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QUESTION 1

A developer is designing a serverless application that customers use to select seats for a concert venue. Customers send the ticket requests to an Amazon API Gateway API with an AWS Lambda function that acknowledges the order and generates an order ID. The application includes two additional Lambda functions: one for inventory management and one for payment processing. These two Lambda functions run in parallel and write the order to an Amazon Dynamo DB table.

The application must provide seats to customers according to the following requirements. If a seat is accidently sold more than once, the first order that the application received must get the seat. In these cases, the application must process the payment for only the first order. However, if the first order is rejected during payment processing, the second order must get the seat. In these cases, the application must process the payment for the second order.

Which solution will meet these requirements?

A. Send the order ID to an Amazon Simple Notification Service (Amazon SNS) FIFO topic that fans out to one Amazon Simple Queue Service (Amazon SQS) FIFO queue for inventory management and another SQS FIFO queue for payment processing.

B. Change the Lambda function that generates the order ID to initiate the Lambda function for inventory management. Then initiate the Lambda function for payment processing.

C. Send the order ID to an Amazon Simple Notification Service (Amazon SNS) topic. Subscribe the Lambda functions for inventory management and payment processing to the topic.

D. Deliver the order ID to an Amazon Simple Queue Service (Amazon SQS) queue. Configure the Lambda functions for inventory management and payment processing to poll the queue.

Correct Answer: A

QUESTION 2

A developer needs to store configuration variables for an application. The developer needs to set an expiration date and time for the 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 Expiration and ExpirationNotification 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 ExpirationNotification policy types.

D. Create an advanced parameter in AWS Systems Manager Parameter Store. Create an Amazon EC2 instance with a cron job to expire the configuration and to send notifications.

Correct Answer: C

QUESTION 3

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 token. Add a resource-based policy to the parameter to allow access from other accounts. Update the IAM role of the EC2 instances with permissions to access Parameter Store. Retrieve the token from Parameter Store with the decrypt flag enabled. Use the decrypted access token to send the message to the chat.

B. Encrypt the access token by using an AWS Key Management Service (AWS KMS) customer managed key. Store the access token in an Amazon DynamoDB table. Update the IAM role of the EC2 instances with permissions to access DynamoDB and AWS KMS.

Retrieve the token from DynamoDB. Decrypt the token by using AWS KMS on the EC2 instances. Use the decrypted access token to send the message to the chat.

C. Use AWS Secrets Manager with an AWS Key Management Service (AWS KMS) customer managed key to store the access token. Add a resource-based policy to the secret to allow access from other accounts. Update the IAM role of the EC2 instanceswith permissions to access Secrets Manager. Retrieve the token from Secrets Manager. Use the decrypted access token to send the message to the chat.

D. Encrypt the access token by using an AWS Key Management Service (AWS KMS) AWS managed key. Store the access token in an Amazon S3 bucket. Add a bucket policy to the S3 bucket to allow access from other accounts. Update the IAM role of the EC2 instances with permissions to access Amazon S3 and AWS KMS. Retrieve the token from the S3 bucket. Decrypt the token by using AWS KMS on the EC2 instances. Use the decrypted access token to send the massage to the chat.

Correct Answer: C

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

QUESTION 4

A company is using Amazon API Gateway to develop an API for its application on AWS. A developer needs to test and generate API responses. Other teams are required to test the API immediately.

What should the developer do to meet these requirements?

A. Set up a mock integration request in API Gateway. Configure the method\\'s integration request and integration response to associate a response with a given status code.

B. Set up the request validators in the API\\'s OpenAPI definition file. Import the OpenAPI definitions into API Gateway to test the API.

C. Set up a gateway response for the API in API Gateway. Configure response headers with hardcoded HTTP status

codes and responses.

D. Set up a request parameter-based Lambda authorizer to control access to the API. Configure the Lambda function with the necessary mapping template.

Correct Answer: A

QUESTION 5

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

Correct Answer: A

A Lambda function has access to local storage in the /tmp directory. Each execution environment provides between 512 MB and 10,240 MB, in 1-MB increments, of disk space in the /tmp directory.
https://docs.aws.amazon.com/lambda/latest/dg/foundation-progmodel.html

QUESTION 6

A developer at a company needs to create a small application that makes the same API call once each day at a designated time. The company does not have infrastructure in the AWS Cloud yet, but the company wants to implement this functionality on AWS.

Which solution meets these requirements in the MOST operationally efficient manner?

A. Use a Kubernetes cron job that runs on Amazon Elastic Kubernetes Service (Amazon EKS).

B. Use an Amazon Linux crontab scheduled job that runs on Amazon EC2.

C. Use an AWS Lambda function that is invoked by an Amazon EventBridge scheduled event.

D. Use an AWS Batch job that is submitted to an AWS Batch job queue.

Correct Answer: C

QUESTION 7

A developer is using AWS Step Functions to automate a workflow The workflow defines each step as an AWS Lambda function task The developer notices that runs of the Step Functions state machine fail in the GetResource task with

either an UlegalArgumentException error or a TooManyRequestsException error

The developer wants the state machine to stop running when the state machine encounters an UlegalArgumentException error. The state machine needs to retry the GetResource task one additional time after 10 seconds if the state machine encounters a TooManyRequestsException error. If the second attempt fails, the developer wants the state machine to stop running.

How can the developer implement the Lambda retry functionality without adding unnecessary complexity to the state machine\\'?

A. Add a Delay task after the GetResource task. Add a catcher to the GetResource task. Configure the catcher with an error type of TooManyRequestsException. Configure the next step to be the Delay task Configure the Delay task to wait for an interval of 10 seconds Configure the next step to be the GetResource task.

B. Add a catcher to the GetResource task Configure the catcher with an error type of TooManyRequestsException. an interval of 10 seconds, and a maximum attempts value of 1.

Configure the next step to be the GetResource task.

C. Add a retrier to the GetResource task Configure the retrier with an error type of TooManyRequestsException, an interval of 10 seconds, and a maximum attempts value of 1.

D. Duplicate the GetResource task Rename the new GetResource task to TryAgain Add a catcher to the original GetResource task Configure the catcher with an error type of TooManyRequestsException. Configure the next step to be TryAgain.

Correct Answer: C

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

QUESTION 8

A company has built a serverless application for its ecommerce website. The application includes a REST API in Amazon API Gateway that invokes an AWS Lambda function. The Lambda function processes data and stores the data in Amazon DynamoDB table. The Lambda function calls a third-party stock application API to process the order. After the ordered is processed, the Lambda function returns an HTTP 200 status code with no body to the client.

During peak usage when the API calls exceeds a certain threshold, the third-party stock application sometimes fails to process the data and responds with error messages. The company needs a solution that will not overwhelm the third-party stock application.

Which solution will meet these requirements?

A. Configure the REST API in API Gateway to write the requests directly into DynamoDB. Configure a DynamoDB intrinsic function to perform the transformation. Set up a DynamoDB stream to call the third-party stock application API with each new row. Delete the Lambda function.

B. Configure the REST API in API Gateway to write the requests directly into an Amazon Simple Queue Service (Amazon SQS) queue. Configure the Lambda function with a reserved concurrency equal to the third-party stock application\\'s threshold. Set Lambda function to process the messages from the SQS queue.

C. Configure the REST API in API Gateway to write the requests directly into an Amazon Simple Notification Service (Amazon SNS) topic. Configure the Lambda function with a provisioned concurrency equal to the third-party stock application\\'s threshold. Set the Lambda function to process the messages from the SNS topic.

D. Configure the REST API in API Gateway to write the requests directly into Amazon Athena. Configure the transformation of the data by using SQL with multiple query result locations set up to point to the DynamoDB table and the third-party stock fulfilment application API. Delete the Lambda function.

Correct Answer: B

QUESTION 9

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 function. Configure VPC1 access for the function. Attach a security group named SG1 to both the Lambda function and the database. Configure the security group inbound and outbound rules to allow TCP traffic on Port 3306.

B. 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.

C. Create the Lambda function. Configure VPC1 access for the function. Assign a security group named SG1 to the Lambda function. Assign a second security group named SG2 to the database. Add an inbound rule to SG1 to allow TCP traffic from Port 3306.

D. 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.

Correct Answer: A

https://repost.aws/en/knowledge-center/connect-lambda-to-an-rds-instance

QUESTION 10

A developer wants the ability to roll back to a previous version of an AWS Lambda function in the event of errors caused by a new deployment. How can the developer achieve this with MINIMAL impact on users?

A. Change the application to use an alias that points to the current version. Deploy the new version of the code. Update the alias to use the newly deployed version. If too many errors are encountered, point the alias back to the previous version.

B. Change the application to use an alias that points to the current version. Deploy the new version of the code. Update the alias to direct 10% of users to the newly deployed version. If too many errors are encountered, send 100% of traffic to the previous version.

C. Do not make any changes to the application. Deploy the new version of the code. If too many errors are encountered, point the application back to the previous version using the version number in the Amazon Resource Name (ARN).

D. Create three aliases: new, existing, and router. Point the existing alias to the current version. Have the router alias direct 100% of users to the existing alias. Update the application to use the router alias. Deploy the new version of the code. Point the new alias to this version. Update the router alias to direct 10% of users to the new alias. If too many errors are encountered, send 100% of traffic to the existing alias.

Correct Answer: B

QUESTION 11

A company has an Amazon S3 bucket containing premier content that it intends to make available to only paid subscribers of its website. The S3 bucket currently has default permissions of all objects being private to prevent inadvertent exposure of the premier content to non-paying website visitors.

How can the company limit the ability to download a premier content file in the S3 bucket to paid subscribers only?

A. Apply a bucket policy that allows anonymous users to download the content from the S3 bucket.

B. Generate a pre-signed object URL for the premier content file when a paid subscriber requests a download.

C. Add a bucket policy that requires multi-factor authentication for requests to access the S3 bucket objects.

D. Enable server-side encryption on the S3 bucket for data protection against the non-paying website visitors.

Correct Answer: B

QUESTION 12

An application runs on multiple EC2 instances behind an ELB.

Where is the session data best written so that it can be served reliably across multiple requests?

A. Write data to Amazon ElastiCache.

B. Write data to Amazon Elastic Block Store.

C. Write data to Amazon EC2 Instance Store.

D. Write data to the root filesystem.

Correct Answer: A

QUESTION 13

A company\\'s application has an AWS Lambda function that processes messages from IoT devices. The company wants to monitor the Lambda function to ensure that the Lambda function is meeting its required service level agreement (SLA).

A developer must implement a solution to determine the application\\'s throughput in near real time. The throughput

must be based on the number of messages that the Lambda function receives and processes in a given time period. The Lambda function performs initialization and post-processing steps that must not factor into the throughput measurement.

What should the developer do to meet these requirements?

A. Use the Lambda function\\'s ConcurrentExecutions metric in Amazon CloudWatch to measure the throughput.

B. Modify the application to log the calculated throughput to Amazon CloudWatch Logs. Use Amazon EventBridge to invoke a separate Lambda function to process the logs on a schedule.

C. Modify the application to publish custom Amazon CloudWatch metrics when the Lambda function receives and processes each message. Use the metrics to calculate the throughput.

D. Use the Lambda function\\'s Invocations metric and Duration metric to calculate the throughput in Amazon CloudWatch.

Correct Answer: C

QUESTION 14

A developer wants to use React to build a web and mobile application. The application will be hosted on AWS. The application must authenticate users and then allow users to store and retrieve files that they own. The developer wants to use Facebook for authentication.

Which CLI will MOST accelerate the development and deployment of this application on AWS?

A. AWS CLI

B. AWS Amplify CLI

C. AWS Serverless Application Model (AWS SAM) CLI

D. Amazon Elastic Container Service (Amazon ECS) CLI

Correct Answer: B

QUESTION 15

An application that runs on AWS receives messages from an Amazon Simple Queue Service (Amazon SQS) queue and processes the messages in batches. The application sends the data to another SQS queue to be consumed by another

legacy application. The legacy system can take up to 5 minutes to process some transaction data.

A developer wants to ensure that there are no out-of-order updates in the legacy system. The developer cannot alter the behavior of the legacy system.

Which solution will meet these requirements?

A. Use an SQS FIFO queue. Configure the visibility timeout value.

B. Use an SQS standard queue with a SendMessageBatchRequestEntry data type. Configure the DelaySeconds values.

C. Use an SQS standard queue with a SendMessageBatchRequestEntry data type. Configure the visibility timeout value.

D. Use an SQS FIFO queue. Configure the DelaySeconds value.

Correct Answer: A

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