine Executions
? The Jitter Strategy for Step Functions Error Retries on the New Workflow Studio

NEW QUESTION 61
A developer has written the following IAM policy to provide access to an Amazon S3 bucket:



```
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Effect": "Allow",
            "Action": [
                "s3:GetObject",
                "s3:PutObject"
            ],
            "Resource": "arn:aws:s3:::DOC-EXAMPLE-BUCKET/*"
        },
        {
            "Effect": "Deny",
            "Action": "s3:*",
            "Resource": "arn:aws:s3:::DOC-EXAMPLE-BUCKET/secrets*"
        }
    ]
}
```

Which access does the policy allow regarding the s3:GetObject and s3:PutObject actions?

A. Access on all buckets except the “DOC-EXAMPLE-BUCKET” bucket
B. Access on all buckets that start with “DOC-EXAMPLE-BUCKET” except the “DOC-EXAMPLE-BUCKET/secrets” bucket
C. Access on all objects in the “DOC-EXAMPLE-BUCKET” bucket along with access to all S3 actions for objects in the “DOC-EXAMPLE-BUCKET” bucket that start with “secrets”
D. Access on all objects in the “DOC-EXAMPLE-BUCKET” bucket except on objects that start with “secrets”

Answer: D

Explanation:
The IAM policy shown in the image is a resource-based policy that grants or denies access to an S3 bucket based on certain conditions. The first statement allows access to any S3 action on any object in the “DOC-EXAMPLE-BUCKET” bucket when the request is made over HTTPS (the value of aws:SecureTransport is true). The second statement denies access to the s3:GetObject and s3:PutObject actions on any object in the “DOC-EXAMPLE-BUCKET/secrets” prefix when the request is made over HTTP (the value of aws:SecureTransport is false). Therefore, the policy allows access on all objects in the “DOC-EXAMPLE-BUCKET” bucket except on objects that start with “secrets”.
Reference: Using IAM policies for Amazon S3

NEW QUESTION 63
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.
I. 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 68
A company has an application that runs as a series of AWS Lambda functions. Each Lambda function receives data from an Amazon Simple Notification Service (Amazon SNS) topic and writes the data to an Amazon Aurora DB instance.
To comply with an information security policy, the company must ensure that the Lambda functions all use a single securely encrypted database connection string to access Aurora.
Which solution will meet these requirements'?

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

Answer: A

Explanation:

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

NEW QUESTION 70
A company has an existing application that has hardcoded database credentials A developer needs to modify the existing application The application is deployed in two AWS Regions with an active-passive failover configuration to meet company's disaster recovery strategy
The developer needs a solution to store the credentials outside the code. The solution must comply With the company's disaster recovery strategy
Which solution Will meet these requirements in the MOST secure way?

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

Answer: A

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

NEW QUESTION 72
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 75
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 78
A company wants to share information with a third party. The third party has an HTTP API endpoint that the company can use to share the information. The company has the required API key to access the HTTP API.
The company needs a way to manage the API key by using code. The integration of the API key with the application code cannot affect application performance.
Which solution will meet these requirements MOST securely?

A. Mastered
B. Not Mastered

Answer: A

Explanation:
AWS Secrets Manager is a service that helps securely store, rotate, and manage secrets such as API keys, passwords, and tokens. The developer can store the API credentials in AWS Secrets Manager and retrieve them at runtime by using the AWS SDK. This solution will meet the requirements of security, code management, and performance. Storing the API credentials in a local code variable or an S3 object is not secure, as it exposes the credentials to unauthorized access or leakage. Storing the API credentials in a DynamoDB table is also not secure, as it requires additional encryption and access control measures. Moreover, retrieving the credentials from S3 or DynamoDB may affect application performance due to network latency.
References:
? [What Is AWS Secrets Manager? - AWS Secrets Manager]
? [Retrieving a Secret - AWS Secrets Manager]

NEW QUESTION 80
A developer has observed an increase in bugs in the AWS Lambda functions that a development team has deployed in its Node.js application.
To minimize these bugs, the developer wants to implement automated testing of Lambda functions in an environment that closely simulates the Lambda environment.
The developer needs to give other developers the ability to run the tests locally. The developer also needs to integrate the tests into the team's continuous integration and continuous delivery (CI/CD) pipeline before the AWS Cloud Development Kit (AWS CDK) deployment.
Which solution will meet these requirements?

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

Create sample events based on the Lambda documentatio

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

O. Document the test scripts for the other developers on the tea
P. Update the CI/CD pipeline to run the test scripts.
Q. Create sample events based on the Lambda documentatio
R. Create a Docker container from the Node.js base image to invoke the Lambda function
S. Check the respons
T. Document how to run the Docker container for the other developers on the tea
. Update the CllCD pipeline to run the Docker container.

Answer: C

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

NEW QUESTION 82
A company is migrating an on-premises database to Amazon RDS for MySQL. The company has read-heavy workloads. The company wants to refactor the code to achieve optimum read performance for queries.
Which solution will meet this requirement with LEAST current and future effort?

Use a multi-AZ Amazon RDS deploymen
A
B: Increase the number of connections that the code makes to the database or increase the connection pool size if a connection pool is in use.
C. Use a multi-AZ Amazon RDS deploymen
D. Modify the code so that queries access the secondary RDS instance.
E. Deploy Amazon RDS with one or more read replica
F. Modify the application code so that queries use the URL for the read replicas.
G. Use open source replication software to create a copy of the MySQL database on an Amazon EC2 instanc
H. Modify the application code so that queries use the IP address of the EC2 instance.

Answer: C

Explanation:
Amazon RDS for MySQL supports read replicas, which are copies of the primary database instance that can handle read-only queries. Read replicas can improve the read performance of the database by offloading the read workload from the primary instance and distributing it across multiple replicas. To use read replicas, the application code needs to be modified to direct read queries to the URL of the read replicas, while write queries still go to the URL of the primary instance. This solution requires less current and future effort than using a multi-AZ deployment, which does not provide read scaling benefits, or using open source replication software, which requires additional configuration and maintenance. Reference: Working with read replicas

NEW QUESTION 86
A developer is testing an application that invokes an AWS Lambda function asynchronously. During the testing phase the Lambda function fails to process after two retries.
How can the developer troubleshoot the failure?

A. Configure AWS CloudTrail logging to investigate the invocation failures.
B. Configure Dead Letter Queues by sending events to Amazon SQS for investigation.
C. Configure Amazon Simple Workflow Service to process any direct unprocessed events.
D. Configure AWS Config to process any direct unprocessed events.

Answer: B

Explanation:
This solution allows the developer to troubleshoot the failure by capturing unprocessed events in a queue for further analysis. Dead Letter Queues (DLQs) are queues that store messages that could not be processed by a service, such as Lambda, for various reasons, such as configuration errors, throttling limits, or permissions issues. The developer can configure DLQs for Lambda functions by sending events to either an Amazon Simple Queue Service (SQS) queue or an Amazon Simple Notification Service (SNS) topic. The developer can then inspect the messages in the queue or topic to identify and fix the root cause of the failure. Configuring AWS CloudTrail logging will not capture invocation failures for asynchronous Lambda invocations, but only record API calls made by or on behalf of Lambda. Configuring Amazon Simple Workflow Service (SWF) or AWS Config will not process any direct unprocessed events, but require additional integration and configuration.
Reference: [Using AWS Lambda with DLQs], [Asynchronous invocation]

NEW QUESTION 90
A developer is building a serverless application by using AWS Serverless Application Model (AWS SAM) on multiple AWS Lambda functions. When the application is deployed, the developer wants to shift 10% of the traffic to the new deployment of the application for the first 10 minutes after deployment. If there are no issues, all traffic must switch over to the new version.
Which change to the AWS SAM template will meet these requirements?

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

Answer: A

Explanation:
? The Deployment Preference Type property specifies how traffic should be shifted between versions of a Lambda function1. The Canary10Percent10Minutes option means that 10% of the traffic is immediately shifted to the new version, and after 10 minutes, the remaining 90% of the traffic is shifted1. This matches the

requirement of shifting 10% of the traffic for the first 10 minutes, and then switching all traffic to the new version.
? The AutoPublishAlias property enables AWS SAM to automatically create and update a Lambda alias that points to the latest version of the function1. This is required to use the Deployment Preference Type property1. The alias name can be specified by the developer, and it can be used to invoke the function with the latest code.

NEW QUESTION 94
A developer at a company needs to create a small application that makes the same API call once each day 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 Kubernetes Service (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:
The correct answer is C. Use an AWS Lambda function that is invoked by an Amazon EventBridge scheduled event.
* C. Use an AWS Lambda function that is invoked by an Amazon EventBridge scheduled event. This is correct. AWS Lambda is a serverless compute service that lets you run code without provisioning or managing servers. Lambda runs your code on a high-availability compute infrastructure and performs all of the administration of the compute resources, including server and operating system maintenance, capacity provisioning and automatic scaling, and logging1. Amazon EventBridge is a serverless event bus service that enables you to connect your applications with data from a variety of sources2. EventBridge can create rules that run on a schedule, either at regular intervals or at specific times and dates, and invoke targets such as Lambda functions3. This solution meets the requirements of creating a small application that makes the same API call once each day at a designated time, without requiring any infrastructure in the AWS Cloud or any operational overhead.
* A. Use a Kubernetes cron job that runs on Amazon Elastic Kubernetes Service (Amazon EKS). This is incorrect. Amazon EKS is a fully managed Kubernetes service that allows you to run containerized applications on AWS4. Kubernetes cron jobs are tasks that run periodically on a given schedule5. This solution could meet the functional requirements of creating a small application that makes the same API call once each day at a designated time, but it would not be the most operationally efficient manner. The company would need to provision and manage an EKS cluster, which would incur additional costs and complexity.
* B. Use an Amazon Linux crontab scheduled job that runs on Amazon EC2. This is incorrect. Amazon EC2 is a web service that provides secure, resizable compute capacity in the cloud6. Crontab is a Linux utility that allows you to schedule commands or scripts to run automatically at a specified time or date7. This solution could meet the functional requirements of creating a small application that makes the same API call once each day at a designated time, but it would not be the most operationally efficient manner. The company would need to provision and manage an EC2 instance, which would incur additional costs and complexity.
* D. Use an AWS Batch job that is submitted to an AWS Batch job queue. This is incorrect. AWS Batch enables you to run batch computing workloads on the AWS Cloud8. Batch jobs are units of work that can be submitted to job queues, where they are executed in parallel or sequentially on compute environments9. This solution could meet the functional requirements of creating a small application that makes the same API call once each day at a designated time, but it would not be the most operationally efficient manner. The company would need to configure and manage an AWS Batch environment, which would incur additional costs and complexity.
References:
? 1: What is AWS Lambda? - AWS Lambda
? 2: What is Amazon EventBridge? - Amazon EventBridge
? 3: Creating an Amazon EventBridge rule that runs on a schedule - Amazon EventBridge
? 4: What is Amazon EKS? - Amazon EKS
? 5: CronJob - Kubernetes
? 6: What is Amazon EC2? - Amazon EC2
? 7: Crontab in Linux with 20 Useful Examples to Schedule Jobs - Tecmint
? 8: What is AWS Batch? - AWS Batch
? 9: Jobs - AWS Batch

NEW QUESTION 99
A developer has an application that stores data in an Amazon S3 bucket. The application uses an HTTP API to store and retrieve objects. When the PutObject API operation adds objects to the S3 bucket the developer must encrypt these objects at rest by using server- side encryption with Amazon S3 managed keys (SSE-S3).
Which solution will meet this requirement?

A. Create an AWS Key Management Service (AWS KMS) ke
B. Assign the KMS key to the S3 bucket.
C. Set the x-amz-server-side-encryption header when invoking the PutObject API operation.
D. Provide the encryption key in the HTTP header of every request.
E. Apply TLS to encrypt the traffic to the S3 bucket.

Answer: B

Explanation:
Amazon S3 supports server-side encryption, which encrypts data at rest on the server that stores the data. One of the encryption options is SSE-S3, which uses keys managed by S3. To use SSE-S3, the x-amz-server-side-encryption header must be set to AES256 when invoking the PutObject API operation. This instructs S3 to encrypt the object data with SSE-S3 before saving it on disks in its data centers and decrypt it when it is downloaded. Reference: Protecting data using server-side encryption with Amazon S3-managed encryption keys (SSE-S3)

NEW QUESTION 100
A developer is working on a serverless application that needs to process any changes to an Amazon DynamoDB table with an AWS Lambda function.
How should the developer configure the Lambda function to detect changes to the DynamoDB table?

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

F. Create a trigger to connect the DynamoDB stream to the Lambda function.
G. Create an Amazon Kinesis Data Firehose delivery stream, and attach it to the DynamoDB tabl
H. Configure the delivery stream destination as the Lambda function.

Answer: C

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

NEW QUESTION 103
A company built an online event platform For each event the company organizes quizzes and generates leaderboards that are based on the quiz scores. The company stores the leaderboard data in Amazon DynamoDB and retains the data for 30 days after an event is complete The company then uses a scheduled job to delete the old leaderboard data
The DynamoDB table is configured with a fixed write capacity. During the months when many events occur, the DynamoDB write API requests are throttled when the scheduled delete job runs.
A developer must create a long-term solution that deletes the old leaderboard data and optimizes write throughput
Which solution meets these requirements?

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

Answer: A

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

NEW QUESTION 108
A developer is building a serverless application by using AWS Serverless Application Model (AWS SAM) on multiple AWS Lambda functions.
When the application is deployed, the developer wants to shift 10% of the traffic to the new deployment of the application for the first 10 minutes after deployment. If there are no issues, all traffic must switch over to the new version.
Which change to the AWS SAM template will meet these requirements?

A. Set the Deployment Preference Type to Canary10Percent10Minute
AutoPublishAlias property to the Lambda alias.
B. Set the
C. Set the Deployment Preference Type to LinearlOPercentEvery10Minute
D. Set AutoPublIshAIias property to the Lambda alias.
E. Set the Deployment Preference Type to CanaryIOPercentIOMinute
F. Set the PreTraffic and PostTraffic properties to the Lambda alias.
G. Set the Deployment Preference Type to LinearlOPercentEveryIOMinute
H. Set PreTraffic and Post Traffic properties to the Lambda alias.

Answer: A

Explanation:
The AWS Serverless Application Model (AWS SAM) comes built-in with CodeDeploy to provide gradual AWS Lambda deployments1.
The DeploymentPreference property in AWS SAM allows you to specify the type of deployment that you want. The Canary10Percent10Minutes option means that 10 percent of your customer traffic is immediately shifted to your new version. After 10 minutes, all traffic is shifted to the new version1. The AutoPublishAlias property in AWS SAM allows AWS SAM to automatically create an alias that points to the updated version of the Lambda function1. Therefore, option A is correct.

NEW QUESTION 111
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
plaintext key from the GenerateDataKey API and a symmetric encryption algorithm to encrypt the file.
B. Use the
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 115

An organization is using Amazon CloudFront to ensure that its users experience low- latency access to its web application. The organization has identified a need to encrypt all traffic between users and CloudFront, and all traffic between CloudFront and the web application.
How can these requirements be met? (Select TWO)

A. Use AWS KMS t0 encrypt traffic between cloudFront and the web application.
B. Set the Origin Protocol Policy to "HTTPS Only".
C. Set the Origin's HTTP Port to 443.
D. Set the Viewer Protocol Policy to "HTTPS Only" or Redirect HTTP to HTTPS"
E. Enable the CloudFront option Restrict Viewer Access.

Answer: BD

Explanation:
This solution will meet the requirements by ensuring that all traffic between users and CloudFront, and all traffic between CloudFront and the web application, are encrypted using HTTPS protocol. The Origin Protocol Policy determines how CloudFront communicates with the origin server (the web application), and setting it to "HTTPS Only" will force CloudFront to use HTTPS for every request to the origin server. The Viewer Protocol Policy determines how CloudFront responds to HTTP or HTTPS requests from users, and setting it to "HTTPS Only" or "Redirect HTTP to HTTPS" will force CloudFront to use HTTPS for every response to users. Option A is not optimal because it will use AWS KMS to encrypt traffic between CloudFront and the web application, which is not necessary or supported by CloudFront. Option C is not optimal because it will set the origin's HTTP port to 443, which is incorrect as port 443 is used for HTTPS protocol, not HTTP protocol. Option E is not optimal because it will enable the CloudFront option Restrict Viewer Access, which is used for controlling access to private content using signed URLs or signed cookies, not for encrypting traffic.
References: [Using HTTPS with CloudFront], [Restricting Access to Amazon S3 Content by Using an Origin Access Identity]

NEW QUESTION 119
A developer is deploying an AWS Lambda function The developer wants the ability to return to older versions of the function quickly and seamlessly.
How can the developer achieve this goal with the LEAST operational overhead?

A. Use AWS OpsWorks to perform blue/green deployments.
B. Use a function alias with different versions.
C. Maintain deployment packages for older versions in Amazon S3.
D. Use AWS CodePipeline for deployments and rollbacks.

Answer: B

Explanation:
A function alias is a pointer to a specific Lambda function version. You can use aliases to create different environments for your function, such as development, testing, and production. You can also use aliases to perform blue/green deployments by shifting traffic between two versions of your function gradually. This way, you can easily roll back to a previous version if something goes wrong, without having to redeploy your code or change your configuration. Reference: AWS Lambda function aliases

NEW QUESTION 123
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 128
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 130
A developer is using AWS Amplify Hosting to build and deploy an application. The developer is receiving an increased number of bug reports from users. The developer wants to add end-to-end testing to the application to eliminate as many bugs as possible before the bugs reach production.
Which solution should the developer implement to meet these requirements?

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

Answer: C

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

NEW QUESTION 134
A company has deployed infrastructure on AWS. A development team wants to create an AWS Lambda function that will retrieve data from an Amazon Aurora database. The Amazon Aurora database is in a private subnet in company's VPC. The VPC is named VPC1. The data is relational in nature. The Lambda function needs to access the data
securely.
Which solution will meet these requirements?

A. Create the Lambda functio
B. Configure VPC1 access for the functio
C. Attach a security group named SG1 to both the Lambda function and the databas
D. Configure the security group inbound and outbound rules to allow TCP traffic on Port 3306.
E. Create and launch a Lambda function in a new public subnet that is in a new VPC named VPC2. Create a peering connection between VPC1 and VPC2.
F. Create the Lambda functio
G. Configure VPC1 access for the functio
H. Assign a security group named SG1 to the Lambda functio
I. Assign a second security group named SG2 to the databas
J. Add an inbound rule to SG1 to allow TCP traffic from Port 3306.
K. Export the data from the Aurora database to Amazon S3. Create and launch a Lambda function in VPC1. Configure the Lambda function query the data from Amazon S3.

Answer: A

Explanation:
AWS Lambda is a service that lets you run code without provisioning or managing servers. Lambda functions can be configured to access resources in a VPC, such as an Aurora database, by specifying one or more subnets and security groups in the VPC settings of the function. A security group acts as a virtual firewall that controls inbound and outbound traffic for the resources in a VPC. To allow a Lambda function to communicate with an Aurora database, both resources need to be associated with the same security group, and the security group rules need to allow TCP traffic on Port 3306, which is the default port for MySQL databases.
Reference: [Configuring a Lambda function to access resources in a VPC]

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

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

Answer: B

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

NEW QUESTION 140
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 145
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 149
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.
Create a Lambda@Edge function that optimizes the photos upon request and returns the photos as a respons
G.
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 152
A developer migrated a legacy application to an AWS Lambda function. The function uses a third-party service to pull data with a series of API calls at the end of each month. The function than processes the data to generate the monthly reports. The function has Been working with no issues so far.
The third-party service recently issued a restriction to allow a feed number to API calls each minute and each day. If the API calls exceed the limit tor each minute or each day, then the service will produce errors. The API also provides the minute limit and daily limit in the response header. This restriction might extend the overall process to multiple days because the process is consuming more API calls than the available limit.
What is the MOST operationally efficient way to refactor the server less application to accommodate this change?

A. Use an AWS Step Functions State machine to monitor API failure
B. Use the Wait state to delay calling the Lambda function.
C. Use an Amazon Simple Queue Service (Amazon SQS) queue to hold the API call
D. Configure the Lambda function to poll the queue within the API threshold limits.
Use an Amazon CloudWatch Logs metric to count the number of API call
E.
F: Configure an Amazon CloudWatch alarm flat slops the currently running instance of the Lambda function when the metric exceeds the API threshold limits.
G. Use Amazon Kinesis Data Firehose to batch me API calls and deliver them to an Amazon S3 bucket win an event notification to invoke the Lambda function.

Answer: A

Explanation:
The solution that will meet the requirements is to use an AWS Step Functions state machine to monitor API failures. Use the Wait state to delay calling the Lambda function. This way, the developer can refactor the serverless application to accommodate the change in a way that is automated and scalable. The developer can use Step Functions to orchestrate the Lambda function and handle any errors or retries. The developer can also use the Wait state to pause the execution for a specified duration or until a specified timestamp, which can help avoid exceeding the API limits. The other options either involve using additional services that are not necessary or appropriate for this scenario, or do not address the issue of API failures.
Reference: AWS Step Functions Wait state

NEW QUESTION 153
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 156
A developer is creating an AWS Lambda function in VPC mode An Amazon S3 event will invoke the Lambda function when an object is uploaded into an S3 bucket The Lambda function will process the object and produce some analytic results that will be recorded into a file Each processed object will also generate a log entry that will be recorded into a file.
Other Lambda functions. AWS services, and on-premises resources must have access to the result files and log file. Each log entry must also be appended to the same shared log file. The developer needs a solution that can share files and append results into an existing file.
Which solution should the developer use to meet these requirements?

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

J. Create a reference to the /opt storage directory Store the result files and log file by using the directory reference Append the log entry to the log file

Answer: A

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

NEW QUESTION 159
A developer is designing a serverless application with two AWS Lambda functions to process photos. One Lambda function stores objects in an Amazon S3 bucket and stores the associated metadata in an Amazon DynamoDB table. The other Lambda function fetches the objects from the S3 bucket by using the metadata from the DynamoDB table. Both Lambda functions use the same Python library to perform complex computations and are approaching the quota for the maximum size of zipped deployment packages.
What should the developer do to reduce the size of the Lambda deployment packages with the LEAST operational overhead?

A. Package each Python library in its own .zip file archiv
B. Deploy each Lambda function with its own copy of the library.
C. Create a Lambda layer with the required Python librar
D. Use the Lambda layer in both Lambda functions.
E. Combine the two Lambda functions into one Lambda functio
F. Deploy the Lambda function as a single .zip file archive.
G. Download the Python library to an S3 bucke
H. Program the Lambda functions to reference the object URLs.

Answer: B

Explanation:
AWS Lambda is a service that lets developers run code without provisioning or managing servers. Lambda layers are a distribution mechanism for libraries, custom runtimes, and other dependencies. The developer can create a Lambda layer with the required Python library and use the layer in both Lambda functions. This will reduce the size of the Lambda deployment packages and avoid reaching the quota for the maximum size of zipped deployment packages. The developer can also benefit from using layers to manage dependencies separately from function code.
References:
? [What Is AWS Lambda? - AWS Lambda]
? [AWS Lambda Layers - AWS Lambda]

NEW QUESTION 161
A company developed an API application on AWS by using Amazon CloudFront, Amazon API Gateway, and AWS Lambda. The API has a minimum of four requests every second. A developer notices that many API users run the same query by using the POST method. The developer wants to cache the POST request to optimize the API resources. Which solution will meet these requirements?

A.

Configure the CloudFront cach
B. Update the application to return cached content based upon the default request headers.
C. Override the cache method in the selected stage of API Gatewa
D. Select the POST method.
E. Save the latest request response in Lambda /tmp director
F. Update the Lambda function to check the /tmp directory.
G. Save the latest request in AWS Systems Manager Parameter Stor
H. Modify the Lambda function to take the latest request response from Parameter Store.

Answer: B

Explanation:
Amazon API Gateway provides tools for creating and documenting web APIs that route HTTP requests to Lambda functions2. You can secure access to your API with authentication and authorization controls. Your APIs can serve traffic over the internet or can be accessible only within your VPC2. You can override the cache method in the selected stage of API Gateway2. Therefore, option B is correct.

NEW QUESTION 162

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:lnclude 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 166
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 167
A company developed an API application on AWS by using Amazon CloudFront. Amazon API Gateway, and AWS Lambda. The API has a minimum of four requests every second A developer notices that many API users run the same query by using the POST method. The developer wants to cache the POST request to optimize the API resources.
Which solution will meet these requirements'?

A. Configure the CloudFront cache Update the application to return cached content based upon the default request headers.
B. Override the cache method in me selected stage of API Gateway Select the POST method.
C. Save the latest request response in Lambda /tmp directory Update the Lambda function to check the /tmp directory
D. Save the latest request m AWS Systems Manager Parameter Store Modify the Lambda function to take the latest request response from Parameter Store

Answer: A

Explanation:
This solution will meet the requirements by using Amazon CloudFront, which is a content delivery network (CDN) service that speeds up the delivery of web content and APIs to end users. The developer can configure the CloudFront cache, which is a set of edge locations that store copies of popular or recently accessed content close to the viewers. The developer can also update the application to return cached content based upon the default request headers, which are a set of HTTP headers that CloudFront automatically forwards to the origin server and uses to determine whether an object in an edge location is still valid. By caching the POST requests, the developer can optimize the API resources and reduce the latency for repeated queries. Option B is not optimal because it will override the cache method in the selected stage of API Gateway, which is not possible or effective as API Gateway does not support caching for POST methods by default. Option C is not optimal because it will save the latest request response in Lambda /tmp directory, which is a local storage space that is available for each Lambda function invocation, not a cache that can be shared across multiple invocations or requests. Option D is not optimal because it will save the latest request in AWS Systems Manager Parameter Store, which is a service that provides secure and scalable storage for configuration data and secrets, not a cache for API responses.
References: [Amazon CloudFront], [Caching Content Based on Request Headers]

NEW QUESTION 171

A developer is building a microservices-based application by using Python on AWS and several AWS services The developer must use AWS X-Ray The developer views the service map by using the console to view the service dependencies. During testing, the developer notices that some services are missing from the service map

What can the developer do to ensure that all services appear in the X-Ray service map?

A. Modify the X-Ray Python agent configuration in each service to increase the sampling rate
B. Instrument the application by using the X-Ray SDK for Pytho
C. Install the X-Ray SDK for all the services that the application uses
D. Enable X-Ray data aggregation in Amazon CloudWatch Logs for all the services that the application uses
E. Increase the X-Ray service map timeout value in the X-Ray console

Answer: B

Explanation:

The X-Ray SDK for Python provides libraries and tools for instrumenting Python applications that use AWS services and other AWS X-Ray integrations. By installing the X-Ray SDK for all the services that the application uses, the developer can ensure that all the service dependencies are captured and displayed in the X-Ray service map. The other options are not relevant or effective for this scenario. References

? AWS X-Ray SDK for Python
? Instrumenting a Python Application

NEW QUESTION 172

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