Amazon

Exam Questions DVA-C02

DVA-C02

NEW QUESTION 1
A developer is incorporating AWS X-Ray into an application that handles personal identifiable information (PII). The application is hosted on Amazon EC2 instances. The application trace messages include encrypted PII and go to Amazon CloudWatch. The developer needs to ensure that no PII goes outside of the EC2 instances.
Which solution will meet these requirements?

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

Answer: A

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

NEW QUESTION 2
A developer is creating a mobile app that calls a backend service by using an Amazon API Gateway REST API. For integration testing during the development phase, the developer wants to simulate different backend responses without invoking the backend service.
Which solution will meet these requirements with the LEAST operational overhead?

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

Answer: D

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

NEW QUESTION 3
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 4
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 5
A developer is testing a RESTful application that is deployed by using Amazon API Gateway and AWS Lambda When the developer tests the user login by using credentials that are not valid, the developer receives an HTTP 405 METHOD_NOT_ALLOWED error The developer has verified that the test is sending the correct request for the resource
Which HTTP error should the application return in response to the request?

A. HTTP 401
B. HTTP 404
C. HTTP 503
D. HTTP 505

Answer: A

Explanation:
The HTTP 401 error indicates that the request has not been applied because it lacks valid authentication credentials for the target resource. This is the appropriate error code to return when the user login fails due to invalid credentials. The HTTP 405 error means that the method specified in the request is not allowed for the resource identified by the request URI, which is not the case here. The other error codes are not relevant to the authentication failure scenario.
References
? HTTP Status Codes
? AWS Lambda Function Errors in API Gateway

NEW QUESTION 6
A company is building a serverless application on AWS. The application uses an AWS Lambda function to process customer orders 24 hours a day, 7 days a week. The Lambda function calls an external vendor's HTTP API to process payments.
During load tests, a developer discovers that the external vendor payment processing API occasionally times out and returns errors. The company expects that some payment processing API calls will return errors.
The company wants the support team to receive notifications in near real time only when
the payment processing external API error rate exceed 5% of the total number of transactions in an hour. Developers need to use an existing Amazon Simple Notification Service (Amazon SNS) topic that is configured to notify the support team.
Which solution will meet these requirements?

A. Write the results of payment processing API calls to Amazon CloudWatc
B. Use Amazon CloudWatch Logs Insights to query the CloudWatch log
C. Schedule the Lambda function to check the CloudWatch logs and notify the existing SNS topic.
D. Publish custom metrics to CloudWatch that record the failures of the external payment processing API call
E. Configure a CloudWatch alarm to notify the existing SNS topic when error rate exceeds the specified rate.
F. Publish the results of the external payment processing API calls to a new Amazon SNS topi
G. Subscribe the support team members to the new SNS topic.
H. Write the results of the external payment processing API calls to Amazon S3. Schedule an Amazon Athena query to run at regular interval
I. Configure Athena to send notifications to the existing SNS topic when the error rate exceeds the specified rate.

Answer: B

Explanation:
Amazon CloudWatch is a service that monitors AWS resources and applications. The developer can publish custom metrics to CloudWatch that record the failures of the external payment processing API calls. The developer can configure a CloudWatch alarm to notify the existing SNS topic when the error rate exceeds 5% of the total number of transactions in an hour. This solution will meet the requirements in a near real-time and scalable way.
References:
? [What Is Amazon CloudWatch? - Amazon CloudWatch]
? [Publishing Custom Metrics - Amazon CloudWatch]
? [Creating Amazon CloudWatch Alarms - Amazon CloudWatch]

NEW QUESTION 7
An online food company provides an Amazon API Gateway HTTP API 1o receive orders for partners. The API is integrated with an AWS Lambda function. The Lambda function stores the orders in an Amazon DynamoDB table.
The company expects to onboard additional partners Some to me panthers require additional Lambda function to receive orders. The company has created an Amazon S3 bucket. The company needs 10 store all orders and updates m the S3 bucket for future analysis
How can the developer ensure that an orders and updates are stored to Amazon S3 with the LEAST development effort?

A. Create a new Lambda function and a new API Gateway API endpoin
B. Configure the new Lambda function to write to the S3 bucke

C. Modify the original Lambda function to post updates to the new API endpoint.
D. Use Amazon Kinesis Data Streams to create a new data strea
E. Modify the Lambda function to publish orders to the oats stream Configure in data stream to write to the S3 bucket.
F. Enable DynamoDB Streams on me DynamoOB tabl
G. Create a new lambda functio
H. Associate the stream's Amazon Resource Name (ARN) with the Lambda Function Configure the Lambda function to write to the S3 bucket as records appear in the table's stream.
I. Modify the Lambda function to punish to a new Amazo
J. Simple Lambda function receives order
K. Subscribe a new Lambda function to the topi
L. Configure the new Lambda function to write to the S3 bucket as updates come through the topic.

Answer: C

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

NEW QUESTION 8
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 9
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 10

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

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

Answer: D

Explanation:

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

NEW QUESTION 10

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 15

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 16
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 18
A developer is creating an AWS Lambda function that searches for Items from an Amazon DynamoDQ table that contains customer contact information. The DynamoDB table items have the customers as the partition and additional properties such as customer -type, name, and job_title.
The Lambda function runs whenever a user types a new character into the customer_type text Input. The developer wants to search to return partial matches of all tne email_address property of a particular customer type. The developer does not want to recreate the DynamoDB table.
What should the developer do to meet these requirements?

A. Add a global secondary index (GSI) to the DynamoDB table with customer-type input, as the partition key and email_address as the sort ke
B. Perform a query operation on the GSI by using the begins with key condition expression with the email_address property.
C. Add a global secondary index (GSI) to the DynamoDB table with email_address as the partition key and customer_type as the sort ke
D. Perform a query operation on the GSI by using the begine_with key condition expresses with the emai
E. Address property.
F. Add a local secondary index (LSI) to the DynemoOB table with customer_type as the partition Key and email_address as the sort Ke
G. Perform a quick operation on the LSI by using the begine_with Key condition expression with the email-address property.
H. Add a local secondary index (LSI) to the DynamoDB table with job-title as the partition key and email_address as the sort ke
I. Perform a query operation on the LSI by using the begins_with key condition expression with the email_address property.

Answer: A

Explanation:
The solution that will meet the requirements is to add a global secondary index (GSI) to the DynamoDB table with customer_type as the partition key and email_address as the sort key. Perform a query operation on the GSI by using the begins_with key condition expression with the email_address property. This way, the developer can search for partial matches of the email_address property of a particular customer type without recreating the DynamoDB table. The other options either involve using a local secondary index (LSI), which requires recreating the table, or using a different partition key, which does not allow filtering by customer_type.
Reference: Using Global Secondary Indexes in DynamoDB

NEW QUESTION 20
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 25

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

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

Answer: A

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

NEW QUESTION 29
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 34
A developer designed an application on an Amazon EC2 instance The application makes API requests to objects in an Amazon S3 bucket
Which combination of steps will ensure that the application makes the API requests in the MOST secure manner? (Select TWO.)

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

Answer: BC

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

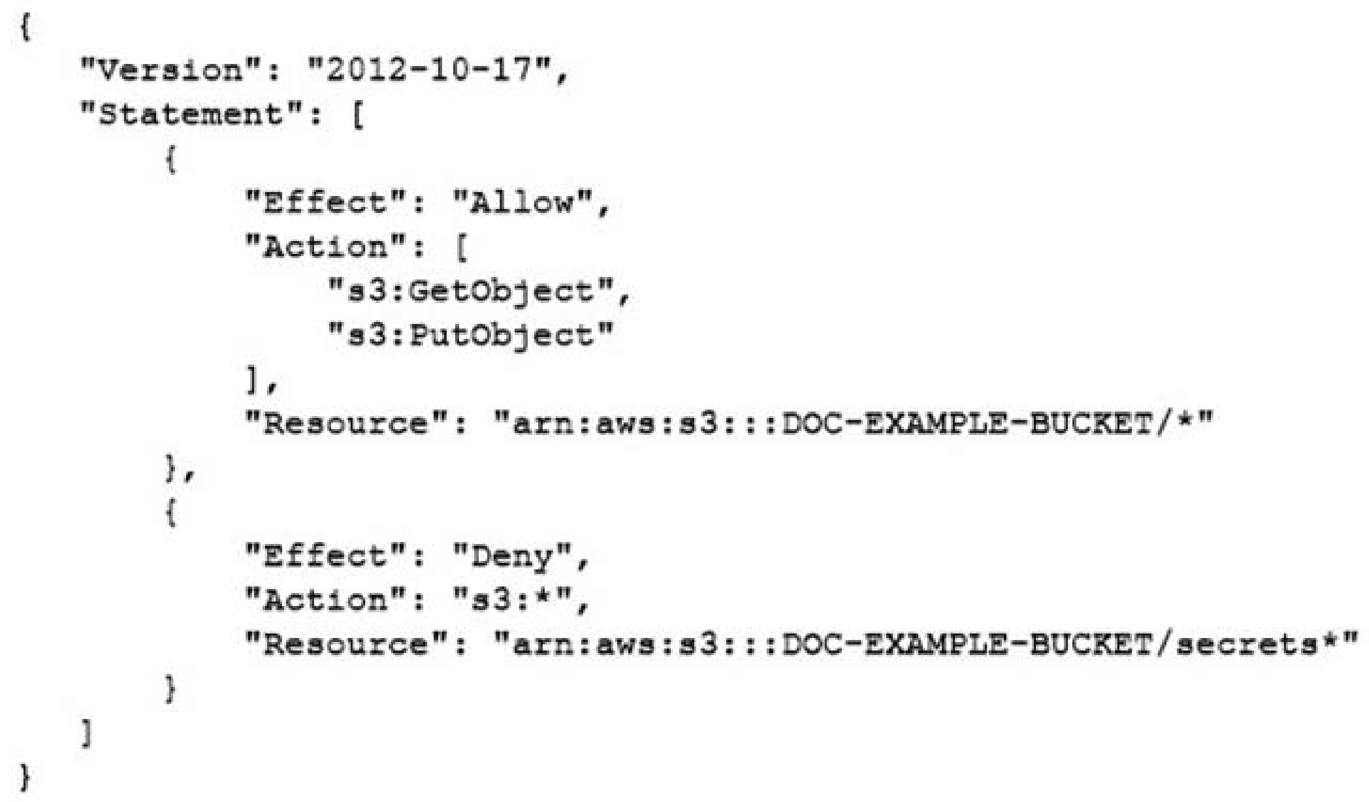
NEW QUESTION 36
A developer is working on a Python application that runs on Amazon EC2 instances. The developer wants to enable tracing of application requests to debug performance issues in the code.
Which combination of actions should the developer take to achieve this goal? (Select TWO)

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

Answer: BE

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

NEW QUESTION 39
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 43
A developer is creating an application that will give users the ability to store photos from their cellphones in the cloud. The application needs to support tens of thousands of users. The application uses an Amazon API Gateway REST API that is integrated with AWS Lambda functions to process the photos. The application stores details about the photos in Amazon DynamoDB.
Users need to create an account to access the application. In the application, users must be able to upload photos and retrieve previously uploaded photos. The photos will range in size from 300 KB to 5 MB.
Which solution will meet these requirements with the LEAST operational overhead?

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

P. Integrate the Lambda authorizer with API Gateway to control access to the AP
Q. Use the Lambda function to store the photos in Amazon S3. Store the object's S3 key as par of the photo details in the DynamoDB tabl
R. Retrieve previously uploaded photos by querying DynamoDB for the S3 key.

Answer: B

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

NEW QUESTION 45
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 50
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 54
For a deployment using AWS Code Deploy, what is the run order of the hooks for in-place deployments?

A. BeforeInstall -> ApplicationStop -> ApplicationStart -> AfterInstall
B. ApplicationStop -> BeforeInstall -> AfterInstall -> ApplicationStart
C. BeforeInstall -> ApplicationStop -> ValidateService -> ApplicationStart
D. ApplicationStop -> BeforeInstall -> ValidateService -> ApplicationStart

Answer: B

Explanation:
For in-place deployments, AWS CodeDeploy uses a set of predefined hooks that run in a specific order during each deployment lifecycle event. The hooks are ApplicationStop, BeforeInstall, AfterInstall, ApplicationStart, and ValidateService. The run order of the hooks for in-place deployments is as follows:
? ApplicationStop: This hook runs first on all instances and stops the current

application that is running on the instances.
? BeforeInstall: This hook runs after ApplicationStop on all instances and performs any tasks required before installing the new application revision.
? AfterInstall: This hook runs after BeforeInstall on all instances and performs any
tasks required after installing the new application revision.
? ApplicationStart: This hook runs after AfterInstall on all instances and starts the new application that has been installed on the instances.
? ValidateService: This hook runs last on all instances and verifies that the new application is running properly on the instances.
Reference: [AWS CodeDeploy lifecycle event hooks reference]

NEW QUESTION 57
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 61
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
F. Install a unit testing framework that reproduces the Lambda execution environment.
documentatio
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 65
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 67
A developer is creating a new REST API by using Amazon API Gateway and AWS Lambda. The development team tests the API and validates responses for the known use cases before deploying the API to the production environment.
The developer wants to make the REST API available for testing by using API Gateway locally.
Which AWS Serverless Application Model Command Line Interface (AWS SAM CLI) subcommand will meet these requirements?

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

Answer: D

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

NEW QUESTION 70
A company has an application that stores data in Amazon RDS instances. The application periodically experiences surges of high traffic that cause performance problems.
During periods of peak traffic, a developer notices a reduction in query speed in all database queries.
The team's technical lead determines that a multi-threaded and scalable caching solution should be used to offload the heavy read traffic. The solution needs to improve performance.
Which solution will meet these requirements with the LEAST complexity?

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

Answer: A

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

NEW QUESTION 72
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 73
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 78
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 81
A developer is writing an application that will retrieve sensitive data from a third-party system. The application will format the data into a PDF file. The PDF file could be more than 1 MB. The application will encrypt the data to disk by using AWS Key Management Service (AWS KMS). The application will decrypt the file when a user requests to download it. The retrieval and formatting portions of the application are complete.
The developer needs to use the GenerateDataKey API to encrypt the PDF file so that the PDF file can be decrypted later. The developer needs to use an AWS KMS symmetric customer managed key for encryption.
Which solutions will meet these requirements?

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

Answer: A

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

NEW QUESTION 86
An application that runs on AWS Lambda requires access to specific highly confidential objects in an Amazon S3 bucket. In accordance with the principle of least privilege a company grants access to the S3 bucket by using only temporary credentials.
How can a developer configure access to the S3 bucket in the MOST secure way?

A. Hardcode the credentials that are required to access the S3 objects in the application cod
B. Use the credentials to access me required S3 objects.

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

Answer: C

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

NEW QUESTION 88
A developer has created an AWS Lambda function that makes queries to an Amazon Aurora MySQL DB instance. When the developer performs a test the OB instance shows an error for too many connections.
Which solution will meet these requirements with the LEAST operational effort?

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

Answer: D

Explanation:
This solution will meet the requirements by using Amazon RDS Proxy, which is a fully managed, highly available database proxy for Amazon RDS that makes applications more scalable, more resilient to database failures, and more secure. The developer can create a proxy in Amazon RDS Proxy, which sits between the application
and the DB instance and handles connection management, pooling, and routing. The developer can query the proxy instead of the DB instance, which reduces the number of open connections to the DB instance and avoids errors for too many connections. Option A is not optimal because it will create a read replica for the DB instance, which may not solve the problem of too many connections as read replicas also have connection limits and may incur additional costs. Option B is not optimal because it will migrate the data to an Amazon DynamoDB database, which may introduce additional complexity and overhead for migrating and accessing data from a different database service. Option C is not optimal because it will configure the Amazon Aurora MySQL DB instance for Multi-AZ deployment, which may improve availability and durability of the DB instance but not reduce the number of connections.
References: [Amazon RDS Proxy], [Working with Amazon RDS Proxy]

NEW QUESTION 91
A company has an analytics application that uses an AWS Lambda function to process transaction data asynchronously A developer notices that asynchronous invocations of the Lambda function sometimes fail When failed Lambda function invocations occur, the developer wants to invoke a second Lambda function to handle errors and log details.
Which solution will meet these requirements?

A. Mastered
B. Not Mastered

Answer: A

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

NEW QUESTION 95
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 96
A company's developer has deployed an application in AWS by using AWS CloudFormation The CloudFormation stack includes parameters in AWS Systems Manager Parameter Store that the application uses as configuration settings. The application can modify the parameter values
When the developer updated the stack to create additional resources with tags, the developer noted that the parameter values were reset and that the values ignored the latest changes made by the application. The developer needs to change the way the company deploys the CloudFormation stack. The developer also needs to avoid resetting the parameter values outside the stack.
Which solution will meet these requirements with the LEAST development effort?

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

Answer: D

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

NEW QUESTION 99
A company needs to set up secure database credentials for all its AWS Cloud resources. The company's resources include Amazon RDS DB instances Amazon DocumentDB clusters and Amazon Aurora DB instances. The company's security policy mandates that database credentials be encrypted at rest and rotated at a regular interval.
Which solution will meet these requirements MOST securely?

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

Answer: D

Explanation:
This solution will meet the requirements by using AWS Secrets Manager, which is a service that helps protect secrets such as database credentials by encrypting them with AWS Key Management Service (AWS KMS) and enabling automatic rotation of secrets. The developer can create an AWS Lambda function by using the SecretsManagerRotationTemplate template in the AWS Secrets Manager console, which provides a sample code for rotating secrets for RDS DB instances, Amazon DocumentDB clusters, and Amazon Aurora DB instances. The developer can also create secrets for the database credentials in Secrets Manager, which encrypts them at rest and provides secure access to them. The developer can set up secrets rotation on a schedule, which changes the database credentials periodically according to a specified interval or event. Option A is not optimal because it will set up IAM database authentication for token-based access, which may not be compatible with all database engines and may require additional configuration and management of IAM roles or users. Option B is not optimal because it will create parameters for the database credentials in AWS Systems Manager Parameter Store, which does not support automatic rotation of secrets. Option C is not optimal because it will store the database access credentials as an encrypted Amazon S3 object in an S3 bucket, which may introduce additional costs and complexity for accessing and securing the data.
References: [AWS Secrets Manager], [Rotating Your AWS Secrets Manager Secrets]

NEW QUESTION 101
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 103
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 106
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 107
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 110
A developer is creating an Amazon DynamoDB table by using the AWS CLI The DynamoDB table must use server-side encryption with an AWS owned encryption key
How should the developer create the DynamoDB table to meet these requirements?

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

Answer: D

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

NEW QUESTION 115
A developer is working on an ecommerce website The developer wants to review server logs without logging in to each of the application servers individually. The website runs on multiple Amazon EC2 instances, is written in Python, and needs to be highly available
How can the developer update the application to meet these requirements with MINIMUM changes?

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

Answer: D

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

NEW QUESTION 118
An application is using Amazon Cognito user pools and identity pools for secure access. A developer wants to integrate the user-specific file upload and download features in the application with Amazon S3. The developer must ensure that the files are saved and retrieved in a secure manner and that users can access only their own files. The file sizes range from 3 KB to 300 MB.
Which option will meet these requirements with the HIGHEST level of security?

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

Answer: D

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

NEW QUESTION 123
A company is planning to use AWS CodeDeploy to deploy an application to Amazon Elastic Container Service (Amazon ECS) During the deployment of a new version of the application, the company initially must expose only 10% of live traffic to the new version of the deployed application. Then, after 15 minutes elapse, the company must route all the remaining live traffic to the new version of the deployed application.
Which CodeDeploy predefined configuration will meet these requirements?

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

Answer: A

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

NEW QUESTION 124
A developer is creating an AWS Lambda function. The Lambda function needs an external library to connect to a third-party solution The external library is a collection of files with a total size of 100 MB The developer needs to make the external library available to the Lambda execution environment and reduce the Lambda package space
Which solution will meet these requirements with the LEAST operational overhead?

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

Answer: A

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

NEW QUESTION 129
A developer is creating a template that uses AWS CloudFormation to deploy an application. The application is serverless and uses Amazon API Gateway, Amazon DynamoDB, and AWS Lambda.

Which AWS service or tool should the developer use to define serverless resources in YAML?

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

Answer: C

Explanation:
AWS Serverless Application Model (AWS SAM) is an open-source framework that enables developers to build and deploy serverless applications on AWS. AWS SAM uses a template specification that extends AWS CloudFormation to simplify the definition of serverless resources such as API Gateway, DynamoDB, and Lambda. The developer can use AWS SAM to define serverless resources in YAML and deploy them using the AWS SAM CLI.
References:
? [What Is the AWS Serverless Application Model (AWS SAM)? - AWS Serverless Application Model]
? [AWS SAM Template Specification - AWS Serverless Application Model]

NEW QUESTION 133
A developer is investigating an issue in part of a company's application. In the application messages are sent to an Amazon Simple Queue Service (Amazon SQS) queue The AWS Lambda function polls messages from the SQS queue and sends email messages by using Amazon Simple Email Service (Amazon SES) Users have been receiving duplicate email messages during periods of high traffic.
Which reasons could explain the duplicate email messages? (Select TWO.)

A. Standard SQS queues support at-least-once message delivery
B. Standard SQS queues support exactly-once processing, so the duplicate email messages are because of user error.
C. Amazon SES has the DomainKeys Identified Mail (DKIM) authentication incorrectly configured
D. The SQS queue's visibility timeout is lower than or the same as the Lambda function's timeout.
E. The Amazon SES bounce rate metric is too high.

Answer: AD

Explanation:
Standard SQS queues support at-least-once message delivery, which means that a message can be delivered more than once to the same or different consumers. This can happen if the message is not deleted from the queue before the visibility timeout expires, or if there is a network issue or a system failure. The SQS queue’s visibility timeout is the period of time that a message is invisible to other consumers after it is received by one consumer. If the visibility timeout is lower than or the same as the Lambda function’s timeout, the Lambda function might not be able to process and delete the message before it becomes visible again, leading to duplicate processing and email messages. To avoid this, the visibility timeout should be set to at least 6 times the length of the Lambda function’s timeout. The other options are not related to the issue of duplicate email messages. References
? Using the Amazon SQS message deduplication ID
? Exactly-once processing - Amazon Simple Queue Service
? Amazon SQS duplicated messages in queue - Stack Overflow
? amazon web services - How long can duplicate SQS messages persist …
? Standard SQS - Duplicate message | AWS re:Post - Amazon Web Services, Inc.

NEW QUESTION 135

A company hosts its application on AWS. The application runs on an Amazon Elastic Container Service (Amazon ECS) cluster that uses AWS Fargate. The cluster runs behind an Application Load Balancer The application stores data in an Amazon Aurora database A developer encrypts and manages database credentials inside the application
The company wants to use a more secure credential storage method and implement periodic credential rotation.
Which solution will meet these requirements with the LEAST operational overhead?

A. Migrate the secret credentials to Amazon RDS parameter group
B. Encrypt the parameter by using an AWS Key Management Service (AWS KMS) key Turn on secret rotatio
C. Use 1AM policies and roles to grant AWS KMS permissions to access Amazon RDS.
D. Migrate the credentials to AWS Systems Manager Parameter Stor
E. Encrypt the parameter by using an AWS Key Management Service (AWS KMS) ke
F. Turn on secret rotatio
G. Use 1AM policies and roles to grant Amazon ECS Fargate permissions to access to AWS Secrets Manager
H. Migrate the credentials to ECS Fargate environment variable
I. Encrypt the credentials by using an AWS Key Management Service (AWS KMS) key Turn on secret rotatio
J. Use 1AM policies and roles to grant Amazon ECS Fargate permissions to access to AWS Secrets Manager.
K. Migrate the credentials to AWS Secrets Manage
L. Encrypt the credentials by using an AWS Key Management Service (AWS KMS) key Turn on secret rotation Use 1AM policies and roles to grant Amazon ECS Fargate permissions to access to AWS Secrets Manager by using keys.

Answer: D

Explanation:
AWS Secrets Manager is a service that helps you store, distribute, and rotate secrets securely. You can use Secrets Manager to migrate your credentials from your application code to a secure and encrypted storage. You can also enable automatic rotation of your secrets by using AWS Lambda functions or custom logic. You can use IAM policies and roles to grant your Amazon ECS Fargate tasks permissions to access your secrets from Secrets Manager. This solution minimizes the operational overhead of managing your credentials and enhances the security of your application. References
? AWS Secrets Manager: Store, Distribute, and Rotate Credentials Securely | AWS
News Blog
? Why You Should Audit and Rotate Your AWS Credentials Periodically - Cloud Academy
? Top 5 AWS root account best practices - TheServerSide

NEW QUESTION 138

A company has an Amazon S3 bucket that contains sensitive data. The data must be encrypted in transit and at rest. The company

encrypts the data in the S3 bucket by using an AWS Key Management Service (AWS KMS) key. A developer needs to grant several other AWS accounts the permission to use the S3 GetObject operation to retrieve the data from the S3 bucket.
How can the developer enforce that all requests to retrieve the data provide encryption in transit?

A. Define a resource-based policy on the S3 bucket to deny access when a request meets the condition “aws:SecureTransport”: “false”.
B. Define a resource-based policy on the S3 bucket to allow access when a request meets the condition “aws:SecureTransport”: “false”.
C. Define a role-based policy on the other accounts' roles to deny access when a request meets the condition of “aws:SecureTransport”: “false”.
D. Define a resource-based policy on the KMS key to deny access when a request meets the condition of “aws:SecureTransport”: “false”.

Answer: A

Explanation:
Amazon S3 supports resource-based policies, which are JSON documents that specify the permissions for accessing S3 resources. A resource-based policy can be used to enforce encryption in transit by denying access to requests that do not use HTTPS. The condition key aws:SecureTransport can be used to check if the request was sent using SSL. If the value of this key is false, the request is denied; otherwise, the request is allowed. Reference: How do I use an S3 bucket policy to require requests to use Secure Socket Layer (SSL)?

NEW QUESTION 142
A company is using Amazon API Gateway to invoke a new AWS Lambda function The company has Lambda function versions in its PROD and DEV environments. In each environment, there is a Lambda function alias pointing to the corresponding Lambda function version API Gateway has one stage that is configured to point at the PROD alias
The company wants to configure API Gateway to enable the PROD and DEV Lambda function versions to be simultaneously and distinctly available
Which solution will meet these requirements?

A. Enable a Lambda authorizer for the Lambda function alias in API Gateway Republish PROD and create a new stage for DEV Create API Gateway stage variables for the PROD and DEV stage
B. Point each stage variable to the PROD Lambda authorizer to the DEV Lambda authorizer.
C. Set up a gateway response in API Gateway for the Lambda function alia
D. Republish PROD and create a new stage for DE
E. Create gateway responses in API Gateway for PROD and DEV Lambda aliases
F. Use an environment variable for the Lambda function alias in API Gatewa
G. Republish PROD and create a new stage for developmen
H. Create API gateway environment variables for PROD and DEV stage
I. Point each stage variable to the PROD Lambda function alias to the DEV Lambda function alias.
J. Use an API Gateway stage variable to configure the Lambda function alias Republish PROD and create a new stage for development Create API Gateway stage variables for PROD and DEV stages Point each stage variable to the PROD Lambda function alias and to the DEV Lambda function alias

Answer: D

Explanation:
The best solution is to use an API Gateway stage variable to configure the Lambda function alias. This allows you to specify the Lambda function name and its alias or version using the syntax function_name:$ {stageVariables.variable_name} in the Integration Request. You can then create different stages in API Gateway, such as PROD and DEV, and assign different values to the stage variable for each stage. This way, you can invoke different Lambda function versions or aliases based on the stage that you are using, without changing the function name in the Integration Request. References
? Using API Gateway stage variables to manage Lambda functions
? How to point AWS API gateway stage to specific lambda function alias?
? Setting stage variables using the Amazon API Gateway console
? Amazon API Gateway stage variables reference

NEW QUESTION 143
A developer is writing a serverless application that requires an AWS Lambda function to be invoked every 10 minutes.
What is an automated and serverless way to invoke the function?

A. Deploy an Amazon EC2 instance based on Linux, and edit its /etc/confab file by adding a command to periodically invoke the lambda function
B. Configure an environment variable named PERIOD for the Lambda functio
C. Set the value to 600.
D. Create an Amazon EventBridge rule that runs on a regular schedule to invoke the Lambda function.
E. Create an Amazon Simple Notification Service (Amazon SNS) topic that has a subscription to the Lambda function with a 600-second timer.

Answer: C

Explanation:
The solution that will meet the requirements is to create an Amazon EventBridge rule that runs on a regular schedule to invoke the Lambda function. This way, the developer can use an automated and serverless way to invoke the function every 10 minutes. The developer can also use a cron expression or a rate expression to specify the schedule for the rule. The other options either involve using an Amazon EC2 instance, which is not serverless, or using environment variables or query parameters, which do not trigger the function.
Reference: Schedule AWS Lambda functions using EventBridge

NEW QUESTION 145
A developer is building a serverless application that is based on AWS Lambda. The developer initializes the AWS software development kit (SDK) outside of the Lambda handcar function.
What is the PRIMARY benefit of this action?

A. Improves legibility and systolic convention
B. Takes advantage of runtime environment reuse
C. Provides better error handling
D. Creates a new SDK instance for each invocation

Answer: B

Explanation:
This benefit occurs when initializing the AWS SDK outside of the Lambda handler function because it allows the SDK instance to be reused across multiple invocations of the same function. This can improve performance and reduce latency by avoiding unnecessary initialization overhead. If the SDK is initialized inside the handler function, it will create a new SDK instance for each invocation, which can increase memory usage and execution time.
Reference: [AWS Lambda execution environment], [Best Practices for Working with AWS
Lambda Functions]

NEW QUESTION 147
A developer wants to insert a record into an Amazon DynamoDB table as soon as a new file is added to an Amazon S3 bucket.
Which set of steps would be necessary to achieve this?

A. Create an event with Amazon EventBridge that will monitor the S3 bucket and then insert the records into DynamoDB.
B. Configure an S3 event to invoke an AWS Lambda function that inserts records into DynamoDB.
C. Create an AWS Lambda function that will poll the S3 bucket and then insert the records into DynamoDB.
D. Create a cron job that will run at a scheduled time and insert the records into DynamoDB.

Answer: B

Explanation:
Amazon S3 is a service that provides highly scalable, durable, and secure object storage. Amazon DynamoDB is a fully managed NoSQL database service that

provides fast and consistent performance with seamless scalability. AWS Lambda is a service that lets developers run code without provisioning or managing servers. The developer can configure an S3 event to invoke a Lambda function that inserts records into DynamoDB whenever a new file is added to the S3 bucket. This solution will meet the requirement of inserting a record into DynamoDB as soon as a new file is added to S3. References:
? [Amazon Simple Storage Service (S3)]
? [Amazon DynamoDB]
? [What Is AWS Lambda? - AWS Lambda]
? [Using AWS Lambda with Amazon S3 - AWS Lambda]

NEW QUESTION 152
A company has a social media application that receives large amounts of traffic User posts and interactions are continuously updated in an Amazon RDS database The data changes frequently, and the data types can be complex The application must serve read requests with minimal latency
The application's current architecture struggles to deliver these rapid data updates efficiently The company needs a solution to improve the application's performance.
Which solution will meet these requirements'?

A. Mastered
B. Not Mastered

Answer: A

Explanation:
Creating an Amazon ElastiCache for Redis cluster is the best solution for improving the application's performance. Redis is an in-memory data store that can serve read requests with minimal latency and handle complex data types, such as lists, sets, hashes, and streams. By using a write-through caching strategy, the application can ensure that the data in Redis is always consistent with the data in RDS. The application can read the data from Redis instead of RDS, reducing the load on the database and improving the response time. The other solutions are either not feasible or not effective. Amazon DynamoDB Accelerator (DAX) is a caching service that works only with DynamoDB, not RDS. Amazon S3 Transfer Acceleration is a feature that speeds up data transfers between S3 and clients across the internet, not between RDS and the application. Amazon CloudFront is a content delivery network that can cache static content, such as images, videos, or HTML files, but not dynamic content, such as user posts and
interactions. References
? Amazon ElastiCache for Redis
? Caching Strategies and Best Practices - Amazon ElastiCache for Redis
? Using Amazon ElastiCache for Redis with Amazon RDS
? Amazon DynamoDB Accelerator (DAX)
? Amazon S3 Transfer Acceleration
? Amazon CloudFront

NEW QUESTION 156
A developer is designing an AWS Lambda function that creates temporary files that are less than 10 MB during invocation. The temporary files will be accessed and modified multiple times during invocation. The developer has no need to save or retrieve these files in the future.
Where should the temporary files be stored?

A. the /tmp directory
B. Amazon Elastic File System (Amazon EFS)
C. Amazon Elastic Block Store (Amazon EBS)
D. Amazon S3

Answer: A

Explanation:
AWS Lambda is a service that lets developers run code without provisioning or managing servers. Lambda provides a local file system that can be used to store temporary files during invocation. The local file system is mounted under the /tmp directory and has a limit of 512 MB. The temporary files are accessible only by the Lambda function that created them and are deleted after the function execution ends. The developer can store temporary files that are less than 10 MB in the /tmp directory and access and modify them multiple times during invocation.
References:
? [What Is AWS Lambda? - AWS Lambda]
? [AWS Lambda Execution Environment - AWS Lambda]

NEW QUESTION 157
A developer has written an AWS Lambda function. The function is CPU-bound. The developer wants to ensure that the function returns responses quickly.
How can the developer improve the function's performance?

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

Answer: B

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

NEW QUESTION 159
A developer must analyze performance issues with production-distributed applications written as AWS Lambda functions. These distributed Lambda applications invoke other components that make up me applications. How should the developer identify and troubleshoot the root cause of the performance issues in production?

A. Add logging statements to the Lambda function
B. then use Amazon CloudWatch to view the logs.
C. Use AWS CloudTrail and then examine the logs.
D. Use AWS X-Ra
E. then examine the segments and errors.
F. Run Amazon inspector agents and then analyze performance.

Answer: C

Explanation:
This solution will meet the requirements by using AWS X-Ray to analyze and debug the performance issues with the distributed Lambda applications. AWS X-Ray is a service that collects data about requests that the applications serve, and provides tools to view, filter, and gain insights into that data. The developer can use AWS X-Ray to identify the root cause of the performance issues by examining the segments and errors that show the details of each request and the components that make up the applications. Option A is not optimal because it will use logging statements and Amazon CloudWatch, which may not provide enough information or visibility into the distributed applications. Option B is not optimal because it will use AWS CloudTrail, which is a service that records API calls and events for AWS services, not application performance data. Option D is not optimal because it will use Amazon Inspector, which is a service that helps improve the security and compliance of applications on Amazon EC2 instances, not Lambda functions. References: AWS X-Ray, Using AWS X-Ray with AWS Lambda

NEW QUESTION 164
A company is implementing an application on Amazon EC2 instances. The application needs to process incoming transactions. When the application detects a transaction that is not valid, the application must send a chat message to the company's support team. To send the message, the application needs to retrieve the access token to authenticate by using the chat API.
A developer needs to implement a solution to store the access token. The access token must be encrypted at rest and in transit. The access token must also be accessible from other AWS accounts.
Which solution will meet these requirements with the LEAST management overhead?

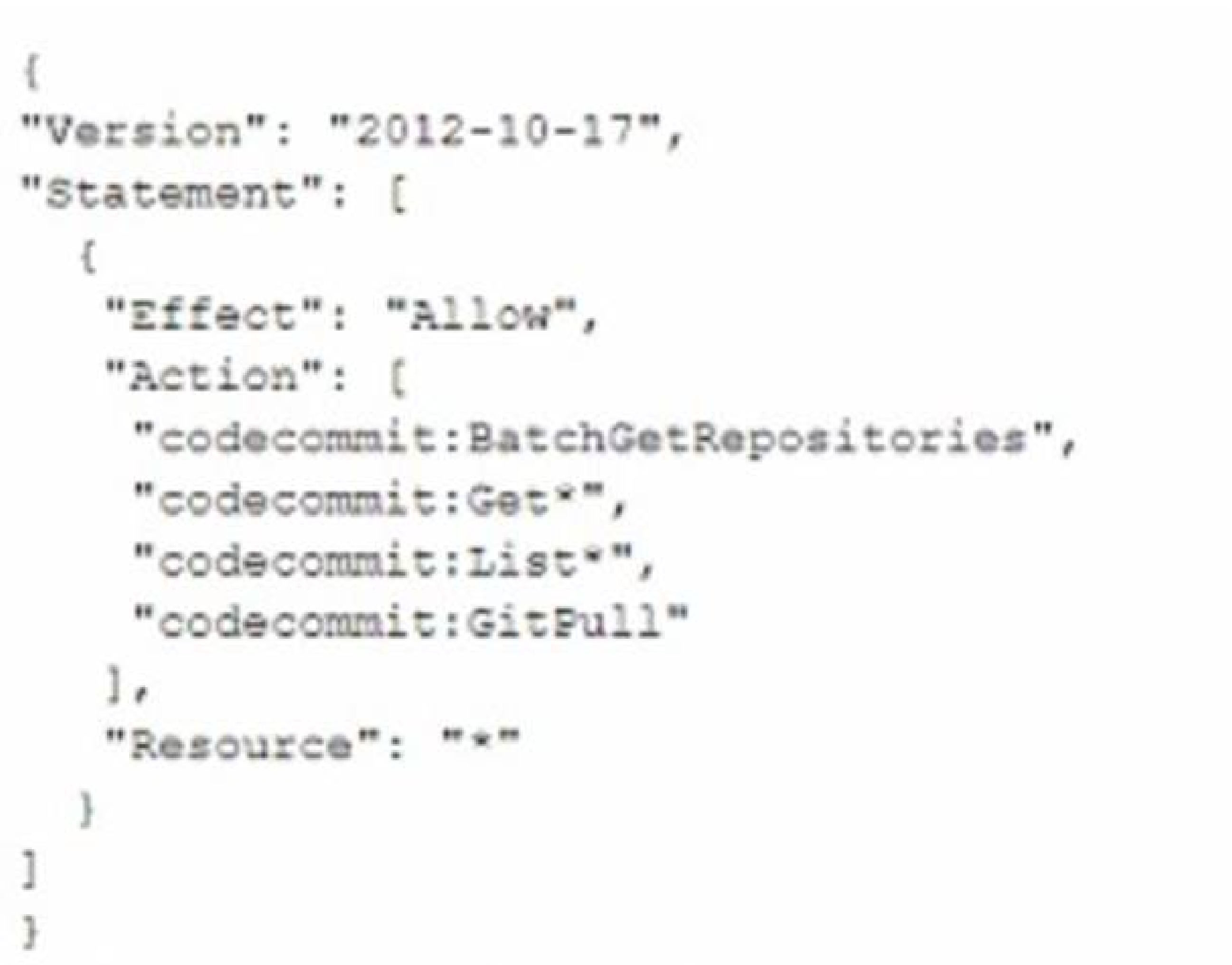
A. Use an AWS Systems Manager Parameter Store SecureString parameter that uses an AWS Key Management Service (AWS KMS) AWS managed key to store the access toke
B. Add a resource-based policy to the parameter to allow access from other account
C. Update the IAM role of the EC2 instances with permissions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

Answer: C

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

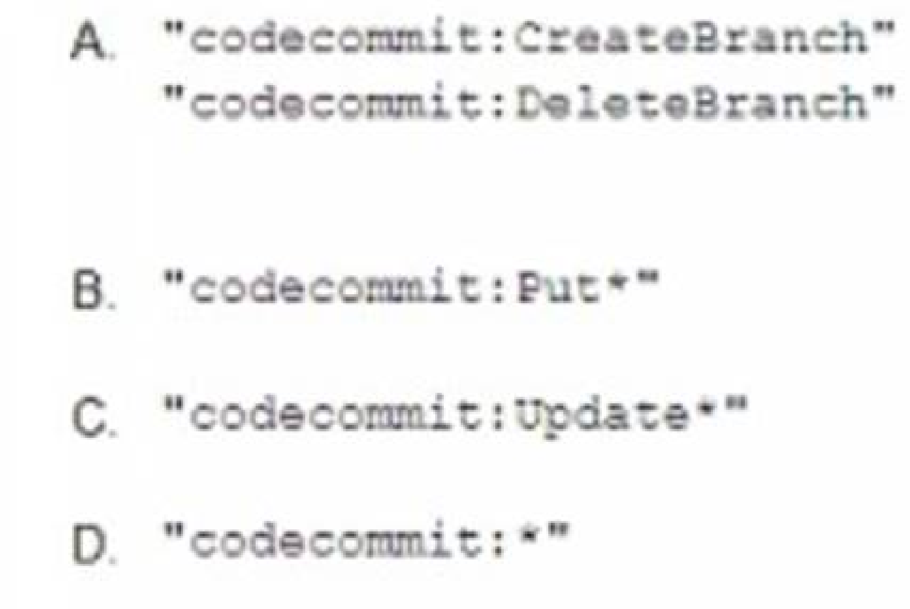
NEW QUESTION 165

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



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

The developer needs to create/delete branches
Which specific IAM permissions need to be added based on the principle of least privilege?



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


B. "codecommit:Put*"

C. "codecommit:Update*"

D. "codecommit:*"
```

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

Answer: A

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

NEW QUESTION 166
A developer needs to store configuration variables for an application. The developer needs to set an expiration date and time for me configuration. The developer wants to receive notifications. Before the configuration expires. Which solution will meet these requirements with the LEAST operational overhead?

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

Answer: C

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

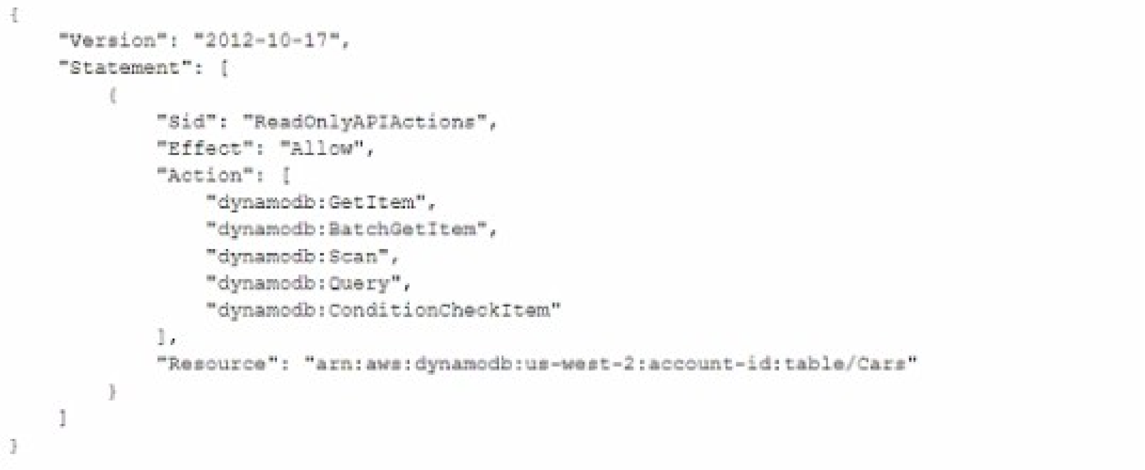
NEW QUESTION 170
A developer wants to deploy a new version of an AWS Elastic Beanstalk application. During deployment the application must maintain full capacity and avoid service interruption. Additionally, the developer must minimize the cost of additional resources that support the deployment.
Which deployment method should the developer use to meet these requirements?

A. All at once
B. Rolling with additional batch
C. Bluegreen
D. Immutable

Answer: B

Explanation:
This solution will meet the requirements by using a rolling with additional batch deployment method, which deploys the new version of the application to a separate group of instances and then shifts traffic to those instances in batches. This way, the application maintains full capacity and avoids service interruption during deployment, as well as minimizes the cost of additional resources that support the deployment. Option A is not optimal because it will use an all at once deployment method, which deploys the new version of the application to all instances simultaneously, which may cause service interruption or downtime during deployment. Option C is not optimal because it will use a blue/green deployment method, which deploys the new version of the application to a separate environment and then swaps URLs with the original environment, which may incur more costs for additional resources that support the deployment. Option D is not optimal because it will use an immutable deployment method, which deploys the new version of the application to a fresh group of instances and then redirects traffic to those instances, which may also incur more costs for additional resources that support the deployment.
References: AWS Elastic Beanstalk Deployment Policies

NEW QUESTION 172
A developer is troubleshooting an application mat uses Amazon DynamoDB in the uswest- 2 Region. The application is deployed to an Amazon EC2 instance. The application requires read-only permissions to a table that is named Cars The EC2 instance has an attached IAM role that contains the following IAM policy.



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

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

A. Modify the IAM policy resource to be "arn aws dynamo* us-west-2 account-id table/*"
B. Modify the IAM policy to include the dynamodb * action
C. Create a trust policy that specifies the EC2 service principa
D. Associate the role with the policy.
E. Create a trust relationship between the role and dynamodb Amazonas com.

Answer: C

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

NEW QUESTION 176
A developer is preparing to begin development of a new version of an application. The previous version of the application is deployed in a production environment. The developer needs to deploy fixes and updates to the current version during the development of the new version of the application. The code for the new version of the application is stored in AWS CodeCommit.
Which solution will meet these requirements?

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

H. Create a new CodeCommit repository for development of the new version of the applicatio
I. Create a Git tag for the development of the new version.

Answer: A

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

NEW QUESTION 179
A developer is creating a service that uses an Amazon S3 bucket for image uploads. The service will use an AWS Lambda function to create a thumbnail of each image Each time an image is uploaded the service needs to send an email notification and create the thumbnail The developer needs to configure the image processing and email notifications setup.
Which solution will meet these requirements?

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

Answer: A

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

NEW QUESTION 182
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