**QUESTION 28**

A company hosts an application on AWS Lambda functions mat are invoked by an Amazon API Gateway API.

The Lambda functions save customer data to an Amazon Aurora MySQL database.

Whenever the company upgrades the database, the Lambda functions fail to establish database connections until the upgrade is complete.

The result is that customer data is not recorded for some of the event.

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

Which solution will meet these requirements?

1. Provision an Amazon RDS proxy to sit between the Lambda functions and the database. Configure the Lambda functions to connect to the RDS proxy.

1. Increase the run time of me Lambda functions to the maximum.

Create a retry mechanism in the code that stores the customer data in the database.

1. Persist the customer data to Lambda local storage.

Configure new Lambda functions to scan the local storage to save the customer data to the database.

1. Store the customer data m an Amazon Simple Queue Service (Amazon SQS) FIFO queue. Create a new Lambda function that polls the queue and stores the customer data in the database.

**Answer:** D

**Explanation:**

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

RDS proxy can improve application availability in such a situation by waiting for the new database instance to be functional and maintaining any requests received from the application during this time. The end result is that the application is more resilient to issues with the underlying database. This will enable solution to hold data till the time DB comes back to normal. RDS proxy is to optimally utilize the connection between Lambda and DB. Lambda can open multiple connection concurrently which can be taxing on DB compute resources, hence RDS proxy was introduced to manage and leverage these connections efficiently.

**QUESTION 57**

A reporting team receives files each day in an Amazon S3 bucket.

The reporting team manually reviews and copies the files from this initial S3 bucket to an analysis S3 bucket each day at the same time to use with Amazon QuickSight.

Additional teams are starting to send more files in larger sizes to the initial S3 bucket.

The reporting team wants to move the files automatically analysis S3 bucket as the files enter the initial S3 bucket.

The reporting team also wants to use AWS Lambda functions to run patternmatching code on the copied data. In addition, the reporting team wants to send the data files to a pipeline in Amazon SageMaker Pipelines.

What should a solutions architect do to meet these requirements with the LEAST operational overhead?

1. Create a Lambda function to copy the files to the analysis S3 bucket.

Create an S3 event notification for the analysis S3 bucket.

Configure Lambda and SageMaker Pipelines as destinations of the event notification. Configure s30bjectCreated:Put as the event type.

1. Create a Lambda function to copy the files to the analysis S3 bucket.

Configure the analysis S3 bucket to send event notifications to Amazon EventBridge (Amazon CloudWatch Events).

Configure an ObjectCreated rule in EventBridge (CloudWatch Events).

Configure Lambda and SageMaker Pipelines as targets for the rule.

1. Configure S3 replication between the S3 buckets.

Create an S3 event notification for the analysis S3 bucket.

Configure Lambda and SageMaker Pipelines as destinations of the event notification. Configure s30bjectCreated:Put as the event type.

1. Configure S3 replication between the S3 buckets.

Configure the analysis S3 bucket to send event notifications to Amazon EventBridge (Amazon CloudWatch Events).

Configure an ObjectCreated rule in EventBridge (CloudWatch Events).

Configure Lambda and SageMaker Pipelines as targets for the rule.

**Answer:** A

**QUESTION 165**

A company is preparing to deploy a new serverless workload.

A solutions architect must use the principle of least privilege to configure permissions that will be used to run an AWS Lambda function.

An Amazon EventBridge (Amazon CloudWatch Events) rule will invoke the function.

Which solution meets these requirements?

1. Add an execution role to the function with lambda:InvokeFunction as the action and \* as the principal.
2. Add an execution role to the function with lambda:InvokeFunction as the action and Service:amazonaws.com as the principal.
3. Add a resource-based policy to the function with lambda:'\* as the action and Service:events.amazonaws.com as the principal.
4. Add a resource-based policy to the function with lambda:InvokeFunction as the action and Service:events.amazonaws.com as the principal.

**Answer:** D

**Explanation:**

<https://docs.aws.amazon.com/eventbridge/latest/userguide/resource-based-policieseventbridge.html#lambda-permissions>

**QUESTION 210**

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

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

The company observes that the ingestion workflow fails occasionally because of network connectivity issues.

When such a failure occurs, the Lambda function does not ingest the corresponding data unless the company manually reruns the job.

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

1. Configure the Lambda function In multiple Availability Zones.
2. Create an Amazon Simple Queue Service (Amazon SQS) queue, and subscribe It to me SNS topic.
3. Increase the CPU and memory that are allocated to the Lambda function.
4. Increase provisioned throughput for the Lambda function.
5. Modify the Lambda function to read from an Amazon Simple Queue Service (Amazon SQS) queue

**Answer:** BE